Appendix A

Notice of Preparation - Scoping Comments

Notice of Preparation

To: Public Agencies and Other Interested Parties

From: City of Burbank
Community Development Department
Planning Division
150 North Third Street
Burbank, California 91502

Subject: Notice of Preparation of a Draft Environmental Impact Report and Notice of Public Scoping Meeting

Project Title: Burbank Housing Element Update and Associated General Plan Updates

The City of Burbank will be the Lead Agency and will prepare an Environmental Impact Report (EIR) for the Burbank Housing Element Update and Associated General Plan Updates (hereafter referred to as "Housing Element Update" or "proposed Project"), which proposes to update the Housing Element for the 2021-2029 planning period, along with minor updates to the Safety and Mobility Elements, and incorporate environmental justice goals, policies and objectives to the City of Burbank's 2035 General Plan. The City requests input from affected public agencies and interested members of the public as to the scope and content of the environmental information that is germane to your agency's statutory responsibilities in connection with the Project.

The Project description and location are described in the attached materials. The City expects that the EIR will include analyses for the following issues that are considered to have potential for significant impacts on the environment in association with the Project:

Air Quality

Cultural Resources

Geology and Soils

Greenhouse Gas Emissions

Hazards and Hazardous Materials

Land Use and Planning

Noise

Population and Housing

Public Services

Recreation

Transportation

Tribal Cultural Resources

Utilities/Service Systems

Issues that have been determined not to have a significant impact, or any impact, include Aesthetics, Agriculture and Forestry Resources, Biological Resources, Energy, Hydrology and Water Quality, Mineral Resources, and Wildfire.

Purpose of the Scoping Meeting: The purpose of the scoping meeting is to present the proposed Project in a public setting and provide an opportunity for a full airing of the environmental issues that are important to the community. The meeting will include a presentation of the proposal and the environmental issues to be analyzed in the Draft EIR will be described. Following the presentation, interested agencies, organizations, and members of the public will be encouraged to present views concerning what environmental issues should be included in the Draft EIR. The oral and written comments made during the scoping meeting will provide an inventory of potential environmental effects of the Project to be addressed by the Draft EIR.

30-Day Comment Period: The City invites all interested members of the public to attend the public scoping meeting. The City also invites written comments on issues related to potential environmental impacts during a 30-day comment period, which starts on February 22, 2021 and will conclude on March 23, 2021. Due to the time limits mandated by State law, your response must be sent at the earliest possible time but not later than 30 days after receipt of this notice, and no later than **5:00 PM** on **March 23, 2021**. Please send written/typed comments (including a name, telephone number, and contact information) to the following:

City of Burbank, Community Development Department
Attn: Lisa Frank, Senior Planner
150 North Third Street
Burbank, California 91502

You may also email your response to lfrank@burbankca.gov. Please provide the name of a contact person at your agency.

For more information about the Housing Element Update and Associated General Plan Updates, please visit: https://www.burbankhousingelement.com/

A Community Meeting/EIR Public Scoping Meeting will be held on February 27, 2021 from 11:00 A.M. to 12:30 P.M. The meeting will be conducted online via zoom through the following link: https://burbankca.zoom.us/j/99610663018 and will be streamed live through the City of Burbank YouTube channel.

All interested parties are invited to attend the public scoping meeting to assist in identifying issues to be addressed in the EIR. A presentation will begin at 11:00 A.M., then public comments for the EIR will be received and attendees will have an opportunity to provide input to the consultants preparing the EIR.

Date: February 22, 2021 Signature: ______________________________
Lisa Frank
Title: Senior Planner
Telephone: (818) 238-5250

Burbank Housing Element Update Project Description

The Burbank Housing Element Update and Associated General Plan Updates involves an update to the Housing Element for the 2021-2029 planning period, along with minor updates to the Safety and Mobility Elements, and incorporate environmental justice goals, policies and objectives to the City of Burbank's 2035 General Plan. The Project would apply to the entire geographic area located within the boundaries of the City of Burbank, which encompasses 17.1 square miles. Figure 1 and Figure 2, below, illustrate the location of the Project in a regional and local context. The proposed Housing Element Update establishes programs, policies and actions to further the goal of meeting the existing and projected housing needs of all household income levels of the community, provides evidence of the City's ability to accommodate the Regional Housing Needs Assessment (RHNA) allocation through the year 2029, as established by the Southern California Association of Governments (SCAG), and identifies any rezoning program needed to reach the required housing capacity. The Project also includes necessary updates to the Safety Element triggered under State law by an update to the Housing Element, and updates to the Mobility Element to incorporate VMT (vehicle miles traveled) metrics.

The Housing Element Update will provide a framework for introducing new housing at all levels of affordability that is within access to transit, Downtown jobs, services, and open spaces. These units may occur anywhere in the City where residential uses are permitted, as well as in areas that may be rezoned in the future to allow for multi-family residential and mixed use of adequate density. Through its identification of sites for future development and implementing housing programs, the updated Housing Element will lay the foundation for achievement of the City's fair share housing needs for approximately 8,800 additional units.

The purpose of the Safety Element Update is to ensure consistency with the Housing Element Update and to comply with recent State legislation and guidelines (including Assembly Bill 162, Senate Bill 1241, Senate Bill 99, Assembly Bill 747, Senate Bill 1035 and Senate Bill 379). Technical amendments will be made to the Safety Element to achieve compliance with State, regional, and local policies and guidelines. The technical amendments will incorporate data and maps, address vulnerability to climate change; incorporate policies and programs from the City's Hazard Mitigation Plan and the Greenhouse Gas Reduction Plan, as well as partial or full integration of other City documents and programs (including but not limited to: Ready Burbank and the Emergency Survival Program). The Safety Element amendments will be submitted to the California Geological Survey, California Office of Emergency Services, California State Board of Forestry and Fire Protection, and Federal Emergency Management Agency for review.

Senate Bill 1000 (SB 1000) states that revisions or adoption of two or more elements of a general plan on or after January 1, 2018 trigger a requirement to "adopt or review the Environmental Justice Element, or the environmental justice goals, policies, and objectives in other elements." Environmental justice goals, policies, and objectives must aim to reduce health risks to disadvantaged communities (DACs), promote civil engagement, and prioritize the needs of these communities. There are several designated DACs identified in central, northwest, and southeast Burbank. These seven census tracts have overall scores that meet or exceed the minimum criteria for DAC designation based on pollution burden and population characteristics. As mandated under SB 1000, the Safety Element update will consider strategies to reduce pollution exposure, promote public facilities, promote food access, promote safe and sanitary homes, promote physical activity, reduce unique or compounded health risks, promote civic engagement, and prioritize the needs of these disadvantaged communities.

Figure 1 Regional Location

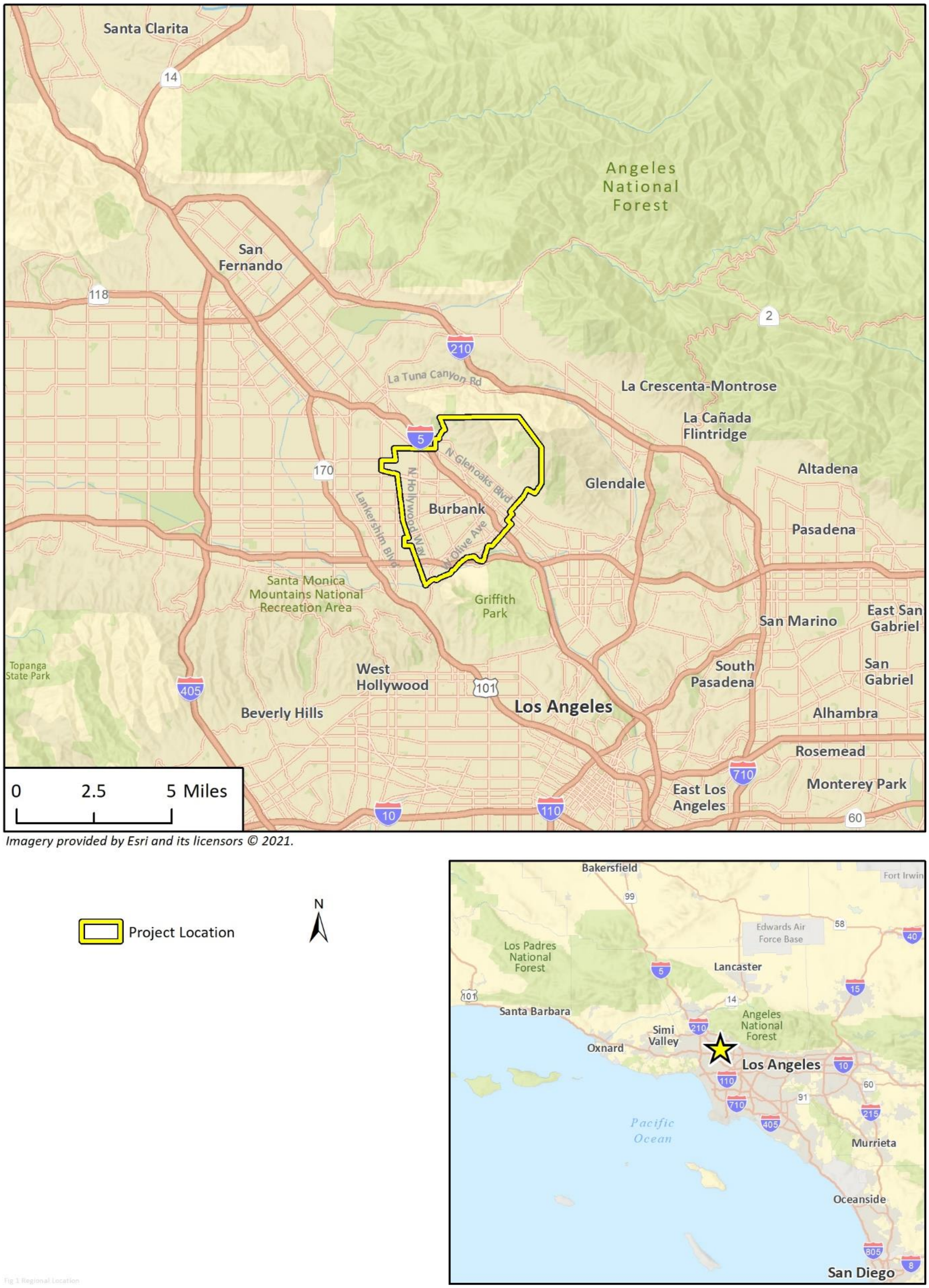

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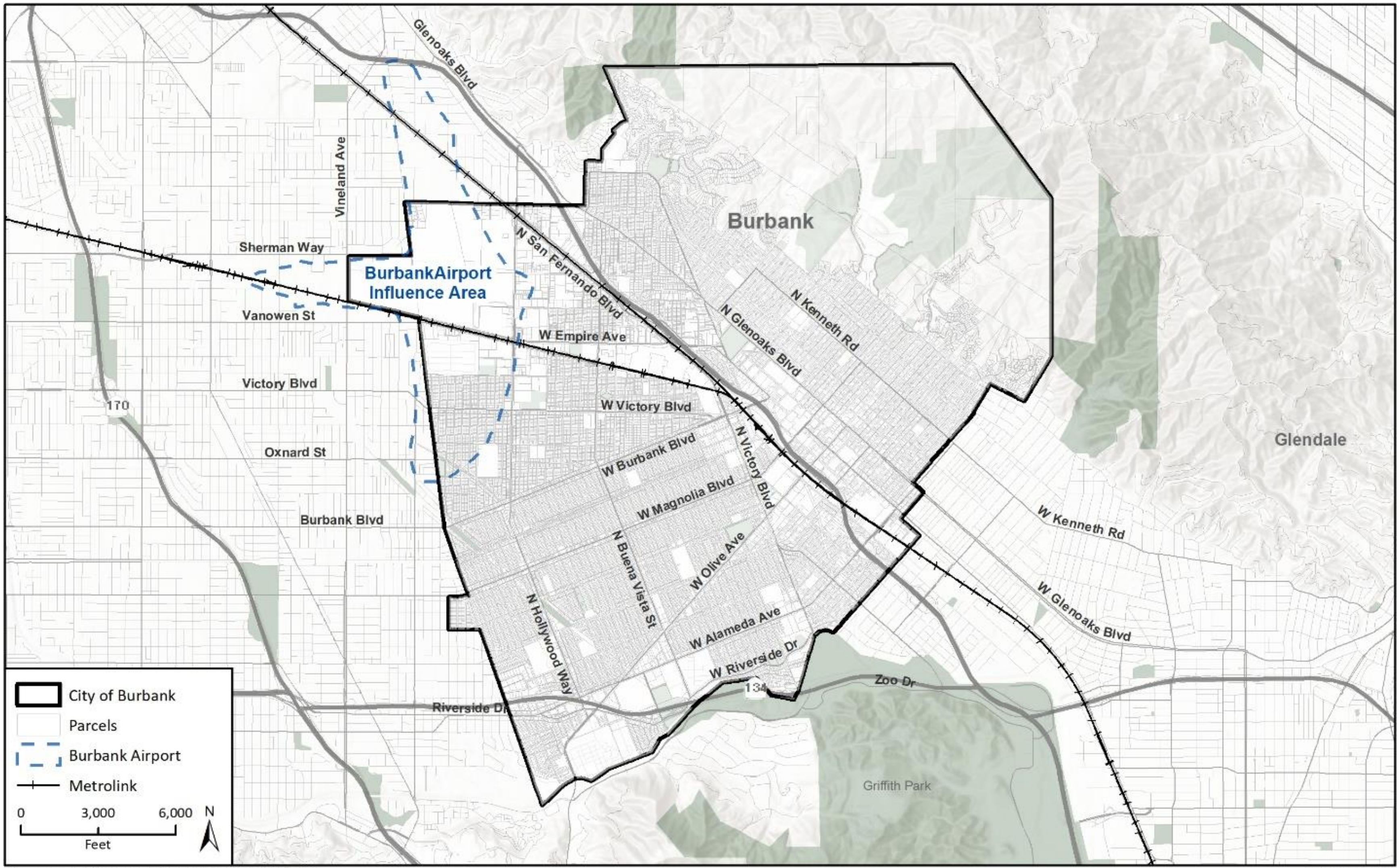
Fig 1 Regional Location

Figure 1 Project Location



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Notice of Preparation

To: Public Agencies and Other Interested Parties

From: City of Burbank
Community Development Department
Planning Division
150 North Third Street
Burbank, California 91502

Subject: Notice of Preparation of a Draft Environmental Impact Report and Notice of Public Scoping Meeting

Project Title: Burbank Housing Element Update and Associated General Plan Updates

The City of Burbank will be the Lead Agency and will prepare an Environmental Impact Report (EIR) for the Burbank Housing Element Update and Associated General Plan Updates (hereafter referred to as "Housing Element Update" or "proposed Project"), which proposes to update the Housing Element for the 2021-2029 planning period, along with minor updates to the Safety and Mobility Elements, and incorporate environmental justice goals, policies and objectives into the City of Burbank's *Burbank2035* General Plan. The City requests input from affected public agencies and interested members of the public as to the scope and content of the environmental information that is germane to your agency's statutory responsibilities in connection with the Project.

The Project description and location are described in the attached materials. The City expects that the EIR will include analyses for the following issues that are considered to have potential for significant impacts on the environment in association with the Project:

Air Quality
Cultural Resources
Geology and Soils
Greenhouse Gas Emissions
Hazards and Hazardous Materials
Land Use and Planning
Noise
Population and Housing
Public Services
Recreation
Transportation
Tribal Cultural Resources
Utilities/Service Systems

Issues that have been determined not to have a significant impact, or any impact, include Aesthetics, Agriculture and Forestry Resources, Biological Resources, Energy, Hydrology and Water Quality, Mineral Resources, and Wildfire.

Purpose of the Scoping Meeting: The purpose of the scoping meeting is to present the proposed Project in a public setting and provide an opportunity for a full airing of the environmental issues that are important to the community. The meeting will include a presentation of the proposal and the environmental issues to be analyzed in the Draft EIR will be described. Following the presentation, interested agencies, organizations, and members of the public will be encouraged to present views concerning what environmental issues should be included in the Draft EIR. The oral and written comments made during the scoping meeting will provide an inventory of potential environmental effects of the Project to be addressed by the Draft EIR.

30-Day Comment Period: This is a recirculation of the original NOP which stated that the EIR will analyze the addition of 8,800 units under the Regional Housing Needs Assessment (RHNA) that was conducted for the Housing Element Update. However, the EIR will analyze 10,088 units to account for a 15 percent buffer for the RHNA. The City invites all interested members of the public to attend the public scoping meeting. The City also invites written comments on issues related to potential environmental impacts during the extended 30-day comment period, which started on February 22, 2021 and will conclude on April 15, 2021. Due to the time limits mandated by State law, your response must be sent at the earliest possible time but not later than 30 days after receipt of this notice, and no later than **5:00 PM** on **April 15, 2021**. Please send written/typed comments (including a name, telephone number, and contact information) to the following:

City of Burbank, Community Development Department
Attn: Lisa Frank, Senior Planner
150 North Third Street
Burbank, California 91502

You may also email your response to lfrank@burbankca.gov. Please provide the name of a contact person at your agency.

For more information about the Housing Element Update and Associated General Plan Updates, please visit: https://www.burbankhousingelement.com/

An EIR Public Scoping Meeting will be held on March 31, 2021 from 6:00 P.M. to 7:00 P.M. The meeting will be conducted online via zoom through the following link: https://burbankca.zoom.us/j/96124014316 and will be recorded.

All interested parties are invited to attend the public scoping meeting to assist in identifying issues to be addressed in the EIR. A presentation will begin at 6:00 P.M., then public comments for the EIR will be received and attendees will have an opportunity to provide input to the consultants preparing the EIR.

Date: March 17, 2021 Signature: ______________________

Lisa Frank
Title: Senior Planner
Telephone: (818) 238-5250

Burbank Housing Element Update Project Description

The Burbank Housing Element Update and Associated General Plan Updates involves an update to the Housing Element for the 2021-2029 planning period, along with minor updates to the Safety and Mobility Elements, and incorporate environmental justice goals, policies and objectives to the City of Burbank's 2035 General Plan. The Project would apply to the entire geographic area located within the boundaries of the City of Burbank, which encompasses 17.1 square miles. Figure 1 and Figure 2, below, illustrate the location of the Project in a regional and local context. The proposed Housing Element Update establishes programs, policies and actions to further the goal of meeting the existing and projected housing needs of all household income levels of the community, provides evidence of the City's ability to accommodate the Regional Housing Needs Assessment (RHNA) allocation through the year 2029, as established by the Southern California Association of Governments (SCAG), and identifies any rezoning program needed to reach the required housing capacity. The Project also includes necessary updates to the Safety Element triggered under State law by an update to the Housing Element, and updates to the Mobility Element to incorporate VMT (vehicle miles traveled) metrics.

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The purpose of the Safety Element Update is to ensure consistency with the Housing Element Update and to comply with recent State legislation and guidelines (including Assembly Bill 162, Senate Bill 1241, Senate Bill 99, Assembly Bill 747, Senate Bill 1035 and Senate Bill 379). Technical amendments will be made to the Safety Element to achieve compliance with State, regional, and local policies and guidelines. The technical amendments will incorporate data and maps, address vulnerability to climate change; incorporate policies and programs from the City's Hazard Mitigation Plan and the Greenhouse Gas Reduction Plan, as well as partial or full integration of other City documents and programs (including but not limited to: Ready Burbank and the Emergency Survival Program). The Safety Element amendments will be submitted to the California Geological Survey, California Office of Emergency Services, California State Board of Forestry and Fire Protection, and Federal Emergency Management Agency for review.

Senate Bill 1000 (SB 1000) states that revisions or adoption of two or more elements of a general plan on or after January 1, 2018 trigger a requirement to "adopt or review the Environmental Justice Element, or the environmental justice goals, policies, and objectives in other elements." Environmental justice goals, policies, and objectives must aim to reduce health risks to disadvantaged communities (DACs), promote civil engagement, and prioritize the needs of these communities. There are several designated DACs identified in central, northwest, and southeast Burbank. These seven census tracts have overall scores that meet or exceed the minimum criteria for DAC designation based on pollution burden and population characteristics. As mandated under SB 1000, the Safety Element update will consider strategies to reduce pollution exposure, promote public facilities, promote food access, promote safe and sanitary homes, promote physical activity, reduce unique or compounded health risks, promote civic engagement, and prioritize the needs of these disadvantaged communities.

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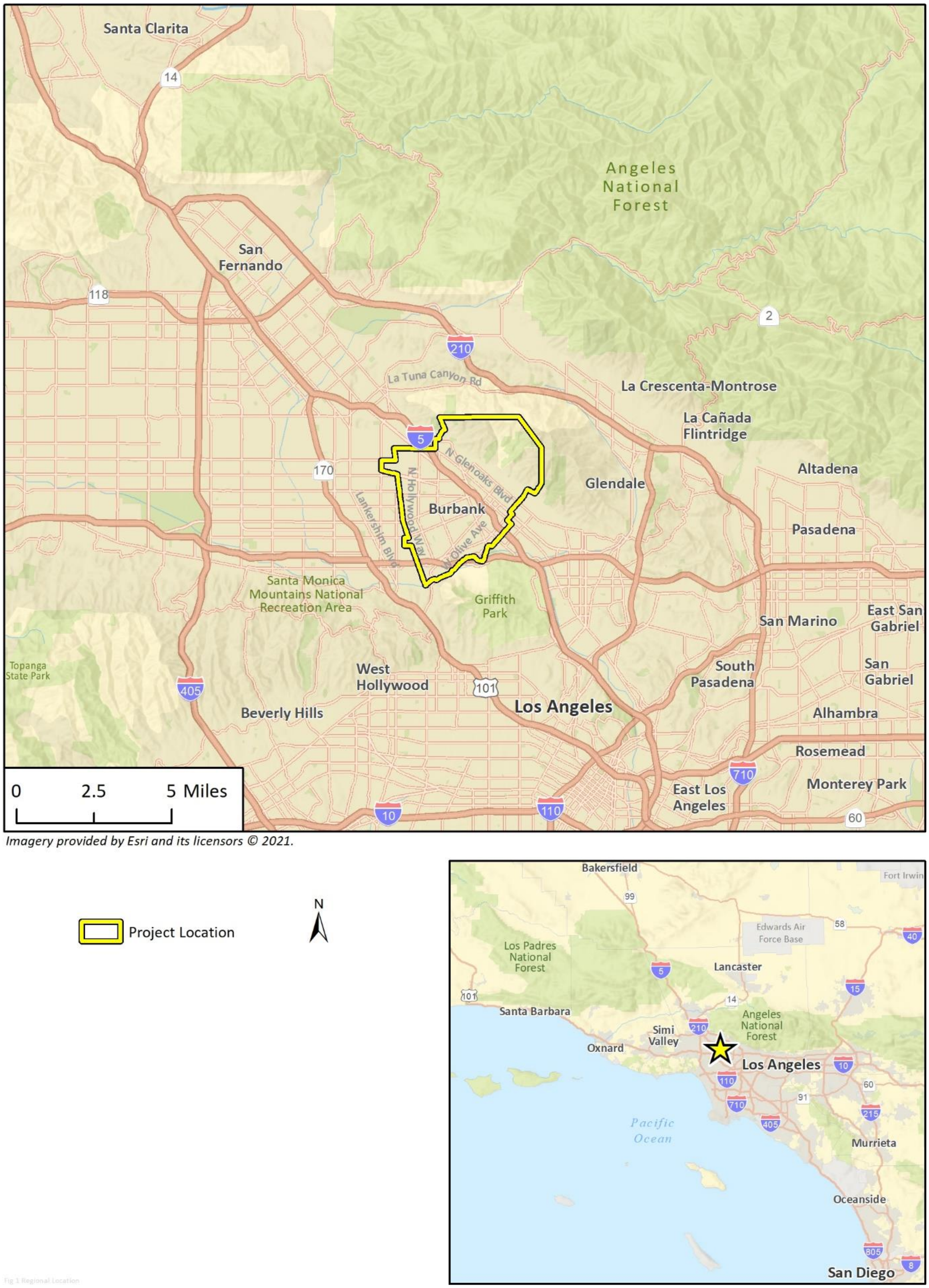

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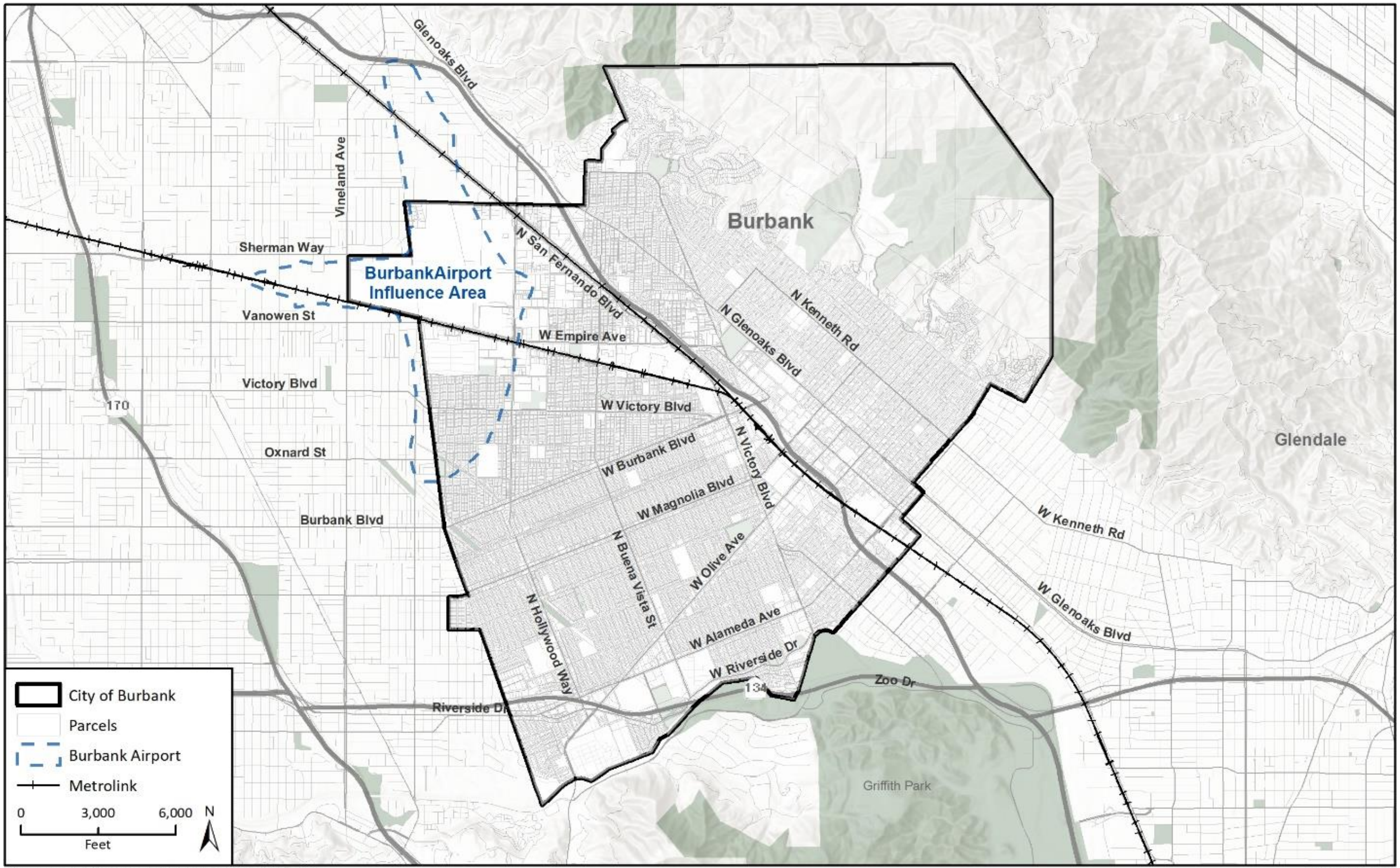
Figure 1 Project Location



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FigX City of Burbank

STATE OF CALIFORNIA Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

March 1, 2021

Lisa Frank
City of Burbank
150 North Third Street
Burbank, CA 91502

Re: 2021020393, Burbank Housing Element and Associated General Plan Updates Project, Los Angeles

Dear Ms. Frank:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

- **a.** The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
- **b.** A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

- **a.** Avoidance and preservation of the resources in place, including, but not limited to:
  - **i.** Planning and construction to avoid the resources and protect the cultural and natural context.
  - **ii.** 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:
  - **i.** Protecting the cultural character and integrity of the resource.
  - **ii.** Protecting the traditional use of the resource.
  - **iii.** 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.
- **d.** Protecting the resource. (Pub. Resource Code §21084.3 (b)).
- **e.** Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).
- **f.** Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

- **a.** The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.
- **b.** The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
- **c.** The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    - **a.** The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    - **b.** Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    - **a.** If part or all of the APE has been previously surveyed for cultural resources.
    - **b.** If any known cultural resources have already been recorded on or adjacent to the APE.
    - **c.** If the probability is low, moderate, or high that cultural resources are located in the APE.
    - **d.** If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    - **a.** The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.

b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:

a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.

b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.

a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.

b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.

c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

cc: State Clearinghouse

STATE OF CALIFORNIA **Gavin Newsom, *Governor***

NATIVE AMERICAN HERITAGE COMMISSION

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

April 6, 2021

Lisa Frank
City of Burbank

Via Email to: lfrank@burbankca.gov

Re: Native American Consultation, Pursuant to Senate Bill 18 (SB18), Government Codes §65352.3 and §65352.4, as well as Assembly Bill 52 (AB52), Public Resources Codes §21080.1, §21080.3.1 and §21080.3.2, Burbank Housing Element Update and Associated General Plan Updates Project, Los Angeles County

Dear Ms. Frank:

Attached is a consultation list of tribes with traditional lands or cultural places located within the boundaries of the above referenced counties or projects.

Government Codes §65352.3 and §65352.4 require local governments to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of avoiding, protecting, and/or mitigating impacts to cultural places when creating or amending General Plans, Specific Plans and Community Plans.

Public Resources Codes §21080.3.1 and §21080.3.2 requires public agencies to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of avoiding, protecting, and/or mitigating impacts to tribal cultural resources as defined, for California Environmental Quality Act (CEQA) projects.

The law does not preclude local governments and agencies from initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction. The NAHC believes that this is the best practice to ensure that tribes are consulted commensurate with the intent of the law.

Best practice for the AB52 process and in accordance with Public Resources Code §21080.3.1(d), is to do the following:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

The NAHC also recommends, but does not require that lead agencies include in their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential affect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

    - A listing of any and all known cultural resources have already been recorded on or adjacent to the APE, such as known archaeological sites;
    - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
    - Whether the records search indicates a low, moderate or high probability that unrecorded cultural resources are located in the APE; and
    - If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

    - Any report that may contain site forms, site significance, and suggested mitigation measures.

      All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code Section 6254.10.

3. The result of the Sacred Lands File (SFL) check conducted through the Native American Heritage Commission was positive. Please contact the Fernandeno Tataviam Band of Mission Indians on the attached list for more information.

4. Any ethnographic studies conducted for any area including all or part of the potential APE; and

5. Any geotechnical reports regarding all or part of the potential APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS is not exhaustive, and a negative response to these searches does not preclude the existence of a tribal cultural resource. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event, that they do, having the information beforehand well help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance we can assure that our consultation list remains current.

If you have any questions, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Tribal Consultation List
Los Angeles County
4/6/2021

Fernandeno Tataviam Band of Mission Indians
Rudy Ortega, Tribal President
1019 Second Street, Suite 1
San Fernando, CA, 91340
Phone: (818) 837 - 0794
Fax: (818) 837-0796
rortega@tataviam-nsn.us
Tataviam

Fernandeno Tataviam Band of Mission Indians
Jairo Avila, Tribal Historic and Cultural Preservation Officer
1019 Second Street, Suite 1
San Fernando, CA, 91340
Phone: (818) 837 - 0794
Fax: (818) 837-0796
jairo.avila@tataviam-nsn.us
Tataviam

Gabrieleno Band of Mission Indians - Kizh Nation
Andrew Salas, Chairperson
P.O. Box 393
Covina, CA, 91723
Phone: (626) 926 - 4131
admin@gabrielenoindians.org
Gabrieleno

Gabrieleno/Tongva San Gabriel Band of Mission Indians
Anthony Morales, Chairperson
P.O. Box 693
San Gabriel, CA, 91778
Phone: (626) 483 - 3564
Fax: (626) 286-1262
GTTribalcouncil@aol.com
Gabrieleno

Gabrielino /Tongva Nation
Sandonne Goad, Chairperson
106 1/2 Judge John Aiso St., #231
Los Angeles, CA, 90012
Phone: (951) 807 - 0479
sgoad@gabrielino-tongva.com
Gabrielino

Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Chairperson
P.O. Box 490
Bellflower, CA, 90707
Phone: (562) 761 - 6417
Fax: (562) 761-6417
gtongva@gmail.com
Gabrielino

Gabrielino-Tongva Tribe
Charles Alvarez,
23454 Vanowen Street
West Hills, CA, 91307
Phone: (310) 403 - 6048
roadkingcharles@aol.com
Gabrielino

Santa Rosa Band of Cahuilla Indians
Lovina Redner, Tribal Chair
P.O. Box 391820
Anza, CA, 92539
Phone: (951) 659 - 2700
Fax: (951) 659-2228
lsaul@santarosa-nsn.gov
Cahuilla

Soboba Band of Luiseno Indians
Isaiah Vivanco, Chairperson
P. O. Box 487
San Jacinto, CA, 92581
Phone: (951) 654 - 5544
Fax: (951) 654-4198
ivivanco@soboba-nsn.gov
Cahuilla
Luiseno

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable only for consultation with Native American tribes under Government Code Sections 65352.3, 65352.4 et seq. and Public Resources Code Sections 21080.3.1 for the proposed Burbank Housing Element Update and Associated General Plan Updates Project, Los Angeles County.

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 7 – Office of Regional Planning
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Making Conservation
a California Way of Life.

March 8, 2021

Lisa Frank
City of Burbank
Community Development Department
150 North Third Street
Burbank, CA 91502

RE: Burbank Housing Element Update and
Associated General Plan Updates – Notice
of Preparation of an Environmental Impact
Report (NOP)
SCH # 2021020393
GTS # 07-LA-2021-03505
Vic. LA-5/PM: 29.126

Dear Lisa Frank:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced NOP. The project involves an update to the City of Burbank's Housing Element for the 2021-2029 planning period, along with minor updates to the Safety and Mobility Elements, and the incorporation of environmental justice goals, policies and objectives to the City of Burbank's 2035 General Plan. The proposed Housing Element Update establishes programs, policies, and actions to further the goal of meeting the existing and projected housing needs of all household income levels of the community. It will also provide evidence of the City's ability to accommodate the Regional Housing Needs Assessment (RHNA) allocation through the year 2029, as established by the Southern California Association of Governments (SCAG), and identifies any rezoning program needed to reach the required housing capacity. In addition, the project includes necessary updates to the Safety Element triggered under State law by an update to the Housing Element, as well as updates to the Mobility Element to incorporate vehicle miles traveled (VMT) metrics. The City of Burbank is the Lead Agency under the California Environmental Quality Act (CEQA).

The project, which spans the entire City of Burbank, intersects with State Route 134 (SR-134) and Interstate 5 (I-5), and is located in close proximity to the United States 101 (US-101). From reviewing the NOP, Caltrans has the following comments:

- For information on determining transportation impacts in terms of VMT on the State Highway System, see the *Technical Advisory on Evaluating Transportation Impacts in CEQA* by the California Governor's Office of Planning and Research (OPR), dated December 2018: http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf.
- The City can also refer to Caltrans' updated *Vehicle Miles Traveled-Focused Transportation Impact Study Guide* (TISG), dated May 2020 and released on Caltrans' website in July 2020: https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-05-20-approved-vmt-focused-tisg-a11y.pdf. Caltrans' new TISG is largely based on the OPR 2018 Technical Advisory.

- Caltrans looks forward to reviewing the VMT analysis for this project. As discussed in Caltrans' new TISG, Caltrans strongly recommends undertaking project VMT analysis, significance determination, and potential mitigation in a manner consistent with OPR's Technical Advisory.
- The updated TISG states, "Additional future guidance will include the basis for requesting transportation impact analysis that is not based on VMT. This guidance will include a simplified safety analysis approach that reduces risks to all road users and that focuses on multi-modal conflict analysis as well as access management issues." Since releasing the TISG, Caltrans has released interim safety analysis guidance, dated December 2020 and found here, for the City's reference: https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-12-22-updated-interim-ldigr-safety-review-guidance-a11y.pdf.
- Caltrans encourages lead agencies to complete traffic safety impact analysis in the California Environmental Quality Act (CEQA) review process so that, through partnerships and collaboration, California can reach zero fatalities and serious injuries by 2050.

The following information is included for your consideration.

The mission of Caltrans is to provide a safe and reliable transportation network that serves all people and respects the environment. Furthermore, Caltrans encourages Lead Agencies to implement Transportation Demand Management (TDM) strategies that reduce VMT and Greenhouse Gas (GHG) emissions. For TDM options to potentially include in the updated Housing, Safety, or Mobility elements, please refer to:

- The 2010 *Quantifying Greenhouse Gas Mitigation Measures* report by the California Air Pollution Control Officers Association (CAPCOA), available at http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf, or
- *Integrating Demand Management into the Transportation Planning Process: A Desk Reference* (Chapter 8) by the Federal Highway Administration (FHWA), available at https://ops.fhwa.dot.gov/publications/fhwahop12035/index.htm.

If you have any questions about these comments, please contact Emily Gibson, the project coordinator, at Emily.Gibson@dot.ca.gov, and refer to GTS # 07-LA-2021-03505.

Sincerely,

Miya Edmonson

MIYA EDMONSON
IGR/CEQA Branch Chief
cc: Scott Morgan, State Clearinghouse

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
South Coast Region
3883 Ruffin Road
San Diego, CA 92123
(858) 467-4201
www.wildlife.ca.gov

***GAVIN NEWSOM*, Governor**
***CHARLTON H. BONHAM*, Director**

March 11, 2021

Lisa Frank
City of Burbank
150 North Third Street
Burbank, CA 91502
LFrank@burbankca.gov

Subject: Notice of Preparation of a Draft Environmental Impact Report for the Burbank Housing Element Update and Associated General Plan Updates Project, SCH #2021020393, City of Burbank, Los Angeles County

Dear Ms. Frank:

The California Department of Fish and Wildlife (CDFW) has reviewed the Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) from the City of Burbank (City; Lead Agency) for the Burbank Housing Element Update and Associated General Plan Updates Project (Project). Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW's Role

CDFW is California's Trustee Agency for fish and wildlife resources and holds those resources in trust by statute for all the people of the State [Fish & G. Code, §§ 711.7, subdivision (a) & 1802; Pub. Resources Code, § 21070; California Environmental Quality Act (CEQA) Guidelines, § 15386, subdivision (a)]. CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (Id., § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect State fish and wildlife resources.

CDFW is also submitting comments as a Responsible Agency under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code, including lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 *et seq*.). Likewise, to the extent implementation of the Project as proposed may result in "take", as defined by State law, of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 *et seq.*), or CESA-listed rare plant pursuant to the Native Plant Protection Act (NPPA; Fish & G. Code, §1900 *et seq.*), CDFW recommends the Project proponent obtain appropriate authorization under the Fish and Game Code.

Project Description and Summary

Objective: The Project involves an update to the Housing Element for the 2021-2029 planning period, along with minor updates to the Safety and Mobility Elements. The Project also incorporates environmental justice goals, policies, and objectives to the City of Burbank's 2035 General Plan. The proposed Housing Element Update establishes programs, policies, and actions to further the goal of meeting the existing and projected housing needs of all family income levels and provides evidence of the City's ability to meet the Southern California Association of Government's 2029 Regional Housing Needs Assessment. The purpose of the Safety Element Update is to ensure consistency with the Housing Element Update and to comply with recent State legislation and guidelines. Technical amendments will be made to the Safety Element to incorporate data and map; address vulnerability to climate change; incorporate policies and programs from the City's Hazard Mitigation Plan and the Greenhouse Gas Reduction Plan; and partially or fully integrate other City documents and programs. Updates to the Mobility Element will incorporate vehicle miles traveled (VMT) metrics. The environmental justice updates will include goals, policies, and objectives aimed at reducing health risks to disadvantaged communities, promote civil engagement, and prioritize the needs of these communities.

Location: The Project would apply to the entire geographic area located within the boundaries of the City of Burbank that encompasses 17.1 square miles in central Los Angeles County.

Comments and Recommendations

CDFW offers the comments and recommendations below to assist the City in adequately identifying, avoiding, and/or mitigating the Project's significant, or potentially significant, direct, and indirect impacts on fish and wildlife (biological) resources.

Specific Comments

1) Adequate Sites Inventory. CDFW recommends the City prepare a map of the following areas if present within or adjacent to the City boundary. In addition, the City should consider the Project's potential impacts on the following areas if present within or adjacent to the Project boundary:

    a) Conservation easements or mitigation lands;
    b) U.S. Fish and Wildlife Service Threatened & Endangered Species Active Critical Habitat (USFWS 2020);
    c) County of Los Angeles Significant Ecological Areas (SEAs);
    d) Wildlife corridors, such as those found along the Verdugo Mountains
    e) Sensitive Natural Communities [see General Comment #3 (Biological Baseline Assessment)];
    f) Aquatic and riparian resources including (but not limited to) rivers, channels, streams, wetlands, and vernal pools, and associated natural plant communities; and,
    g) Urban forests, particularly areas with dense and large trees [see Specific Comment #4 (Loss of Bird and Raptor Nesting Habitat)].

    CDFW recommends the City avoid sites that may have a direct or indirect impact on conservation easements or lands set aside as mitigation. CDFW recommends the DEIR include measures where future housing development facilitated by the Project mitigate (avoid if feasible) for impacts on biological resources occurring within SEAs and critical habitat, as well as mitigate for impacts on wildlife corridors, sensitive natural communities, aquatic and riparian resources, and urban forests.

2) Impacts on Wildlife Corridors and Wildlife. CDFW is concerned that the Project would impact wildlife corridors. Additionally, development occurring adjacent to natural habitat areas such as wildlife corridors could have direct or indirect impacts on wildlife. Impacts could result from increased human presence, traffic, noise, and artificial lighting. Increased human-wildlife interactions could lead to injury or mortality of wildlife. For instance, as human population and communities expand into wildland areas, there has been a commensurate increase in direct and indirect interaction between mountain lions and people (CDFW 2013). As a result, the need to relocate or humanely euthanize mountain lions (depredation kills) may increase for public safety.

   CDFW recommends the DEIR include measures where future housing development facilitated by the Project thoroughly analyze whether the project may impact wildlife corridors. Impacts include habitat loss and fragmentation, narrowing of a wildlife corridor, and introduction of barriers to wildlife movement. Additionally, CDFW recommends future development projects thoroughly analyze whether the project may have direct and indirect impacts wildlife resulting from increased human presence, traffic, noise, and artificial lighting.

3) Nesting Birds. CDFW recommends the DEIR include measures where future housing development facilitated by the Project avoids potential impacts to nesting birds. Project activities occurring during the bird and raptor breeding and nesting season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment.

   a) Migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (Code of Federal Regulations, Title 50, § 10.13). Sections 3503, 3503.5, and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests including raptors and other migratory nongame birds (as listed under the Federal MBTA). It is unlawful to take, possess, or needlessly destroy the nest or eggs of any raptor.

   b) CDFW recommends that measures be taken to fully avoid impacts to nesting birds and raptors. Ground-disturbing activities (e.g., mobilizing, staging, drilling, and excavating) and vegetation removal should occur outside of the avian breeding season which generally runs from February 15 through August 31 (as early as January 1 for some raptors) to avoid take of birds, raptors, or their eggs.

   c) If impacts to nesting birds and raptors cannot be avoided, CDFW recommends the DEIR include measures where future housing development facilitated by the Project mitigates for impacts. CDFW recommends surveys by a qualified biologist with experience conducting breeding bird and raptor surveys. Surveys are needed to detect protected native birds and raptors occurring in suitable nesting habitat that may be disturbed and any other such habitat within 300 feet of the project disturbance area, to the extent allowable and accessible. For raptors, this radius should be expanded to 500 feet and 0.5 mile for special status species, if feasible. Project personnel, including all contractors working on site, should be instructed on the sensitivity of the area. Reductions in the nest buffer distance may be appropriate depending on the avian species involved, ambient levels of human activity, screening vegetation, or possibly other factors.

4) Loss of Bird and Raptor Nesting Habitat. The biggest threat to birds is habitat loss and conversion of natural vegetation into another land use such as development (e.g., commercial, residential, industrial). In the greater Los Angeles region, urban forests and street trees, both native and some non-native species, provide habitat for a high diversity of birds (Wood and Esaian 2020). Some species of raptors have adapted to and exploited urban areas for breeding and nesting (Cooper et al. 2020). For example, raptors (*Accipitridae*, *Falconidae*) such as red-tailed hawks (*Buteo jamaicensis*) and Cooper's hawks (*Accipiter cooperii*) can nest successfully in urban sites. Red-tailed hawks commonly nest in ornamental vegetation such as eucalyptus (Cooper et al. 2020). According to iNaturalist, there are multiple observations of red-tailed hawks and Copper's hawks within the City.

   a) CDFW recommends the DEIR provide measures where future housing development facilitated by the Project avoids removal of any native trees, large and dense-canopied native and non-native trees, and trees occurring in high density (Wood and Esaian 2020). CDFW also recommends avoiding impacts to trees protected by the City's Heritage Tree Program and Tree Ordinance. CDFW also recommends avoiding impacts to understory vegetation (e.g., ground cover, subshrubs, shrubs, and trees).

   b) If impacts to trees cannot be avoided, trees should be replaced to compensate for the temporal or permanent loss habitat within a project site. Depending on the status of the bird or raptor species impacted, replacement habitat acres should increase with the occurrence of a California Species of Special Concern. Replacement habitat acres should further increase with the occurrence of a CESA-listed threatened or endangered species.

   c) CDFW recommends planting native tree species preferred by birds. This includes coast live oak (*Quercus agrifolia*) and California sycamore (*Platanus racemosa*) (Wood and Esaian 2020). CDFW recommends Audubon Society's Plants for Birds for more information on selecting native plants and trees beneficial to birds (Audubon Society 2020).

5) Bats. Numerous bat species are known to roost in trees and structures throughout Los Angeles County (Remington and Cooper 2014). In urbanized areas, bats use trees and man-made structures for daytime and nighttime roosts. Accordingly, CDFW recommends the DEIR provide measures where future housing development facilitated by the Project avoids potential impacts to bats.

   a) Bats are considered non-game mammals and are afforded protection by state law from take and/or harassment (Fish & G. Code, § 4150; Cal. Code of Regs., § 251.1). Project construction and activities, including (but not limited to) ground disturbance, vegetation removal, and any activities leading to increased noise levels may have direct and/or indirect impacts on bats and roosts.

   b) CDFW recommends a project-level biological resources survey provide a thorough discussion and adequate disclosure of potential impacts to bats and roosts from project construction and activities including (but not limited to) ground-disturbing activities (e.g., mobilizing, staging, drilling, and excavating) and vegetation removal. If necessary, to reduce impacts to less than significant, a project-level environmental document should provide bat-specific avoidance and/or mitigation measures [CEQA Guidelines, § 15126.4(a)(1)].

General Comments

1) Disclosure. An environmental document should provide an adequate, complete, and detailed disclosure about the effect which a proposed project is likely to have on the environment (Pub. Resources Code, § 20161; CEQA Guidelines, §15151). Adequate disclosure is necessary so CDFW may provide comments on the adequacy of proposed avoidance, minimization, or mitigation measures, as well as to assess the significance of the specific impact relative to the species (e.g., current range, distribution, population trends, and connectivity).

2) Mitigation Measures. Public agencies have a duty under CEQA to prevent significant, avoidable damage to the environment by requiring changes in projects through the use of feasible alternatives or mitigation measures [CEQA Guidelines, §§ 15002(a)(3), 15021]. Pursuant to CEQA Guidelines section 15126.4, an environmental document shall describe feasible measures which could mitigate for impacts below a significant level under CEQA.

    a) Level of Detail. Mitigation measures must be feasible, effective, implemented, and fully enforceable/imposed by the lead agency through permit conditions, agreements, or other legally binding instruments (Pub. Resources Code, § 21081.6(b); CEQA Guidelines, §§ 15126.4, 15041). A public agency shall provide the measures that are fully enforceable through permit conditions, agreements, or other measures (Pub. Resources Code, § 21081.6). CDFW recommends that the City prepare mitigation measures that are specific, detailed (i.e., responsible party, timing, specific actions, location), and clear in order for a measure to be fully enforceable and implemented successfully via a mitigation monitoring and/or reporting program (CEQA Guidelines, § 15097; Pub. Resources Code, § 21081.6). Adequate disclosure is necessary so CDFW may provide comments on the adequacy and feasibility of proposed mitigation measures.

    b) Disclosure of Impacts. If a proposed mitigation measure would cause one or more significant effects, in addition to impacts caused by the Project as proposed, the environmental document should include a discussion of the effects of proposed mitigation measures [CEQA Guidelines, § 15126.4(a)(1)]. In that regard, the environmental document should provide an adequate, complete, and detailed disclosure about a project’s proposed mitigation measure(s). Adequate disclosure is necessary so CDFW may assess the potential impacts of proposed mitigation measures.

3) Biological Baseline Assessment. An adequate biological resources assessment should provide a complete assessment and impact analysis of the flora and fauna within and adjacent to a project site and where a project may result in ground disturbance. The assessment and analysis should place emphasis upon identifying endangered, threatened, sensitive, regionally, and locally unique species, and sensitive habitats. Impact analysis will

aid in determining any direct, indirect, and cumulative biological impacts, as well as specific mitigation or avoidance measures necessary to offset those impacts. CDFW recommends avoiding any sensitive natural communities found on or adjacent to a project. CDFW also considers impacts to Species of Special Concern a significant direct and cumulative adverse effect without implementing appropriate avoid and/or mitigation measures. A project-level environmental document should include the following information:

a) Information on the regional setting that is critical to an assessment of environmental impacts, with special emphasis on resources that are rare or unique to the region [CEQA Guidelines, § 15125(c)]. An environmental document should include measures to fully avoid and otherwise protect Sensitive Natural Communities from project-related impacts. CDFW considers these communities as threatened habitats having both regional and local significance. Plant communities, alliances, and associations with a state-wide ranking of S1, S2, S3 and S4 should be considered sensitive and declining at the local and regional level. These ranks can be obtained by visiting Vegetation Classification and Mapping Program - Natural Communities webpage (CDFW 2020a);

b) A thorough, recent, floristic-based assessment of special status plants and natural communities following CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018). Adjoining habitat areas should be included where project construction and activities could lead to direct or indirect impacts off site;

c) Floristic, alliance- and/or association-based mapping and vegetation impact assessments conducted at a project site and within the neighboring vicinity. The Manual of California Vegetation (MCV), second edition, should also be used to inform this mapping and assessment (Sawyer et al. 2009). Adjoining habitat areas should be included in this assessment where project activities could lead to direct or indirect impacts off site. Habitat mapping at the alliance level will help establish baseline vegetation conditions;

d) A complete, recent, assessment of the biological resources associated with each habitat type on site and within adjacent areas that could also be affected by a project. CDFW’s California Natural Diversity Database (CNDDB) in Sacramento should be contacted to obtain current information on any previously reported sensitive species and habitat (CDFW 2020b). An assessment should include a nine-quadrangle search of the CNDDB to determine a list of species potentially present at a project site. A lack of records in the CNDDB does not mean that rare, threatened, or endangered plants and wildlife do not occur in the project site. Field verification for the presence or absence of sensitive species is necessary to provide a complete biological assessment for adequate CEQA review [CEQA Guidelines, § 15003(i)];

e) A complete, recent, assessment of rare, threatened, and endangered, and other sensitive species on site and within the area of potential effect, including California Species of Special Concern, and California Fully Protected Species (Fish & G. Code, §§ 3511, 4700, 5050, and 5515). Species to be addressed should include all those which meet the CEQA definition of endangered, rare, or threatened species (CEQA Guidelines, § 15380). Seasonal variations in use of a project site should also be addressed such as wintering, roosting, nesting, and foraging habitat. Focused species-specific surveys, conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, may be required if suitable habitat is present. See CDFW's Survey and Monitoring Protocols and Guidelines for established survey protocol for select species (CDFW 2020c). Acceptable species-specific survey procedures may be developed in consultation with CDFW and the U.S. Fish and Wildlife Service; and,

f) A recent wildlife and rare plant survey. CDFW generally considers biological field assessments for wildlife to be valid for a one-year period, and assessments for rare plants may be considered valid for a period of up to three years. Some aspects of a proposed project may warrant periodic updated surveys for certain sensitive taxa, particularly if build out could occur over a protracted time frame or in phases.

g) A biological resources survey should include identification and delineation of any rivers, streams, and lakes and their associated natural plant communities/habitats. This includes any culverts, ditches, storm channels that may transport water, sediment, pollutants, and discharge into rivers, streams, and lakes.

4) Data. CEQA requires that information developed in environmental impact reports be incorporated into a database which may be used to make subsequent or supplemental environmental determinations [Pub. Resources Code, § 21003, subd. (e)]. Accordingly, please report any special status species and natural communities detected by completing and submitting CNDDB Field Survey Forms (CDFW 2020d). The City should ensure data collected at a project-level has been properly submitted, with all data fields applicable filled out. The data entry should also list pending development as a threat and then update this occurrence after impacts have occurred.

5) Biological Direct, Indirect, and Cumulative Impacts. CDFW recommends providing a thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts. The DEIR should address the following:

a) A discussion regarding Project-related indirect impacts on biological resources, including resources in nearby public lands, open space, adjacent natural habitats, riparian ecosystems, and any designated and/or proposed or existing reserve lands [e.g., preserve lands associated with a Natural Community Conservation Plan (NCCP, Fish & G. Code, § 2800 et. seq.)]. Impacts on, and maintenance of, wildlife corridor/movement areas, including access to undisturbed habitats in adjacent areas, should be fully evaluated in the DEIR;

b) A discussion of both the short-term and long-term effects to species population distribution and concentration and alterations of the ecosystem supporting the species impacted [CEQA Guidelines, § 15126.2(a)];

c) A discussion of potential adverse impacts from lighting, noise, temporary and permanent human activity, and exotic species, and identification of any mitigation measures;

d) A discussion on Project-related changes on drainage patterns; the volume, velocity, and frequency of existing and post-Project surface flows; polluted runoff; soil erosion and/or sedimentation in streams and water bodies; and, post-Project fate of runoff from the Project sites. The discussion should also address the potential water extraction activities and the potential resulting impacts on the habitat (if any) supported by the groundwater. Mitigation measures proposed to alleviate such Project impacts should be included;

e) An analysis of impacts from proposed changes to land use designations and zoning, and existing land use designation and zoning located nearby or adjacent to natural areas that may inadvertently contribute to wildlife-human interactions. A discussion of possible conflicts and mitigation measures to reduce these conflicts should be included in the DEIR; and,

f) A cumulative effects analysis, as described under CEQA Guidelines section 15130. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant and wildlife species, habitat, and vegetation communities. If the City determines that the Project would not have a cumulative impact, the environmental document should indicate why the cumulative impact is not significant. The City's conclusion should be supported by facts and analyses [CEQA Guidelines, § 15130(a)(2)].

6) Project Description and Alternatives. To enable CDFW to adequately review and comment on the proposed Project from the standpoint of the protection of plants, fish, and wildlife, we recommend the following information be included in the DEIR:

a) A complete discussion of the purpose and need for, and description of, the proposed Project;

b) CEQA Guidelines section 15126.6(a) states that an environmental document shall describe a reasonable range of potentially feasible alternatives to the Project, or to the location of the Project, which would feasibly attain most of the basic objectives of the Project but would avoid or substantially lessen any of the significant effects of the Project. CEQA Guidelines section 15126.6(f)(2) states if the Lead Agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion and should include reasons in the environmental document; and,

c) A range of feasible alternatives to Project component location and design features to avoid or otherwise minimize direct and indirect impacts to sensitive biological resources and wildlife movement areas. CDFW recommends the City consider configuring Project construction and activities, as well as the development footprint, in such a way as to fully avoid impacts to sensitive and special status plants and wildlife species, habitat, and sensitive vegetation communities. CDFW also recommends the City consider establishing appropriate setbacks from sensitive and special status biological resources. Setbacks should not be impacted by ground disturbance or hydrological changes for the duration of the Project and from any future development. As a general rule, CDFW recommends reducing or clustering the development footprint to retain unobstructed spaces for vegetation and wildlife and provide connections for wildlife between properties and minimize obstacles to open space.

Project alternatives should be thoroughly evaluated, even if an alternative would impede, to some degree, the attainment of the Project objectives or would be more costly (CEQA

Guidelines, § 15126.6).

d) Where the Project may impact aquatic and riparian resources, CDFW recommends the City consider alternatives that would fully avoid impacts to such resources. CDFW also recommends alternatives that would allow not impede, alter, or otherwise modify existing surface flow; watercourse and meander; and water-dependent ecosystems and vegetation communities. Project-related designs should consider elevated crossings to avoid channelizing or narrowing of streams. Any modifications to a river, creek, or stream may cause or magnify upstream bank erosion, channel incision, and drop in water level and cause the stream to alter its course of flow.

7) <u>CESA</u>. CDFW considers adverse impacts to a species protected by CESA to be significant without mitigation under CEQA. As to CESA, take of any endangered, threatened, candidate species, or CESA-listed plant species that results from the Project is prohibited, except as authorized by state law (Fish & G. Code §§ 2080, 2085; Cal. Code Regs., tit. 14, §786.9). Consequently, if the Project or any Project-related activity during the life of the Project will result in take of a species designated as endangered or threatened, or a candidate for listing under CESA, CDFW recommends that the Project proponent seek appropriate take authorization under CESA prior to implementing the Project. Appropriate authorization from CDFW may include an Incidental Take Permit (ITP) or a consistency determination in certain circumstances, among other options [Fish & Game Code, §§ 2080.1, 2081, subds. (b) and (c)]. Early consultation is encouraged, as significant modification to a Project and mitigation measures may be required in order to obtain a CESA Permit. Revisions to the Fish and Game Code, effective January 1998, may require that CDFW issue a separate CEQA document for the issuance of an ITP unless the Project CEQA document addresses all Project impacts to CESA-listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of an ITP. For these reasons, biological mitigation monitoring and reporting proposals should be of sufficient detail and resolution to satisfy the requirements for a CESA ITP.

8) <u>Jurisdictional Waters</u>. As a Responsible Agency under CEQA, CDFW has authority over activities in streams and/or lakes that will divert or obstruct the natural flow, or change the bed, channel, or bank (including vegetation associated with the stream or lake) of a river or stream, or use material from a streambed. For any such activities, the project applicant (or "entity") must provide written notification to CDFW pursuant to Fish and Game Code Section 1600 *et seq*.

a) CDFW's issuance of a Lake and Streambed Alteration (LSA) Agreement for a project that is subject to CEQA will require CEQA compliance actions by CDFW as a Responsible Agency. As a Responsible Agency, CDFW may consider the environmental document of the local jurisdiction (Lead Agency) for the project. To minimize additional requirements by CDFW pursuant to section 1600 *et seq.* and/or under CEQA, the environmental document should fully identify the potential impacts to the stream or riparian resources and provide adequate avoidance, mitigation, monitoring and reporting commitments for issuance of the LSA Agreement. Please visit CDFW's <u>Lake and Streambed Alteration Program</u> webpage for information about LSA Notification (CDFW 2020e).

b) In the event the project area may support aquatic, riparian, and wetland habitats; a preliminary delineation of the streams and their associated riparian habitats should be included in the environmental document. The delineation should be conducted pursuant to the U.S. Fish and Wildlife Service (USFWS) wetland definition adopted by CDFW (Cowardin et al. 1970). Be advised that some wetland and riparian habitats subject to CDFW's authority may extend beyond the jurisdictional limits of the U.S. Army Corps of Engineers' Section 404 permit and Regional Water Quality Control Board Section 401 Certification.

c) In project areas which may support ephemeral or episodic streams, herbaceous vegetation, woody vegetation, and woodlands also serve to protect the integrity of these resources and help maintain natural sedimentation processes; therefore, CDFW recommends effective setbacks be established to maintain appropriately sized vegetated buffer areas adjoining ephemeral drainages.

d) Project-related changes in upstream and downstream drainage patterns, runoff, and sedimentation should be included and evaluated in the environmental document.

e) As part of the LSA Notification process, CDFW requests a hydrological evaluation of the 100, 50, 25, 10, 5, and 2-year frequency storm event for existing and proposed conditions. CDFW recommends the environmental document evaluate the results and address avoidance, minimization, and/or mitigation measures that may be necessary to reduce potential significant impacts.

9) Wetland Resources. CDFW, as described in Fish and Game Code section 703(a), is guided by the Fish and Game Commission's (Commission) policies. The Wetlands Resources policy the Commission "…seek[s] to provide for the protection, preservation, restoration, enhancement and expansion of wetland habitat in California (CFGC 2020). Further, it is the policy of the Fish and Game Commission to strongly discourage development in or conversion of wetlands. It opposes, consistent with its legal authority, any development or conversion that would result in a reduction of wetland acreage or wetland habitat values. To that end, the Commission opposes wetland development proposals unless, at a minimum, project mitigation assures there will be 'no net loss' of either wetland habitat values or acreage. The Commission strongly prefers mitigation which would achieve expansion of wetland acreage and enhancement of wetland habitat values."

a) The Wetlands Resources policy provides a framework for maintaining wetland resources and establishes mitigation guidance. CDFW encourages avoidance of wetland resources as a primary mitigation measure and discourages the development or type conversion of wetlands to uplands. CDFW encourages activities that would avoid the reduction of wetland acreage, function, or habitat values. Once avoidance and minimization measures have been exhausted, a project must include mitigation measures to assure a "no net loss" of either wetland habitat values, or acreage, for unavoidable impacts to wetland resources. Conversions include, but are not limited to, conversion to subsurface drains, placement of fill or building of structures within the wetland, and channelization or removal of materials from the streambed. All wetlands and watercourses, whether ephemeral, intermittent, or perennial, should be retained and provided with substantial setbacks, which preserve the riparian and aquatic values and functions for the benefit to on-site and off-site wildlife populations. CDFW recommends mitigation measures to compensate for unavoidable impacts be included in an environmental document and these measures should compensate for the loss of function and value.

b) The Fish and Game Commission’s Water policy guides CDFW on the quantity and quality of the waters of this State that should be apportioned and maintained respectively so as to produce and sustain maximum numbers of fish and wildlife; to provide maximum protection and enhancement of fish and wildlife and their habitat; encourage and support programs to maintain or restore a high quality of the waters of this State; prevent the degradation thereof caused by pollution and contamination; and, endeavor to keep as much water as possible open and accessible to the public for the use and enjoyment of fish and wildlife. CDFW recommends avoidance of water practices and structures that use excessive amounts of water, and minimization of impacts that negatively affect water quality, to the extent feasible (Fish & G. Code, § 5650).

10) Translocation/Salvage of Plants and Animal Species. Translocation and transplantation is the process of moving an individual from a project site and permanently moving it to a new location. CDFW generally does not support the use of, translocation or transplantation as the primary mitigation strategy for unavoidable impacts to rare, threatened, or endangered plant or animal species. Studies have shown that these efforts are experimental and the outcome unreliable. CDFW has found that permanent preservation and management of habitat capable of supporting these species is often a more effective long-term strategy for conserving sensitive plants and animals and their habitats.

11) Compensatory Mitigation. An environmental document should include mitigation measures for adverse Project related direct or indirect impacts to sensitive plants, animals, and habitats. Mitigation measures should emphasize avoidance and reduction of project-related impacts. For unavoidable impacts, on-site habitat restoration or enhancement should be discussed in detail. If on-site mitigation is not feasible or would not be biologically viable and therefore not adequately mitigate the loss of biological functions and values, off-site mitigation through habitat creation and/or acquisition and preservation in perpetuity should be addressed. Areas proposed as mitigation lands should be protected in perpetuity with a conservation easement, financial assurance and dedicated to a qualified entity for long-term management and monitoring. Under Government Code, section 65967, the Lead Agency must exercise due diligence in reviewing the qualifications of a governmental entity, special district, or nonprofit organization to effectively manage and steward land, water, or natural resources on mitigation lands it approves.

12) Long-term Management of Mitigation Lands. For proposed preservation and/or restoration, an environmental document should include measures to protect the targeted habitat values from direct and indirect negative impacts in perpetuity. The objective should be to offset the project-induced qualitative and quantitative losses of wildlife habitat values. Issues that should be addressed include (but are not limited to) restrictions on access, proposed land dedications, monitoring and management programs, control of illegal dumping, water pollution, and increased human intrusion. An appropriate non-wasting endowment should be set aside to provide for long-term management of mitigation lands.

Conclusion

We appreciate the opportunity to comment on the NOP for the Burbank Housing Element Update and Associated General Plan Updates Project to assist the City of Burbank in identifying and mitigating Project impacts on biological resources. If you have any questions or comments regarding this letter, please contact Andrew Valand, Environmental Scientist, at Andrew.Valand@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Erinn Wilson-Olgin
B6E58CFE24724F5...

Erinn Wilson-Olgin
Environmental Program Manager I
South Coast Region

ec: CDFW
Erinn Wilson-Olgin, Los Alamitos – Erinn.Wilson-Olgin@wildlife.ca.gov
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Susan Howell, San Diego – Susan.Howell@wildlife.ca.gov
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Pasadena, California 91101

VIA ELECTRONIC & U.S. MAIL

March 19, 2021

Zizette Mullins,
City Clerk
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Burbank, CA 91510
Em: zmullins@burbankca.gov

Lisa Frank
Senior Planner
City of Burbank
150 North Third Street
Burbank, CA 91502
Em: lfrank@burbankca.gov

RE: Public Records Act and Mailing List Request Regarding Burbank Housing Element Update and Associated General Plan Updates (SCH #: 2021020393).

Dear Ms. Mullins and Ms. Frank,

On behalf of Southwest Regional Council of Carpenters ("**SWRCC**") and its members, this Office requests that the City of Burbank ("**City**") provide any and all information referring or related to the Burbank Housing Element Update and Associated General Plan Updates ("**Project**") pursuant to the California Public Records Act ("**PRA**"), Cal. Government ("**Gov't**") Code §§ 6250–6270 from on or after <Date Range> (collectively "**PRA Request**").

Moreover, the SWRCC requests that City provide notice for any and all notices referring or related to the Project issued under the California Environmental Quality Act ("**CEQA**"), Cal Public Resources Code ("**PRC**") § 21000 *et seq*, and the California Planning and Zoning Law ("**Planning and Zoning Law**"), Cal. Gov't Code §§ 65000–65010. California Public Resources Code Sections 21092.2, and 21167(f) and

Government Code Section 65092 require agencies to mail such notices to any person who has filed a written request for them with the clerk of the agency's governing body.

The Southwest Regional Council of Carpenters is a labor union representing 50,000 union carpenters in six states, including in southern California, and has a strong interest in well-ordered land use planning and addressing the environmental impacts of development projects, such as the Project.

I. PUBLIC RECORDS ACT REQUEST.

SWRCC is requesting any and all information referring or related to the Project.

The Public Records Act defines the term "public record" broadly as "any writing containing information relating to the conduct of the public's business . . . regardless of physical form and characteristics." Gov't Code § 6252(d). "Records" includes all communications relating to public business regardless of physical form or characteristics, including but not limited to any writing, picture, sound, or symbol, whether paper, magnetic, electronic, text, other media, or written verification of any oral communication. Included in this request are any references in any appointment calendars and applications, phone records, or text records. These "records" are to include, but are not limited to correspondences, e-mails, reports, letters, memorandums, and communications by any employee or elected official of City concerning the Project.

Please include in your response to this request the following examples of "records," as well as any similar physical or electronic forms of communication: any form of writing such as correspondence, electronic mail records ("email"), legal and factual memoranda, facsimiles, photographs, maps, videotapes, film, data, reports, notes, audiotapes, or drawings. Cal. Government Code § 6252(g) (defining a writing to including "any record thereby created, regardless of the manner in which the record has been stored"). Responsive correspondence should include, inter alia, emails, text messages, or any other form of communication regardless of whether they were sent or received on public or privately-owned electronic devices "relating to the conduct of the public's business." Cal. Government Code § 6252(e); *Citizens for Ceres v. Super. Ct.* ("*Ceres*") (2013) 217 Cal. App. 4th 889, 909; *Citizens for Open Gov't v. City of Lodi ("Lodi")* (2012) 205 Cal.App.4th 296, 307, 311; *City of San Jose v. Superior Court* (2017) 2 Cal. 5th 608, 625 (finding that a public employee or officer's "writings about public business are not excluded" from the California Public Records Act "simply because they have been sent, received, or stored in a personal account.") .

This Office requests any and all information referring or related to the Project, including but not limited to:

(1) All Project application materials;

(2) All staff reports and related documents prepared by the City with respect to its compliance with the substantive and procedural requirements of the California Environmental Quality Act, Public Resources Code § 21000 et seq., and the CEQA Guidelines, title 14, California Code of Regulations, § 15000 et seq. (collectively "**CEQA**") and with respect to the action on the Project;

(3) All staff reports and related documents prepared by the City and written testimony or documents submitted by any person relevant to any findings or statement of overriding considerations adopted by the agency pursuant to CEQA;

(4) Any transcript or minutes of the proceedings at which the decisionmaking body of the City heard testimony on, or considered any environmental document on, the Project, and any transcript or minutes of proceedings before any advisory body to the public agency that were presented to the decisionmaking body prior to action on the environmental documents or on the Project;

(5) All notices issued by the City to comply with CEQA or with any other law governing the processing and approval of the Project;

(6) All written comments received in response to, or in connection with, environmental documents prepared for the Project, including responses to the notice of preparation;

(7) All written evidence or correspondence submitted to, or transferred from, the City with respect to compliance with CEQA or with respect to the Project;

(8) Any proposed decisions or findings submitted to the decisionmaking

body of the City by its staff, or the Project proponent, Project opponents, or other persons;

(9) The documentation of the final City decision and approvals, including the final environmental impact report, mitigated negative declaration, negative declaration, or notice of exemption, and all documents, in addition to those referenced in paragraph (3), cited or relied on in the findings or in a statement of overriding considerations adopted pursuant to CEQA;

(10) Any other written materials relevant to the public agency's compliance with CEQA or to its decision on the merits of the Project, including the initial study, any drafts of any environmental document, or portions thereof, that have been released for public review, and copies of studies or other documents relied upon in any environmental document prepared for the Project and either made available to the public during the public review period or included in the City 's files on the Project, and all internal agency communications, including staff notes and memoranda related to the Project or to compliance with CEQA; and

(11) The full written record before any inferior administrative decisionmaking body whose decision was appealed to a superior administrative decisionmaking body prior to the filing of any litigation.

Please respond within 10 days from the date you receive this request as to whether this request specifies identifiable records not exempt from disclosure under the PRA or otherwise privileged or confidential, and are therefore subject to disclosure. This Office understands that this time may be extended up to 14 days for unusual circumstances as provided by Cal. Government Code § 6253(c), and that we will be notified of any extension and the reasons justifying it.

We request that you provide all documents in electronic format and waive any and all fees associated with this Request. SWRCC is a community-based organization. Please notify and obtain express approval from this Office before incurring any duplication costs.

<u>If any of the above requested documents are available online, please provide us with the URL web address at which the documents may be downloaded. If any of the</u>

requested documents are retained by the City in electronic computer-readable format such as PDF (portable document format), please provide us with pdf copies of the documents via email, or inform us of the location at which we can copy these documents electronically.

In preparing your response, please bear in mind that you have an obligation under Government Code section 6253.1 to (1) identify all records and information responsive to our request or the purpose of our request; (2) describe the information technology and physical location in which the records exist; and (3) provide suggestions for overcoming any practical basis for denying access to the records or information sought.

In responding to this request, please bear in mind that any exemptions from disclosure you may believe to be applicable are to be narrowly construed. *Marken v. Santa Monica-Malibu Unif. Sch. Dist.* (2012) 202 Cal. App. 4th 1250,1262; and may be further narrowed or eliminated by the adoption of Proposition 59, which amended article I, section 3(b)(2) of the California Constitution to direct that any "statute ... or other authority ... [that] limits the right of access" to "information concerning the conduct of the people's business" must be "narrowly construed."

As for any records that you nonetheless decline to produce on the grounds of an exemption, please bear in mind that the case law under the Public Records Act imposes a duty on you to distinguish between the exempt and the non-exempt portion of any such records, and to attempt in good faith to redact the exempt portion and to disclose the balance of such documents.

Please bear in mind further that should you choose to withhold any document from disclosure, you have a duty under Government Code section 6255, subd. (a) to "justify withholding any record by demonstrating that the record in question is exempt under express provisions" of the Public Records Act or that "the public interest served by not disclosing the record clearly outweighs the public interest served by disclosure of the record."

Finally, please note that you must retain and not destroy any and all records, notwithstanding any local record retention or document destruction policies. As the Court noted in *Golden Door Properties, LLC v. Superior Court of San Diego County* (2020) 53 Cal.App.5th 733 that a public agency "must retain '[a]ll written evidence or correspondence submitted to, or transferred from' . . . with respect to" CEQA compliance or "with respect to the project."

II. NOTICE LIST REQUEST.

We also ask that you put this Office on its notice list for any and all notices issued under the CEQA and the Planning and Zoning Law.

In particular, we request that City send by mail or electronic mail notice of any and all actions or hearings related to activities undertaken, authorized, approved, permitted, licensed, or certified by the City and any of its subdivision for the Project, or supported, in whole or in part, through permits, contracts, grants, subsidies, loans, or other forms of approvals, actions or assistance, including but not limited to the following:

- Notices of any public hearing held in connection with the Project; as well as
- Any and all notices prepared pursuant to CEQA, including but not limited to:
- Notices of determination that an Environmental Impact Report ("EIR") or supplemental EIR is required for a project, prepared pursuant to Public Resources Code Section 21080.4;
- Notices of availability of an EIR or a negative declaration for a project prepared pursuant to Public Resources Code Section 21152 and Section 15087 of Title 14 of the California Code of Regulations;
- Notices of approval or determination to carry out a project, prepared pursuant to Public Resources Code Section 21152 or any other provision of law;
- Notice of approval or certification of any EIR or negative declaration prepared pursuant to Public Resources Code Section 21152 or any other provision of law;
- Notice of exemption from CEQA prepared pursuant to Public Resources Code section 21152 or any other provision of law; and
- Notice of any Final EIR prepared pursuant to CEQA.

This Office is requesting notices of any approvals or public hearings under CEQA and the California Planning and Zoning Law. This request is filed pursuant to California Public Resources Code Sections 21092.2, and 21167(f) and Government Code Section 65092 requiring agencies to mail such notices to any person who has filed a written request for them with the clerk of the agency's governing body.

Please send notice by regular and electronic mail to:

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Suite 104
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Em: mitch@mitchtsailaw.com
Em: greg@mitchtsailaw.com
Em: leon@mitchtsailaw.com

We look forward to working with you. If you have any questions or concerns, please do not hesitate to contact our Office.

Sincerely,

Mitchell M. Tsai
Attorneys for Southwest Regional Council
of Carpenters

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 7 – Office of Regional Planning
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www.dot.ca.gov

Making Conservation
a California Way of Life.

March 22, 2021

Lisa Frank
City of Burbank, Community Development Department
150 North Third Street
Burbank, CA 91502

RE: Burbank Housing Element Update and
Associated General Plan Updates –
Recirculated Notice of Preparation of an
Environmental Impact Report (NOP)
SCH # 2021020393
GTS # 07-LA-2021-03528
Vic. LA-5/PM: 29.126

Dear Lisa Frank:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced recirculated NOP. The project involves an update to the City of Burbank's Housing Element for the 2021-2029 planning period, along with minor updates to the Safety and Mobility Elements, and the incorporation of environmental justice goals and objectives to the City of Burbank's 2035 General Plan. The proposed Housing Element Update establishes programs and actions to further the goal of meeting the existing and projected housing needs of all household income levels of the community. It will also provide evidence of the City's ability to accommodate the Regional Housing Needs Assessment (RHNA) allocation through the year 2029, as established by the Southern California Association of Governments, and identifies any rezoning needed to reach the required housing capacity. In addition, the project includes updates to the Safety Element triggered under State law by an update to the Housing Element, as well as updates to the Mobility Element to incorporate vehicle miles traveled (VMT) metrics. The NOP has been recirculated because the forthcoming EIR will now analyze the impacts of 10,088 housing units, rather than 8,800 units as originally planned, to account for a 15% buffer for the RHNA. The City of Burbank is the Lead Agency under the California Environmental Quality Act (CEQA).

The project, which spans the entire City of Burbank, intersects with State Route 134 (SR-134) and Interstate 5 (I-5), and is located in close proximity to the United States 101 (US-101). From reviewing the recirculated NOP, Caltrans has the same comments as it did on the original NOP, which are the following:

- For information on determining transportation impacts in terms of VMT on the State Highway System, see the *Technical Advisory on Evaluating Transportation Impacts in CEQA* by the California Governor's Office of Planning and Research (OPR), dated December 2018: http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf.
- The City can also refer to Caltrans' updated *Vehicle Miles Traveled-Focused Transportation Impact Study Guide* (TISG), dated May 2020 and released on Caltrans' website in July 2020: https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-05-20-approved-vmt-focused-tisg-a11y.pdf. Caltrans' new TISG is largely based on the OPR 2018 Technical Advisory.

- Caltrans looks forward to reviewing the VMT analysis for this project. As discussed in Caltrans' new TISG, Caltrans strongly recommends undertaking project VMT analysis, significance determination, and potential mitigation in a manner consistent with OPR's Technical Advisory.
- The updated TISG states, "Additional future guidance will include the basis for requesting transportation impact analysis that is not based on VMT. This guidance will include a simplified safety analysis approach that reduces risks to all road users and that focuses on multi-modal conflict analysis as well as access management issues." Since releasing the TISG, Caltrans has released interim safety analysis guidance, dated December 2020 and found here, for the City's reference: https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-12-22-updated-interim-ldigr-safety-review-guidance-a11y.pdf.
- Caltrans encourages lead agencies to complete traffic safety impact analysis in the California Environmental Quality Act (CEQA) review process so that, through partnerships and collaboration, California can reach zero fatalities and serious injuries by 2050.

The following information is included for your consideration.

The mission of Caltrans is to provide a safe and reliable transportation network that serves all people and respects the environment. Furthermore, Caltrans encourages Lead Agencies to implement Transportation Demand Management (TDM) strategies that reduce VMT and Greenhouse Gas (GHG) emissions. For TDM options to potentially include in the updated Housing, Safety, or Mobility elements, please refer to:

- The 2010 *Quantifying Greenhouse Gas Mitigation Measures* report by the California Air Pollution Control Officers Association (CAPCOA), available at http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf, or
- *Integrating Demand Management into the Transportation Planning Process: A Desk Reference* (Chapter 8) by the Federal Highway Administration (FHWA), available at https://ops.fhwa.dot.gov/publications/fhwahop12035/index.htm.

If you have any questions about these comments, please contact Emily Gibson, the project coordinator, at Emily.Gibson@dot.ca.gov, and refer to GTS # 07-LA-2021-03528.

Sincerely,

Miya Edmonson

MIYA EDMONSON
IGR/CEQA Branch Chief
cc: Scott Morgan, State Clearinghouse

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

SENT VIA E-MAIL:
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Lisa Frank, Senior Planner
City of Burbank, Community Development Department
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Burbank, California 91502

March 25, 2021

Notice of Preparation of a Draft Environmental Impact Report for the Burbank Housing Element Update and Associated General Plan Updates (Proposed Project)

South Coast Air Quality Management District (South Coast AQMD) staff appreciates the opportunity to comment on the above-mentioned document. Our comments are recommendations on the analysis of potential air quality impacts from the Proposed Project that should be included in the Draft Environmental Impact Report (EIR). Please send a copy of the Draft EIR upon its completion and public release directly to South Coast AQMD as copies of the Draft EIR submitted to the State Clearinghouse are not forwarded. **In addition, please send all appendices and technical documents related to the air quality, health risk, and greenhouse gas analyses and electronic versions of all emission calculation spreadsheets, and air quality modeling and health risk assessment input and output files (not PDF files). Any delays in providing all supporting documentation for our review will require additional review time beyond the end of the comment period.**

CEQA Air Quality Analysis

Staff recommends that the Lead Agency use South Coast AQMD's CEQA Air Quality Handbook and website[1] as guidance when preparing the air quality and greenhouse gas analyses. It is also recommended that the Lead Agency use the CalEEMod[2] land use emissions software, which can estimate pollutant emissions from typical land use development and is the only software model maintained by the California Air Pollution Control Officers Association.

South Coast AQMD has developed both regional and localized significance thresholds. South Coast AQMD staff recommends that the Lead Agency quantify criteria pollutant emissions and compare the emissions to South Coast AQMD's CEQA regional pollutant emissions significance thresholds[3] and localized significance thresholds (LSTs)[4] to determine the Proposed Project's air quality impacts. The localized analysis can be conducted by either using the LST screening tables or performing dispersion modeling.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the Proposed Project and all air pollutant sources related to the Proposed Project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of

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[1] South Coast AQMD's CEQA Handbook and other resources for preparing air quality analyses can be found at: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook.

[2] CalEEMod is available free of charge at: www.caleemod.com.

[3] South Coast AQMD's CEQA regional pollutant emissions significance thresholds can be found at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf.

[4] South Coast AQMD's guidance for performing a localized air quality analysis can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds.

heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips, and hauling trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers and air pollution control devices), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, such as sources that generate or attract vehicular trips, should be included in the analysis. Furthermore, emissions from the overlapping construction and operational activities should be combined and compared to South Coast AQMD's regional air quality CEQA *operational* thresholds to determine the level of significance.

If the Proposed Project generates diesel emissions from long-term construction or attracts diesel-fueled vehicular trips, especially heavy-duty diesel-fueled vehicles, it is recommended that the Lead Agency perform a mobile source health risk assessment[5].

The South Coast AQMD's *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*[6] includes suggested policies that local governments can use in their General Plans or through local planning to prevent or reduce potential air pollution impacts and protect public health. It is recommended that the Lead Agency review this Guidance Document as a tool when making local planning and land use decisions.

Mitigation Measures

In the event that the Proposed Project results in significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized to minimize these impacts. Any impacts resulting from mitigation measures must also be analyzed. Several resources to assist the Lead Agency with identifying potential mitigation measures for the Proposed Project include South Coast AQMD's CEQA Air Quality Handbook[1], South Coast AQMD's Mitigation Monitoring and Reporting Plan for the 2016 Air Quality Management Plan[7], and Southern California Association of Government's Mitigation Monitoring and Reporting Plan for the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy[8].

South Coast AQMD staff is available to work with the Lead Agency to ensure that air quality, greenhouse gas, and health risk impacts from the Proposed Project are accurately evaluated and mitigated where feasible. If you have any questions regarding this letter, please contact me at lsun@aqmd.gov.

Sincerely,
Lijin Sun
Lijin Sun, J.D.
Program Supervisor, CEQA IGR
Planning, Rule Development & Area Sources

LS
LAC210325-01
Control Number

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[5] South Coast AQMD's guidance for performing a mobile source health risk assessment can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis.

[6] South Coast AQMD. 2005. *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*. Available at: http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf.

[7] South Coast AQMD's 2016 Air Quality Management Plan can be found at: http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2017/2017-mar3-035.pdf (starting on page 86).

[8] Southern California Association of Governments' 2020-2045 RTP/SCS can be found at: https://www.connectsocal.org/Documents/PEIR/certified/Exhibit-A_ConnectSoCal_PEIR.pdf.

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SOUTHERN CALIFORNIA
ASSOCIATION OF GOVERNMENTS
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April 15, 2021

Ms. Lisa Frank, Senior Planner
City of Burbank, Community Development Department
150 North Third Street
Burbank, California 91502
Phone: (818) 238-5250
E-mail: lfrank@burbankca.gov

RE: SCAG Comments on the Notice of Preparation of a Draft Environmental Impact Report for the Burbank Housing Element Update [SCAG NO. IGR10359]

Dear Ms. Frank,

Thank you for submitting the Notice of Preparation of a Draft Environmental Impact Report for the Burbank Housing Element Update ("proposed project") to the Southern California Association of Governments (SCAG) for review and comment. SCAG is responsible for providing informational resources to regionally significant plans, projects, and programs per the California Environmental Quality Act (CEQA) to facilitate the consistency of these projects with SCAG's adopted regional plans, to be determined by the lead agencies.[1]

Pursuant to Senate Bill (SB) 375, SCAG is the designated Regional Transportation Planning Agency under state law and is responsible for preparation of the Regional Transportation Plan (RTP) including the Sustainable Communities Strategy (SCS). SCAG's feedback is intended to assist local jurisdictions and project proponents to implement projects that have the potential to contribute to attainment of Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) goals and align with RTP/SCS policies. Finally, SCAG is also the authorized regional agency for Inter-Governmental Review (IGR) of programs proposed for Federal financial assistance and direct Federal development activities, pursuant to Presidential Executive Order 12372.

SCAG staff has reviewed the Notice of Preparation of a Draft Environmental Impact Report for the Burbank Housing Element Update in Los Angeles County. The proposed project includes updates to the Housing Element for the 2021-2029 planning period, minor updates to the Safety and Mobility Elements, and incorporates environmental justice goals, policies, and objectives into the City's *Burbank2035* General Plan.

When available, please email environmental documentation to *IGR@scag.ca.gov* providing, at a minimum, the full public comment period for review.

If you have any questions regarding the attached comments, please contact the Inter-Governmental Review (IGR) Program, attn.: Anita Au, Senior Regional Planner, at (213) 236-1874 or IGR@scag.ca.gov. Thank you.

Sincerely,

Rongsheng Luo
Acting Manager, Compliance and Performance Monitoring

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[1] Lead agencies such as local jurisdictions have the sole discretion in determining a local project's consistency with the 2020 RTP/SCS (Connect SoCal) for the purpose of determining consistency for CEQA.

COMMENTS ON THE NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE BURBANK HOUSING ELEMENT UPDATE [SCAG NO. IGR10359]

CONSISTENCY WITH CONNECT SOCAL

SCAG provides informational resources to facilitate the consistency of the proposed project with the adopted 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS or Connect SoCal). For the purpose of determining consistency with CEQA, lead agencies such as local jurisdictions have the sole discretion in determining a local project's consistency with Connect SoCal.

CONNECT SOCAL GOALS

The SCAG Regional Council fully adopted Connect SoCal in September 2020. Connect SoCal, also known as the 2020 – 2045 RTP/SCS, builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern. The long-range visioning plan balances future mobility and housing needs with goals for the environment, the regional economy, social equity and environmental justice, and public health. The goals included in Connect SoCal may be pertinent to the proposed project. These goals are meant to provide guidance for considering the proposed project. Among the relevant goals of Connect SoCal are the following:

SCAG CONNECT SOCAL GOALS	
Goal #1:	*Encourage regional economic prosperity and global competitiveness*
Goal #2:	*Improve mobility, accessibility, reliability and travel safety for people and goods*
Goal #3:	*Enhance the preservation, security, and resilience of the regional transportation system*
Goal #4:	*Increase person and goods movement and travel choices within the transportation system*
Goal #5:	*Reduce greenhouse gas emissions and improve air quality*
Goal #6:	*Support healthy and equitable communities*
Goal #7:	*Adapt to a changing climate and support an integrated regional development pattern and transportation network*
Goal #8:	*Leverage new transportation technologies and data-driven solutions that result in more efficient travel*
Goal #9:	*Encourage development of diverse housing types in areas that are supported by multiple transportation options*
Goal #10:	*Promote conservation of natural and agricultural lands and restoration of habitats*

For ease of review, we encourage the use of a side-by-side comparison of SCAG goals with discussions of the consistency, non-consistency or non-applicability of the goals and supportive analysis in a table format. Suggested format is as follows:

SCAG CONNECT SOCAL GOALS		
	Goal	Analysis
Goal #1:	*Encourage regional economic prosperity and global competitiveness*	*Consistent: Statement as to why;* *Not-Consistent: Statement as to why;* *Or* *Not Applicable: Statement as to why;* *DEIR page number reference*
Goal #2:	*Improve mobility, accessibility, reliability and travel safety for people and goods*	*Consistent: Statement as to why;* *Not-Consistent: Statement as to why;* *Or* *Not Applicable: Statement as to why;* *DEIR page number reference*
etc.		etc.

Connect SoCal Strategies

To achieve the goals of Connect SoCal, a wide range of land use and transportation strategies are included in the accompanying twenty (20) technical reports. To view Connect SoCal and the accompanying technical reports, please visit the Connect SoCal webpage. Connect SoCal builds upon the progress from previous RTP/SCS cycles and continues to focus on integrated, coordinated, and balanced planning for land use and transportation that helps the SCAG region strive towards a more sustainable region, while meeting statutory requirements pertinent to RTP/SCSs. These strategies within the regional context are provided as guidance for lead agencies such as local jurisdictions when the proposed project is under consideration.

DEMOGRAPHICS AND GROWTH FORECASTS

A key, formative step in projecting future population, households, and employment through 2045 for Connect SoCal was the generation of a forecast of regional and county level growth in collaboration with expert demographers and economists on Southern California. From there, jurisdictional level forecasts were ground-truthed by subregions and local agencies, which helped SCAG identify opportunities and barriers to future development. This forecast helps the region understand, in a very general sense, where we are expected to grow, and allows SCAG to focus attention on areas that are experiencing change and may have increased transportation needs. After a year-long engagement effort with all 197 jurisdictions one-on-one, 82 percent of SCAG’s 197 jurisdictions provided feedback on the forecast of future growth for Connect SoCal. SCAG also sought feedback on potential sustainable growth strategies from a broad range of stakeholder groups – including local jurisdictions, county transportation commissions, other partner agencies, industry groups, community-based organizations, and the general public. Connect SoCal utilizes a bottom-up approach in that total projected growth for each jurisdiction reflects feedback received from jurisdiction staff, including city managers, community development/planning directors, and local staff. Growth at the neighborhood level (i.e., transportation analysis zone (TAZ) reflects entitled projects and adheres to current general and specific plan maximum densities as conveyed by jurisdictions (except in cases where entitled projects and development agreements exceed these capacities as calculated by SCAG). Neighborhood level growth projections also feature strategies that help to reduce greenhouse gas emissions (GHG) from automobiles and light trucks to achieve Southern California’s GHG reduction target, approved by the California Air Resources Board (CARB) in accordance with state planning law. Connect SoCal’s Forecasted Development Pattern is utilized for long range modeling purposes and does not supersede actions taken by elected bodies on future development, including entitlements and development agreements. SCAG does not have the authority to implement the plan -- neither through decisions about what type of development is built where, nor what transportation projects are ultimately built, as Connect SoCal is adopted at the jurisdictional level. Achieving a sustained regional outcome depends upon informed and intentional local action. To access jurisdictional level growth estimates and forecasts for years 2016 and 2045, please refer to the Connect SoCal Demographics and Growth Forecast Technical Report. The growth forecasts for the region and applicable jurisdictions are below.

	Adopted SCAG Region Wide Forecasts				**Adopted City of Burbank Forecasts**			
	Year 2020	**Year 2030**	**Year 2035**	**Year 2045**	**Year 2020**	**Year 2030**	**Year 2035**	**Year 2045**
Population	19,517,731	20,821,171	21,443,006	22,503,899	106,026	109,539	111,459	115,430
Households	6,333,458	6,902,821	7,170,110	7,633,451	42,764	45,219	46,370	48,640
Employment	8,695,427	9,303,627	9,566,384	10,048,822	116,547	128,658	134,780	138,711

MITIGATION MEASURES

SCAG staff recommends that you review the Final Program Environmental Impact Report (Final PEIR) for Connect SoCal for guidance, as appropriate. SCAG's Regional Council certified the PEIR and adopted the associated Findings of Fact and a Statement of Overriding Considerations (FOF/SOC) and Mitigation Monitoring and Reporting Program (MMRP) on May 7, 2020 and also adopted a PEIR Addendum and amended the MMRP on September 3, 2020 (please see the PEIR webpage and scroll to the bottom of the page for the PEIR Addendum). The PEIR includes a list of project-level performance standards-based mitigation measures that may be considered for adoption and implementation by lead, responsible, or trustee agencies in the region, as applicable and feasible. Project-level mitigation measures are within responsibility, authority, and/or jurisdiction of project-implementing agency or other public agency serving as lead agency under CEQA in subsequent project- and site- specific design, CEQA review, and decision-making processes, to meet the performance standards for each of the CEQA resource categories.

REGIONAL HOUSING NEEDS ALLOCATION

On March 4, 2021 SCAG's Regional Council adopted the 6th cycle Final Regional Housing Needs Assessment (RHNA) Allocation Plan which covers the planning period October 2021 through October 2029. The 6th cycle Final RHNA allocation for the applicable jurisdiction is below.

SCAG 6th Cycle Final RHNA Allocation for City of Burbank	
Very low income	2,553
Low income	1,418
Moderate income	1,409
Above moderate income	3,392
Total RHNA Allocation	8,772

Sixth cycle housing elements are due to the California Department of Housing and Community Development (HCD) by October 15, 2021. SCAG encourages jurisdictions to prepare the draft housing element in advance of the due date to ensure adequate time to address HCD comments and adopt a final housing element. Jurisdictions that do not have a compliant housing element may be ineligible for certain State funding and grant opportunities and may be at risk for legal action from stakeholders or HCD.

Appendix B

Initial Study

Burbank Housing and Safety Element Update

Initial Study

State Clearinghouse #2021020393

prepared by

City of Burbank
Community Development Department
150 North Third Street
Burbank, California 91502
Contact: Lisa Frank, Senior Planner

prepared with the assistance of

Rincon Consultants, Inc.
250 East 1st Street, Suite 1400
Los Angeles, California 90012

January 2022

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
rinconconsultants.com

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This report prepared on 50% recycled paper with 50% post-consumer content.

Table of Contents

Tables

Figures

Initial Study

1. Project Title

Burbank Housing and Safety Element Update[1]

2. Lead Agency Name and Address

City of Burbank - Community Development Department
150 North Third Street
Burbank, California 91502

3. Contact Person and Phone Number

Lisa Frank, Senior Planner
(818) 238-5250
lfrank@burbankca.gov

4. Project Location

The Burbank Housing and Safety Element Update (hereafter referred to as “Housing and Safety Element Update” or “proposed Project”) would apply to the entire geographic area located within the boundaries of the City of Burbank (City), which encompasses 17.1 square miles. Burbank is located in the central portion of Los Angeles County, approximately 12 miles north of downtown Los Angeles. The City is generally bounded by the Verdugo Mountains to the northeast, the City of Glendale to the southeast, the City of Los Angeles to the south and west. The City is bisected by the Interstate 5 (I-5) Freeway and the Metrolink Commuter Rail. Figure 1 and Figure 2, below, illustrate the location of the City in a regional and local context.

5. Project Sponsor’s Name and Address

City of Burbank - Community Development Department
150 North Third Street
Burbank, California 91502

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[1] The proposed Project will also include updates to the Safety Element and the various other elements of the General Plan to incorporate the goals, policies and objectives related to Environmental Justice. These updates are required for compliance with State law and to ensure consistency with the updated Housing Element. The title of the proposed Project is “Burbank Housing and Safety Element Update.”

Figure 1 Regional Location

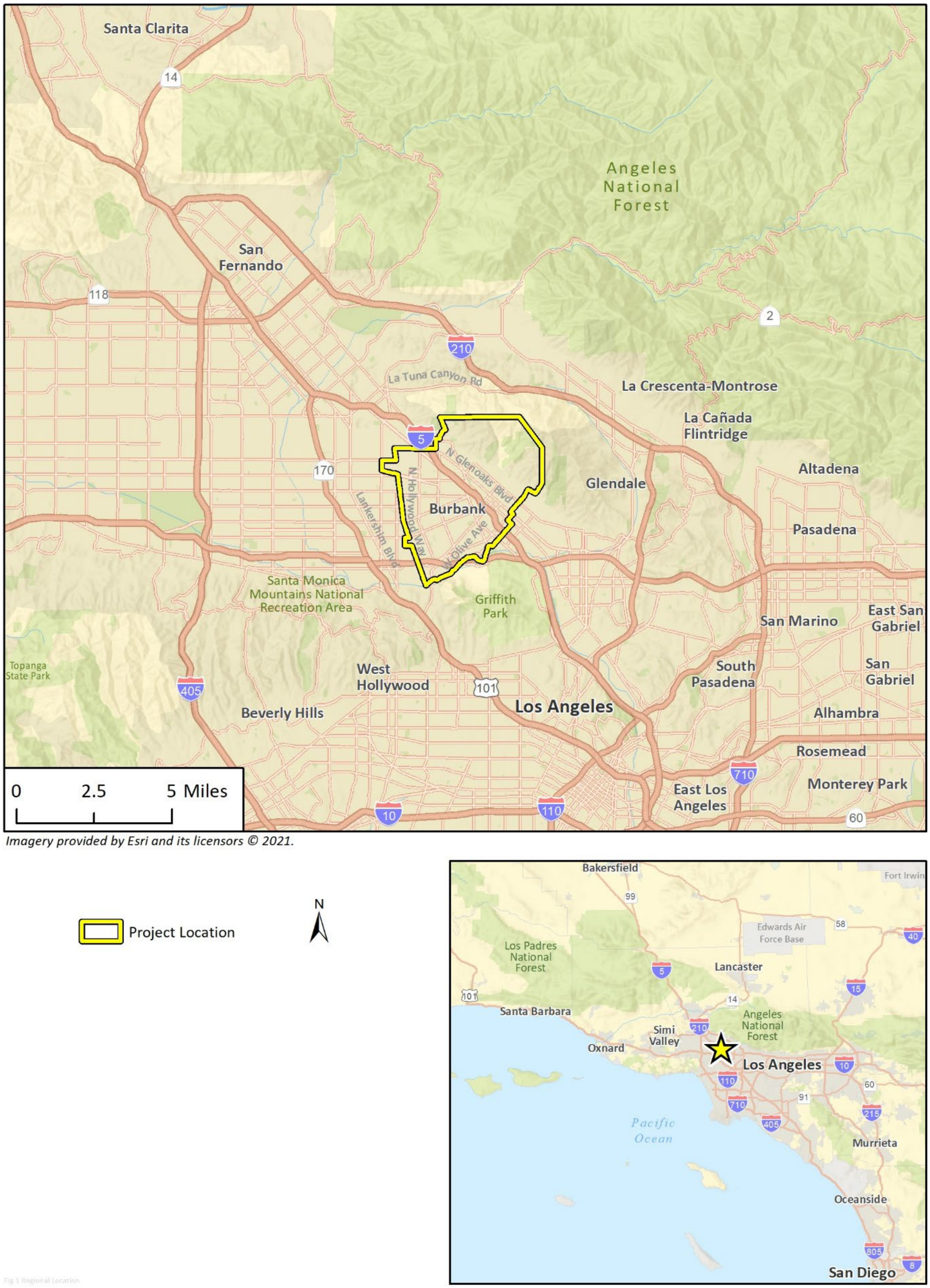

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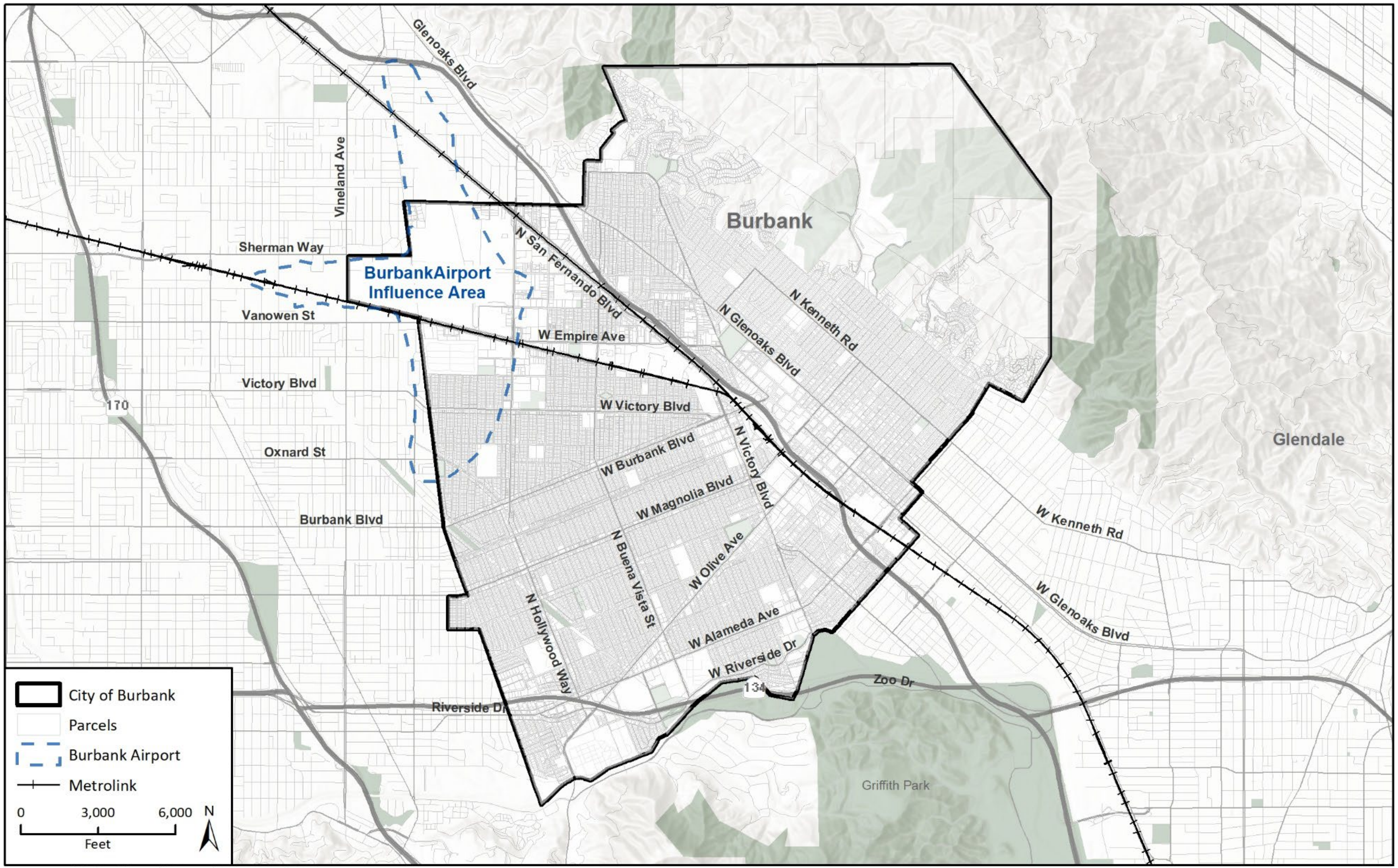
Figure 2 Project Location



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FigX City of Burbank

6. General Plan Designations

The Burbank2035 General Plan includes a variety of land use designations including: Low, Medium, and High Density Residential; Corridor and Regional Commercial; four specific commercial areas and two commercial/industrial areas; Open Space; Institutional; and Airport. Land uses in Burbank's various neighborhoods and commercial areas include single-family and multi-family residential housing, mixed-use development, public spaces like parks and playgrounds, and some industrial land uses.

7. Zoning

The Zoning Code includes various zones that correspond to the GP land uses, including residential, commercial, media district, business, auto dealership, industrial, airport, railroad, cemetery, and open space.

8. Description of Project

The proposed Project would involve an update to the Housing Element of the City's Burbank2035 General Plan for the 2021-2029 planning period, along with minor updates to the Safety and Mobility Elements, and incorporation of environmental justice goals, policies and objectives into the Burbank2035 General Plan. The proposed Housing and Safety Element Update establishes programs, policies and actions to further the goal of meeting the existing and projected housing needs of all household income levels of the community; provides evidence of the City's ability to accommodate the Regional Housing Needs Assessment (RHNA) allocation through the year 2029, as established by the Southern California Association of Governments (SCAG), and identifies any rezoning program needed to reach the required housing capacity. The Safety Element update is triggered by various new provisions of state law, the Mobility Element update would incorporate VMT (vehicle miles traveled) metrics per SB 743, and the environmental justice policies would be added pursuant to the requirements of SB 1000.

Housing Element Update

The Housing Element is comprised of the following major components:

- Review of effectiveness of the existing Housing Element
- Assessment of existing and projected housing needs
- Identification of resources – financial, land, administrative
- Evaluation of constraints to housing
- Housing Plan – goals, policies, and programs

The Housing Element Update will provide a framework for accommodating new housing at all levels of affordability that is within access to transit, Downtown jobs, services, and open spaces. New housing units may occur anywhere in the City where residential uses are permitted, as well as in areas that may be rezoned in the future to allow for multi-family residential and mixed use of adequate density to meet affordability targets.

RHNA Allocation

SCAG has allocated the region's 1,341,827 housing unit growth needs to each city and county through a process called the Regional Housing Needs Assessment (RHNA). As shown in Table 1, Burbank's draft RHNA for the 2021-2029 planning period (6th RHNA cycle) is 8,772 housing units, distributed among the four income categories (HCD 2020).

Table 1 RHNA Percentage of Income Distribution

Income Level	Percent of Area Median Income (AMI)	Units	Percent
Very Low	0-50%	2,553	29%
Low	51-80%	1,418	16%
Moderate	81-120%	1,409	16%
Above Moderate	>120%	3,392	39%
Total	–	**8,772**	**100%**

Source: SCAG 2021

The RHNA represents the minimum number of housing units that the City is required to plan for in its housing element by providing "adequate sites" through the Burbank2035 General Plan and zoning.

Table 2 shows the estimated units for projects that are entitled and pending entitlement, the net housing units for the various opportunity sites based on the General Plan, the number of accessory dwelling units that can be expected over the course of the planning period, and the number of units that can be expected through the City's committed assistance program. As shown in the table, the City would fall short of the RHNA allocation by 2,391 units.

Table 2 Estimated Net Housing Units for the City of Burbank

		Income Distribution			
Sites/Projects	Total Net Units	Very Low	Low	Moderate	Above Moderate
2021 – 2029 RHNA Targets	**8,772**	**2,553**	**1,418**	**1,409**	**3,392**
Entitled Projects	935	7	6	83	838
Pending Entitlement	1,245	109	21	0	1,116
Opportunity Sites (Zoning in place)	2,591	944	354	625	668
Accessory Dwelling Units (ADUs)[1]	1,600	384	704	32	480
Committed Assistance[2]	10	10	0	0	0
Total Site Capacity	**6,381**		**2,539**	**740**	**3,102**
RHNA Surplus/(Shortfall)	**(2,391)**		**(1,432)**	**(669)**	**(290)**

[1] ADUs are small backyard units that are either attached or detached from a single-family home.

[2] Committed Assistance units are units that the City has provided a legally enforceable agreement to provide. This is through an ongoing partnership with the Burbank Housing Corporation. See the Housing Element for further discussion.

To make up for this shortfall of 2,391 units, the Housing Element includes a housing program to amend the General Plan and adopt the Downtown Transit-Oriented-Development Specific Plan (Downtown TOD) and the Golden State Specific Plan (GSSP) (see Figure 3). Adoption of these Specific Plans will provide the necessary zoning, development standards, and processing procedures to facilitate the production of housing required to accommodate the City's housing needs during the Housing Element 2021-2029 planning period. The zone changes required by these Specific Plans will be adopted in 2022-2024. Table 3 shows the number of units expected from the rezoning of the Specific Plan areas. See Figure 3 for the locations of the Specific Plan locations and the rezone areas. The City would exceed the RHNA requirement by 1,270 units with the rezoning of the Specific Plan areas. The State requires jurisdictions to create a sufficient buffer in the Housing Element sites inventory beyond that required by the RHNA to ensure that adequate site capacity exists throughout the eight-year planning period. With the inclusion of the Specific Plan units, the City will exceed the RHNA allocation by 14 percent.

Table 3 Projected Specific Plan Units

Specific Plan	Total Net Units
Downtown TOD sites	871
Golden State Specific Plan sites	2,690
Total	**3,561**
Existing GP Units (from Table 2)	6,381
New Total with Specific Plans	**9,942**
RHNA Surplus/(Shortfall)	**1,270**

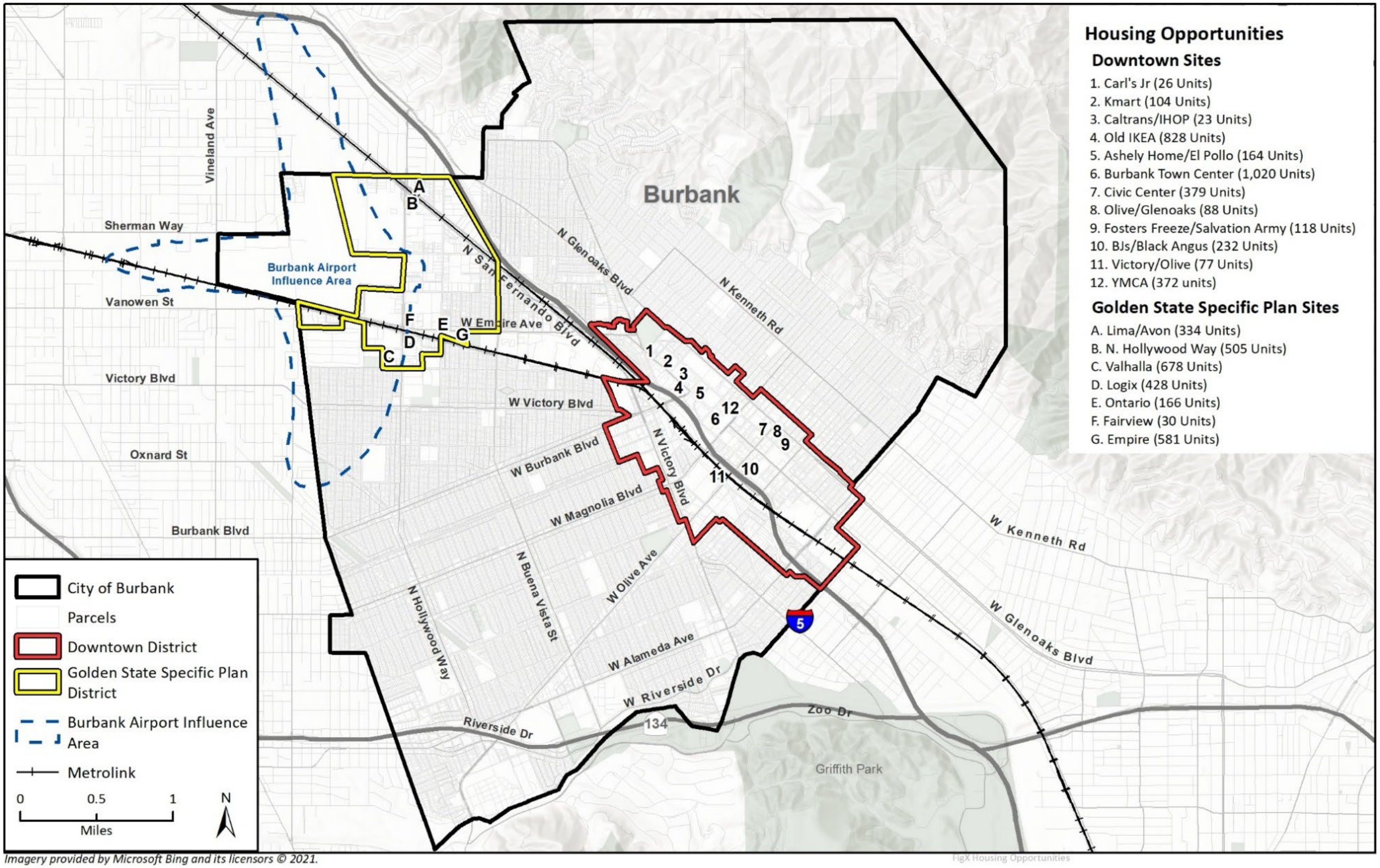
Rezoning

The opportunity sites include 19 locations that have the greatest potential to accommodate the RHNA's housing growth allocated for Burbank. Twelve of the opportunity sites are located in the proposed Downtown TOD Specific Plan area and seven sites are located in the proposed Golden State Specific Plan area. The locations of these sites of shown in Figure 3.

Safety Element Update

The Safety Element Update will ensure consistency with the Housing Element Update and will comply with recent State legislation and guidelines (including Assembly Bill 162, Senate Bill 1241, Senate Bill 99, Assembly Bill 747, Senate Bill 1035 and Senate Bill 379). Amendments incorporate data and maps, address vulnerability to climate change; incorporate policies and programs from the City's Hazard Mitigation Plan and the Greenhouse Gas Reduction Plan, as well as partial or full integration of other City documents and programs (including but not limited to: Ready Burbank and the Emergency Survival Program). Key areas of the Burbank Safety Element to be updated include flooding and fire hazards as well as emergency response and preparedness, especially as they relate to the City's projected climate change exposure, and vulnerability. The Safety Element amendments will be submitted to the California State Board of Forestry and Fire Protection (CalFire) for review. As mandated under Senate Bill 1000 (SB 1000), the Safety Element Update would consider strategies to reduce pollution exposure, promote public facilities, promote food access, promote safe and sanitary homes, promote physical activity, reduce unique or compounded health risks, promote civic engagement, and prioritize the needs of DACs.

Figure 3 Specific Plan and Housing Opportunity Locations



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Environmental Justice Update

SB 1000 states that revisions or adoption of two or more elements of a general plan on or after January 1, 2018 trigger a requirement to “adopt or review the Environmental Justice Element, or the environmental justice goals, policies, and objectives in other elements.” Environmental justice goals, policies, and objectives must aim to reduce health risks to disadvantaged communities (DACs), promote civil engagement, and prioritize the needs of these communities. These updates focus on the inclusion of disadvantaged communities in decision making procedures as well as increasing protections for these communities. Figure 4 provided below, displays CalEnviroScreen results for Burbank. There are several designated DACs identified in central, northwest, and southeast Burbank. These seven census tracts have overall scores that meet or exceed the minimum criteria for DAC designation based on pollution burden and population characteristics.

9. Required Approvals

The Project would require the following discretionary approvals:

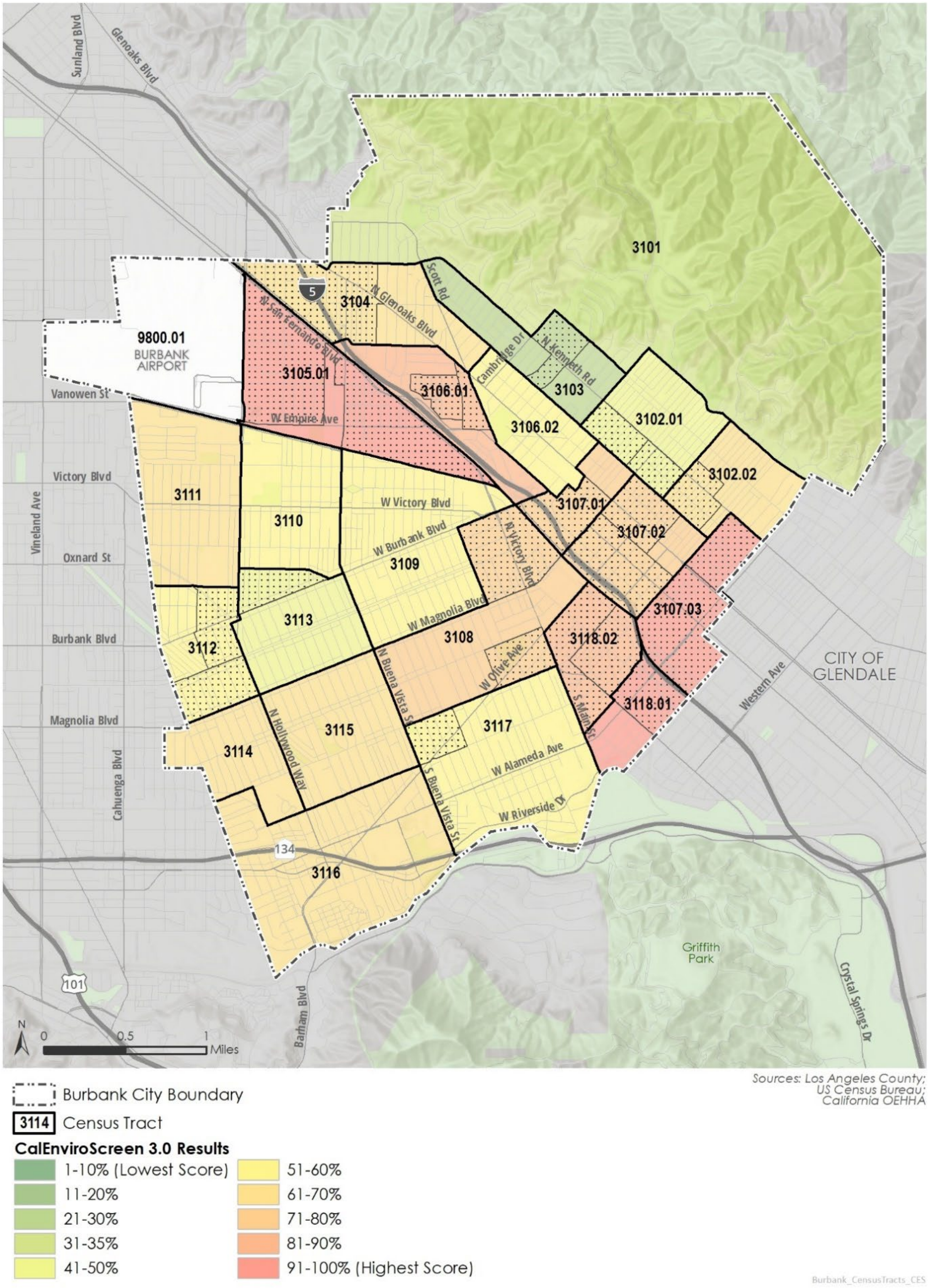
- Certification of this EIR prepared for the proposed Project
- Adoption of the Housing Element Update for the 2021-2029 planning period
- Adoption of the General Plan Land Use Map to re-designate land uses for certain selected housing sites
- Adoption of updates to the Safety Element
- Adoption of updates to other General Plan elements to incorporate environmental justice goals, objectives and policies
- Adoption of updates to the Mobility Element to incorporate VMT.
- Rezoning of opportunity sites within the Specific Plan areas

After adoption, by the City Council, the updated Housing Element will be submitted to the California Department of Housing and Community Development (HCD) for certification. The Safety Element updates will be submitted to CalFire for their review and approval.

10. Have California Native American Tribes Traditionally and Culturally Affiliated with the Project Area Requested Consultation Pursuant to Public Resources Code Section 21080.3.1?

As discussed in Section 18, *Tribal Cultural Resources*, the proposed Project could potentially result in the disturbance of intact tribal cultural resources. Native American consultation between the City of Burbank and Native American tribes under Assembly Bill (AB) 52 is underway.

Figure 4 CalEnviroScreen – Disadvantaged Communities



Sources: Los Angeles County; US Census Bureau; California OEHHA

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Environmental Factors Potentially Affected

This project would potentially affect the environmental factors checked below, involving at least one impact that is "Potentially Significant" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

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

Determination

Based on this initial evaluation:

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

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

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

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

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

Federico G. Ramirez	1/20/2022
Signature	Date
Federico G. Ramirez	Assistant Community Development Director – Planning Division

Environmental Checklist

1 Aesthetics

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	■	☐
b. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	■
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	■	☐
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	■	☐

a. Would the project have a substantial adverse effect on a scenic vista?

Scenic views generally refer to visual access to, or the visibility of, a particular natural or man-made visual resource from a given vantage point or corridor. Focal views focus on a particular object, scene, setting, or feature of visual interest. Panoramic views, or vistas, provide visual access to a large geographic area for which the field of view can be wide and extend into the distance. Panoramic views are usually associated with vantage points looking out over urban or natural areas that provide a geographic orientation and view not commonly available. Examples of panoramic views might include an urban skyline, a valley, a mountain range, the ocean, or other water bodies. The Burbank2035 General Plan Open Space and Conservation Element defines scenic vistas as viewpoints that provide expansive views of a highly valued landscape for the benefit of the general public (City of Burbank 2013a).

Scenic vistas in Burbank include views of the Verdugo Mountains to the northeast and views of the eastern Santa Monica Mountains to the south. Downslope views from hillside development in the Verdugo Mountains toward the City and the Santa Monica Mountains beyond are also considered to be a valued resource by the City's General Plan. In more urban areas, the character of neighborhoods, architecture, vegetation, and landscaping all provide visual character. Scenic resources in Burbank include public parks and open space, such as Wildwood Canyon Park, Stough Park, Johnny Carson Park, and Brace Canyon Park. The architecture of historic structures, such as Burbank City Hall, the Portal of the Folded Wings Shrine to Aviation in Valhalla Memorial Park, and commercial signs throughout the City, such as the Bob's Big Boy and Safari Inn signs, are also scenic resources that represent aspects of the City's history (City of Burbank 2013a).

Reasonably foreseeable development under the Housing and Safety Element Update would have the potential to affect scenic vistas if new or intensified development blocked the vistas noted above. Potential impacts could include obstructing views of scenic resources such as Verdugo and Santa Monica Mountains or the unique urban or historic structures found throughout urbanized areas of Burbank. However, future project developments would be required to comply with General Plan goals and policies intended to protect scenic vistas and visual resources. These include the following goal and policies under the Land Use Element and Open Space and Conservation Element:

Goal 8 Low Density Residential Land Use

Policy 8.8 Ensure that new development is compatible with the topography and geology of the hillside area and is incorporated into the natural setting.

Policy 8.9 Require that new development or expansion of existing homes be subject to discretionary review when a possibility exists that the project may affect the character of the hillside area.

Policy 8.10 Consider and address the p preservation of scenic views in the hillside areas.

Goal 7 Visual and Aesthetic Resources

Policy 7.2 Minimize the visual intrusion of development in the hillside area

In addition, development under the proposed Project would primarily occur in already developed and urbanized areas of the City where scenic vistas are not present and would not be affected. Thus, potential development under the Housing Element Update would not result in substantial adverse effects on scenic vistas, and the Safety Element and Environmental Justice updates would not result in development that would create aesthetic impacts. Impacts would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

b. Would the project substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The California State Scenic Highway System Map indicates that no existing or proposed State scenic highways are located in Burbank (Caltrans 2020). The nearest designated scenic highway is State Route 210, located approximately 1.5 miles northeast of the City. Therefore, the updates associated with the Housing Element, Safety Element and Environmental Justice under the proposed Project would not result in substantial damage to scenic resources in a State scenic highway. No impact would occur and further analysis of this issue in an EIR is not warranted.

NO IMPACT

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

The proposed Housing Element Update would facilitate the development of up to 10,456 new housing units in Burbank, primarily in areas with access to transit, Downtown jobs, services, and open spaces. This would allow for higher densities than what currently exists in some areas. This could alter the visual character of portions of the City, including changes to building heights and massing. However, reasonably foreseeable development under the proposed Project would be subject to the City's development standards, such as floor area ratio (FAR), building heights and setbacks, and transitional height requirements for properties abutting residential zones. Furthermore, the multiple Specific Plans throughout Burbank include objective design standards that enhance streetscapes, buildings, and public places. Compliance with existing standards and plans would be required for all future housing developers. Therefore, reasonably foreseeable developments would be consistent with applicable zoning and other regulations and the overall pattern of development in the City would be generally maintained. Further, the Safety Element and Environmental Justice updates would not result in development that would create aesthetic impacts. Impacts would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

d. *Would the project create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?*

Lighting associated with reasonably foreseeable development under the Housing and Safety Element Update (security lighting, parking lot lighting, ornamental lighting, pedestrian scale lights, lighting from ground floor storefronts and signs) would increase overall lighting levels.

However, the City is urbanized and areas where new housing is anticipated primarily already have high ambient levels of nighttime lighting; thus, additional lighting from new housing development would be incremental. Furthermore, reasonably foreseeable development under the proposed Project would be required to comply with the following lighting provisions of the Burbank Municipal Code (BMC) to reduce potential impacts from light:

- Chapter 10.1.628.W(2). Outdoor lighting fixtures must be positioned and directed so as not to shine or cause glare onto adjacent properties or public rights-of-way.
- Chapter 10.1.628.W(3). Free-standing lighting fixtures must be no taller than eight (8) feet as measured from the abutting ground surface or floor level.
- Chapter 10.1.1153.A. Building Elevations facing a residential zone with 50 percent or more of the building surface in glass shall be limited to a maximum of 15 percent reflectivity for those materials. Building elevations facing a residential zone with less than 50 percent of surface glass shall be limited to a maximum of 20 percent reflectivity for those materials.
- Glare is a common phenomenon throughout Burbank primarily due to the occurrence of a high number of days per year with direct sunlight and the urbanized nature of the City. Daytime glare can result from sunlight reflecting off glass, other structural fixtures of buildings, and windshields of parked and moving vehicles within the roadways in the City. Reasonably

foreseeable development under the proposed Project would be required to comply with BMC standards and regulations for lighting and glare affecting sensitive residential uses.

Light and glare associated with development would incrementally increase daytime and nighttime light and glare in portions of Burbank. However, due to the urbanized nature of the City where high levels of light and glare are already present and compliance with applicable regulations in the BMC, impacts would be less than significant; and the Safety Element and Environmental Justice updates would not result in development that would create aesthetic impacts. Further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

2 Agriculture and Forestry Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	■
b. Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	■
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	■
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	■
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	■

a. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

b. Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?

The California Important Farmland Finder Map indicates that none of the land in the City is mapped as Important Farmland (California Department of Conservation [DOC] 2020). Likewise, according to the DOC, there are no Williamson Act contracts in the City (DOC 2016). Burbank's Zoning Map indicates that no areas are currently zoned for agricultural use. The Housing Element, Safety Element and Environmental Justice updates under the proposed Project would have no effect on the conversion of farmland to non-agricultural uses. No impact would occur and further analysis of this issue in an EIR is not warranted.

NO IMPACT

c. *Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?*

d. *Would the project result in the loss of forest land or conversion of forest land to non-forest use?*

Burbank is urbanized with no forest land in the majority of the City, and no land in the City is zoned for forest land or timberland. The northeastern part of the City is located along the foothills of the Verdugo Mountains which is designated open space that includes forest lands. However, reasonably foreseeable development under the Housing Element Update would be primarily concentrated in urbanized areas of the City, and the Safety Element and Environmental Justice updates would not result in development that would create impacts to forest or timberland resources. Therefore, no impact to forest lands would occur and further analysis of this issue in an EIR is not warranted.

NO IMPACT

e. *Would the project 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?*

As discussed under *Impact a.* through *d.*, there would be no impacts associated with agricultural lands, and potential impacts associated with forest lands would be less than significant. The Housing Element, Safety Element and Environmental Justice updates under the proposed Project would not involve other changes in the existing environment that could result in the conversion of Farmland to non-agricultural use or the conversion of forest land to non-forest use. Therefore, no impact would occur and further analysis of this issue in an EIR is not warranted.

NO IMPACT

3 Air Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	■	☐	☐	☐
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	■	☐	☐	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	■	☐	☐	☐
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	■	☐

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

b. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

Burbank is located in the South Coast Air Basin (the Basin), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The local air quality management agency is required to monitor air pollutant levels to ensure that applicable air quality standards are met, and, if they are not met, to develop strategies to meet the standards. The SCAQMD has adopted an Air Quality Management Plan that provides a strategy for the attainment of State and Federal air quality standards. Emissions generated by reasonably foreseeable development under the proposed Housing and Safety Element Update would include temporary construction emissions and long-term operational emissions.

Construction activities such as the operation of construction vehicles and equipment over unpaved areas, grading, trenching, and disturbance of stockpiled soils have the potential to generate fugitive dust (PM_{10}) through the exposure of soil to wind erosion and dust entrainment. In addition, exhaust emissions associated with heavy construction equipment would potentially degrade air quality. Construction emissions from individual housing developments could potentially exceed SCAQMD significance thresholds.

Long-term emissions associated with operation of reasonably foreseeable housing developments would include emissions from vehicle trips, natural gas and electricity use, landscape maintenance equipment, and consumer products and architectural coating. Emissions associated with individual housing developments could exceed SCAQMD significance thresholds. Long-term vehicular emissions could also result in elevated concentrations of carbon monoxide (CO) at congested intersections in the City.

Certain population groups, such as children, the elderly, and people with health problems, are considered particularly sensitive to air pollution. Sensitive receptors include health care facilities, retirement homes, school and playground facilities, and residential areas.

Impacts related to both temporary construction-related air pollutant emissions and long-term emissions under the Housing and Safety Element Update may be potentially significant and will be analyzed further in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The occurrence and severity of potential odor impacts depends on a number of factors, including the nature, frequency, and intensity of the source; the wind speeds and direction; and the sensitivity of the receiving location, each contribute to the intensity of the impact. Although offensive odors seldom cause physical harm, they can be annoying and cause distress among the public and generate citizen complaints.

Construction activities associated with reasonably foreseeable development under the Housing and Safety Element Update may produce temporary odors. Potential odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment, and architectural coatings. Such odors would disperse rapidly from the individual construction sites, generally occur at magnitudes that would not affect substantial numbers of people and would be limited to the construction period. Furthermore, construction would be required to comply with SCAQMD Rule 402, which regulates nuisance odors. Accordingly, the construction associated with reasonably foreseeable development under the proposed Project would not create objectionable odors affecting a substantial number of people and impacts would be less than significant.

SCAQMD's *CEQA Air Quality Handbook* (1993) identifies land uses associated with odor complaints as agricultural uses, wastewater treatment plants, chemical and food processing plants, composting, refineries, landfills, dairies, and fiberglass molding. Reasonably foreseeable development under the Housing Element Update would include residential and mixed-use developments, which are not major sources of odors and would not create objectionable odors to surrounding sensitive land uses. In addition, the Safety Element and Environmental Justice updates would not result in development that would create odor impacts. Therefore, potential impacts would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

4 Biological Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	■	☐	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	■	☐
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	■	☐
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	■	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	■	☐
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	■

a. *Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

Special Status Species

Special status species are those plants and animals listed, proposed for listing, or candidates for listing as Threatened or Endangered by the United States Fish and Wildlife Service (USFWS) under the Federal Endangered Species Act (FESA); those considered “Species of Concern” by the USFWS; those listed or candidates for listing as Rare, Threatened, or Endangered by the California Department of Fish and Wildlife (CDFW) under the California Endangered Species Act (CESA); animals designated as “Fully Protected” by the California Fish and Game Code (CFGC); animals listed as “Species of Special Concern” (SSC) by the CDFW; CDFW Special Plants, specifically those with California Rare Plant Ranks (CRPR) of 1B, 2, 3, and 4 in the CNPS’s Inventory of Rare and Endangered Vascular Plants of California (CNPS 2020); and birds identified as sensitive or watch list species by the Los Angeles County Sensitive Bird Species Working Group (2009).

Burbank contains approximately 732 acres of parks, not including landscape areas such as street medians, parkways, and other green areas throughout the City that provide wildlife habitat (City of Burbank 2013a). A majority of those park acres, approximately 603, are on the edge of the City, near the Verdugo Mountains. Urbanization in the City has substantially reduced the abundance and diversity of biological resources. In addition, Burbank is surrounded by other developed areas in Glendale and Los Angeles.

The Housing and Safety Element Update would prioritize development on infill sites in urbanized areas of the City. Reasonably foreseeable development under the proposed Project would be primarily concentrated on underutilized sites that have been previously developed and disturbed. Given the lack of suitable habitat to support special status species in urbanized and disturbed areas where new housing is to be concentrated, reasonably foreseeable development under the Housing and Safety Element Update would not result in significant adverse impacts to special status species or the habitats that support them. Further analysis of this issue in an EIR is not warranted.

Nesting Birds

While common birds are not designated as special status species, destruction of their eggs, nests, and nestlings is prohibited by Federal and State law. Nesting birds are protected under the CFGC Sections 3503, 3503.5, and 3513 as well as the Migratory Bird Treaty Act (MBTA). Violation of these provisions would be considered a potentially significant impact.

Development under the proposed Project could directly and indirectly affect nesting birds. Construction of reasonably foreseeable development under the proposed Project could occur during the bird nesting season, which is generally from March 1 through August 31 and begins as early as February 1 for raptors. As such, potential construction impacts resulting in vegetation trimming or removal during the nesting season would have the potential to disturb active nests, either directly (e.g., injury, mortality, or disruption of normal nesting behaviors) or indirectly (e.g., construction noise, dust, and vibration from equipment). Therefore, although unlikely, construction activities have the potential to disturb nesting birds and raptors.

The Safety Element and Environmental Justice updates would not result in development that would create impacts to biological resources. Therefore, these components would not result in impacts to special status species or nesting birds. However, impacts to nesting birds and raptors under the Housing Element Update may be potentially significant and will be analyzed further in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Plant communities are considered sensitive biological resources if they have limited distributions, high wildlife value, include sensitive species, or are particularly susceptible to disturbance. CDFW maintains a list of sensitive plant communities (CDFW 2020). Although Burbank is urbanized, the communities along the foothills of the Verdugo Mountains are located near a number of sensitive plant communities such as Coast Live Oak and Coastal Mixed Hardwood Alliances (City of Burbank 2013b). In addition, according to the U.S. Fish and Wildlife's National Wetlands Inventory (NWI) there are no riparian habitats or Federally protected wetlands located within the developed areas of the City. However, the Verdugo Mountains contain a number of creeks and streams, classified as riverine wetlands, that flow into freshwater ponds in the foothills (NWI 2020).

Reasonably foreseeable development under the Housing Element Update would occur in urbanized areas of the City, and therefore, would not directly or indirectly impact sensitive natural communities or riparian habitat. In addition, the Safety Element and Environmental Justice updates would not result in development that would create impacts to biological resources. As a result, impacts to sensitive natural communities or riparian habitats would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

c. Would the project 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?

In accordance with Section 1602 of the CFGC, the CDFW has jurisdiction over lakes and streambeds (including adjacent riparian resources). CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake. Under Section 404 of the Clean Water Act (CWA), the United States Army Corps of Engineers (USACE) has authority to regulate activities that discharge dredge or fill material into wetlands or other "waters of the United States" through issuance of a Section 404 Permit. Finally, the Regional Water Quality Control Board (RWQCB) has jurisdiction over "waters of the State" pursuant to the Porter-Cologne Water Quality Control Act and has the responsibility for review of water quality certification per Section 401 of the federal CWA for proposed development projects.

The approximately six-mile long Burbank Western Channel trends north to south through the center of City and flows into the Los Angeles River approximately half a mile south of the City's southern boundary and then out to the Pacific Ocean. The National Wetlands Inventory classifies this system as an intermittent riverine system, with flowing water only part of the year. The system falls under the class of streambed, is seasonally flooded, and is lined with concrete (NWI 2020).

Construction and operation of reasonably foreseeable development under the Housing Element Update would not result in the direct modifications or interruptions of State or Federally protected wetlands, and the Safety Element and Environmental Justice updates would not result in development that would create impacts to biological resources. Therefore, impacts would be less than significant and further analysis in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

d. *Would the project 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?*

Wildlife corridors are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as between foraging and denning areas, or they may be regional in nature, allowing movement across the landscape. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Examples of barriers or impediments to movement include housing and other urban development, roads, fencing, unsuitable habitat, or open areas with little vegetative cover. Regional and local wildlife movements are expected to be concentrated near topographic features that allow convenient passage, including roads, drainages, and ridgelines.

Habitat fragmentation occurs when a proposed action results in a single, unified habitat area being divided into two or more areas in such a way that the division isolates the two new areas from each other. Isolation of habitat occurs when wildlife cannot move freely from one portion of the habitat to another or from one habitat type to another, as in the fragmentation of habitats within and around “checkerboard” residential development. Habitat fragmentation also can occur when a portion of one or more habitats is converted into another habitat, as when annual burning converts scrub habitats to grassland habitats.

Much of the land in Burbank has been converted from open space to various urban uses, resulting in habitat fragmentation. There are no regional wildlife habitat linkages or described wildlife movement in the City outside of the Verdugo Mountains. While there are small fragments of open space and approximately 732 acres of parkland in Burbank it is unlikely for wildlife movement to occur in the remaining 127 acres due to the patchwork of remaining parks, their small size, and existence in a highly urbanized area. Outside of the Verdugo Mountains, Burbank is surrounded by residential and commercial development and its existing urbanized area is not situated to form a link between blocks of intact habitat.

Reasonably foreseeable development under the Housing Element Update would be concentrated in urbanized areas and on sites that have been previously developed and disturbed, and not within the Verdugo Mountains. Development in such areas would not result in substantial impacts to potential local wildlife movement. In addition, the Safety Element and Environmental Justice updates would not result in development that would create impacts to biological resources. Therefore, potential impacts to wildlife corridors or nursery sites due to development under the proposed Project would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Section 7-4-108 of the BMC provides for the protection of landmark trees, trees of outstanding size and beauty, and dedicated trees; and Section 7-4-115 of the BMC states that it is unlawful to remove or destroy trees on public property without approval and permits from the Director of Public Works.

If future development resulting from the implementation of the proposed Housing Element Update includes the removal of trees on City property (including street trees), the plans will be reviewed by the City and required to comply with the tree ordinances. In addition, the Safety Element and Environmental Justice updates would not result in development that would create impacts to biological resources. Therefore, impacts related to potential conflicts with local policies or ordinances would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No adopted local, regional, or State Habitat Conservation Plans or Natural Community Conservation Plans apply to any portion of Burbank (CDFW 2019). Therefore, no impact would occur under the proposed Project and further analysis of this issue is not warranted.

NO IMPACT

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5 Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	■	☐	☐	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	■	☐	☐	☐
c. Disturb any human remains, including those interred outside of formal cemeteries?	■	☐	☐	☐

a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

Notable historic structures in Burbank include City Hall and the Portal of the Folded Wings Shrine to Aviation in Valhalla Memorial Park. Burbank's residential, commercial, and industrial neighborhoods also contain numerous examples of historic architectural styles including Craftsman, Colonial, Mediterranean, Prairie, Googie, Art Deco, and Mission Revival. (City of Burbank 2013a) The sites of reasonably foreseeable development under the Housing and Safety Element Update could potentially contain historic structures or resources eligible for listing in the California Register of Historical Resources, the demolition or alteration of which could constitute a significant impact. Therefore, reasonably foreseeable future development under the Housing and Safety Element Update has the potential to impact historical resources and this issue will be further analyzed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

c. Would the project disturb any human remains, including those interred outside of formal cemeteries?

Reasonably foreseeable development under the Housing and Safety Element Update would occur primarily in areas that have previously been developed and disturbed. Therefore, it is likely that prior grading, construction, and modern use of the potential housing sites would have either removed or destroyed archaeological resources in surficial soils. Nonetheless, previously undiscovered archaeological resources could potentially be present below the ground surface throughout the City and such resources could be disturbed by grading and excavation activities associated with development. Therefore, reasonably foreseeable development under the Housing and Safety Element Update has the potential to adversely archaeological resources. This issue will be discussed further in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

6 Energy

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

California is one of the lowest per capita energy users in the United States, ranked 48th in among states, due to its energy efficiency programs and mild climate. In 2018, California consumed 681 million barrels of petroleum, 2,137 billion cubic feet of natural gas, and one million short tons of coal in 2018 (United States Energy Information Administration [EIA] 2020). The single largest end-use sector for energy consumption in California is transportation (39.1 percent), followed by industrial (23.5 percent), commercial (19.2 percent), and residential (18.3 percent) (EIA 2020).

Most of California's electricity is generated in-state with approximately 30 percent imported from the northwest and southwest in 2018. In addition, approximately 30 percent of California's electricity supply comes from renewable energy sources, such as wind, solar photovoltaic, geothermal, and biomass (California Energy Commission 2019). Adopted on September 10, 2018, Senate Bill (SB) 100 accelerates the State's Renewables Portfolio Standards Program by requiring electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

To reduce statewide vehicle emissions, California requires all motorists use California Reformulated Gasoline, which is sourced almost exclusively from in-state refineries. Gasoline is the most used transportation fuel in California with 15.3 billion gallons sold in 2019 and is used by light-duty cars, pickup trucks, sport utility vehicles, and aviation (California Department of Tax and Fee Administration 2020). Diesel is the second most used fuel in California with 4.2 billion gallons sold in 2015 and is used primarily by heavy duty-trucks, delivery vehicles, buses, trains, ships, boats and barges, farm equipment, and heavy-duty construction and military vehicles (California Energy Commission 2016).

a. Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Reasonably foreseeable development under the proposed Project would consume energy during construction and operation through the use of petroleum fuel, natural gas, and electricity, as further addressed below.

Construction

Energy use during construction associated with reasonably foreseeable development under the Housing and Safety Element Update would be in the form of fuel consumption (e.g., gasoline and diesel fuel) to operate heavy equipment, light-duty vehicles, machinery, and generators for lighting. In addition, temporary grid power may also be provided to construction trailers or electric construction equipment. Energy use during the construction of individual projects would be temporary in nature, and equipment used would be typical of construction projects in the region. In addition, construction contractors would be required to demonstrate compliance with applicable California Air Resources Board regulations that restrict the idling of heavy-duty diesel motor vehicles and govern the accelerated retrofitting, repowering, or replacement of heavy-duty diesel on- and off-road equipment.

Construction activities associated with reasonably foreseeable development under the proposed Project would be required to utilize fuel-efficient equipment consistent with State and Federal regulations and would comply with State measures to reduce the inefficient, wasteful, or unnecessary consumption of energy. In addition, individual projects would be required to comply with construction waste management practices to divert 80 percent of construction and demolition debris. Developers would be required to complete the Construction and Demolition Waste Management Plan Form and use City-approved haulers to remove mixed construction debris in accordance with the standards set by the Department of Public Works.

These practices would result in efficient use of energy during construction of future development under the proposed Project. Furthermore, in the interest of both environmental awareness and cost efficiency, construction contractors would not utilize fuel in a manner that is wasteful or unnecessary. Therefore, future construction activities associated with reasonably foreseeable development under the Housing and Safety Element Update would not result in potentially significant environmental effects due to the wasteful, inefficient, or unnecessary consumption of energy, and impacts would be less than significant.

Operation

Long-term operation of new projects developed in accordance with the Housing and Safety Element Update would require permanent grid connections for electricity and natural gas service to power internal and exterior building lighting, and heating and cooling systems. As previously discussed, the Housing and Safety Element Update would prioritize development in previously developed areas of Burbank that are already served by energy providers. Electricity service in the City is provided by Burbank Water and Power. Southern California Gas Company (SoCal Gas) provides natural gas services to residents and businesses in the City.

Reasonably foreseeable development under the Housing and Safety Element Update would be subject to the energy conservation requirements of the California Energy Code (Title 24, Part 6 of the California Code of Regulations, California’s Energy Efficiency Standards for Residential and Nonresidential Buildings), the California Green Building Standards Code (Title 24, Part 11 of the California Code of Regulations). The California Energy Code provides energy conservation standards for all new and renovated commercial and residential buildings constructed in California. This Code applies to the building envelope, space-conditioning systems, and water-heating and lighting systems of buildings and appliances and provides guidance on construction techniques to maximize energy conservation. Minimum efficiency standards are given for a variety of building elements, including appliances; water and space heating and cooling equipment; and insulation for doors, pipes, walls, and ceilings. The Code emphasizes saving energy at peak periods and seasons and improving the quality of installation of energy efficiency measures. The California Green Building Standards Code sets targets for energy efficiency; water consumption; dual plumbing systems for potable and recyclable water; diversion of construction waste from landfills; and use of environmentally sensitive materials in construction and design, including ecofriendly flooring, carpeting, paint, coatings, thermal insulation, and acoustical wall and ceiling panels.

In addition, the Housing and Safety Element Update would prioritize future development projects in close proximity to high quality transit areas and existing commercial/retail, recreational, and institutional land uses, which would reduce trip distances and encourage the use of alternative modes of transportation such as bicycling and walking. These factors would minimize the potential of the proposed Project to result in the wasteful or unnecessary consumption of vehicle fuels. As a result, operation of reasonably foreseeable development projects under the Housing Element Update would not result in potentially significant environmental effects due to the wasteful, inefficient, or unnecessary consumption of energy, and impacts would be less than significant; the Safety Element and Environmental Justice updates would not result in development that would create energy impacts. Further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

In January 2008, the City Council integrated the City's environmental programs by adopting the Sustainability Action Plan. This plan is based on the United National Environmental Accords which provide a series of goals or "action items" that can be adopted at the local level to achieve urban sustainability, promote healthy economies, advance social equity, and protect the world's ecosystem. The plan includes both renewable energy and energy efficiency goals, as well as the expansion of public transportation throughout the City (City of Burbank 2008). In addition, Burbank Water and Power (BWP) will continue to implement programs to emphasize water conservation consistent with the City's Urban Water Management Plan (UWMP) and renewable energy generation. This includes the increased use of recycled water and stormwater capture for groundwater recharge, as well as potential development of a compressed air energy storage facility (BWP 2016; BWP 2018).

Construction activity associated with individual projects under the Housing and Safety Element Update would be required to comply with applicable City and State energy efficiency regulations and standards, which would ensure that the proposed Project would not conflict with renewable energy and energy efficiency plans adopted by the City. As such, reasonably foreseeable development under the Housing Element Update would not conflict with or obstruct a plan for renewable energy or energy efficiency, and the Safety Element and Environmental Justice updates would not result in development that would create energy impacts. Impacts would be less than significant and Further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

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7 Geology and Soils

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1. 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?	☐	☐	■	☐
2. Strong seismic ground shaking?	☐	☐	■	☐
3. Seismic-related ground failure, including liquefaction?	☐	☐	■	☐
4. Landslides?	☐	☐	■	☐
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	■	☐
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	■	☐
d. Be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	■	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	■
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	■	☐	☐	☐

a.1. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving 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?

Burbank is located in a seismically active region of southern California. Moderate to strong earthquakes can occur on numerous local faults. Southern California faults are classified as "active," "potentially active," or "inactive." Faults from past geologic periods of mountain building that do not display any evidence of recent offset are considered "potentially active" or "inactive." Faults that have historically produced earthquakes or show evidence of movement in the past 11,000 years are known as "active faults."

The active Verdugo Fault runs through the northeastern side of the City and is capable of producing surface fault rupture during a future earthquake (City of Burbank 2013a). According to the DOC, the Verdugo Fault runs east to west for approximately seven miles through the eastern portion of the City (DOC 2020b). Therefore, reasonably foreseeable development under the Housing Element Update could occur in areas with the potential for fault rupture and associated risk of loss, injury, or death. However, such development would not directly or indirectly cause or exacerbate potential substantial adverse effects involving the rupture of a known earthquake fault, and the Safety Element and Environmental Justice updates would not result in development that would create geologic impacts. Impacts would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

a.2. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

The Verdugo Fault runs through the City and would be capable of producing strong seismic ground shaking in the event of an earthquake. In addition, the City is located in the highly seismic Southern California region where several fault systems are considered to be active or potentially active. Reasonably foreseeable development under the Housing and Safety Element Update may be subject to ground shaking in the event of an earthquake originating along one of the faults designated as active or potentially active in the vicinity of Burbank. Nearby active faults include the Verdugo Fault, the Santa Monica Fault, the Newport-Inglewood Fault Zone, the Raymond Fault, the Hollywood Fault, the Sierra Madre Fault, and the San Fernando Fault.

Development in Burbank is required to adhere to the Uniform Building Code (UBC) and California Building Code (CBC). The UBC and CBC regulate the design and construction of excavations, foundations, building frames, retaining walls, and other building elements to mitigate the effects of seismic shaking. Compliance with applicable standards would minimize the potential for property damage and loss of life and reasonably foreseeable development under the Housing Element Update would not increase the frequency or severity of ground shaking; and the Safety Element and Environmental Justice updates would not result in development that would create geologic impacts. Therefore, impacts would be less than significant and further analysis of this issue is not warranted.

LESS THAN SIGNIFICANT IMPACT

a.3. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

Liquefaction is a phenomenon in which loose, saturated, granular soils behave similarly to a fluid when subjected to high-intensity ground shaking. Liquefaction occurs when three general conditions exist: shallow groundwater; low density, fine, clean sandy soils; and strong ground motion. Liquefaction-related effects include loss of bearing strength, amplified ground oscillations, lateral spreading, and flow failures.

According to the DOC Earthquake Zones of Required Investigation map, portions of the City are at risk of seismically induced liquefaction (DOC 2020c). As mentioned above, development in Burbank is required to adhere to the UBC and CBC. Compliance with City and State building codes would reduce impacts associated with liquefaction from seismic ground shaking with current engineering practices and the proposed Project would not exacerbate liquefaction potential in the area. As such, reasonably foreseeable development under the Housing Element Update would not directly or indirectly cause substantial adverse effects from liquefaction risk, and the Safety Element and Environmental Justice updates would not result in development that would create geologic impacts. Impacts would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

a.4. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

The geologic character of an area determines its potential for landslides. Steep slopes, the extent of erosion, and the rock composition of a hillside all contribute to the potential for slope failure and landslide events. In order to fail, unstable slopes need to be disturbed; common triggering mechanisms of slope failure include undercutting slopes by erosion or grading, saturation of marginally stable slopes by rainfall or irrigation; and, shaking of marginally stable slopes during earthquakes. The topography of the City of Burbank is generally flat, although the northeastern portion of development in the City is situated along the foothills of the Verdugo Mountains. According to the DOC Earthquake Zones of Required investigation map, several single-family residential parcels located north of Bel Aire Drive in the northeast portion of the City have been identified as potential areas for landslides, but the majority of the City is not located in a landslide zone (DOC 2020c) and housing sites identified in the Housing Element Update are not located along the foothills. In addition, the Safety Element and Environmental Justice updates would not result in development that would create geologic impacts. Therefore, development under the proposed Project would not directly or indirectly cause impacts related to landslides. Potential impacts would be less than significant and further analysis of this issue is not warranted.

LESS THAN SIGNIFICANT IMPACT

b. Would the project result in substantial soil erosion or the loss of topsoil?

Soil erosion or the loss of topsoil may occur when soils are disturbed but not secured or restored, such that wind or rain events may mobilize disturbed soils, resulting in their transport offsite. The Housing and Safety Element Update would emphasize the reasonably foreseeable development on previously disturbed, infill areas. Ground-disturbing activities associated with the construction of development would have the potential to result in the removal and erosion of topsoil during grading and excavation.

Because the Housing and Safety Element Update would prioritize development in areas that are already built out, the potential for erosion would primarily be limited to temporary effects of possible topsoil loss at future project construction sites. Standard construction Best Management Practices (BMPs) would be implemented in order to avoid or minimize soil erosion associated with ground-disturbing activities. Implementation of erosion control measures required by BMC Chapter 9.3.407, *Standard Urban Storm Water and Urban Runoff Management Programs,* would be designed to capture and treat runoff from construction sites such as through stabilization of construction entrance roadways and on-site retention of eroded sediments and pollutants. Construction activities that disturb one or more acres of land are subject to the National Pollutant Discharge Elimination System (NPDES) General Construction Permit process, which would require development of a Stormwater Pollution Prevention Plan (SWPPP) that outlines project-specific BMPs to control erosion, sediment release, and otherwise reduce the potential for discharge of pollutants from construction into stormwater. Typical BMPs include, but are not limited to, installation of silt fences, erosion control blankets, and anti-tracking pads at site exits to prevent off-site transport of soil material. Construction activities would also be required to comply with CBC Chapter 70 standards, which are designed to ensure implementation of appropriate measures during grading and construction to control erosion and storm water pollution.

With implementation of the requirements described above, erosion from demolition and construction activities associated with reasonably foreseeable development under the Housing Element Update would be controlled through implementation of the requirements and BMPs contained in existing regulations, including the NPDES Construction General Permit and BMC. Furthermore, BMPs for post-construction erosion and sediment control would remain in effect, which would improve future erosion conditions. Compliance with the regulations discussed above would reduce the risk of soil erosion from construction activities such that there would be minimal change in risk compared to current conditions. In addition, the Safety Element and Environmental Justice updates would not result in development that would create erosion impacts. Therefore, impacts would be less than significant and further analysis of this issue is not warranted.

LESS THAN SIGNIFICANT IMPACT

c. *Would the project 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?*

Impacts related to landslides and liquefaction are addressed under *Impacts a.3*. and *a.4*.; therefore, this discussion focuses on impacts related to unstable soils as a result of lateral spreading, subsidence, or collapse. Lateral spreading occurs as a result of liquefaction; accordingly, liquefaction-prone areas would also be susceptible to lateral spreading. Subsidence occurs at great depths below the surface when subsurface pressure is reduced by the withdrawal of fluids (e.g., groundwater, natural gas, or oil) resulting in sinking of the ground. The City of Burbank may be susceptible to subsidence from groundwater withdrawal as a result of drought conditions and declining groundwater levels.

The Housing and Safety Element Update would prioritize development of housing on infill sites that may contain underlying unstable soils. Because reasonably foreseeable development under the proposed Project would primarily involve infill development, development under the proposed Project would not affect existing conditions related to unstable soils, unless improperly constructed. Future development would be required to comply with the CBC's minimum standards for structural design and site development. The CBC provides standards for excavation, grading, and earthwork construction; fills and embankments; expansive soils; foundation investigations; and liquefaction potential and soils strength loss. Thus, CBC-required incorporation of soil treatment programs (replacement, grouting, compaction, drainage control, etc.) in the excavation and construction plans can achieve an acceptable degree of soil stability to address site-specific soil conditions. Adherence to these requirements would achieve accepted safety standards relative to unstable geologic units or soils. In addition, although reasonably foreseeable development under the Housing Element Update would potentially be subject to these hazards, it would not increase the potential for lateral spreading, subsidence, or collapse; and the Safety Element and Environmental Justice updates would not result in development that would create geologic impacts. Therefore, impacts would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

d. Would the project be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Soils that volumetrically increase (swell) or expand when exposed to water and contract when dry (shrink) are considered expansive soils. A soil's potential to shrink and swell depends on the amount and types of clay in the soil. Highly expansive soils can cause structural damage to foundations and roads without proper structural engineering and are generally less suitable or desirable for development than non-expansive soils because of the necessity for detailed geologic investigations and costlier grading applications.

The Housing and Safety Element Update would prioritize development of housing on infill sites in the City that may contain underlying expansive soils. Because reasonably foreseeable development under the Housing and Safety Element Update would primarily involve infill development, new development would not substantially increase the potential exposure to or extent of expansive soils within the City. Furthermore, future projects under the Housing Element would be subject to BMC regulations that require the submission of a soils report and all appropriate recommendations by a registered civic engineer before the issuance of building permits within liquefaction susceptibility zones. The CBC, which is based on the UBC, has been modified for California conditions with numerous more detailed and/or more stringent regulations. If expansive soils are detected based on a preliminary soil report, the CBC requires the preparation of a soil investigation prior to construction and incorporation of appropriate corrective actions to prevent structural damage, to be determined on a project-by-project basis. Consequently, there would be minimal change in the exposure of people or structures to risks associated with expansive soils and impacts would be less than significant. In addition, the Safety Element and Environmental Justice updates would not result in development that would create impacts to soils. Further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The Housing and Safety Element Update would emphasize reasonably foreseeable development in urban infill sites that are served by existing infrastructure. Future development under the proposed Project is not anticipated to include the use of septic systems. Therefore, there would be no impact related to the use of septic tanks or alternative wastewater disposal systems and further analysis of this issue in an EIR is not warranted.

NO IMPACT

f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The Housing and Safety Element Update would prioritize reasonably foreseeable development on infill sites in the City that have previously been developed and disturbed. Nonetheless, there is the potential for as yet undiscovered paleontological resources to be present below the ground surface throughout the City. Such resources could be disturbed by grading and excavation activities associated with future development. Therefore, reasonably foreseeable development under the Housing and Safety Element Update has the potential to adversely affect paleontological resources and this issue will be discussed further in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

8 Greenhouse Gas Emissions

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

Overview of Climate Change and Greenhouse Gases

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHGs). The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), fluorinated gases such as hydrofluorocarbons and perfluorocarbons, and sulfur hexafluoride. Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, and CH_4 results from off-gassing associated with agricultural practices and landfills. Different types of GHGs have varying global warming potentials (GWPs), which are the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the GHG emissions, referred to as carbon dioxide equivalent (CO_2e), and is the amount of a GHG emitted multiplied by its GWP. CO_2 has a 100-year GWP of one. By contrast, CH_4 has a GWP of 28, meaning its global warming effect is 28 times greater than that of CO_2 on a molecule per molecule basis (Intergovernmental Panel on Climate Change [IPCC] 2014a).[2]

The accumulation of GHGs in the atmosphere regulates Earth's temperature. Without the natural heat-trapping effect of GHGs, the Earth's surface would be about 60 degrees Fahrenheit cooler than present (USEPA 2021). However, emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of GHGs in the atmosphere beyond the level of naturally occurring concentrations.

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[2] The IPCC's (2014a) *Fifth Assessment Report* determined that methane has a GWP of 28. However, modeling of GHG emissions was completed using the California Emissions Estimator Model version 2016.3.2, which uses a GWP of 25 for methane, consistent with the IPCC's (2007) *Fourth Assessment Report*.

a. Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

b. Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Reasonably foreseeable development under the Housing and Safety Element Update would generate GHG emissions during construction through the use of petroleum-fueled construction equipment and worker vehicle trips to and from construction sites. Operation of development under the Housing Element Update would generate GHG emissions through the use of electricity and natural gas, vehicle trips of occupants, waste generation, water use, and wastewater generation.

Emissions could potentially create a significant impact on the environment and/or conflict with local and regional plans adopted for the purpose of reducing GHG emissions, including the regional Sustainable Communities Strategy (SCS), and the goals and policies of the Air Quality and Climate Change and Open Space and Conservation Elements in the Burbank2035 General Plan. Impacts related to GHG emissions would be potentially significant and will be analyzed further in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	■	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	■	☐	☐	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	■	☐	☐	☐
d. Be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	■	☐	☐	☐
e. For a project located in an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	■	☐	☐	☐
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	■	☐	☐	☐
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	■	☐

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Construction activity associated with reasonably foreseeable development under the proposed Project would involve the use of potentially hazardous materials, such as vehicle fuels and fluids, that could be released should a leak or spill occur. However, contractors would be required to implement standard construction best management practices (BMPs) for the use and handling of such materials to avoid or reduce the potential for such conditions to occur. Any use of potentially hazardous materials during construction of future development would be required to comply with all local, State, and Federal regulations regarding the handling of potentially hazardous materials. Likewise, the transport, use, and storage of hazardous materials during future construction would be required to comply with applicable State and Federal laws, such as the Hazardous Materials Transportation Act, Resource Conservation and Recovery Act, the California Hazardous Material Management Act, and California Code of Regulations Title 22.

Reasonably foreseeable development under the proposed Project would primarily include mixed-use commercial and housing, which are not land uses typically associated with the use, transportation, storage, or generation of significant quantities of hazardous materials. Operation of future developments under the proposed Project would likely involve an incremental increase in the use of common household hazardous materials, such as cleaning and degreasing solvents, fertilizers, pesticides, and other materials used in regular property and landscaping maintenance. Use of these materials would be subject to compliance with existing regulations, standards, and guidelines established by local, State, and Federal agencies related to storage, use, and disposal of hazardous materials. Therefore, upon compliance with all applicable laws and regulations relating to environmental protection and the management of hazardous materials, potential impacts associated with the routine transport, use, or disposal of hazardous materials during construction and operation of development projects under the Housing Element Update would be less than significant; and the Safety Element and Environmental Justice updates would not result in development that would create hazardous impacts. Further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

b. Would the project 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?

As described under *Impact a.*, above, the transport, use, and storage of hazardous materials during the construction of future development under the proposed Project would be conducted in accordance with applicable local, State and Federal laws, such as the Hazardous Materials Transportation Act, Resource Conservation and Recovery Act, the California Hazardous Material Management Act, and California Code of Regulations Title 22. However, there is the potential for future construction to involve the demolition or alteration of structures that may contain asbestos and/or lead-based paint (LBP), which could pose hazards to receptors at adjacent land uses. Furthermore, because the Housing and Safety Element Update would emphasize development on infill sites within urban areas, there is the potential for future development to occur on sites where hazardous materials were once used or stored and have the potential to contain contaminated soils, the disturbance of which could pose hazards to receptors at adjacent land uses. Therefore, impacts related to the release of hazardous materials would be potentially significant and will be studied further in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

The Burbank Unified School District (BUSD) oversees 22 schools in the City, including 11 elementary schools, three middle schools, three high schools, and five alternative schools (BUSD 2002). There are also numerous day cares, charter schools and private schools located throughout the City. As discussed above, future development under the proposed Project would not involve the use or transport of large quantities of hazardous materials. However, due to the potential for schools to be located within 0.25 miles of future construction sites and the potential for release of contamination during the construction period, this impact is potentially significant and will be further analyzed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

d. Would the project be located on a site that is included on a list of hazardous material 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?

Reasonably foreseeable development under the proposed Project could potentially occur on hazardous materials sites listed in Government Code Section 66962.5. Construction of future development under the Housing and Safety Element Update could potentially result in a significant hazard to the public or environment through the release of hazardous materials during site grading and exposure of future residents to potential contamination if contaminants are not properly identified and remediated as appropriate. Therefore, this impact is potentially significant and will be further discussed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

The Hollywood Burbank Airport is located near the northwestern edge of the City and has an associated airport land use plan (Los Angeles County 2003). The Housing and Safety Element Update would accommodate development in the Golden State District, which surrounds a portion of the airport. Because reasonably foreseeable development under the proposed Project may occur in the Airport Influence Area, impacts would be potentially significant and will be further analyzed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The Safety Element of the Burbank2035 General Plan identifies the evacuation routes in the City. These routes are typically parallel major north-south and east-west corridors, such as North San Fernando Boulevard and West Burbank Boulevard (City of Burbank 2013a). Reasonably foreseeable development under the Housing and Safety Element Update would be required to comply with applicable City codes and regulations pertaining to emergency response and evacuation plans maintained by the City's police and fire departments, including all updates under the Safety Element. However, construction activities associated with reasonably foreseeable development under the Housing and Safety Element Update could interfere with adopted emergency response or evacuation plans as a result of temporary construction activities within rights-of-way, due to temporary construction barricades or other obstructions that could impede emergency access. In addition, increased development density under the Housing and Safety Element Update could result in additional traffic on area roadways. Therefore, impacts related to emergency response plans and emergency evacuation plans would be potentially significant and will be further analyzed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

The northeastern portion of the City that is in the Verdugo Mountains is located in a Very High Fire Hazard Severity Zone (VHFHSZ) as mapped by the California Department of Forestry and Fire Protection (CalFire 2020). Also, a portion of the City between the 134 Freeway and Forest Lawn Drive are within the VHFHSZ. However, the Housing and Safety Element Update would prioritize future development in the urbanized areas of the City that are not in the VHFHSZ. In addition, reasonably foreseeable development under the Housing and Safety Element Update would be required to be constructed according to the UBC requirements for fire-protection and would be subject to review and approval by the Burbank Fire Department. Therefore, development under the proposed Project would not pose a substantial risk to people or structures due to wildland fires or exacerbate existing wildland fire hazards. In addition, the Safety Element Update is intended to improve policies and regulations associated with wildland fires, which therefore aim to reduce potential wildland fire risks, and the Environmental Justice Update would not result in development that would create impacts related to wildland fires. Potential impacts would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

10 Hydrology and Water Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	■	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	■	☐	☐	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	☐	☐	■	☐
(i) Result in substantial erosion or siltation on- or off-site;	☐	☐	■	☐
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	■	☐
(iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	■	☐
(iv) Impede or redirect flood flows?	☐	☐	■	☐
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	■	☐
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	■	☐

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Burbank is within the jurisdiction of the Los Angeles Regional Water Quality Control Board (RWQCB), which is responsible for the preparation and implementation of the water quality control plan for the Los Angeles Region. Section 90 of WHMC Chapter 15.56., Storm Water and Urban Runoff Pollution Control, requires owners or developers to implement stormwater pollution control requirements for construction activities. In addition, Regulations under the Federal Clean Water Act require compliance with the National Pollutant Discharge Elimination System (NPDES) storm water permit for projects disturbing more than one acre during construction. Operators of a construction site would be responsible for preparing and implementing a SWPPP that outlines project specific BMPs to control erosion, sediment release, and otherwise reduce the potential for discharge of pollutants in stormwater. Typical BMPs include covering stockpiled soils, installation of silt fences and erosion control blankets, and proper handling and disposal of wastes. Compliance with these regulatory requirements would minimize impacts to water quality during the construction of future projects under the Housing and Safety Element Update.

Construction of reasonably foreseeable development under the Housing and Safety Element Update could potentially impact surface or ground water quality due to erosion resulting from exposed soils and the generation of water pollutants, including trash, construction materials, and equipment fluids. However, compliance with the regulations described above would reduce impacts resulting from reasonably foreseeable development under the Housing and Safety Element Update to a less than significant level. Furthermore, the Housing Element Update would not introduce any features that would preclude implementation of or alter these policies and procedures, and the Safety Element and Environmental Justice updates would not result in development that would create impacts related to water quality. Therefore, implementation of the proposed Project would not violate any water quality standards or waste discharge requirements. Impacts would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Reasonably foreseeable development under the Housing and Safety Element Update would utilize water for construction, operations, and landscape maintenance. Water supply requirements for development under the Housing and Safety Element Update would be met by Burbank Water and Power (BWP). BWP's sources of water include water purchased from the Metropolitan Water District of Southern California (MWD), stored groundwater, and groundwater credits. Because a portion of BWP's water supply is from groundwater resources, groundwater could potentially be a source in supplying water to future project sites. Water demand could be met in a number of ways other than increasing groundwater withdrawal, such as increasing the amount of water purchased from the MWD of Southern California, implementing water conservation measures, increasing use of recycled water, and/or implementing groundwater recharge projects.

Reasonably foreseeable development would not substantially increase the amount of impervious surface in the City because the Housing and Safety Element Update would prioritize development on infill areas that are already urbanized and largely covered with impervious surfaces; therefore, the proposed Project would not interfere substantially with groundwater recharge. Implementation of the Housing and Safety Element Update may provide some benefits to groundwater recharge by replacing older development with new development subject to open space, landscaping, and stormwater BMP requirements that would increase pervious surfaces associated with new development.

Potential construction activities associated with future development under the Housing and Safety Element Update, such as excavation for subterranean parking lots and foundation-laying for tall buildings, could potentially extend into the underlying groundwater table. Construction activities overlying areas with shallower groundwater depth could expose groundwater resources to contamination. However, the risk of groundwater contamination during construction is minimal and would most likely occur due to spills or leaks from equipment or materials used in construction. Developers of individual project sites one acre or more in size are also required to prepare a SWPPP, which includes BMPs to prevent contamination of stormwater and runoff during construction. Typical construction BMPs to prevent stormwater contamination would also prevent contamination of groundwater resources, as exemplified by the following BMPs:

- Construction equipment and vehicles shall be properly maintained.
- All materials shall be properly stored and transported.
- Fuels will be stored in secure areas.

With implementation of appropriate construction BMPs, the impact of reasonably foreseeable development under the Housing and Safety Element Update on groundwater resources would be minimized and impacts related to infiltration/contamination would be less than significant. However, impacts related to groundwater supplies and sustainable groundwater management are potentially significant. The impact analysis will be provided in the *Utilities and Service Systems* section of the EIR.

POTENTIALLY SIGNIFICANT IMPACT

c.(i) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site?

c.(ii) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

c.(iii) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Under existing conditions, infill sites that would be the focus of reasonably foreseeable development under the proposed Project are primarily paved and/or developed with structures. Therefore, development under the Housing and Safety Element Update would not be anticipated to substantially alter drainage patterns, or alter drainage patterns to an extent that would result in substantial erosion, siltation, or flooding on- or off-site. Residential uses that would be accommodated by the Housing and Safety Element Update are not sources of high levels of stormwater pollution.

As discussed under *Impact a.* of this section, future construction activities would be required to include BMPs to prevent stormwater contamination and reduce runoff, pursuant to WHMC Chapter 15.56.090, and potentially the NPDES General Construction Permit depending on the size of future development projects. BMPs and implementation of a Standard Urban Storm Water Mitigation Plan (SUSMP) would be required for future projects to reduce polluted runoff from by retaining, treating, or infiltrating polluted runoff onsite, and integrate post-construction BMPs into a site's overall drainage system. These construction and erosion control practices would reduce the potential for adverse effects caused by excavation and general construction. Therefore, reasonably foreseeable development under the proposed Project would not introduce substantial additional sources of polluted runoff.

Because development under the Housing Element Update would not substantially alter the existing drainage pattern and development and construction of future projects would be required to implement stormwater BMPs, development under the proposed Project would not generate a substantial increase in runoff that would result in substantial erosion, siltation, flooding on- or off-site, or increased polluted runoff. The Safety Element and Environmental Justice updates would not result in development that would create drainage impacts. Therefore, impacts related to drainage and runoff would be less than significant and further analysis of these issues in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

c.(iv) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows?

According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps (FIRMs), the City of Burbank contains a strip of Special Flood Hazard Areas (SFHA), areas subject to 100-year and 500-year floods, along the northern edge of U.S. Highway 5 in the center of the City.

New developments are required to comply with Section 1612 (Flood Loads) and Appendix G (Flood-Resistant Construction) of the CBC, which have also been adopted under Chapter 1 of the BMC. In addition, as discussed under *Impact c(i), c (ii),* and *c(iii)*, above, the Housing and Safety Element Update would emphasize new development of on infill sites in urbanized areas that are already primarily paved and/or developed with structures. Therefore, reasonably foreseeable development under the Housing Element Update would not substantially alter drainage patterns, and the Safety Element and Environmental Justice updates would not result in development that would create drainage impacts. Consequently, growth under the proposed Project would not alter the drainage pattern of the Plan Area to an extent that would redirect or impede flood flows. Impacts would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

d. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

Seiches are large waves generated by ground shaking effects within enclosed bodies of water. Four reservoirs or dams surround Burbank: Devil's Gate Dam, Reservoir 1, Reservoir 4, and Reservoir 5. The northwest portion of the City is subject to Dam inundation by the three reservoirs (Burbank Fire Department 2011). However, these reservoirs impound more than 50 acre-feet of water in order to reduce the risk of flooding, and they are not large enough to result in considerable risk of inundation in Burbank that would result from failure of any of the facilities (Burbank 2013). Therefore, potential impacts associated with flooding from a seismically induced seiche would not be significant.

Tsunamis are tidal waves generated by fault displacement or major ground movement. Since Burbank is landlocked and located over 15 miles from the Pacific Ocean, tsunamis are not considered a hazard.

As discussed under Impact c.(iv), above, a central portion of the City lies in a flood hazard zones subject to 100-year and 500-year floods. Reasonably foreseeable development under the proposed Project would be concentrated on infill sites and would not substantially alter the overall development patterns in the City. The Housing and Safety Element Update would increase development capacity, thereby potentially increasing the number of people and structures exposed to potential flooding. However, this condition already exists, and the proposed Project would not exacerbate existing flood hazards. Further, while there is the potential for flooding to impact portions of the City, as discussed under Section 9, *Hazards and Hazardous Materials*, future developments under the proposed Project would not involve the storage or use of significant quantities of hazardous materials, and construction of new structures would be required to comply with CBC regulations for flooding. Therefore, risks related to the release of hazardous materials due to inundation are minimal. The Housing Element Update would have a less than significant impact. In addition, the Safety Element and Environmental Justice updates would not result in development that would create impacts related to seiches, tsunamis or flood hazards. Further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Potential water quality and groundwater impacts associated with the Housing and Safety Element Update are discussed above under *Impacts a.* and *b.* The Housing Element Update would not contain any policies that would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Furthermore, development under the proposed Project would be required to comply with the existing regulations discussed under *Impacts a.* and *b* of this section, including during construction and operation, and would not otherwise substantially degrade water quality. In addition, the Safety Element and Environmental Justice updates would not result in development that would conflict with applicable water management plans. Impacts would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

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11 Land Use and Planning

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

a. Would the project physically divide an established community?

Implementation of the Housing and Safety Element Update would prioritize future development on infill sites in already urbanized areas of the City. Therefore, reasonably foreseeable development under the proposed Project would not involve the construction of new roads, railroads, or other features that may physically divide established communities in the City. As discussed in the *Description of the Project*, above, goals, policies and objectives under the Housing Element Update would put a greater emphasis on preventing displacement and promoting housing stability to maintain and preserve the quality of the City's existing neighborhoods. Consequently, there would be no impact associated with the physical division of an established community. In addition, the Safety Element and Environmental Justice updates would not result in development that would divide an established community. Further analysis of this issue in an EIR is not warranted.

NO IMPACT

b. Would the project 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?

The proposed Project is the 2021-2029 Burbank Housing Element Update, Safety Element Update, and Environmental Justice Updates, which examines the City's housing needs, as they exist today, and projects future housing needs. The Housing and Safety Element Update focuses on addressing the City's housing needs by providing goals, policies and programs associated with fair housing, the prevention of displacement, promoting housing stability, and the prevention of homelessness. The proposed Project includes actions the City is undertaking to achieve its housing RHNA targets and also would implement SCAG's land use goals and policies by primarily placing development in areas with access to transit and services, thus minimizing vehicle trips and GHG emissions.

Upon its adoption by the City, the Housing and Safety Element Update would serve as a comprehensive statement of the City's housing policies and as a specific guide for program actions to be taken in support of those policies. As a part of the General Plan, development with adherence to the Housing Element Update would comply with the City's Burbank2035 General Plan. In addition, the Safety Element Update will be made to achieve compliance with State, regional and local policies, and guidelines; and the Environmental Justice Updates will reduce health risks to DACs, promote civic engagement, and prioritize the needs of these communities.

The Housing and Safety Element Update is a policy document that encourages development on infill sites, but would not grant entitlements for any specific projects. Future development proposals that are intended to assist in meeting the City's projected housing need would be reviewed by the City for consistency with all adopted local and State laws, regulations, standards, and policies. Impacts related to conflicts with land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

12 Mineral Resources

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

a. Would the project 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?

Reasonably foreseeable development under the proposed Project would primarily occur in existing commercial and residential areas, which are not compatible with or used for mineral extraction. It is not anticipated that development under the Housing and Safety Element Update would occur on lands presently in use for mineral extraction. Furthermore, the proposed Housing Element, Safety Element and Environmental Justice updates do not include any policies that related to mineral resources or conflict with existing General Plan policies and City ordinances regulating the conservation and use of mineral resources. Therefore, the proposed Project would not result in a loss of availability of a known mineral resource. There would be no impact and further analysis of this issue in an EIR is not warranted.

NO IMPACT

b. Would the project 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?

The California Surface Mining and Reclamation Act of 1975 (SMARA) was enacted to promote conservation and protection of significant mineral deposits. SMARA requires the State to identify and classify mineral deposits within the State as either: (1) containing little or no mineral deposits (MRZ-1), (2) significant deposits (MRZ-2) or (3) deposits identified but further evaluation needed (MRZ-3 and MRZ-4).

As discussed under *Impact a.* of this section, the Housing and Safety Element Update would prioritize reasonably foreseeable development on infill sites in urban areas that primarily consist of residential, commercial and mixed-use development, which are not considered compatible with mineral extraction. According to the Open Space and Conservation Element of the Burbank2035 General Plan, portions of the City are categorized as MRZ-2 and MRZ-3 (City of Burbank 2013a). However, due to the extensive urban development of the City and historical land use changes, mining activities are no longer feasible. In addition, the proposed Safety Element and Environmental Justice updates would not result in development that would create environmental impacts.

Therefore, the proposed Project would not further the loss of available mineral resources. No impact would occur and further analysis of this issue in an EIR is not warranted.

NO IMPACT

13 Noise

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

a. Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction of reasonably foreseeable development under the Housing and Safety Element Update could generate temporary noise levels in excess of the ambient noise levels in the City. Operation of reasonably foreseeable development under the Housing and Safety Element Update has the potential to generate vehicle trips to and from individual projects and include operational noise sources, including, but not limited to, heating, ventilation and air conditioning equipment and hauling/delivery vehicles. Development may also generate traffic increases along the local transportation network. Operation of reasonably foreseeable development under the proposed Project may have the potential to exceed operational thresholds for receiving land uses and sensitive receivers, if located nearby. Potential noise impacts related to substantial temporary or permanent increases in noise, in excess of City standards, could occur. Impacts would be potentially significant and will be further analyzed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Construction activity can result in varying degrees of ground vibration depending on the equipment and methods employed. Operation of construction equipment causes vibrations that spread through the ground and diminish in strength with distance. Reasonably foreseeable development under the Housing and Safety Element Update may result in excessive short- and/or long-term ground borne vibration or noise from construction or operation activities if located near sensitive receivers, such as residences, hospitals, schools, libraries, churches, or fragile buildings where vibration damage can occur. Impacts related to ground borne vibration and ground borne noise would be potentially significant and will be evaluated in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

As discussed in Section 9, *Hazards and Hazardous Materials*, a portion of Burbank is within the Airport Influence Area of the Hollywood Burbank Airport on the northwestern edge of the City. Although overflight of aircrafts has the potential to expose people residing or working in the City to aircraft noise, this type of noise is common in urban areas. In addition, aircraft noise is intermittent and temporary. Nevertheless, because the Housing and Safety Element Update would accommodate housing development in the Golden State District that surrounds the eastern portion of the airport, future development under the proposed Project may occur within the Airport Influence Area. Impacts would be potentially significant and will be further analyzed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

14 Population and Housing

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

a. Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

As described in Section 2.5.2, *RHNA Allocation*, the estimated net housing units for the City of Burbank would fall short of the RHNA allocation by 2,391 units. To make up for this shortfall, the Housing Element includes a housing program to amend the General Plan and adopt the Downtown TOD and the GSSP which will provide the necessary zoning, development standards, and processing procedures to facilitate the production of housing required to accommodate the City's housing needs during the Housing Element 2021-2029 planning period. The zone changes required by these Specific Plans will be adopted in 2022-24. The City would exceed the RHNA requirement for a total of 10,456 new residential units. According to the California Department of Finance (DOF), the City of Burbank has a current population of 103,969 with an average household size of 2.45 (DOF 2021). Based on the average household size of 2.45, the increase of 10,456 residential units would generate a population increase of approximately 25,617 residents. Implementation of the Housing and Safety Element Update would contribute to population growth in the City. Impacts related to population growth are potentially significant and will be further analyzed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Reasonably foreseeable development under the Housing and Safety Element Update would involve development projects on infill sites. However, goals, policies, and objectives included in the Housing and Safety Element Update aim to prevent displacement and promote housing stability. In addition, the Housing and Safety Element Update would provide additional opportunities for housing by expanding areas where housing is allowed. The Housing Element Update would accommodate up to 10,456 residential units throughout the planning period, and it is anticipated that any replacement housing need created by displacement of existing housing would be more than offset through implementation of the Housing Element Update. In addition, the Safety Element and Environmental Justice updates would not result in development that would displace people or housing. Therefore, impacts would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

15 Public Services

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
1 Fire protection?	■	☐	☐	☐
2 Police protection?	■	☐	☐	☐
3 Schools?	■	☐	☐	☐
4 Parks?	■	☐	☐	☐
5 Other public facilities?	■	☐	☐	☐

a.1. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, or the 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?

Fire protection in the City is provided by the Burbank Fire Department (BFD). The BFD, in conjunction with the City's Community Development Department Building & Safety Division, reviews site plans, construction plans, and architectural plans prior to occupancy to ensure the required fire protection safety features, including building sprinklers and emergency access, are implemented. Development with modern materials and in accordance with current standards, inclusive of fire-resistant materials, fire alarms and detection systems, automatic fire sprinklers, would enhance fire safety and would support fire protection services (Title 24, Cal. Code Regs. Part 9). The BFD has established the Fire Department Headquarters (Station 11) at 311 East Orange Grove Avenue and operates five other fire stations distributed throughout the City (City of Burbank 2013a).

Reasonably foreseeable development under the proposed Project may increase the need for fire services in areas where development would be concentrated. Potential impacts of the Housing and Safety Element Update, such as placing an unanticipated burden on fire protection services or affecting response times or service ratios, such that new or expanded fire protection facilities would be needed, will be further analyzed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

a.2. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, or the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

The Burbank Police Department (BPD) provides police protection services in the City. Services include emergency and non-emergency police response, routine police patrols, investigative services, traffic enforcement, traffic investigation, and parking code enforcement. The BPD has established the Police Headquarters at 200 North Third Street, and operates the local animal shelter, a police pistol range, the City Jail, and a heliport in Sun Valley (City of Burbank 2013a). BPD has mutual aid agreements with the City of Los Angeles, San Fernando, Glendale, and Pasadena police departments (City of Burbank 2013a). BPD uses 11 patrol beats to service the City and surrounding areas if needed, and has an average emergency response time of less than four minutes, and an average response time for non-emergency calls of 16 minutes (City of Burbank 2013a).

Reasonably foreseeable development under the proposed Project may increase the need for police services in areas where development would be concentrated. Potential impacts of the Housing and Safety Element Update, such as placing an unanticipated burden on police protection services or affecting response times or service ratios, such that new or expanded police protection facilities would be needed, will be further analyzed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

a.3. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered schools, or the need for new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

The Burbank Unified School District (BUSD) provides public school services to Burbank residents for grades kindergarten through 12 and oversees 22 schools. As discussed in Section 14, *Population and Housing*, the net increase of 10,456 units would generate an increase of approximately 25,617 new residents, some of whom would be school-aged children. The Housing and Safety Element Update would not directly affect local schools, but may generate new students entering the BUSD. Reasonably foreseeable development under the Housing and Safety Element Update could create the need for new or physically altered school facilities if student population increases beyond existing capacity. This impact would be potentially significant and will be further analyzed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

a.4. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered parks, or the need for new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

As identified in the Burbank2035 General Plan, the City contains 26 parks that total approximately 731.85 acres of parkland within the City (City of Burbank 2013a). Stough Canyon Park and Wildwood Canyon Park are the two largest parks in the City. They each serve as recreational and cultural focal points for the community at large.

The Open Space and Conservation Element of the Burbank2035 General Plan establishes a requirement for three acres of new parkland per 1,000 new residents. This requirement applies to large residential developments and would result in parkland dedications or improvements, or in-lieu payments if a project applicant is not able to dedicate land or the land is considered unsuitable for park or recreation use. The proposed Project may include large developments that would need to comply with this requirement. Therefore, development under the proposed Project may result in construction of new parks and recreation facilities. Impacts would be potentially significant and will be analyzed further in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

a.5. Would the project result in substantial adverse physical impacts associated with the provision of other new or physically altered public facilities, or the need for other new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

The Housing and Safety Element Update would emphasize the creation of reasonably foreseeable development in urban infill areas of the City that could increase demand for other public facilities. Impacts related to increased demand for other public facilities such as stormwater, wastewater, and utility facilities are discussed in Section 19, *Utilities and Service Systems*. Development projects can affect the need for new or physically altered public facilities and demand increases beyond existing capacity. A significant impact may occur if a project includes substantial employment or population growth that could generate a demand for other public facilities, which would exceed the capacity available to serve the City, necessitating a new or physically altered building, the construction of which would have significant physical impacts on the environment.

Adoption of the Housing and Safety Element Update may cause an exceedance of capacity at existing facilities, such as local libraries, or generate a substantial demand for them. Therefore, expansion or construction of new facilities may be required. Impacts would be potentially significant and will be analyzed further in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

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16 Recreation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	■	☐
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	■	☐	☐	☐

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

As discussed in Section 15, *Public Services*, recreational amenities in Burbank include 26 parks, totaling 731.85 acres of parkland (City of Burbank 2013a). According to the DOF there are an estimated 103,969 residents in the City of Burbank (DOF 2021). With the 731.85 acres of public parkland in the City, there are approximately seven acres of parkland per 1,000 residents. The Open Space and Conservation Element of the Burbank2035 General Plan establishes a citywide parkland level of service goal of five acres of improved parkland per 1,000 residents, and a requirement applicable to new development of three acres of new parkland per 1,000 new residents.

Reasonably foreseeable development under the Housing and Safety Element Update could increase the use of existing neighborhood and regional parks. As discussed in the *Description of Project*, the proposed Project would accommodate up to 10,456 new residential units in the City, which would generate a population increase of approximately 25,617 residents. The population increase would result in a total of approximately 129,586 residents, which would increase demand for parks and recreational facilities. With the 731.85 acres of public parkland in the City, there would be approximately 5.6 acres of parkland per 1,000 residents with all forecast growth under the proposed Project. As such, the City would meet the standard of five acres per 1,000 residents. Furthermore, applicants for development projects under the proposed Project would be required to either provide parkland or pay community facilities fees to meet the standard of three acres of new parkland per 1,000 new residents. Therefore, development under the Housing Element Update would not result in substantial deterioration of existing recreation facilities, and the Safety Element and Environmental Justice updates would not result in development that would create impacts to recreational resources. Potential impacts to existing parks would be less than significant and further analysis of this issue is not warranted.

LESS THAN SIGNIFICANT IMPACT

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

As discussed in Section 15, *Public Services*, the Housing and Safety Element Update does not include goals or policies to develop additional park space. However, the Open Space and Conservation Element of the Burbank2035 General Plan establishes a requirement for three acres of new parkland per 1,000 new residents. This requirement applies to large residential developments and would result in parkland dedications or improvements, or in-lieu payments if a project applicant is not able to dedicate land or the land is considered unsuitable for park or recreation use. The proposed Project may include large developments that would need to comply with this requirement. Therefore, reasonably foreseeable development under the proposed Project may result in construction of new parks and recreation facilities. Impacts would be potentially significant and will be discussed further in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

17 Transportation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	■	☐	☐	☐
b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	■	☐	☐	☐
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?	■	☐	☐	☐
d. Result in inadequate emergency access?	■	☐	☐	☐

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

b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?

d. Would the project result in inadequate emergency access?

The Housing and Safety Element Update would accommodate up to 10,456 new residential units in Burbank, which may allow for development of currently undeveloped parcels and for alteration, intensification, or redistribution of existing land uses. This could result in increased traffic compared to existing conditions. Trips generated as a result of increased density or reasonably foreseeable development under the proposed Project have the potential to impact intersection and roadway segments throughout the City and contribute to cumulative traffic increases. The proposed Project could also conflict with applicable plans and policies addressing the circulation system. Potential impacts related to CEQA Guidelines Section 15064 pertaining to vehicle miles traveled (VMT) and compliance with plans and policies that establish measures of effective performance of the circulation system will be evaluated in an EIR. In addition, reasonably foreseeable development under the proposed Project result in construction activities that may temporarily alter traffic patterns, and also result in long-term alterations of existing traffic patterns that may result in transportation related impacts associated with traffic hazards, incompatible uses, and emergency access. Impacts would be potentially significant and will be discussed further in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

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18 Tribal Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), 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 Cod Section 2024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significant of the resource to a California Native American tribe.	■	☐	☐	☐

As of July 1, 2015, AB 52 of 2014 was enacted to expand CEQA by defining a new resource category, “tribal cultural resources.” AB 52 establishes that “a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment” (PRC Section 21084.2). It further states that the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3).

PRC Section 21074 (a)(1)(A) and (B) define tribal cultural resources as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe” and is:

1. Listed or eligible for listing in the CRHR or in a local register of historical resources as defined in PRC Section 5020.1(k), or
2. 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 PRC Section 5024.1. In applying these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified or adopted. Under AB 52, lead agencies are required to “begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed Project." Native American tribes to be included in the process are those that have requested notice of projects proposed within the jurisdiction of the lead agency.

a. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?*

b. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 that is 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?*

As discussed in Section 5, *Cultural Resources,* there is potential for reasonably foreseeable development under the proposed Project to disturb as yet undiscovered intact cultural resources, including tribal cultural resources. Although the likelihood of encountering resources is low since development would emphasize urbanized infill sites that are already disturbed, impacts would be potentially significant and will be further analyzed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

19 Utilities and Service Systems

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	■	☐	☐	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	■	☐	☐	☐
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	■	☐	☐	☐
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	■	☐	☐	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	■	☐

a. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

c. Would the project 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?

Reasonably foreseeable development under the Housing and Safety Element Update would occur in urbanized areas that are served by existing utilities infrastructure, including potable water, wastewater, stormwater drainage, electrical power, natural gas, and telecommunications facilities.

Water Supply

The Housing and Safety Element Update would accommodate reasonably foreseeable development that would require water for a variety of activities such as landscaping, controlling fugitive dust, and providing potable water to workers during construction and residents and commercial occupants of future developments. In addition, as discussed in Section 10, *Hydrology and Water Quality*, impacts related to groundwater supplies and sustainable groundwater management are potentially significant. Therefore, these issues will be studied further in an EIR.

Furthermore, as development occurs throughout the City, upgrades to water conveyance facilities may be required. The precise location and connection would need to be determined at the time development is proposed. Any future line size modifications or connections would be designed in accordance with applicable provisions of the Burbank Municipal Code and to the satisfaction of the City Engineer. However, increased development density has the potential to impact the capacities of local utilities infrastructure, which may require the expansion or construction of new facilities. In addition, under the Safety Element, expanded resiliency policy could potentially result in the relocation of critical infrastructure out of disaster-prone areas, and/or the expansion of utilities and infrastructure to improve resilience. Therefore, this issue will be studied further in an EIR.

Wastewater Generation

Wastewater treatment would be provided by existing infrastructure in the City. However, the amount of wastewater generated by project development is not known at this time and may exceed existing capacity. Similar to water supply, development has the potential to impact the capacities of the City's wastewater treatment conveyance systems that may require the expansion or construction of new infrastructure or facilities. In addition, the updates under the Safety Element could result in relocation of critical infrastructure. Therefore, this issue will be studied further in an EIR.

Stormwater

New infill development would be located in an urban area that is served by existing stormwater drainage systems. However, increased development density has the potential to impact the capacities of local utilities infrastructure that may require the expansion or construction of new wastewater treatment and storm water drainage facilities. In addition, the updates under the Safety Element could result in relocation of critical infrastructure. Therefore, this issue will be studied further in an EIR.

Electricity, Natural Gas, and Telecommunications

Telecommunications services are provided by ONE Burbank, AT&T, EarthLink, Spectrum or other providers, at the discretion of future residents. Telecommunications are generally available in the City and facility upgrades would not likely be necessary.

Electricity is currently provided to the City by BWP and natural gas service is provided by Southern California Gas Company. Operation and occupancy of reasonably foreseeable development under the proposed Project would increase demand for electricity and natural gas compared to existing conditions. Increased development density has the potential to impact the capacities of local utilities infrastructure that may require the expansion or construction of new facilities, and updates under the Safety Element could result in relocation of critical infrastructure. Therefore, impacts would be potentially significant and this issue will be studied further in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

d. Would the project 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?

The City of Burbank Street and Solid Waste Division collects, transports, and disposes of solid waste for all single-family residences, 60 percent of multi-family residences, and approximately ten percent of the City's commercial/industrial refuse customers. (City of Burbank 2009b). Solid waste from Burbank is collected by the Public Works Department and taken to either the Burbank Landfill or Burbank Recycle Center (City of Burbank 2013a). Green waste is processed and delivered to a compost facility outside of the City (City of Burbank 2009c).

Reasonably foreseeable development under the Housing and Safety Element Update would generate both construction and operational solid waste that would be disposed of at the aforementioned facilities and other collection centers. Solid waste generated by up to 10,456 new residential units could potentially exceed the capacity of these facilities. Impacts would be potentially significant and will be further analyzed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

A significant impact could occur if the Housing and Safety Element Update would conflict with any statutes and regulations governing solid waste. In compliance with State legislation, any development project under the Housing and Safety Element Update would be required to implement a Solid Waste Diversion Program and divert at least 75 percent of the solid waste generated from the applicable landfill site. Reasonably foreseeable development under the Housing and Safety Element Update would comply with Federal, State, and local statutes and regulations related to solid waste, such as the California Waste Integrated Waste Management Act (AB 939), mandatory commercial recycling (AB 341, AB 1826), and the City’s recycling program. Since development projects under the Housing Element Update would comply with applicable Federal, State, and local regulations involving solid waste, impacts related to conflict with statutes and regulations governing solid waste would be less than significant. In addition, the Safety Element and Environmental Justice updates would not result in development that would create impacts related to solid waste. Further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

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20 Wildfire

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	■	☐
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	■	☐
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	■	☐
d. Expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	■	☐

a. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?*

Based on the California Fire Hazard Severity Zone (FHSZ) map, there are two areas at risk for wildfire in the City. The northeastern boundary of the City along the Verdugo Mountain range is within the FHSZ, as well as the area between the 134 Freeway and Forest Lawn Drive (CalFire 2020). The northeastern area is primarily developed with single-family residential uses, while the southern area consists of residential and commercial development and the Disney and Warner Brothers studios. The Housing and Safety Element Update would emphasize development in urbanized areas of the City that are not subject to significant wildfire risks. Such development would not conflict with an adopted emergency response plan or emergency evacuation plan. In addition, the transportation analysis will address potential traffic hazards associated with the proposed Project.

As discussed in Section 9, *Hazards and Hazardous Materials*, construction activities could interfere with adopted emergency response or evacuation plans as a result of temporary construction activities within rights-of-way. However, temporary construction barricades or other obstructions used for project development that could impede emergency access would be subject to the City's permitting process, which requires a traffic control and mitigation plan subject to City review and approval. Implementation of these plans would ensure that future development under the proposed Project would not impair or physically interfere with adopted emergency response or evacuation procedures.

Increased density in urban areas of the City under the proposed Project could result in additional traffic within area roadways. However, in the event of a wildfire, implementation of the County's 2012 Emergency Response Plan (ERP) would coordinate all the facilities and personnel of County government, along with the jurisdictional resources of the cities and special districts within the County, into an efficient organization capable of managing emergency evacuation for affected areas. In addition, the BFD's Emergency Management Division would coordinate all the facilities and personnel of the City, along with the jurisdictional resources of the surrounding cities.

The BFD would be responsible for ensuring that future development does not impair adopted emergency response or evacuation plans. As part of standard development procedures, future development plans would be submitted for review and approval to ensure that reasonably foreseeable development has adequate emergency access and escape routes in compliance with existing City regulations. Furthermore, the Housing Element Update would not introduce features or policies that would preclude implementation of or alter these policies or procedures or encourage development in VHFHSZ; the Safety Element Update would improve policies and regulations associated with emergency response or evacuation plans and wildland fires; and the Environmental Justice Updates would not result in development that would create impacts related to wildland fires. Therefore, impacts would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

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

d. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

Portions of the City are subject to wildland fire risk, primarily areas to the north where single-family residential development abuts the Verdugo Mountain hillsides, and at the southwestern portion of the City. Properties located within VHFHSZ as mapped by CalFire are required to minimize fire risks during the high fire season through vegetation clearance, maintenance of landscape vegetation to minimize fuel supply that would spread the intensity of a fire, compliance with provisions for emergency vehicle access, use of approved building materials and design, and compliance with the BFD's Fire Hazard Reduction Program (Burbank Fire Department 2021). The undeveloped portions of the Verdugo Mountains are generally designated for open space with no opportunities for development. Development opportunities in the hillside areas may include accessory dwelling units (ADUs) and junior ADUs on existing single-family residential sites.

The Housing and Safety Element Update would incentivize development on urban infill sites within areas well served by high quality public transit. However, it is anticipated that the proposed Project would include development of ADUs and junior ADUs in hillside areas on existing single-family residential sites. Since single-family homes have existing sufficient access for fire services, construction of any ADU or junior ADU behind these homes would be provided the same access. Therefore, development is not likely to expose project occupants to the uncontrolled spread of a wildfire or other associated risks including, but not limited to, flooding, landslides, and instability. Nonetheless, all development would be subject to applicable response plans and would be required to comply with all existing City regulations. In the event of a wildfire, the County's ERP and BFD's Emergency Management Division would coordinate all the facilities and personnel, along with the jurisdictional resources of the surrounding cities, into an efficient organization capable of managing emergency evacuation for affected areas. Furthermore, project development would be required to be constructed according to the UBC requirements for fire-protection and would be subject to review and approval by the BFD. The BFD provides several fire developments services to the City related to enforcing codes concerning new construction and remodeling, including Fire Life Safety Plan Checks and Fire Life Safety Inspections. In addition, the updates to the Safety Element specifically aim at reducing wildfire risks, and no development would occur under the Environmental Justice Updates.

Because the Housing and Safety Element Update would generally direct development away from the hillside areas with fire hazards and reasonably foreseeable development would be required to comply with fire safety provisions established by the Burbank Municipal Code, development under the proposed Project would not pose a substantial risk to people or structures due to wildland fires. Impacts would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

c. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?*

The Housing and Safety Element Update would prioritize reasonably foreseeable development in urban areas of the City near existing high-quality public transit infrastructure. As such, the proposed Project would not encourage development in the residential areas subject to wildfire risk, and development would occur in areas that are well-served by existing roadways and utilities infrastructure. Therefore, development under the Housing Element Update would not require additional roads, fuel breaks, emergency water sources, power lines or other utilities that would exacerbate fire risk; and the Safety Element and Environmental Justice updates would not result in development that would create impacts related to fire risks. Impacts would be less than significant and further analysis of this issue in an EIR is not warranted.

LESS THAN SIGNIFICANT IMPACT

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21 Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Does the project:				
a. Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	■	☐	☐	☐
b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	■	☐	☐	☐
c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	■	☐	☐	☐

a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Reasonably foreseeable development under the Housing and Safety Element Update may involve alteration, intensification, and redistribution of land uses in the City of Burbank. While proposed changes could have the potential to have a substantial adverse effect on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, the proposed Project focuses on infill development and not on the hillsides or slopes of the Verdugo Mountains. As such, proposed changes are in fact unlikely to have any significant impact. As discussed in Section 5, *Cultural Resources*, Section 7, *Geology and Soils*, and Section 18, *Tribal*

Cultural Resources, development under the Housing and Safety Element Update have the potential to impact historical, archaeological, paleontological, and tribal cultural resources. Since the Housing and Safety Element Update has the potential to degrade the quality of the environment, including plants, animals, and potential cultural and historical resources, this impact is potentially significant and will be further analyzed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

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

As discussed in Sections 1 through 20, implementation of the Housing and Safety Element Update and could result in significant impacts to air quality, cultural resources, geology and soils, GHG emissions, hazards and hazardous materials, noise, population and housing, public services, recreation, transportation and traffic, and utilities and service systems. Potential cumulative impacts in these issue areas, for which potentially significant impacts have been identified, will be further analyzed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

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

In general, impacts to human beings are associated with air quality, hazards and hazardous materials, and noise. As discussed in Section 3, *Air Quality*, operation of reasonably foreseeable development under the proposed Project could potentially generate criteria pollutant emissions exceeding the SCAQMD regional thresholds for operation and construction activities under the Housing and Safety Element Update may expose sensitive receptors in the City to substantial pollutant concentrations. As discussed in Section 9, *Hazards and Hazardous Materials*, there is the potential for future construction to involve the demolition or alteration of structures that may contain asbestos and/or LBP, and residential construction under the Housing and Safety Element Update could lead to a significant hazard to the public or environment by exposing future residents to potential on-site contamination if not properly identified. As discussed in Section 13, *Noise*, construction of developments under the Housing and Safety Element Update could generate temporary noise levels in excess of allowable City standards and potentially exceed operational thresholds for receiving land uses and sensitive receivers, if located nearby. Because implementation of the Housing and Safety Element Update could potentially have harmful environmental effects that could affect humans either directly or indirectly, impacts would be potentially significant and these issues will be discussed in an EIR.

POTENTIALLY SIGNIFICANT IMPACT

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List of Preparers

Rincon Consultants, Inc. prepared this Initial Study under contract to the City of Burbank. Persons involved in data gathering analysis, project management, and quality control are listed below.

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Appendix C

Health Risk Assessment Calculations
(Due to the large files, modeling outputs are only available upon request)

*HARP - HRACalc v21081 10/13/2021 3:47:52 PM - Cancer Risk - Input File: C:\Users\mmcnamara\OneDrive - Rincon Consultants\Desktop\HARP Projects\BURBANK HE SR134\hra\Cancer_Res_HRAInput.hra

REC	GRP	NETID	Description	X	Y	RISK_SUM	MERV-13 Filtration I-5	MAX NChronic	MAX NAcute
401	SENSITIV	SR	R SR-1 Floor 1	376431	3779890	7.56E-06	2.53	0.01	0.03
402	SENSITIV	SR	R SR-1 Floor 2	376431	3779890	7.37E-06	2.46	0.01	0.03
403	SENSITIV	SR	R SR-1 Floor 3	376431	3779890	6.09E-06	2.04	0.01	0.03
404	SENSITIV	SR	R SR-1 Floor 4	376431	3779890	4.29E-06	1.43	0.00	0.02
405	SENSITIV	SR	R SR-1 Floor 5	376431	3779890	2.65E-06	0.89	0.00	0.02
406	SENSITIV	SR	R SR-1 Floor 6	376431	3779890	1.53E-06	0.51	0.00	0.01
407	SENSITIV	SR	R SR-1 Floor 7	376431	3779890	8.96E-07	0.30	0.00	0.01
408	SENSITIV	SR	R SR-2 Floor 1	376462	3779901	8.59E-06	2.87	0.01	0.03
409	SENSITIV	SR	R SR-2 Floor 2	376462	3779901	8.38E-06	2.80	0.01	0.03
410	SENSITIV	SR	R SR-2 Floor 3	376462	3779901	6.81E-06	2.27	0.01	0.03
411	SENSITIV	SR	R SR-2 Floor 4	376462	3779901	4.65E-06	1.56	0.01	0.02
412	SENSITIV	SR	R SR-2 Floor 5	376462	3779901	2.78E-06	0.93	0.00	0.02
413	SENSITIV	SR	R SR-2 Floor 6	376462	3779901	1.58E-06	0.53	0.00	0.01
414	SENSITIV	SR	R SR-2 Floor 7	376462	3779901	9.29E-07	0.31	0.00	0.01
415	SENSITIV	SR	R SR-3 Floor 1	376484	3779902	8.87E-06	2.97	0.01	0.03
416	SENSITIV	SR	R SR-3 Floor 2	376484	3779902	8.67E-06	2.90	0.01	0.03
417	SENSITIV	SR	R SR-3 Floor 3	376484	3779902	7.02E-06	2.35	0.01	0.03
418	SENSITIV	SR	R SR-3 Floor 4	376484	3779902	4.77E-06	1.59	0.01	0.02
419	SENSITIV	SR	R SR-3 Floor 5	376484	3779902	2.83E-06	0.94	0.00	0.02
420	SENSITIV	SR	R SR-3 Floor 6	376484	3779902	1.60E-06	0.54	0.00	0.01
421	SENSITIV	SR	R SR-3 Floor 7	376484	3779902	9.42E-07	0.31	0.00	0.01
422	SENSITIV	SR	R SR-4 Floor 1	376490	3779887	7.87E-06	2.63	0.01	0.03
423	SENSITIV	SR	R SR-4 Floor 2	376490	3779887	7.71E-06	2.58	0.01	0.03
424	SENSITIV	SR	R SR-4 Floor 3	376490	3779887	6.41E-06	2.14	0.01	0.03
425	SENSITIV	SR	R SR-4 Floor 4	376490	3779887	4.51E-06	1.51	0.01	0.02
426	SENSITIV	SR	R SR-4 Floor 5	376490	3779887	2.76E-06	0.92	0.00	0.02
427	SENSITIV	SR	R SR-4 Floor 6	376490	3779887	1.58E-06	0.53	0.00	0.01
428	SENSITIV	SR	R SR-4 Floor 7	376490	3779887	9.22E-07	0.31	0.00	0.01
429	SENSITIV	SR	R SR-5 Floor 1	376477	3779874	7.03E-06	2.35	0.01	0.03
430	SENSITIV	SR	R SR-5 Floor 2	376477	3779874	6.89E-06	2.30	0.01	0.03
431	SENSITIV	SR	R SR-5 Floor 3	376477	3779874	5.85E-06	1.95	0.01	0.03
432	SENSITIV	SR	R SR-5 Floor 4	376477	3779874	4.23E-06	1.42	0.00	0.02
433	SENSITIV	SR	R SR-5 Floor 5	376477	3779874	2.66E-06	0.89	0.00	0.02
434	SENSITIV	SR	R SR-5 Floor 6	376477	3779874	1.54E-06	0.52	0.00	0.01
435	SENSITIV	SR	R SR-5 Floor 7	376477	3779874	8.99E-07	0.30	0.00	0.01
436	SENSITIV	SR	R SR-6 Floor 1	376455	3779865	6.44E-06	2.15	0.01	0.02
437	SENSITIV	SR	R SR-6 Floor 2	376455	3779865	6.32E-06	2.11	0.01	0.02
438	SENSITIV	SR	R SR-6 Floor 3	376455	3779865	5.44E-06	1.82	0.01	0.03
439	SENSITIV	SR	R SR-6 Floor 4	376455	3779865	4.02E-06	1.34	0.00	0.02
440	SENSITIV	SR	R SR-6 Floor 5	376455	3779865	1.52E-06	0.51	0.00	0.01
441	SENSITIV	SR	R SR-6 Floor 6	376455	3779865	8.85E-07	0.30	0.00	0.01
442	SENSITIV	SR	R SR-6 Floor 7	376455	3779865	6.44E-06	2.15	0.01	0.02
443	SENSITIV	SR	R SR-7 Floor 1	376433	3779865	6.16E-06	2.06	0.01	0.02
444	SENSITIV	SR	R SR-7 Floor 2	376433	3779865	5.29E-06	1.77	0.01	0.03
445	SENSITIV	SR	R SR-7 Floor 3	376433	3779865	3.92E-06	1.31	0.00	0.02
446	SENSITIV	SR	R SR-7 Floor 4	376433	3779865	2.54E-06	0.85	0.00	0.02
447	SENSITIV	SR	R SR-7 Floor 5	376433	3779865	1.50E-06	0.50	0.00	0.01
448	SENSITIV	SR	R SR-7 Floor 6	376433	3779865	8.74E-07	0.29	0.00	0.01
449	SENSITIV	SR	R SR-7 Floor 7	376433	3779865	6.27E-06	2.10	0.01	0.02
450	SENSITIV	SR	R SR-8 Floor 1	376427	3779881	6.83E-06	2.28	0.01	0.02
451	SENSITIV	SR	R SR-8 Floor 2	376427	3779881	5.74E-06	1.92	0.01	0.03
452	SENSITIV	SR	R SR-8 Floor 3	376427	3779881	4.13E-06	1.38	0.00	0.02
453	SENSITIV	SR	R SR-8 Floor 4	376427	3779881	2.59E-06	0.87	0.00	0.02
454	SENSITIV	SR	R SR-8 Floor 5	376427	3779881	1.51E-06	0.50	0.00	0.01
455	SENSITIV	SR	R SR-8 Floor 6	376427	3779881	8.82E-07	0.29	0.00	0.01
456	SENSITIV	SR	R SR-8 Floor 7	376427	3779881	7.00E-06	2.34	0.01	0.03

GRP	NETID	X	Y	Description	I-5	MERV-13 Filtration I-5	BWP_lvl1	BWP_lvl2	BWP_lvl3	BWP_lvl4	BWP_lvl5	BWP_lvl6	BWP_lvl7	BWP_lvl8	TOTAL CANCER SUM	MAX NChronic I-5	MAX NAcute I-5	MAX NChronic BWP	MAX NAcute BWP
SENSITIV	SR	378572.5	3783633	TOD3 SR-1 Floor 1	1.17E-05	3.90	0.89	0.89	0.90	0.90	0.90	0.90	0.91	0.91	4.80	0.011	0.032	0.001	0.002
SENSITIV	SR	378593	3783654	TOD3 SR-2 Floor 1	8.94E-06	2.99	0.91	0.91	0.91	0.91	0.92	0.92	0.92	0.93	3.90	0.008	0.030	0.001	0.002
SENSITIV	SR	378610.2	3783671	TOD3 SR-3 Floor 1	7.37E-06	2.46	0.92	0.92	0.92	0.92	0.93	0.93	0.93	0.94	3.38	0.007	0.028	0.001	0.002
SENSITIV	SR	378661.5	3783628	TOD3 SR-4 Floor 1	7.32E-06	2.45	1.01	1.01	1.01	1.02	1.02	1.03	1.03	1.04	3.45	0.007	0.030	0.001	0.002
SENSITIV	SR	378701.1	3783591	TOD3 SR-5 Floor 1	7.35E-06	2.46	1.08	1.08	1.08	1.09	1.10	1.10	1.11	1.12	3.53	0.007	0.031	0.001	0.003
SENSITIV	SR	378678.1	3783572	TOD3 SR-6 Floor 1	9.61E-06	3.21	1.08	1.08	1.09	1.09	1.10	1.11	1.11	1.12	4.29	0.009	0.032	0.001	0.003
SENSITIV	SR	378649.3	3783560	TOD3 SR-7 Floor 1	9.57E-06	3.20	1.06	1.06	1.07	1.07	1.08	1.08	1.09	1.10	4.25	0.009	0.031	0.001	0.003
SENSITIV	SR	378641.2	3783579	TOD3 SR-8 Floor 1	8.85E-06	2.96	1.03	1.03	1.04	1.04	1.05	1.05	1.06	1.07	3.99	0.009	0.030	0.001	0.003
SENSITIV	SR	378631.7	3783604	TOD3 SR-9 Floor 1	1.07E-05	3.59	1.00	1.00	1.00	1.01	1.01	1.02	1.02	1.03	4.59	0.010	0.032	0.001	0.003
SENSITIV	SR	378614.2	3783626	TOD3 SR-10 Floor 1	1.01E-05	3.37	0.96	0.96	0.96	0.96	0.97	0.97	0.98	0.98	4.32	0.010	0.031	0.001	0.003
SENSITIV	SR	378808.1	3783487	TOD4 SR-1 Floor 1	6.85E-06	2.29	1.16	1.17	1.18	1.19	1.20	1.21	1.22	1.24	3.45	0.006	0.030	0.001	0.003
SENSITIV	SR	378853	3783449	TOD4 SR-2 Floor 1	6.32E-06	2.11	1.11	1.12	1.13	1.14	1.15	1.16	1.18	1.19	3.22	0.006	0.030	0.001	0.003
SENSITIV	SR	378881.8	3783408	TOD4 SR-3 Floor 1	6.57E-06	2.19	1.05	1.06	1.07	1.08	1.10	1.11	1.13	1.14	3.25	0.006	0.029	0.001	0.003
SENSITIV	SR	378924.8	3783385	TOD4 SR-4 Floor 1	5.76E-06	1.92	0.91	0.91	0.92	0.93	0.94	0.96	0.97	0.98	2.83	0.005	0.028	0.001	0.004
SENSITIV	SR	378896.2	3783345	TOD4 SR-5 Floor 1	7.69E-06	2.57	1.02	1.03	1.04	1.06	1.08	1.09	1.11	1.13	3.59	0.007	0.030	0.001	0.004
SENSITIV	SR	378870.3	3783316	TOD4 SR-6 Floor 1	1.02E-05	3.42	1.13	1.14	1.16	1.18	1.20	1.23	1.25	1.28	4.55	0.010	0.032	0.001	0.004
SENSITIV	SR	378830	3783284	TOD4 SR-7 Floor 1	1.19E-05	3.99	1.28	1.30	1.32	1.35	1.38	1.41	1.45	1.49	5.27	0.011	0.030	0.001	0.004
SENSITIV	SR	378812.8	3783325	TOD4 SR-8 Floor 1	1.52E-05	5.08	1.31	1.33	1.34	1.37	1.39	1.42	1.45	1.49	6.39	0.014	0.035	0.001	0.004
SENSITIV	SR	378793.7	3783373	TOD4 SR-9 Floor 1	1.06E-05	3.53	1.31	1.32	1.33	1.35	1.37	1.39	1.42	1.44	4.84	0.010	0.031	0.001	0.004
SENSITIV	SR	378775.6	3783426	TOD4 SR-10 Floor 1	9.17E-06	3.06	1.27	1.28	1.29	1.31	1.32	1.34	1.36	1.38	4.33	0.009	0.031	0.001	0.003
SENSITIV	SR	378785.3	3783463	TOD4 SR-11 Floor 1	9.44E-06	3.16	1.22	1.23	1.24	1.25	1.26	1.28	1.29	1.31	4.38	0.009	0.032	0.001	0.003
SENSITIV	SR	378846	3783181	TOD5 SR-1 Floor 1	1.16E-05	3.88	1.16	1.19	1.22	1.26	1.31	1.37	1.43	1.50	5.04	0.011	0.027	0.001	0.005
SENSITIV	SR	378829	3783223	TOD5 SR-2 Floor 1	1.56E-05	5.22	1.27	1.30	1.33	1.36	1.41	1.46	1.51	1.57	6.49	0.015	0.031	0.001	0.005
SENSITIV	SR	378849	3783222	TOD5 SR-3 Floor 1	1.30E-05	4.36	1.19	1.21	1.24	1.27	1.31	1.36	1.41	1.46	5.55	0.012	0.030	0.001	0.005
SENSITIV	SR	378876	3783197	TOD5 SR-4 Floor 1	1.19E-05	3.97	1.04	1.06	1.08	1.12	1.15	1.20	1.25	1.30	5.01	0.011	0.029	0.001	0.005
SENSITIV	SR	378902	3783173	TOD5 SR-5 Floor 1	1.52E-05	5.08	0.87	0.88	0.91	0.93	0.97	1.01	1.05	1.10	5.95	0.014	0.033	0.001	0.004
SENSITIV	SR	378930	3783142	TOD5 SR-6 Floor 1	1.43E-05	4.77	0.67	0.68	0.70	0.72	0.75	0.78	0.82	0.86	5.44	0.013	0.032	0.001	0.005
SENSITIV	SR	378957	3783118	TOD5 SR-7 Floor 1	9.99E-06	3.34	0.52	0.53	0.54	0.56	0.58	0.60	0.63	0.66	3.86	0.009	0.028	0.001	0.004
SENSITIV	SR	378962	3783080	TOD5 SR-8 Floor 1	1.09E-05	3.63	0.44	0.45	0.46	0.48	0.50	0.52	0.54	0.57	4.08	0.010	0.029	0.000	0.005
SENSITIV	SR	378937	3783053	TOD5 SR-9 Floor 1	1.45E-05	4.84	0.47	0.47	0.49	0.51	0.53	0.56	0.59	0.63	5.30	0.013	0.031	0.001	0.005
SENSITIV	SR	378917	3783050	TOD5 SR-10 Floor 1	1.19E-05	3.98	0.52	0.53	0.55	0.58	0.61	0.65	0.69	0.75	4.51	0.011	0.027	0.001	0.005
SENSITIV	SR	378900	3783073	TOD5 SR-11 Floor 1	1.75E-05	5.85	0.65	0.66	0.69	0.72	0.76	0.81	0.87	0.94	6.50	0.016	0.031	0.001	0.005
SENSITIV	SR	378884	3783095	TOD5 SR-12 Floor 1	1.22E-05	4.09	0.79	0.80	0.83	0.87	0.92	0.98	1.05	1.13	4.88	0.011	0.027	0.001	0.005
SENSITIV	SR	378867	3783127	TOD5 SR-13 Floor 1	1.39E-05	4.66	0.96	0.98	1.01	1.06	1.11	1.17	1.25	1.33	5.62	0.013	0.028	0.001	0.005
SENSITIV	SR	378856	3783154	TOD5 SR-14 Floor 1	1.75E-05	5.84	1.07	1.10	1.13	1.17	1.23	1.29	1.36	1.43	6.91	0.016	0.032	0.001	0.005
SENSITIV	SR	378841.4	3783279	TOD6 SR-1 Floor 1	1.11E-05	3.72	1.24	1.26	1.28	1.31	1.34	1.38	1.41	1.45	4.97	0.010	0.030	0.001	0.004
SENSITIV	SR	378931.6	3783377	TOD6 SR-2 Floor 1	5.74E-06	1.92	0.88	0.89	0.90	0.90	0.92	0.93	0.94	0.96	2.80	0.005	0.028	0.001	0.004
SENSITIV	SR	378819.4	3783491	TOD6 SR-3 Floor 1	6.29E-06	2.10	1.14	1.15	1.16	1.17	1.18	1.19	1.20	1.21	3.24	0.006	0.030	0.001	0.003
SENSITIV	SR	378884.2	3783456	TOD6 SR-4 Floor 1	5.34E-06	1.78	1.02	1.03	1.03	1.04	1.05	1.06	1.07	1.09	2.80	0.005	0.028	0.001	0.003
SENSITIV	SR	378963.8	3783411	TOD6 SR-5 Floor 1	4.51E-06	1.51	0.77	0.77	0.78	0.78	0.79	0.80	0.81	0.82	2.27	0.004	0.026	0.001	0.003
SENSITIV	SR	379050.2	3783500	TOD6 SR-6 Floor 1	2.68E-06	0.90	0.53	0.53	0.53	0.53	0.54	0.54	0.54	0.54	1.42	0.002	0.022	0.000	0.003
SENSITIV	SR	379002.7	3783424	TOD6 SR-7 Floor 1	3.82E-06	1.28	0.64	0.64	0.65	0.65	0.66	0.66	0.67	0.68	1.92	0.004	0.026	0.001	0.003
SENSITIV	SR	379079.6	3783354	TOD6 SR-8 Floor 1	3.63E-06	1.21	0.41	0.42	0.42	0.42	0.43	0.43	0.43	0.44	1.63	0.003	0.025	0.000	0.003
SENSITIV	SR	379148.6	3783422	TOD6 SR-9 Floor 1	2.50E-06	0.84	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.34	1.16	0.002	0.021	0.000	0.003
SENSITIV	SR	379070.3	3783325	TOD6 SR-10 Floor 1	4.00E-06	1.34	0.42	0.42	0.43	0.43	0.43	0.44	0.44	0.45	1.76	0.004	0.025	0.000	0.003
SENSITIV	SR	379012.6	3783327	TOD6 SR-11 Floor 1	4.77E-06	1.59	0.57	0.57	0.58	0.58	0.59	0.60	0.61	0.62	2.16	0.004	0.026	0.001	0.004
SENSITIV	SR	379022	3783271	TOD6 SR-12 Floor 1	5.42E-06	1.81	0.50	0.51	0.51	0.52	0.53	0.53	0.54	0.55	2.31	0.005	0.027	0.000	0.004
SENSITIV	SR	378981.7	3783227	TOD6 SR-13 Floor 1	7.30E-06	2.44	0.59	0.60	0.61	0.62	0.63	0.64	0.66	0.68	3.03	0.007	0.029	0.001	0.004
SENSITIV	SR	379046.9	3783168	TOD6 SR-14 Floor 1	6.55E-06	2.19	0.36	0.37	0.37	0.38	0.38	0.39	0.40	0.41	2.55	0.006	0.029	0.000	0.004
SENSITIV	SR	378997.4	3783125	TOD6 SR-15 Floor 1	9.80E-06	3.28	0.42	0.43	0.44	0.45	0.46	0.47	0.49	0.51	3.70	0.009	0.031	0.000	0.005
SENSITIV	SR	378959.1	3783155	TOD6 SR-16 Floor 1	1.10E-05	3.67	0.58	0.59	0.60	0.61	0.63	0.66	0.68	0.71	4.24	0.010	0.031	0.001	0.004
SENSITIV	SR	378909.6	3783200	TOD6 SR-17 Floor 1	1.30E-05	4.33	0.87	0.88	0.90	0.93	0.96	0.99	1.03	1.07	5.20	0.012	0.032	0.001	0.004
SENSITIV	SR	378844.5	3783260	TOD6 SR-18 Floor 1	1.15E-05	3.85	1.23	1.25	1.27	1.30	1.34	1.37	1.42	1.46	5.08	0.011	0.030	0.001	0.004
SENSITIV	SR	379232	3782792	TOD10a SR-1 Floor 1	1.17E-05	3.92	0.25	0.25	0.25	0.25	0.25	0.26	0.26	0.27	4.16	0.011	0.028	0.000	0.005
SENSITIV	SR	379256	3782818	TOD10a SR-2 Floor 1	8.79E-06	2.94	0.24	0.24	0.24	0.24	0.25	0.25	0.25	0.26	3.18	0.008	0.027	0.000	0.004
SENSITIV	SR	379289	3782823	TOD10a SR-3 Floor 1	1.02E-05	3.42	0.23	0.23	0.23	0.24	0.24	0.24	0.24	0.25	3.65	0.010	0.029	0.000	0.004
SENSITIV	SR	379314	3782801	TOD10a SR-4 Floor 1	1.01E-05	3.39	0.22	0.23	0.23	0.23	0.23	0.23	0.24	0.24	3.61	0.009	0.029	0.000	0.004
SENSITIV	SR	379342	3782777	TOD10a SR-5 Floor 1	1.03E-05	3.43	0.22	0.22	0.22	0.22	0.22	0.22	0.23	0.23	3.64	0.010	0.029	0.000	0.004
SENSITIV	SR	379344	3782748	TOD10a SR-6 Floor 1	1.31E-05	4.39	0.22	0.22	0.22	0.22	0.22	0.22	0.22	0.23	4.61	0.012	0.030	0.000	0.004
SENSITIV	SR	379325	3782727	TOD10a SR-7 Floor 1	1.18E-05	3.95	0.22	0.22	0.22	0.22	0.22	0.22	0.23	0.23	4.17	0.011	0.027	0.000	0.004
SENSITIV	SR	379289	3782727	TOD10a SR-8 Floor 1	1.49E-05	4.99	0.23	0.23	0.23	0.23	0.23	0.23	0.24	0.24	5.21	0.014	0.029	0.000	0.004
SENSITIV	SR	379269	3782742	TOD10a SR-9 Floor 1	1.37E-05	4.58	0.23	0.23	0.23	0.24	0.24	0.24	0.25	0.25	4.81	0.013	0.028	0.000	0.004
SENSITIV	SR	379240	3782764	TOD10a SR-10 Floor 1	9.75E-06	3.26	0.24	0.24	0.24	0.25	0.25	0.25	0.26	0.26	3.50	0.009	0.024	0.000	0.005
SENSITIV	SR	379333.8	3782699	TOD10b SR-1 Floor 1	1.33E-05	4.43	0.21	0.21	0.22	0.22	0.22	0.22	0.22	0.22	4.64	0.013	0.028	0.000	0.004
SENSITIV	SR	379348.8	3782726	TOD10b SR-2 Floor 1	9.90E-06	3.31	0.21	0.21	0.21	0.22	0.22	0.22	0.22	0.22	3.52	0.009	0.026	0.000	0.004
SENSITIV	SR	379370.7	3782748	TOD10b SR-3 Floor 1	1.12E-05	3.73	0.21	0.21	0.21	0.21	0.21	0.21	0.22	0.22	3.94	0.010	0.029	0.000	0.004
SENSITIV	SR	379413.5	3782710	TOD10b SR-4 Floor 1	7.90E-06	2.64	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.21	2.84	0.007	0.024	0.000	0.004
SENSITIV	SR	379450.3	3782677	TOD10b SR-5 Floor 1	7.90E-06	2.64	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	2.83	0.007	0.023	0.000	0.004
SENSITIV	SR	379428.7	3782653	TOD10b SR-6 Floor 1	9.94E-06	3.32	0.19	0.19	0.19	0.19	0.19	0.19	0.20	0.20	3.51	0.009	0.025	0.000	0.004
SENSITIV	SR	379408.6	3782631	TOD10b SR-7 Floor 1	1.27E-05	4.23	0.19	0.19	0.19	0.19	0.19	0.20	0.20	0.20	4.42	0.012	0.027	0.000	0.004
SENSITIV	SR	379389.5	3782643	TOD10b SR-8 Floor 1	1.24E-05	4.15	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	4.34	0.012	0.027	0.000	0.004
SENSITIV	SR	379369	3782661	TOD10b SR-9 Floor 1	1.24E-05	4.14	0.20	0.20	0.20	0.20	0.21	0.21	0.21	0.21	4.34	0.012	0.027	0.000	0.004
SENSITIV	SR	379347.3	3782687	TOD10b SR-10 Floor 1	1.27E-05	4.24	0.21	0.21	0.21	0.21	0.21	0.22	0.22	0.22	4.46	0.012	0.028	0.000	0.004
SENSITIV	SR	379523	3782649	PF SR-1 Floor 1	7.82E-06	2.61	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	2.79	0.007	0.023	0.000	0.003
SENSITIV	SR	379519	3782661	PF SR-2 Floor 1	7.55E-06	2.52	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	2.70	0.007	0.023	0.000	0.003
SENSITIV	SR	379532	3782658	PF SR-3 Floor 1	7.12E-06	2.38	0.18	0.17	0.17	0.18	0.18	0.18	0.18	0.18	2.56	0.007	0.023	0.000	0.003
SENSITIV	SR	379547	3782644	PF SR-4 Floor 1	6.99E-06	2.33	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	2.51	0.006	0.022	0.000	0.003
SENSITIV	SR	379552	3782632	PF SR-5 Floor 1	7.17E-06	2.40	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	2.57	0.007	0.023	0.000	0.003
SENSITIV	SR	379542	3782632	PF SR-6 Floor 1	7.61E-06	2.54	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	2.72	0.007	0.023	0.000	0.003
SENSITIV	SR	378686	3782175	TOD 11			0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15				0.000	0.005
SENSITIV	SR	378706	3782197	TOD 11			0.15	0.16	0.16	0.15	0.15	0.15	0.16	0.16				0.000	0.005
SENSITIV	SR	378727	3782219	TOD 11			0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16				0.000	0.005
SENSITIV	SR	378747	3782242	TOD 11			0.16	0.17	0.17	0.16	0.17	0.17	0.17	0.17				0.000	0.006
SENSITIV	SR	378767	3782264	TOD 11			0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17				0.000	0.007
SENSITIV	SR	378783	3782281	TOD 11			0.17	0.18	0.17	0.17	0.18	0.18	0.18	0.18				0.000	0.007
SENSITIV	SR	378805	3782261	TOD 11			0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.18				0.000	0.007
SENSITIV	SR	378828	3782242	TOD 11			0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17				0.000	0.006
SENSITIV	SR	378849	3782224	TOD 11			0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17				0.000	0.005
SENSITIV	SR	378840	3782213	TOD 11			0.16	0.17	0.17	0.16	0.16	0.17	0.17	0.17				0.000	0.005
SENSITIV	SR	378831	3782195	TOD 11			0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16				0.000	0.005
SENSITIV	SR	378820	3782168	TOD 11			0.15	0.16	0.16	0.16	0.16	0.16	0.16	0.16				0.000	0.005
SENSITIV	SR	378806	3782145	TOD 11			0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15				0.000	0.005
SENSITIV	SR	378785	3782124	TOD 11			0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15				0.000	0.005
SENSITIV	SR	378764	3782102	TOD 11			0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14				0.000	0.005
SENSITIV	SR	378744	3782080	TOD 11			0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14				0.000	0.005
SENSITIV	SR	378728	3782064	TOD 11			0.13	0.14	0.14	0.14	0.13	0.13	0.13	0.14				0.000	0.005
SENSITIV	SR	378718	3782092	TOD 11			0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14				0.000	0.005
SENSITIV	SR	378707	3782120	TOD 11			0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14				0.000	0.005
SENSITIV	SR	378697	3782148	TOD 11			0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15				0.000	0.005

Adjusted Potential Carcinogenic Health Risks Within the Project Site Calculation

		Factor	
EF =	Exposure frequency in days per year	350	
EFa =	Exp. Freq adjusted outside; only 2.1 hours/day outside	30.6	USEPA Exposure Factors Handbook
EFai =	Exp. Freq adjusted inside; 16.4 hours/day inside	239.2	USEPA Exposure Factors Handbook
FE =	Filter Efficiency	90%	
DPM =	Percent of risk associated with DPM	71%	

Equation = Mitigated Risk = ([Unmitigated Risk]/EF*Efa)+((1-(FE*DPM))*([Unmitigated Risk]/EF*Efai))

Time Spent Indoors

Time Spent Outdoors

Age Gr	Mean (min/day)
Birth to	0
1 to 2 y	36
2 to 3 y	76
3 to 6 y	107
6 to 11	132
11 to 1	100
16 to 2	102
18 to 6	281
>64 yea	298
Average	126
Hours F	**2.1**

Time Spent Indoors at Residence

Age Group	Mean (min/day)
Birth to 1 year	1,108
1 to 2 years	1,065
2 to 3 years	979
3 to 6 years	957
6 to 11 years	893
11 to 16 years	889
16 to 21 years	833
18 to 64 years	948
>64 years	1,175
Average	983
Hours Per Day	**16.4**

Emissions Calculations - SR 134

AADT	AADT per direction	Caltrans Truck %	Number daily trucks	Diesel Truck *	Gas Truck *	LD Vehicles	LD Diesel **	All Gas
214,500	107,250	4.70%	5,041	552	4,489	102,209	201	106,497

Source: Caltrans Traffic Data E Source: Caltrans Traffic Data Branch, 2018 AADT and Truck Traffic 2018

** Light Duty Diesel proportion based on vehicle miles traveled for LDA, LDT1, and LDT2 for Year 2024, South Coast AQMD, EMFAC2017.

Diesel Proportion:	11.0%
Non-Diesel Proportion:	89.0%

Source: Portion of Diesel Truck Vehicles vs. Non-Diesel Truck Vehicles based on EMFAC2021 aggregate VMT

	Truck Diesel Vehicles		Light Duty Diesel Vehicles		All Gas Vehicles
Speed (miles/hour)	**hot stabilized exhaust PM (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**	**hot stabilized exhaust PM (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**
50 mph for trucks (TOG), 65 mph for trucks (PM), 50 mph for light duty (TOG), 65 mph for light duty (PM), 65 for gas (TOG)	0.0248	0.0248	0.0061	0.0124	0.0157

Source: EMFAC2021 Emissions Database

Mobile Source Air Toxics (MSAT) Speciation Factors Based on Proportion In TOG										
Analysis Year	**Diesel**					**Non-Diesel**				
	Hot Stabilized Exhaust					**Hot Stabilized Exhaust**				
	benzene	1,3-butadiene	Acetaldehyde	Acrolein	Formaldehyde	benzene	1,3-butadiene	Acetaldehyde	Acrolein	Formaldehyde
2029	0.007320	0.002292	0.034383	0.006088	0.082668	0.034539	0.002295	0.009056	0.000602	0.014238
Total Daily Emissions, g/mi	0.12	0.04	0.56	0.00	1.34	57.61	3.83	15.11	1.00	23.75

Speciation Source: U.S. Environmental Protection Agency Motor Vehicle Emission Simulator (MOVES2014).

Derivation of Emission Rates for SR 134 Sources

Freeway width, one way	76.8	feet	23.4	m
Each direction segment at	393.7	feet long	120	m

	Emissions					
	Diesel PM	Benzene	1,3-Butadiene	Acetaldehyde	Acrolein	Formaldehyde
grams/mi/day **	14.9	57.73	3.86	15.66	1.00	25.09
lbs/hour/segment	0.000102	0.000395	0.000026	0.000107	0.000007	0.000172
lbs/day/segment	0.002448	0.009489	0.000635	0.002575	0.0001651	0.004124
lbs/year/segment ***	0.893528	3.463627	0.231893	0.939733	0.060258	1.505154

Segment 14

Freeway width, one way	76.8	feet	23.4	m
Each direction segment at	198.8	feet long	60.6	m

	Emissions					
	Diesel PM	Benzene	1,3-Butadiene	Acetaldehyde	Acrolein	Formaldehyde
grams/mi/day **	14.9	57.73	3.86	15.66	1.00	25.09
lbs/hour/segment	0.000052	0.00020	0.000013	0.00005	0.000003	0.00009
lbs/day/segment	0.0012	0.0048	0.0003	0.0013	0.0001	0.0021
lbs/year/segment ***	0.451232	1.749132	0.117106	0.474565	0.030430	0.760103

** Total emissions per mile calculated using the above speciation factors.

*** Based on 365 day/year

HARP ID:	**9901**	**71432**	**106990**	**75070**	**107028**	**50000**

Emissions Calculations - I-5

AADT	AADT per direction	Caltrans Truck %	Number daily trucks	Diesel Truck *	Gas Truck *	LD Vehicles	LD Diesel **	All Gas
219,500	109,750	6.57%	7,205	789	6,416	102,545	169	108,792

Source: Caltrans Traffic Data Branch, 2019 AADT and 2019 Truck Traffic . Traffic and truck percentage represent average of back and ahead counts.

** Light Duty Diesel proportion based on vehicle miles traveled for LDA, LDT1, and LDT2 for Year 2024, South Coast AQMD, EMFAC2017.

Diesel Proportion:	10.9%
Non-Diesel Proportion:	89.1%

Source: Portion of Diesel Truck Vehicles vs. Non-Diesel Truck Vehicles based on EMFAC2021 aggregate VMT

	Truck Diesel Vehicles		Light Duty Diesel Vehicles		All Gas Vehicles
Speed (miles/hour)	**hot stabilized exhaust PM (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**	**hot stabilized exhaust PM (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**
50 mph for trucks (TOG), 65 mph for trucks (PM), 50 mph for light duty (TOG), 65 mph for light duty (PM), 65 for gas (TOG)	0.0248	0.0248	0.0057	0.0124	0.0157

Source: EMFAC2021 Emissions Database

Mobile Source Air Toxics (MSAT) Speciation Factors Based on Proportion of VOC

Analysis Year	**Diesel**					**Non-Diesel**				
	Hot Stabilized Exhaust					**Hot Stabilized Exhaust**				
	benzene	1,3-butadiene	Acetaldehyde	Acrolein	Formaldehyde	benzene	1,3-butadiene	Acetaldehyde	Acrolein	Formaldehyde
2029	0.007320	0.002292	0.034383	0.006088	0.082668	0.034539	0.002295	0.009056	0.000602	0.014238
Total Daily Emissions, g/mi	0.16	0.05	0.75	0.00	1.79	58.85	3.91	15.43	1.03	24.26

Speciation Source: U.S. Environmental Protection Agency Motor Vehicle Emission Simulator (MOVES2014).

Derivation of Emission Rates for I-5 Sources

NORTHBOUND SEGMENTS

Freeway width, one way	80.7	feet		24.6	m
Each direction segment at	656.2	feet long		200	m

Emissions

	Diesel PM	Benzene	1,3-Butadiene	Acetaldehyde	Acrolein	Formaldehyde
grams/mi/day **	20.5	59.01	3.96	16.18	1.03	26.05
lbs/hour/segment	0.000234	0.000674	0.000045	0.000185	0.000012	0.000297
lbs/day/segment	0.005617	0.016167	0.001085	0.004432	0.0002811	0.007137
lbs/year/segment ***	2.050302	5.900872	0.395993	1.617613	0.102594	2.605063

Freeway width, one way	69.9	feet		21.3	m
Each direction segment at	656.2	feet long		200	m

Emissions

	Diesel PM	Benzene	1,3-Butadiene	Acetaldehyde	Acrolein	Formaldehyde
grams/mi/day **	20.5	59.01	3.96	16.18	1.03	26.05
lbs/hour/segment	0.000234	0.00067	0.000045	0.00018	0.000012	0.00030
lbs/day/segment	0.0056	0.0162	0.0011	0.0044	0.0003	0.0071
lbs/year/segment ***	2.050302	5.900872	0.395993	1.617613	0.102594	2.605063

Freeway width, one way	86	feet		26.1	m
Each direction segment at	656.2	feet long		200	m

Emissions

	Diesel PM	Benzene	1,3-Butadiene	Acetaldehyde	Acrolein	Formaldehyde
grams/mi/day **	20.5	59.01	3.96	16.2	1.03	26.05

lbs/hour/segment	0.000234	0.000674	0.000045	0.000185	0.000012	0.000297
lbs/day/segment	0.005617	0.016167	0.0011	0.0044	0.0003	0.0071
lbs/year/segment ***	2.050302	5.900872	0.395993	1.617613	0.102594	2.605063

SOUTHBOUND SEGMENTS

Freeway width, one way	81	feet	24.6	m
Each direction segment at	328.1	feet long	100	m

	Emissions					
	Diesel PM	Benzene	1,3-Butadiene	Acetaldehyde	Acrolein	Formaldehyde
grams/mi/day **	20.5	59.01	3.96	16.2	1.03	26.05
lbs/hour/segment	0.000117	0.000337	0.000023	0.000092	0.000006	0.000149
lbs/day/segment	0.002809	0.008083	0.0005	0.0022	0.0001	0.0036
lbs/year/segment ***	1.025151	2.950436	0.197996	0.808807	0.051297	1.302531

Freeway width, one way	70	feet	21.3	m
Each direction segment at	328.1	feet long	100	m

	Emissions					
	Diesel PM	Benzene	1,3-Butadiene	Acetaldehyde	Acrolein	Formaldehyde
grams/mi/day **	20.5	59.01	3.96	16.2	1.03	26.05
lbs/hour/segment	0.000117	0.000337	0.000023	0.000092	0.000006	0.000149
lbs/day/segment	0.002809	0.008083	0.0005	0.0022	0.0001	0.0036
lbs/year/segment ***	1.025151	2.950436	0.197996	0.808807	0.051297	1.302531

Freeway width, one way	86	feet	26.1	m
Each direction segment at	328.1	feet long	100	m

	Emissions					
	Diesel PM	Benzene	1,3-Butadiene	Acetaldehyde	Acrolein	Formaldehyde
grams/mi/day **	20.5	59.01	3.96	16.2	1.03	26.05
lbs/hour/segment	0.000117	0.000337	0.000023	0.000092	0.000006	0.000149
lbs/day/segment	0.002809	0.008083	0.0005	0.0022	0.0001	0.0036
lbs/year/segment ***	1.025151	2.950436	0.197996	0.808807	0.051297	1.302531

** Total emissions per mile calculated using the above speciation factors.
*** Based on 365 day/year

HARP ID:	**9901**	**71432**	**106990**	**75070**	**107028**	**50000**

Emissions Calculations - Ramp #1 (Seg 5 NB off to EB Burbank Blvd.)

AADT	**AADT per direction**	**Caltrans Truck %**	**Number daily trucks**	**Diesel Truck ***	**Gas Truck ***	**LD Vehicles**	**LD Diesel ****	**All Gas**
5,600	5,600	6.93%	388	42	346	5,212	43	5,515

Source: Caltrans Traffic Data Branch, 2014 Ramp AADT and Truck Traffic 2017 (Percentage from I-10 west of I-110)

* "Translation Factors" (the fractions below identify % of trucks that are diesel-powered; they translate Caltrans truck data into an estimate of diesel vehicles)

Diesel Proportion:	10.9%
Non-Diesel Proportion:	89.1%

Source: Portion of Diesel Truck Vehicles vs. Non-Diesel Truck Vehicles based on EMFAC2021 aggregate VMT

	Truck Diesel Vehicles		Light Duty Diesel Vehicles		All Gas Vehicles
Speed (miles/hour)	**hot stabilized exhaust PM (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**	**hot stabilized exhaust PM (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**
35	0.0104	0.0441	0.0068	0.0185	0.0164

Source: EMFAC2021 Emissions Database

Mobile Source Air Toxics (MSAT) Speciation Factors Based on Proportion In TOG

Analysis Year	**Diesel**					**Non-Diesel**				
	Hot Stabilized Exhaust					**Hot Stabilized Exhaust**				
	benzene	1,3-butadiene	Acetaldehyde	Acrolein	Formaldehyde	benzene	1,3-butadiene	Acetaldehyde	Acrolein	Formaldehyde
2029	0.007320	0.002292	0.034383	0.006088	0.082668	0.034539	0.002295	0.009056	0.000602	0.014238
Total Daily Emissions, g/mi	0.02	0.01	0.09	0.00	0.22	3.12	0.21	0.82	0.05	1.29

Speciation Source: U.S. Environmental Protection Agency Motor Vehicle Emission Simulator (MOVES2014).

Derivation of Emission Rates for Sources: Ramp #1 (Seg 5 NB off to EB Burbank Blvd.)

Ramp width, one way	42.3 feet	12.9 m	2 lanes
Each direction segment at	295.3 feet long	90 m	

Emissions

	Diesel PM	Benzene	1,3-Butadiene	Acetaldehyde	Acrolein	Formaldehyde
grams/mi/day **	0.7	3.14	0.21	0.91	0.05	1.51
lbs/hour/segment	0.000004	0.00002	0.000001	0.000005	0.0000003	0.000008
lbs/day/segment	0.0001	0.0004	0.0000	0.0001	0.0000	0.0002
lbs/year/segment ***	0.032873	0.141278	0.009602	0.040913	0.002448	0.067730

Emissions Calculations - Ramp #2 (Seg 5 NB off to WB Burbank Blvd.)

AADT	AADT per direction	Caltrans Truck %	Number daily trucks	Diesel Truck *	Gas Truck *	LD Vehicles	LD Diesel **	All Gas
7,260	7,260	3.46%	251	27	224	7,009	58	7,175

Source: Caltrans Traffic Data Branch, 2008 Ramp AADT and Truck Traffic 2017 (Percentage from I-10 east of I-110)

* "Translation Factors" (the fractions below identify % of trucks that are diesel-powered; they translate Caltrans truck data into an estimate of diesel vehicles)

Diesel Proportion:	10.9%
Non-Diesel Proportion:	89.1%

Source: Portion of Diesel Truck Vehicles vs. Non-Diesel Truck Vehicles based on EMFAC2021 aggregate VMT

	Truck Diesel Vehicles		Light Duty Diesel Vehicles		All Gas Vehicles
Speed (miles/hour)	**hot stabilized exhaust PM (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**	**hot stabilized exhaust PM (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**
35	0.0104	0.0441	0.0068	0.0185	0.0164

Source: EMFAC2021 Emissions Database

Mobile Source Air Toxics (MSAT) Speciation Factors Based on Proportion In TOG

Analysis Year	**Diesel**					**Non-Diesel**				
	Hot Stabilized Exhaust					**Hot Stabilized Exhaust**				
	benzene	1,3-butadiene	Acetaldehyde	Acrolein	Formaldehyde	benzene	1,3-butadiene	Acetaldehyde	Acrolein	Formaldehyde
2029	0.007320	0.002292	0.034383	0.006088	0.082668	0.034539	0.002295	0.009056	0.000602	0.014238
Total Daily Emissions, g/mi	0.02	0.01	0.08	0.00	0.19	4.06	0.27	1.06	0.07	1.67

Speciation Source: U.S. Environmental Protection Agency Motor Vehicle Emission Simulator (MOVES2014).

Derivation of Emission Rates for Sources: Ramp #2 (Seg 5 NB off to WB Burbank Blvd.)

Ramp width, one way	44.9	feet	13.7	m	2 lanes
Each direction segment at	328.1	feet long	100	m	

	Emissions					
	Diesel PM	Benzene	1,3-Butadiene	Acetaldehyde	Acrolein	Formaldehyde
grams/mi/day **	0.7	4.08	0.27	1.14	0.07	1.86
lbs/hour/segment	0.000004	0.00002	0.000002	0.000007	0.0000004	0.00001
lbs/day/segment	0.0001	0.0006	0.0000	0.0002	0.0000	0.0003
lbs/year/segment ***	0.03380	0.203796	0.013745	0.057107	0.003538	0.093012

Emissions Calculations - Ramp #3 (Seg 5 SB off to Burbank Blvd.)

AADT	AADT per direction	Caltrans Truck %	Number daily trucks	Diesel Truck *	Gas Truck *	LD Vehicles	LD Diesel **	All Gas
6,859	6,859	8.01%	549	60	489	6,310	52	6,747

Source: Caltrans Traffic Data Branch, 2014 Ramp AADT and Truck Traffic 2017 (Percentage from weighted average of I-10 east of I-110 and west of I-110 based on WB and EB contribution)

* "Translation Factors" (the fractions below identify % of trucks that are diesel-powered; they translate Caltrans truck data into an estimate of diesel vehicles)

Diesel Proportion:	10.9%
Non-Diesel Proportion:	89.1%

Source: Portion of Diesel Truck Vehicles vs. Non-Diesel Truck Vehicles based on EMFAC2021 aggregate VMT

	Truck Diesel Vehicles		Light Duty Diesel Vehicles		All Gas Vehicles
Speed (miles/hour)	**hot stabilized exhaust PM (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**	**hot stabilized exhaust PM (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**
35	0.0104	0.0441	0.0068	0.0185	0.0164

Source: EMFAC2021 Emissions Database

Mobile Source Air Toxics (MSAT) Speciation Factors Based on Proportion In TOG

Analysis Year	**Diesel**					**Non-Diesel**				
	Hot Stabilized Exhaust					**Hot Stabilized Exhaust**				
	benzene	1,3-butadiene	Acetaldehyde	Acrolein	Formaldehyde	benzene	1,3-butadiene	Acetaldehyde	Acrolein	Formaldehyde
2029	0.007320	0.002292	0.034383	0.006088	0.082668	0.034539	0.002295	0.009056	0.000602	0.014238
Total Daily Emissions, g/mi	0.03	0.01	0.12	0.00	0.30	3.82	0.25	1.00	0.07	1.57

Speciation Source: U.S. Environmental Protection Agency Motor Vehicle Emission Simulator (MOVES2014).

Derivation of Emission Rates for Sources: Ramp #3 (Seg 5 SB off to Burbank Blvd.)

Ramp width, one way	64.6 feet	19.7 m	3 lane
Each direction segment at	262.5 feet long	80 m	

Emissions

	Diesel PM	Benzene	1,3-Butadiene	Acetaldehyde	Acrolein	Formaldehyde
grams/mi/day **	1.0	3.84	0.26	1.12	0.07	1.87
lbs/hour/segment	0.00000	0.00002	0.000001	0.000005	0.0000003	0.00001
lbs/day/segment	0.0001	0.0004	0.0000	0.0001	0.0000	0.0002
lbs/year/segment ***	0.039181	0.153741	0.010476	0.045000	0.002662	0.074876

Emissions Calculations - Ramp #4 (SB on from EB Burbank Blvd.)

AADT	**AADT per direction**	**Caltrans Truck %**	**Number daily trucks**	**Diesel Truck ***	**Gas Truck ***	**LD Vehicles**	**LD Diesel ****	**All Gas**
15,468	15,468	6.93%	1,072	117	955	14,396	119	15,232

Source: Caltrans Traffic Data Branch, 2014 Ramp AADT and Truck Traffic 2017 (Percentage from I-110 north of I-10)

* "Translation Factors" (the fractions below identify % of trucks that are diesel-powered; they translate Caltrans truck data into an estimate of diesel vehicles)

Diesel Proportion:	10.9%
Non-Diesel Proportion:	89.1%

Source: Portion of Diesel Truck Vehicles vs. Non-Diesel Truck Vehicles based on EMFAC2021 aggregate VMT

	Truck Diesel Vehicles		Light Duty Diesel Vehicles		All Gas Vehicles
Speed (miles/hour)	**hot stabilized exhaust PM (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**	**hot stabilized exhaust PM (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**
50	0.0133	0.0248	0.0057	0.0124	0.0128

Source: EMFAC2021 Emissions Database

Mobile Source Air Toxics (MSAT) Speciation Factors Based on Proportion In TOG

Analysis Year	**Diesel**					**Non-Diesel**				
	Hot Stabilized Exhaust					**Hot Stabilized Exhaust**				
	benzene	1,3-butadiene	Acetaldehyde	Acrolein	Formaldehyde	benzene	1,3-butadiene	Acetaldehyde	Acrolein	Formaldehyde
2029	0.007320	0.002292	0.034383	0.006088	0.082668	0.034539	0.002295	0.009056	0.000602	0.014238
Total Daily Emissions, g/mi	0.03	0.01	0.15	0.00	0.36	6.75	0.45	1.77	0.12	2.78

Speciation Source: U.S. Environmental Protection Agency Motor Vehicle Emission Simulator (MOVES2014).

Derivation of Emission Rates for Sources: Ramp #4 (SB on from EB Burbank Blvd.)

Ramp width, one way	37.7 feet	11.5 m	2 lane
Each direction segment at	131.2 feet long	40 m	

Emissions

	Diesel PM	Benzene	1,3-Butadiene	Acetaldehyde	Acrolein	Formaldehyde
grams/mi/day **	2.2	6.78	0.46	1.92	0.12	3.15
lbs/hour/segment	0.000005	0.00002	0.000001	0.00000	0.0000003	0.00001
lbs/day/segment	0.0001	0.0004	0.0000	0.0001	0.0000	0.0002
lbs/year/segment ***	0.044736	0.135672	0.009173	0.038418	0.002354	0.062903

Emissions Calculations - Ramp #5 (SB on from WB Burbank Blvd.)

AADT	AADT per direction	Caltrans Truck %	Number daily trucks	Diesel Truck *	Gas Truck *	LD Vehicles	LD Diesel **	All Gas
7,882	7,882	6.93%	546	60	486	7,336	61	7,761

Source: Caltrans Traffic Data Branch, 2014 Ramp AADT and Truck Traffic 2017 (Percentage from I-110 south of I-10)

* "Translation Factors" (the fractions below identify % of trucks that are diesel-powered; they translate Caltrans truck data into an estimate of diesel vehicles)

Diesel Proportion:	10.9%
Non-Diesel Proportion:	89.1%

Source: Portion of Diesel Truck Vehicles vs. Non-Diesel Truck Vehicles based on EMFAC2021 aggregate VMT

	Truck Diesel Vehicles		Light Duty Diesel Vehicles		All Gas Vehicles
Speed (miles/hour)	**hot stabilized exhaust PM (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**	**hot stabilized exhaust PM (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**
50	0.0133	0.0248	0.0057	0.0124	0.0128

Source: EMFAC2021 Emissions Database

Mobile Source Air Toxics (MSAT) Speciation Factors Based on Proportion In TOG

Analysis Year	**Diesel**					**Non-Diesel**				
	Hot Stabilized Exhaust					**Hot Stabilized Exhaust**				
	benzene	1,3-butadiene	Acetaldehyde	Acrolein	Formaldehyde	benzene	1,3-butadiene	Acetaldehyde	Acrolein	Formaldehyde
2029	0.007320	0.002292	0.034383	0.006088	0.082668	0.034539	0.002295	0.009056	0.000602	0.014238
Total Daily Emissions, g/mi	0.02	0.01	0.08	0.00	0.19	3.44	0.23	0.90	0.06	1.42

Speciation Source: U.S. Environmental Protection Agency Motor Vehicle Emission Simulator (MOVES2014).

Derivation of Emission Rates for Sources: Ramp #5 (SB on from WB Burbank Blvd.)

Ramp width, one way	48.2 feet	14.7 m	2 lane
Each direction segment at	328.1 feet long	100 m	

Emissions

	Diesel PM	Benzene	1,3-Butadiene	Acetaldehyde	Acrolein	Formaldehyde
grams/mi/day **	1.1	3.46	0.23	0.98	0.06	1.60
lbs/hour/segment	0.00001	0.00002	0.000001	0.000006	0.0000003	0.00001
lbs/day/segment	0.0002	0.0005	0.0000	0.0001	0.0000	0.0002
lbs/year/segment ***	0.057455	0.172817	0.011686	0.048967	0.002998	0.080200

Emissions Calculations - Ramp #6 (Seg 5 NB on from Olive Ave.)

AADT	AADT per direction	Caltrans Truck %	Number daily trucks	Diesel Truck *	Gas Truck *	LD Vehicles	LD Diesel **	All Gas
8,619	8,619	6.93%	597	65	532	8,022	67	8,487

Source: Caltrans Traffic Data Branch, 2014 Ramp AADT and Truck Traffic 2017 (Percentage from I-110 south of I-10)

* "Translation Factors" (the fractions below identify % of trucks that are diesel-powered; they translate Caltrans truck data into an estimate of diesel vehicles)

Diesel Proportion:	10.9%
Non-Diesel Proportion:	89.1%

Source: Portion of Diesel Truck Vehicles vs. Non-Diesel Truck Vehicles based on EMFAC2021 aggregate VMT

	Truck Diesel Vehicles		Light Duty Diesel Vehicles		All Gas Vehicles
Speed (miles/hour)	**hot stabilized exhaust PM (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**	**hot stabilized exhaust PM (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**
50	0.0133	0.0248	0.0057	0.0124	0.0128

Source: EMFAC2021 Emissions Database

Mobile Source Air Toxics (MSAT) Speciation Factors Based on Proportion In TOG

Analysis Year	**Diesel**					**Non-Diesel**				
	Hot Stabilized Exhaust					**Hot Stabilized Exhaust**				
	benzene	1,3-butadiene	Acetaldehyde	Acrolein	Formaldehyde	benzene	1,3-butadiene	Acetaldehyde	Acrolein	Formaldehyde
2029	0.007320	0.002292	0.034383	0.006088	0.082668	0.034539	0.002295	0.009056	0.000602	0.014238
Total Daily Emissions, g/mi	0.02	0.01	0.08	0.00	0.20	3.76	0.25	0.99	0.07	1.55

Speciation Source: U.S. Environmental Protection Agency Motor Vehicle Emission Simulator (MOVES2014).

Derivation of Emission Rates for Sources: Ramp #6 (Seg 5 NB on from Olive Ave.)

Ramp width, one way	40.0 feet	12.2 m	1 lane
Each direction segment at	262.5 feet long	80 m	

Emissions

	Diesel PM	Benzene	1,3-Butadiene	Acetaldehyde	Acrolein	Formaldehyde
grams/mi/day **	1.2	3.78	0.26	1.07	0.07	1.75
lbs/hour/segment	0.000006	0.00002	0.000001	0.000005	0.0000003	0.00001
lbs/day/segment	0.0001	0.0004	0.0000	0.0001	0.0000	0.0002
lbs/year/segment ***	0.049937	0.151188	0.010222	0.042818	0.002623	0.070114

Emissions Calculations - Ramp #7 (Seg 5 SB off to Verdugo Ave.)

AADT	AADT per direction	Caltrans Truck %	Number daily trucks	Diesel Truck *	Gas Truck *	LD Vehicles	LD Diesel **	All Gas
3,880	3,880	6.93%	269	29	240	3,611	30	3,821

Source: Caltrans Traffic Data Branch, 2014 Ramp AADT and Truck Traffic 2017 (Percentage from I-110 south of I-10)

* "Translation Factors" (the fractions below identify % of trucks that are diesel-powered; they translate Caltrans truck data into an estimate of diesel vehicles)

Diesel Proportion:	10.9%
Non-Diesel Proportion:	89.1%

Source: Portion of Diesel Truck Vehicles vs. Non-Diesel Truck Vehicles based on EMFAC2021 aggregate VMT

	Truck Diesel Vehicles		Light Duty Diesel Vehicles		All Gas Vehicles
Speed (miles/hour)	**hot stabilized exhaust PM (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**	**hot stabilized exhaust PM (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**
35	0.0104	0.0441	0.0068	0.0185	0.0164

Source: EMFAC2021 Emissions Database

Mobile Source Air Toxics (MSAT) Speciation Factors Based on Proportion In TOG

Analysis Year	**Diesel**					**Non-Diesel**				
	Hot Stabilized Exhaust					**Hot Stabilized Exhaust**				
	benzene	1,3-butadiene	Acetaldehyde	Acrolein	Formaldehyde	benzene	1,3-butadiene	Acetaldehyde	Acrolein	Formaldehyde
2029	0.007320	0.002292	0.034383	0.006088	0.082668	0.034539	0.002295	0.009056	0.000602	0.014238
Total Daily Emissions, g/mi	0.01	0.00	0.06	0.00	0.15	2.16	0.14	0.57	0.04	0.89

Speciation Source: U.S. Environmental Protection Agency Motor Vehicle Emission Simulator (MOVES2014).

Derivation of Emission Rates for Sources: Ramp #7 (Seg 5 NB off to Verdugo Ave.)

Ramp width, one way	39.4 feet	12 m	1 lane
Each direction segment at	328.1 feet long	100 m	

Emissions

	Diesel PM	Benzene	1,3-Butadiene	Acetaldehyde	Acrolein	Formaldehyde
grams/mi/day **	0.5	2.18	0.15	0.63	0.04	1.04
lbs/hour/segment	0.000003	0.00001	0.0000008	0.000004	0.0000002	0.000006
lbs/day/segment	0.0001	0.0003	0.0000	0.0001	0.0000	0.0001
lbs/year/segment ***	0.025379	0.108755	0.007392	0.031499	0.001884	0.052147

Emissions Calculations - Ramp #8 (Seg 5 SB on from Verdugo Ave.)

AADT	AADT per direction	Caltrans Truck %	Number daily trucks	Diesel Truck *	Gas Truck *	LD Vehicles	LD Diesel **	All Gas
8,619	8,619	6.93%	597	65	532	8,022	67	8,487

Source: Caltrans Traffic Data Branch, 2014 Ramp AADT and Truck Traffic 2017 (Percentage from I-110 south of I-10)

* "Translation Factors" (the fractions below identify % of trucks that are diesel-powered; they translate Caltrans truck data into an estimate of diesel vehicles)

Diesel Proportion:	10.9%
Non-Diesel Proportion:	89.1%

Source: Portion of Diesel Truck Vehicles vs. Non-Diesel Truck Vehicles based on EMFAC2021 aggregate VMT

	Truck Diesel Vehicles		Light Duty Diesel Vehicles		All Gas Vehicles
Speed (miles/hour)	**hot stabilized exhaust PM (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**	**hot stabilized exhaust PM (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**
50	0.0133	0.0248	0.0057	0.0124	0.0128

Source: EMFAC2021 Emissions Database

Mobile Source Air Toxics (MSAT) Speciation Factors Based on Proportion In TOG

Analysis Year	**Diesel**					**Non-Diesel**				
	Hot Stabilized Exhaust					**Hot Stabilized Exhaust**				
	benzene	1,3-butadiene	Acetaldehyde	Acrolein	Formaldehyde	benzene	1,3-butadiene	Acetaldehyde	Acrolein	Formaldehyde
2029	0.007320	0.002292	0.034383	0.006088	0.082668	0.034539	0.002295	0.009056	0.000602	0.014238
Total Daily Emissions, g/mi	0.02	0.01	0.08	0.00	0.20	3.76	0.25	0.99	0.07	1.55

Speciation Source: U.S. Environmental Protection Agency Motor Vehicle Emission Simulator (MOVES2014).

Derivation of Emission Rates for Sources: Ramp #8 (Seg 5 NB on from Verdugo Ave.)

Ramp width, one way	49.5 feet	15.1 m	1 lane
Each direction segment at	98.4 feet long	30 m	

	Emissions					
	Diesel PM	Benzene	1,3-Butadiene	Acetaldehyde	Acrolein	Formaldehyde
grams/mi/day **	1.2	3.78	0.26	1.07	0.07	1.75
lbs/hour/segment	0.000002	0.000006	0.0000004	0.000002	0.0000001	0.000003
lbs/day/segment	0.0001	0.0002	0.0000	0.0000	0.0000	0.0001
lbs/year/segment ***	0.018726	0.056695	0.003833	0.016057	0.000984	0.026293

Emissions Calculations - Ramp #9 (Seg 5 NB off to Olive Ave.)

AADT	**AADT per direction**	**Caltrans Truck %**	**Number daily trucks**	**Diesel Truck ***	**Gas Truck ***	**LD Vehicles**	**LD Diesel ****	**All Gas**
10,913	10,913	6.93%	756	83	673	10,157	85	10,745

Source: Caltrans Traffic Data Branch, 2014 Ramp AADT and Truck Traffic 2017 (Percentage from I-110 south of I-10)

* "Translation Factors" (the fractions below identify % of trucks that are diesel-powered; they translate Caltrans truck data into an estimate of diesel vehicles)

Diesel Proportion:	10.9%
Non-Diesel Proportion:	89.1%

Source: Portion of Diesel Truck Vehicles vs. Non-Diesel Truck Vehicles based on EMFAC2021 aggregate VMT

	Truck Diesel Vehicles		Light Duty Diesel Vehicles		All Gas Vehicles
Speed (miles/hour)	**hot stabilized exhaust PM (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**	**hot stabilized exhaust PM (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**
35	0.0104	0.0441	0.0068	0.0185	0.0164

Source: EMFAC2021 Emissions Database

Mobile Source Air Toxics (MSAT) Speciation Factors Based on Proportion In TOG

Analysis Year	**Diesel**					**Non-Diesel**				
	Hot Stabilized Exhaust					**Hot Stabilized Exhaust**				
	benzene	1,3-butadiene	Acetaldehyde	Acrolein	Formaldehyde	benzene	1,3-butadiene	Acetaldehyde	Acrolein	Formaldehyde
2029	0.007320	0.002292	0.034383	0.006088	0.082668	0.034539	0.002295	0.009056	0.000602	0.014238
Total Daily Emissions, g/mi	0.04	0.01	0.18	0.00	0.43	6.08	0.40	1.59	0.11	2.51

Speciation Source: U.S. Environmental Protection Agency Motor Vehicle Emission Simulator (MOVES2014).

Derivation of Emission Rates for Sources: Ramp #9 (Seg 5 NB off to Olive Ave.)

Ramp width, one way	33.8 feet	10.3 m	1 lane
Each direction segment at	98.4 feet long	30 m	

	Emissions					
	Diesel PM	Benzene	1,3-Butadiene	Acetaldehyde	Acrolein	Formaldehyde
grams/mi/day **	1.4	6.12	0.42	1.77	0.11	2.94
lbs/hour/segment	0.000002	0.00001	0.0000007	0.000003	0.0000002	0.000005
lbs/day/segment	0.0001	0.0003	0.0000	0.0001	0.0000	0.0001
lbs/year/segment ***	0.021639	0.091761	0.006239	0.026608	0.001590	0.044075

Emissions Calculations - Ramp #10 (Seg 134 WB on from W Alameda Dr.)

AADT	AADT per direction	Caltrans Truck %	Number daily trucks	Diesel Truck *	Gas Truck *	LD Vehicles	LD Diesel **	All Gas
1,001	1,001	6.93%	69	18	51	932	8	975

Source: Caltrans Traffic Data Branch, 2014 Ramp AADT and Truck Traffic 2017 (Percentage from I-110 south of I-10)

* "Translation Factors" (the fractions below identify % of trucks that are diesel-powered; they translate Caltrans truck data into an estimate of diesel vehicles)

Diesel Proportion: 25.8%

Non-Diesel Proportion: 74.2%

Source: Portion of Diesel Truck Vehicles vs. Non-Diesel Truck Vehicles based on EMFAC2021 aggregate VMT

	Truck Diesel Vehicles		Light Duty Diesel Vehicles		All Gas Vehicles
Speed (miles/hour)	**hot stabilized exhaust PM (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**	**hot stabilized exhaust PM (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**
50	0.0133	0.0248	0.0057	0.0124	0.0128

Source: EMFAC2021 Emissions Database

Mobile Source Air Toxics (MSAT) Speciation Factors Based on Proportion In TOG

Analysis Year	**Diesel**					**Non-Diesel**				
	Hot Stabilized Exhaust					**Hot Stabilized Exhaust**				
	benzene	1,3-butadiene	Acetaldehyde	Acrolein	Formaldehyde	benzene	1,3-butadiene	Acetaldehyde	Acrolein	Formaldehyde
2029	0.007320	0.002292	0.034383	0.006088	0.082668	0.034539	0.002295	0.009056	0.000602	0.014238
Total Daily Emissions, g/mi	0.00	0.00	0.02	0.00	0.04	0.43	0.03	0.11	0.01	0.18

Speciation Source: U.S. Environmental Protection Agency Motor Vehicle Emission Simulator (MOVES2014).

Derivation of Emission Rates for Sources: Ramp #10 (Seg 134 WB on from W Alameda Dr.)

Ramp width, one way	60.7	feet	18.5	m	2 lanes
Each direction segment at	98.4	feet long	30	m	

	Emissions					
	Diesel PM	Benzene	1,3-Butadiene	Acetaldehyde	Acrolein	Formaldehyde
grams/mi/day **	0.3	0.44	0.03	0.13	0.01	0.22
lbs/hour/segment	0.0000005	0.000001	0.00000005	0.0000002	0.00000001	0.0000004
lbs/day/segment	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
lbs/year/segment ***	0.004266	0.006543	0.000449	0.001980	0.000113	0.003346

Emissions Calculations - Ramp #11 (Seg 134 EB on from Riverside Dr.)

AADT	AADT per direction	Caltrans Truck %	Number daily trucks	Diesel Truck *	Gas Truck *	LD Vehicles	LD Diesel **	All Gas
7,821	7,821	6.93%	542	140	402	7,279	61	7,620

Source: Caltrans Traffic Data Branch, 2014 Ramp AADT and Truck Traffic 2017 (Percentage from I-110 south of I-10)

* "Translation Factors" (the fractions below identify % of trucks that are diesel-powered; they translate Caltrans truck data into an estimate of diesel vehicles)

Diesel Proportion:	25.8%
Non-Diesel Proportion:	74.2%

Source: Portion of Diesel Truck Vehicles vs. Non-Diesel Truck Vehicles based on EMFAC2021 aggregate VMT

	Truck Diesel Vehicles		Light Duty Diesel Vehicles		All Gas Vehicles
Speed (miles/hour)	**hot stabilized exhaust PM (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**	**hot stabilized exhaust PM (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**	**hot stabilized exhaust TOG (grams/mile)**
50	0.0133	0.0248	0.0057	0.0124	0.0128

Source: EMFAC2021 Emissions Database

Mobile Source Air Toxics (MSAT) Speciation Factors Based on Proportion In TOG

Analysis Year	**Diesel**					**Non-Diesel**				
	Hot Stabilized Exhaust					**Hot Stabilized Exhaust**				
	benzene	1,3-butadiene	Acetaldehyde	Acrolein	Formaldehyde	benzene	1,3-butadiene	Acetaldehyde	Acrolein	Formaldehyde
2029	0.007320	0.002292	0.034383	0.006088	0.082668	0.034539	0.002295	0.009056	0.000602	0.014238
Total Daily Emissions, g/mi	0.03	0.01	0.15	0.00	0.35	3.38	0.22	0.89	0.06	1.39

Speciation Source: U.S. Environmental Protection Agency Motor Vehicle Emission Simulator (MOVES2014).

Derivation of Emission Rates for Sources: Ramp #11 (Seg 134 EB on from Riverside Dr.)

Ramp width, one way	45.9 feet	14 m	1 lane
Each direction segment at	98.4 feet long	30 m	

	Emissions					
	Diesel PM	Benzene	1,3-Butadiene	Acetaldehyde	Acrolein	Formaldehyde
grams/mi/day **	2.2	3.41	0.23	1.03	0.06	1.74
lbs/hour/segment	0.000004	0.000006	0.0000004	0.000002	0.0000001	0.000003
lbs/day/segment	0.0001	0.0001	0.0000	0.0000	0.0000	0.0001
lbs/year/segment ***	0.033203	0.051128	0.003512	0.015465	0.000883	0.026127

Appendix D

CalEEMod Results

Date: 7/22/2021 8:42 AM

Sample Scenario - 2 Pieces of Equipment, 25 Truck Trips - Los Angeles-South Coast County, Summer

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

Sample Scenario - 2 Pieces of Equipment, 25 Truck Trips

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	10.00	Dwelling Unit	0.63	10,000.00	29

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2021
Utility Company	Burbank Water & Power				
CO2 Intensity (lb/MWhr)	929.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	6,750.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	20,250.00	0.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00

tblOffRoadEquipment	UsageHours	1.00	8.00
tblTripsAndVMT	HaulingTripNumber	0.00	250.00
tblTripsAndVMT	HaulingTripNumber	0.00	25.00
tblTripsAndVMT	HaulingTripNumber	0.00	50.00
tblTripsAndVMT	HaulingTripNumber	0.00	2,500.00
tblTripsAndVMT	HaulingTripNumber	0.00	125.00
tblTripsAndVMT	HaulingTripNumber	0.00	125.00
tblTripsAndVMT	VendorTripNumber	1.00	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	10.00
tblTripsAndVMT	WorkerTripNumber	5.00	10.00
tblTripsAndVMT	WorkerTripNumber	5.00	10.00
tblTripsAndVMT	WorkerTripNumber	7.00	20.00
tblTripsAndVMT	WorkerTripNumber	5.00	10.00
tblTripsAndVMT	WorkerTripNumber	1.00	10.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	2.2953	26.7475	15.5425	0.0474	13.6540	1.1211	14.7751	6.8846	1.0334	7.9180	0.0000	4,791.1365	4,791.1365	1.0442	0.2827	4,900.6736
Maximum	**2.2953**	**26.7475**	**15.5425**	**0.0474**	**13.6540**	**1.1211**	**14.7751**	**6.8846**	**1.0334**	**7.9180**	**0.0000**	**4,791.1365**	**4,791.1365**	**1.0442**	**0.2827**	**4,900.6736**

Sample Scenario - 2 Pieces of Equipment, 25 Truck Trips - Los Angeles-South Coast County, Summer

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

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	2.2953	26.7475	15.5425	0.0474	6.4465	1.1211	7.5675	3.1803	1.0334	4.2138	0.0000	4,791.1365	4,791.1365	1.0442	0.2827	4,900.6736
Maximum	**2.2953**	**26.7475**	**15.5425**	**0.0474**	**6.4465**	**1.1211**	**7.5675**	**3.1803**	**1.0334**	**4.2138**	**0.0000**	**4,791.1365**	**4,791.1365**	**1.0442**	**0.2827**	**4,900.6736**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**52.79**	**0.00**	**48.78**	**53.80**	**0.00**	**46.78**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2021	1/14/2021	5	10	
2	Site Preparation	Site Preparation	1/15/2021	1/15/2021	5	1	
3	Grading	Grading	1/16/2021	1/19/2021	5	2	
4	Building Construction	Building Construction	1/20/2021	6/8/2021	5	100	
5	Paving	Paving	6/9/2021	6/15/2021	5	5	
6	Architectural Coating	Architectural Coating	6/16/2021	6/22/2021	5	5	

Acres of Grading (Site Preparation Phase): 1

Sample Scenario - 2 Pieces of Equipment, 25 Truck Trips - Los Angeles-South Coast County, Summer

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

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Cranes	2	8.00	231	0.29
Paving	Pavers	2	8.00	130	0.42
Architectural Coating	Air Compressors	2	8.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	2	10.00	0.00	250.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	10.00	0.00	25.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	2	10.00	0.00	50.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	2	20.00	0.00	2,500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	2	10.00	0.00	125.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	10.00	0.00	125.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Sample Scenario - 2 Pieces of Equipment, 25 Truck Trips - Los Angeles-South Coast County, Summer

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

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0927	21.9426	8.0756	0.0171		1.0649	1.0649		0.9797	0.9797		1,654.7044	1,654.7044	0.5352		1,668.0835
Total	**2.0927**	**21.9426**	**8.0756**	**0.0171**		**1.0649**	**1.0649**		**0.9797**	**0.9797**		**1,654.7044**	**1,654.7044**	**0.5352**		**1,668.0835**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1650	4.7761	1.1017	0.0160	0.4376	0.0554	0.4930	0.1200	0.0530	0.1730		1,748.3847	1,748.3847	0.0915	0.2773	1,833.2927
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0376	0.0288	0.4314	1.0600e-003	0.1118	7.7000e-004	0.1125	0.0296	7.1000e-004	0.0304		106.9287	106.9287	3.1500e-003	2.7300e-003	107.8203
Total	**0.2026**	**4.8049**	**1.5331**	**0.0171**	**0.5494**	**0.0562**	**0.6055**	**0.1496**	**0.0537**	**0.2033**		**1,855.3135**	**1,855.3135**	**0.0947**	**0.2800**	**1,941.1130**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0927	21.9426	8.0756	0.0171		1.0649	1.0649		0.9797	0.9797	0.0000	1,654.7044	1,654.7044	0.5352		1,668.0835
Total	**2.0927**	**21.9426**	**8.0756**	**0.0171**		**1.0649**	**1.0649**		**0.9797**	**0.9797**	**0.0000**	**1,654.7044**	**1,654.7044**	**0.5352**		**1,668.0835**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1650	4.7761	1.1017	0.0160	0.4376	0.0554	0.4930	0.1200	0.0530	0.1730		1,748.3847	1,748.3847	0.0915	0.2773	1,833.2927
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0376	0.0288	0.4314	1.0600e-003	0.1118	7.7000e-004	0.1125	0.0296	7.1000e-004	0.0304		106.9287	106.9287	3.1500e-003	2.7300e-003	107.8203
Total	**0.2026**	**4.8049**	**1.5331**	**0.0171**	**0.5494**	**0.0562**	**0.6055**	**0.1496**	**0.0537**	**0.2033**		**1,855.3135**	**1,855.3135**	**0.0947**	**0.2800**	**1,941.1130**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

Sample Scenario - 2 Pieces of Equipment, 25 Truck Trips - Los Angeles-South Coast County, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					13.1047	0.0000	13.1047	6.7350	0.0000	6.7350			0.0000			0.0000
Off-Road	2.0927	21.9426	8.0756	0.0171		1.0649	1.0649		0.9797	0.9797		1,654.7044	1,654.7044	0.5352		1,668.0835
Total	**2.0927**	**21.9426**	**8.0756**	**0.0171**	**13.1047**	**1.0649**	**14.1696**	**6.7350**	**0.9797**	**7.7147**		**1,654.7044**	**1,654.7044**	**0.5352**		**1,668.0835**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1650	4.7761	1.1017	0.0160	0.4376	0.0554	0.4930	0.1200	0.0530	0.1730		1,748.3847	1,748.3847	0.0915	0.2773	1,833.2927
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0376	0.0288	0.4314	1.0600e-003	0.1118	7.7000e-004	0.1125	0.0296	7.1000e-004	0.0304		106.9287	106.9287	3.1500e-003	2.7300e-003	107.8203
Total	**0.2026**	**4.8049**	**1.5331**	**0.0171**	**0.5494**	**0.0562**	**0.6055**	**0.1496**	**0.0537**	**0.2033**		**1,855.3135**	**1,855.3135**	**0.0947**	**0.2800**	**1,941.1130**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.8971	0.0000	5.8971	3.0307	0.0000	3.0307			0.0000			0.0000
Off-Road	2.0927	21.9426	8.0756	0.0171		1.0649	1.0649		0.9797	0.9797	0.0000	1,654.7044	1,654.7044	0.5352		1,668.0835
Total	**2.0927**	**21.9426**	**8.0756**	**0.0171**	**5.8971**	**1.0649**	**6.9620**	**3.0307**	**0.9797**	**4.0105**	**0.0000**	**1,654.7044**	**1,654.7044**	**0.5352**		**1,668.0835**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1650	4.7761	1.1017	0.0160	0.4376	0.0554	0.4930	0.1200	0.0530	0.1730		1,748.3847	1,748.3847	0.0915	0.2773	1,833.2927
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0376	0.0288	0.4314	1.0600e-003	0.1118	7.7000e-004	0.1125	0.0296	7.1000e-004	0.0304		106.9287	106.9287	3.1500e-003	2.7300e-003	107.8203
Total	**0.2026**	**4.8049**	**1.5331**	**0.0171**	**0.5494**	**0.0562**	**0.6055**	**0.1496**	**0.0537**	**0.2033**		**1,855.3135**	**1,855.3135**	**0.0947**	**0.2800**	**1,941.1130**

3.4 Grading - 2021

Unmitigated Construction On-Site

Sample Scenario - 2 Pieces of Equipment, 25 Truck Trips - Los Angeles-South Coast County, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1210	0.0000	2.1210	0.2290	0.0000	0.2290			0.0000			0.0000
Off-Road	1.8589	21.4056	14.0094	0.0303		0.8328	0.8328		0.7661	0.7661		2,935.8230	2,935.8230	0.9495		2,959.5607
Total	**1.8589**	**21.4056**	**14.0094**	**0.0303**	**2.1210**	**0.8328**	**2.9538**	**0.2290**	**0.7661**	**0.9952**		**2,935.8230**	**2,935.8230**	**0.9495**		**2,959.5607**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1650	4.7761	1.1017	0.0160	0.4376	0.0554	0.4930	0.1200	0.0530	0.1730		1,748.3847	1,748.3847	0.0915	0.2773	1,833.2927
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0376	0.0288	0.4314	1.0600e-003	0.1118	7.7000e-004	0.1125	0.0296	7.1000e-004	0.0304		106.9287	106.9287	3.1500e-003	2.7300e-003	107.8203
Total	**0.2026**	**4.8049**	**1.5331**	**0.0171**	**0.5494**	**0.0562**	**0.6055**	**0.1496**	**0.0537**	**0.2033**		**1,855.3135**	**1,855.3135**	**0.0947**	**0.2800**	**1,941.1130**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.9545	0.0000	0.9545	0.1031	0.0000	0.1031			0.0000			0.0000
Off-Road	1.8589	21.4056	14.0094	0.0303		0.8328	0.8328		0.7661	0.7661	0.0000	2,935.8230	2,935.8230	0.9495		2,959.5607
Total	**1.8589**	**21.4056**	**14.0094**	**0.0303**	**0.9545**	**0.8328**	**1.7872**	**0.1031**	**0.7661**	**0.8692**	**0.0000**	**2,935.8230**	**2,935.8230**	**0.9495**		**2,959.5607**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1650	4.7761	1.1017	0.0160	0.4376	0.0554	0.4930	0.1200	0.0530	0.1730		1,748.3847	1,748.3847	0.0915	0.2773	1,833.2927
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0376	0.0288	0.4314	1.0600e-003	0.1118	7.7000e-004	0.1125	0.0296	7.1000e-004	0.0304		106.9287	106.9287	3.1500e-003	2.7300e-003	107.8203
Total	**0.2026**	**4.8049**	**1.5331**	**0.0171**	**0.5494**	**0.0562**	**0.6055**	**0.1496**	**0.0537**	**0.2033**		**1,855.3135**	**1,855.3135**	**0.0947**	**0.2800**	**1,941.1130**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

Sample Scenario - 2 Pieces of Equipment, 25 Truck Trips - Los Angeles-South Coast County, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8258	9.6987	3.9657	0.0115		0.3938	0.3938		0.3623	0.3623		1,117.4775	1,117.4775	0.3614		1,126.5129
Total	**0.8258**	**9.6987**	**3.9657**	**0.0115**		**0.3938**	**0.3938**		**0.3623**	**0.3623**		**1,117.4775**	**1,117.4775**	**0.3614**		**1,126.5129**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1650	4.7761	1.1017	0.0160	0.4376	0.0554	0.4930	0.1200	0.0530	0.1730		1,748.3847	1,748.3847	0.0915	0.2773	1,833.2927
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0751	0.0575	0.8627	2.1100e-003	0.2236	1.5300e-003	0.2251	0.0593	1.4100e-003	0.0607		213.8574	213.8574	6.3000e-003	5.4500e-003	215.6405
Total	**0.2401**	**4.8336**	**1.9645**	**0.0181**	**0.6611**	**0.0569**	**0.7181**	**0.1793**	**0.0544**	**0.2337**		**1,962.2422**	**1,962.2422**	**0.0978**	**0.2827**	**2,048.9332**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Off-Road	0.8258	9.6987	3.9657	0.0115		0.3938	0.3938		0.3623	0.3623	0.0000	1,117.4775	1,117.4775	0.3614		1,126.5129
Total	**0.8258**	**9.6987**	**3.9657**	**0.0115**		**0.3938**	**0.3938**		**0.3623**	**0.3623**	**0.0000**	**1,117.4775**	**1,117.4775**	**0.3614**		**1,126.5129**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1650	4.7761	1.1017	0.0160	0.4376	0.0554	0.4930	0.1200	0.0530	0.1730		1,748.3847	1,748.3847	0.0915	0.2773	1,833.2927
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0751	0.0575	0.8627	2.1100e-003	0.2236	1.5300e-003	0.2251	0.0593	1.4100e-003	0.0607		213.8574	213.8574	6.3000e-003	5.4500e-003	215.6405
Total	**0.2401**	**4.8336**	**1.9645**	**0.0181**	**0.6611**	**0.0569**	**0.7181**	**0.1793**	**0.0544**	**0.2337**		**1,962.2422**	**1,962.2422**	**0.0978**	**0.2827**	**2,048.9332**

3.6 Paving - 2021

Unmitigated Construction On-Site

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

Off-Road	0.4925	5.1901	5.8096	9.4000e-003		0.2508	0.2508		0.2308	0.2308		910.1217	910.1217	0.2944		917.4805
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4925**	**5.1901**	**5.8096**	**9.4000e-003**		**0.2508**	**0.2508**		**0.2308**	**0.2308**		**910.1217**	**910.1217**	**0.2944**		**917.4805**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1650	4.7761	1.1017	0.0160	0.4376	0.0554	0.4930	0.1200	0.0530	0.1730		1,748.3847	1,748.3847	0.0915	0.2773	1,833.2927
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0376	0.0288	0.4314	1.0600e-003	0.1118	7.7000e-004	0.1125	0.0296	7.1000e-004	0.0304		106.9287	106.9287	3.1500e-003	2.7300e-003	107.8203
Total	**0.2026**	**4.8049**	**1.5331**	**0.0171**	**0.5494**	**0.0562**	**0.6055**	**0.1496**	**0.0537**	**0.2033**		**1,855.3135**	**1,855.3135**	**0.0947**	**0.2800**	**1,941.1130**

Mitigated Construction On-Site

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

Off-Road	0.4925	5.1901	5.8096	9.4000e-003		0.2508	0.2508		0.2308	0.2308	0.0000	910.1217	910.1217	0.2944		917.4805
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4925**	**5.1901**	**5.8096**	**9.4000e-003**		**0.2508**	**0.2508**		**0.2308**	**0.2308**	**0.0000**	**910.1217**	**910.1217**	**0.2944**		**917.4805**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1650	4.7761	1.1017	0.0160	0.4376	0.0554	0.4930	0.1200	0.0530	0.1730		1,748.3847	1,748.3847	0.0915	0.2773	1,833.2927
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0376	0.0288	0.4314	1.0600e-003	0.1118	7.7000e-004	0.1125	0.0296	7.1000e-004	0.0304		106.9287	106.9287	3.1500e-003	2.7300e-003	107.8203
Total	**0.2026**	**4.8049**	**1.5331**	**0.0171**	**0.5494**	**0.0562**	**0.6055**	**0.1496**	**0.0537**	**0.2033**		**1,855.3135**	**1,855.3135**	**0.0947**	**0.2800**	**1,941.1130**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

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

Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5837	4.0716	4.8468	7.9200e-003		0.2509	0.2509		0.2509	0.2509		750.5281	750.5281	0.0515		751.8158
Total	**0.5837**	**4.0716**	**4.8468**	**7.9200e-003**		**0.2509**	**0.2509**		**0.2509**	**0.2509**		**750.5281**	**750.5281**	**0.0515**		**751.8158**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1650	4.7761	1.1017	0.0160	0.4376	0.0554	0.4930	0.1200	0.0530	0.1730		1,748.3847	1,748.3847	0.0915	0.2773	1,833.2927
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0376	0.0288	0.4314	1.0600e-003	0.1118	7.7000e-004	0.1125	0.0296	7.1000e-004	0.0304		106.9287	106.9287	3.1500e-003	2.7300e-003	107.8203
Total	**0.2026**	**4.8049**	**1.5331**	**0.0171**	**0.5494**	**0.0562**	**0.6055**	**0.1496**	**0.0537**	**0.2033**		**1,855.3135**	**1,855.3135**	**0.0947**	**0.2800**	**1,941.1130**

Mitigated Construction On-Site

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

Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5837	4.0716	4.8468	7.9200e-003		0.2509	0.2509		0.2509	0.2509	0.0000	750.5281	750.5281	0.0515		751.8158
Total	**0.5837**	**4.0716**	**4.8468**	**7.9200e-003**		**0.2509**	**0.2509**		**0.2509**	**0.2509**	**0.0000**	**750.5281**	**750.5281**	**0.0515**		**751.8158**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1650	4.7761	1.1017	0.0160	0.4376	0.0554	0.4930	0.1200	0.0530	0.1730		1,748.3847	1,748.3847	0.0915	0.2773	1,833.2927
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0376	0.0288	0.4314	1.0600e-003	0.1118	7.7000e-004	0.1125	0.0296	7.1000e-004	0.0304		106.9287	106.9287	3.1500e-003	2.7300e-003	107.8203
Total	**0.2026**	**4.8049**	**1.5331**	**0.0171**	**0.5494**	**0.0562**	**0.6055**	**0.1496**	**0.0537**	**0.2033**		**1,855.3135**	**1,855.3135**	**0.0947**	**0.2800**	**1,941.1130**

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

Sample Scenario - 2 Pieces of Equipment, 25 Truck Trips

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	10.00	Dwelling Unit	0.63	10,000.00	29

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2021
Utility Company	Burbank Water & Power				
CO2 Intensity (lb/MWhr)	929.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	6,750.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	20,250.00	0.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00

tblOffRoadEquipment	UsageHours	1.00	8.00
tblTripsAndVMT	HaulingTripNumber	0.00	250.00
tblTripsAndVMT	HaulingTripNumber	0.00	25.00
tblTripsAndVMT	HaulingTripNumber	0.00	50.00
tblTripsAndVMT	HaulingTripNumber	0.00	2,500.00
tblTripsAndVMT	HaulingTripNumber	0.00	125.00
tblTripsAndVMT	HaulingTripNumber	0.00	125.00
tblTripsAndVMT	VendorTripNumber	1.00	0.00
tblTripsAndVMT	WorkerTripNumber	5.00	10.00
tblTripsAndVMT	WorkerTripNumber	5.00	10.00
tblTripsAndVMT	WorkerTripNumber	5.00	10.00
tblTripsAndVMT	WorkerTripNumber	7.00	20.00
tblTripsAndVMT	WorkerTripNumber	5.00	10.00
tblTripsAndVMT	WorkerTripNumber	1.00	10.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	2.2953	26.9397	15.5255	0.0473	13.6540	1.1212	14.7752	6.8846	1.0335	7.9181	0.0000	4,785.6605	4,785.6605	1.0441	0.2831	4,895.2633
Maximum	**2.2953**	**26.9397**	**15.5255**	**0.0473**	**13.6540**	**1.1212**	**14.7752**	**6.8846**	**1.0335**	**7.9181**	**0.0000**	**4,785.6605**	**4,785.6605**	**1.0441**	**0.2831**	**4,895.2633**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	2.2953	26.9397	15.5255	0.0473	6.4465	1.1212	7.5676	3.1803	1.0335	4.2138	0.0000	4,785.6605	4,785.6605	1.0441	0.2831	4,895.2633
Maximum	**2.2953**	**26.9397**	**15.5255**	**0.0473**	**6.4465**	**1.1212**	**7.5676**	**3.1803**	**1.0335**	**4.2138**	**0.0000**	**4,785.6605**	**4,785.6605**	**1.0441**	**0.2831**	**4,895.2633**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**52.79**	**0.00**	**48.78**	**53.80**	**0.00**	**46.78**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2021	1/14/2021	5	10	
2	Site Preparation	Site Preparation	1/15/2021	1/15/2021	5	1	
3	Grading	Grading	1/16/2021	1/19/2021	5	2	
4	Building Construction	Building Construction	1/20/2021	6/8/2021	5	100	
5	Paving	Paving	6/9/2021	6/15/2021	5	5	
6	Architectural Coating	Architectural Coating	6/16/2021	6/22/2021	5	5	

Acres of Grading (Site Preparation Phase): 1

Sample Scenario - 2 Pieces of Equipment, 25 Truck Trips - Los Angeles-South Coast County, Winter

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

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Cranes	2	8.00	231	0.29
Paving	Pavers	2	8.00	130	0.42
Architectural Coating	Air Compressors	2	8.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	2	10.00	0.00	250.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	10.00	0.00	25.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	2	10.00	0.00	50.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	2	20.00	0.00	2,500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	2	10.00	0.00	125.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	2	10.00	0.00	125.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Sample Scenario - 2 Pieces of Equipment, 25 Truck Trips - Los Angeles-South Coast County, Winter

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

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0927	21.9426	8.0756	0.0171		1.0649	1.0649		0.9797	0.9797		1,654.7044	1,654.7044	0.5352		1,668.0835
Total	**2.0927**	**21.9426**	**8.0756**	**0.0171**		**1.0649**	**1.0649**		**0.9797**	**0.9797**		**1,654.7044**	**1,654.7044**	**0.5352**		**1,668.0835**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1625	4.9654	1.1205	0.0160	0.4376	0.0555	0.4931	0.1200	0.0531	0.1730		1,748.5798	1,748.5798	0.0914	0.2773	1,833.4967
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0401	0.0318	0.3955	1.0000e-003	0.1118	7.7000e-004	0.1125	0.0296	7.1000e-004	0.0304		101.2576	101.2576	3.1800e-003	2.9200e-003	102.2059
Total	**0.2026**	**4.9971**	**1.5161**	**0.0170**	**0.5494**	**0.0562**	**0.6056**	**0.1496**	**0.0538**	**0.2034**		**1,849.8374**	**1,849.8374**	**0.0946**	**0.2802**	**1,935.7026**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0927	21.9426	8.0756	0.0171		1.0649	1.0649		0.9797	0.9797	0.0000	1,654.7044	1,654.7044	0.5352		1,668.0835
Total	**2.0927**	**21.9426**	**8.0756**	**0.0171**		**1.0649**	**1.0649**		**0.9797**	**0.9797**	**0.0000**	**1,654.7044**	**1,654.7044**	**0.5352**		**1,668.0835**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1625	4.9654	1.1205	0.0160	0.4376	0.0555	0.4931	0.1200	0.0531	0.1730		1,748.5798	1,748.5798	0.0914	0.2773	1,833.4967
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0401	0.0318	0.3955	1.0000e-003	0.1118	7.7000e-004	0.1125	0.0296	7.1000e-004	0.0304		101.2576	101.2576	3.1800e-003	2.9200e-003	102.2059
Total	**0.2026**	**4.9971**	**1.5161**	**0.0170**	**0.5494**	**0.0562**	**0.6056**	**0.1496**	**0.0538**	**0.2034**		**1,849.8374**	**1,849.8374**	**0.0946**	**0.2802**	**1,935.7026**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

Sample Scenario - 2 Pieces of Equipment, 25 Truck Trips - Los Angeles-South Coast County, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					13.1047	0.0000	13.1047	6.7350	0.0000	6.7350			0.0000			0.0000
Off-Road	2.0927	21.9426	8.0756	0.0171		1.0649	1.0649		0.9797	0.9797		1,654.7044	1,654.7044	0.5352		1,668.0835
Total	**2.0927**	**21.9426**	**8.0756**	**0.0171**	**13.1047**	**1.0649**	**14.1696**	**6.7350**	**0.9797**	**7.7147**		**1,654.7044**	**1,654.7044**	**0.5352**		**1,668.0835**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1625	4.9654	1.1205	0.0160	0.4376	0.0555	0.4931	0.1200	0.0531	0.1730		1,748.5798	1,748.5798	0.0914	0.2773	1,833.4967
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0401	0.0318	0.3955	1.0000e-003	0.1118	7.7000e-004	0.1125	0.0296	7.1000e-004	0.0304		101.2576	101.2576	3.1800e-003	2.9200e-003	102.2059
Total	**0.2026**	**4.9971**	**1.5161**	**0.0170**	**0.5494**	**0.0562**	**0.6056**	**0.1496**	**0.0538**	**0.2034**		**1,849.8374**	**1,849.8374**	**0.0946**	**0.2802**	**1,935.7026**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.8971	0.0000	5.8971	3.0307	0.0000	3.0307			0.0000			0.0000
Off-Road	2.0927	21.9426	8.0756	0.0171		1.0649	1.0649		0.9797	0.9797	0.0000	1,654.7044	1,654.7044	0.5352		1,668.0835
Total	**2.0927**	**21.9426**	**8.0756**	**0.0171**	**5.8971**	**1.0649**	**6.9620**	**3.0307**	**0.9797**	**4.0105**	**0.0000**	**1,654.7044**	**1,654.7044**	**0.5352**		**1,668.0835**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1625	4.9654	1.1205	0.0160	0.4376	0.0555	0.4931	0.1200	0.0531	0.1730		1,748.5798	1,748.5798	0.0914	0.2773	1,833.4967
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0401	0.0318	0.3955	1.0000e-003	0.1118	7.7000e-004	0.1125	0.0296	7.1000e-004	0.0304		101.2576	101.2576	3.1800e-003	2.9200e-003	102.2059
Total	**0.2026**	**4.9971**	**1.5161**	**0.0170**	**0.5494**	**0.0562**	**0.6056**	**0.1496**	**0.0538**	**0.2034**		**1,849.8374**	**1,849.8374**	**0.0946**	**0.2802**	**1,935.7026**

3.4 Grading - 2021

Unmitigated Construction On-Site

Sample Scenario - 2 Pieces of Equipment, 25 Truck Trips - Los Angeles-South Coast County, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1210	0.0000	2.1210	0.2290	0.0000	0.2290			0.0000			0.0000
Off-Road	1.8589	21.4056	14.0094	0.0303		0.8328	0.8328		0.7661	0.7661		2,935.8230	2,935.8230	0.9495		2,959.5607
Total	**1.8589**	**21.4056**	**14.0094**	**0.0303**	**2.1210**	**0.8328**	**2.9538**	**0.2290**	**0.7661**	**0.9952**		**2,935.8230**	**2,935.8230**	**0.9495**		**2,959.5607**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1625	4.9654	1.1205	0.0160	0.4376	0.0555	0.4931	0.1200	0.0531	0.1730		1,748.5798	1,748.5798	0.0914	0.2773	1,833.4967
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0401	0.0318	0.3955	1.0000e-003	0.1118	7.7000e-004	0.1125	0.0296	7.1000e-004	0.0304		101.2576	101.2576	3.1800e-003	2.9200e-003	102.2059
Total	**0.2026**	**4.9971**	**1.5161**	**0.0170**	**0.5494**	**0.0562**	**0.6056**	**0.1496**	**0.0538**	**0.2034**		**1,849.8374**	**1,849.8374**	**0.0946**	**0.2802**	**1,935.7026**

Mitigated Construction On-Site

Sample Scenario - 2 Pieces of Equipment, 25 Truck Trips - Los Angeles-South Coast County, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.9545	0.0000	0.9545	0.1031	0.0000	0.1031			0.0000			0.0000
Off-Road	1.8589	21.4056	14.0094	0.0303		0.8328	0.8328		0.7661	0.7661	0.0000	2,935.8230	2,935.8230	0.9495		2,959.5607
Total	**1.8589**	**21.4056**	**14.0094**	**0.0303**	**0.9545**	**0.8328**	**1.7872**	**0.1031**	**0.7661**	**0.8692**	**0.0000**	**2,935.8230**	**2,935.8230**	**0.9495**		**2,959.5607**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1625	4.9654	1.1205	0.0160	0.4376	0.0555	0.4931	0.1200	0.0531	0.1730		1,748.5798	1,748.5798	0.0914	0.2773	1,833.4967
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0401	0.0318	0.3955	1.0000e-003	0.1118	7.7000e-004	0.1125	0.0296	7.1000e-004	0.0304		101.2576	101.2576	3.1800e-003	2.9200e-003	102.2059
Total	**0.2026**	**4.9971**	**1.5161**	**0.0170**	**0.5494**	**0.0562**	**0.6056**	**0.1496**	**0.0538**	**0.2034**		**1,849.8374**	**1,849.8374**	**0.0946**	**0.2802**	**1,935.7026**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

Sample Scenario - 2 Pieces of Equipment, 25 Truck Trips - Los Angeles-South Coast County, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8258	9.6987	3.9657	0.0115		0.3938	0.3938		0.3623	0.3623		1,117.4775	1,117.4775	0.3614		1,126.5129
Total	**0.8258**	**9.6987**	**3.9657**	**0.0115**		**0.3938**	**0.3938**		**0.3623**	**0.3623**		**1,117.4775**	**1,117.4775**	**0.3614**		**1,126.5129**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1625	4.9654	1.1205	0.0160	0.4376	0.0555	0.4931	0.1200	0.0531	0.1730		1,748.5798	1,748.5798	0.0914	0.2773	1,833.4967
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0801	0.0636	0.7911	2.0000e-003	0.2236	1.5300e-003	0.2251	0.0593	1.4100e-003	0.0607		202.5151	202.5151	6.3700e-003	5.8300e-003	204.4119
Total	**0.2427**	**5.0289**	**1.9116**	**0.0180**	**0.6611**	**0.0570**	**0.7181**	**0.1793**	**0.0545**	**0.2337**		**1,951.0950**	**1,951.0950**	**0.0978**	**0.2831**	**2,037.9086**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Off-Road	0.8258	9.6987	3.9657	0.0115		0.3938	0.3938		0.3623	0.3623	0.0000	1,117.4775	1,117.4775	0.3614		1,126.5129
Total	**0.8258**	**9.6987**	**3.9657**	**0.0115**		**0.3938**	**0.3938**		**0.3623**	**0.3623**	**0.0000**	**1,117.4775**	**1,117.4775**	**0.3614**		**1,126.5129**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1625	4.9654	1.1205	0.0160	0.4376	0.0555	0.4931	0.1200	0.0531	0.1730		1,748.5798	1,748.5798	0.0914	0.2773	1,833.4967
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0801	0.0636	0.7911	2.0000e-003	0.2236	1.5300e-003	0.2251	0.0593	1.4100e-003	0.0607		202.5151	202.5151	6.3700e-003	5.8300e-003	204.4119
Total	**0.2427**	**5.0289**	**1.9116**	**0.0180**	**0.6611**	**0.0570**	**0.7181**	**0.1793**	**0.0545**	**0.2337**		**1,951.0950**	**1,951.0950**	**0.0978**	**0.2831**	**2,037.9086**

3.6 Paving - 2021

Unmitigated Construction On-Site

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

Off-Road	0.4925	5.1901	5.8096	9.4000e-003		0.2508	0.2508		0.2308	0.2308		910.1217	910.1217	0.2944		917.4805
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4925**	**5.1901**	**5.8096**	**9.4000e-003**		**0.2508**	**0.2508**		**0.2308**	**0.2308**		**910.1217**	**910.1217**	**0.2944**		**917.4805**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1625	4.9654	1.1205	0.0160	0.4376	0.0555	0.4931	0.1200	0.0531	0.1730		1,748.5798	1,748.5798	0.0914	0.2773	1,833.4967
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0401	0.0318	0.3955	1.0000e-003	0.1118	7.7000e-004	0.1125	0.0296	7.1000e-004	0.0304		101.2576	101.2576	3.1800e-003	2.9200e-003	102.2059
Total	**0.2026**	**4.9971**	**1.5161**	**0.0170**	**0.5494**	**0.0562**	**0.6056**	**0.1496**	**0.0538**	**0.2034**		**1,849.8374**	**1,849.8374**	**0.0946**	**0.2802**	**1,935.7026**

Mitigated Construction On-Site

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

Off-Road	0.4925	5.1901	5.8096	9.4000e-003		0.2508	0.2508		0.2308	0.2308	0.0000	910.1217	910.1217	0.2944		917.4805
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4925**	**5.1901**	**5.8096**	**9.4000e-003**		**0.2508**	**0.2508**		**0.2308**	**0.2308**	**0.0000**	**910.1217**	**910.1217**	**0.2944**		**917.4805**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1625	4.9654	1.1205	0.0160	0.4376	0.0555	0.4931	0.1200	0.0531	0.1730		1,748.5798	1,748.5798	0.0914	0.2773	1,833.4967
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0401	0.0318	0.3955	1.0000e-003	0.1118	7.7000e-004	0.1125	0.0296	7.1000e-004	0.0304		101.2576	101.2576	3.1800e-003	2.9200e-003	102.2059
Total	**0.2026**	**4.9971**	**1.5161**	**0.0170**	**0.5494**	**0.0562**	**0.6056**	**0.1496**	**0.0538**	**0.2034**		**1,849.8374**	**1,849.8374**	**0.0946**	**0.2802**	**1,935.7026**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

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

Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5837	4.0716	4.8468	7.9200e-003		0.2509	0.2509		0.2509	0.2509		750.5281	750.5281	0.0515		751.8158
Total	**0.5837**	**4.0716**	**4.8468**	**7.9200e-003**		**0.2509**	**0.2509**		**0.2509**	**0.2509**		**750.5281**	**750.5281**	**0.0515**		**751.8158**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1625	4.9654	1.1205	0.0160	0.4376	0.0555	0.4931	0.1200	0.0531	0.1730		1,748.5798	1,748.5798	0.0914	0.2773	1,833.4967
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0401	0.0318	0.3955	1.0000e-003	0.1118	7.7000e-004	0.1125	0.0296	7.1000e-004	0.0304		101.2576	101.2576	3.1800e-003	2.9200e-003	102.2059
Total	**0.2026**	**4.9971**	**1.5161**	**0.0170**	**0.5494**	**0.0562**	**0.6056**	**0.1496**	**0.0538**	**0.2034**		**1,849.8374**	**1,849.8374**	**0.0946**	**0.2802**	**1,935.7026**

Mitigated Construction On-Site

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

Sample Scenario - 2 Pieces of Equipment, 25 Truck Trips - Los Angeles-South Coast County, Winter

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

Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.5837	4.0716	4.8468	7.9200e-003		0.2509	0.2509		0.2509	0.2509	0.0000	750.5281	750.5281	0.0515		751.8158
Total	**0.5837**	**4.0716**	**4.8468**	**7.9200e-003**		**0.2509**	**0.2509**		**0.2509**	**0.2509**	**0.0000**	**750.5281**	**750.5281**	**0.0515**		**751.8158**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1625	4.9654	1.1205	0.0160	0.4376	0.0555	0.4931	0.1200	0.0531	0.1730		1,748.5798	1,748.5798	0.0914	0.2773	1,833.4967
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0401	0.0318	0.3955	1.0000e-003	0.1118	7.7000e-004	0.1125	0.0296	7.1000e-004	0.0304		101.2576	101.2576	3.1800e-003	2.9200e-003	102.2059
Total	**0.2026**	**4.9971**	**1.5161**	**0.0170**	**0.5494**	**0.0562**	**0.6056**	**0.1496**	**0.0538**	**0.2034**		**1,849.8374**	**1,849.8374**	**0.0946**	**0.2802**	**1,935.7026**

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

Sample Scenario - 4 Pieces of Equipment, 50 Truck Trips

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	10.00	Dwelling Unit	0.63	10,000.00	29

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2021
Utility Company	Burbank Water & Power				
CO2 Intensity (lb/MWhr)	929.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	6,750.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	20,250.00	0.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	1.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblTripsAndVMT	HaulingTripNumber	0.00	500.00
tblTripsAndVMT	HaulingTripNumber	0.00	50.00
tblTripsAndVMT	HaulingTripNumber	0.00	100.00
tblTripsAndVMT	HaulingTripNumber	0.00	5,000.00
tblTripsAndVMT	HaulingTripNumber	0.00	250.00
tblTripsAndVMT	HaulingTripNumber	0.00	250.00
tblTripsAndVMT	VendorTripNumber	1.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00
tblTripsAndVMT	WorkerTripNumber	7.00	40.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00
tblTripsAndVMT	WorkerTripNumber	1.00	20.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Year	lb/day										lb/day					
2021	4.3568	52.9579	25.1511	0.0815	16.3244	2.0100	18.3344	7.2632	1.8532	9.1164	0.0000	8,301.1543	8,301.1543	1.6740	0.5654	8,509.8701
Maximum	**4.3568**	**52.9579**	**25.1511**	**0.0815**	**16.3244**	**2.0100**	**18.3344**	**7.2632**	**1.8532**	**9.1164**	**0.0000**	**8,301.1543**	**8,301.1543**	**1.6740**	**0.5654**	**8,509.8701**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.3568	52.9579	25.1511	0.0815	7.9503	2.0100	9.9602	3.4330	1.8532	5.2863	0.0000	8,301.1543	8,301.1543	1.6740	0.5654	8,509.8701
Maximum	**4.3568**	**52.9579**	**25.1511**	**0.0815**	**7.9503**	**2.0100**	**9.9602**	**3.4330**	**1.8532**	**5.2863**	**0.0000**	**8,301.1543**	**8,301.1543**	**1.6740**	**0.5654**	**8,509.8701**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**51.30**	**0.00**	**45.67**	**52.73**	**0.00**	**42.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2021	1/14/2021	5	10	

2	Site Preparation	Site Preparation	1/15/2021	1/15/2021	5	1	
3	Grading	Grading	1/16/2021	1/19/2021	5	2	
4	Building Construction	Building Construction	1/20/2021	6/8/2021	5	100	
5	Paving	Paving	6/9/2021	6/15/2021	5	5	
6	Architectural Coating	Architectural Coating	6/16/2021	6/22/2021	5	5	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 6

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Cranes	2	8.00	231	0.29
Building Construction	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Architectural Coating	Air Compressors	4	8.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class

Demolition	4	20.00	0.00	500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	4	20.00	0.00	50.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	20.00	0.00	100.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	40.00	0.00	5,000.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	20.00	0.00	250.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	4	20.00	0.00	250.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.8624	28.0184	15.4236	0.0296		1.4111	1.4111		1.3260	1.3260		2,840.0337	2,840.0337	0.6040		2,855.1335
Total	**2.8624**	**28.0184**	**15.4236**	**0.0296**		**1.4111**	**1.4111**		**1.3260**	**1.3260**		**2,840.0337**	**2,840.0337**	**0.6040**		**2,855.1335**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Sample Scenario - 4 Pieces of Equipment, 50 Truck Trips - Los Angeles-South Coast County, Summer

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

Category	lb/day										lb/day					
Hauling	0.3300	9.5523	2.2035	0.0320	0.8752	0.1108	0.9859	0.2399	0.1060	0.3459		3,496.7695	3,496.7695	0.1831	0.5545	3,666.5854
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0751	0.0575	0.8627	2.1100e-003	0.2236	1.5300e-003	0.2251	0.0593	1.4100e-003	0.0607		213.8574	213.8574	6.3000e-003	5.4500e-003	215.6405
Total	**0.4051**	**9.6098**	**3.0662**	**0.0341**	**1.0987**	**0.1123**	**1.2110**	**0.2992**	**0.1074**	**0.4066**		**3,710.6269**	**3,710.6269**	**0.1894**	**0.5600**	**3,882.2259**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.8624	28.0184	15.4236	0.0296		1.4111	1.4111		1.3260	1.3260	0.0000	2,840.0337	2,840.0337	0.6040		2,855.1335
Total	**2.8624**	**28.0184**	**15.4236**	**0.0296**		**1.4111**	**1.4111**		**1.3260**	**1.3260**	**0.0000**	**2,840.0337**	**2,840.0337**	**0.6040**		**2,855.1335**

Mitigated Construction Off-Site

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

Hauling	0.3300	9.5523	2.2035	0.0320	0.8752	0.1108	0.9859	0.2399	0.1060	0.3459		3,496.7695	3,496.7695	0.1831	0.5545	3,666.5854
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0751	0.0575	0.8627	2.1100e-003	0.2236	1.5300e-003	0.2251	0.0593	1.4100e-003	0.0607		213.8574	213.8574	6.3000e-003	5.4500e-003	215.6405
Total	**0.4051**	**9.6098**	**3.0662**	**0.0341**	**1.0987**	**0.1123**	**1.2110**	**0.2992**	**0.1074**	**0.4066**		**3,710.6269**	**3,710.6269**	**0.1894**	**0.5600**	**3,882.2259**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					13.1047	0.0000	13.1047	6.7350	0.0000	6.7350			0.0000			0.0000
Off-Road	2.4673	25.7342	12.5960	0.0233		1.2885	1.2885		1.1854	1.1854		2,256.5045	2,256.5045	0.7298		2,274.7495
Total	**2.4673**	**25.7342**	**12.5960**	**0.0233**	**13.1047**	**1.2885**	**14.3931**	**6.7350**	**1.1854**	**7.9203**		**2,256.5045**	**2,256.5045**	**0.7298**		**2,274.7495**

Unmitigated Construction Off-Site

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

Hauling	0.3300	9.5523	2.2035	0.0320	0.8752	0.1108	0.9859	0.2399	0.1060	0.3459		3,496.7695	3,496.7695	0.1831	0.5545	3,666.5854
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0751	0.0575	0.8627	2.1100e-003	0.2236	1.5300e-003	0.2251	0.0593	1.4100e-003	0.0607		213.8574	213.8574	6.3000e-003	5.4500e-003	215.6405
Total	**0.4051**	**9.6098**	**3.0662**	**0.0341**	**1.0987**	**0.1123**	**1.2110**	**0.2992**	**0.1074**	**0.4066**		**3,710.6269**	**3,710.6269**	**0.1894**	**0.5600**	**3,882.2259**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.8971	0.0000	5.8971	3.0307	0.0000	3.0307			0.0000			0.0000
Off-Road	2.4673	25.7342	12.5960	0.0233		1.2885	1.2885		1.1854	1.1854	0.0000	2,256.5045	2,256.5045	0.7298		2,274.7495
Total	**2.4673**	**25.7342**	**12.5960**	**0.0233**	**5.8971**	**1.2885**	**7.1856**	**3.0307**	**1.1854**	**4.2161**	**0.0000**	**2,256.5045**	**2,256.5045**	**0.7298**		**2,274.7495**

Mitigated Construction Off-Site

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

Hauling	0.3300	9.5523	2.2035	0.0320	0.8752	0.1108	0.9859	0.2399	0.1060	0.3459		3,496.7695	3,496.7695	0.1831	0.5545	3,666.5854
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0751	0.0575	0.8627	2.1100e-003	0.2236	1.5300e-003	0.2251	0.0593	1.4100e-003	0.0607		213.8574	213.8574	6.3000e-003	5.4500e-003	215.6405
Total	**0.4051**	**9.6098**	**3.0662**	**0.0341**	**1.0987**	**0.1123**	**1.2110**	**0.2992**	**0.1074**	**0.4066**		**3,710.6269**	**3,710.6269**	**0.1894**	**0.5600**	**3,882.2259**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					15.2257	0.0000	15.2257	6.9640	0.0000	6.9640			0.0000			0.0000
Off-Road	3.9516	43.3481	22.0849	0.0474		1.8977	1.8977		1.7459	1.7459		4,590.5274	4,590.5274	1.4847		4,627.6442
Total	**3.9516**	**43.3481**	**22.0849**	**0.0474**	**15.2257**	**1.8977**	**17.1233**	**6.9640**	**1.7459**	**8.7098**		**4,590.5274**	**4,590.5274**	**1.4847**		**4,627.6442**

Unmitigated Construction Off-Site

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

Hauling	0.3300	9.5523	2.2035	0.0320	0.8752	0.1108	0.9859	0.2399	0.1060	0.3459		3,496.7695	3,496.7695	0.1831	0.5545	3,666.5854
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0751	0.0575	0.8627	2.1100e-003	0.2236	1.5300e-003	0.2251	0.0593	1.4100e-003	0.0607		213.8574	213.8574	6.3000e-003	5.4500e-003	215.6405
Total	**0.4051**	**9.6098**	**3.0662**	**0.0341**	**1.0987**	**0.1123**	**1.2110**	**0.2992**	**0.1074**	**0.4066**		**3,710.6269**	**3,710.6269**	**0.1894**	**0.5600**	**3,882.2259**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.8516	0.0000	6.8516	3.1338	0.0000	3.1338			0.0000			0.0000
Off-Road	3.9516	43.3481	22.0849	0.0474		1.8977	1.8977		1.7459	1.7459	0.0000	4,590.5274	4,590.5274	1.4847		4,627.6442
Total	**3.9516**	**43.3481**	**22.0849**	**0.0474**	**6.8516**	**1.8977**	**8.7492**	**3.1338**	**1.7459**	**4.8796**	**0.0000**	**4,590.5274**	**4,590.5274**	**1.4847**		**4,627.6442**

Mitigated Construction Off-Site

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

Hauling	0.3300	9.5523	2.2035	0.0320	0.8752	0.1108	0.9859	0.2399	0.1060	0.3459		3,496.7695	3,496.7695	0.1831	0.5545	3,666.5854
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0751	0.0575	0.8627	2.1100e-003	0.2236	1.5300e-003	0.2251	0.0593	1.4100e-003	0.0607		213.8574	213.8574	6.3000e-003	5.4500e-003	215.6405
Total	**0.4051**	**9.6098**	**3.0662**	**0.0341**	**1.0987**	**0.1123**	**1.2110**	**0.2992**	**0.1074**	**0.4066**		**3,710.6269**	**3,710.6269**	**0.1894**	**0.5600**	**3,882.2259**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1067	12.5424	7.3561	0.0162		0.5614	0.5614		0.5165	0.5165		1,568.8276	1,568.8276	0.5074		1,581.5124
Total	**1.1067**	**12.5424**	**7.3561**	**0.0162**		**0.5614**	**0.5614**		**0.5165**	**0.5165**		**1,568.8276**	**1,568.8276**	**0.5074**		**1,581.5124**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3300	9.5523	2.2035	0.0320	0.8752	0.1108	0.9859	0.2399	0.1060	0.3459		3,496.7695	3,496.7695	0.1831	0.5545	3,666.5854

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1502	0.1150	1.7255	4.2200e-003	0.4471	3.0700e-003	0.4502	0.1186	2.8300e-003	0.1214		427.7148	427.7148	0.0126	0.0109	431.2810
Total	**0.4802**	**9.6673**	**3.9289**	**0.0362**	**1.3223**	**0.1138**	**1.4361**	**0.3585**	**0.1088**	**0.4673**		**3,924.4843**	**3,924.4843**	**0.1957**	**0.5654**	**4,097.8664**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1067	12.5424	7.3561	0.0162		0.5614	0.5614		0.5165	0.5165	0.0000	1,568.8276	1,568.8276	0.5074		1,581.5124
Total	**1.1067**	**12.5424**	**7.3561**	**0.0162**		**0.5614**	**0.5614**		**0.5165**	**0.5165**	**0.0000**	**1,568.8276**	**1,568.8276**	**0.5074**		**1,581.5124**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3300	9.5523	2.2035	0.0320	0.8752	0.1108	0.9859	0.2399	0.1060	0.3459		3,496.7695	3,496.7695	0.1831	0.5545	3,666.5854
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Worker	0.1502	0.1150	1.7255	4.2200e-003	0.4471	3.0700e-003	0.4502	0.1186	2.8300e-003	0.1214		427.7148	427.7148	0.0126	0.0109	431.2810
Total	**0.4802**	**9.6673**	**3.9289**	**0.0362**	**1.3223**	**0.1138**	**1.4361**	**0.3585**	**0.1088**	**0.4673**		**3,924.4843**	**3,924.4843**	**0.1957**	**0.5654**	**4,097.8664**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8766	9.0706	10.8924	0.0176		0.4425	0.4425		0.4071	0.4071		1,699.0331	1,699.0331	0.5495		1,712.7707
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8766**	**9.0706**	**10.8924**	**0.0176**		**0.4425**	**0.4425**		**0.4071**	**0.4071**		**1,699.0331**	**1,699.0331**	**0.5495**		**1,712.7707**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3300	9.5523	2.2035	0.0320	0.8752	0.1108	0.9859	0.2399	0.1060	0.3459		3,496.7695	3,496.7695	0.1831	0.5545	3,666.5854
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Worker	0.0751	0.0575	0.8627	2.1100e-003	0.2236	1.5300e-003	0.2251	0.0593	1.4100e-003	0.0607		213.8574	213.8574	6.3000e-003	5.4500e-003	215.6405
Total	**0.4051**	**9.6098**	**3.0662**	**0.0341**	**1.0987**	**0.1123**	**1.2110**	**0.2992**	**0.1074**	**0.4066**		**3,710.6269**	**3,710.6269**	**0.1894**	**0.5600**	**3,882.2259**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8766	9.0706	10.8924	0.0176		0.4425	0.4425		0.4071	0.4071	0.0000	1,699.0331	1,699.0331	0.5495		1,712.7706
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8766**	**9.0706**	**10.8924**	**0.0176**		**0.4425**	**0.4425**		**0.4071**	**0.4071**	**0.0000**	**1,699.0331**	**1,699.0331**	**0.5495**		**1,712.7706**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3300	9.5523	2.2035	0.0320	0.8752	0.1108	0.9859	0.2399	0.1060	0.3459		3,496.7695	3,496.7695	0.1831	0.5545	3,666.5854
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Worker	0.0751	0.0575	0.8627	2.1100e-003	0.2236	1.5300e-003	0.2251	0.0593	1.4100e-003	0.0607		213.8574	213.8574	6.3000e-003	5.4500e-003	215.6405
Total	**0.4051**	**9.6098**	**3.0662**	**0.0341**	**1.0987**	**0.1123**	**1.2110**	**0.2992**	**0.1074**	**0.4066**		**3,710.6269**	**3,710.6269**	**0.1894**	**0.5600**	**3,882.2259**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	1.1675	8.1432	9.6936	0.0159		0.5019	0.5019		0.5019	0.5019		1,501.0563	1,501.0563	0.1030		1,503.6315
Total	**1.1675**	**8.1432**	**9.6936**	**0.0159**		**0.5019**	**0.5019**		**0.5019**	**0.5019**		**1,501.0563**	**1,501.0563**	**0.1030**		**1,503.6315**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3300	9.5523	2.2035	0.0320	0.8752	0.1108	0.9859	0.2399	0.1060	0.3459		3,496.7695	3,496.7695	0.1831	0.5545	3,666.5854
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Worker	0.0751	0.0575	0.8627	2.1100e-003	0.2236	1.5300e-003	0.2251	0.0593	1.4100e-003	0.0607		213.8574	213.8574	6.3000e-003	5.4500e-003	215.6405
Total	**0.4051**	**9.6098**	**3.0662**	**0.0341**	**1.0987**	**0.1123**	**1.2110**	**0.2992**	**0.1074**	**0.4066**		**3,710.6269**	**3,710.6269**	**0.1894**	**0.5600**	**3,882.2259**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	1.1675	8.1432	9.6936	0.0159		0.5019	0.5019		0.5019	0.5019	0.0000	1,501.0563	1,501.0563	0.1030		1,503.6315
Total	**1.1675**	**8.1432**	**9.6936**	**0.0159**		**0.5019**	**0.5019**		**0.5019**	**0.5019**	**0.0000**	**1,501.0563**	**1,501.0563**	**0.1030**		**1,503.6315**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3300	9.5523	2.2035	0.0320	0.8752	0.1108	0.9859	0.2399	0.1060	0.3459		3,496.7695	3,496.7695	0.1831	0.5545	3,666.5854
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Sample Scenario - 4 Pieces of Equipment, 50 Truck Trips - Los Angeles-South Coast County, Summer

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

Worker	0.0751	0.0575	0.8627	2.1100e-003	0.2236	1.5300e-003	0.2251	0.0593	1.4100e-003	0.0607		213.8574	213.8574	6.3000e-003	5.4500e-003	215.6405
Total	**0.4051**	**9.6098**	**3.0662**	**0.0341**	**1.0987**	**0.1123**	**1.2110**	**0.2992**	**0.1074**	**0.4066**		**3,710.6269**	**3,710.6269**	**0.1894**	**0.5600**	**3,882.2259**

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

Sample Scenario - 4 Pieces of Equipment, 50 Truck Trips

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	10.00	Dwelling Unit	0.63	10,000.00	29

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2021
Utility Company	Burbank Water & Power				
CO2 Intensity (lb/MWhr)	929.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	6,750.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	20,250.00	0.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	1.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblTripsAndVMT	HaulingTripNumber	0.00	500.00
tblTripsAndVMT	HaulingTripNumber	0.00	50.00
tblTripsAndVMT	HaulingTripNumber	0.00	100.00
tblTripsAndVMT	HaulingTripNumber	0.00	5,000.00
tblTripsAndVMT	HaulingTripNumber	0.00	250.00
tblTripsAndVMT	HaulingTripNumber	0.00	250.00
tblTripsAndVMT	VendorTripNumber	1.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00
tblTripsAndVMT	WorkerTripNumber	7.00	40.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00
tblTripsAndVMT	WorkerTripNumber	1.00	20.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Year	lb/day										lb/day					
2021	4.3569	53.3424	25.1171	0.0814	16.3244	2.0101	18.3345	7.2632	1.8534	9.1166	0.0000	8,290.2022	8,290.2022	1.6738	0.5662	8,499.0494
Maximum	**4.3569**	**53.3424**	**25.1171**	**0.0814**	**16.3244**	**2.0101**	**18.3345**	**7.2632**	**1.8534**	**9.1166**	**0.0000**	**8,290.2022**	**8,290.2022**	**1.6738**	**0.5662**	**8,499.0494**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.3569	53.3424	25.1171	0.0814	7.9503	2.0101	9.9604	3.4330	1.8534	5.2864	0.0000	8,290.2022	8,290.2022	1.6738	0.5662	8,499.0494
Maximum	**4.3569**	**53.3424**	**25.1171**	**0.0814**	**7.9503**	**2.0101**	**9.9604**	**3.4330**	**1.8534**	**5.2864**	**0.0000**	**8,290.2022**	**8,290.2022**	**1.6738**	**0.5662**	**8,499.0494**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**51.30**	**0.00**	**45.67**	**52.73**	**0.00**	**42.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2021	1/14/2021	5	10	

Sample Scenario - 4 Pieces of Equipment, 50 Truck Trips - Los Angeles-South Coast County, Winter

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

2	Site Preparation	Site Preparation	1/15/2021	1/15/2021	5	1	
3	Grading	Grading	1/16/2021	1/19/2021	5	2	
4	Building Construction	Building Construction	1/20/2021	6/8/2021	5	100	
5	Paving	Paving	6/9/2021	6/15/2021	5	5	
6	Architectural Coating	Architectural Coating	6/16/2021	6/22/2021	5	5	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 6

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Cranes	2	8.00	231	0.29
Building Construction	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Architectural Coating	Air Compressors	4	8.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class

Demolition	4	20.00	0.00	500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	4	20.00	0.00	50.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	20.00	0.00	100.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	40.00	0.00	5,000.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	20.00	0.00	250.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	4	20.00	0.00	250.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.8624	28.0184	15.4236	0.0296		1.4111	1.4111		1.3260	1.3260		2,840.0337	2,840.0337	0.6040		2,855.1335
Total	**2.8624**	**28.0184**	**15.4236**	**0.0296**		**1.4111**	**1.4111**		**1.3260**	**1.3260**		**2,840.0337**	**2,840.0337**	**0.6040**		**2,855.1335**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Sample Scenario - 4 Pieces of Equipment, 50 Truck Trips - Los Angeles-South Coast County, Winter

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

Category	lb/day										lb/day					
Hauling	0.3251	9.9307	2.2411	0.0320	0.8752	0.1109	0.9861	0.2399	0.1061	0.3461		3,497.1597	3,497.1597	0.1828	0.5546	3,666.9933
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0801	0.0636	0.7911	2.0000e-003	0.2236	1.5300e-003	0.2251	0.0593	1.4100e-003	0.0607		202.5151	202.5151	6.3700e-003	5.8300e-003	204.4119
Total	**0.4052**	**9.9943**	**3.0321**	**0.0340**	**1.0987**	**0.1125**	**1.2112**	**0.2992**	**0.1076**	**0.4068**		**3,699.6748**	**3,699.6748**	**0.1892**	**0.5604**	**3,871.4052**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.8624	28.0184	15.4236	0.0296		1.4111	1.4111		1.3260	1.3260	0.0000	2,840.0337	2,840.0337	0.6040		2,855.1335
Total	**2.8624**	**28.0184**	**15.4236**	**0.0296**		**1.4111**	**1.4111**		**1.3260**	**1.3260**	**0.0000**	**2,840.0337**	**2,840.0337**	**0.6040**		**2,855.1335**

Mitigated Construction Off-Site

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

Hauling	0.3251	9.9307	2.2411	0.0320	0.8752	0.1109	0.9861	0.2399	0.1061	0.3461		3,497.1597	3,497.1597	0.1828	0.5546	3,666.9933
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0801	0.0636	0.7911	2.0000e-003	0.2236	1.5300e-003	0.2251	0.0593	1.4100e-003	0.0607		202.5151	202.5151	6.3700e-003	5.8300e-003	204.4119
Total	**0.4052**	**9.9943**	**3.0321**	**0.0340**	**1.0987**	**0.1125**	**1.2112**	**0.2992**	**0.1076**	**0.4068**		**3,699.6748**	**3,699.6748**	**0.1892**	**0.5604**	**3,871.4052**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					13.1047	0.0000	13.1047	6.7350	0.0000	6.7350			0.0000			0.0000
Off-Road	2.4673	25.7342	12.5960	0.0233		1.2885	1.2885		1.1854	1.1854		2,256.5045	2,256.5045	0.7298		2,274.7495
Total	**2.4673**	**25.7342**	**12.5960**	**0.0233**	**13.1047**	**1.2885**	**14.3931**	**6.7350**	**1.1854**	**7.9203**		**2,256.5045**	**2,256.5045**	**0.7298**		**2,274.7495**

Unmitigated Construction Off-Site

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

Sample Scenario - 4 Pieces of Equipment, 50 Truck Trips - Los Angeles-South Coast County, Winter

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

Hauling	0.3251	9.9307	2.2411	0.0320	0.8752	0.1109	0.9861	0.2399	0.1061	0.3461		3,497.1597	3,497.1597	0.1828	0.5546	3,666.9933
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0801	0.0636	0.7911	2.0000e-003	0.2236	1.5300e-003	0.2251	0.0593	1.4100e-003	0.0607		202.5151	202.5151	6.3700e-003	5.8300e-003	204.4119
Total	**0.4052**	**9.9943**	**3.0321**	**0.0340**	**1.0987**	**0.1125**	**1.2112**	**0.2992**	**0.1076**	**0.4068**		**3,699.6748**	**3,699.6748**	**0.1892**	**0.5604**	**3,871.4052**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.8971	0.0000	5.8971	3.0307	0.0000	3.0307			0.0000			0.0000
Off-Road	2.4673	25.7342	12.5960	0.0233		1.2885	1.2885		1.1854	1.1854	0.0000	2,256.5045	2,256.5045	0.7298		2,274.7495
Total	**2.4673**	**25.7342**	**12.5960**	**0.0233**	**5.8971**	**1.2885**	**7.1856**	**3.0307**	**1.1854**	**4.2161**	**0.0000**	**2,256.5045**	**2,256.5045**	**0.7298**		**2,274.7495**

Mitigated Construction Off-Site

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

Hauling	0.3251	9.9307	2.2411	0.0320	0.8752	0.1109	0.9861	0.2399	0.1061	0.3461		3,497.1597	3,497.1597	0.1828	0.5546	3,666.9933
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0801	0.0636	0.7911	2.0000e-003	0.2236	1.5300e-003	0.2251	0.0593	1.4100e-003	0.0607		202.5151	202.5151	6.3700e-003	5.8300e-003	204.4119
Total	**0.4052**	**9.9943**	**3.0321**	**0.0340**	**1.0987**	**0.1125**	**1.2112**	**0.2992**	**0.1076**	**0.4068**		**3,699.6748**	**3,699.6748**	**0.1892**	**0.5604**	**3,871.4052**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					15.2257	0.0000	15.2257	6.9640	0.0000	6.9640			0.0000			0.0000
Off-Road	3.9516	43.3481	22.0849	0.0474		1.8977	1.8977		1.7459	1.7459		4,590.5274	4,590.5274	1.4847		4,627.6442
Total	**3.9516**	**43.3481**	**22.0849**	**0.0474**	**15.2257**	**1.8977**	**17.1233**	**6.9640**	**1.7459**	**8.7098**		**4,590.5274**	**4,590.5274**	**1.4847**		**4,627.6442**

Unmitigated Construction Off-Site

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

Hauling	0.3251	9.9307	2.2411	0.0320	0.8752	0.1109	0.9861	0.2399	0.1061	0.3461		3,497.1597	3,497.1597	0.1828	0.5546	3,666.9933
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0801	0.0636	0.7911	2.0000e-003	0.2236	1.5300e-003	0.2251	0.0593	1.4100e-003	0.0607		202.5151	202.5151	6.3700e-003	5.8300e-003	204.4119
Total	**0.4052**	**9.9943**	**3.0321**	**0.0340**	**1.0987**	**0.1125**	**1.2112**	**0.2992**	**0.1076**	**0.4068**		**3,699.6748**	**3,699.6748**	**0.1892**	**0.5604**	**3,871.4052**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.8516	0.0000	6.8516	3.1338	0.0000	3.1338			0.0000			0.0000
Off-Road	3.9516	43.3481	22.0849	0.0474		1.8977	1.8977		1.7459	1.7459	0.0000	4,590.5274	4,590.5274	1.4847		4,627.6442
Total	**3.9516**	**43.3481**	**22.0849**	**0.0474**	**6.8516**	**1.8977**	**8.7492**	**3.1338**	**1.7459**	**4.8796**	**0.0000**	**4,590.5274**	**4,590.5274**	**1.4847**		**4,627.6442**

Mitigated Construction Off-Site

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

Hauling	0.3251	9.9307	2.2411	0.0320	0.8752	0.1109	0.9861	0.2399	0.1061	0.3461		3,497.1597	3,497.1597	0.1828	0.5546	3,666.9933
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0801	0.0636	0.7911	2.0000e-003	0.2236	1.5300e-003	0.2251	0.0593	1.4100e-003	0.0607		202.5151	202.5151	6.3700e-003	5.8300e-003	204.4119
Total	**0.4052**	**9.9943**	**3.0321**	**0.0340**	**1.0987**	**0.1125**	**1.2112**	**0.2992**	**0.1076**	**0.4068**		**3,699.6748**	**3,699.6748**	**0.1892**	**0.5604**	**3,871.4052**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1067	12.5424	7.3561	0.0162		0.5614	0.5614		0.5165	0.5165		1,568.8276	1,568.8276	0.5074		1,581.5124
Total	**1.1067**	**12.5424**	**7.3561**	**0.0162**		**0.5614**	**0.5614**		**0.5165**	**0.5165**		**1,568.8276**	**1,568.8276**	**0.5074**		**1,581.5124**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3251	9.9307	2.2411	0.0320	0.8752	0.1109	0.9861	0.2399	0.1061	0.3461		3,497.1597	3,497.1597	0.1828	0.5546	3,666.9933

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1603	0.1271	1.5822	4.0000e-003	0.4471	3.0700e-003	0.4502	0.1186	2.8300e-003	0.1214		405.0303	405.0303	0.0127	0.0117	408.8238
Total	**0.4853**	**10.0578**	**3.8232**	**0.0360**	**1.3223**	**0.1140**	**1.4363**	**0.3585**	**0.1090**	**0.4675**		**3,902.1900**	**3,902.1900**	**0.1955**	**0.5662**	**4,075.8171**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1067	12.5424	7.3561	0.0162		0.5614	0.5614		0.5165	0.5165	0.0000	1,568.8276	1,568.8276	0.5074		1,581.5124
Total	**1.1067**	**12.5424**	**7.3561**	**0.0162**		**0.5614**	**0.5614**		**0.5165**	**0.5165**	**0.0000**	**1,568.8276**	**1,568.8276**	**0.5074**		**1,581.5124**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3251	9.9307	2.2411	0.0320	0.8752	0.1109	0.9861	0.2399	0.1061	0.3461		3,497.1597	3,497.1597	0.1828	0.5546	3,666.9933
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Worker	0.1603	0.1271	1.5822	4.0000e-003	0.4471	3.0700e-003	0.4502	0.1186	2.8300e-003	0.1214		405.0303	405.0303	0.0127	0.0117	408.8238
Total	**0.4853**	**10.0578**	**3.8232**	**0.0360**	**1.3223**	**0.1140**	**1.4363**	**0.3585**	**0.1090**	**0.4675**		**3,902.1900**	**3,902.1900**	**0.1955**	**0.5662**	**4,075.8171**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8766	9.0706	10.8924	0.0176		0.4425	0.4425		0.4071	0.4071		1,699.0331	1,699.0331	0.5495		1,712.7707
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8766**	**9.0706**	**10.8924**	**0.0176**		**0.4425**	**0.4425**		**0.4071**	**0.4071**		**1,699.0331**	**1,699.0331**	**0.5495**		**1,712.7707**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3251	9.9307	2.2411	0.0320	0.8752	0.1109	0.9861	0.2399	0.1061	0.3461		3,497.1597	3,497.1597	0.1828	0.5546	3,666.9933
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Worker	0.0801	0.0636	0.7911	2.0000e-003	0.2236	1.5300e-003	0.2251	0.0593	1.4100e-003	0.0607		202.5151	202.5151	6.3700e-003	5.8300e-003	204.4119
Total	**0.4052**	**9.9943**	**3.0321**	**0.0340**	**1.0987**	**0.1125**	**1.2112**	**0.2992**	**0.1076**	**0.4068**		**3,699.6748**	**3,699.6748**	**0.1892**	**0.5604**	**3,871.4052**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8766	9.0706	10.8924	0.0176		0.4425	0.4425		0.4071	0.4071	0.0000	1,699.0331	1,699.0331	0.5495		1,712.7706
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8766**	**9.0706**	**10.8924**	**0.0176**		**0.4425**	**0.4425**		**0.4071**	**0.4071**	**0.0000**	**1,699.0331**	**1,699.0331**	**0.5495**		**1,712.7706**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3251	9.9307	2.2411	0.0320	0.8752	0.1109	0.9861	0.2399	0.1061	0.3461		3,497.1597	3,497.1597	0.1828	0.5546	3,666.9933
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Worker	0.0801	0.0636	0.7911	2.0000e-003	0.2236	1.5300e-003	0.2251	0.0593	1.4100e-003	0.0607		202.5151	202.5151	6.3700e-003	5.8300e-003	204.4119
Total	**0.4052**	**9.9943**	**3.0321**	**0.0340**	**1.0987**	**0.1125**	**1.2112**	**0.2992**	**0.1076**	**0.4068**		**3,699.6748**	**3,699.6748**	**0.1892**	**0.5604**	**3,871.4052**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	1.1675	8.1432	9.6936	0.0159		0.5019	0.5019		0.5019	0.5019		1,501.0563	1,501.0563	0.1030		1,503.6315
Total	**1.1675**	**8.1432**	**9.6936**	**0.0159**		**0.5019**	**0.5019**		**0.5019**	**0.5019**		**1,501.0563**	**1,501.0563**	**0.1030**		**1,503.6315**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3251	9.9307	2.2411	0.0320	0.8752	0.1109	0.9861	0.2399	0.1061	0.3461		3,497.1597	3,497.1597	0.1828	0.5546	3,666.9933
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Worker	0.0801	0.0636	0.7911	2.0000e-003	0.2236	1.5300e-003	0.2251	0.0593	1.4100e-003	0.0607		202.5151	202.5151	6.3700e-003	5.8300e-003	204.4119
Total	**0.4052**	**9.9943**	**3.0321**	**0.0340**	**1.0987**	**0.1125**	**1.2112**	**0.2992**	**0.1076**	**0.4068**		**3,699.6748**	**3,699.6748**	**0.1892**	**0.5604**	**3,871.4052**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	1.1675	8.1432	9.6936	0.0159		0.5019	0.5019		0.5019	0.5019	0.0000	1,501.0563	1,501.0563	0.1030		1,503.6315
Total	**1.1675**	**8.1432**	**9.6936**	**0.0159**		**0.5019**	**0.5019**		**0.5019**	**0.5019**	**0.0000**	**1,501.0563**	**1,501.0563**	**0.1030**		**1,503.6315**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3251	9.9307	2.2411	0.0320	0.8752	0.1109	0.9861	0.2399	0.1061	0.3461		3,497.1597	3,497.1597	0.1828	0.5546	3,666.9933
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Worker	0.0801	0.0636	0.7911	2.0000e-003	0.2236	1.5300e-003	0.2251	0.0593	1.4100e-003	0.0607		202.5151	202.5151	6.3700e-003	5.8300e-003	204.4119
Total	**0.4052**	**9.9943**	**3.0321**	**0.0340**	**1.0987**	**0.1125**	**1.2112**	**0.2992**	**0.1076**	**0.4068**		**3,699.6748**	**3,699.6748**	**0.1892**	**0.5604**	**3,871.4052**

Sample Scenario - 8 Pieces of Equipment, 100 Truck Trips

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	10.00	Dwelling Unit	0.63	10,000.00	29

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2021
Utility Company	Burbank Water & Power				
CO2 Intensity (lb/MWhr)	929.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	6,750.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	20,250.00	0.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	8.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00

Sample Scenario - 8 Pieces of Equipment, 100 Truck Trips - Los Angeles-South Coast County, Summer

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

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	1.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,000.00
tblTripsAndVMT	HaulingTripNumber	0.00	100.00
tblTripsAndVMT	HaulingTripNumber	0.00	200.00
tblTripsAndVMT	HaulingTripNumber	0.00	10,000.00
tblTripsAndVMT	HaulingTripNumber	0.00	500.00
tblTripsAndVMT	HaulingTripNumber	0.00	500.00
tblTripsAndVMT	VendorTripNumber	1.00	0.00
tblTripsAndVMT	WorkerTripNumber	20.00	40.00
tblTripsAndVMT	WorkerTripNumber	20.00	40.00
tblTripsAndVMT	WorkerTripNumber	20.00	40.00
tblTripsAndVMT	WorkerTripNumber	7.00	80.00
tblTripsAndVMT	WorkerTripNumber	20.00	40.00
tblTripsAndVMT	WorkerTripNumber	1.00	40.00

2.0 Emissions Summary

Sample Scenario - 8 Pieces of Equipment, 100 Truck Trips - Los Angeles-South Coast County, Summer

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

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	5.7448	70.6880	39.2814	0.1321	28.4068	2.8015	31.2083	14.0684	2.5855	16.6539	0.0000	13,613.9653	13,613.9653	2.3816	1.1308	14,007.2346
Maximum	**5.7448**	**70.6880**	**39.2814**	**0.1321**	**28.4068**	**2.8015**	**31.2083**	**14.0684**	**2.5855**	**16.6539**	**0.0000**	**13,613.9653**	**13,613.9653**	**2.3816**	**1.1308**	**14,007.2346**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	5.7448	70.6880	39.2814	0.1321	13.9916	2.8015	16.7931	6.6599	2.5855	9.2455	0.0000	13,613.9653	13,613.9653	2.3816	1.1308	14,007.2346
Maximum	**5.7448**	**70.6880**	**39.2814**	**0.1321**	**13.9916**	**2.8015**	**16.7931**	**6.6599**	**2.5855**	**9.2455**	**0.0000**	**13,613.9653**	**13,613.9653**	**2.3816**	**1.1308**	**14,007.2346**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**50.75**	**0.00**	**46.19**	**52.66**	**0.00**	**44.48**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Sample Scenario - 8 Pieces of Equipment, 100 Truck Trips - Los Angeles-South Coast County, Summer

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2021	1/14/2021	5	10	
2	Site Preparation	Site Preparation	1/15/2021	1/15/2021	5	1	
3	Grading	Grading	1/16/2021	1/19/2021	5	2	
4	Building Construction	Building Construction	1/20/2021	6/8/2021	5	100	
5	Paving	Paving	6/9/2021	6/15/2021	5	5	
6	Architectural Coating	Architectural Coating	6/16/2021	6/22/2021	5	5	

Acres of Grading (Site Preparation Phase): 2

Acres of Grading (Grading Phase): 6

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	4	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	2	8.00	231	0.29

Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	4	6.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Architectural Coating	Air Compressors	8	8.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	8	40.00	0.00	1,000.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	8	40.00	0.00	100.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	40.00	0.00	200.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	80.00	0.00	10,000.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	40.00	0.00	500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	8	40.00	0.00	500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Off-Road	4.5963	45.4499	29.2769	0.0536		2.2569	2.2569		2.1041	2.1041		5,167.9618	5,167.9618	1.3569		5,201.8841
Total	**4.5963**	**45.4499**	**29.2769**	**0.0536**		**2.2569**	**2.2569**		**2.1041**	**2.1041**		**5,167.9618**	**5,167.9618**	**1.3569**		**5,201.8841**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6600	19.1046	4.4069	0.0640	1.7503	0.2215	1.9718	0.4799	0.2120	0.6918		6,993.5389	6,993.5389	0.3661	1.1090	7,333.1708
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1502	0.1150	1.7255	4.2200e-003	0.4471	3.0700e-003	0.4502	0.1186	2.8300e-003	0.1214		427.7148	427.7148	0.0126	0.0109	431.2810
Total	**0.8103**	**19.2196**	**6.1324**	**0.0682**	**2.1974**	**0.2246**	**2.4220**	**0.5985**	**0.2148**	**0.8132**		**7,421.2538**	**7,421.2538**	**0.3787**	**1.1199**	**7,764.4518**

Mitigated Construction On-Site

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

Off-Road	4.5963	45.4499	29.2769	0.0536		2.2569	2.2569		2.1041	2.1041	0.0000	5,167.9618	5,167.9618	1.3569		5,201.8841
Total	**4.5963**	**45.4499**	**29.2769**	**0.0536**		**2.2569**	**2.2569**		**2.1041**	**2.1041**	**0.0000**	**5,167.9618**	**5,167.9618**	**1.3569**		**5,201.8841**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6600	19.1046	4.4069	0.0640	1.7503	0.2215	1.9718	0.4799	0.2120	0.6918		6,993.5389	6,993.5389	0.3661	1.1090	7,333.1708
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1502	0.1150	1.7255	4.2200e-003	0.4471	3.0700e-003	0.4502	0.1186	2.8300e-003	0.1214		427.7148	427.7148	0.0126	0.0109	431.2810
Total	**0.8103**	**19.2196**	**6.1324**	**0.0682**	**2.1974**	**0.2246**	**2.4220**	**0.5985**	**0.2148**	**0.8132**		**7,421.2538**	**7,421.2538**	**0.3787**	**1.1199**	**7,764.4518**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					26.2094	0.0000	26.2094	13.4699	0.0000	13.4699			0.0000			0.0000

Sample Scenario - 8 Pieces of Equipment, 100 Truck Trips - Los Angeles-South Coast County, Summer

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

Off-Road	4.9345	51.4684	25.1920	0.0466		2.5769	2.5769		2.3708	2.3708		4,513.0091	4,513.0091	1.4596		4,549.4990
Total	**4.9345**	**51.4684**	**25.1920**	**0.0466**	**26.2094**	**2.5769**	**28.7863**	**13.4699**	**2.3708**	**15.8407**		**4,513.0091**	**4,513.0091**	**1.4596**		**4,549.4990**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6600	19.1046	4.4069	0.0640	1.7503	0.2215	1.9718	0.4799	0.2120	0.6918		6,993.5389	6,993.5389	0.3661	1.1090	7,333.1708
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1502	0.1150	1.7255	4.2200e-003	0.4471	3.0700e-003	0.4502	0.1186	2.8300e-003	0.1214		427.7148	427.7148	0.0126	0.0109	431.2810
Total	**0.8103**	**19.2196**	**6.1324**	**0.0682**	**2.1974**	**0.2246**	**2.4220**	**0.5985**	**0.2148**	**0.8132**		**7,421.2538**	**7,421.2538**	**0.3787**	**1.1199**	**7,764.4518**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					11.7942	0.0000	11.7942	6.0615	0.0000	6.0615			0.0000			0.0000

Off-Road	4.9345	51.4684	25.1920	0.0466		2.5769	2.5769		2.3708	2.3708	0.0000	4,513.0091	4,513.0091	1.4596		4,549.4990
Total	**4.9345**	**51.4684**	**25.1920**	**0.0466**	**11.7942**	**2.5769**	**14.3711**	**6.0615**	**2.3708**	**8.4322**	**0.0000**	**4,513.0091**	**4,513.0091**	**1.4596**		**4,549.4990**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6600	19.1046	4.4069	0.0640	1.7503	0.2215	1.9718	0.4799	0.2120	0.6918		6,993.5389	6,993.5389	0.3661	1.1090	7,333.1708
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1502	0.1150	1.7255	4.2200e-003	0.4471	3.0700e-003	0.4502	0.1186	2.8300e-003	0.1214		427.7148	427.7148	0.0126	0.0109	431.2810
Total	**0.8103**	**19.2196**	**6.1324**	**0.0682**	**2.1974**	**0.2246**	**2.4220**	**0.5985**	**0.2148**	**0.8132**		**7,421.2538**	**7,421.2538**	**0.3787**	**1.1199**	**7,764.4518**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					15.2257	0.0000	15.2257	6.9640	0.0000	6.9640			0.0000			0.0000

Off-Road	4.7846	51.4466	33.1490	0.0639		2.3301	2.3301		2.1437	2.1437		6,192.7115	6,192.7115	2.0029		6,242.7827
Total	**4.7846**	**51.4466**	**33.1490**	**0.0639**	**15.2257**	**2.3301**	**17.5558**	**6.9640**	**2.1437**	**9.1077**		**6,192.7115**	**6,192.7115**	**2.0029**		**6,242.7827**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6600	19.1046	4.4069	0.0640	1.7503	0.2215	1.9718	0.4799	0.2120	0.6918		6,993.5389	6,993.5389	0.3661	1.1090	7,333.1708
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1502	0.1150	1.7255	4.2200e-003	0.4471	3.0700e-003	0.4502	0.1186	2.8300e-003	0.1214		427.7148	427.7148	0.0126	0.0109	431.2810
Total	**0.8103**	**19.2196**	**6.1324**	**0.0682**	**2.1974**	**0.2246**	**2.4220**	**0.5985**	**0.2148**	**0.8132**		**7,421.2538**	**7,421.2538**	**0.3787**	**1.1199**	**7,764.4518**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.8516	0.0000	6.8516	3.1338	0.0000	3.1338			0.0000			0.0000

Off-Road	4.7846	51.4466	33.1490	0.0639		2.3301	2.3301		2.1437	2.1437	0.0000	6,192.7115	6,192.7115	2.0029		6,242.7827
Total	**4.7846**	**51.4466**	**33.1490**	**0.0639**	**6.8516**	**2.3301**	**9.1817**	**3.1338**	**2.1437**	**5.2775**	**0.0000**	**6,192.7115**	**6,192.7115**	**2.0029**		**6,242.7827**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6600	19.1046	4.4069	0.0640	1.7503	0.2215	1.9718	0.4799	0.2120	0.6918		6,993.5389	6,993.5389	0.3661	1.1090	7,333.1708
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1502	0.1150	1.7255	4.2200e-003	0.4471	3.0700e-003	0.4502	0.1186	2.8300e-003	0.1214		427.7148	427.7148	0.0126	0.0109	431.2810
Total	**0.8103**	**19.2196**	**6.1324**	**0.0682**	**2.1974**	**0.2246**	**2.4220**	**0.5985**	**0.2148**	**0.8132**		**7,421.2538**	**7,421.2538**	**0.3787**	**1.1199**	**7,764.4518**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0477	20.0612	16.1499	0.0300		0.9709	0.9709		0.9126	0.9126		2,850.6901	2,850.6901	0.7122		2,868.4944

Total	**2.0477**	**20.0612**	**16.1499**	**0.0300**		**0.9709**	**0.9709**		**0.9126**	**0.9126**		**2,850.6901**	**2,850.6901**	**0.7122**		**2,868.4944**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6600	19.1046	4.4069	0.0640	1.7503	0.2215	1.9718	0.4799	0.2120	0.6918		6,993.5389	6,993.5389	0.3661	1.1090	7,333.1708
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3004	0.2300	3.4509	8.4400e-003	0.8942	6.1400e-003	0.9004	0.2372	5.6500e-003	0.2428		855.4297	855.4297	0.0252	0.0218	862.5620
Total	**0.9605**	**19.3346**	**7.8578**	**0.0724**	**2.6445**	**0.2277**	**2.8722**	**0.7170**	**0.2176**	**0.9346**		**7,848.9686**	**7,848.9686**	**0.3913**	**1.1308**	**8,195.7329**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0477	20.0612	16.1499	0.0300		0.9709	0.9709		0.9126	0.9126	0.0000	2,850.6900	2,850.6900	0.7122		2,868.4944
Total	**2.0477**	**20.0612**	**16.1499**	**0.0300**		**0.9709**	**0.9709**		**0.9126**	**0.9126**	**0.0000**	**2,850.6900**	**2,850.6900**	**0.7122**		**2,868.4944**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6600	19.1046	4.4069	0.0640	1.7503	0.2215	1.9718	0.4799	0.2120	0.6918		6,993.5389	6,993.5389	0.3661	1.1090	7,333.1708
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3004	0.2300	3.4509	8.4400e-003	0.8942	6.1400e-003	0.9004	0.2372	5.6500e-003	0.2428		855.4297	855.4297	0.0252	0.0218	862.5620
Total	**0.9605**	**19.3346**	**7.8578**	**0.0724**	**2.6445**	**0.2277**	**2.8722**	**0.7170**	**0.2176**	**0.9346**		**7,848.9686**	**7,848.9686**	**0.3913**	**1.1308**	**8,195.7329**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2489	12.5093	14.1756	0.0226		0.6404	0.6404		0.5909	0.5909		2,155.9409	2,155.9409	0.6806		2,172.9568
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2489**	**12.5093**	**14.1756**	**0.0226**		**0.6404**	**0.6404**		**0.5909**	**0.5909**		**2,155.9409**	**2,155.9409**	**0.6806**		**2,172.9568**

Sample Scenario - 8 Pieces of Equipment, 100 Truck Trips - Los Angeles-South Coast County, Summer

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6600	19.1046	4.4069	0.0640	1.7503	0.2215	1.9718	0.4799	0.2120	0.6918		6,993.5389	6,993.5389	0.3661	1.1090	7,333.1708
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1502	0.1150	1.7255	4.2200e-003	0.4471	3.0700e-003	0.4502	0.1186	2.8300e-003	0.1214		427.7148	427.7148	0.0126	0.0109	431.2810
Total	**0.8103**	**19.2196**	**6.1324**	**0.0682**	**2.1974**	**0.2246**	**2.4220**	**0.5985**	**0.2148**	**0.8132**		**7,421.2538**	**7,421.2538**	**0.3787**	**1.1199**	**7,764.4518**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2489	12.5093	14.1756	0.0226		0.6404	0.6404		0.5909	0.5909	0.0000	2,155.9409	2,155.9409	0.6806		2,172.9568
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2489**	**12.5093**	**14.1756**	**0.0226**		**0.6404**	**0.6404**		**0.5909**	**0.5909**	**0.0000**	**2,155.9409**	**2,155.9409**	**0.6806**		**2,172.9568**

Sample Scenario - 8 Pieces of Equipment, 100 Truck Trips - Los Angeles-South Coast County, Summer

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

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6600	19.1046	4.4069	0.0640	1.7503	0.2215	1.9718	0.4799	0.2120	0.6918		6,993.5389	6,993.5389	0.3661	1.1090	7,333.1708
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1502	0.1150	1.7255	4.2200e-003	0.4471	3.0700e-003	0.4502	0.1186	2.8300e-003	0.1214		427.7148	427.7148	0.0126	0.0109	431.2810
Total	**0.8103**	**19.2196**	**6.1324**	**0.0682**	**2.1974**	**0.2246**	**2.4220**	**0.5985**	**0.2148**	**0.8132**		**7,421.2538**	**7,421.2538**	**0.3787**	**1.1199**	**7,764.4518**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	2.3349	16.2863	19.3873	0.0317		1.0037	1.0037		1.0037	1.0037		3,002.1125	3,002.1125	0.2060		3,007.2631
Total	**2.3349**	**16.2863**	**19.3873**	**0.0317**		**1.0037**	**1.0037**		**1.0037**	**1.0037**		**3,002.1125**	**3,002.1125**	**0.2060**		**3,007.2631**

Sample Scenario - 8 Pieces of Equipment, 100 Truck Trips - Los Angeles-South Coast County, Summer

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6600	19.1046	4.4069	0.0640	1.7503	0.2215	1.9718	0.4799	0.2120	0.6918		6,993.5389	6,993.5389	0.3661	1.1090	7,333.1708
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1502	0.1150	1.7255	4.2200e-003	0.4471	3.0700e-003	0.4502	0.1186	2.8300e-003	0.1214		427.7148	427.7148	0.0126	0.0109	431.2810
Total	**0.8103**	**19.2196**	**6.1324**	**0.0682**	**2.1974**	**0.2246**	**2.4220**	**0.5985**	**0.2148**	**0.8132**		**7,421.2538**	**7,421.2538**	**0.3787**	**1.1199**	**7,764.4518**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	2.3349	16.2863	19.3873	0.0317		1.0037	1.0037		1.0037	1.0037	0.0000	3,002.1125	3,002.1125	0.2060		3,007.2631
Total	**2.3349**	**16.2863**	**19.3873**	**0.0317**		**1.0037**	**1.0037**		**1.0037**	**1.0037**	**0.0000**	**3,002.1125**	**3,002.1125**	**0.2060**		**3,007.2631**

Sample Scenario - 8 Pieces of Equipment, 100 Truck Trips - Los Angeles-South Coast County, Summer

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

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6600	19.1046	4.4069	0.0640	1.7503	0.2215	1.9718	0.4799	0.2120	0.6918		6,993.5389	6,993.5389	0.3661	1.1090	7,333.1708
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1502	0.1150	1.7255	4.2200e-003	0.4471	3.0700e-003	0.4502	0.1186	2.8300e-003	0.1214		427.7148	427.7148	0.0126	0.0109	431.2810
Total	**0.8103**	**19.2196**	**6.1324**	**0.0682**	**2.1974**	**0.2246**	**2.4220**	**0.5985**	**0.2148**	**0.8132**		**7,421.2538**	**7,421.2538**	**0.3787**	**1.1199**	**7,764.4518**

Sample Scenario - 8 Pieces of Equipment, 100 Truck Trips - Los Angeles-South Coast County, Winter

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

Sample Scenario - 8 Pieces of Equipment, 100 Truck Trips

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	10.00	Dwelling Unit	0.63	10,000.00	29

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2021
Utility Company	Burbank Water & Power				
CO2 Intensity (lb/MWhr)	929.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	6,750.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	20,250.00	0.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	8.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00

Sample Scenario - 8 Pieces of Equipment, 100 Truck Trips - Los Angeles-South Coast County, Winter

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

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	1.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,000.00
tblTripsAndVMT	HaulingTripNumber	0.00	100.00
tblTripsAndVMT	HaulingTripNumber	0.00	200.00
tblTripsAndVMT	HaulingTripNumber	0.00	10,000.00
tblTripsAndVMT	HaulingTripNumber	0.00	500.00
tblTripsAndVMT	HaulingTripNumber	0.00	500.00
tblTripsAndVMT	VendorTripNumber	1.00	0.00
tblTripsAndVMT	WorkerTripNumber	20.00	40.00
tblTripsAndVMT	WorkerTripNumber	20.00	40.00
tblTripsAndVMT	WorkerTripNumber	20.00	40.00
tblTripsAndVMT	WorkerTripNumber	7.00	80.00
tblTripsAndVMT	WorkerTripNumber	20.00	40.00
tblTripsAndVMT	WorkerTripNumber	1.00	40.00

2.0 Emissions Summary

Sample Scenario - 8 Pieces of Equipment, 100 Truck Trips - Los Angeles-South Coast County, Winter

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

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	5.7449	71.4570	39.2133	0.1319	28.4068	2.8019	31.2086	14.0684	2.5859	16.6543	0.0000	13,592.0612	13,592.0612	2.3812	1.1325	13,985.5932
Maximum	**5.7449**	**71.4570**	**39.2133**	**0.1319**	**28.4068**	**2.8019**	**31.2086**	**14.0684**	**2.5859**	**16.6543**	**0.0000**	**13,592.0612**	**13,592.0612**	**2.3812**	**1.1325**	**13,985.5932**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	5.7449	71.4570	39.2133	0.1319	13.9916	2.8019	16.7935	6.6599	2.5859	9.2458	0.0000	13,592.0611	13,592.0611	2.3812	1.1325	13,985.5932
Maximum	**5.7449**	**71.4570**	**39.2133**	**0.1319**	**13.9916**	**2.8019**	**16.7935**	**6.6599**	**2.5859**	**9.2458**	**0.0000**	**13,592.0611**	**13,592.0611**	**2.3812**	**1.1325**	**13,985.5932**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**50.75**	**0.00**	**46.19**	**52.66**	**0.00**	**44.48**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Sample Scenario - 8 Pieces of Equipment, 100 Truck Trips - Los Angeles-South Coast County, Winter

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2021	1/14/2021	5	10	
2	Site Preparation	Site Preparation	1/15/2021	1/15/2021	5	1	
3	Grading	Grading	1/16/2021	1/19/2021	5	2	
4	Building Construction	Building Construction	1/20/2021	6/8/2021	5	100	
5	Paving	Paving	6/9/2021	6/15/2021	5	5	
6	Architectural Coating	Architectural Coating	6/16/2021	6/22/2021	5	5	

Acres of Grading (Site Preparation Phase): 2

Acres of Grading (Grading Phase): 6

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	4	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	2	8.00	231	0.29

Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	4	6.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Architectural Coating	Air Compressors	8	8.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	8	40.00	0.00	1,000.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	8	40.00	0.00	100.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	40.00	0.00	200.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	80.00	0.00	10,000.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	40.00	0.00	500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	8	40.00	0.00	500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Off-Road	4.5963	45.4499	29.2769	0.0536		2.2569	2.2569		2.1041	2.1041		5,167.9618	5,167.9618	1.3569		5,201.8841
Total	**4.5963**	**45.4499**	**29.2769**	**0.0536**		**2.2569**	**2.2569**		**2.1041**	**2.1041**		**5,167.9618**	**5,167.9618**	**1.3569**		**5,201.8841**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6502	19.8615	4.4821	0.0640	1.7503	0.2219	1.9722	0.4799	0.2123	0.6922		6,994.3194	6,994.3194	0.3656	1.1092	7,333.9867
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1603	0.1271	1.5822	4.0000e-003	0.4471	3.0700e-003	0.4502	0.1186	2.8300e-003	0.1214		405.0303	405.0303	0.0127	0.0117	408.8238
Total	**0.8104**	**19.9886**	**6.0643**	**0.0680**	**2.1974**	**0.2250**	**2.4224**	**0.5985**	**0.2151**	**0.8136**		**7,399.3496**	**7,399.3496**	**0.3783**	**1.1208**	**7,742.8105**

Mitigated Construction On-Site

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

Off-Road	4.5963	45.4499	29.2769	0.0536		2.2569	2.2569		2.1041	2.1041	0.0000	5,167.9618	5,167.9618	1.3569		5,201.8841
Total	**4.5963**	**45.4499**	**29.2769**	**0.0536**		**2.2569**	**2.2569**		**2.1041**	**2.1041**	**0.0000**	**5,167.9618**	**5,167.9618**	**1.3569**		**5,201.8841**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6502	19.8615	4.4821	0.0640	1.7503	0.2219	1.9722	0.4799	0.2123	0.6922		6,994.3194	6,994.3194	0.3656	1.1092	7,333.9867
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1603	0.1271	1.5822	4.0000e-003	0.4471	3.0700e-003	0.4502	0.1186	2.8300e-003	0.1214		405.0303	405.0303	0.0127	0.0117	408.8238
Total	**0.8104**	**19.9886**	**6.0643**	**0.0680**	**2.1974**	**0.2250**	**2.4224**	**0.5985**	**0.2151**	**0.8136**		**7,399.3496**	**7,399.3496**	**0.3783**	**1.1208**	**7,742.8105**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					26.2094	0.0000	26.2094	13.4699	0.0000	13.4699			0.0000			0.0000

Off-Road	4.9345	51.4684	25.1920	0.0466		2.5769	2.5769		2.3708	2.3708		4,513.0091	4,513.0091	1.4596		4,549.4990
Total	**4.9345**	**51.4684**	**25.1920**	**0.0466**	**26.2094**	**2.5769**	**28.7863**	**13.4699**	**2.3708**	**15.8407**		**4,513.0091**	**4,513.0091**	**1.4596**		**4,549.4990**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6502	19.8615	4.4821	0.0640	1.7503	0.2219	1.9722	0.4799	0.2123	0.6922		6,994.3194	6,994.3194	0.3656	1.1092	7,333.9867
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1603	0.1271	1.5822	4.0000e-003	0.4471	3.0700e-003	0.4502	0.1186	2.8300e-003	0.1214		405.0303	405.0303	0.0127	0.0117	408.8238
Total	**0.8104**	**19.9886**	**6.0643**	**0.0680**	**2.1974**	**0.2250**	**2.4224**	**0.5985**	**0.2151**	**0.8136**		**7,399.3496**	**7,399.3496**	**0.3783**	**1.1208**	**7,742.8105**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					11.7942	0.0000	11.7942	6.0615	0.0000	6.0615			0.0000			0.0000

Off-Road	4.9345	51.4684	25.1920	0.0466		2.5769	2.5769		2.3708	2.3708	0.0000	4,513.0091	4,513.0091	1.4596		4,549.4990
Total	**4.9345**	**51.4684**	**25.1920**	**0.0466**	**11.7942**	**2.5769**	**14.3711**	**6.0615**	**2.3708**	**8.4322**	**0.0000**	**4,513.0091**	**4,513.0091**	**1.4596**		**4,549.4990**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6502	19.8615	4.4821	0.0640	1.7503	0.2219	1.9722	0.4799	0.2123	0.6922		6,994.3194	6,994.3194	0.3656	1.1092	7,333.9867
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1603	0.1271	1.5822	4.0000e-003	0.4471	3.0700e-003	0.4502	0.1186	2.8300e-003	0.1214		405.0303	405.0303	0.0127	0.0117	408.8238
Total	**0.8104**	**19.9886**	**6.0643**	**0.0680**	**2.1974**	**0.2250**	**2.4224**	**0.5985**	**0.2151**	**0.8136**		**7,399.3496**	**7,399.3496**	**0.3783**	**1.1208**	**7,742.8105**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					15.2257	0.0000	15.2257	6.9640	0.0000	6.9640			0.0000			0.0000

Off-Road	4.7846	51.4466	33.1490	0.0639		2.3301	2.3301		2.1437	2.1437		6,192.7115	6,192.7115	2.0029		6,242.7827
Total	**4.7846**	**51.4466**	**33.1490**	**0.0639**	**15.2257**	**2.3301**	**17.5558**	**6.9640**	**2.1437**	**9.1077**		**6,192.7115**	**6,192.7115**	**2.0029**		**6,242.7827**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6502	19.8615	4.4821	0.0640	1.7503	0.2219	1.9722	0.4799	0.2123	0.6922		6,994.3194	6,994.3194	0.3656	1.1092	7,333.9867
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1603	0.1271	1.5822	4.0000e-003	0.4471	3.0700e-003	0.4502	0.1186	2.8300e-003	0.1214		405.0303	405.0303	0.0127	0.0117	408.8238
Total	**0.8104**	**19.9886**	**6.0643**	**0.0680**	**2.1974**	**0.2250**	**2.4224**	**0.5985**	**0.2151**	**0.8136**		**7,399.3496**	**7,399.3496**	**0.3783**	**1.1208**	**7,742.8105**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.8516	0.0000	6.8516	3.1338	0.0000	3.1338			0.0000			0.0000

Off-Road	4.7846	51.4466	33.1490	0.0639		2.3301	2.3301		2.1437	2.1437	0.0000	6,192.7115	6,192.7115	2.0029		6,242.7827
Total	**4.7846**	**51.4466**	**33.1490**	**0.0639**	**6.8516**	**2.3301**	**9.1817**	**3.1338**	**2.1437**	**5.2775**	**0.0000**	**6,192.7115**	**6,192.7115**	**2.0029**		**6,242.7827**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6502	19.8615	4.4821	0.0640	1.7503	0.2219	1.9722	0.4799	0.2123	0.6922		6,994.3194	6,994.3194	0.3656	1.1092	7,333.9867
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1603	0.1271	1.5822	4.0000e-003	0.4471	3.0700e-003	0.4502	0.1186	2.8300e-003	0.1214		405.0303	405.0303	0.0127	0.0117	408.8238
Total	**0.8104**	**19.9886**	**6.0643**	**0.0680**	**2.1974**	**0.2250**	**2.4224**	**0.5985**	**0.2151**	**0.8136**		**7,399.3496**	**7,399.3496**	**0.3783**	**1.1208**	**7,742.8105**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0477	20.0612	16.1499	0.0300		0.9709	0.9709		0.9126	0.9126		2,850.6901	2,850.6901	0.7122		2,868.4944

Sample Scenario - 8 Pieces of Equipment, 100 Truck Trips - Los Angeles-South Coast County, Winter

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

Total	**2.0477**	**20.0612**	**16.1499**	**0.0300**		**0.9709**	**0.9709**		**0.9126**	**0.9126**		**2,850.6901**	**2,850.6901**	**0.7122**		**2,868.4944**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6502	19.8615	4.4821	0.0640	1.7503	0.2219	1.9722	0.4799	0.2123	0.6922		6,994.3194	6,994.3194	0.3656	1.1092	7,333.9867
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3205	0.2542	3.1643	8.0000e-003	0.8942	6.1400e-003	0.9004	0.2372	5.6500e-003	0.2428		810.0605	810.0605	0.0255	0.0233	817.6476
Total	**0.9707**	**20.1157**	**7.6464**	**0.0720**	**2.6445**	**0.2280**	**2.8726**	**0.7170**	**0.2179**	**0.9350**		**7,804.3799**	**7,804.3799**	**0.3910**	**1.1325**	**8,151.6342**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.0477	20.0612	16.1499	0.0300		0.9709	0.9709		0.9126	0.9126	0.0000	2,850.6900	2,850.6900	0.7122		2,868.4944
Total	**2.0477**	**20.0612**	**16.1499**	**0.0300**		**0.9709**	**0.9709**		**0.9126**	**0.9126**	**0.0000**	**2,850.6900**	**2,850.6900**	**0.7122**		**2,868.4944**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6502	19.8615	4.4821	0.0640	1.7503	0.2219	1.9722	0.4799	0.2123	0.6922		6,994.3194	6,994.3194	0.3656	1.1092	7,333.9867
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3205	0.2542	3.1643	8.0000e-003	0.8942	6.1400e-003	0.9004	0.2372	5.6500e-003	0.2428		810.0605	810.0605	0.0255	0.0233	817.6476
Total	**0.9707**	**20.1157**	**7.6464**	**0.0720**	**2.6445**	**0.2280**	**2.8726**	**0.7170**	**0.2179**	**0.9350**		**7,804.3799**	**7,804.3799**	**0.3910**	**1.1325**	**8,151.6342**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2489	12.5093	14.1756	0.0226		0.6404	0.6404		0.5909	0.5909		2,155.9409	2,155.9409	0.6806		2,172.9568
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2489**	**12.5093**	**14.1756**	**0.0226**		**0.6404**	**0.6404**		**0.5909**	**0.5909**		**2,155.9409**	**2,155.9409**	**0.6806**		**2,172.9568**

Date: 7/22/2021 8:48 AM

Sample Scenario - 8 Pieces of Equipment, 100 Truck Trips - Los Angeles-South Coast County, Winter

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6502	19.8615	4.4821	0.0640	1.7503	0.2219	1.9722	0.4799	0.2123	0.6922		6,994.3194	6,994.3194	0.3656	1.1092	7,333.9867
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1603	0.1271	1.5822	4.0000e-003	0.4471	3.0700e-003	0.4502	0.1186	2.8300e-003	0.1214		405.0303	405.0303	0.0127	0.0117	408.8238
Total	**0.8104**	**19.9886**	**6.0643**	**0.0680**	**2.1974**	**0.2250**	**2.4224**	**0.5985**	**0.2151**	**0.8136**		**7,399.3496**	**7,399.3496**	**0.3783**	**1.1208**	**7,742.8105**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2489	12.5093	14.1756	0.0226		0.6404	0.6404		0.5909	0.5909	0.0000	2,155.9409	2,155.9409	0.6806		2,172.9568
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2489**	**12.5093**	**14.1756**	**0.0226**		**0.6404**	**0.6404**		**0.5909**	**0.5909**	**0.0000**	**2,155.9409**	**2,155.9409**	**0.6806**		**2,172.9568**

Sample Scenario - 8 Pieces of Equipment, 100 Truck Trips - Los Angeles-South Coast County, Winter

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

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6502	19.8615	4.4821	0.0640	1.7503	0.2219	1.9722	0.4799	0.2123	0.6922		6,994.3194	6,994.3194	0.3656	1.1092	7,333.9867
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1603	0.1271	1.5822	4.0000e-003	0.4471	3.0700e-003	0.4502	0.1186	2.8300e-003	0.1214		405.0303	405.0303	0.0127	0.0117	408.8238
Total	**0.8104**	**19.9886**	**6.0643**	**0.0680**	**2.1974**	**0.2250**	**2.4224**	**0.5985**	**0.2151**	**0.8136**		**7,399.3496**	**7,399.3496**	**0.3783**	**1.1208**	**7,742.8105**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	2.3349	16.2863	19.3873	0.0317		1.0037	1.0037		1.0037	1.0037		3,002.1125	3,002.1125	0.2060		3,007.2631
Total	**2.3349**	**16.2863**	**19.3873**	**0.0317**		**1.0037**	**1.0037**		**1.0037**	**1.0037**		**3,002.1125**	**3,002.1125**	**0.2060**		**3,007.2631**

Sample Scenario - 8 Pieces of Equipment, 100 Truck Trips - Los Angeles-South Coast County, Winter

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6502	19.8615	4.4821	0.0640	1.7503	0.2219	1.9722	0.4799	0.2123	0.6922		6,994.3194	6,994.3194	0.3656	1.1092	7,333.9867
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1603	0.1271	1.5822	4.0000e-003	0.4471	3.0700e-003	0.4502	0.1186	2.8300e-003	0.1214		405.0303	405.0303	0.0127	0.0117	408.8238
Total	**0.8104**	**19.9886**	**6.0643**	**0.0680**	**2.1974**	**0.2250**	**2.4224**	**0.5985**	**0.2151**	**0.8136**		**7,399.3496**	**7,399.3496**	**0.3783**	**1.1208**	**7,742.8105**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	2.3349	16.2863	19.3873	0.0317		1.0037	1.0037		1.0037	1.0037	0.0000	3,002.1125	3,002.1125	0.2060		3,007.2631
Total	**2.3349**	**16.2863**	**19.3873**	**0.0317**		**1.0037**	**1.0037**		**1.0037**	**1.0037**	**0.0000**	**3,002.1125**	**3,002.1125**	**0.2060**		**3,007.2631**

Sample Scenario - 8 Pieces of Equipment, 100 Truck Trips - Los Angeles-South Coast County, Winter

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

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.6502	19.8615	4.4821	0.0640	1.7503	0.2219	1.9722	0.4799	0.2123	0.6922		6,994.3194	6,994.3194	0.3656	1.1092	7,333.9867
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1603	0.1271	1.5822	4.0000e-003	0.4471	3.0700e-003	0.4502	0.1186	2.8300e-003	0.1214		405.0303	405.0303	0.0127	0.0117	408.8238
Total	**0.8104**	**19.9886**	**6.0643**	**0.0680**	**2.1974**	**0.2250**	**2.4224**	**0.5985**	**0.2151**	**0.8136**		**7,399.3496**	**7,399.3496**	**0.3783**	**1.1208**	**7,742.8105**

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

Sample Scenario - 10 Pieces of Equipment, 150 Truck Trips

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	10.00	Dwelling Unit	0.63	10,000.00	29

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2021
Utility Company	Burbank Water & Power				
CO2 Intensity (lb/MWhr)	929.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	6,750.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	20,250.00	0.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	10.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

Sample Scenario - 10 Pieces of Equipment, 150 Truck Trips - Los Angeles-South Coast County, Summer

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

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	5.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	1.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,500.00
tblTripsAndVMT	HaulingTripNumber	0.00	150.00
tblTripsAndVMT	HaulingTripNumber	0.00	300.00
tblTripsAndVMT	HaulingTripNumber	0.00	15,000.00
tblTripsAndVMT	HaulingTripNumber	0.00	750.00
tblTripsAndVMT	HaulingTripNumber	0.00	750.00
tblTripsAndVMT	VendorTripNumber	1.00	0.00
tblTripsAndVMT	WorkerTripNumber	25.00	50.00
tblTripsAndVMT	WorkerTripNumber	25.00	50.00
tblTripsAndVMT	WorkerTripNumber	25.00	50.00
tblTripsAndVMT	WorkerTripNumber	7.00	100.00
tblTripsAndVMT	WorkerTripNumber	25.00	50.00
tblTripsAndVMT	WorkerTripNumber	1.00	50.00

Sample Scenario - 10 Pieces of Equipment, 150 Truck Trips - Los Angeles-South Coast County, Summer

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

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	7.3460	93.1361	45.7559	0.1784	35.9460	3.5573	39.5033	17.7054	3.2849	20.9904	0.0000	18,501.0317	18,501.0317	2.9828	1.6908	19,075.3851
Maximum	**7.3460**	**93.1361**	**45.7559**	**0.1784**	**35.9460**	**3.5573**	**39.5033**	**17.7054**	**3.2849**	**20.9904**	**0.0000**	**18,501.0317**	**18,501.0317**	**2.9828**	**1.6908**	**19,075.3851**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	7.3460	93.1361	45.7559	0.1784	17.9271	3.5573	21.4844	8.4449	3.2849	11.7298	0.0000	18,501.0317	18,501.0317	2.9828	1.6908	19,075.3851
Maximum	**7.3460**	**93.1361**	**45.7559**	**0.1784**	**17.9271**	**3.5573**	**21.4844**	**8.4449**	**3.2849**	**11.7298**	**0.0000**	**18,501.0317**	**18,501.0317**	**2.9828**	**1.6908**	**19,075.3851**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**50.13**	**0.00**	**45.61**	**52.30**	**0.00**	**44.12**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Sample Scenario - 10 Pieces of Equipment, 150 Truck Trips - Los Angeles-South Coast County, Summer

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2021	1/14/2021	5	10	
2	Site Preparation	Site Preparation	1/15/2021	1/15/2021	5	1	
3	Grading	Grading	1/16/2021	1/19/2021	5	2	
4	Building Construction	Building Construction	1/20/2021	6/8/2021	5	100	
5	Paving	Paving	6/9/2021	6/15/2021	5	5	
6	Architectural Coating	Architectural Coating	6/16/2021	6/22/2021	5	5	

Acres of Grading (Site Preparation Phase): 2.5

Acres of Grading (Grading Phase): 8

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	3	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	4	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	5	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	5	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	2	8.00	187	0.41
Grading	Rubber Tired Dozers	2	8.00	247	0.40

Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	2	8.00	231	0.29
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	4	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	3	8.00	130	0.42
Paving	Paving Equipment	3	8.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Architectural Coating	Air Compressors	10	8.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	10	50.00	0.00	1,500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	10	50.00	0.00	150.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	10	50.00	0.00	300.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	10	100.00	0.00	15,000.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	10	50.00	0.00	750.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	10	50.00	0.00	750.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

Sample Scenario - 10 Pieces of Equipment, 150 Truck Trips - Los Angeles-South Coast County, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	6.0275	59.4590	36.9887	0.0684		2.9625	2.9625		2.7670	2.7670		6,587.9786	6,587.9786	1.6589		6,629.4509
Total	**6.0275**	**59.4590**	**36.9887**	**0.0684**		**2.9625**	**2.9625**		**2.7670**	**2.7670**		**6,587.9786**	**6,587.9786**	**1.6589**		**6,629.4509**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9901	28.6569	6.6104	0.0960	2.6255	0.3323	2.9578	0.7198	0.3179	1.0377		10,490.3084	10,490.3084	0.5492	1.6635	10,999.7562
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1878	0.1438	2.1568	5.2800e-003	0.5589	3.8400e-003	0.5627	0.1482	3.5300e-003	0.1518		534.6436	534.6436	0.0158	0.0136	539.1013
Total	**1.1778**	**28.8006**	**8.7672**	**0.1012**	**3.1844**	**0.3361**	**3.5205**	**0.8680**	**0.3215**	**1.1895**		**11,024.9520**	**11,024.9520**	**0.5649**	**1.6771**	**11,538.8575**

Mitigated Construction On-Site

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	6.0275	59.4590	36.9887	0.0684		2.9625	2.9625		2.7670	2.7670	0.0000	6,587.9786	6,587.9786	1.6589		6,629.4509
Total	**6.0275**	**59.4590**	**36.9887**	**0.0684**		**2.9625**	**2.9625**		**2.7670**	**2.7670**	**0.0000**	**6,587.9786**	**6,587.9786**	**1.6589**		**6,629.4509**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9901	28.6569	6.6104	0.0960	2.6255	0.3323	2.9578	0.7198	0.3179	1.0377		10,490.3084	10,490.3084	0.5492	1.6635	10,999.7562
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1878	0.1438	2.1568	5.2800e-003	0.5589	3.8400e-003	0.5627	0.1482	3.5300e-003	0.1518		534.6436	534.6436	0.0158	0.0136	539.1013
Total	**1.1778**	**28.8006**	**8.7672**	**0.1012**	**3.1844**	**0.3361**	**3.5205**	**0.8680**	**0.3215**	**1.1895**		**11,024.9520**	**11,024.9520**	**0.5649**	**1.6771**	**11,538.8575**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Fugitive Dust					32.7617	0.0000	32.7617	16.8374	0.0000	16.8374			0.0000			0.0000
Off-Road	6.1682	64.3355	31.4901	0.0582		3.2211	3.2211		2.9635	2.9635		5,641.2614	5,641.2614	1.8245		5,686.8738
Total	**6.1682**	**64.3355**	**31.4901**	**0.0582**	**32.7617**	**3.2211**	**35.9828**	**16.8374**	**2.9635**	**19.8009**		**5,641.2614**	**5,641.2614**	**1.8245**		**5,686.8738**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9901	28.6569	6.6104	0.0960	2.6255	0.3323	2.9578	0.7198	0.3179	1.0377		10,490.3084	10,490.3084	0.5492	1.6635	10,999.7562
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1878	0.1438	2.1568	5.2800e-003	0.5589	3.8400e-003	0.5627	0.1482	3.5300e-003	0.1518		534.6436	534.6436	0.0158	0.0136	539.1013
Total	**1.1778**	**28.8006**	**8.7672**	**0.1012**	**3.1844**	**0.3361**	**3.5205**	**0.8680**	**0.3215**	**1.1895**		**11,024.9520**	**11,024.9520**	**0.5649**	**1.6771**	**11,538.8575**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Sample Scenario - 10 Pieces of Equipment, 150 Truck Trips - Los Angeles-South Coast County, Summer

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

Category	lb/day										lb/day					
Fugitive Dust					14.7428	0.0000	14.7428	7.5768	0.0000	7.5768			0.0000			0.0000
Off-Road	6.1682	64.3355	31.4901	0.0582		3.2211	3.2211		2.9635	2.9635	0.0000	5,641.2613	5,641.2613	1.8245		5,686.8738
Total	**6.1682**	**64.3355**	**31.4901**	**0.0582**	**14.7428**	**3.2211**	**17.9639**	**7.5768**	**2.9635**	**10.5403**	**0.0000**	**5,641.2613**	**5,641.2613**	**1.8245**		**5,686.8738**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9901	28.6569	6.6104	0.0960	2.6255	0.3323	2.9578	0.7198	0.3179	1.0377		10,490.3084	10,490.3084	0.5492	1.6635	10,999.7562
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1878	0.1438	2.1568	5.2800e-003	0.5589	3.8400e-003	0.5627	0.1482	3.5300e-003	0.1518		534.6436	534.6436	0.0158	0.0136	539.1013
Total	**1.1778**	**28.8006**	**8.7672**	**0.1012**	**3.1844**	**0.3361**	**3.5205**	**0.8680**	**0.3215**	**1.1895**		**11,024.9520**	**11,024.9520**	**0.5649**	**1.6771**	**11,538.8575**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Sample Scenario - 10 Pieces of Equipment, 150 Truck Trips - Los Angeles-South Coast County, Summer

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

Category	lb/day										lb/day					
Fugitive Dust					16.2862	0.0000	16.2862	7.0785	0.0000	7.0785			0.0000			0.0000
Off-Road	5.6905	63.2957	36.6834	0.0772		2.7055	2.7055		2.4891	2.4891		7,476.0798	7,476.0798	2.4179		7,536.5276
Total	**5.6905**	**63.2957**	**36.6834**	**0.0772**	**16.2862**	**2.7055**	**18.9917**	**7.0785**	**2.4891**	**9.5675**		**7,476.0798**	**7,476.0798**	**2.4179**		**7,536.5276**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9901	28.6569	6.6104	0.0960	2.6255	0.3323	2.9578	0.7198	0.3179	1.0377		10,490.3084	10,490.3084	0.5492	1.6635	10,999.7562
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1878	0.1438	2.1568	5.2800e-003	0.5589	3.8400e-003	0.5627	0.1482	3.5300e-003	0.1518		534.6436	534.6436	0.0158	0.0136	539.1013
Total	**1.1778**	**28.8006**	**8.7672**	**0.1012**	**3.1844**	**0.3361**	**3.5205**	**0.8680**	**0.3215**	**1.1895**		**11,024.9520**	**11,024.9520**	**0.5649**	**1.6771**	**11,538.8575**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Fugitive Dust					7.3288	0.0000	7.3288	3.1853	0.0000	3.1853			0.0000			0.0000
Off-Road	5.6905	63.2957	36.6834	0.0772		2.7055	2.7055		2.4891	2.4891	0.0000	7,476.0797	7,476.0797	2.4179		7,536.5276
Total	**5.6905**	**63.2957**	**36.6834**	**0.0772**	**7.3288**	**2.7055**	**10.0343**	**3.1853**	**2.4891**	**5.6744**	**0.0000**	**7,476.0797**	**7,476.0797**	**2.4179**		**7,536.5276**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9901	28.6569	6.6104	0.0960	2.6255	0.3323	2.9578	0.7198	0.3179	1.0377		10,490.3084	10,490.3084	0.5492	1.6635	10,999.7562
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1878	0.1438	2.1568	5.2800e-003	0.5589	3.8400e-003	0.5627	0.1482	3.5300e-003	0.1518		534.6436	534.6436	0.0158	0.0136	539.1013
Total	**1.1778**	**28.8006**	**8.7672**	**0.1012**	**3.1844**	**0.3361**	**3.5205**	**0.8680**	**0.3215**	**1.1895**		**11,024.9520**	**11,024.9520**	**0.5649**	**1.6771**	**11,538.8575**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Sample Scenario - 10 Pieces of Equipment, 150 Truck Trips - Los Angeles-South Coast County, Summer

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

Category	lb/day										lb/day					
Off-Road	2.6530	23.0790	19.5876	0.0351		1.1192	1.1192		1.0608	1.0608		3,265.6455	3,265.6455	0.7662		3,284.8007
Total	**2.6530**	**23.0790**	**19.5876**	**0.0351**		**1.1192**	**1.1192**		**1.0608**	**1.0608**		**3,265.6455**	**3,265.6455**	**0.7662**		**3,284.8007**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9901	28.6569	6.6104	0.0960	2.6255	0.3323	2.9578	0.7198	0.3179	1.0377		10,490.3084	10,490.3084	0.5492	1.6635	10,999.7562
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3756	0.2875	4.3137	0.0106	1.1178	7.6700e-003	1.1254	0.2964	7.0600e-003	0.3035		1,069.2871	1,069.2871	0.0315	0.0273	1,078.2026
Total	**1.3656**	**28.9444**	**10.9240**	**0.1065**	**3.7432**	**0.3400**	**4.0832**	**1.0163**	**0.3250**	**1.3412**		**11,559.5955**	**11,559.5955**	**0.5807**	**1.6908**	**12,077.9588**

Mitigated Construction On-Site

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

Off-Road	2.6530	23.0790	19.5876	0.0351		1.1192	1.1192		1.0608	1.0608	0.0000	3,265.6455	3,265.6455	0.7662		3,284.8007
Total	**2.6530**	**23.0790**	**19.5876**	**0.0351**		**1.1192**	**1.1192**		**1.0608**	**1.0608**	**0.0000**	**3,265.6455**	**3,265.6455**	**0.7662**		**3,284.8007**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9901	28.6569	6.6104	0.0960	2.6255	0.3323	2.9578	0.7198	0.3179	1.0377		10,490.3084	10,490.3084	0.5492	1.6635	10,999.7562
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3756	0.2875	4.3137	0.0106	1.1178	7.6700e-003	1.1254	0.2964	7.0600e-003	0.3035		1,069.2871	1,069.2871	0.0315	0.0273	1,078.2026
Total	**1.3656**	**28.9444**	**10.9240**	**0.1065**	**3.7432**	**0.3400**	**4.0832**	**1.0163**	**0.3250**	**1.3412**		**11,559.5955**	**11,559.5955**	**0.5807**	**1.6908**	**12,077.9588**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6872	17.0446	19.6218	0.0313		0.8616	0.8616		0.7944	0.7944		3,005.4575	3,005.4575	0.9554		3,029.3421

Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6872**	**17.0446**	**19.6218**	**0.0313**		**0.8616**	**0.8616**		**0.7944**	**0.7944**		**3,005.4575**	**3,005.4575**	**0.9554**		**3,029.3421**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9901	28.6569	6.6104	0.0960	2.6255	0.3323	2.9578	0.7198	0.3179	1.0377		10,490.3084	10,490.3084	0.5492	1.6635	10,999.7562
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1878	0.1438	2.1568	5.2800e-003	0.5589	3.8400e-003	0.5627	0.1482	3.5300e-003	0.1518		534.6436	534.6436	0.0158	0.0136	539.1013
Total	**1.1778**	**28.8006**	**8.7672**	**0.1012**	**3.1844**	**0.3361**	**3.5205**	**0.8680**	**0.3215**	**1.1895**		**11,024.9520**	**11,024.9520**	**0.5649**	**1.6771**	**11,538.8575**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6872	17.0446	19.6218	0.0313		0.8616	0.8616		0.7944	0.7944	0.0000	3,005.4575	3,005.4575	0.9554		3,029.3421

Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6872**	**17.0446**	**19.6218**	**0.0313**		**0.8616**	**0.8616**		**0.7944**	**0.7944**	**0.0000**	**3,005.4575**	**3,005.4575**	**0.9554**		**3,029.3421**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9901	28.6569	6.6104	0.0960	2.6255	0.3323	2.9578	0.7198	0.3179	1.0377		10,490.3084	10,490.3084	0.5492	1.6635	10,999.7562
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1878	0.1438	2.1568	5.2800e-003	0.5589	3.8400e-003	0.5627	0.1482	3.5300e-003	0.1518		534.6436	534.6436	0.0158	0.0136	539.1013
Total	**1.1778**	**28.8006**	**8.7672**	**0.1012**	**3.1844**	**0.3361**	**3.5205**	**0.8680**	**0.3215**	**1.1895**		**11,024.9520**	**11,024.9520**	**0.5649**	**1.6771**	**11,538.8575**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

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

Off-Road	2.9187	20.3579	24.2341	0.0396		1.2546	1.2546		1.2546	1.2546		3,752.6407	3,752.6407	0.2575		3,759.0789
Total	**2.9187**	**20.3579**	**24.2341**	**0.0396**		**1.2546**	**1.2546**		**1.2546**	**1.2546**		**3,752.6407**	**3,752.6407**	**0.2575**		**3,759.0789**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9901	28.6569	6.6104	0.0960	2.6255	0.3323	2.9578	0.7198	0.3179	1.0377		10,490.3084	10,490.3084	0.5492	1.6635	10,999.7562
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1878	0.1438	2.1568	5.2800e-003	0.5589	3.8400e-003	0.5627	0.1482	3.5300e-003	0.1518		534.6436	534.6436	0.0158	0.0136	539.1013
Total	**1.1778**	**28.8006**	**8.7672**	**0.1012**	**3.1844**	**0.3361**	**3.5205**	**0.8680**	**0.3215**	**1.1895**		**11,024.9520**	**11,024.9520**	**0.5649**	**1.6771**	**11,538.8575**

Mitigated Construction On-Site

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

Sample Scenario - 10 Pieces of Equipment, 150 Truck Trips - Los Angeles-South Coast County, Summer

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

Off-Road	2.9187	20.3579	24.2341	0.0396		1.2546	1.2546		1.2546	1.2546	0.0000	3,752.6406	3,752.6406	0.2575		3,759.0789
Total	**2.9187**	**20.3579**	**24.2341**	**0.0396**		**1.2546**	**1.2546**		**1.2546**	**1.2546**	**0.0000**	**3,752.6406**	**3,752.6406**	**0.2575**		**3,759.0789**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9901	28.6569	6.6104	0.0960	2.6255	0.3323	2.9578	0.7198	0.3179	1.0377		10,490.3084	10,490.3084	0.5492	1.6635	10,999.7562
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1878	0.1438	2.1568	5.2800e-003	0.5589	3.8400e-003	0.5627	0.1482	3.5300e-003	0.1518		534.6436	534.6436	0.0158	0.0136	539.1013
Total	**1.1778**	**28.8006**	**8.7672**	**0.1012**	**3.1844**	**0.3361**	**3.5205**	**0.8680**	**0.3215**	**1.1895**		**11,024.9520**	**11,024.9520**	**0.5649**	**1.6771**	**11,538.8575**

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

Sample Scenario - 10 Pieces of Equipment, 150 Truck Trips

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	10.00	Dwelling Unit	0.63	10,000.00	29

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2021
Utility Company	Burbank Water & Power				
CO2 Intensity (lb/MWhr)	929.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	6,750.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	20,250.00	0.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	10.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

Sample Scenario - 10 Pieces of Equipment, 150 Truck Trips - Los Angeles-South Coast County, Winter

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

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	5.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	1.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblTripsAndVMT	HaulingTripNumber	0.00	1,500.00
tblTripsAndVMT	HaulingTripNumber	0.00	150.00
tblTripsAndVMT	HaulingTripNumber	0.00	300.00
tblTripsAndVMT	HaulingTripNumber	0.00	15,000.00
tblTripsAndVMT	HaulingTripNumber	0.00	750.00
tblTripsAndVMT	HaulingTripNumber	0.00	750.00
tblTripsAndVMT	VendorTripNumber	1.00	0.00
tblTripsAndVMT	WorkerTripNumber	25.00	50.00
tblTripsAndVMT	WorkerTripNumber	25.00	50.00
tblTripsAndVMT	WorkerTripNumber	25.00	50.00
tblTripsAndVMT	WorkerTripNumber	7.00	100.00
tblTripsAndVMT	WorkerTripNumber	25.00	50.00
tblTripsAndVMT	WorkerTripNumber	1.00	50.00

Sample Scenario - 10 Pieces of Equipment, 150 Truck Trips - Los Angeles-South Coast County, Winter

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

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	7.3437	94.2866	45.6895	0.1781	35.9460	3.5578	39.5038	17.7054	3.2854	20.9909	0.0000	18,473.8466	18,473.8466	2.9822	1.6929	19,048.5374
Maximum	**7.3437**	**94.2866**	**45.6895**	**0.1781**	**35.9460**	**3.5578**	**39.5038**	**17.7054**	**3.2854**	**20.9909**	**0.0000**	**18,473.8466**	**18,473.8466**	**2.9822**	**1.6929**	**19,048.5374**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	7.3437	94.2866	45.6895	0.1781	17.9271	3.5578	21.4849	8.4449	3.2854	11.7303	0.0000	18,473.8466	18,473.8466	2.9822	1.6929	19,048.5374
Maximum	**7.3437**	**94.2866**	**45.6895**	**0.1781**	**17.9271**	**3.5578**	**21.4849**	**8.4449**	**3.2854**	**11.7303**	**0.0000**	**18,473.8466**	**18,473.8466**	**2.9822**	**1.6929**	**19,048.5374**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**50.13**	**0.00**	**45.61**	**52.30**	**0.00**	**44.12**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Sample Scenario - 10 Pieces of Equipment, 150 Truck Trips - Los Angeles-South Coast County, Winter

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2021	1/14/2021	5	10	
2	Site Preparation	Site Preparation	1/15/2021	1/15/2021	5	1	
3	Grading	Grading	1/16/2021	1/19/2021	5	2	
4	Building Construction	Building Construction	1/20/2021	6/8/2021	5	100	
5	Paving	Paving	6/9/2021	6/15/2021	5	5	
6	Architectural Coating	Architectural Coating	6/16/2021	6/22/2021	5	5	

Acres of Grading (Site Preparation Phase): 2.5

Acres of Grading (Grading Phase): 8

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	3	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	4	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	5	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	5	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	2	8.00	187	0.41
Grading	Rubber Tired Dozers	2	8.00	247	0.40

Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	2	8.00	231	0.29
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	4	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	3	8.00	130	0.42
Paving	Paving Equipment	3	8.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Architectural Coating	Air Compressors	10	8.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	10	50.00	0.00	1,500.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	10	50.00	0.00	150.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	10	50.00	0.00	300.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	10	100.00	0.00	15,000.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	10	50.00	0.00	750.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	10	50.00	0.00	750.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

Sample Scenario - 10 Pieces of Equipment, 150 Truck Trips - Los Angeles-South Coast County, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	6.0275	59.4590	36.9887	0.0684		2.9625	2.9625		2.7670	2.7670		6,587.9786	6,587.9786	1.6589		6,629.4509
Total	**6.0275**	**59.4590**	**36.9887**	**0.0684**		**2.9625**	**2.9625**		**2.7670**	**2.7670**		**6,587.9786**	**6,587.9786**	**1.6589**		**6,629.4509**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9752	29.7922	6.7232	0.0960	2.6255	0.3328	2.9583	0.7198	0.3184	1.0382		10,491.4790	10,491.4790	0.5484	1.6637	11,000.9800
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2003	0.1589	1.9777	5.0000e-003	0.5589	3.8400e-003	0.5627	0.1482	3.5300e-003	0.1518		506.2878	506.2878	0.0159	0.0146	511.0297
Total	**1.1756**	**29.9511**	**8.7009**	**0.1010**	**3.1844**	**0.3367**	**3.5210**	**0.8680**	**0.3220**	**1.1900**		**10,997.7669**	**10,997.7669**	**0.5643**	**1.6783**	**11,512.0097**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	6.0275	59.4590	36.9887	0.0684		2.9625	2.9625		2.7670	2.7670	0.0000	6,587.9786	6,587.9786	1.6589		6,629.4509
Total	**6.0275**	**59.4590**	**36.9887**	**0.0684**		**2.9625**	**2.9625**		**2.7670**	**2.7670**	**0.0000**	**6,587.9786**	**6,587.9786**	**1.6589**		**6,629.4509**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9752	29.7922	6.7232	0.0960	2.6255	0.3328	2.9583	0.7198	0.3184	1.0382		10,491.4790	10,491.4790	0.5484	1.6637	11,000.9800
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2003	0.1589	1.9777	5.0000e-003	0.5589	3.8400e-003	0.5627	0.1482	3.5300e-003	0.1518		506.2878	506.2878	0.0159	0.0146	511.0297
Total	**1.1756**	**29.9511**	**8.7009**	**0.1010**	**3.1844**	**0.3367**	**3.5210**	**0.8680**	**0.3220**	**1.1900**		**10,997.7669**	**10,997.7669**	**0.5643**	**1.6783**	**11,512.0097**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Fugitive Dust					32.7617	0.0000	32.7617	16.8374	0.0000	16.8374			0.0000			0.0000
Off-Road	6.1682	64.3355	31.4901	0.0582		3.2211	3.2211		2.9635	2.9635		5,641.2614	5,641.2614	1.8245		5,686.8738
Total	**6.1682**	**64.3355**	**31.4901**	**0.0582**	**32.7617**	**3.2211**	**35.9828**	**16.8374**	**2.9635**	**19.8009**		**5,641.2614**	**5,641.2614**	**1.8245**		**5,686.8738**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9752	29.7922	6.7232	0.0960	2.6255	0.3328	2.9583	0.7198	0.3184	1.0382		10,491.4790	10,491.4790	0.5484	1.6637	11,000.9800
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2003	0.1589	1.9777	5.0000e-003	0.5589	3.8400e-003	0.5627	0.1482	3.5300e-003	0.1518		506.2878	506.2878	0.0159	0.0146	511.0297
Total	**1.1756**	**29.9511**	**8.7009**	**0.1010**	**3.1844**	**0.3367**	**3.5210**	**0.8680**	**0.3220**	**1.1900**		**10,997.7669**	**10,997.7669**	**0.5643**	**1.6783**	**11,512.0097**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Fugitive Dust					14.7428	0.0000	14.7428	7.5768	0.0000	7.5768			0.0000			0.0000
Off-Road	6.1682	64.3355	31.4901	0.0582		3.2211	3.2211		2.9635	2.9635	0.0000	5,641.2613	5,641.2613	1.8245		5,686.8738
Total	**6.1682**	**64.3355**	**31.4901**	**0.0582**	**14.7428**	**3.2211**	**17.9639**	**7.5768**	**2.9635**	**10.5403**	**0.0000**	**5,641.2613**	**5,641.2613**	**1.8245**		**5,686.8738**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9752	29.7922	6.7232	0.0960	2.6255	0.3328	2.9583	0.7198	0.3184	1.0382		10,491.4790	10,491.4790	0.5484	1.6637	11,000.9800
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2003	0.1589	1.9777	5.0000e-003	0.5589	3.8400e-003	0.5627	0.1482	3.5300e-003	0.1518		506.2878	506.2878	0.0159	0.0146	511.0297
Total	**1.1756**	**29.9511**	**8.7009**	**0.1010**	**3.1844**	**0.3367**	**3.5210**	**0.8680**	**0.3220**	**1.1900**		**10,997.7669**	**10,997.7669**	**0.5643**	**1.6783**	**11,512.0097**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Sample Scenario - 10 Pieces of Equipment, 150 Truck Trips - Los Angeles-South Coast County, Winter

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

Category	lb/day										lb/day					
Fugitive Dust					16.2862	0.0000	16.2862	7.0785	0.0000	7.0785			0.0000			0.0000
Off-Road	5.6905	63.2957	36.6834	0.0772		2.7055	2.7055		2.4891	2.4891		7,476.0798	7,476.0798	2.4179		7,536.5276
Total	**5.6905**	**63.2957**	**36.6834**	**0.0772**	**16.2862**	**2.7055**	**18.9917**	**7.0785**	**2.4891**	**9.5675**		**7,476.0798**	**7,476.0798**	**2.4179**		**7,536.5276**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9752	29.7922	6.7232	0.0960	2.6255	0.3328	2.9583	0.7198	0.3184	1.0382		10,491.4790	10,491.4790	0.5484	1.6637	11,000.9800
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2003	0.1589	1.9777	5.0000e-003	0.5589	3.8400e-003	0.5627	0.1482	3.5300e-003	0.1518		506.2878	506.2878	0.0159	0.0146	511.0297
Total	**1.1756**	**29.9511**	**8.7009**	**0.1010**	**3.1844**	**0.3367**	**3.5210**	**0.8680**	**0.3220**	**1.1900**		**10,997.7669**	**10,997.7669**	**0.5643**	**1.6783**	**11,512.0097**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Fugitive Dust					7.3288	0.0000	7.3288	3.1853	0.0000	3.1853			0.0000			0.0000
Off-Road	5.6905	63.2957	36.6834	0.0772		2.7055	2.7055		2.4891	2.4891	0.0000	7,476.0797	7,476.0797	2.4179		7,536.5276
Total	**5.6905**	**63.2957**	**36.6834**	**0.0772**	**7.3288**	**2.7055**	**10.0343**	**3.1853**	**2.4891**	**5.6744**	**0.0000**	**7,476.0797**	**7,476.0797**	**2.4179**		**7,536.5276**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9752	29.7922	6.7232	0.0960	2.6255	0.3328	2.9583	0.7198	0.3184	1.0382		10,491.4790	10,491.4790	0.5484	1.6637	11,000.9800
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2003	0.1589	1.9777	5.0000e-003	0.5589	3.8400e-003	0.5627	0.1482	3.5300e-003	0.1518		506.2878	506.2878	0.0159	0.0146	511.0297
Total	**1.1756**	**29.9511**	**8.7009**	**0.1010**	**3.1844**	**0.3367**	**3.5210**	**0.8680**	**0.3220**	**1.1900**		**10,997.7669**	**10,997.7669**	**0.5643**	**1.6783**	**11,512.0097**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Sample Scenario - 10 Pieces of Equipment, 150 Truck Trips - Los Angeles-South Coast County, Winter

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

Category	lb/day										lb/day					
Off-Road	2.6530	23.0790	19.5876	0.0351		1.1192	1.1192		1.0608	1.0608		3,265.6455	3,265.6455	0.7662		3,284.8007
Total	**2.6530**	**23.0790**	**19.5876**	**0.0351**		**1.1192**	**1.1192**		**1.0608**	**1.0608**		**3,265.6455**	**3,265.6455**	**0.7662**		**3,284.8007**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9752	29.7922	6.7232	0.0960	2.6255	0.3328	2.9583	0.7198	0.3184	1.0382		10,491.4790	10,491.4790	0.5484	1.6637	11,000.9800
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.4006	0.3178	3.9554	0.0100	1.1178	7.6700e-003	1.1254	0.2964	7.0600e-003	0.3035		1,012.5757	1,012.5757	0.0318	0.0292	1,022.0594
Total	**1.3759**	**30.1100**	**10.6786**	**0.1060**	**3.7432**	**0.3405**	**4.0837**	**1.0163**	**0.3255**	**1.3417**		**11,504.0547**	**11,504.0547**	**0.5802**	**1.6929**	**12,023.0395**

Mitigated Construction On-Site

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

Off-Road	2.6530	23.0790	19.5876	0.0351		1.1192	1.1192		1.0608	1.0608	0.0000	3,265.6455	3,265.6455	0.7662		3,284.8007
Total	**2.6530**	**23.0790**	**19.5876**	**0.0351**		**1.1192**	**1.1192**		**1.0608**	**1.0608**	**0.0000**	**3,265.6455**	**3,265.6455**	**0.7662**		**3,284.8007**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9752	29.7922	6.7232	0.0960	2.6255	0.3328	2.9583	0.7198	0.3184	1.0382		10,491.4790	10,491.4790	0.5484	1.6637	11,000.9800
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.4006	0.3178	3.9554	0.0100	1.1178	7.6700e-003	1.1254	0.2964	7.0600e-003	0.3035		1,012.5757	1,012.5757	0.0318	0.0292	1,022.0594
Total	**1.3759**	**30.1100**	**10.6786**	**0.1060**	**3.7432**	**0.3405**	**4.0837**	**1.0163**	**0.3255**	**1.3417**		**11,504.0547**	**11,504.0547**	**0.5802**	**1.6929**	**12,023.0395**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6872	17.0446	19.6218	0.0313		0.8616	0.8616		0.7944	0.7944		3,005.4575	3,005.4575	0.9554		3,029.3421

Sample Scenario - 10 Pieces of Equipment, 150 Truck Trips - Los Angeles-South Coast County, Winter

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

Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6872**	**17.0446**	**19.6218**	**0.0313**		**0.8616**	**0.8616**		**0.7944**	**0.7944**		**3,005.4575**	**3,005.4575**	**0.9554**		**3,029.3421**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9752	29.7922	6.7232	0.0960	2.6255	0.3328	2.9583	0.7198	0.3184	1.0382		10,491.4790	10,491.4790	0.5484	1.6637	11,000.9800
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2003	0.1589	1.9777	5.0000e-003	0.5589	3.8400e-003	0.5627	0.1482	3.5300e-003	0.1518		506.2878	506.2878	0.0159	0.0146	511.0297
Total	**1.1756**	**29.9511**	**8.7009**	**0.1010**	**3.1844**	**0.3367**	**3.5210**	**0.8680**	**0.3220**	**1.1900**		**10,997.7669**	**10,997.7669**	**0.5643**	**1.6783**	**11,512.0097**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6872	17.0446	19.6218	0.0313		0.8616	0.8616		0.7944	0.7944	0.0000	3,005.4575	3,005.4575	0.9554		3,029.3421

Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6872**	**17.0446**	**19.6218**	**0.0313**		**0.8616**	**0.8616**		**0.7944**	**0.7944**	**0.0000**	**3,005.4575**	**3,005.4575**	**0.9554**		**3,029.3421**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9752	29.7922	6.7232	0.0960	2.6255	0.3328	2.9583	0.7198	0.3184	1.0382		10,491.4790	10,491.4790	0.5484	1.6637	11,000.9800
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2003	0.1589	1.9777	5.0000e-003	0.5589	3.8400e-003	0.5627	0.1482	3.5300e-003	0.1518		506.2878	506.2878	0.0159	0.0146	511.0297
Total	**1.1756**	**29.9511**	**8.7009**	**0.1010**	**3.1844**	**0.3367**	**3.5210**	**0.8680**	**0.3220**	**1.1900**		**10,997.7669**	**10,997.7669**	**0.5643**	**1.6783**	**11,512.0097**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

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

Off-Road	2.9187	20.3579	24.2341	0.0396		1.2546	1.2546		1.2546	1.2546		3,752.6407	3,752.6407	0.2575		3,759.0789
Total	**2.9187**	**20.3579**	**24.2341**	**0.0396**		**1.2546**	**1.2546**		**1.2546**	**1.2546**		**3,752.6407**	**3,752.6407**	**0.2575**		**3,759.0789**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9752	29.7922	6.7232	0.0960	2.6255	0.3328	2.9583	0.7198	0.3184	1.0382		10,491.4790	10,491.4790	0.5484	1.6637	11,000.9800
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2003	0.1589	1.9777	5.0000e-003	0.5589	3.8400e-003	0.5627	0.1482	3.5300e-003	0.1518		506.2878	506.2878	0.0159	0.0146	511.0297
Total	**1.1756**	**29.9511**	**8.7009**	**0.1010**	**3.1844**	**0.3367**	**3.5210**	**0.8680**	**0.3220**	**1.1900**		**10,997.7669**	**10,997.7669**	**0.5643**	**1.6783**	**11,512.0097**

Mitigated Construction On-Site

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

Sample Scenario - 10 Pieces of Equipment, 150 Truck Trips - Los Angeles-South Coast County, Winter

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

Off-Road	2.9187	20.3579	24.2341	0.0396		1.2546	1.2546		1.2546	1.2546	0.0000	3,752.6406	3,752.6406	0.2575		3,759.0789
Total	**2.9187**	**20.3579**	**24.2341**	**0.0396**		**1.2546**	**1.2546**		**1.2546**	**1.2546**	**0.0000**	**3,752.6406**	**3,752.6406**	**0.2575**		**3,759.0789**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9752	29.7922	6.7232	0.0960	2.6255	0.3328	2.9583	0.7198	0.3184	1.0382		10,491.4790	10,491.4790	0.5484	1.6637	11,000.9800
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2003	0.1589	1.9777	5.0000e-003	0.5589	3.8400e-003	0.5627	0.1482	3.5300e-003	0.1518		506.2878	506.2878	0.0159	0.0146	511.0297
Total	**1.1756**	**29.9511**	**8.7009**	**0.1010**	**3.1844**	**0.3367**	**3.5210**	**0.8680**	**0.3220**	**1.1900**		**10,997.7669**	**10,997.7669**	**0.5643**	**1.6783**	**11,512.0097**

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

Burbank Housing Element Construction Scenario

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	54.00	Dwelling Unit	3.38	54,000.00	154
Single Family Housing	51.00	Dwelling Unit	16.56	91,800.00	146
Strip Mall	15.00	1000sqft	0.34	15,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2029
Utility Company	Burbank Water & Power				
CO2 Intensity (lb/MWhr)	929.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Table Name	Column Name	Default Value	New Value
tblGrading	MaterialExported	0.00	14,889.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

Burbank Housing Element Construction Scenario - Los Angeles-South Coast County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.3026	2.9110	2.7216	5.9000e-003	0.4002	0.1305	0.5307	0.1476	0.1219	0.2695	0.0000	527.1044	527.1044	0.1062	0.0163	534.6185
2023	0.6950	1.4374	1.7983	3.3900e-003	0.0701	0.0677	0.1378	0.0188	0.0636	0.0824	0.0000	297.9794	297.9794	0.0570	4.5000e-003	300.7436
Maximum	**0.6950**	**2.9110**	**2.7216**	**5.9000e-003**	**0.4002**	**0.1305**	**0.5307**	**0.1476**	**0.1219**	**0.2695**	**0.0000**	**527.1044**	**527.1044**	**0.1062**	**0.0163**	**534.6185**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.3026	2.9110	2.7216	5.9000e-003	0.4002	0.1305	0.5307	0.1476	0.1219	0.2695	0.0000	527.1040	527.1040	0.1062	0.0163	534.6181
2023	0.6950	1.4374	1.7983	3.3900e-003	0.0701	0.0677	0.1378	0.0188	0.0636	0.0824	0.0000	297.9791	297.9791	0.0570	4.5000e-003	300.7433
Maximum	**0.6950**	**2.9110**	**2.7216**	**5.9000e-003**	**0.4002**	**0.1305**	**0.5307**	**0.1476**	**0.1219**	**0.2695**	**0.0000**	**527.1040**	**527.1040**	**0.1062**	**0.0163**	**534.6181**

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

Quarter	**Start Date**	**End Date**	**Maximum Unmitigated ROG + NOX (tons/quarter)**	**Maximum Mitigated ROG + NOX (tons/quarter)**
1	**1-3-2022**	**4-2-2022**	1.3953	1.3953
2	**4-3-2022**	**7-2-2022**	0.5982	0.5982

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

3	**7-3-2022**	**10-2-2022**	0.6048	0.6048
4	**10-3-2022**	**1-2-2023**	0.6056	0.6056
5	**1-3-2023**	**4-2-2023**	0.5432	0.5432
6	**4-3-2023**	**7-2-2023**	0.5476	0.5476
7	**7-3-2023**	**9-30-2023**	0.4994	0.4994
		Highest	1.3953	1.3953

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/3/2022	1/28/2022	5	20	
2	Site Preparation	Site Preparation	1/29/2022	2/11/2022	5	10	
3	Grading	Grading	2/12/2022	4/1/2022	5	35	
4	Building Construction	Building Construction	4/2/2022	9/1/2023	5	370	
5	Paving	Paving	9/2/2023	9/29/2023	5	20	
6	Architectural Coating	Architectural Coating	9/30/2023	10/27/2023	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 105

Acres of Paving: 0

Residential Indoor: 295,245; Residential Outdoor: 98,415; Non-Residential Indoor: 22,500; Non-Residential Outdoor: 7,500; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40

Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	366.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	1,861.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	62.00	14.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Burbank Housing Element Construction Scenario - Los Angeles-South Coast County, Annual

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

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0396	0.0000	0.0396	5.9900e-003	0.0000	5.9900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289
Total	**0.0264**	**0.2572**	**0.2059**	**3.9000e-004**	**0.0396**	**0.0124**	**0.0520**	**5.9900e-003**	**0.0116**	**0.0175**	**0.0000**	**33.9902**	**33.9902**	**9.5500e-003**	**0.0000**	**34.2289**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.4000e-004	0.0324	7.2200e-003	1.1000e-004	3.1500e-003	2.3000e-004	3.3800e-003	8.6000e-004	2.2000e-004	1.0800e-003	0.0000	11.3033	11.3033	6.0000e-004	1.7900e-003	11.8527
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1000e-004	4.3000e-004	5.5700e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3606	1.3606	4.0000e-005	4.0000e-005	1.3726
Total	**1.3500e-003**	**0.0328**	**0.0128**	**1.2000e-004**	**4.7900e-003**	**2.4000e-004**	**5.0300e-003**	**1.3000e-003**	**2.3000e-004**	**1.5300e-003**	**0.0000**	**12.6639**	**12.6639**	**6.4000e-004**	**1.8300e-003**	**13.2253**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0396	0.0000	0.0396	5.9900e-003	0.0000	5.9900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289
Total	**0.0264**	**0.2572**	**0.2059**	**3.9000e-004**	**0.0396**	**0.0124**	**0.0520**	**5.9900e-003**	**0.0116**	**0.0175**	**0.0000**	**33.9902**	**33.9902**	**9.5500e-003**	**0.0000**	**34.2289**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.4000e-004	0.0324	7.2200e-003	1.1000e-004	3.1500e-003	2.3000e-004	3.3800e-003	8.6000e-004	2.2000e-004	1.0800e-003	0.0000	11.3033	11.3033	6.0000e-004	1.7900e-003	11.8527
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.1000e-004	4.3000e-004	5.5700e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3606	1.3606	4.0000e-005	4.0000e-005	1.3726
Total	**1.3500e-003**	**0.0328**	**0.0128**	**1.2000e-004**	**4.7900e-003**	**2.4000e-004**	**5.0300e-003**	**1.3000e-003**	**2.3000e-004**	**1.5300e-003**	**0.0000**	**12.6639**	**12.6639**	**6.4000e-004**	**1.8300e-003**	**13.2253**

3.3 Site Preparation - 2022

Burbank Housing Element Construction Scenario - Los Angeles-South Coast County, Annual

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

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0159	0.1654	0.0985	1.9000e-004		8.0600e-003	8.0600e-003		7.4200e-003	7.4200e-003	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	**0.0159**	**0.1654**	**0.0985**	**1.9000e-004**	**0.0983**	**8.0600e-003**	**0.1064**	**0.0505**	**7.4200e-003**	**0.0579**	**0.0000**	**16.7197**	**16.7197**	**5.4100e-003**	**0.0000**	**16.8549**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.6000e-004	3.3400e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8164	0.8164	2.0000e-005	2.0000e-005	0.8236
Total	**3.1000e-004**	**2.6000e-004**	**3.3400e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**9.9000e-004**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.8164**	**0.8164**	**2.0000e-005**	**2.0000e-005**	**0.8236**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0159	0.1654	0.0985	1.9000e-004		8.0600e-003	8.0600e-003		7.4200e-003	7.4200e-003	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	**0.0159**	**0.1654**	**0.0985**	**1.9000e-004**	**0.0983**	**8.0600e-003**	**0.1064**	**0.0505**	**7.4200e-003**	**0.0579**	**0.0000**	**16.7197**	**16.7197**	**5.4100e-003**	**0.0000**	**16.8549**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.6000e-004	3.3400e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8164	0.8164	2.0000e-005	2.0000e-005	0.8236
Total	**3.1000e-004**	**2.6000e-004**	**3.3400e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**9.9000e-004**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.8164**	**0.8164**	**2.0000e-005**	**2.0000e-005**	**0.8236**

3.4 Grading - 2022

Unmitigated Construction On-Site

Burbank Housing Element Construction Scenario - Los Angeles-South Coast County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1619	0.0000	0.1619	0.0641	0.0000	0.0641	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0634	0.6798	0.5082	1.0900e-003		0.0286	0.0286		0.0263	0.0263	0.0000	95.4356	95.4356	0.0309	0.0000	96.2072
Total	**0.0634**	**0.6798**	**0.5082**	**1.0900e-003**	**0.1619**	**0.0286**	**0.1905**	**0.0641**	**0.0263**	**0.0904**	**0.0000**	**95.4356**	**95.4356**	**0.0309**	**0.0000**	**96.2072**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.2900e-003	0.1646	0.0367	5.8000e-004	0.0160	1.1600e-003	0.0172	4.4000e-003	1.1100e-003	5.5100e-003	0.0000	57.4737	57.4737	3.0500e-003	9.1200e-003	60.2676
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-003	1.0000e-003	0.0130	3.0000e-005	3.8400e-003	3.0000e-005	3.8600e-003	1.0200e-003	2.0000e-005	1.0400e-003	0.0000	3.1747	3.1747	9.0000e-005	9.0000e-005	3.2027
Total	**5.4900e-003**	**0.1656**	**0.0497**	**6.1000e-004**	**0.0199**	**1.1900e-003**	**0.0210**	**5.4200e-003**	**1.1300e-003**	**6.5500e-003**	**0.0000**	**60.6485**	**60.6485**	**3.1400e-003**	**9.2100e-003**	**63.4703**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1619	0.0000	0.1619	0.0641	0.0000	0.0641	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0634	0.6798	0.5082	1.0900e-003		0.0286	0.0286		0.0263	0.0263	0.0000	95.4354	95.4354	0.0309	0.0000	96.2071
Total	**0.0634**	**0.6798**	**0.5082**	**1.0900e-003**	**0.1619**	**0.0286**	**0.1905**	**0.0641**	**0.0263**	**0.0904**	**0.0000**	**95.4354**	**95.4354**	**0.0309**	**0.0000**	**96.2071**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.2900e-003	0.1646	0.0367	5.8000e-004	0.0160	1.1600e-003	0.0172	4.4000e-003	1.1100e-003	5.5100e-003	0.0000	57.4737	57.4737	3.0500e-003	9.1200e-003	60.2676
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-003	1.0000e-003	0.0130	3.0000e-005	3.8400e-003	3.0000e-005	3.8600e-003	1.0200e-003	2.0000e-005	1.0400e-003	0.0000	3.1747	3.1747	9.0000e-005	9.0000e-005	3.2027
Total	**5.4900e-003**	**0.1656**	**0.0497**	**6.1000e-004**	**0.0199**	**1.1900e-003**	**0.0210**	**5.4200e-003**	**1.1300e-003**	**6.5500e-003**	**0.0000**	**60.6485**	**60.6485**	**3.1400e-003**	**9.2100e-003**	**63.4703**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

Burbank Housing Element Construction Scenario - Los Angeles-South Coast County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1664	1.5225	1.5954	2.6300e-003		0.0789	0.0789		0.0742	0.0742	0.0000	225.9321	225.9321	0.0541	0.0000	227.2853
Total	**0.1664**	**1.5225**	**1.5954**	**2.6300e-003**		**0.0789**	**0.0789**		**0.0742**	**0.0742**	**0.0000**	**225.9321**	**225.9321**	**0.0541**	**0.0000**	**227.2853**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.6600e-003	0.0702	0.0233	2.7000e-004	8.6000e-003	6.4000e-004	9.2400e-003	2.4800e-003	6.1000e-004	3.0900e-003	0.0000	26.0658	26.0658	8.7000e-004	3.7600e-003	27.2080
Worker	0.0207	0.0173	0.2244	5.9000e-004	0.0662	4.3000e-004	0.0667	0.0176	4.0000e-004	0.0180	0.0000	54.8324	54.8324	1.5600e-003	1.4900e-003	55.3152
Total	**0.0234**	**0.0875**	**0.2477**	**8.6000e-004**	**0.0748**	**1.0700e-003**	**0.0759**	**0.0201**	**1.0100e-003**	**0.0211**	**0.0000**	**80.8981**	**80.8981**	**2.4300e-003**	**5.2500e-003**	**82.5232**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1664	1.5225	1.5954	2.6300e-003		0.0789	0.0789		0.0742	0.0742	0.0000	225.9318	225.9318	0.0541	0.0000	227.2850
Total	**0.1664**	**1.5225**	**1.5954**	**2.6300e-003**		**0.0789**	**0.0789**		**0.0742**	**0.0742**	**0.0000**	**225.9318**	**225.9318**	**0.0541**	**0.0000**	**227.2850**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.6600e-003	0.0702	0.0233	2.7000e-004	8.6000e-003	6.4000e-004	9.2400e-003	2.4800e-003	6.1000e-004	3.0900e-003	0.0000	26.0658	26.0658	8.7000e-004	3.7600e-003	27.2080
Worker	0.0207	0.0173	0.2244	5.9000e-004	0.0662	4.3000e-004	0.0667	0.0176	4.0000e-004	0.0180	0.0000	54.8324	54.8324	1.5600e-003	1.4900e-003	55.3152
Total	**0.0234**	**0.0875**	**0.2477**	**8.6000e-004**	**0.0748**	**1.0700e-003**	**0.0759**	**0.0201**	**1.0100e-003**	**0.0211**	**0.0000**	**80.8981**	**80.8981**	**2.4300e-003**	**5.2500e-003**	**82.5232**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Burbank Housing Element Construction Scenario - Los Angeles-South Coast County, Annual

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

Category	tons/yr										MT/yr					
Off-Road	0.1376	1.2587	1.4214	2.3600e-003		0.0612	0.0612		0.0576	0.0576	0.0000	202.8292	202.8292	0.0483	0.0000	204.0354
Total	**0.1376**	**1.2587**	**1.4214**	**2.3600e-003**		**0.0612**	**0.0612**		**0.0576**	**0.0576**	**0.0000**	**202.8292**	**202.8292**	**0.0483**	**0.0000**	**204.0354**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3800e-003	0.0494	0.0185	2.3000e-004	7.7200e-003	2.4000e-004	7.9600e-003	2.2300e-003	2.3000e-004	2.4600e-003	0.0000	22.2732	22.2732	7.4000e-004	3.2100e-003	23.2471
Worker	0.0172	0.0137	0.1853	5.2000e-004	0.0595	3.7000e-004	0.0598	0.0158	3.4000e-004	0.0161	0.0000	47.9123	47.9123	1.2600e-003	1.2300e-003	48.3108
Total	**0.0186**	**0.0631**	**0.2038**	**7.5000e-004**	**0.0672**	**6.1000e-004**	**0.0678**	**0.0180**	**5.7000e-004**	**0.0186**	**0.0000**	**70.1855**	**70.1855**	**2.0000e-003**	**4.4400e-003**	**71.5579**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Off-Road	0.1376	1.2587	1.4214	2.3600e-003		0.0612	0.0612		0.0576	0.0576	0.0000	202.8289	202.8289	0.0483	0.0000	204.0352
Total	**0.1376**	**1.2587**	**1.4214**	**2.3600e-003**		**0.0612**	**0.0612**		**0.0576**	**0.0576**	**0.0000**	**202.8289**	**202.8289**	**0.0483**	**0.0000**	**204.0352**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3800e-003	0.0494	0.0185	2.3000e-004	7.7200e-003	2.4000e-004	7.9600e-003	2.2300e-003	2.3000e-004	2.4600e-003	0.0000	22.2732	22.2732	7.4000e-004	3.2100e-003	23.2471
Worker	0.0172	0.0137	0.1853	5.2000e-004	0.0595	3.7000e-004	0.0598	0.0158	3.4000e-004	0.0161	0.0000	47.9123	47.9123	1.2600e-003	1.2300e-003	48.3108
Total	**0.0186**	**0.0631**	**0.2038**	**7.5000e-004**	**0.0672**	**6.1000e-004**	**0.0678**	**0.0180**	**5.7000e-004**	**0.0186**	**0.0000**	**70.1855**	**70.1855**	**2.0000e-003**	**4.4400e-003**	**71.5579**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0269	20.0269	6.4800e-003	0.0000	20.1888

Burbank Housing Element Construction Scenario - Los Angeles-South Coast County, Annual

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

Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0103**	**0.1019**	**0.1458**	**2.3000e-004**		**5.1000e-003**	**5.1000e-003**		**4.6900e-003**	**4.6900e-003**	**0.0000**	**20.0269**	**20.0269**	**6.4800e-003**	**0.0000**	**20.1888**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	3.8000e-004	5.1200e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3248	1.3248	3.0000e-005	3.0000e-005	1.3358
Total	**4.8000e-004**	**3.8000e-004**	**5.1200e-003**	**1.0000e-005**	**1.6400e-003**	**1.0000e-005**	**1.6500e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.3248**	**1.3248**	**3.0000e-005**	**3.0000e-005**	**1.3358**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0268	20.0268	6.4800e-003	0.0000	20.1888

Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0103**	**0.1019**	**0.1458**	**2.3000e-004**		**5.1000e-003**	**5.1000e-003**		**4.6900e-003**	**4.6900e-003**	**0.0000**	**20.0268**	**20.0268**	**6.4800e-003**	**0.0000**	**20.1888**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8000e-004	3.8000e-004	5.1200e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3248	1.3248	3.0000e-005	3.0000e-005	1.3358
Total	**4.8000e-004**	**3.8000e-004**	**5.1200e-003**	**1.0000e-005**	**1.6400e-003**	**1.0000e-005**	**1.6500e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.3248**	**1.3248**	**3.0000e-005**	**3.0000e-005**	**1.3358**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5257					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	**0.5276**	**0.0130**	**0.0181**	**3.0000e-005**		**7.1000e-004**	**7.1000e-004**		**7.1000e-004**	**7.1000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.5000e-004**	**0.0000**	**2.5571**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	3.0000e-004	4.1000e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3200e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.0598	1.0598	3.0000e-005	3.0000e-005	1.0686
Total	**3.8000e-004**	**3.0000e-004**	**4.1000e-003**	**1.0000e-005**	**1.3100e-003**	**1.0000e-005**	**1.3200e-003**	**3.5000e-004**	**1.0000e-005**	**3.6000e-004**	**0.0000**	**1.0598**	**1.0598**	**3.0000e-005**	**3.0000e-005**	**1.0686**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5257					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	**0.5276**	**0.0130**	**0.0181**	**3.0000e-005**		**7.1000e-004**	**7.1000e-004**		**7.1000e-004**	**7.1000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.5000e-004**	**0.0000**	**2.5571**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	3.0000e-004	4.1000e-003	1.0000e-005	1.3100e-003	1.0000e-005	1.3200e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.0598	1.0598	3.0000e-005	3.0000e-005	1.0686
Total	**3.8000e-004**	**3.0000e-004**	**4.1000e-003**	**1.0000e-005**	**1.3100e-003**	**1.0000e-005**	**1.3200e-003**	**3.5000e-004**	**1.0000e-005**	**3.6000e-004**	**0.0000**	**1.0598**	**1.0598**	**3.0000e-005**	**3.0000e-005**	**1.0686**

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

Burbank Housing Element

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	5,385.00	Dwelling Unit	336.56	5,385,000.00	15401
Single Family Housing	5,071.00	Dwelling Unit	1,646.43	9,127,800.00	14503
Strip Mall	1,428.83	1000sqft	32.80	1,428,830.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2029
Utility Company	Burbank Water & Power				
CO2 Intensity (lb/MWhr)	538.41	**CH4 Intensity (lb/MWhr)**	0.019	**N2O Intensity (lb/MWhr)**	0.002

1.3 User Entered Comments & Non-Default Data

Vehicle Trips - Per trip Generation Memo.

Woodstoves - SCAQMD Rule 445; new development may not have a wood-burning fireplace.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	10.00
tblConstructionPhase	NumDays	6,000.00	10.00
tblConstructionPhase	NumDays	15,500.00	10.00
tblConstructionPhase	NumDays	155,000.00	10.00
tblConstructionPhase	NumDays	11,000.00	10.00
tblConstructionPhase	NumDays	11,000.00	10.00

Burbank Housing Element - Los Angeles-South Coast County, Summer

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

tblFireplaces	NumberWood	269.25	0.00
tblFireplaces	NumberWood	253.55	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0.019
tblProjectCharacteristics	CO2IntensityFactor	929.98	538.41
tblProjectCharacteristics	N2OIntensityFactor	0.004	0.002
tblVehicleTrips	CC_TL	8.40	13.17
tblVehicleTrips	CNW_TL	6.90	13.17
tblVehicleTrips	CW_TL	16.60	13.17
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	40.00	0.00
tblVehicleTrips	HO_TL	8.70	-6.52
tblVehicleTrips	HO_TL	8.70	-6.52
tblVehicleTrips	HS_TL	5.90	-6.52
tblVehicleTrips	HS_TL	5.90	-6.52
tblVehicleTrips	HW_TL	14.70	-6.52
tblVehicleTrips	HW_TL	14.70	-6.52
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	15.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	45.00	100.00
tblVehicleTrips	ST_TR	8.14	0.91
tblVehicleTrips	ST_TR	9.54	0.00
tblVehicleTrips	ST_TR	42.04	9.63
tblVehicleTrips	SU_TR	6.28	0.91
tblVehicleTrips	SU_TR	8.55	0.00

tblVehicleTrips	SU_TR	20.43	9.63
tblVehicleTrips	WD_TR	7.32	0.91
tblVehicleTrips	WD_TR	9.44	0.00
tblVehicleTrips	WD_TR	44.32	9.63

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	669.4932	199.1653	3,487.4831	9.3481		434.7750	434.7750		434.7750	434.7750	61,707.5311	189,761.5756	251,469.1067	293.5657	3.4505	259,836.4930
Energy	5.8873	50.3476	21.6838	0.3211		4.0676	4.0676		4.0676	4.0676		64,225.5804	64,225.5804	1.2310	1.1775	64,607.2409
Mobile	45.6435	40.9126	431.9702	0.9595	114.4255	0.6329	115.0584	30.4855	0.5882	31.0737		102,931.8117	102,931.8117	6.6680	4.0265	104,298.3940
Total	**721.0240**	**290.4255**	**3,941.1371**	**10.6287**	**114.4255**	**439.4756**	**553.9011**	**30.4855**	**439.4309**	**469.9163**	**61,707.5311**	**356,918.9676**	**418,626.4987**	**301.4647**	**8.6544**	**428,742.1278**

Mitigated Operational

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

Burbank Housing Element - Los Angeles-South Coast County, Summer

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

Area	669.4932	199.1653	3,487.4831	9.3481		434.7750	434.7750		434.7750	434.7750	61,707.5311	189,761.5756	251,469.1067	293.5657	3.4505	259,836.4930
Energy	5.8873	50.3476	21.6838	0.3211		4.0676	4.0676		4.0676	4.0676		64,225.5804	64,225.5804	1.2310	1.1775	64,607.2409
Mobile	45.6435	40.9126	431.9702	0.9595	114.4255	0.6329	115.0584	30.4855	0.5882	31.0737		102,931.8117	102,931.8117	6.6680	4.0265	104,298.3940
Total	**721.0240**	**290.4255**	**3,941.1371**	**10.6287**	**114.4255**	**439.4756**	**553.9011**	**30.4855**	**439.4309**	**469.9163**	**61,707.5311**	**356,918.9676**	**418,626.4987**	**301.4647**	**8.6544**	**428,742.1278**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	45.6435	40.9126	431.9702	0.9595	114.4255	0.6329	115.0584	30.4855	0.5882	31.0737		102,931.8117	102,931.8117	6.6680	4.0265	104,298.3940
Unmitigated	45.6435	40.9126	431.9702	0.9595	114.4255	0.6329	115.0584	30.4855	0.5882	31.0737		102,931.8117	102,931.8117	6.6680	4.0265	104,298.3940

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	4,900.35	4,900.35	4900.35	-11,629,903	-11,629,903
Single Family Housing	0.00	0.00	0.00		
Strip Mall	13,759.63	13,759.63	13759.63	65,962,029	65,962,029
Total	18,659.98	18,659.98	18,659.98	54,332,126	54,332,126

4.3 Trip Type Information

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

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	-6.52	-6.52	-6.52	40.20	19.20	40.60	100	0	0
Single Family Housing	-6.52	-6.52	-6.52	40.20	19.20	40.60	100	0	0
Strip Mall	13.17	13.17	13.17	16.60	64.40	19.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.531474	0.067154	0.192702	0.126421	0.024086	0.006875	0.011564	0.007937	0.000940	0.000574	0.026268	0.000718	0.00
Single Family Housing	0.531474	0.067154	0.192702	0.126421	0.024086	0.006875	0.011564	0.007937	0.000940	0.000574	0.026268	0.000718	0.00
Strip Mall	0.531474	0.067154	0.192702	0.126421	0.024086	0.006875	0.011564	0.007937	0.000940	0.000574	0.026268	0.000718	0.00

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	5.8873	50.3476	21.6838	0.3211		4.0676	4.0676		4.0676	4.0676		64,225.5804	64,225.5804	1.2310	1.1775	64,607.2409
NaturalGas Unmitigated	5.8873	50.3476	21.6838	0.3211		4.0676	4.0676		4.0676	4.0676		64,225.5804	64,225.5804	1.2310	1.1775	64,607.2409

5.2 Energy by Land Use - NaturalGas

Date: 7/21/2021 9:45 AM

Burbank Housing Element - Los Angeles-South Coast County, Summer

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

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	155891	1.6812	14.3664	6.1134	0.0917		1.1615	1.1615		1.1615	1.1615		18,340.1211	18,340.1211	0.3515	0.3362	18,449.10 2
Single Family Housing	383646	4.1374	35.3556	15.0449	0.2257		2.8585	2.8585		2.8585	2.8585		45,134.7767	45,134.7767	0.8651	0.8275	45,402.99 1
Strip Mall	6380.8	0.0688	0.6256	0.5255	3.7500e-003		0.0475	0.0475		0.0475	0.0475		750.6826	750.6826	0.0144	0.0138	755.1436
Total		**5.8873**	**50.3476**	**21.6838**	**0.3211**		**4.0676**	**4.0676**		**4.0676**	**4.0676**		**64,225.5804**	**64,225.5804**	**1.2310**	**1.1775**	**64,607.24 9**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	155.891	1.6812	14.3664	6.1134	0.0917		1.1615	1.1615		1.1615	1.1615		18,340.1211	18,340.1211	0.3515	0.3362	18,449.10 2
Single Family Housing	383.646	4.1374	35.3556	15.0449	0.2257		2.8585	2.8585		2.8585	2.8585		45,134.7767	45,134.7767	0.8651	0.8275	45,402.99 1
Strip Mall	6.3808	0.0688	0.6256	0.5255	3.7500e-003		0.0475	0.0475		0.0475	0.0475		750.6826	750.6826	0.0144	0.0138	755.1436
Total		**5.8873**	**50.3476**	**21.6838**	**0.3211**		**4.0676**	**4.0676**		**4.0676**	**4.0676**		**64,225.5804**	**64,225.5804**	**1.2310**	**1.1775**	**64,607.24 9**

Burbank Housing Element - Los Angeles-South Coast County, Summer

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

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	669.4932	199.1653	3,487.4831	9.3481		434.7750	434.7750		434.7750	434.7750	61,707.5311	189,761.5756	251,469.1067	293.5657	3.4505	259,836.4930
Unmitigated	669.4932	199.1653	3,487.4831	9.3481		434.7750	434.7750		434.7750	434.7750	61,707.5311	189,761.5756	251,469.1067	293.5657	3.4505	259,836.4930

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	28.5084					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	315.6443					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	299.4515	189.2369	2,625.5217	9.3025		429.9925	429.9925		429.9925	429.9925	61,707.5311	188,208.0000	249,915.5311	292.0775	3.4505	258,245.7113
Landscaping	25.8891	9.9284	861.9614	0.0456		4.7825	4.7825		4.7825	4.7825		1,553.5756	1,553.5756	1.4882		1,590.7817

Total	**669.4932**	**199.1653**	**3,487.4831**	**9.3481**		**434.7750**	**434.7750**		**434.7750**	**434.7750**	**61,707.5311**	**189,761.5756**	**251,469.1067**	**293.5657**	**3.4505**	**259,836.4929**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	28.5084					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	315.6443					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	299.4515	189.2369	2,625.5217	9.3025		429.9925	429.9925		429.9925	429.9925	61,707.5311	188,208.0000	249,915.5311	292.0775	3.4505	258,245.7113
Landscaping	25.8891	9.9284	861.9614	0.0456		4.7825	4.7825		4.7825	4.7825		1,553.5756	1,553.5756	1.4882		1,590.7817
Total	**669.4932**	**199.1653**	**3,487.4831**	**9.3481**		**434.7750**	**434.7750**		**434.7750**	**434.7750**	**61,707.5311**	**189,761.5756**	**251,469.1067**	**293.5657**	**3.4505**	**259,836.4929**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Burbank Housing Element - Los Angeles-South Coast County, Summer

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

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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

Burbank Housing Element

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	5,385.00	Dwelling Unit	336.56	5,385,000.00	15401
Single Family Housing	5,071.00	Dwelling Unit	1,646.43	9,127,800.00	14503
Strip Mall	1,428.83	1000sqft	32.80	1,428,830.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2029
Utility Company	Burbank Water & Power				
CO2 Intensity (lb/MWhr)	538.41	**CH4 Intensity (lb/MWhr)**	0.019	**N2O Intensity (lb/MWhr)**	0.002

1.3 User Entered Comments & Non-Default Data

Vehicle Trips - Per trip Generation Memo.

Woodstoves - SCAQMD Rule 445; new development may not have a wood-burning fireplace.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	10.00
tblConstructionPhase	NumDays	6,000.00	10.00
tblConstructionPhase	NumDays	15,500.00	10.00
tblConstructionPhase	NumDays	155,000.00	10.00
tblConstructionPhase	NumDays	11,000.00	10.00
tblConstructionPhase	NumDays	11,000.00	10.00

Burbank Housing Element - Los Angeles-South Coast County, Winter

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

tblFireplaces	NumberWood	269.25	0.00
tblFireplaces	NumberWood	253.55	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0.019
tblProjectCharacteristics	CO2IntensityFactor	929.98	538.41
tblProjectCharacteristics	N2OIntensityFactor	0.004	0.002
tblVehicleTrips	CC_TL	8.40	13.17
tblVehicleTrips	CNW_TL	6.90	13.17
tblVehicleTrips	CW_TL	16.60	13.17
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	40.00	0.00
tblVehicleTrips	HO_TL	8.70	-6.52
tblVehicleTrips	HO_TL	8.70	-6.52
tblVehicleTrips	HS_TL	5.90	-6.52
tblVehicleTrips	HS_TL	5.90	-6.52
tblVehicleTrips	HW_TL	14.70	-6.52
tblVehicleTrips	HW_TL	14.70	-6.52
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	15.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	45.00	100.00
tblVehicleTrips	ST_TR	8.14	0.91
tblVehicleTrips	ST_TR	9.54	0.00
tblVehicleTrips	ST_TR	42.04	9.63
tblVehicleTrips	SU_TR	6.28	0.91
tblVehicleTrips	SU_TR	8.55	0.00

tblVehicleTrips	SU_TR	20.43	9.63
tblVehicleTrips	WD_TR	7.32	0.91
tblVehicleTrips	WD_TR	9.44	0.00
tblVehicleTrips	WD_TR	44.32	9.63

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	669.4932	199.1653	3,487.4831	9.3481		434.7750	434.7750		434.7750	434.7750	61,707.5311	189,761.5756	251,469.1067	293.5657	3.4505	259,836.4930
Energy	5.8873	50.3476	21.6838	0.3211		4.0676	4.0676		4.0676	4.0676		64,225.5804	64,225.5804	1.2310	1.1775	64,607.2409
Mobile	44.6759	44.1201	427.7599	0.9199	114.4255	0.6332	115.0587	30.4855	0.5885	31.0740		98,662.5979	98,662.5979	6.8601	4.1946	100,084.1048
Total	**720.0564**	**293.6329**	**3,936.9268**	**10.5891**	**114.4255**	**439.4758**	**553.9014**	**30.4855**	**439.4311**	**469.9166**	**61,707.5311**	**352,649.7538**	**414,357.2849**	**301.6569**	**8.8226**	**424,527.8387**

Mitigated Operational

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

Burbank Housing Element - Los Angeles-South Coast County, Winter

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

Area	669.4932	199.1653	3,487.4831	9.3481		434.7750	434.7750		434.7750	434.7750	61,707.5311	189,761.5756	251,469.1067	293.5657	3.4505	259,836.4930
Energy	5.8873	50.3476	21.6838	0.3211		4.0676	4.0676		4.0676	4.0676		64,225.5804	64,225.5804	1.2310	1.1775	64,607.2409
Mobile	44.6759	44.1201	427.7599	0.9199	114.4255	0.6332	115.0587	30.4855	0.5885	31.0740		98,662.5979	98,662.5979	6.8601	4.1946	100,084.1048
Total	**720.0564**	**293.6329**	**3,936.9268**	**10.5891**	**114.4255**	**439.4758**	**553.9014**	**30.4855**	**439.4311**	**469.9166**	**61,707.5311**	**352,649.7538**	**414,357.2849**	**301.6569**	**8.8226**	**424,527.8387**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	44.6759	44.1201	427.7599	0.9199	114.4255	0.6332	115.0587	30.4855	0.5885	31.0740		98,662.5979	98,662.597	6.8601	4.1946	100,084.104
Unmitigated	44.6759	44.1201	427.7599	0.9199	114.4255	0.6332	115.0587	30.4855	0.5885	31.0740		98,662.5979	98,662.597	6.8601	4.1946	100,084.104

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	4,900.35	4,900.35	4900.35	-11,629,903	-11,629,903
Single Family Housing	0.00	0.00	0.00		
Strip Mall	13,759.63	13,759.63	13759.63	65,962,029	65,962,029
Total	18,659.98	18,659.98	18,659.98	54,332,126	54,332,126

4.3 Trip Type Information

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

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	-6.52	-6.52	-6.52	40.20	19.20	40.60	100	0	0
Single Family Housing	-6.52	-6.52	-6.52	40.20	19.20	40.60	100	0	0
Strip Mall	13.17	13.17	13.17	16.60	64.40	19.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.531474	0.067154	0.192702	0.126421	0.024086	0.006875	0.011564	0.007937	0.000940	0.000574	0.026268	0.000718	0.00
Single Family Housing	0.531474	0.067154	0.192702	0.126421	0.024086	0.006875	0.011564	0.007937	0.000940	0.000574	0.026268	0.000718	0.00
Strip Mall	0.531474	0.067154	0.192702	0.126421	0.024086	0.006875	0.011564	0.007937	0.000940	0.000574	0.026268	0.000718	0.00

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	5.8873	50.3476	21.6838	0.3211		4.0676	4.0676		4.0676	4.0676		64,225.5804	64,225.5804	1.2310	1.1775	64,607.2409
NaturalGas Unmitigated	5.8873	50.3476	21.6838	0.3211		4.0676	4.0676		4.0676	4.0676		64,225.5804	64,225.5804	1.2310	1.1775	64,607.2409

5.2 Energy by Land Use - NaturalGas

Date: 7/21/2021 9:46 AM

Burbank Housing Element - Los Angeles-South Coast County, Winter

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

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	155891	1.6812	14.3664	6.1134	0.0917		1.1615	1.1615		1.1615	1.1615		18,340.1211	18,340.1211	0.3515	0.3362	18,449.107 2
Single Family Housing	383646	4.1374	35.3556	15.0449	0.2257		2.8585	2.8585		2.8585	2.8585		45,134.7767	45,134.7767	0.8651	0.8275	45,402.99 1
Strip Mall	6380.8	0.0688	0.6256	0.5255	3.7500e-003		0.0475	0.0475		0.0475	0.0475		750.6826	750.6826	0.0144	0.0138	755.1436
Total		**5.8873**	**50.3476**	**21.6838**	**0.3211**		**4.0676**	**4.0676**		**4.0676**	**4.0676**		**64,225.5804**	**64,225.5804**	**1.2310**	**1.1775**	**64,607.24 9**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	155.891	1.6812	14.3664	6.1134	0.0917		1.1615	1.1615		1.1615	1.1615		18,340.1211	18,340.1211	0.3515	0.3362	18,449.107 2
Single Family Housing	383.646	4.1374	35.3556	15.0449	0.2257		2.8585	2.8585		2.8585	2.8585		45,134.7767	45,134.7767	0.8651	0.8275	45,402.99 1
Strip Mall	6.3808	0.0688	0.6256	0.5255	3.7500e-003		0.0475	0.0475		0.0475	0.0475		750.6826	750.6826	0.0144	0.0138	755.1436
Total		**5.8873**	**50.3476**	**21.6838**	**0.3211**		**4.0676**	**4.0676**		**4.0676**	**4.0676**		**64,225.5804**	**64,225.5804**	**1.2310**	**1.1775**	**64,607.24 9**

Burbank Housing Element - Los Angeles-South Coast County, Winter

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

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	669.4932	199.1653	3,487.4831	9.3481		434.7750	434.7750		434.7750	434.7750	61,707.5311	189,761.5756	251,469.1067	293.5657	3.4505	259,836.4930
Unmitigated	669.4932	199.1653	3,487.4831	9.3481		434.7750	434.7750		434.7750	434.7750	61,707.5311	189,761.5756	251,469.1067	293.5657	3.4505	259,836.4930

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	28.5084					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	315.6443					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	299.4515	189.2369	2,625.5217	9.3025		429.9925	429.9925		429.9925	429.9925	61,707.5311	188,208.0000	249,915.5311	292.0775	3.4505	258,245.7113
Landscaping	25.8891	9.9284	861.9614	0.0456		4.7825	4.7825		4.7825	4.7825		1,553.5756	1,553.5756	1.4882		1,590.7817

Total	**669.4932**	**199.1653**	**3,487.4831**	**9.3481**		**434.7750**	**434.7750**		**434.7750**	**434.7750**	**61,707.5311**	**189,761.5756**	**251,469.1067**	**293.5657**	**3.4505**	**259,836.4929**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	28.5084					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	315.6443					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	299.4515	189.2369	2,625.5217	9.3025		429.9925	429.9925		429.9925	429.9925	61,707.5311	188,208.0000	249,915.5311	292.0775	3.4505	258,245.7113
Landscaping	25.8891	9.9284	861.9614	0.0456		4.7825	4.7825		4.7825	4.7825		1,553.5756	1,553.5756	1.4882		1,590.7817
Total	**669.4932**	**199.1653**	**3,487.4831**	**9.3481**		**434.7750**	**434.7750**		**434.7750**	**434.7750**	**61,707.5311**	**189,761.5756**	**251,469.1067**	**293.5657**	**3.4505**	**259,836.4929**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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

Burbank Housing Element

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	5,385.00	Dwelling Unit	336.56	5,385,000.00	15401
Single Family Housing	5,071.00	Dwelling Unit	1,646.43	9,127,800.00	14503
Strip Mall	1,428.83	1000sqft	32.80	1,428,830.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2029
Utility Company	Burbank Water & Power				
CO2 Intensity (lb/MWhr)	538.41	**CH4 Intensity (lb/MWhr)**	0.019	**N2O Intensity (lb/MWhr)**	0.002

1.3 User Entered Comments & Non-Default Data

Vehicle Trips - Per trip Generation Memo.

Woodstoves - SCAQMD Rule 445; new development may not have a wood-burning fireplace.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10,000.00	10.00
tblConstructionPhase	NumDays	6,000.00	10.00
tblConstructionPhase	NumDays	15,500.00	10.00
tblConstructionPhase	NumDays	155,000.00	10.00
tblConstructionPhase	NumDays	11,000.00	10.00
tblConstructionPhase	NumDays	11,000.00	10.00

Burbank Housing Element - Los Angeles-South Coast County, Annual

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

tblFireplaces	NumberWood	269.25	0.00
tblFireplaces	NumberWood	253.55	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0.019
tblProjectCharacteristics	CO2IntensityFactor	929.98	538.41
tblProjectCharacteristics	N2OIntensityFactor	0.004	0.002
tblVehicleTrips	CC_TL	8.40	13.17
tblVehicleTrips	CNW_TL	6.90	13.17
tblVehicleTrips	CW_TL	16.60	13.17
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	40.00	0.00
tblVehicleTrips	HO_TL	8.70	-6.52
tblVehicleTrips	HO_TL	8.70	-6.52
tblVehicleTrips	HS_TL	5.90	-6.52
tblVehicleTrips	HS_TL	5.90	-6.52
tblVehicleTrips	HW_TL	14.70	-6.52
tblVehicleTrips	HW_TL	14.70	-6.52
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	15.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	45.00	100.00
tblVehicleTrips	ST_TR	8.14	0.91
tblVehicleTrips	ST_TR	9.54	0.00
tblVehicleTrips	ST_TR	42.04	9.63
tblVehicleTrips	SU_TR	6.28	0.91
tblVehicleTrips	SU_TR	8.55	0.00

tblVehicleTrips	SU_TR	20.43	9.63
tblVehicleTrips	WD_TR	7.32	0.91
tblVehicleTrips	WD_TR	9.44	0.00
tblVehicleTrips	WD_TR	44.32	9.63

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	69.7871	3.6065	140.5642	0.1220		5.9727	5.9727		5.9727	5.9727	699.7516	2,310.4153	3,010.1670	3.4809	0.0391	3,108.8487
Energy	1.0744	9.1884	3.9573	0.0586		0.7423	0.7423		0.7423	0.7423	0.0000	30,252.2793	30,252.2793	0.8961	0.2678	30,354.4934
Mobile	7.9946	8.1267	78.3201	0.1692	20.4195	0.1151	20.5346	5.4487	0.1070	5.5557	0.0000	16,459.1560	16,459.1560	1.1266	0.6960	16,694.7167
Waste						0.0000	0.0000		0.0000	0.0000	2,014.4011	0.0000	2,014.4011	119.0477	0.0000	4,990.5935
Water						0.0000	0.0000		0.0000	0.0000	249.7066	3,844.2256	4,093.9321	25.7829	0.6199	4,923.2255
Total	**78.8561**	**20.9216**	**222.8416**	**0.3497**	**20.4195**	**6.8301**	**27.2497**	**5.4487**	**6.8220**	**12.2707**	**2,963.8593**	**52,866.0762**	**55,829.9355**	**150.3342**	**1.6228**	**60,071.8778**

Mitigated Operational

Burbank Housing Element - Los Angeles-South Coast County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						tons/yr								MT/yr		
Area	69.7871	3.6065	140.5642	0.1220		5.9727	5.9727		5.9727	5.9727	699.7516	2,310.4153	3,010.1670	3.4809	0.0391	3,108.8487
Energy	1.0744	9.1884	3.9573	0.0586		0.7423	0.7423		0.7423	0.7423	0.0000	30,252.2793	30,252.2793	0.8961	0.2678	30,354.4934
Mobile	7.9946	8.1267	78.3201	0.1692	20.4195	0.1151	20.5346	5.4487	0.1070	5.5557	0.0000	16,459.1560	16,459.1560	1.1266	0.6960	16,694.7167
Waste						0.0000	0.0000		0.0000	0.0000	2,014.4011	0.0000	2,014.4011	119.0477	0.0000	4,990.5935
Water						0.0000	0.0000		0.0000	0.0000	249.7066	3,844.2256	4,093.9321	25.7829	0.6199	4,923.2255
Total	**78.8561**	**20.9216**	**222.8416**	**0.3497**	**20.4195**	**6.8301**	**27.2497**	**5.4487**	**6.8220**	**12.2707**	**2,963.8593**	**52,866.0762**	**55,829.9355**	**150.3342**	**1.6228**	**60,071.8778**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						tons/yr								MT/yr		
Mitigated	7.9946	8.1267	78.3201	0.1692	20.4195	0.1151	20.5346	5.4487	0.1070	5.5557	0.0000	16,459.1560	16,459.1560	1.1266	0.6960	16,694.7167
Unmitigated	7.9946	8.1267	78.3201	0.1692	20.4195	0.1151	20.5346	5.4487	0.1070	5.5557	0.0000	16,459.1560	16,459.1560	1.1266	0.6960	16,694.7167

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	4,900.35	4,900.35	4900.35	-11,629,903	-11,629,903
Single Family Housing	0.00	0.00	0.00		
Strip Mall	13,759.63	13,759.63	13759.63	65,962,029	65,962,029
Total	18,659.98	18,659.98	18,659.98	54,332,126	54,332,126

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	-6.52	-6.52	-6.52	40.20	19.20	40.60	100	0	0
Single Family Housing	-6.52	-6.52	-6.52	40.20	19.20	40.60	100	0	0
Strip Mall	13.17	13.17	13.17	16.60	64.40	19.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.531474	0.067154	0.192702	0.126421	0.024086	0.006875	0.011564	0.007937	0.000940	0.000574	0.026268	0.000718	0.0032
Single Family Housing	0.531474	0.067154	0.192702	0.126421	0.024086	0.006875	0.011564	0.007937	0.000940	0.000574	0.026268	0.000718	0.0032
Strip Mall	0.531474	0.067154	0.192702	0.126421	0.024086	0.006875	0.011564	0.007937	0.000940	0.000574	0.026268	0.000718	0.0032

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	19,619.0142	19,619.0142	0.6923	0.0729	19,658.0401
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	19,619.0142	19,619.0142	0.6923	0.0729	19,658.0401
NaturalGas Mitigated	1.0744	9.1884	3.9573	0.0586		0.7423	0.7423		0.7423	0.7423	0.0000	10,633.2651	10,633.2651	0.2038	0.1949	10,696.4533
NaturalGas Unmitigated	1.0744	9.1884	3.9573	0.0586		0.7423	0.7423		0.7423	0.7423	0.0000	10,633.2651	10,633.2651	0.2038	0.1949	10,696.4533

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	5.69002e+007	0.3068	2.6219	1.1157	0.0167		0.2120	0.2120		0.2120	0.2120	0.0000	3,036.4127	3,036.4127	0.0582	0.0557	3,054.4566
Single Family Housing	1.40031e+008	0.7551	6.4524	2.7457	0.0412		0.5217	0.5217		0.5217	0.5217	0.0000	7,472.5685	7,472.5685	0.1432	0.1370	7,516.9742
Strip Mall	2.32899e+006	0.0126	0.1142	0.0959	6.8000e-004		8.6800e-003	8.6800e-003		8.6800e-003	8.6800e-003	0.0000	124.2839	124.2839	2.3800e-003	2.2800e-003	125.0225
Total		**1.0744**	**9.1884**	**3.9573**	**0.0586**		**0.7423**	**0.7423**		**0.7423**	**0.7423**	**0.0000**	**10,633.2651**	**10,633.2651**	**0.2038**	**0.1950**	**10,696.4533**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	5.69002e+007	0.3068	2.6219	1.1157	0.0167		0.2120	0.2120		0.2120	0.2120	0.0000	3,036.4127	3,036.4127	0.0582	0.0557	3,054.4566
Single Family Housing	1.40031e+008	0.7551	6.4524	2.7457	0.0412		0.5217	0.5217		0.5217	0.5217	0.0000	7,472.5685	7,472.5685	0.1432	0.1370	7,516.9742
Strip Mall	2.32899e+006	0.0126	0.1142	0.0959	6.8000e-004		8.6800e-003	8.6800e-003		8.6800e-003	8.6800e-003	0.0000	124.2839	124.2839	2.3800e-003	2.2800e-003	125.0225
Total		**1.0744**	**9.1884**	**3.9573**	**0.0586**		**0.7423**	**0.7423**		**0.7423**	**0.7423**	**0.0000**	**10,633.2651**	**10,633.2651**	**0.2038**	**0.1950**	**10,696.4533**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	2.16745e+007	5,293.3086	0.1868	0.0197	5,303.8380
Single Family Housing	3.99845e+007	9,764.9688	0.3446	0.0363	9,784.3932
Strip Mall	1.86748e+007	4,560.7368	0.1609	0.0169	4,569.8089
Total		**19,619.0142**	**0.6923**	**0.0729**	**19,658.0401**

Burbank Housing Element - Los Angeles-South Coast County, Annual

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

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	2.16745e+007	5,293.3086	0.1868	0.0197	5,303.8380
Single Family Housing	3.99845e+007	9,764.9688	0.3446	0.0363	9,784.3932
Strip Mall	1.86748e+007	4,560.7368	0.1609	0.0169	4,569.8089
Total		**19,619.0142**	**0.6923**	**0.0729**	**19,658.0401**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	69.7871	3.6065	140.5642	0.1220		5.9727	5.9727		5.9727	5.9727	699.7516	2,310.4153	3,010.1670	3.4809	0.0391	3,108.8487
Unmitigated	69.7871	3.6065	140.5642	0.1220		5.9727	5.9727		5.9727	5.9727	699.7516	2,310.4153	3,010.1670	3.4809	0.0391	3,108.8487

Burbank Housing Element - Los Angeles-South Coast County, Annual

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

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	5.2028					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	57.6051					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.7431	2.3655	32.8190	0.1163		5.3749	5.3749		5.3749	5.3749	699.7516	2,134.2428	2,833.9945	3.3121	0.0391	2,928.4571
Landscaping	3.2361	1.2411	107.7452	5.7000e-003		0.5978	0.5978		0.5978	0.5978	0.0000	176.1725	176.1725	0.1688	0.0000	180.3916
Total	**69.7871**	**3.6065**	**140.5642**	**0.1220**		**5.9727**	**5.9727**		**5.9727**	**5.9727**	**699.7516**	**2,310.4153**	**3,010.1670**	**3.4809**	**0.0391**	**3,108.8487**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	5.2028					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	57.6051					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.7431	2.3655	32.8190	0.1163		5.3749	5.3749		5.3749	5.3749	699.7516	2,134.2428	2,833.9945	3.3121	0.0391	2,928.4571

Landscaping	3.2361	1.2411	107.7452	5.7000e-003		0.5978	0.5978		0.5978	0.5978	0.0000	176.1725	176.1725	0.1688	0.0000	180.3916
Total	**69.7871**	**3.6065**	**140.5642**	**0.1220**		**5.9727**	**5.9727**		**5.9727**	**5.9727**	**699.7516**	**2,310.4153**	**3,010.1670**	**3.4809**	**0.0391**	**3,108.8487**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4,093.9321	25.7829	0.6199	4,923.2255
Unmitigated	4,093.9321	25.7829	0.6199	4,923.2255

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	350.854 / 221.191	1,827.1673	11.4932	0.2763	2,196.8400

Single Family Housing	330.396 / 208.293	1,720.6249	10.8230	0.2602	2,068.7420
Strip Mall	105.837 / 64.8679	546.1400	3.4668	0.0833	657.6436
Total		**4,093.9321**	**25.7829**	**0.6199**	**4,923.2255**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	350.854 / 221.191	1,827.1673	11.4932	0.2763	2,196.8400
Single Family Housing	330.396 / 208.293	1,720.6249	10.8230	0.2602	2,068.7420
Strip Mall	105.837 / 64.8679	546.1400	3.4668	0.0833	657.6436
Total		**4,093.9321**	**25.7829**	**0.6199**	**4,923.2255**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2,014.4011	119.0477	0.0000	4,990.5935
Unmitigated	2,014.4011	119.0477	0.0000	4,990.5935

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	2477.1	502.8289	29.7163	0.0000	1,245.7374
Single Family Housing	5946.23	1,207.0310	71.3335	0.0000	2,990.3681
Strip Mall	1500.27	304.5413	17.9979	0.0000	754.4881
Total		**2,014.4011**	**119.0477**	**0.0000**	**4,990.5935**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

Burbank Housing Element - Los Angeles-South Coast County, Annual

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

Land Use	tons	MT/yr			
Apartments Low Rise	2477.1	502.8289	29.7163	0.0000	1,245.7374
Single Family Housing	5946.23	1,207.0310	71.3335	0.0000	2,990.3681
Strip Mall	1500.27	304.5413	17.9979	0.0000	754.4881
Total		**2,014.4011**	**119.0477**	**0.0000**	**4,990.5935**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix E

Transportation Assessment

Burbank Housing Element Update

Transportation Assessment

Prepared for:
City of Burbank

November 8, 2021

LA20-3200

FEHR & PEERS

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1. Introduction

This study was completed in support of the 2021 Housing Element Update for the City of Burbank. This transportation assessment provides the background and analysis to inform the City-required Environmental Impact Report (EIR) for consideration of the Housing Element Update. This transportation assessment is not a general analysis of transportation in Burbank. It is a project-specific assessment performed in compliance with the rules and regulations of CEQA and the City of Burbank.

The California Department of Housing and Community Development (HCD) has established that the 6th Cycle of the Housing Element for jurisdictions in the Southern California (SCAG) region will plan for the period of October 15, 2021 – October 15, 2029. The City must demonstrate that it has the policies and strategies as well as the land capacity necessary to meet the City's housing needs. The proposed update to the Burbank Housing Element (Project) has been prepared in response to the State's requirements. As part of the 6th Cycle Housing Element, the City has prepared a Suitable Sites Inventory (SSI) which identifies potential sites that could be redeveloped with housing. A detailed land use analysis based on existing land use throughout the City, current development activity, adopted plans, and the SSI was conducted by City staff. Land use data for the 2029 With Project scenario was provided by the City for use in this study.

This report describes the City's existing transportation and circulation system and mobility options, describes where housing can potentially be accommodated in the City per the Housing Element Update SSI, the assumptions and methodologies for the analysis, and the results of the transportation assessment.

1.1 Study Scope

In accordance with the California Environmental Quality Act (CEQA) and City transportation assessment requirements, this study analyzes the Project's effect on vehicle miles traveled (VMT) as the primary metric of assessing the potential for the Project to result in significant transportation impacts. Section 15064.3 of the CEQA Guidelines was added by the Office of Planning and Research (OPR) on December 28, 2018, and states that vehicle miles traveled (VMT) is the appropriate measure of transportation impacts for projects subject to CEQA. Section 15064.3(c) also states that the provisions of this section shall apply prospectively (i.e., only applicable to new projects after the date of adoption) and must be implemented statewide by July 1, 2020. Since the City of Burbank has not yet adopted its own VMT metrics and thresholds, this study is consistent with the approach provided in the OPR *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018) and interim City guidance based on discussions with City staff.

Because Section 15064.3 requires that intersection level of service (LOS) cannot be used to assess the potential significance of transportation impacts under CEQA, the intersection LOS contained in this report is provided as a local transportation assessment outside of the CEQA process to aid the community and decisionmakers in understanding the Project's potential effect on the City's roadway system.

As required by State CEQA guidance, a programmatic and qualitative assessment of the potential for the Project to increase hazards due to a geometric design feature, inadequate emergency access or inconsistency with plans, programs, ordinances, and policies is also included. This study also assesses the potential for transportation impacts of one alternative to the proposed Project.

1.2 Organization of Report

This report is divided into five chapters, including this introduction. **Chapter 2 – Transportation Environmental Setting** describes the existing transportation system and mobility options in Burbank (including the roadway network, public transit, bicycle/pedestrian facilities). **Chapter 3 – Future Analysis Scenarios** describes the scenarios analyzed for this Project. **Chapter 4 – Transportation Impact Analysis** provides the VMT impact analysis, identifies potential mitigation measures and presents other CEQA-required transportation analyses conducted for the Project. **Chapter 5 – Local Transportation Assessment** provides the local roadway intersection LOS analysis conducted for the Project. Appendices contain supporting technical documentation and data.

2. Transportation Environmental Setting

This section describes the existing and future (2029) transportation environmental setting for the City of Burbank. The transportation environmental setting includes the existing transportation network, including automobile, transit, bicycle, and pedestrian facilities, and planned and funded transportation improvements.

2.1 Existing Street and Highway System

The roadway network serving the City consists of the roadway classifications listed below. The functional classification of streets, as defined in the Mobility Element of the Burbank General Plan, is illustrated in **Figure 1**.

- **Freeways** are major regional connectors designed to accommodate longer, regional trips with limited local access. The freeway system in the City of Burbank is owned and operated by Caltrans and is limited to Interstate 5 and State Route 134.
- **Major and Secondary Arterial Streets** are generally defined as having at least two lanes in each direction along with a median turn lane. The width of Major and Secondary Arterial Streets is usually 68-76 feet with a typical parkway width of 6-16 feet.
- **Downtown Collectors** are generally defined as having one lane in each direction along with a median turn lane. The width of Downtown Collectors is usually 44-60 feet with a typical parkway width of 12-15 feet. Such streets are in the downtown commercial core of the City and prioritize people walking over all other modes.
- **Neighborhood Collectors or Locals** are generally defined as having one lane in each direction and no median turn lane. The width of Neighborhood Collectors or Locals is usually 36 feet with a typical parkway width of 12 feet. Such streets are typically intended for vehicle trips that start or end in the immediate vicinity of the street.

2.2 Existing Transit System

Transit service is provided by multiple transit operators, including LA Metro, Burbank Bus, and Metrolink:

- **LA Metro** is the primary transit operator in Los Angeles County, providing bus, light rail, and subway services. LA Metro provides Rapid, Express and Local bus lines within the City of Burbank. Headways for Rapid buses are typically 10 minutes during peak hours, and 20 minutes during off-peak times. Express buses operate during peak commute hours only.
- **Burbank Bus** provides additional local bus service within the City of Burbank. The three routes comprising the Burbank Bus system connect key destinations, including: the Media District, two LA Metro subway stations, two Metrolink stations, and the Bob Hope Airport.

- **Metrolink** provides commuter rail service throughout the greater Southern California region. The Metrolink system includes three stations within the City of Burbank. Metrolink service focuses on the peak commute hours but also provides some off-peak service.

2.3 Existing Bicycle and Pedestrian Facilities

The City's commitment to providing safe and comfortable bicycle infrastructure is laid out in the *City of Burbank Bicycle Master Plan* (City of Burbank, 2009).

Bicycle infrastructure in the City includes a network of on-street bicycle lanes and routes, as well as off-street paths, intended to increase access to citywide destinations, cyclist safety and citywide ridership. The bicycle network in the City is made up of the following facility types:

- **Class I Bike Paths** provide a completely separated right-of-way for the exclusive use by people walking and biking.
- **Class II Bike Lanes** are striped lanes that provide dedicated space for people biking on the roadway adjacent to auto and bus traffic.
- **Class III Bike Routes** are shared-use roadways where autos and bikes mix in the travel lane.

The City's bicycle network is mainly comprised of Class II and Class III facilities. The primary Class I facility in the City is the Chandler Bikeway. The network of existing and planned bicycle facilities in the City is shown in **Figure 2**.

Pedestrian infrastructure includes a nearly citywide network of sidewalks and marked crosswalks that improve the safety, comfort and visibility of people walking. Pedestrian facilities in the City include sidewalks, crosswalks, and multi-use paths.

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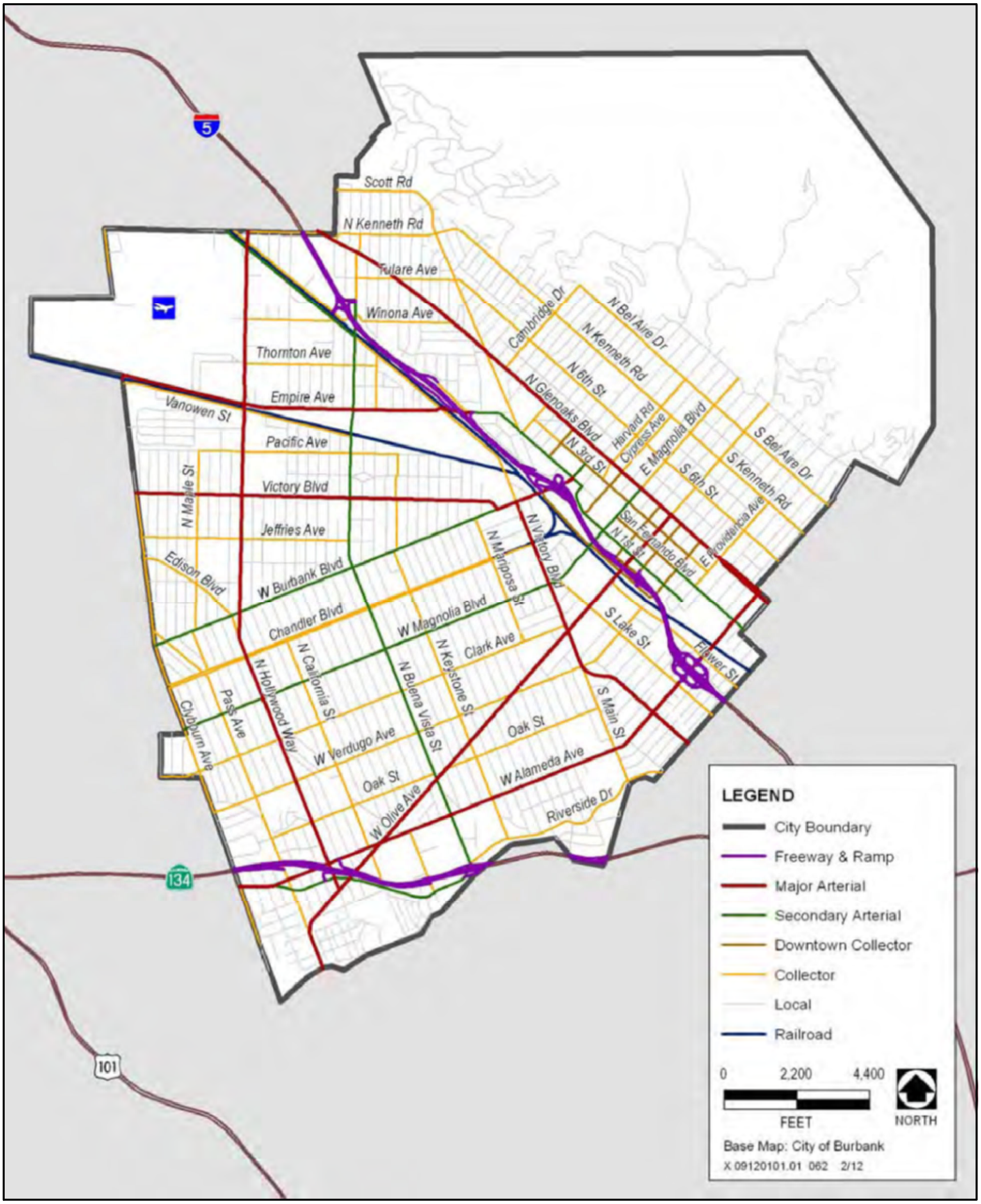
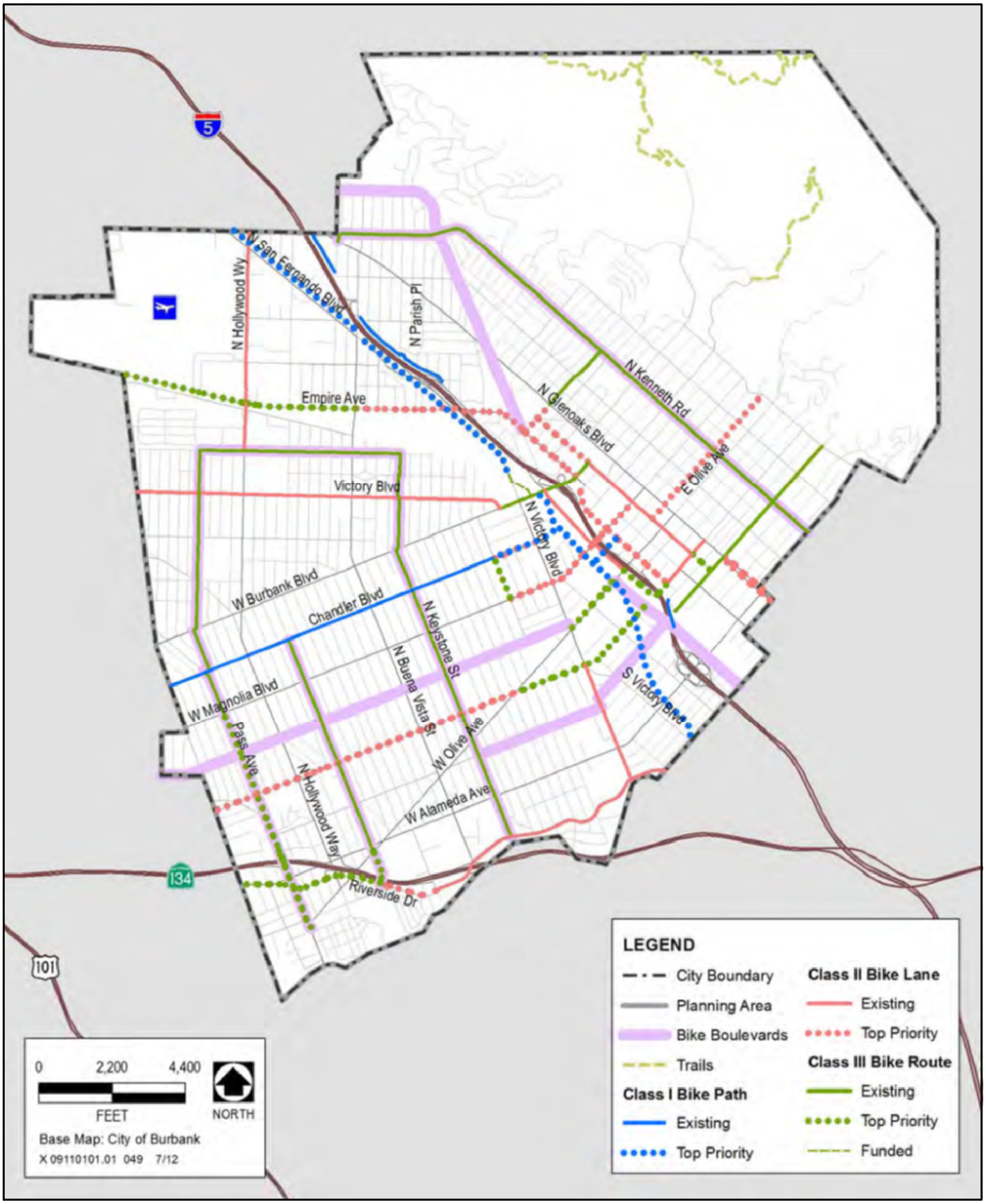


Source: Burbank 2035 General Plan

Figure 1

Existing Roadway Network



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Source: Burbank 2035 General Plan

Figure 2

Burbank2035 Future (Top Priority) Bikeway Network

3. Future Analysis Scenarios

3.1 Housing Element Update Project

The proposed Housing Element lays out the strategic plan for the development of housing to meet the City's state-mandated Regional Housing Needs Allocation (RHNA). This transportation study analyzes an increase in population of 21,103 and an increase in employment of 12,420 resulting from the Project's increase of 10,456 households and supporting commercial space.

3.2 Baseline (2021) Scenario

For this study, a Baseline (2021) scenario was created[1] and modeled using the 2016-2040 RTP/SCS SCAG travel demand model[2]. The land use and socio-economic data in the 2016 base year model was updated to represent the Baseline (2021) scenario using a straight-line interpolation of the forecasted population and employment growth between the 2016 base year and the 2040 horizon year from the SCAG model.

3.3 Future With Project (2029) Scenario

Table 1 presents the land use and socio-economic assumptions for the Future With Project (2029) scenario that was provided by the City for use in this study. **Figure 3** and **Figure 4** show the projected changes in households and commercial space across the City under the Future With Project scenario relative to the Baseline scenario.

Table 1 – Future (2029) Land Use and Population Assumptions

Category	Baseline	Future With Project	Percent Change from Baseline
Population	108,347	129,450	19%
Employment	119,073	131,493	10%
Total Households	44,471	53,028	19%

Source: 2016-2040 RTP/SCS SCAG Model, Fehr & Peers, 2021.

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[1] Household growth for the Housing Element project was determined in consultation with City staff and is based on a linear interpolation of the 2016-2040 RTP/SCS SCAG model socioeconomic data between the 2016 base year model scenario and the 2040 horizon year model scenario. The household growth the City attributed to the 2016-2029 period was 10,456 households. For CEQA compliance, the VMT analysis is required to adjust the baseline to the year of the NOP release, in this case 2021. Therefore, the household growth for the 2021-2029 period, adjusted using the linear interpolation approach, is 8,557 households.

[2] The 2020-2045 RTP/SCS SCAG travel demand model has not yet been released. Therefore, the 2016-2040 RTP/SCS SCAG travel demand model was the latest available regional travel demand model to perform the VMT analysis for this project.

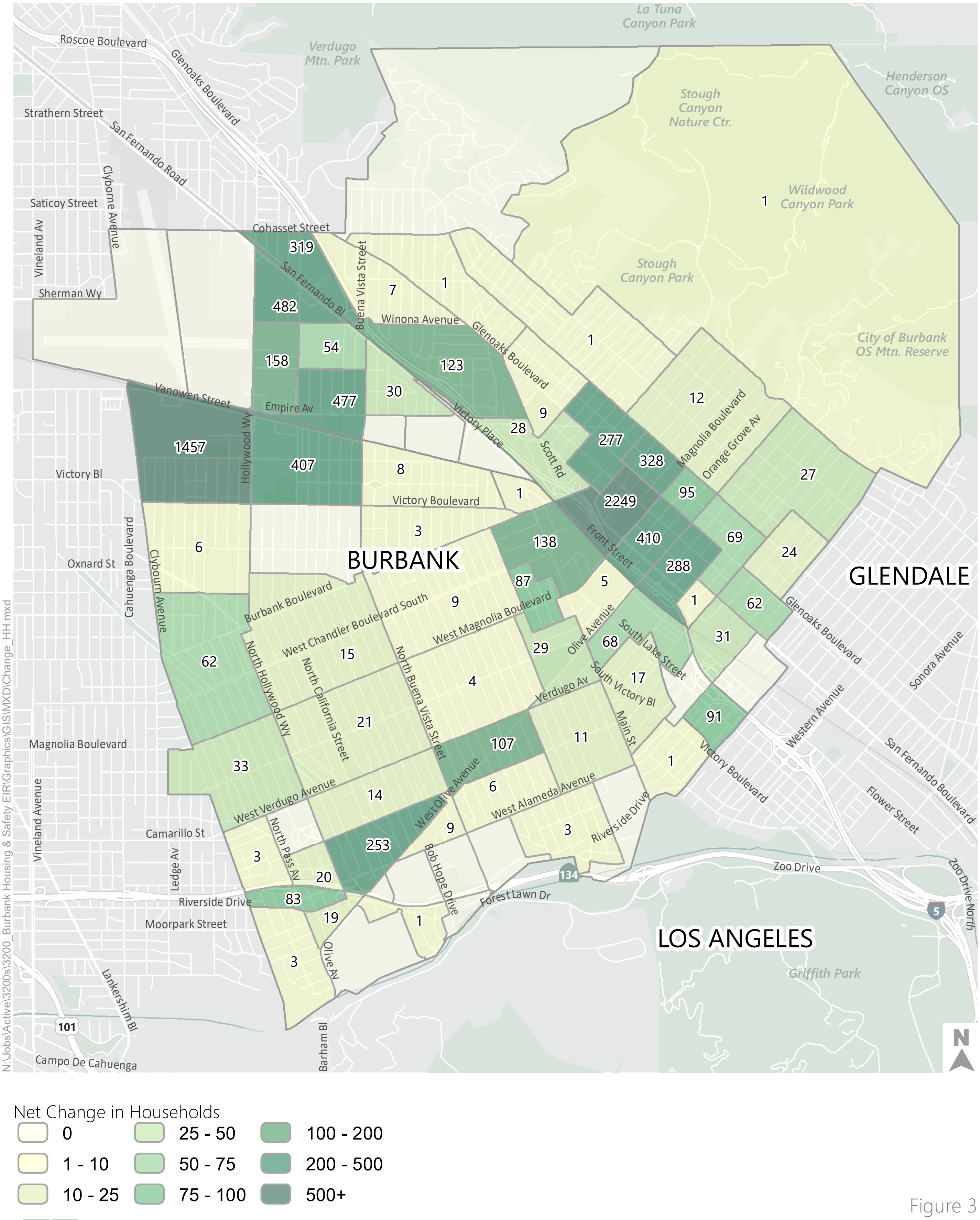

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Figure 3

Future (2029) with Project Change in Households

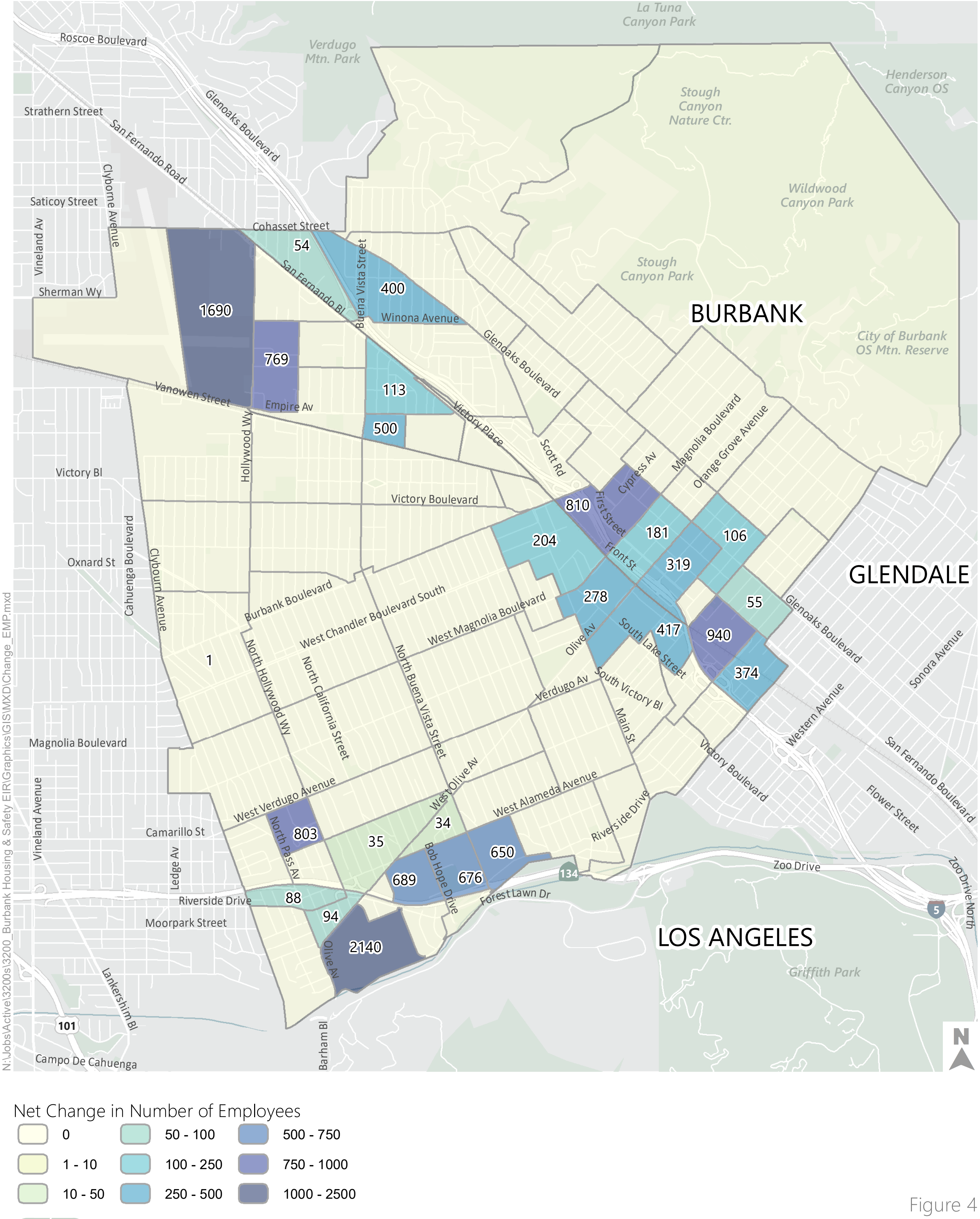

Figure 4

Future (2029) with Project Change in Employment

4. Transportation Impact Analysis

This chapter documents the transportation impact analysis conducted to determine the potential for the proposed Project, implementation of the Housing Element Update, to result in significant transportation impacts under CEQA. The methodologies and threshold criteria were determined in consultation with City staff and based on standard OPR guidance.

Section 15064.3 of the CEQA Guidelines was added by the Office of Planning and Research (OPR) on December 28, 2018, and states that vehicle miles traveled (VMT) is the appropriate measure of transportation impacts for projects subject to CEQA. Section 15064.3(c) also states that the provisions of the section shall apply prospectively (i.e., only applicable to new projects after the date of adoption) and must be implemented statewide by July 1, 2020. Since the City of Burbank has not yet adopted its own VMT metrics and thresholds, this study is consistent with the approach provided in the OPR *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018) and interim City guidance based on discussions with City staff. The analytical methods and significance thresholds, which are outlined as follows, are applied to the proposed Project. As required by CEQA, the potential for the Project to result in significant transportation impacts related to geometric design features, inadequate emergency access or inconsistency with plans, programs, ordinances, and policies was also assessed.

4.1 Background on VMT

VMT measures the cumulative distance of automobile travel, considering the origin and destination of a particular trip. Typically, development located at a greater distance from other land uses and in areas without transit and active transportation options generates more VMT than development near other land uses with more robust transportation options. As noted by OPR, mitigation to reduce VMT can include designing projects with a mix of uses, building transportation demand management (TDM) features into the project, locating the project in neighborhoods that have transit or active transportation opportunities, or contributing to the creation of such opportunities. Since VMT is sensitive to regional location, it can also be mitigated by choosing a more central location for the project. Used as a transportation metric under CEQA, VMT can encourage reductions in motor vehicle travel, increases in transit and active transportation use, and increase infill development opportunities.

For many years, VMT information has been utilized to help measure other CEQA impacts, including air quality and greenhouse gas emissions for individual projects. This is the first long-range plan analyzed by the City since the adoption of new VMT-based CEQA transportation impact methods and metrics in 2020.

4.2 VMT Significance Thresholds

City staff have determined a set of three VMT significance thresholds to apply to the Project, consistent with standard OPR guidance.

4.2.1 Threshold 1: VMT per Capita

The Project's VMT per capita must not exceed 15 percent below the baseline regional average VMT per capita. The baseline regional average VMT per capita is calculated using the 2016-2040 RTP/SCS SCAG model, interpolated to the baseline year (2021).

4.2.2 Threshold 2: VMT per Employee

The Project's VMT per employee must not exceed 15 percent below the baseline regional average VMT per employee. The baseline regional average VMT per employee is calculated using the 2016-2040 RTP/SCS SCAG model, interpolated to the baseline year (2021).

4.2.3 Threshold 3: Total VMT per Service Population

The Project's total VMT per service population[3] must not exceed 15 percent below the baseline regional average total VMT per service population. The baseline regional average total VMT per service population is calculated using the 2016-2040 RTP/SCS SCAG model, interpolated to the baseline year (2021).

If the Project exceeds any of these thresholds it is considered to have a significant transportation impact on the environment. City staff decided to include all three thresholds to provide a comprehensive understanding of potential VMT impacts caused by the Project.

4.3 VMT Calculation Methodology and Estimation

The 2016-2040 RTP/SCS SCAG model is calibrated to represent trip generation by various land use types, traffic volumes on local roadways, trip lengths, and the overall distribution and origin-destination patterns for the various trip purposes in the region. The SCAG model is the best available tool to estimate VMT for the current study. The model represents the following trip purposes:

- Residential trips generated by residential units (Home-based trips)
- Employee trips generated by residential units (Home-based work trips)
- Non-residential trips generated at other places beside home and work (Non-home-based trips)

Each of the above trip purposes have specific trip lengths, trip distribution and time-of-day patterns. Given the significant increase in housing supply in the City under the Future With Project scenario, the proportion of commute trips from Burbank residents to Burbank job locations (i.e., internal trips) increased compared to the Baseline scenario. The Future With Project scenario also includes a 7% reduction in single occupant vehicle commute trips to reflect various transportation demand management policies planned within the SCAG region and City.

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[3] Total VMT includes all resident and employee VMT plus other trip types including visitor and freight trips. Service population is the combined total of resident population and employees within a defined area.

4.4 Project VMT Impact Analysis

4.4.1 Project Comparison to Significance Thresholds

Based on the most recent data available from the SCAG model, the baseline regional average daily residential VMT per capita is 14.9, the baseline regional average daily work VMT per employee is 18.1, and the baseline regional total daily VMT per service population is 34.5. Therefore, these are the current thresholds applied to the Project.

Table 2 presents results from the SCAG model run for the Project for the Baseline (2021) and Future (2029) With Project scenarios. Under Future With Project conditions, the future City population of 129,450 is estimated to produce a total of 147,932 daily trips and 1,187,371 daily residential VMT, with an average of 9.2 miles per capita. The 131,493 future employees in the City are estimated to generate a total of 142,510 commute trips and 2,198,215 commute VMT, with an average of 16.7 miles per employee. The total 260,943 service population in the City is estimated to generate a total of 788,283 trips and 8,737,133 total trips, with an average of 33.5 miles per service population. Thus, the Project's daily VMT per capita would not exceed the City's VMT Significance Threshold 1. However, the Project's daily VMT per employee and total daily VMT per service population would exceed the City's VMT Significance Thresholds 2 and 3, respectively.

Table 2 – Burbank Housing Element Update Summary of Vehicle Miles Traveled

	VMT Metrics	**Regional Baseline (2021)**	**Future (2029) With Project**	**Alternative 2**
Socio-Economic Data (SED)	Population	19,544,863	129,450	149,239
	Employment	8,202,739	131,493	131,493
	Service Population	27,747,602	260,943	280,732
Vehicle Trips (VT)	Total Vehicle Trips (includes Auto and Trucks)	83,351,242	788,283	811,746
	Home-Based Vehicle Trips (Production)	26,889,647	147,932	161,512
	Home-Based Work Vehicle Trips (Attraction)	9,530,040	142,510	142,260
	Total Vehicle Trips per Service Population	3.0	3.0	2.9
	Home-Based Vehicle Trips per Capita	1.4	1.1	1.1
	Home-Based Work Vehicle Trips per Employee	1.2	1.1	1.1
Average Trip Length	Average Trip Length (Total Trip)	11.5	11.1	11.0
	Average Trip Length (Home-Based Trip Production)	10.9	8.0	8.0
	Average Trip Length (Home-Based Work Trip Attraction)	15.5	15.4	15.3
Vehicle Miles Traveled (VMT)	Total VMT (includes Auto and Trucks)	957,259,947	8,737,133	8,896,566
	Home-Based VMT (Production)	291,776,899	1,187,371	1,292,861
	Home-Based Work VMT (Attraction)	148,170,588	2,198,215	2,169,489
	Total VMT per Service Population	**34.5**	**33.5**	**31.7**
	Home-Based VMT per Capita	**14.9**	**9.2**	**8.7**
	Home-Based Work VMT per Employee	**18.1**	**16.7**	**16.5**

Source: Fehr & Peers, 2021.

4.5 Mitigation Measures

Potential mitigation measures to reduce the average VMT per employee and average total VMT per service population significant impacts include the following:

- Provide bicycle parking at employer locations
- Provide parking cash-out programs
- Provide car-sharing, bike sharing, and ride-sharing programs at employer locations
- Provide transit passes to employees
- Improve or increase transit accessibility to employer locations
- Improve pedestrian or bicycle networks, or transit service
- Provide traffic calming features on City roadways

Additionally, the City may evaluate the feasibility of a local or regional VMT impact bank or exchange. Such an offset program, if determined feasible, would be administered by the City or a regional agency, and would offer demonstrated VMT reduction strategies through transportation demand management programs, impact fee programs, mitigation banks or exchange programs, in-lieu fee programs, or other land use project conditions that reduce VMT in a manner consistent with state guidance on VMT reduction. If, through land use changes, a subject project cannot demonstrate consistency with state guidance on VMT reduction, the project can contribute on a pro-rata basis to a local or regional VMT reduction bank or exchange, as necessary, to reduce net VMT impacts.

However, these potential mitigation measures to reduce the significant impact are generally beyond the scope of the Housing Element Update. For example, average VMT per employee could be reduced by enacting transportation demand management (TDM) measures or participation in a VMT reduction bank or exchange at employer locations, but enacting TDM measures or a VMT reduction program at employer locations falls beyond the scope of the Housing Element. Similarly, average total VMT per service population could be reduced by changing visitor trip behavior to and from the Bob Hope Airport or freight trips throughout the City, but airport operations and freight distribution also fall beyond the scope of the Housing Element. Therefore, feasible measures do not exist to mitigate average VMT per employee and average total VMT per service population and the VMT impact for the Housing Element is significant and unavoidable.

4.6 Plans, Programs, Ordinances, and Policies and Hazards Review

The purpose of this section is to determine the potential for an increase of hazards due to a geometric design feature, emergency access, and whether the Project conflicts with a transportation-related City plan, ordinance, or policy that was adopted to protect the environment. A project would not be shown to result in an impact merely based on whether a project would not implement an adopted plan, ordinance, or policy. Rather, it is the intention of this threshold test to ensure that proposed development does not conflict with nor preclude the City from implementing adopted plans, ordinances, or policies. This evaluation was conducted by reviewing City documents such as the Burbank2035 General Plan, the Citywide Complete Streets Plan, and municipal code sections.

4.6.1 Geometric Design Hazards

4.6.1.1 Threshold

Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

4.6.1.2 Impact Statement

Adoption of the Housing Element Update does not grant entitlements for any specific project or future development. All future developments would be reviewed by the appropriate City staff to ensure consistency with all applicable City design standards, including standards on driveway number, location, design, sight lines, and roadway modifications. Therefore, the Housing Element Update would not result in increased hazards due to a geometric design feature or incompatible use and the impact is less than significant and mitigation is not required.

4.6.2 Emergency Access

4.6.2.1 Threshold

Would the project result in inadequate emergency access?

4.6.2.2 Impact Statement

Adoption of the Housing Element Update does not grant entitlements for any specific project or future development. All future developments would be reviewed by the appropriate City staff to ensure consistency with all applicable City design standards. Therefore, the Housing Element Update would not result in inadequate emergency access and the impact is less than significant and mitigation is not required.

4.6.3 Transit System Project Impacts

4.6.3.1 Disruptions to Existing Transit Service

4.6.3.1.1 Threshold

A significant impact would occur if a project or project-related mitigation disrupts existing transit services or facilities. This includes disruptions on transit streets caused by proposed project driveways, impacts to transit stops/shelters, and impacts to transit operations from traffic improvements proposed or resulting from a project.

4.6.3.1.2 Impact Statement

The Project is not anticipated to impact citywide transit circulation and the existing ADA-accessible sidewalks and curb ramps that provide access to bus stops will be maintained. Therefore, the impact is less than significant.

4.6.3.2 Interference with Planned Transit Services

4.6.3.2.1 Threshold

A significant impact occurs if a project interferes with planned transit services or facilities.

4.6.3.2.2 Impact Statement

Major planned transit improvements in the City include the California High Speed Rail Burbank Station, the North Hollywood to Pasadena bus rapid transit route, and increased Metrolink service. The Project will not prevent any of these improvements. Since there are no planned transit services that would be impacted by the development of the Project, the impact is less than significant.

4.6.3.3 Inconsistencies with Adopted Transit System Plans, Guidelines, Policies, or Standards

4.6.3.3.1 Threshold

A significant impact occurs if a project conflicts or creates inconsistencies with adopted transit system plans, guidelines, policies, or standards.

4.6.3.3.2 Impact Statement

The *Burbank2035 General Plan Mobility Element* includes policies supporting the development of alternative transportation programs. Key goals and objectives described by the Mobility Element include:

- Policy 2.1: Improve Burbank's alternative transportation access to local and regional destinations through land use decisions that support multimodal transportation.
- Policy 4.1: Ensure that local transit service is reliable, safe, and provides high-quality service to major employment centers, shopping districts, regional transit centers, and residential areas.

The Complete Streets Plan also includes goals to promote transit use by people of all ages and abilities and improve the experience for transit riders.

In addition, increased transit usage is a key goal of regional transportation plans and policies:

- The SCAG *Connect SoCal (2020-2045 Regional Transportation Plan/Sustainable Communities Strategy)* (2020) includes specific goals of sustainable mobility. This includes plans to improve air quality and public health, reduce greenhouse gas emissions, and promote transit-friendly development.
- The SCAG *Regional Comprehensive Plan* (2008) includes an adopted policy supporting local jurisdiction programs that encourage the use of transit and thus reduce the need for roadway expansion, reduce the number of auto trips and vehicle miles traveled, and create opportunities for residents to walk and bicycle.

The Project will not interfere with the adopted transit system plans, guidelines, policies or standards. Also, by encouraging development on infill sites or development of existing parcels with greater density in high-resource areas around the city already service by public transit, the Project will improve residential transit access and possibly increase transit mode share. Therefore, the impact is less than significant.

4.6.4 Bicycle Network Project Impacts

4.6.4.1 Disruptions to Existing Facilities

4.6.4.1.1 Threshold

A significant impact occurs if a project disrupts existing bicycle facilities.

4.6.4.1.2 Impact Statement

No Project features or physical mitigation measures have been proposed that would disrupt existing bicycle facilities. Therefore, the impact is less than significant.

4.6.4.2 Interference with Planned Bicycle Facilities

4.6.4.2.1 Threshold

A significant impact occurs if a project interferes with planned bicycle facilities. This includes failure to dedicate rights-of-way for planned on- and off-street bicycle facilities included in an adopted bicycle specific plan or to contribute towards construction of planned bicycle facilities along the project frontage.

4.6.4.2.2 Impact Statement

The Project would not interfere with planned bicycle facilities. Therefore, the impact is less than significant.

4.6.4.3 Conflicts with Adopted Bicycle Plans, Guidelines, Policies, or Standards

4.6.4.3.1 Threshold

A significant impact occurs if the project conflicts or creates inconsistencies with adopted bicycle system plans, guidelines, policies, or standards.

4.6.4.3.2 Impact Statement

The Citywide Complete Streets Plan and City of Burbank Bicycle Master Plan recognize the importance of bicycling as a viable means of transportation and provide prioritized recommendations for facilities and programs. The Project does not conflict with adopted bicycle system plans, guidelines, policies, or standards. Also, by encouraging development on infill sites or development of existing parcels with greater density in high-resource areas around the city, the Project will facilitate the completion of household errands on bike, rather than in a car, which further supports state and local transportation-related climate and congestion goals. Therefore, the impact is less than significant.

4.6.5 Pedestrian Network Project Impacts

4.6.5.1 Disruptions to Existing Facilities

4.6.5.1.1 Threshold

A significant impact occurs if a project disrupts existing pedestrian facilities.

4.6.5.1.2 Impact Statement

No Project features or physical mitigation measures have been proposed that would disrupt existing pedestrian facilities. Therefore, the impact is less than significant.

4.6.5.2 Interference with Planned Pedestrian Facilities

4.6.5.2.1 Threshold

A significant impact occurs if a project interferes with planned pedestrian facilities. In existing or planned urbanized areas, main streets, or pedestrian districts, this can include impacts to the quality of the walking environment.

4.6.5.2.2 Impact Statement

The Project would not interfere with planned pedestrian facilities. Therefore, the impact is less than significant.

4.6.5.3 Conflicts with Adopted Pedestrian Plans, Guidelines, Policies, or Standards

4.6.5.3.1 Threshold

A significant impact occurs if a project conflicts or creates inconsistencies with adopted pedestrian system plans, guidelines, policies, or standards.

4.6.5.3.2 Impact Statement

The Complete Streets Plan outlines policy goals for future pedestrian improvements. The plan sets goals to encourage walkability and improve pedestrian safety. The Project does not conflict with adopted pedestrian system plans, guidelines, policies, or standards. Also, by encouraging development on infill sites or development of existing parcels with greater density in high-resource areas around the city, the Project will facilitate the completion of household errands on foot, rather than in a car, which further supports state and local transportation-related climate and congestion goals. Therefore, the impact is less than significant.

5. Project Alternatives

Potential transportation impacts for the Project alternatives were evaluated as part of the study. As permitted under CEQA, Project alternatives were evaluated to a lesser level of detail than the proposed Project. A qualitative assessment of the first alternative to the Project was conducted to determine its potential VMT impacts as compared to the proposed Project. A quantitative assessment using the 2016-2040 RTP/SCS SCAG model was conducted for the second alternative to the Project to determine its potential VMT impacts as compared to the proposed Project. The alternatives to the proposed Project are described below:

- Alternative 1 – No Project. The No Project Alternative assumes that the Housing Element Update is not implemented. Growth would continue to occur in accordance with adopted plans and regulations. By 2029, it is estimated that a total of approximately 3,500 new households would be added to the Baseline amount. This is less than half as many as are anticipated under the Project.
- Alternative 2 – Adding More Housing. Alternative 2 would add an additional 8,144 households beyond what is proposed in the Project. The additional households would be dispersed proportionally citywide with the same distribution as the Project.

5.1 Impact Analysis of Project Alternatives

Alternative 1 assumes no additional housing growth beyond what is already expected in accordance with adopted plans and regulations. Since the baseline citywide average VMT per capita is already well under 15 percent below the baseline regional average VMT per capita, it is reasonable to expect that the No Project alternative, even with a smaller household increase, would also result in average VMT per capita for the City to be less than 15 percent below the baseline regional average VMT per capita. However, adding fewer houses than the Project would likely result in fewer internal trips and therefore it is reasonable to expect that the No Project alternative would result in average VMT per employee and average total VMT per service population for the City to be greater than the Project's result for these metrics and by extension greater than 15 percent below the baseline regional averages for these metrics. Therefore, Alternative 1 would still have two significant and unavoidable VMT impacts.

Alternative 2 was fully analyzed as part of this study and the results are presented above in **Table 2**. As shown, under Alternative 2 average VMT per capita would reduce further to 8.7, average VMT per employee would reduce further to 16.5, and average total VMT per service population would reduce further to 31.7. Since the results for Thresholds 2 and 3 are still greater than 15 percent below the baseline regional averages for these metrics, Alternative 2 would still have two significant and unavoidable VMT impacts.

The results of the VMT impact analysis for the proposed Project and alternatives is presented in **Table 3**.

Table 3 – Summary of Impacts for Project Alternatives

Scenario	Threshold Criteria 1 (VMT per Capita)	Threshold Criteria 2 (VMT per Employee)	Threshold Criteria 3 (Total VMT per Service Population)
Proposed Project	LTS	SUI	SUI
Alternative 1: No Project	LTS	SUI	SUI
Alternative 2: Adding More Housing	LTS	SUI	SUI

Notes: LTS = Less Than Significant Impact SUI = Significant and Unavoidable Impact

6. Non-CEQA Local Transportation Assessment

6.1 Study Intersections

The same 35 study intersections selected for the most recent Burbank General Plan Update study have also been analyzed for the Project study. All 35 intersections are signalized in both the Existing and Future With Project scenarios and are illustrated in **Figure 5**.

The following 35 study intersections were identified in conjunction with the City of Burbank to be analyzed as part of the scope of work for this Project:

1. Winona Avenue & Hollywood Way
2. Thornton Avenue & Hollywood Way
3. Victory Boulevard & Hollywood Way
4. Burbank Boulevard & Hollywood Way
5. Magnolia Boulevard & Hollywood Way
6. Verdugo Avenue & Hollywood Way
7. Riverside Drive & Alameda Avenue
8. Pass Avenue & Alameda Avenue
9. Pass Avenue & Olive Avenue
10. Alameda Avenue & Hollywood Way
11. Riverside Drive & Hollywood Way
12. Olive Avenue & Hollywood Way
13. Olive Avenue & Riverside Drive
14. Olive Avenue & Alameda Avenue & Ontario Street
15. Gleanoaks Boulevard & Buena Vista Street
16. San Fernando Boulevard & Buena Vista Street
17. Empire Avenue & Buena Vista Street
18. Vanowen Street & Buena Vista Street
19. Victory Boulevard & Buena Vista Street
20. Burbank Boulevard & Buena Vista Street
21. Magnolia Boulevard & Buena Vista Street
22. Olive Avenue & Buena Vista Street
23. Alameda Avenue & Buena Vista Street
24. Riverside Drive & State Route 134 Ramps & Buena Vista Street
25. Burbank Boulevard & Victory Boulevard & Victory Place
26. Magnolia Boulevard & Victory Boulevard
27. Olive Avenue & Victory Boulevard

28. Alameda Avenue & Victory Boulevard
29. Burbank Boulevard & San Fernando Boulevard
30. Magnolia Boulevard & First Street
31. Olive Avenue & First Street
32. Alameda Avenue & San Fernando Boulevard
33. Magnolia Boulevard & Glenoaks Boulevard
34. Olive Avenue & Glenoaks Boulevard
35. Alameda Avenue & Glenoaks Boulevard

6.2 Existing Traffic Volumes and Level of Service

This section presents existing peak hour traffic volumes, describes the methodology used to assess the traffic conditions at each study intersection, and analyzes the resulting operating conditions at each, indicating seconds of delay and levels of service (LOS).

6.2.1 Existing Traffic Volumes

Due to the COVID-19 pandemic, which has substantially affected local and regional travel patterns and traffic volumes, existing traffic counts could not be collected in the Baseline (2021) scenario year. Therefore, previously collected traffic volumes from 2017-2019 were used. Counts were collected for each study intersection on a weekday during both AM and PM peak commute hours. Since most of the counts used were from 2019, a growth factor was applied to the 2017 and 2018 counts to represent an Existing (2019) scenario. The growth factor was applied using the same methodology as described in the Future With Project Traffic Volumes section.

6.2.2 Level of Service Methodology

Study intersections were analyzed using the *Highway Capacity Manual (HCM), 6th Edition* methodology. The HCM, 6th Edition analysis methodology describes the operation of an intersection using a range of LOS from LOS A (free flow) to LOS F (severely congested conditions), based on a range of delay in seconds experienced per vehicle, as shown in **Table 4**. Signalized study intersections are considered adversely affected if the Project's traffic results in a change in level of service from LOS D or better to LOS E or F.

6.2.3 Existing (2019) Levels of Service

Existing traffic volumes, included in the Appendix, were analyzed using the methodologies described above to determine the existing operating conditions at the study intersections. **Table 5** summarizes the results of the analysis of the existing weekday AM and PM peak hour seconds of delay and corresponding LOS at each of the study intersections. Of the 35 study intersections, 26 operate at LOS D or better during both peak hours.

The following 9 study intersections are currently operating at poor levels of service, i.e., LOS E or F during one or both peak hours:

4. Burbank Boulevard & Hollywood Way (AM Peak Hour)
6. Verdugo Avenue & Hollywood Way (AM Peak Hour)
16. San Fernando Boulevard & Buena Vista Street (PM Peak Hour)
22. Olive Avenue & Buena Vista Street (AM Peak Hour)
24. Riverside Drive & State Route 134 Ramps & Buena Vista Street (AM & PM Peak Hours)
25. Burbank Boulevard & Victory Boulevard & Victory Place (PM Peak Hour)
26. Magnolia Boulevard & Victory Boulevard (PM Peak Hour)
27. Olive Avenue & Victory Boulevard (AM Peak Hour)
34. Olive Avenue & Glenoaks Boulevard (AM & PM Peak Hours)

Detailed LOS results are provided in the Appendix.

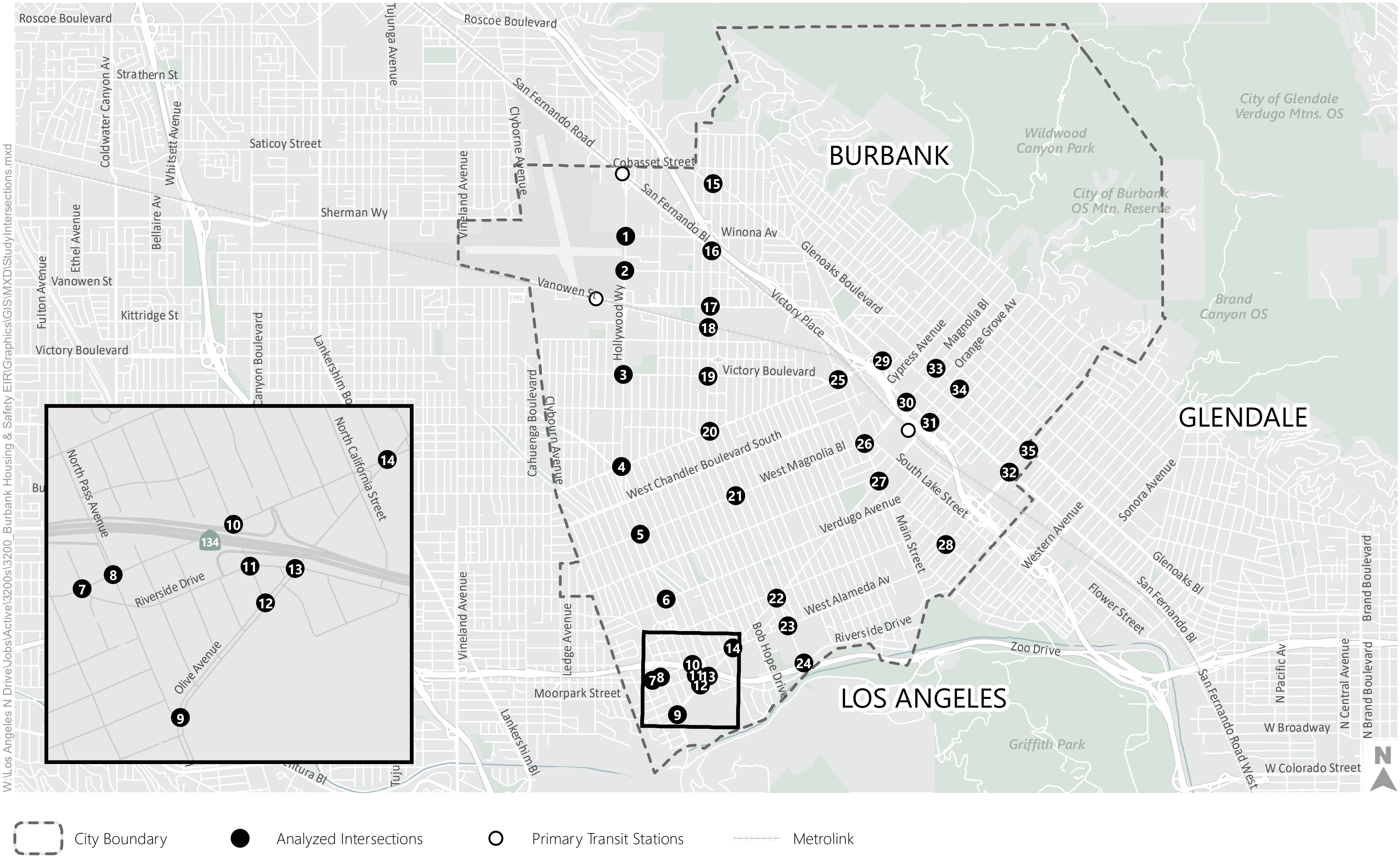


Figure 5

Study Intersections

Table 4 - HCM Level of Service Definitions for Signalized Intersections

LOS	Description	Signalized Delay (Seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle length.	≤ 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	> 10.0 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	> 20.0 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	> 35.0 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	> 55.0 to 80.0
F	Operations with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	> 80.0

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

Table 5 - Existing (2019) and Future (2029) With Project Intersection Levels of Service

#	Study Intersection	Peak Hour	Baseline 2019		2029 with Project	
			Delay	LOS	Delay	LOS
1	Winona Ave & Hollywood Way	AM	9	A	10	A
		PM	25	C	33	C
2	Thornton Ave & Hollywood Way	AM	27	C	29	C
		PM	26	C	27	C
3	Victory Blvd & Hollywood Way	AM	44	D	49	D
		PM	42	D	46	D
4	Burbank Blvd & Hollywood Way	**AM**	**59**	**E**	**66**	**E**
		PM	45	D	48	D
5	Magnolia Blvd & Hollywood Way	AM	36	D	39	D
		PM	37	D	41	D
6	Hollywood Way & Verdugo Ave	**AM**	**59**	**E**	**90**	**F**
		PM	44	D	53	D
7	Riverside Dr & Alameda Ave	AM	11	B	11	B
		PM	20	B	21	C
8	Pass Ave & Alameda Ave	AM	37	D	45	D
		PM	43	D	52	D
9	Olive Ave & Pass Ave	AM	18	B	18	B
		PM	23	C	24	C
10	Alameda Ave & Hollywood Way	AM	40	D	44	D
		PM	48	D	**57**	**E**
11	Hollywood Way & Riverside Dr	AM	29	C	33	C
		PM	31	C	36	D
12	Hollywood Way & Olive Ave	AM	18	B	18	B
		PM	18	B	20	B
13	Riverside Dr & Olive Ave	AM	37	D	39	D
		PM	35	D	38	D
14	Alameda Ave & Ontario St & Olive Ave	AM	32	C	33	C
		PM	38	D	40	D
15	Buena Vista St & Glenoaks Blvd	AM	26	C	34	C
		PM	20	B	21	C
16	San Fernando Blvd & Buena Vista St	AM	36	D	39	D
		PM	**70**	**E**	**87**	**F**
17	Buena Vista St & Empire Ave	AM	30	C	31	C
		PM	37	D	40	D
18	Vanowen St/Driveway & Buena Vista St	AM	29	C	31	C
		PM	30	C	33	C
19	Victory Blvd & Buena Vista St	AM	42	D	45	D
		PM	41	D	46	D
20	Burbank Blvd & Buena Vista St	AM	39	D	44	D
		PM	37	D	39	D
21	Magnolia Blvd & Buena Vista St	**AM**	46	D	**59**	**E**
		PM	44	D	51	D
22	Olive Ave & Buena Vista St	**AM**	**57**	**E**	**66**	**E**
		PM	52	D	55	D

23	Alameda Ave & Buena Vista St	AM	41	D	42	D
		PM	48	D	50	D
24	Riverside Dr & SR 134 Ramps/Buena Vista St & SR 134 WB On Ramp	**AM**	**63**	**E**	**68**	**E**
		PM	**63**	**E**	**74**	**E**
25	Burbank Blvd & Victory Blvd/Victory Pl	**AM**	53	D	**56**	**E**
		PM	**59**	**E**	**61**	**E**
26	Victory Blvd & Magnolia Blvd	**AM**	50	D	**57**	**E**
		PM	**85**	**F**	**98**	**F**
27	Olive Ave & Victory Blvd	**AM**	**56**	**E**	**58**	**E**
		PM	42	D	43	D
28	Alameda Ave & Victory Blvd	AM	30	C	30	C
		PM	37	D	41	D
29	Burbank Blvd & San Fernando Blvd	AM	33	C	36	D
		PM	30	C	31	C
30	Magnolia Blvd & First St	AM	24	C	25	C
		PM	30	C	36	D
31	Olive Ave & First St	AM	26	C	26	C
		PM	33	C	34	C
32	Alameda Ave & San Fernando Blvd	AM	51	D	54	D
		PM	48	D	52	D
33	Magnolia Blvd & Glenoaks Blvd	AM	24	C	52	D
		PM	26	C	34	C
34	Olive Ave & Glenoaks Blvd	**AM**	**75**	**E**	**100**	**F**
		PM	**99**	**F**	**117**	**F**
35	Alameda Ave & Glenoaks Blvd	**AM**	41	D	**57**	**E**
		PM	39	D	46	D

Source: Fehr & Peers, 2021.

6.3 Project Traffic

As indicated in Chapter 3, the Project includes the addition of 21,103 residents and 12,420 employees to the City of Burbank by the year 2029. The same 2016-2040 RTP/SCS SCAG model run used to estimate the Project's VMT was also utilized to estimate traffic growth at the 35 study intersections in the Future (2029) With Project scenario. Intersection growth rates for each of the study intersections was calculated using the SCAG model and applied to the Existing (2019) traffic volumes to estimate the Future (2029) With Project traffic volumes. The intersection growth rates for each study intersection are shown in the Appendix.

6.4 Future (2029) With Project Traffic Level of Service

The resulting Future (2029) With Project peak hour traffic volumes were analyzed to determine the projected future operating conditions with the addition of the Project traffic. The results of the Future (2029) With Project analysis are also presented in **Table 5** above. Of the 35 study intersections, 23 are projected to operate at LOS D or better during the AM and PM peak hours under Future (2029) With Project conditions.

The following 12 intersections are projected to operate at poor levels of service, i.e., LOS E or F:

5. Burbank Boulevard & Hollywood Way (AM Peak Hour)
7. Verdugo Avenue & Hollywood Way (AM Peak Hour)
10. Alameda Avenue & Hollywood Way (PM Peak Hour)
17. San Fernando Boulevard & Buena Vista Street (PM Peak Hour)
21. Magnolia Boulevard & Buena Vista Street (AM Peak Hour)
22. Olive Avenue & Buena Vista Street (AM Peak Hour)
24. Riverside Drive & State Route 134 Ramps & Buena Vista Street (AM & PM Peak Hours)
25. Burbank Boulevard & Victory Boulevard & Victory Place (AM & PM Peak Hours)
26. Magnolia Boulevard & Victory Boulevard (AM & PM Peak Hours)
27. Olive Avenue & Victory Boulevard (AM Peak Hour)
34. Olive Avenue & Glenoaks Boulevard (AM & PM Peak Hours)
35. Alameda Avenue & Glenoaks Boulevard (AM Peak Hour)

Details of the analysis are included in the Appendix.

References

- *Burbank2035 General Plan* (City of Burbank, 2013)
- *Burbank Citywide Complete Streets Plan* (City of Burbank, 2020)
- *City of Burbank Bicycle Master Plan* (City of Burbank, 2009)
- *Highway Capacity Manual, 6th Edition* (Transportation Research Board, 2016)

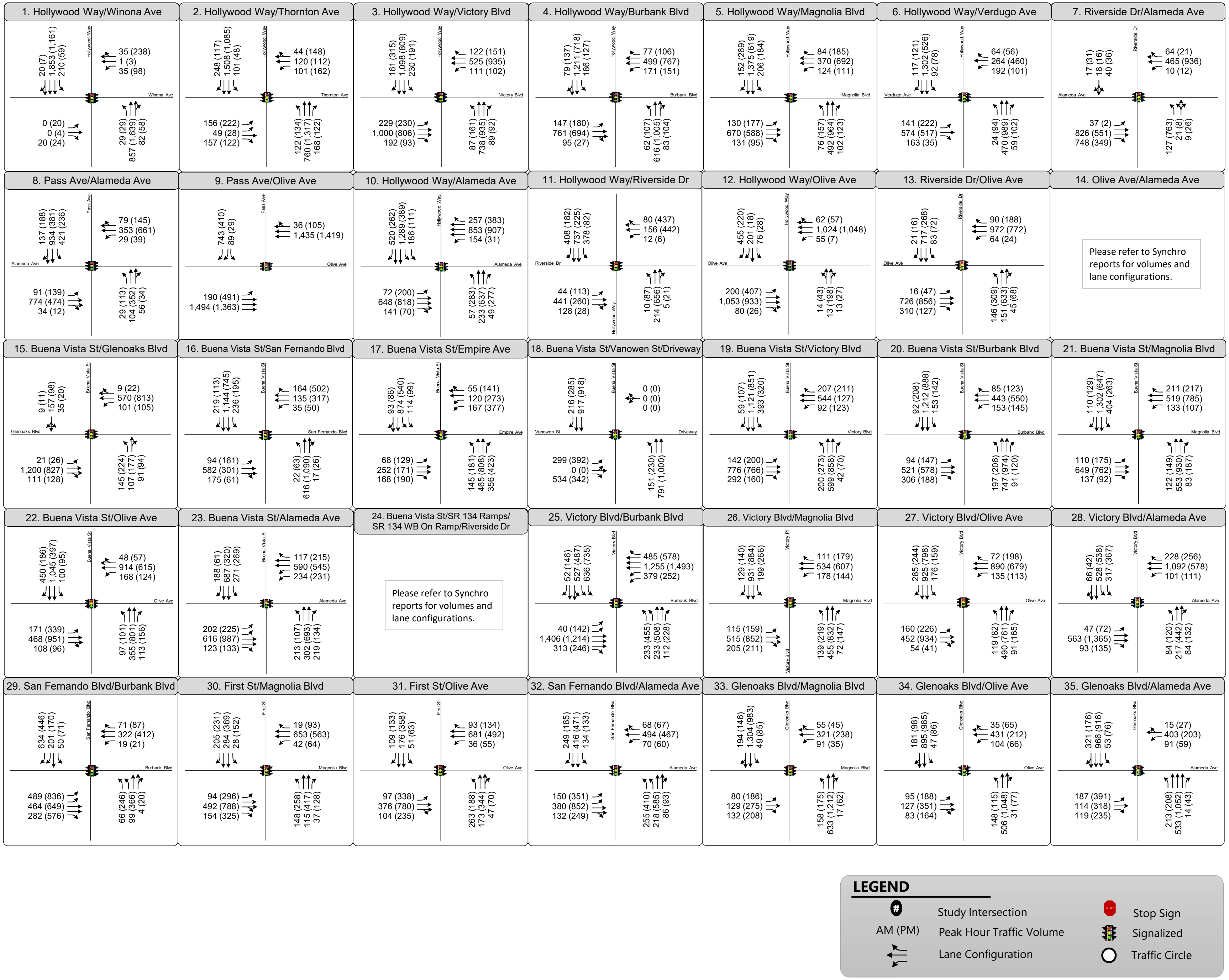
APPENDIX:
Intersection
Growth Rates

Table: Growth Rate by Intersections

Intersections	Base Volume		Future with Project Volume		Model Difference		Model Ratio	
	AM	PM	AM	PM	AM	PM	AM	PM
1 - Hollywood Way & Winona Avenue	2,409	2,878	2,732	3,309	323	431	13%	15%
2 - Hollywood Way & Thornton Avenue	2,747	2,960	2,996	3,220	249	260	9%	9%
3 - Hollywood Way & Victory Boulevard	3,682	4,394	3,956	4,812	274	418	7%	10%
4 - Hollywood Way & Burbank Boulevard	3,094	3,665	3,267	4,006	173	341	6%	9%
5 - Hollywood Way & Magnolia Boulevard	2,044	2,479	2,216	2,925	172	446	8%	18%
6 - Hollywood Way & Verdugo Avenue	2,264	2,720	2,526	3,146	262	426	12%	16%
7 - Riverside Drive & Alameda Avenue	1,786	2,134	2,003	2,550	217	416	12%	19%
8 - Pass Avenue & Alameda Avenue	2,557	2,673	2,839	3,020	282	347	11%	13%
9 - Pass Avenue & Olive Avenue	4,890	5,290	5,012	5,457	122	167	2%	3%
10 - Hollywood Way & Alameda Avenue	4,467	4,885	4,867	5,605	400	720	9%	15%
11 - Hollywood Way & Riverside Drive	2,384	2,464	2,576	3,028	192	564	8%	23%
12 - Hollywood Way & Olive Avenue	3,206	3,539	3,230	3,689	24	150	1%	4%
13 - Olive Avenue & Riverside Drive	2,821	3,347	3,113	3,839	292	492	10%	15%
14 - Olive Avenue & Alameda Avenue	3,971	4,555	4,182	4,864	211	309	5%	7%
15 - Buena Vista Street & Glenoaks Boulevard	1,363	1,510	1,529	1,687	166	177	12%	12%
16 - Buena Vista Street & San Fernando Boulevard	3,257	3,878	3,453	4,237	196	359	6%	9%
17 - Buena Vista Street & Empire Avenue	5,210	6,182	5,924	7,121	714	939	14%	15%
18 - Buena Vista Street & Vanowen Street	2,848	2,989	3,223	3,454	375	465	13%	16%
19 - Buena Vista Street & Victory Boulevard	4,024	4,550	4,338	5,016	314	466	8%	10%
20 - Buena Vista Street & Burbank Boulevard	2,722	3,177	2,956	3,511	234	334	9%	11%
21 - Buena Vista Street & Magnolia Boulevard	2,069	2,614	2,288	2,926	219	312	11%	12%
22 - Buena Vista Street & Olive Avenue	2,738	3,273	3,002	3,604	264	331	10%	10%
23 - Buena Vista Street & Alameda Avenue	3,186	3,370	3,331	3,522	145	152	5%	5%
24 - Buena Vista Street/State Route 134 & Riverside Drive	1,936	1,798	2,064	1,948	128	150	7%	8%
25 - Victory Boulevard/Victory Place & Burbank Boulevard	4,385	4,761	4,588	5,006	203	245	5%	5%
26 - Victory Boulevard & Magnolia Boulevard	3,232	3,931	3,579	4,322	347	391	11%	10%
27 - Victory Boulevard & Olive Avenue	3,004	3,666	3,092	3,893	88	227	3%	6%
28 - Victory Boulevard & Alameda Avenue	3,474	4,401	3,794	4,892	320	491	9%	11%
29 - San Fernando Boulevard & Burbank Boulevard	3,359	3,964	3,510	4,026	151	62	4%	2%
30 - First Street & Magnolia Boulevard	1,998	2,441	2,373	2,911	375	470	19%	19%
31 - First Street & Olive Avenue	2,391	2,545	2,398	2,734	7	189	0%	7%
32 - San Fernando Boulevard & Alameda Avenue	2,924	3,952	3,448	4,494	524	542	18%	14%
33 - Glenoaks Boulevard & Magnolia Boulevard	1,758	2,326	2,211	2,645	453	319	26%	14%
34 - Glenoaks Boulevard & Olive Avenue	2,393	2,911	2,761	3,149	368	238	15%	8%
35 - Glenoaks Boulevard & Alameda Avenue	3,277	4,086	3,743	4,498	466	412	14%	10%
Total					**9,250**	**12,758**	**9%**	**11%**
Annual Growth Rate							**0.7%**	**0.8%**

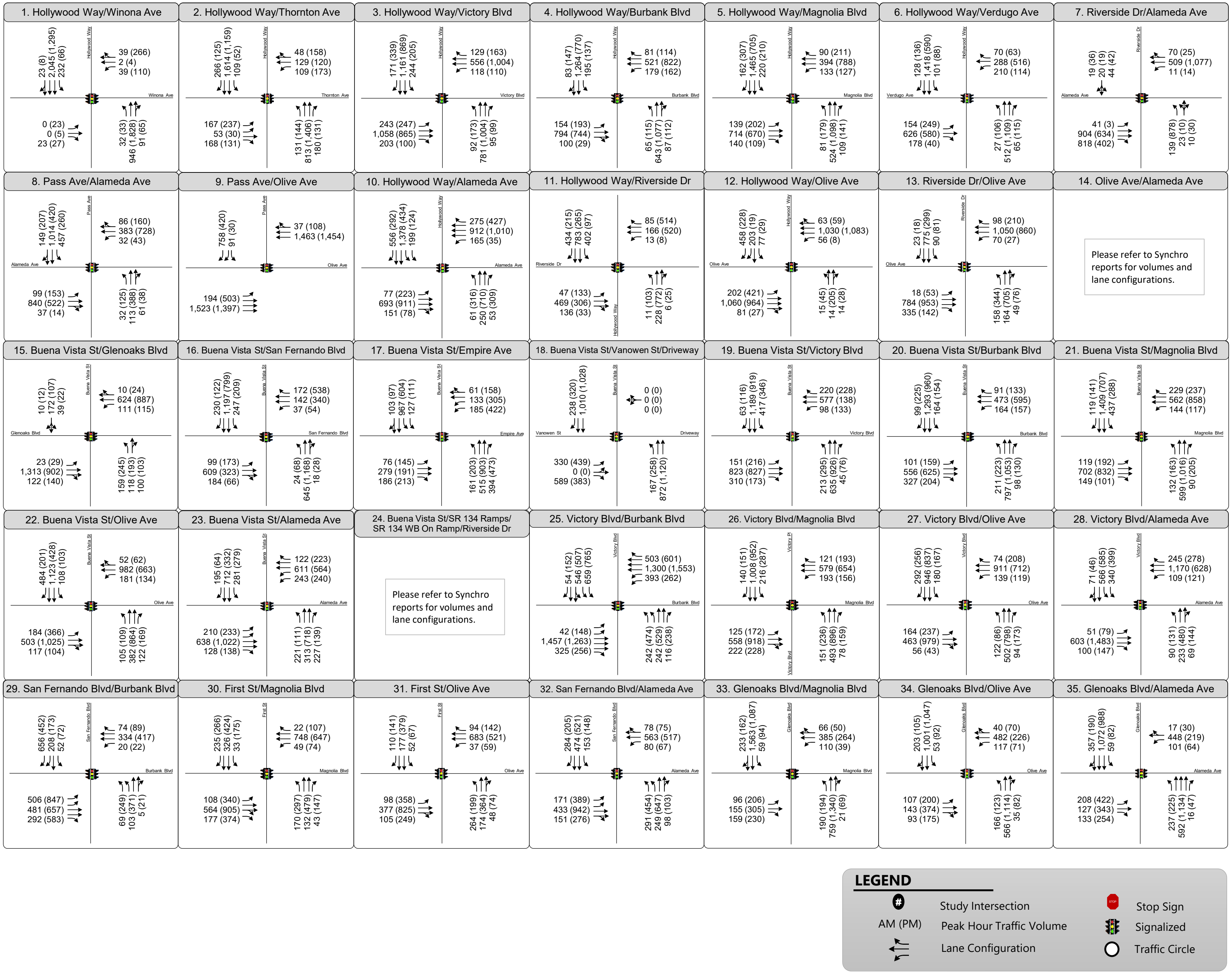
APPENDIX:

Intersection Lane Configurations and Turning Movement Volumes



FEHR PEERS

Existing (2019) Conditions
Traffic Volumes & Lane Configurations AM(PM)
Burbank Housing Element Update
FIGURE 1



Future Plus Project (2029) Conditions
Traffic Volumes & Lane Configurations AM(PM)
Burbank Housing Element Update
FIGURE 2

APPENDIX:

Existing Traffic Counts

Prepared by National Data & Surveying Services

N Hollywood Way & Winona Ave

Peak Hour Turning Movement Count

ID: 19-05223-002
City: Burbank

Day: Tuesday
Date: 04/23/2019

PEAK HOURS		COUNT PERIODS
07:45 AM - 08:45 AM	AM	07:00 AM - 10:00 AM
NONE	NOON	NONE
05:00 PM - 06:00 PM	PM	04:30 PM - 07:30 PM

N Hollywood Way SOUTHBOUND

	↲	↓	↳	U-turn	⇧
AM	20	1853	209	1	893
NOON	0	0	0	0	0
PM	7	1161	59	0	1897
Lanes	0	3	1	0	

Winona Ave EASTBOUND

	AM	NOON	PM	Lanes
⇦	49	0	35	
U-turn	0	0	0	0
Left	0	0	20	1
→	0	0	4	1
Right	20	0	24	1

Winona Ave WESTBOUND

Lanes		PM	NOON	AM
0	Right	238	0	35
2	←	3	0	1
1	Left	98	0	35
0	U-turn	0	0	0
	⇨	121	0	291

N Hollywood Way NORTHBOUND

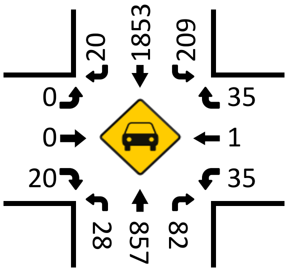
	⇩	U-turn	↰	↑	↱
Lanes		0	1	2	0
PM	1287	4	25	1639	58
NOON	0	0	0	0	0
AM	1909	1	28	857	82

CONTROL

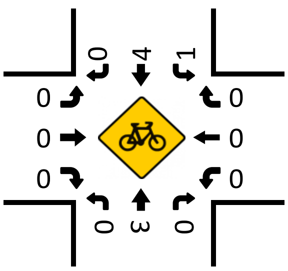
Signalized

	AM	NOON	PM
TEV	3142	0	3340
PHF	0.97		0.92

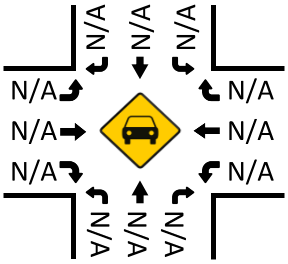
Total Vehicles (AM)



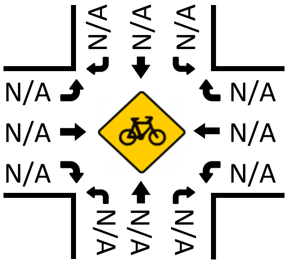
Bikes (AM)



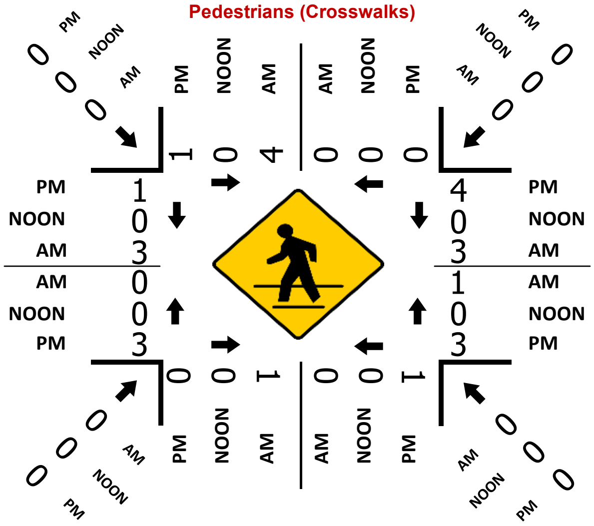
Total Vehicles (Noon)



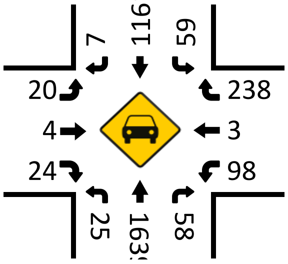
Bikes (NOON)



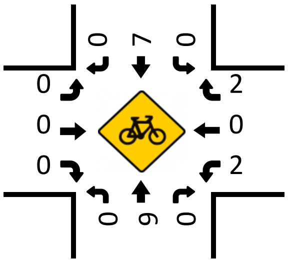
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

N Hollywood Way & Thornton Ave

Peak Hour Turning Movement Count

ID: 19-05223-003
City: Burbank

Day: Tuesday
Date: 04/23/2019

	PEAK HOURS	COUNT PERIODS
AM	08:00 AM - 09:00 AM	07:00 AM - 10:00 AM
NOON	NONE	NONE
PM	05:00 PM - 06:00 PM	04:30 PM - 07:30 PM

N Hollywood Way

SOUTHBOUND

AM	248	1508	101	0	960	AM
NOON	0	0	0	0	0	NOON
PM	117	1085	48	0	1687	PM
	↲	↓	↳	↶	⇧	
	1	2	1	0		

Thornton Ave

EASTBOUND

AM	NOON	PM		
490	0	361	⇦	
0	0	0	↶	0
156	0	222	↱	2
49	0	28	→	1
157	0	122	↴	1
AM	NOON	PM		

CONTROL

Signalized

TEV	3534	0	3617
	AM	NOON	PM
PHF	0.95		0.93

Thornton Ave

WESTBOUND

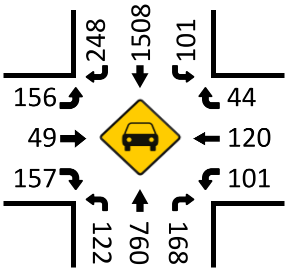
		PM	NOON	AM
0.5	↰	148	0	44
1.5	←	112	0	120
1	↲	162	0	101
0	↷	0	0	0
	⇨	198	0	318
		PM	NOON	AM

		0	1	2	1	
	⇩	↶	↰	↑	↱	
PM	1371	2	132	1317	122	PM
NOON	0	0	0	0	0	NOON
AM	1766	0	122	760	168	AM

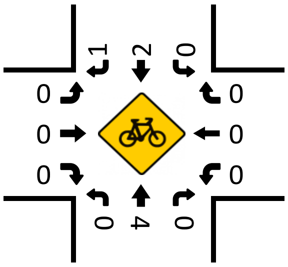
NORTHBOUND

N Hollywood Way

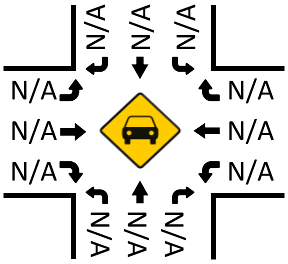
Total Vehicles (AM)



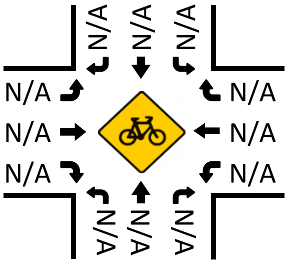
Bikes (AM)



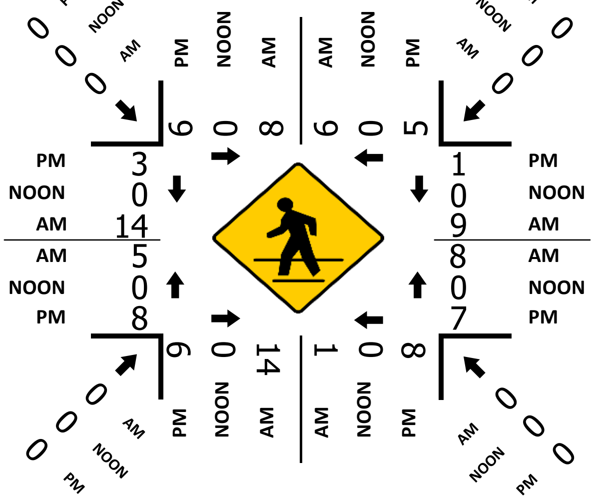
Total Vehicles (Noon)



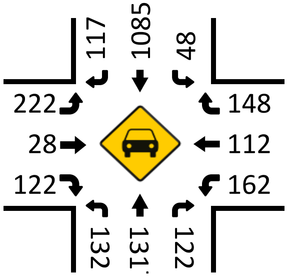
Bikes (NOON)



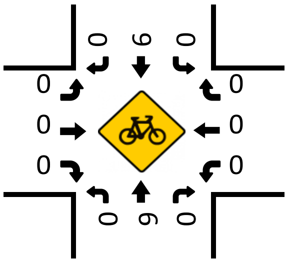
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

N Hollywood Way & W Victory Blvd

Peak Hour Turning Movement Count

ID: 19-05223-009
City: Burbank

Day: Tuesday
Date: 04/23/2019

	PEAK HOURS	COUNT PERIODS
AM	07:45 AM - 08:45 AM	07:00 AM - 10:00 AM
NOON	NONE	NONE
PM	05:30 PM - 06:30 PM	04:30 PM - 07:30 PM

N Hollywood Way

SOUTHBOUND

	↲	↓	↳	↻	⇧
AM	161	1098	230	0	1089
NOON	0	0	0	0	0
PM	315	809	191	0	1316
	1	2	1	0	

W Victory Blvd

EASTBOUND

	AM	NOON	PM
⇦	773	0	1411
↻ 0	0	0	0
↰ 1	229	0	230
→ 2	1000	0	806
↴ 1	192	0	93

W Victory Blvd

WESTBOUND

	PM	NOON	AM
1 ↰	151	0	122
2 ←	935	0	525
1 ↲	102	0	111
0 ↻	0	0	0
⇨	1089	0	1319

CONTROL

Signalized

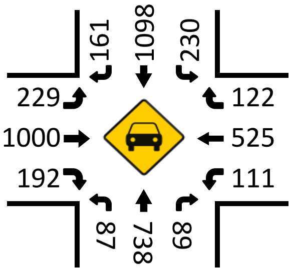
	AM	NOON	PM
TEV	4582	0	4820
PHF	0.91		0.98

NORTHBOUND

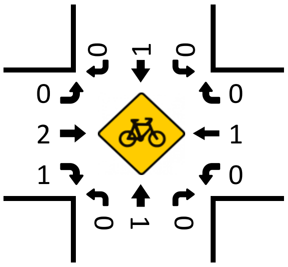
	⇩	↺	↰	↑	↱
		0	1	2	1
PM	1004	0	161	935	92
NOON	0	0	0	0	0
AM	1401	0	87	738	89

N Hollywood Way

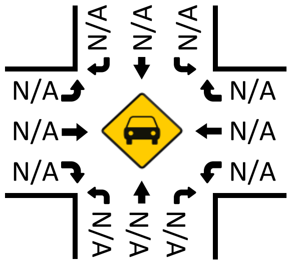
Total Vehicles (AM)



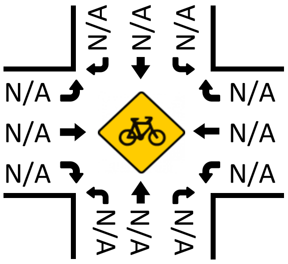
Bikes (AM)



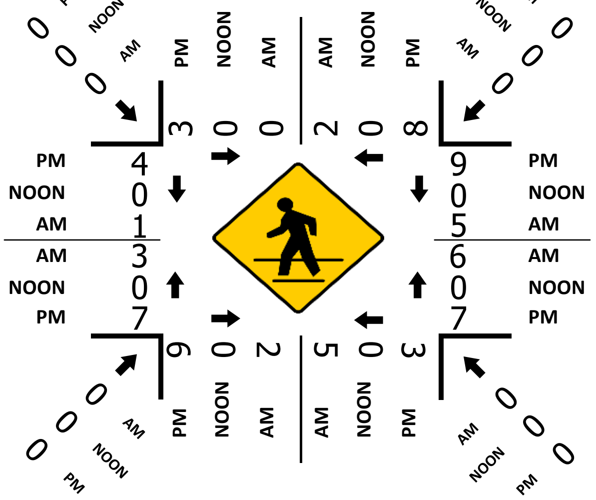
Total Vehicles (Noon)



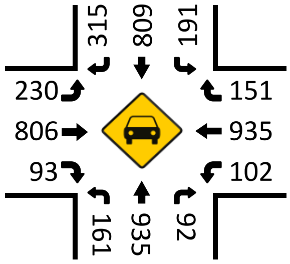
Bikes (NOON)



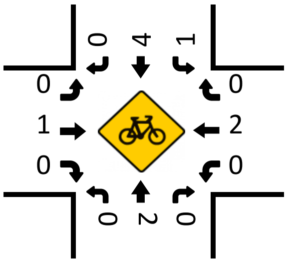
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

N Hollywood Way & W Burbank Blvd

Peak Hour Turning Movement Count

ID: 19-05223-010
City: Burbank

Day: Tuesday
Date: 04/23/2019

PEAK HOURS	
AM	07:45 AM - 08:45 AM
NOON	NONE
PM	05:30 PM - 06:30 PM

COUNT PERIODS	
AM	07:00 AM - 10:00 AM
NOON	NONE
PM	04:30 PM - 07:30 PM

N Hollywood Way

SOUTHBOUND

AM	79	1211	186	0	840	AM
NOON	0	0	0	0	0	NOON
PM	137	718	127	0	1290	PM
	0	2	1	0		

W Burbank Blvd

EASTBOUND

AM	NOON	PM	
640	0	1012	
0	0	1	0
147	0	179	1
761	0	694	2
95	0	27	0

W Burbank Blvd

WESTBOUND

	PM	NOON	AM
1	106	0	77
2	767	0	499
1	151	0	171
0	0	0	0
	925	0	1030

CONTROL

Signalized

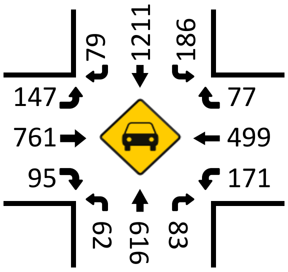
	AM	NOON	PM
TEV	3987	0	4123
PHF	0.93		0.98

NORTHBOUND

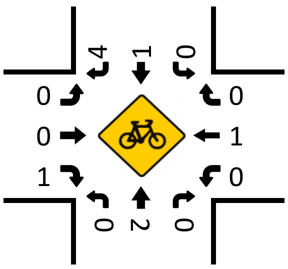
N Hollywood Way

		0	1	2	0	
PM	896	0	107	1005	104	PM
NOON	0	0	0	0	0	NOON
AM	1477	0	62	616	83	AM

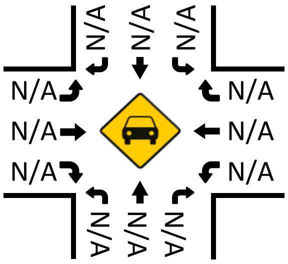
Total Vehicles (AM)



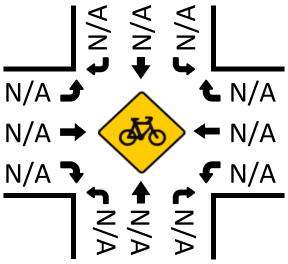
Bikes (AM)



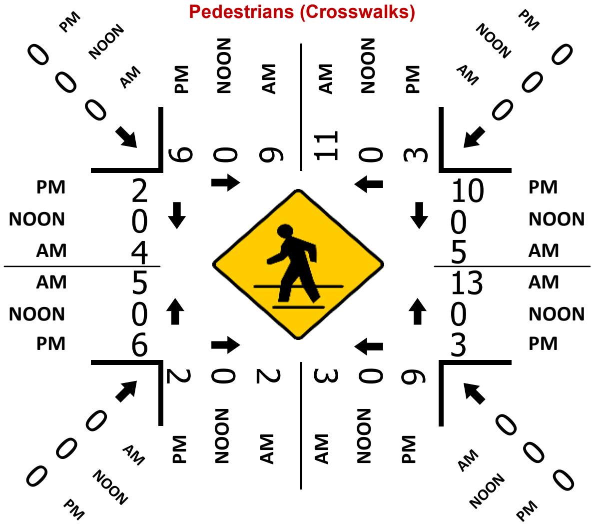
Total Vehicles (Noon)



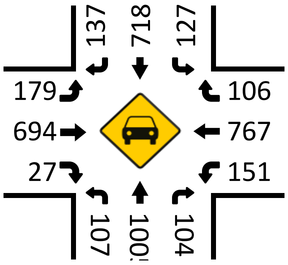
Bikes (NOON)



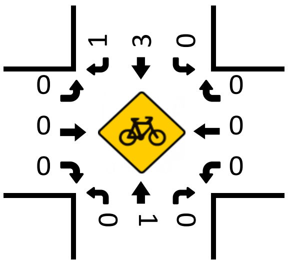
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

N Hollywood Way & Magnolia Blvd

Peak Hour Turning Movement Count

ID: 19-05223-011
City: Burbank

Day: Tuesday
Date: 04/23/2019

PEAK HOURS	
AM	08:15 AM - 09:15 AM
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS	
AM	07:00 AM - 10:00 AM
NOON	NONE
PM	04:30 PM - 07:30 PM

N Hollywood Way
SOUTHBOUND

	↲	↓	↳	↻	⇧
AM	152	1375	206	0	705
NOON	0	0	0	0	0
PM	269	619	184	0	1326
	1	2	1	0	

Magnolia Blvd
EASTBOUND

	AM	NOON	PM	
⇦	599	0	1117	
↺	1	0	0	0
↰	129	0	177	1
→	670	0	588	2
↱	131	0	95	1

Magnolia Blvd
WESTBOUND

		PM	NOON	AM
1	↰	185	0	84
2	←	692	0	370
1	↲	110	0	124
0	↺	1	0	0
	⇨	896	0	978

CONTROL

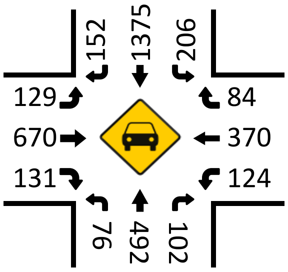
Signalized

	AM	NOON	PM
TEV	3912	0	4164
PHF	0.98		0.98

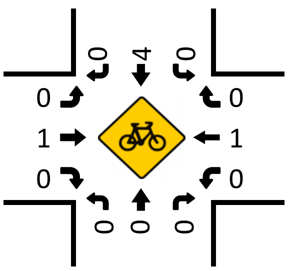
NORTHBOUND
N Hollywood Way

		0	1	2	1
	⇩	↺	↰	↑	↱
PM	825	1	156	964	123
NOON	0	0	0	0	0
AM	1630	0	76	492	102

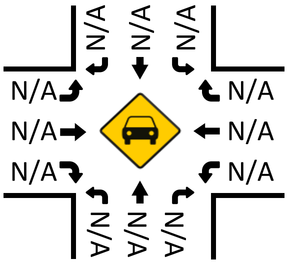
Total Vehicles (AM)



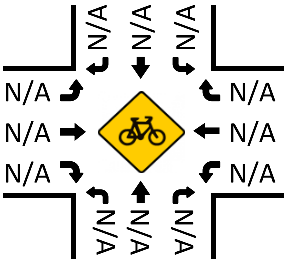
Bikes (AM)



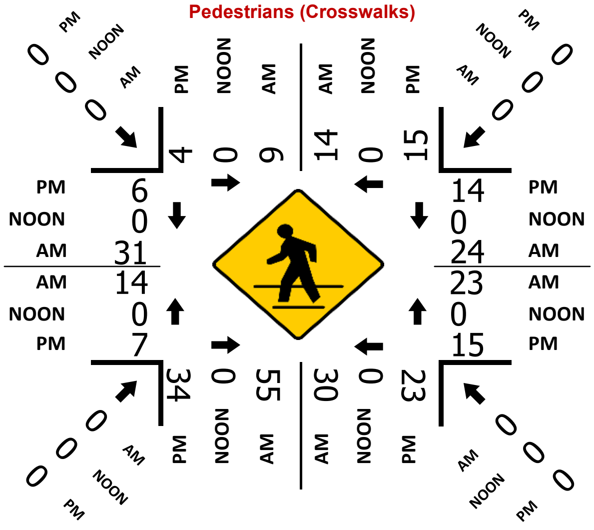
Total Vehicles (Noon)



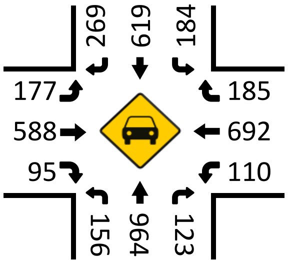
Bikes (NOON)



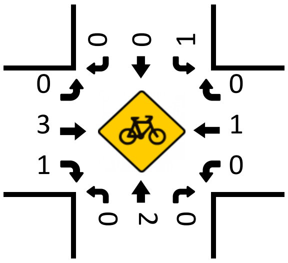
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: N Hollywood Way & W Verdugo Ave
City: Burbank
Control: Signalized

Project ID: 19-05223-012
Date: 4/23/2019

Total

NS/EW Streets:	N Hollywood Way				N Hollywood Way				W Verdugo Ave				W Verdugo Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	1	1	1	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	3	88	2	0	7	238	25	0	27	25	16	0	34	50	10	0	525
7:15 AM	2	83	14	0	5	244	40	0	31	49	9	0	30	50	8	0	565
7:30 AM	11	96	3	0	13	323	33	0	42	75	18	0	29	53	9	0	705
7:45 AM	5	128	15	0	17	315	31	0	52	90	22	0	39	82	15	0	811
8:00 AM	7	133	12	0	22	331	24	0	35	106	26	0	43	70	13	0	822
8:15 AM	7	103	14	0	37	282	34	0	33	190	40	0	36	71	11	0	858
8:30 AM	5	127	14	0	22	361	29	0	27	156	39	0	58	70	25	0	933
8:45 AM	5	107	19	0	11	328	30	0	46	122	58	0	55	53	15	0	849
9:00 AM	8	102	6	0	4	344	18	0	43	119	58	0	51	56	12	0	821
9:15 AM	7	118	8	0	15	349	25	0	44	101	47	0	35	55	10	0	814
9:30 AM	6	115	15	0	11	260	31	0	40	90	42	0	32	60	12	0	714
9:45 AM	4	136	12	0	9	276	28	0	56	89	20	0	34	57	13	0	734
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	70	1336	134	0	173	3651	348	0	476	1212	395	0	476	727	153	0	9151
APPROACH %'s :	4.55%	86.75%	8.70%	0.00%	4.15%	87.51%	8.34%	0.00%	22.85%	58.19%	18.96%	0.00%	35.10%	53.61%	11.28%	0.00%	
PEAK HR :	**08:00 AM - 09:00 AM**																TOTAL
PEAK HR VOL :	24	470	59	0	92	1302	117	0	141	574	163	0	192	264	64	0	3462
PEAK HR FACTOR :	0.857	0.883	0.776	0.000	0.622	0.902	0.860	0.000	0.766	0.755	0.703	0.000	0.828	0.930	0.640	0.000	0.928
	0.910				0.917				0.835				0.850				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	1	0	1	2	1	0	1	1	1	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	13	203	11	0	11	164	30	0	55	83	9	0	26	84	9	0	698
4:45 PM	16	193	19	0	23	146	35	0	47	99	9	0	27	86	17	0	717
5:00 PM	21	249	16	0	23	141	31	0	53	107	9	0	26	104	16	0	796
5:15 PM	18	241	10	0	29	170	30	0	59	117	10	0	27	88	17	0	816
5:30 PM	20	217	22	0	15	123	36	0	50	140	10	0	27	125	22	0	807
5:45 PM	28	274	30	0	17	135	32	0	55	126	6	0	14	113	10	0	840
6:00 PM	18	210	27	0	24	130	20	0	55	121	7	0	31	110	15	0	768
6:15 PM	28	288	23	0	22	138	33	0	62	130	12	0	29	112	9	0	886
6:30 PM	29	205	33	0	17	110	35	0	53	104	13	0	34	117	16	0	766
6:45 PM	20	187	16	0	12	129	25	0	66	117	18	0	21	82	10	0	703
7:00 PM	27	205	24	0	12	140	16	0	64	106	8	0	24	81	14	0	721
7:15 PM	15	191	14	0	12	162	16	0	61	86	9	0	24	74	14	0	678
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	253	2663	245	0	217	1688	339	0	680	1336	120	0	310	1176	169	0	9196
APPROACH %'s :	8.00%	84.25%	7.75%	0.00%	9.67%	75.22%	15.11%	0.00%	31.84%	62.55%	5.62%	0.00%	18.73%	71.06%	10.21%	0.00%	
PEAK HR :	**05:30 PM - 06:30 PM**																TOTAL
PEAK HR VOL :	94	989	102	0	78	526	121	0	222	517	35	0	101	460	56	0	3301
PEAK HR FACTOR :	0.839	0.859	0.850	0.000	0.813	0.953	0.840	0.000	0.895	0.923	0.729	0.000	0.815	0.920	0.636	0.000	0.931
	0.874				0.939				0.949				0.886				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Evergreen St/Riverside Dr & Riverside Dr/Alameda Ave
City: Burbank
Control: Signalized

Project ID: 19-05221-003
Date: 4/23/2019

Total

NS/EW Streets:	Evergreen St/Riverside Dr					Evergreen St/Riverside Dr					Riverside Dr/Alameda Ave					Riverside Dr/Alameda Ave											
AM	NORTHBOUND					SOUTHBOUND					EASTBOUND					WESTBOUND					NORTHBOUND2						
	1.3	0.3	0.3	0	0	0	1	0	0	0	0	2	1	0	0	1	2	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	NU2	SL	ST	SR	SU	ST2	EL	ET	ER	EU	ER2	WL	WT	WR	WU	WL2	N2L	N2U	N2L2	N2T2	N2R2	N2U2	TOTAL
7:00 AM	13	1	0	0	4	2	5	2	0	0	0	42	31	0	0	1	75	4	0	1		0	1	0	0	2	184
7:15 AM	20	2	0	0	2	3	2	2	0	0	1	42	39	0	0	0	57	6	1	2		0	0	0	0	3	182
7:30 AM	20	3	1	0	1	5	4	2	0	1	1	65	66	0	0	2	93	4	0	0		0	3	0	0	6	277
7:45 AM	24	5	1	0	3	10	1	0	0	0	4	81	67	1	0	2	109	15	0	0		0	3	0	0	6	332
8:00 AM	20	5	1	0	5	7	6	4	0	0	5	141	108	0	0	2	102	7	0	3		0	3	0	0	4	423
8:15 AM	32	4	2	0	4	7	4	2	0	1	10	190	204	0	0	2	127	13	0	0		0	7	0	0	9	618
8:30 AM	30	8	2	0	8	14	7	7	0	0	7	218	193	0	6	2	115	13	0	1		0	0	0	0	7	638
8:45 AM	31	5	3	0	6	9	4	4	0	0	6	197	189	0	5	3	118	19	1	2		0	0	0	0	12	614
9:00 AM	34	4	2	0	5	10	3	4	0	2	14	221	162	0	5	2	105	19	0	2		0	0	0	0	9	603
9:15 AM	38	5	1	0	4	5	5	0	0	1	7	231	174	0	4	2	92	25	0	0		0	0	0	1	7	602
9:30 AM	43	5	4	0	7	5	2	4	0	1	6	135	129	0	7	4	120	19	0	3		0	1	0	1	9	505
9:45 AM	40	6	1	0	3	8	6	1	0	0	10	154	129	0	9	3	114	17	0	2		0	0	0	0	4	507
	NL	NT	NR	NU	NU2	SL	ST	SR	SU	ST2	EL	ET	ER	EU	ER2	WL	WT	WR	WU	WL2	N2L	N2U	N2L2	N2T2	N2R2	N2U2	TOTAL
TOTAL VOLUMES :	345	53	18	0	52	85	49	32	0	6	71	1717	1491	1	36	25	1227	161	2	16	0	0	18	0	2	78	5485
APPROACH %'s :	73.72%	11.32%	3.85%	0.00%	11.11%	49.42%	28.49%	18.60%	0.00%	3.49%	2.14%	51.78%	44.96%	0.03%	1.09%	1.75%	85.74%	11.25%	0.14%	1.12%	0.00%	0.00%	18.37%	0.00%	2.04%	79.59%	
PEAK HR :	08:15 AM - 09:15 AM																										TOTAL
PEAK HR VOL :	127	21	9	0	23	40	18	17	0	3	37	826	748	0	16	9	465	64	1	5	0	0	7	0	0	37	2473
PEAK HR FACTOR :	0.934	0.656	0.750	0.000	0.719	0.714	0.643	0.607	0.000	0.375	0.661	0.934	0.917	0.000	0.667	0.750	0.915	0.842	0.250	0.625	0.000	0.000	0.250	0.000	0.000	0.771	0.969
			0.938					0.696					0.959					0.951					0.688				

PM	NORTHBOUND					SOUTHBOUND					EASTBOUND					WESTBOUND					NORTHBOUND2						
	1.3	0.3	0.3	0	0	0	1	0	0	0	0	2	1	0	0	1	2	0	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	NU2	SL	ST	SR	SU	ST2	EL	ET	ER	EU	ER2	WL	WT	WR	WU	WL2	N2L	N2U	N2L2	N2T2	N2R2	N2U2	TOTAL
4:30 PM	93	2	7	0	1	0	6	2	0	0	1	107	59	0	2	2	190	8	0	2		0	0	0	0	11	493
4:45 PM	93	1	1	0	7	4	2	5	0	0	2	119	76	0	3	2	157	7	0	1		0	5	0	0	15	500
5:00 PM	151	3	11	0	8	3	4	8	0	0	2	129	92	0	2	8	196	2	2	0		0	1	0	0	8	630
5:15 PM	132	4	3	0	3	4	3	11	0	0	1	157	89	0	4	0	226	4	0	0		0	2	0	0	10	653
5:30 PM	181	3	3	0	5	10	7	14	0	0	1	141	82	0	2	4	206	3	0	1		0	0	0	0	10	673
5:45 PM	170	1	5	0	3	8	2	4	0	0	0	141	84	0	3	4	219	4	0	2		0	1	0	0	10	661
6:00 PM	194	1	7	0	2	9	4	15	0	0	0	147	86	0	3	0	237	6	0	1		0	1	0	0	10	723
6:15 PM	223	6	5	0	6	7	4	6	0	0	2	120	93	0	5	5	246	5	0	2		0	0	0	0	6	741
6:30 PM	176	0	9	0	6	12	6	6	0	0	0	143	86	0	2	3	234	6	0	2		0	0	0	0	14	705
6:45 PM	126	4	7	0	10	6	1	15	0	0	0	129	87	0	2	1	187	2	0	1		0	1	0	0	7	586
7:00 PM	95	1	5	0	3	5	6	6	0	0	0	119	76	0	1	1	190	5	0	4		0	0	0	0	5	522
7:15 PM	103	1	4	0	3	6	3	6	0	0	1	97	60	0	3	0	151	3	0	4		0	0	0	0	4	449
	NL	NT	NR	NU	NU2	SL	ST	SR	SU	ST2	EL	ET	ER	EU	ER2	WL	WT	WR	WU	WL2	N2L	N2U	N2L2	N2T2	N2R2	N2U2	TOTAL
TOTAL VOLUMES :	1737	27	67	0	57	74	48	98	0	0	10	1549	970	0	32	30	2439	55	2	20	0	0	11	0	0	110	7336
APPROACH %'s :	92.00%	1.43%	3.55%	0.00%	3.02%	33.64%	21.82%	44.55%	0.00%	0.00%	0.39%	60.48%	37.88%	0.00%	1.25%	1.18%	95.80%	2.16%	0.08%	0.79%	0.00%	0.00%	9.09%	0.00%	0.00%	90.91%	
PEAK HR :	05:45 PM - 06:45 PM																										TOTAL
PEAK HR VOL :	763	8	26	0	17	36	16	31	0	0	2	551	349	0	13	12	936	21	0	7	0	0	2	0	0	40	2830
PEAK HR FACTOR :	0.855	0.333	0.722	0.000	0.708	0.750	0.667	0.517	0.000	0.000	0.250	0.937	0.938	0.000	0.650	0.600	0.951	0.875	0.000	0.875	0.000	0.000	0.500	0.000	0.000	0.714	0.955
			0.848					0.741					0.969					0.946					0.750				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Pass Ave & Alameda Ave
City: Burbank
Control: Signalized

Project ID: 19-05221-005
Date: 4/23/2019

Total

NS/EW Streets:	Pass Ave				Pass Ave				Alameda Ave				Alameda Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	2	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	3	11	2	0	26	99	19	0	12	31	0	0	2	57	9	0	271
7:15 AM	2	20	4	0	38	109	31	0	10	37	0	0	7	38	10	0	306
7:30 AM	4	14	3	0	53	129	25	0	13	54	3	0	4	69	13	0	384
7:45 AM	5	16	4	0	108	192	41	0	18	71	3	0	5	80	11	0	554
8:00 AM	6	33	8	0	167	200	30	0	19	125	3	0	1	78	9	0	679
8:15 AM	5	27	13	0	129	240	40	0	30	168	7	0	7	93	11	0	770
8:30 AM	8	24	12	0	105	247	37	0	23	178	21	0	9	85	13	0	762
8:45 AM	2	20	11	0	105	249	43	0	16	199	0	0	5	97	24	0	771
9:00 AM	8	33	18	0	84	214	33	0	29	176	6	0	6	87	23	0	717
9:15 AM	11	27	15	0	127	224	24	0	23	221	7	0	9	84	19	0	791
9:30 AM	14	29	21	0	83	164	43	0	18	114	2	0	6	92	22	0	608
9:45 AM	7	26	15	0	93	161	32	0	22	141	5	0	9	88	24	0	623
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	75	280	126	0	1118	2228	398	0	233	1515	57	0	70	948	188	0	7236
APPROACH %'s :	15.59%	58.21%	26.20%	0.00%	29.86%	59.51%	10.63%	0.00%	12.91%	83.93%	3.16%	0.00%	5.80%	78.61%	15.59%	0.00%	
PEAK HR :	08:30 AM - 09:30 AM																TOTAL
PEAK HR VOL :	29	104	56	0	421	934	137	0	91	774	34	0	29	353	79	0	3041
PEAK HR FACTOR :	0.659	0.788	0.778	0.000	0.829	0.938	0.797	0.000	0.784	0.876	0.405	0.000	0.806	0.910	0.823	0.000	0.961
	0.801				0.940				0.895				0.915				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	2	2	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	12	53	8	0	51	99	51	0	22	82	4	0	9	139	37	0	567
4:45 PM	3	51	8	0	45	85	44	0	29	98	3	0	5	126	38	0	535
5:00 PM	10	78	13	0	39	75	47	0	28	101	7	0	9	152	31	0	590
5:15 PM	19	69	9	0	36	86	45	0	41	127	2	0	9	158	38	0	639
5:30 PM	20	72	7	0	61	98	31	0	33	112	1	0	5	164	29	0	633
5:45 PM	30	90	3	0	68	96	49	0	36	119	1	0	8	135	28	0	663
6:00 PM	33	103	11	1	60	98	41	0	34	128	4	0	9	171	31	0	724
6:15 PM	30	91	9	0	57	100	46	0	33	99	2	0	10	182	47	0	706
6:30 PM	19	68	11	0	51	87	52	0	36	128	5	0	12	173	39	0	681
6:45 PM	12	69	11	0	52	84	40	0	26	98	4	0	6	134	38	0	574
7:00 PM	15	70	11	0	59	71	59	0	30	109	3	0	8	126	32	0	593
7:15 PM	13	66	7	0	47	61	43	0	31	78	3	0	9	107	30	0	495
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	216	880	108	1	626	1040	548	0	379	1279	39	0	99	1767	418	0	7400
APPROACH %'s :	17.93%	73.03%	8.96%	0.08%	28.27%	46.97%	24.75%	0.00%	22.33%	75.37%	2.30%	0.00%	4.33%	77.36%	18.30%	0.00%	
PEAK HR :	05:45 PM - 06:45 PM																TOTAL
PEAK HR VOL :	112	352	34	1	236	381	188	0	139	474	12	0	39	661	145	0	2774
PEAK HR FACTOR :	0.848	0.854	0.773	0.250	0.868	0.953	0.904	0.000	0.965	0.926	0.600	0.000	0.813	0.908	0.771	0.000	0.958
	0.843				0.945				0.925				0.884				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Pass Ave & Olive Ave
City: Burbank
Control: Signalized

Project ID: 19-05221-007
Date: 4/23/2019

Total

NS/EW Streets:	Pass Ave				Pass Ave				Olive Ave				Olive Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1	0	2	0	1	3	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	7	0	76	0	12	126	0	0	0	341	5	0	567
7:15 AM	0	0	0	0	2	0	83	0	29	167	0	0	0	331	3	0	615
7:30 AM	0	0	0	0	4	0	99	0	22	208	0	0	0	348	1	0	682
7:45 AM	0	0	0	0	10	0	161	0	30	243	0	0	0	325	2	0	771
8:00 AM	0	0	0	0	9	0	142	0	45	308	0	0	0	367	8	0	879
8:15 AM	0	0	0	0	21	0	242	0	42	341	0	0	0	353	6	0	1005
8:30 AM	0	0	0	0	18	0	194	0	50	356	0	0	0	341	7	0	966
8:45 AM	0	0	0	0	28	0	197	0	37	349	0	0	0	411	5	0	1027
9:00 AM	0	0	0	0	18	0	164	0	50	378	0	0	0	356	11	0	977
9:15 AM	0	0	0	0	25	0	188	0	53	411	0	0	0	327	13	0	1017
9:30 AM	0	0	0	0	11	0	156	0	59	367	0	0	0	310	8	0	911
9:45 AM	0	0	0	0	12	0	147	0	64	352	0	1	0	273	10	0	859
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	165	0	1849	0	493	3606	0	1	0	4083	79	0	10276
APPROACH %'s :					8.19%	0.00%	91.81%	0.00%	12.02%	87.95%	0.00%	0.02%	0.00%	98.10%	1.90%	0.00%	
PEAK HR :	08:30 AM - 09:30 AM																TOTAL
PEAK HR VOL :	0	0	0	0	89	0	743	0	190	1494	0	0	0	1435	36	0	3987
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.795	0.000	0.943	0.000	0.896	0.909	0.000	0.000	0.000	0.873	0.692	0.000	0.971
						0.924				0.907				0.884			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	1	0	2	0	1	3	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	0	0	0	0	7	0	96	0	86	345	0	0	0	293	7	0	834
4:45 PM	0	0	0	0	9	0	83	0	67	370	0	0	0	275	10	0	814
5:00 PM	0	0	0	0	5	0	83	0	89	358	0	0	0	328	18	0	881
5:15 PM	0	0	0	0	5	0	105	0	88	327	0	0	0	343	19	0	887
5:30 PM	0	0	0	0	6	0	118	0	102	320	0	0	0	360	21	0	927
5:45 PM	0	0	0	0	6	0	103	0	126	379	0	0	0	323	25	0	962
6:00 PM	0	0	0	0	11	0	107	0	156	376	0	0	0	332	29	0	1011
6:15 PM	0	0	0	0	6	0	82	0	107	288	0	0	0	404	30	0	917
6:30 PM	0	0	0	0	6	0	97	0	90	227	0	0	0	301	26	0	747
6:45 PM	0	0	0	0	12	0	69	0	84	355	0	0	0	285	16	0	821
7:00 PM	0	0	0	0	6	0	61	0	93	373	0	0	0	288	13	0	834
7:15 PM	0	0	0	0	6	0	65	0	84	350	0	0	0	271	6	0	782
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	85	0	1069	0	1172	4068	0	0	0	3803	220	0	10417
APPROACH %'s :					7.37%	0.00%	92.63%	0.00%	22.37%	77.63%	0.00%	0.00%	0.00%	94.53%	5.47%	0.00%	
PEAK HR :	05:30 PM - 06:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	29	0	410	0	491	1363	0	0	0	1419	105	0	3817
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.659	0.000	0.869	0.000	0.787	0.899	0.000	0.000	0.000	0.878	0.875	0.000	0.944
						0.885				0.871				0.878			

Prepared by National Data & Surveying Services

N Hollywood Way & W Alameda Ave

Peak Hour Turning Movement Count

ID: 19-05223-013
City: Burbank

Day: Tuesday
Date: 04/23/2019

	PEAK HOURS	COUNT PERIODS
AM	08:30 AM - 09:30 AM	07:00 AM - 10:00 AM
NOON	NONE	NONE
PM	05:30 PM - 06:30 PM	04:30 PM - 07:30 PM

N Hollywood Way — SOUTHBOUND

	↲	↓	↳	U	⇧
AM	520	1289	186	0	562
NOON	0	0	0	0	0
PM	262	389	111	0	1220
Lanes	1	2	2	0	

W Alameda Ave — EASTBOUND

	AM	NOON	PM	Lanes
⇦	1430	0	1452	
U	0	0	0	0
↰	72	0	200	1
→	648	0	818	3
↱	141	0	70	0

W Alameda Ave — WESTBOUND

	PM	NOON	AM	Lanes
↰	383	0	257	1
←	907	0	853	3
↲	31	0	154	1
U	0	0	0	0
⇨	1206	0	883	

N Hollywood Way — NORTHBOUND

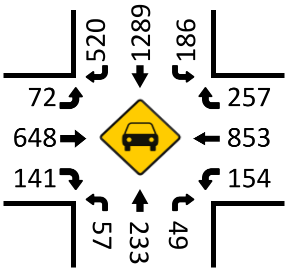
	⇩	U	↰	↑	↱
Lanes		0	1	2	1
PM	490	0	283	637	277
NOON	0	0	0	0	0
AM	1584	0	57	233	49

CONTROL

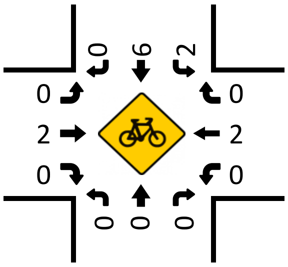
Signalized

	AM	NOON	PM
TEV	4459	0	4368
PHF	0.98		0.91

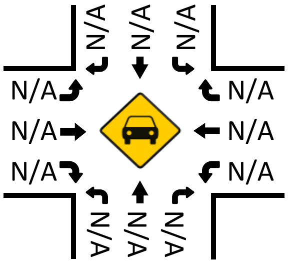
Total Vehicles (AM)



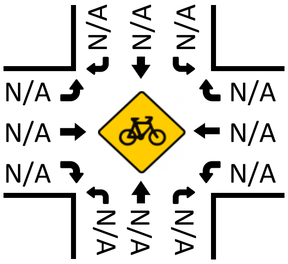
Bikes (AM)



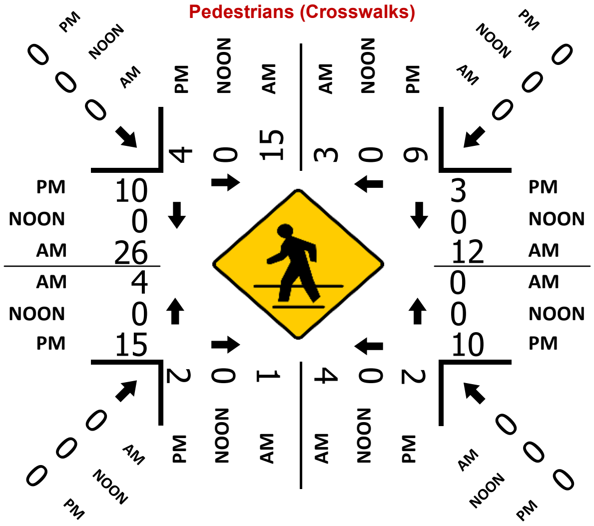
Total Vehicles (Noon)



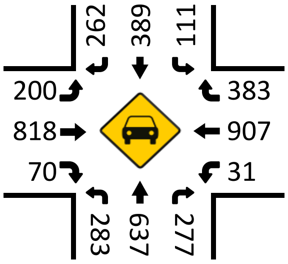
Bikes (NOON)



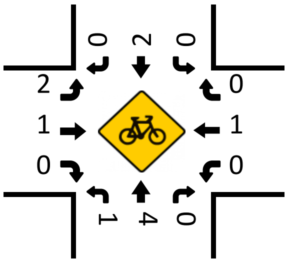
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Hollywood Way & Riverside Dr
City: Burbank **Project ID:** 19-05221-011
Control: Signalized **Date:** 4/23/2019

Total

NS/EW Streets:	Hollywood Way				Hollywood Way				Riverside Dr				Riverside Dr				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	1	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	2	49	1	0	19	142	89	0	7	12	5	0	0	16	13	0	355
7:15 AM	3	42	0	0	22	136	86	0	4	14	9	0	0	16	12	0	344
7:30 AM	3	61	1	0	21	154	133	0	7	14	8	0	3	23	9	0	437
7:45 AM	0	73	2	0	57	168	91	0	7	29	18	0	1	29	16	0	491
8:00 AM	2	89	0	0	67	162	80	0	7	72	18	0	3	29	24	0	553
8:15 AM	2	60	2	0	72	146	67	0	11	153	20	0	2	37	21	0	593
8:30 AM	4	46	0	0	100	207	119	0	13	108	29	0	6	36	22	0	690
8:45 AM	4	58	3	0	86	186	110	0	8	100	47	0	1	44	21	0	668
9:00 AM	0	50	0	0	119	198	112	1	12	80	32	0	3	39	16	0	662
9:15 AM	2	49	2	0	84	157	114	0	12	63	24	0	3	52	23	0	585
9:30 AM	11	78	0	0	51	150	85	0	16	52	30	0	1	34	22	0	530
9:45 AM	9	56	6	0	25	112	80	0	21	75	27	0	2	45	24	0	482
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	42	711	17	0	723	1918	1166	1	125	772	267	0	25	400	223	0	6390
APPROACH %'s :	5.45%	92.34%	2.21%	0.00%	18.99%	50.37%	30.62%	0.03%	10.74%	66.32%	22.94%	0.00%	3.86%	61.73%	34.41%	0.00%	
PEAK HR :	08:15 AM - 09:15 AM																TOTAL
PEAK HR VOL :	10	214	5	0	377	737	408	1	44	441	128	0	12	156	80	0	2613
PEAK HR FACTOR :	0.625	0.892	0.417	0.000	0.792	0.890	0.857	0.250	0.846	0.721	0.681	0.000	0.500	0.886	0.909	0.000	0.947
	0.881				0.885				0.833				0.939				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	1	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	7	137	11	0	13	62	55	0	19	47	10	0	1	52	69	0	483
4:45 PM	10	143	8	0	13	73	48	0	39	57	9	0	3	67	67	0	537
5:00 PM	23	149	7	0	17	76	48	1	25	59	9	0	3	82	105	0	604
5:15 PM	20	138	3	0	19	73	52	0	34	63	10	0	3	102	99	0	616
5:30 PM	13	150	5	0	19	65	43	0	28	71	5	0	1	120	99	0	619
5:45 PM	19	132	4	0	24	54	41	0	27	50	7	0	4	90	104	0	556
6:00 PM	24	208	8	0	19	56	40	1	24	73	6	0	0	110	122	0	691
6:15 PM	31	166	4	0	18	50	58	1	34	66	10	0	1	122	112	0	673
6:30 PM	28	123	5	0	14	51	52	0	31	67	6	0	3	103	84	0	567
6:45 PM	18	139	2	0	17	43	53	0	28	55	3	0	1	61	62	0	482
7:00 PM	29	152	3	0	17	43	53	0	29	44	6	1	0	66	70	1	514
7:15 PM	18	129	1	0	6	73	68	0	19	33	4	1	0	64	63	0	479
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	240	1766	61	0	196	719	611	3	337	685	85	2	20	1039	1056	1	6821
APPROACH %'s :	11.61%	85.44%	2.95%	0.00%	12.82%	47.02%	39.96%	0.20%	30.39%	61.77%	7.66%	0.18%	0.95%	49.10%	49.91%	0.05%	
PEAK HR :	05:30 PM - 06:30 PM																TOTAL
PEAK HR VOL :	87	656	21	0	80	225	182	2	113	260	28	0	6	442	437	0	2539
PEAK HR FACTOR :	0.702	0.788	0.656	0.000	0.833	0.865	0.784	0.500	0.831	0.890	0.700	0.000	0.375	0.906	0.895	0.000	0.919
	0.796				0.963				0.911				0.941				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Hollywood Way & Olive Ave
City: Burbank
Control: Signalized

Project ID: 19-05221-012
Date: 4/23/2019

Total

NS/EW Streets:	Hollywood Way				Hollywood Way				Olive Ave				Olive Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	1	1.5	0.5	0	1	3	0	0	1	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	7	15	117	0	44	66	7	0	2	221	4	0	483
7:15 AM	0	0	1	0	6	9	106	0	45	115	4	0	6	213	8	0	513
7:30 AM	0	5	1	0	2	9	125	0	55	140	1	0	4	213	10	0	565
7:45 AM	0	1	0	0	7	21	140	0	71	157	7	0	5	209	9	1	628
8:00 AM	0	3	0	0	16	19	95	0	89	206	5	0	7	270	11	0	721
8:15 AM	0	1	0	0	11	18	125	0	64	234	13	0	8	242	14	0	730
8:30 AM	2	1	0	0	20	33	110	0	46	282	23	0	9	264	18	0	808
8:45 AM	7	6	9	0	20	57	140	1	58	258	16	0	15	235	13	0	835
9:00 AM	3	4	0	0	14	61	96	0	51	251	22	0	17	286	14	1	820
9:15 AM	2	2	4	0	21	50	109	0	45	262	19	0	12	239	17	1	783
9:30 AM	2	5	2	0	5	30	97	0	76	274	19	0	14	222	15	0	761
9:45 AM	2	5	3	0	10	19	95	0	65	260	17	1	9	191	19	0	696
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	18	33	20	0	139	341	1355	1	709	2505	153	1	108	2805	152	3	8343
APPROACH %'s :	25.35%	46.48%	28.17%	0.00%	7.57%	18.57%	73.80%	0.05%	21.05%	74.38%	4.54%	0.03%	3.52%	91.43%	4.95%	0.10%	
PEAK HR :	08:30 AM - 09:30 AM																TOTAL
PEAK HR VOL :	14	13	13	0	75	201	455	1	200	1053	80	0	53	1024	62	2	3246
PEAK HR FACTOR :	0.500	0.542	0.361	0.000	0.893	0.824	0.813	0.250	0.862	0.934	0.870	0.000	0.779	0.895	0.861	0.500	0.972
		0.455				0.839				0.949				0.897			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	1	1.5	0.5	0	1	3	0	0	1	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	5	17	5	0	4	6	62	0	100	238	4	0	5	210	12	0	668
4:45 PM	2	16	6	0	4	4	64	0	116	245	0	0	3	205	10	0	675
5:00 PM	5	24	8	0	11	4	67	0	102	236	2	0	2	242	10	2	715
5:15 PM	9	31	5	0	7	7	65	0	104	218	0	0	1	261	13	0	721
5:30 PM	5	33	5	0	3	2	62	0	97	228	2	0	0	273	20	0	730
5:45 PM	11	34	4	0	6	5	50	1	99	258	5	0	1	244	10	0	728
6:00 PM	14	64	7	0	6	4	53	1	107	249	6	0	2	273	17	0	803
6:15 PM	13	67	11	0	11	7	55	0	104	198	13	0	4	258	10	0	751
6:30 PM	10	47	5	0	15	7	41	1	69	154	7	0	3	240	6	0	605
6:45 PM	10	47	8	0	4	8	41	0	93	241	7	0	2	223	10	0	694
7:00 PM	18	41	13	0	3	1	48	1	120	261	2	0	0	214	10	1	733
7:15 PM	6	38	2	0	5	0	70	0	102	225	0	0	1	186	7	0	642
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	108	459	79	0	79	55	678	4	1213	2751	48	0	24	2829	135	3	8465
APPROACH %'s :	16.72%	71.05%	12.23%	0.00%	9.68%	6.74%	83.09%	0.49%	30.23%	68.57%	1.20%	0.00%	0.80%	94.58%	4.51%	0.10%	
PEAK HR :	05:30 PM - 06:30 PM																TOTAL
PEAK HR VOL :	43	198	27	0	26	18	220	2	407	933	26	0	7	1048	57	0	3012
PEAK HR FACTOR :	0.768	0.739	0.614	0.000	0.591	0.643	0.887	0.500	0.951	0.904	0.500	0.000	0.438	0.960	0.713	0.000	0.938
		0.736				0.911				0.943				0.949			

Location: Olive Ave & Riverside Dr
City: Burbank

Project ID: 19-05221-014
Date: 4/23/2019

Pedestrians (Crosswalks)

NS/EW Streets:	Riverside Dr		Riverside Dr		Olive Ave		Olive Ave				
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		NORTH LEG 2 CUT OUT		
	EB	WB	EB	WB	NB	SB	NB	SB	EB	WB	TOTAL
7:00 AM	0	0	2	4	1	2	0	0	0	0	9
7:15 AM	0	0	1	2	0	0	0	1	0	0	4
7:30 AM	1	1	1	2	0	1	5	4	0	0	15
7:45 AM	1	0	3	0	1	0	1	3	0	0	9
8:00 AM	1	5	2	4	1	4	1	2	0	0	20
8:15 AM	0	3	2	2	0	0	1	9	0	0	17
8:30 AM	0	3	1	2	0	2	2	6	0	0	16
8:45 AM	0	2	2	2	1	2	3	8	0	0	20
9:00 AM	3	6	2	9	0	10	1	16	0	0	47
9:15 AM	3	1	2	4	1	0	2	11	0	0	24
9:30 AM	0	4	3	4	0	0	6	10	0	0	27
9:45 AM	0	0	3	5	4	0	1	0	0	0	13
	EB	WB	EB	WB	NB	SB	NB	SB	EB	WB	TOTAL
TOTAL VOLUMES :	9	25	24	40	9	21	23	70	0	0	221
APPROACH %'s :	26.47%	73.53%	37.50%	62.50%	30.00%	70.00%	24.73%	75.27%			
PEAK HR :	08:15 AM - 09:15 AM										TOTAL
PEAK HR VOL :	3	14	7	15	1	14	7	39	0	0	100
PEAK HR FACTOR :	0.250	0.583	0.875	0.417	0.250	0.350	0.583	0.609			0.532
	0.472		0.500		0.375		0.676				

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		NORTH LEG 2 CUT OUT		
	EB	WB	EB	WB	NB	SB	NB	SB	EB	WB	TOTAL
4:30 PM	2	2	2	5	0	1	5	0	2	6	25
4:45 PM	3	0	4	1	0	2	4	3	5	2	24
5:00 PM	1	5	1	3	1	2	9	2	0	0	24
5:15 PM	0	0	3	2	3	3	7	4	0	0	22
5:30 PM	4	2	0	3	0	1	11	3	0	0	24
5:45 PM	1	2	4	1	0	0	7	0	0	0	15
6:00 PM	1	1	6	0	1	6	6	0	0	0	21
6:15 PM	4	0	1	2	4	0	6	3	0	0	20
6:30 PM	1	0	3	0	0	2	17	0	0	0	23
6:45 PM	0	3	0	2	2	2	10	2	0	0	21
7:00 PM	3	2	4	0	3	2	13	3	0	0	30
7:15 PM	1	2	2	0	5	0	4	2	0	0	16
	EB	WB	EB	WB	NB	SB	NB	SB	EB	WB	TOTAL
TOTAL VOLUMES :	21	19	30	19	19	21	99	22	7	8	265
APPROACH %'s :	52.50%	47.50%	61.22%	38.78%	47.50%	52.50%	81.82%	18.18%			
PEAK HR :	05:15 PM - 06:15 PM										TOTAL
PEAK HR VOL :	6	5	13	6	4	10	31	7	0	0	82
PEAK HR FACTOR :	0.375	0.625	0.542	0.500	0.333	0.417	0.705	0.438			0.854
	0.458		0.792		0.500		0.679				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Olive Ave & Alameda Ave
City: Burbank
Control: Signalized

Project ID: 19-05221-019
Date: 4/23/2019

Total

NS/EW Streets:	Olive Ave					Olive Ave					Alameda Ave					Alameda Ave											
AM	NORTHBOUND					SOUTHBOUND					EASTBOUND					WESTBOUND					SOUTHBOUND2						
	0	2	1	0	0	0	2	1	0	0	2	1.5	0.5	0	0	2	1.5	0.5	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	NT2	SL	ST	SR	SU	SU2	EL	ET	ER	EU	EL2	WL	WT	WR	WU	WR2	S2L	S2U	S2L2	S2T2	S2R2	S2U2	TOTAL
7:00 AM	0	45	21	0	0	0	148	63	0	0	17	29	2	0	0	55	38	3	0	0		0	0	0	3	0	424
7:15 AM	0	65	34	0	0	0	165	59	0	2	19	42	5	0	4	45	45	1	0	2		0	0	0	4	0	492
7:30 AM	0	77	42	0	0	0	157	85	0	4	31	50	6	0	2	54	61	2	0	0		0	0	0	5	0	576
7:45 AM	0	75	53	0	0	0	168	89	0	1	24	99	2	0	1	55	84	5	0	3		0	0	0	1	0	660
8:00 AM	0	71	81	0	0	0	228	120	0	2	32	191	2	0	0	57	62	5	0	0		0	0	0	4	0	855
8:15 AM	0	120	72	0	0	0	195	85	0	1	44	192	9	0	3	66	80	6	0	4		0	0	0	7	0	884
8:30 AM	0	98	99	0	0	0	229	119	0	1	50	137	5	0	1	65	77	5	0	4		0	0	0	8	0	898
8:45 AM	0	104	76	0	0	0	237	89	0	2	34	127	5	0	4	53	88	3	0	1		0	0	0	3	0	826
9:00 AM	0	119	63	0	0	0	252	87	0	2	42	120	9	0	3	69	100	3	0	2		0	0	0	5	0	876
9:15 AM	0	118	93	0	0	0	231	125	0	3	45	131	2	0	4	48	93	2	0	4		0	0	0	7	0	906
9:30 AM	0	117	73	0	0	0	172	97	0	3	38	80	6	0	6	63	81	5	0	5		0	0	0	10	0	756
9:45 AM	0	138	59	0	0	1	155	103	0	5	36	101	4	0	3	58	95	3	0	0		0	0	0	9	0	770
	NL	NT	NR	NU	NT2	SL	ST	SR	SU	SU2	EL	ET	ER	EU	EL2	WL	WT	WR	WU	WR2	S2L	S2U	S2L2	S2T2	S2R2	S2U2	TOTAL
TOTAL VOLUMES :	0	1147	766	0	0	1	2337	1121	0	26	412	1299	57	0	31	688	904	43	0	25	0	0	0	0	66	0	8923
APPROACH %'s :	0.00%	59.96%	40.04%	0.00%	0.00%	0.03%	67.06%	32.17%	0.00%	0.75%	22.90%	72.21%	3.17%	0.00%	1.72%	41.45%	54.46%	2.59%	0.00%	1.51%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR :	08:30 AM - 09:30 AM																										TOTAL
PEAK HR VOL :	0	439	331	0	0	0	949	420	0	8	171	515	21	0	12	235	358	13	0	11	0	0	0	0	23	0	3506
PEAK HR FACTOR :	0.000	0.922	0.836	0.000	0.000	0.000	0.941	0.840	0.000	0.667	0.855	0.940	0.583	0.000	0.750	0.851	0.895	0.650	0.000	0.688	0.000	0.000	0.000	0.000	0.719	0.000	0.967
			0.912					0.959					0.931					0.886					0.719				

PM	NORTHBOUND					SOUTHBOUND					EASTBOUND					WESTBOUND					SOUTHBOUND2						
	0	2	1	0	0	0	2	1	0	0	2	1.5	0.5	0	0	2	1.5	0.5	0	0	0	0	0	0	0	0	
	NL	NT	NR	NU	NT2	SL	ST	SR	SU	SU2	EL	ET	ER	EU	EL2	WL	WT	WR	WU	WR2	S2L	S2U	S2L2	S2T2	S2R2	S2U2	TOTAL
4:30 PM	0	166	54	0	0	0	124	85	0	3	48	61	3	0	1	51	151	9	0	4		0	0	0	9	0	769
4:45 PM	0	214	66	0	0	0	143	79	0	2	48	68	2	0	4	37	149	5	0	3		0	0	0	11	0	831
5:00 PM	0	213	64	0	0	0	136	74	0	2	57	71	1	0	0	65	188	2	0	4		0	0	0	13	0	890
5:15 PM	0	208	59	1	0	0	151	74	0	2	62	85	1	0	2	83	186	4	0	3		0	0	1	15	0	937
5:30 PM	0	210	53	0	0	0	123	60	0	4	78	93	5	0	4	58	170	9	0	0		0	0	0	14	0	881
5:45 PM	0	221	75	0	0	0	139	73	0	2	71	75	4	0	1	44	158	8	0	3		0	0	0	13	0	887
6:00 PM	0	240	61	0	0	0	127	74	0	3	92	87	3	0	3	62	180	4	0	0		0	0	0	11	0	947
6:15 PM	0	187	60	0	0	0	106	63	0	3	74	91	4	0	3	82	175	5	0	2		0	0	0	14	0	869
6:30 PM	0	156	51	0	0	0	136	75	0	4	65	100	2	0	7	49	137	5	0	1		0	0	0	13	0	801
6:45 PM	0	223	59	0	0	0	145	86	1	3	72	73	1	0	1	58	118	8	0	4		0	0	0	13	0	865
7:00 PM	0	216	68	0	0	0	140	80	0	0	65	78	2	0	3	42	123	9	0	1		0	0	0	15	0	842
7:15 PM	0	159	71	0	0	0	109	78	0	0	81	73	3	0	4	51	98	7	0	1		0	0	0	11	0	746
	NL	NT	NR	NU	NT2	SL	ST	SR	SU	SU2	EL	ET	ER	EU	EL2	WL	WT	WR	WU	WR2	S2L	S2U	S2L2	S2T2	S2R2	S2U2	TOTAL
TOTAL VOLUMES :	0	2413	741	1	0	0	1579	901	1	28	813	955	31	0	33	682	1833	75	0	26	0	0	0	1	152	0	10265
APPROACH %'s :	0.00%	76.48%	23.49%	0.03%	0.00%	0.00%	62.93%	35.91%	0.04%	1.12%	44.38%	52.13%	1.69%	0.00%	1.80%	26.07%	70.07%	2.87%	0.00%	0.99%	0.00%	0.00%	0.00%	0.65%	99.35%	0.00%	
PEAK HR :	05:15 PM - 06:15 PM																										TOTAL
PEAK HR VOL :	0	879	248	1	0	0	540	281	0	11	303	340	13	0	10	247	694	25	0	6	0	0	0	1	53	0	3652
PEAK HR FACTOR :	0.000	0.916	0.827	0.250	0.000	0.000	0.894	0.949	0.000	0.688	0.823	0.914	0.650	0.000	0.625	0.744	0.933	0.694	0.000	0.500	0.000	0.000	0.000	0.250	0.883	0.000	0.964
			0.937					0.916					0.900					0.880					0.844				

ITM Peak Hour Summary

Prepared by:

NDS

National Data & Surveying Services

Buena Vista St and Glenoaks Blvd , Burbank

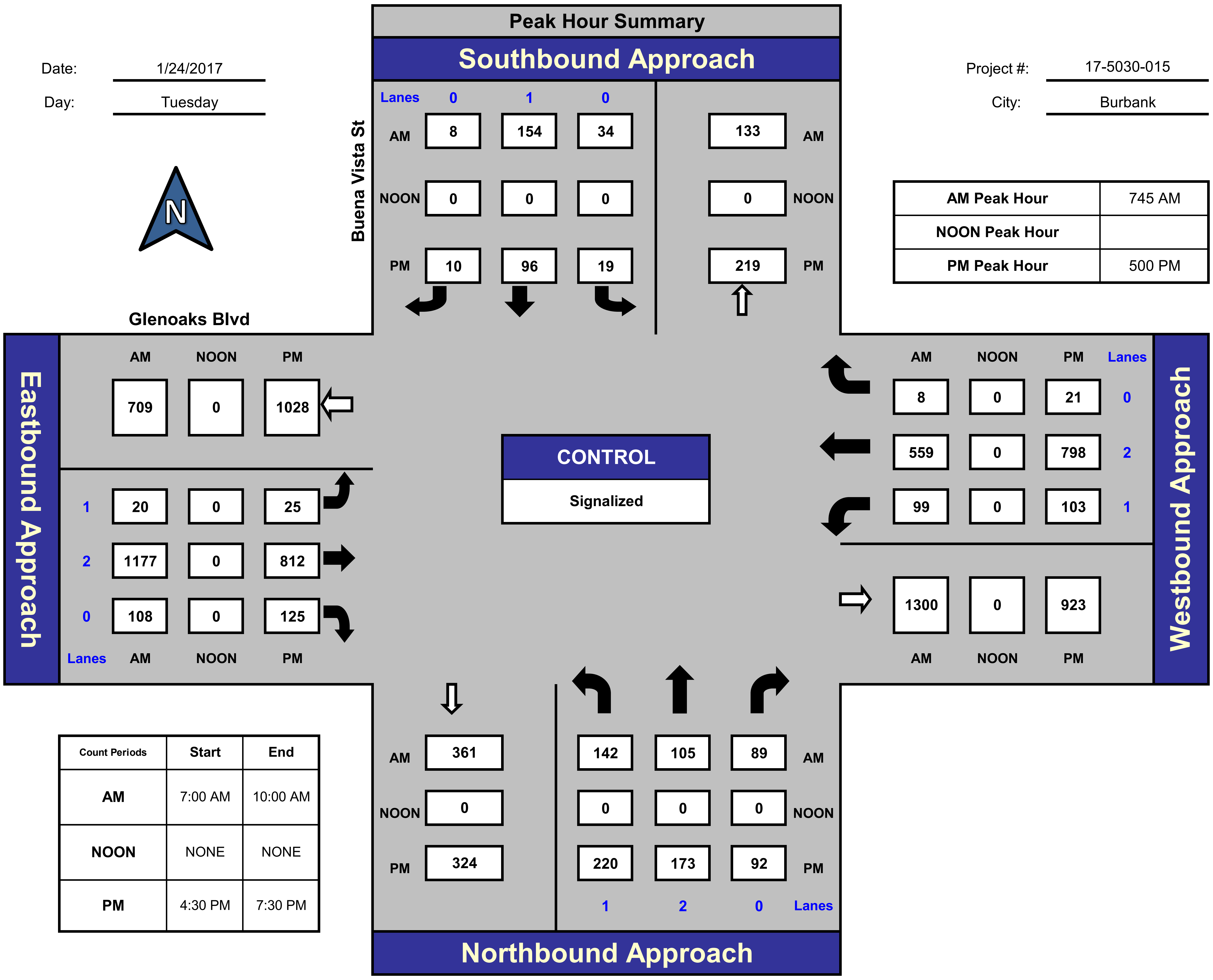
Date: 1/24/2017

Day: Tuesday

Project #: 17-5030-015

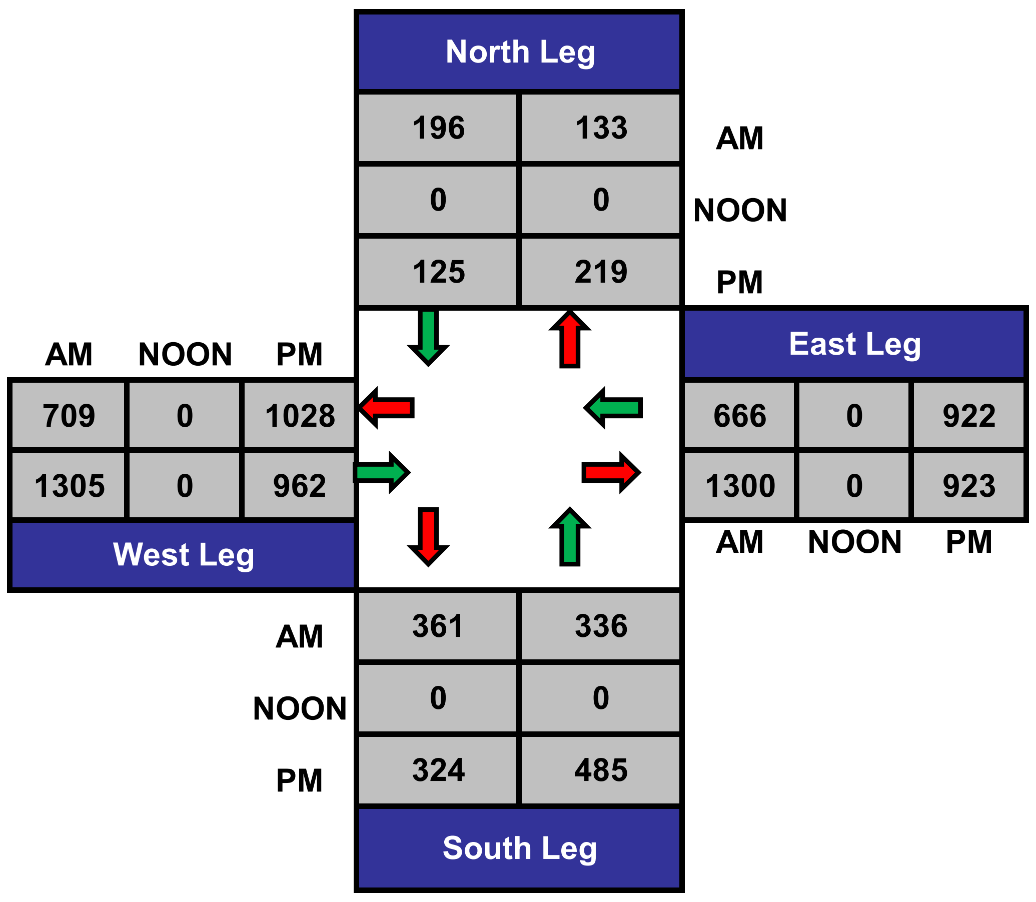
City: Burbank

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	500 PM

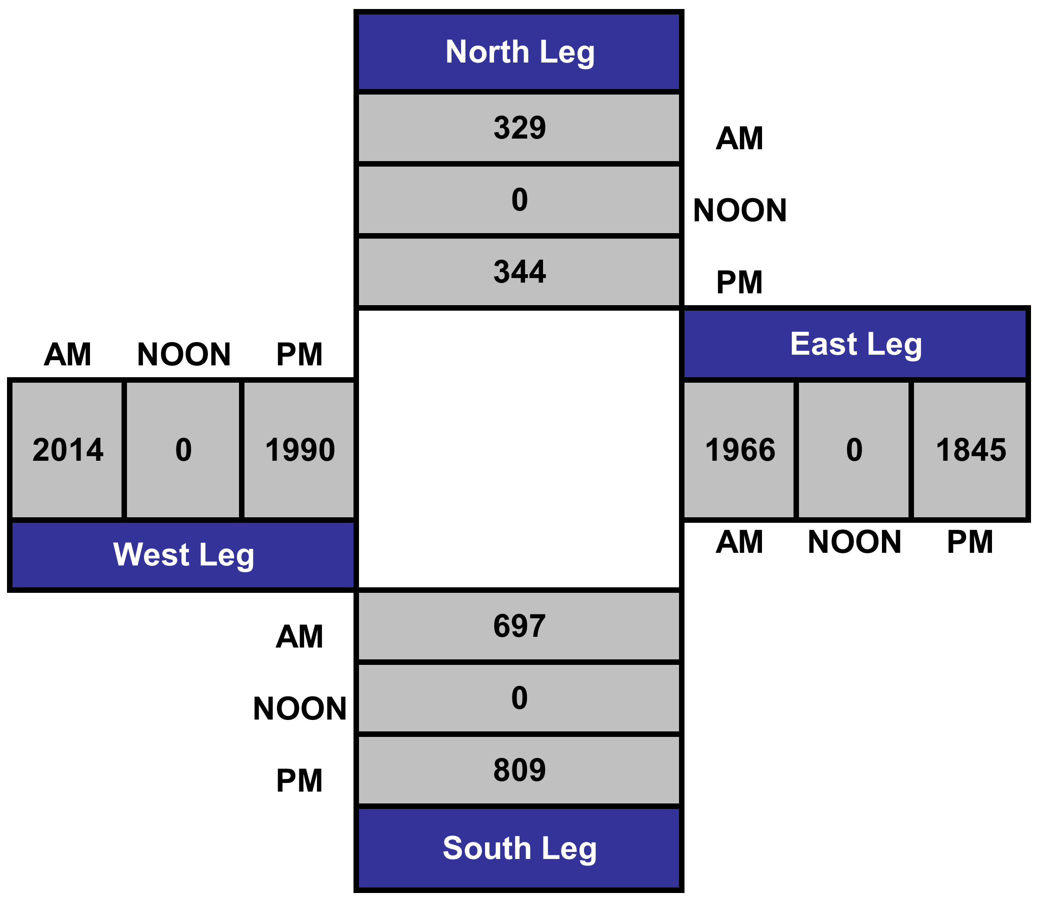


Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON	NONE	NONE
PM	4:30 PM	7:30 PM

Total Ins & Outs



Total Volume Per Leg



National Data & Surveying Services

Intersection Turning Movement Count

Location: N Buena Vista St & N San Fernando Blvd
City: Burbank
Control: Signalized

Project ID: 19-05223-017
Date: 4/23/2019

Total

NS/EW Streets:	N Buena Vista St				N Buena Vista St				N San Fernando Blvd				N San Fernando Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	1	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	12	110	2	0	49	261	51	0	17	75	20	0	4	19	35	0	655
7:15 AM	5	116	1	0	50	267	45	0	16	136	26	0	5	18	36	0	721
7:30 AM	10	152	7	0	43	270	62	0	21	153	35	0	6	25	38	0	822
7:45 AM	1	141	6	0	60	269	70	0	31	191	38	0	8	40	41	0	896
8:00 AM	9	146	6	0	64	276	40	0	27	117	40	0	9	26	46	0	806
8:15 AM	6	195	2	0	56	323	42	0	25	128	48	0	7	31	35	0	898
8:30 AM	6	134	3	0	56	276	67	0	11	146	49	0	11	38	42	0	839
8:45 AM	5	133	3	0	63	328	41	0	18	154	37	0	11	30	30	0	853
9:00 AM	10	119	9	0	65	258	44	0	14	181	52	0	12	39	30	0	833
9:15 AM	11	129	6	0	53	252	49	0	16	118	38	0	8	24	33	0	737
9:30 AM	5	110	8	0	61	270	58	0	6	73	25	0	6	24	45	0	691
9:45 AM	11	126	3	0	56	274	61	0	12	79	23	0	7	38	48	0	738
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	91	1611	56	0	676	3324	630	0	214	1551	431	0	94	352	459	0	9489
APPROACH %'s :	5.18%	91.64%	3.19%	0.00%	14.60%	71.79%	13.61%	0.00%	9.74%	70.63%	19.63%	0.00%	10.39%	38.90%	50.72%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	22	616	17	0	236	1144	219	0	94	582	175	0	35	135	164	0	3439
PEAK HR FACTOR :	0.611	0.790	0.708	0.000	0.922	0.885	0.782	0.000	0.758	0.762	0.893	0.000	0.795	0.844	0.891	0.000	0.957
		0.807				0.950				0.818				0.918			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	2	0	0	1	2	1	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:30 PM	15	233	5	0	56	199	48	0	34	60	18	0	15	63	149	0	895
4:45 PM	7	255	5	0	52	189	28	0	46	50	20	0	14	75	94	0	835
5:00 PM	13	265	4	0	47	172	32	0	45	84	16	0	14	89	123	0	904
5:15 PM	19	297	6	0	50	210	34	0	37	74	11	0	13	74	136	0	961
5:30 PM	15	254	12	0	49	178	19	0	43	68	17	0	10	81	113	0	859
5:45 PM	16	274	4	0	49	185	28	0	36	75	17	0	13	73	130	0	900
6:00 PM	14	289	2	0	38	170	27	0	42	62	11	0	16	72	126	0	869
6:15 PM	22	299	4	0	68	191	24	0	24	54	15	0	15	68	130	0	914
6:30 PM	12	273	3	0	52	189	38	0	30	52	8	0	13	54	120	0	844
6:45 PM	18	225	4	0	51	176	26	0	26	55	11	0	11	62	124	0	789
7:00 PM	5	255	4	0	52	163	20	0	26	67	9	0	16	52	114	0	783
7:15 PM	10	241	5	0	51	159	27	0	14	47	12	0	8	49	83	0	706
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	166	3160	58	0	615	2181	351	0	403	748	165	0	158	812	1442	0	10259
APPROACH %'s :	4.91%	93.38%	1.71%	0.00%	19.54%	69.30%	11.15%	0.00%	30.62%	56.84%	12.54%	0.00%	6.55%	33.67%	59.78%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	63	1090	26	0	195	745	113	0	161	301	61	0	50	317	502	0	3624
PEAK HR FACTOR :	0.829	0.918	0.542	0.000	0.975	0.887	0.831	0.000	0.894	0.896	0.897	0.000	0.893	0.890	0.923	0.000	0.943
		0.915				0.895				0.902				0.961			

Prepared by National Data & Surveying Services

N Buena Vista St & W Empire Ave

Peak Hour Turning Movement Count

ID: 19-05223-020
City: Burbank

Day: Tuesday
Date: 04/23/2019

PEAK HOURS

08:15 AM - 09:15 AM
NONE
05:15 PM - 06:15 PM

COUNT PERIODS

07:00 AM - 10:00 AM
NONE
04:30 PM - 07:30 PM

N Buena Vista St

SOUTHBOUND

AM	93	874	114	0	588
NOON	0	0	0	0	0
PM	86	540	99	0	1078
	↲	↓	↳	↶	⇧
	0	2	2	0	

W Empire Ave

EASTBOUND

AM	NOON	PM		
358	0	540	⇦	
0	0	0	↶	0
68	0	129	↱	1
252	0	171	→	2
168	0	190	↴	1

W Empire Ave

WESTBOUND

		PM	NOON	AM
0	↰	141	0	55
2	←	273	0	120
2	↙	377	0	167
0	↷	0	0	0
	⇨	693	0	722

CONTROL

Signalized

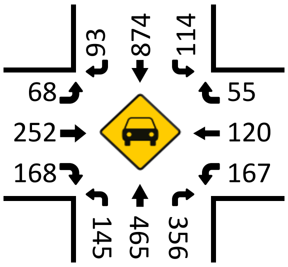
	AM	NOON	PM
TEV	2877	0	3418
PHF	0.97		0.96

NORTHBOUND

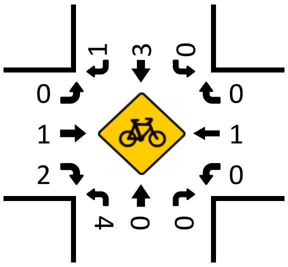
N Buena Vista St

		0	1	2	1
	⇩	↶	↰	↑	↱
PM	1107	0	181	808	423
NOON	0	0	0	0	0
AM	1209	0	145	465	356

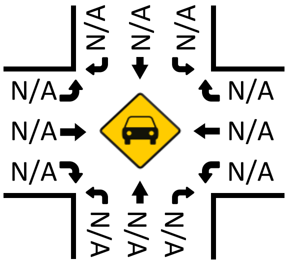
Total Vehicles (AM)



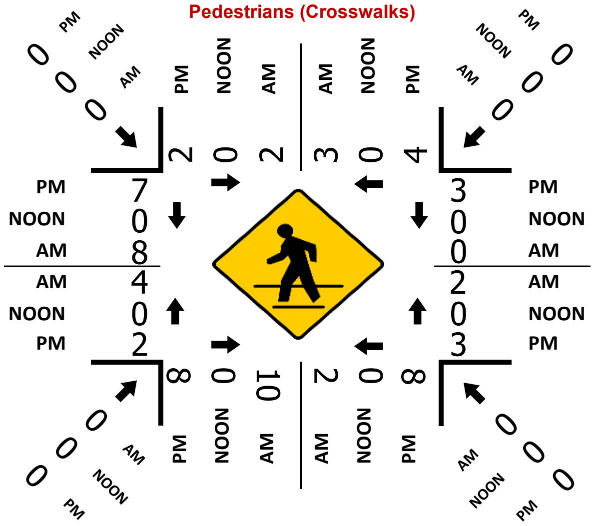
Bikes (AM)



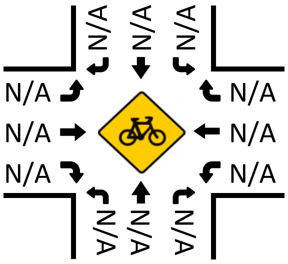
Total Vehicles (Noon)



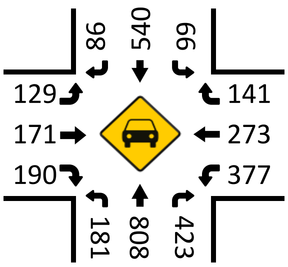
Pedestrians (Crosswalks)



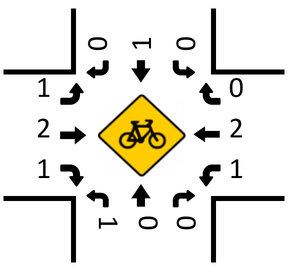
Bikes (NOON)



Total Vehicles (PM)



Bikes (PM)



WILTEC

Phone: (626)

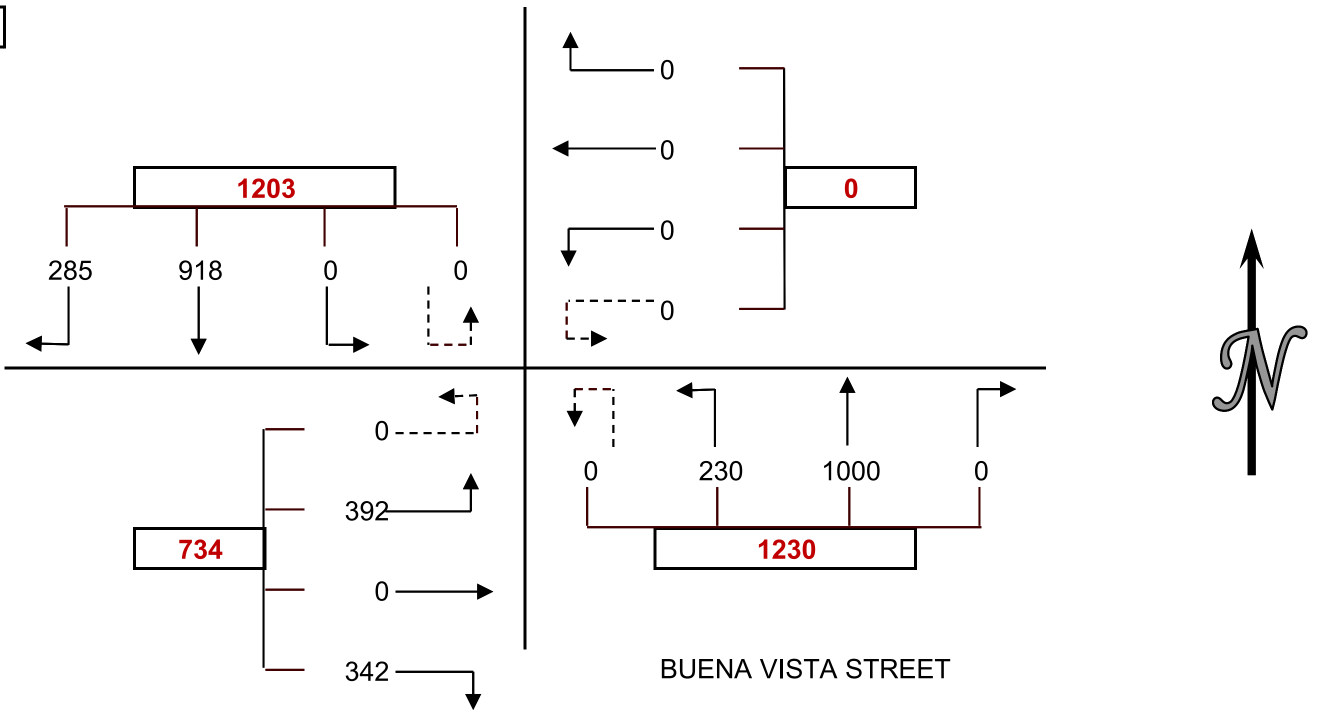
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		DUDEK
PROJECT:		BURBANK TRAFFIC COUNTS
DATE:		TUESDAY MAY 7, 2019
PERIOD:		4:30 PM TO 7:30 PM
INTERSECTION:	N/S	BUENA VISTA STREET
	E/W	VANOWEN STREET
CITY:		BURBANK

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT
430-445	65	222	0	0	0	0	0	0	0	237	50	0	86
445-500	47	184	0	0	0	0	0	0	0	231	54	0	77
500-515	80	233	0	0	0	0	0	0	0	246	46	0	98
515-530	69	218	0	0	0	0	0	0	0	232	78	0	89
530-545	75	261	0	0	0	0	0	0	0	270	62	0	85
545-600	61	206	0	0	0	0	0	0	0	252	44	0	70
600-615	66	225	0	0	0	0	0	0	0	224	50	0	81
615-630	84	262	0	0	0	0	0	0	0	251	53	0	104
630-645	56	204	0	0	0	0	0	0	0	244	55	0	73
645-700	55	182	0	0	0	0	0	0	0	215	30	0	71
700-715	64	149	0	0	0	0	0	0	0	197	43	0	60
715-730	58	178	0	0	0	0	0	0	0	187	37	0	63
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT
430-530	261	857	0	0	0	0	0	0	0	946	228	0	350
445-545	271	896	0	0	0	0	0	0	0	979	240	0	349
500-600	285	918	0	0	0	0	0	0	0	1000	230	0	342
515-615	271	910	0	0	0	0	0	0	0	978	234	0	325
530-630	286	954	0	0	0	0	0	0	0	997	209	0	340
545-645	267	897	0	0	0	0	0	0	0	971	202	0	328
600-700	261	873	0	0	0	0	0	0	0	934	188	0	329
615-715	259	797	0	0	0	0	0	0	0	907	181	0	308
630-730	233	713	0	0	0	0	0	0	0	843	165	0	267

PEAK HOUR	500-600



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
430-445	3	3	0	1	7
445-500	3	3	0	0	6

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST
PERIOD	LEG	LEG	LEG	LEG
430-445	0	0	0	0
445-500	1	0	0	0

500-515	1	1	0	1	3
515-530	1	1	0	0	2
530-545	2	2	0	0	4
545-600	3	3	0	0	6
600-615	0	0	0	0	0
615-630	1	1	0	0	2
630-645	2	2	0	1	5
645-700	0	0	0	0	0
700-715	0	0	0	0	0
715-730	0	0	0	1	1
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
430-530	8	8	0	2	18
445-545	7	7	0	1	15
500-600	7	7	0	1	15
515-615	6	6	0	0	12
530-630	6	6	0	0	12

500-515	0	0	0	1
515-530	1	0	0	2
530-545	0	0	0	1
545-600	0	0	0	0
600-615	0	0	0	0
615-630	0	0	0	0
630-645	0	0	0	1
645-700	0	0	0	0
700-715	0	0	1	0
715-730	0	0	0	0
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG
430-530	2	0	0	3
445-545	2	0	0	4
500-600	1	0	0	4
515-615	1	0	0	3
530-630	0	0	0	1

564-1944

11 EBTH
0
0
0
0
0
0
0
0
0
0
0
0
11 EBTH
0
0
0
0
0
0
0
0
0

TOTAL
0
1

1
3
1
0
0
0
1
0
1
0
TOTAL
5
6
5
4
1

WILTEC

Phone: (626) 56

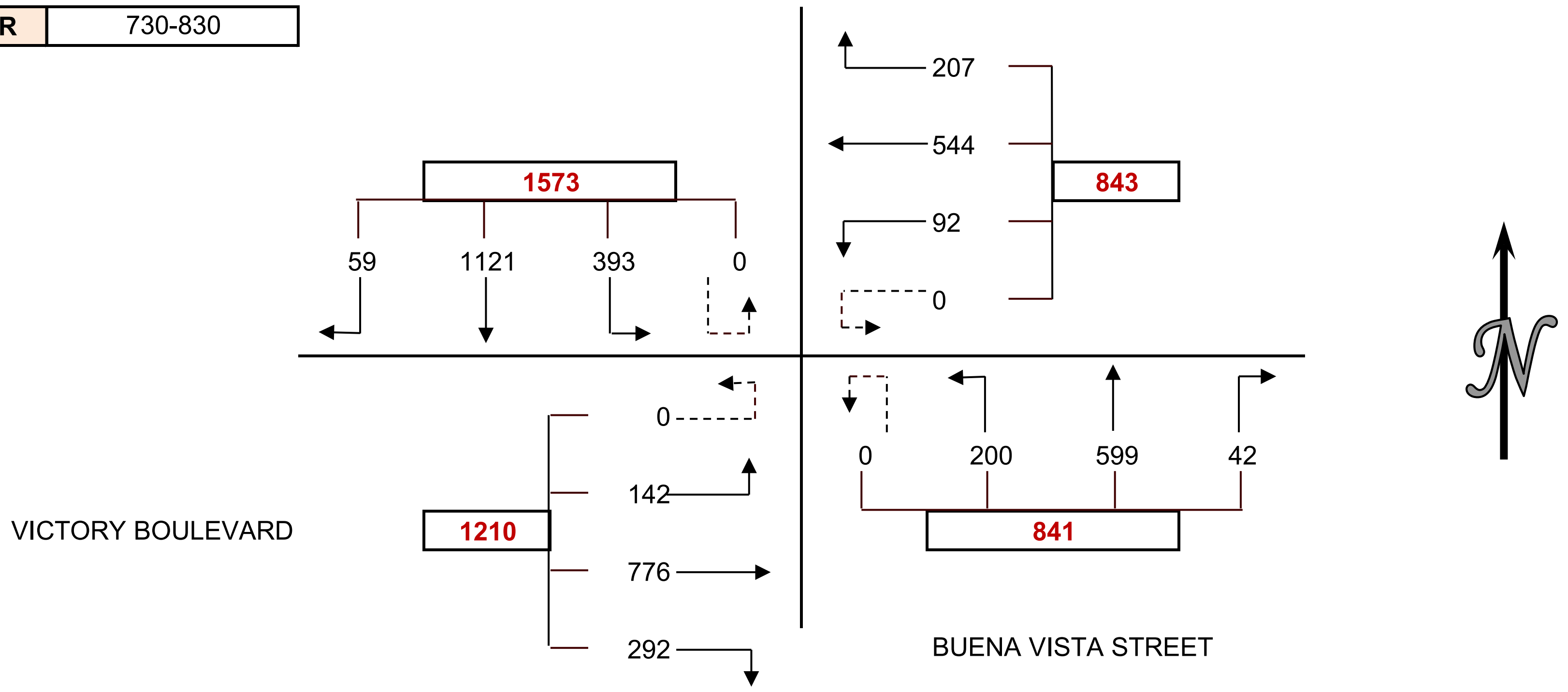
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		DUDEK
PROJECT:		BURBANK TRAFFIC COUNTS
DATE:		TUESDAY MAY 7, 2019
PERIOD:		7:00 AM TO 10:00 AM
INTERSECTION:	N/S	BUENA VISTA STREET
	E/W	VICTORY BOULEVARD
CITY:		BURBANK

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT
700-715	19	243	83	0	43	89	13	0	5	92	19	0	43
715-730	17	242	81	0	41	107	15	0	4	106	17	0	64
730-745	22	282	104	0	38	122	19	0	9	132	36	0	95
745-800	14	243	93	0	62	180	19	0	13	157	61	0	66
800-815	11	272	91	0	50	119	30	0	10	171	58	0	58
815-830	12	324	105	0	57	123	24	0	10	139	45	0	73
830-845	16	298	87	0	48	104	50	0	17	127	42	0	54
845-900	16	292	73	0	56	126	22	0	13	144	46	0	49
900-915	11	306	100	0	64	97	28	0	8	134	42	0	31
915-930	19	239	91	0	58	80	19	0	16	151	44	0	44
930-945	8	201	76	0	52	96	17	0	13	119	26	0	64
945-1000	29	226	58	0	41	96	24	0	20	136	27	0	36
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT
700-800	72	1010	361	0	184	498	66	0	31	487	133	0	268
715-815	64	1039	369	0	191	528	83	0	36	566	172	0	283
730-830	59	1121	393	0	207	544	92	0	42	599	200	0	292
745-845	53	1137	376	0	217	526	123	0	50	594	206	0	251
800-900	55	1186	356	0	211	472	126	0	50	581	191	0	234
815-915	55	1220	365	0	225	450	124	0	48	544	175	0	207
830-930	62	1135	351	0	226	407	119	0	54	556	174	0	178
845-945	54	1038	340	0	230	399	86	0	50	548	158	0	188
900-1000	67	972	325	0	215	369	88	0	57	540	139	0	175

PEAK HOUR	730-830



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	3	3	0	2	8
715-730	2	2	0	0	4

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST
PERIOD	LEG	LEG	LEG	LEG
700-715	2	2	1	1
715-730	0	0	0	0

730-745	0	0	2	3	5
745-800	5	5	3	1	14
800-815	4	4	7	6	21
815-830	4	4	1	7	16
830-845	3	3	6	3	15
845-900	6	6	7	1	20
900-915	6	6	3	3	18
915-930	13	13	2	3	31
930-945	13	13	2	0	28
945-1000	4	4	4	4	16
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	10	10	5	6	31
715-815	11	11	12	10	44
730-830	13	13	13	17	56
745-845	16	16	17	17	66
800-900	17	17	21	17	72

730-745	0	0	0	0
745-800	0	0	1	0
800-815	2	1	0	0
815-830	0	2	0	0
830-845	0	1	2	0
845-900	0	2	1	0
900-915	0	1	0	0
915-930	1	0	2	0
930-945	2	1	1	1
945-1000	0	0	1	1
HOUR TOTALS	NORTH	EAST	SOUTH	WEST
PERIOD	LEG	LEG	LEG	LEG
700-800	2	2	2	1
715-815	2	1	1	0
730-830	2	3	1	0
745-845	2	4	3	0
800-900	2	6	3	0

4-1944

11 EBTH
102
152
192
205
218
161
159
126
120
123
173
145
11 EBTH
651
767
776
743
664
566
528
542
561

TOTAL
6
0

0
1
3
2
3
3
1
3
5
2
TOTAL
7
4
6
9
11

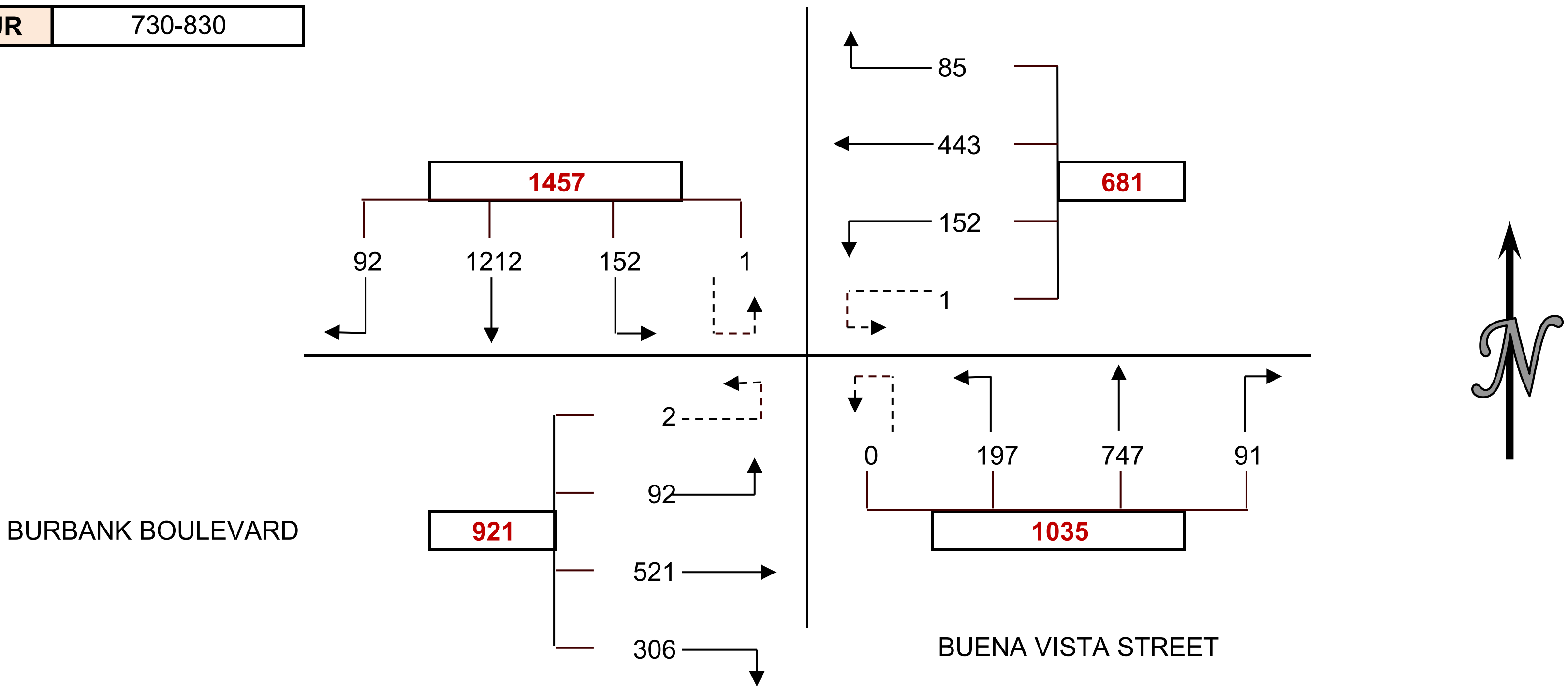
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		DUDEK
PROJECT:		BURBANK TRAFFIC COUNTS
DATE:		THURSDAY MAY 23, 2019
PERIOD:		7:00 AM TO 10:00 AM
INTERSECTION:	N/S	BUENA VISTA STREET
	E/W	BURBANK BOULEVARD
CITY:		BURBANK

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT
700-715	15	210	22	0	11	59	14	0	5	106	18	0	33
715-730	19	290	24	0	24	79	30	0	6	125	27	0	47
730-745	17	328	20	0	11	97	44	1	13	155	50	0	101
745-800	23	296	35	0	27	130	26	0	13	195	52	0	100
800-815	23	276	44	1	27	98	42	0	32	225	60	0	49
815-830	29	312	53	0	20	118	40	0	33	172	35	0	56
830-845	23	293	32	0	25	100	36	0	21	153	20	0	57
845-900	27	291	25	1	20	77	35	0	21	133	29	0	50
900-915	21	238	20	0	12	99	40	0	17	122	32	1	50
915-930	16	239	23	0	17	88	26	0	15	149	28	0	39
930-945	30	227	22	0	16	82	30	0	20	139	25	0	46
945-1000	26	221	21	0	9	98	32	0	25	171	30	0	36
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT
700-800	74	1124	101	0	73	365	114	1	37	581	147	0	281
715-815	82	1190	123	1	89	404	142	1	64	700	189	0	297
730-830	92	1212	152	1	85	443	152	1	91	747	197	0	306
745-845	98	1177	164	1	99	446	144	0	99	745	167	0	262
800-900	102	1172	154	2	92	393	153	0	107	683	144	0	212
815-915	100	1134	130	1	77	394	151	0	92	580	116	1	213
830-930	87	1061	100	1	74	364	137	0	74	557	109	1	196
845-945	94	995	90	1	65	346	131	0	73	543	114	1	185
900-1000	93	925	86	0	54	367	128	0	77	581	115	1	171

PEAK HOUR	730-830



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	0	0	0	0	0
715-730	0	0	0	1	1

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST
PERIOD	LEG	LEG	LEG	LEG
700-715	0	0	0	0
715-730	0	0	0	0

730-745	0	0	0	0	0
745-800	0	0	0	1	1
800-815	4	4	0	2	10
815-830	2	2	0	2	6
830-845	4	4	0	2	10
845-900	0	0	0	0	0
900-915	1	1	0	3	5
915-930	0	0	1	1	2
930-945	2	2	2	4	10
945-1000	1	1	0	0	2
HOUR TOTALS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
PERIOD					
700-800	0	0	0	2	2
715-815	4	4	0	4	12
730-830	6	6	0	5	17
745-845	10	10	0	7	27
800-900	10	10	0	6	26

730-745	1	0	0	0
745-800	0	0	0	0
800-815	0	0	0	0
815-830	0	0	0	0
830-845	0	0	0	0
845-900	1	1	0	0
900-915	0	0	0	0
915-930	0	0	0	0
930-945	0	0	0	0
945-1000	0	0	0	0
HOUR TOTALS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG
PERIOD				
700-800	1	0	0	0
715-815	1	0	0	0
730-830	1	0	0	0
745-845	0	0	0	0
800-900	1	1	0	0

4-1944

11 EBTH
66
89
120
159
105
137
129
105
133
101
118
110
11 EBTH
434
473
521
530
476
504
468
457
462

TOTAL
0
0

1
0
0
0
0
2
0
0
0
0
TOTAL
1
1
1
0
2

WILTEC

Phone: (626) 5

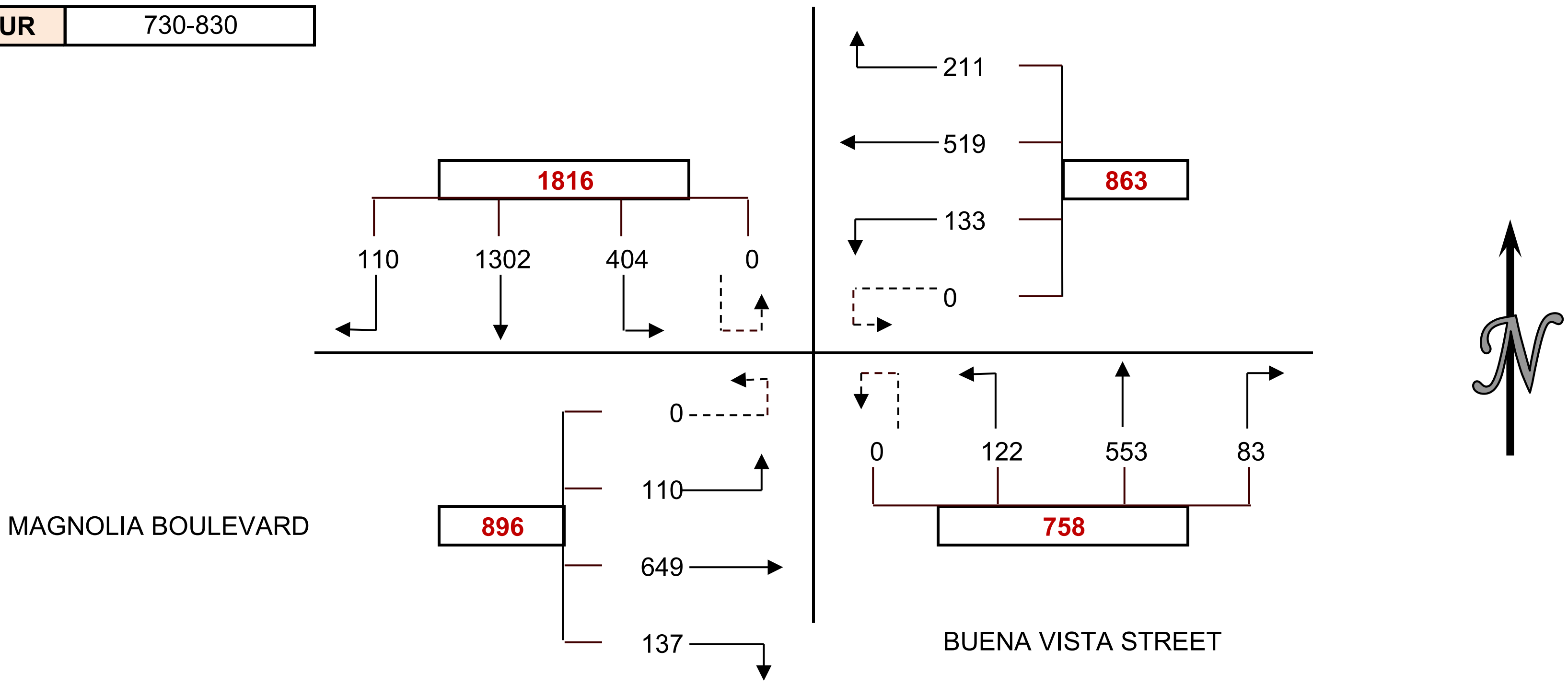
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		DUDEK
PROJECT:		BURBANK TRAFFIC COUNTS
DATE:		THURSDAY MAY 2, 2019
PERIOD:		7:00 AM TO 10:00 AM
INTERSECTION:	N/S	BUENA VISTA STREET
	E/W	MAGNOLIA BOULEVARD
CITY:		BURBANK

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT
700-715	12	206	41	0	25	76	35	0	16	81	15	0	20
715-730	15	268	41	0	26	80	31	0	12	65	7	0	25
730-745	19	361	113	0	47	104	23	0	18	107	24	0	46
745-800	29	326	128	0	59	169	45	0	19	194	37	0	24
800-815	25	279	78	0	70	122	30	0	18	128	35	0	27
815-830	37	336	85	0	35	124	35	0	28	124	26	0	40
830-845	21	284	57	0	38	156	37	0	19	117	24	0	36
845-900	39	333	98	0	23	114	38	0	35	108	30	0	38
900-915	19	285	53	0	29	131	38	1	16	109	27	0	25
915-930	33	241	50	0	29	131	32	0	15	108	32	0	39
930-945	23	205	42	0	29	111	27	1	20	131	22	0	-59
945-1000	39	189	48	0	29	99	34	0	30	112	26	0	130
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT
700-800	75	1161	323	0	157	429	134	0	65	447	83	0	115
715-815	88	1234	360	0	202	475	129	0	67	494	103	0	122
730-830	110	1302	404	0	211	519	133	0	83	553	122	0	137
745-845	112	1225	348	0	202	571	147	0	84	563	122	0	127
800-900	122	1232	318	0	166	516	140	0	100	477	115	0	141
815-915	116	1238	293	0	125	525	148	1	98	458	107	0	139
830-930	112	1143	258	0	119	532	145	1	85	442	113	0	138
845-945	114	1064	243	0	110	487	135	2	86	456	111	0	43
900-1000	114	920	193	0	116	472	131	2	81	460	107	0	135

PEAK HOUR	730-830



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	2	2	1	3	8
715-730	1	1	0	0	2

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST
PERIOD	LEG	LEG	LEG	LEG
700-715	0	1	3	0
715-730	0	1	0	0

730-745	1	1	1	1	4
745-800	4	4	1	1	10
800-815	1	1	1	3	6
815-830	4	4	4	3	15
830-845	4	4	1	1	10
845-900	6	6	4	3	19
900-915	1	1	3	3	8
915-930	2	2	2	4	10
930-945	3	3	0	1	7
945-1000	2	2	1	4	9
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-800	8	8	3	5	24
715-815	7	7	3	5	22
730-830	10	10	7	8	35
745-845	13	13	7	8	41
800-900	15	15	10	10	50

730-745	0	0	1	0
745-800	1	0	1	5
800-815	1	0	3	0
815-830	0	0	3	1
830-845	1	0	1	0
845-900	1	1	3	0
900-915	0	0	3	1
915-930	0	0	4	1
930-945	1	0	1	0
945-1000	0	0	4	1
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG
700-800	1	2	5	5
715-815	2	1	5	5
730-830	2	0	8	6
745-845	3	0	8	6
800-900	3	1	10	1

64-1944

11 EBTH
66
97
157
198
155
139
143
177
125
114
156
140
11 EBTH
518
607
649
635
614
584
559
572
535

TOTAL
4
1

1
7
4
4
2
5
4
5
2
5
TOTAL
13
13
16
17
15

Prepared by National Data & Surveying Services

Buena Vista St & Olive Ave

Peak Hour Turning Movement Count

ID: 19-05221-021
City: Burbank

Day: Tuesday
Date: 04/23/2019

PEAK HOURS	
	08:15 AM - 09:15 AM
	NONE
	05:00 PM - 06:00 PM

COUNT PERIODS	
	07:00 AM - 10:00 AM
	NONE
	04:30 PM - 07:30 PM

Buena Vista St

SOUTHBOUND

AM	450	1045	100	0	573	AM
NOON	0	0	0	0	0	NOON
PM	186	397	95	0	1197	PM
	↲ 1	↓ 2	↳ 1	↶ 0	⇧	

Olive Ave

EASTBOUND

AM	NOON	PM		
1462	0	902	⇦	
1	0	0	↶	0
170	0	339	↱	1
468	0	951	→	2
108	0	96	↴	0
AM	NOON	PM		

CONTROL

Signalized

TEV	4037	0	3918
	AM	NOON	PM
PHF	0.95		0.94

Olive Ave

WESTBOUND

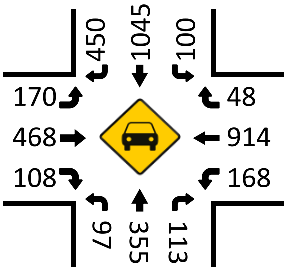
		PM	NOON	AM
0	↰	57	0	48
2	←	615	0	914
1	↙	124	0	168
0	↷	0	0	0
	⇨	1202	0	681
		PM	NOON	AM

NORTHBOUND

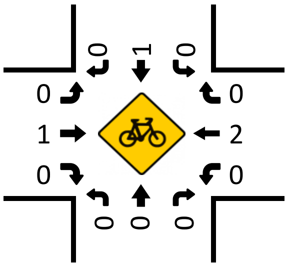
Buena Vista St

	⇩	↷ 0	↰ 1	↑ 2	↱ 1	
PM	617	0	101	801	156	PM
NOON	0	0	0	0	0	NOON
AM	1321	0	97	355	113	AM

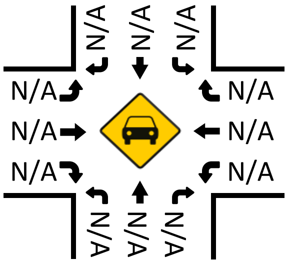
Total Vehicles (AM)



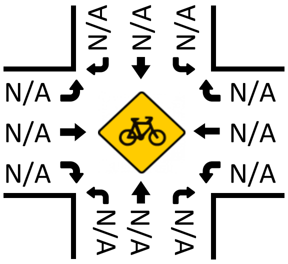
Bikes (AM)



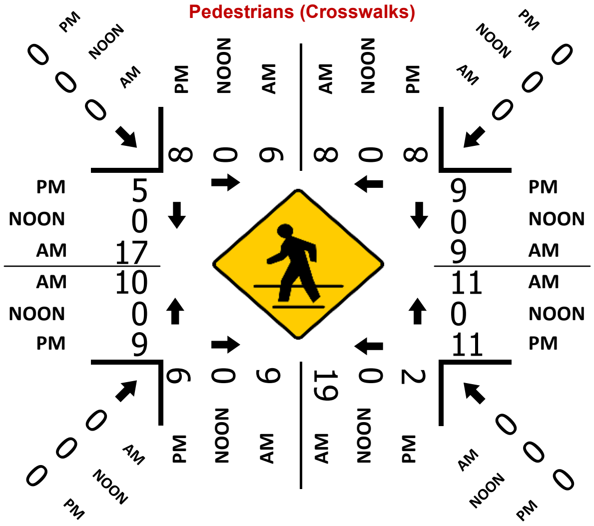
Total Vehicles (Noon)



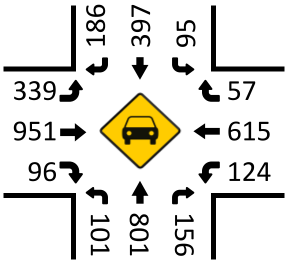
Bikes (NOON)



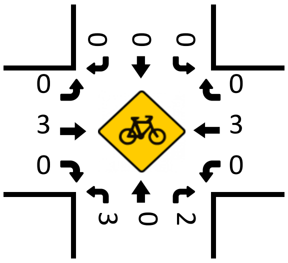
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



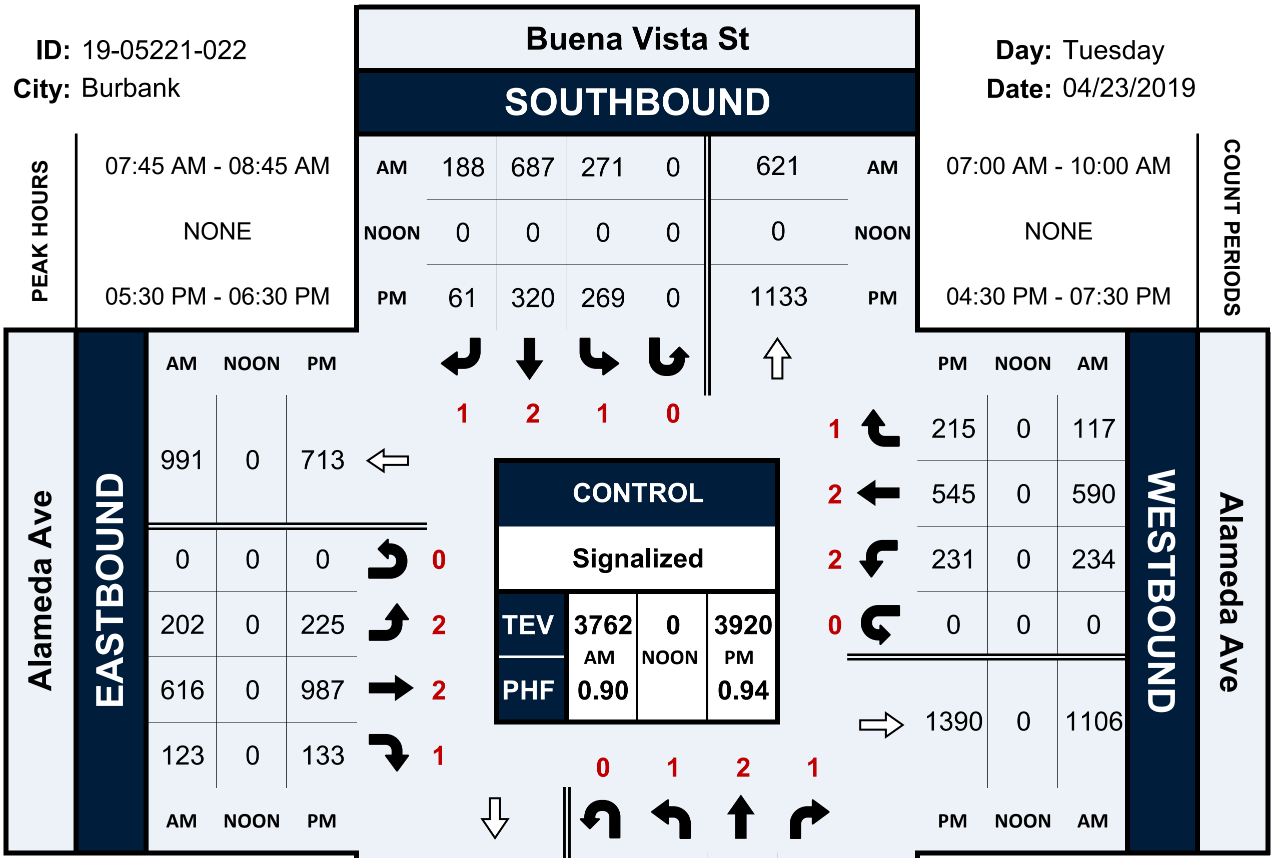
Prepared by National Data & Surveying Services

Buena Vista St & Alameda Ave

Peak Hour Turning Movement Count

ID: 19-05221-022
City: Burbank

Day: Tuesday
Date: 04/23/2019



PEAK HOURS	COUNT PERIODS
07:45 AM - 08:45 AM	07:00 AM - 10:00 AM
NONE	NONE
05:30 PM - 06:30 PM	04:30 PM - 07:30 PM

Buena Vista St

SOUTHBOUND

	↲	↓	↳	↺	⇧	
AM	188	687	271	0	621	AM
NOON	0	0	0	0	0	NOON
PM	61	320	269	0	1133	PM
	1	2	1	0		

Alameda Ave

EASTBOUND

AM	NOON	PM		
991	0	713	⇦	
0	0	0	↺	0
202	0	225	↰	2
616	0	987	→	2
123	0	133	↴	1

CONTROL

Signalized

	AM	NOON	PM
TEV	3762	0	3920
PHF	0.90		0.94

WESTBOUND

Alameda Ave

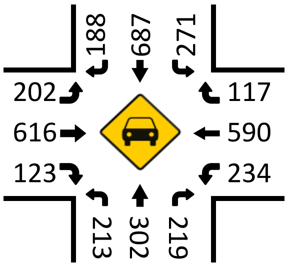
		PM	NOON	AM
1	↰	215	0	117
2	←	545	0	590
2	↙	231	0	234
0	↻	0	0	0
	⇨	1390	0	1106

		0	1	2	1	
	⇩	↶	↰	↑	↱	
PM	684	0	107	693	134	PM
NOON	0	0	0	0	0	NOON
AM	1044	0	213	302	219	AM

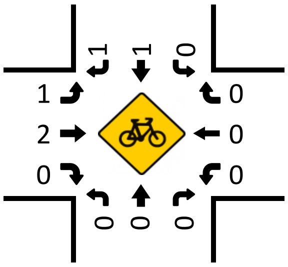
NORTHBOUND

Buena Vista St

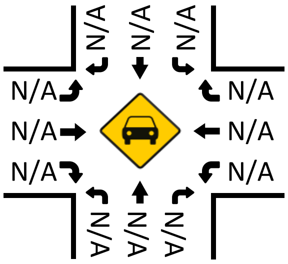
Total Vehicles (AM)



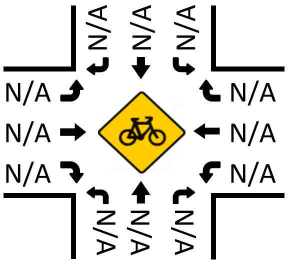
Bikes (AM)



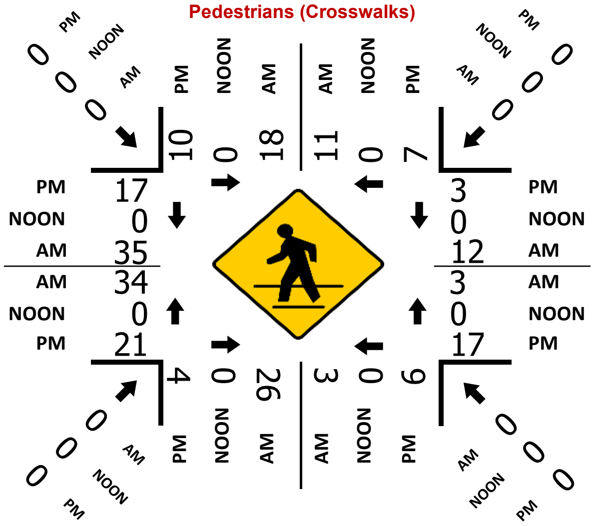
Total Vehicles (Noon)



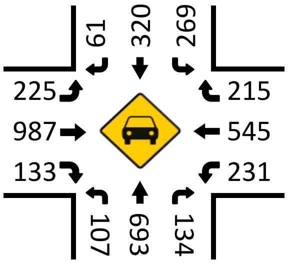
Bikes (NOON)



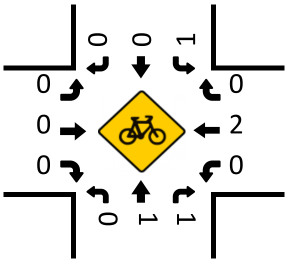
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

Buena Vista St/SR-134 Ramps/Riverside Dr & SR-134 Ramps/Riverside Dr

Peak Hour Turning Movement Count

ID: 19-05221-023
City: Burbank

Day: Tuesday
Date: 04/23/2019

PEAK HOURS		COUNT PERIODS
AM	08:15 AM - 09:15 AM	07:00 AM - 10:00 AM
NOON	NONE	NONE
PM	05:30 PM - 06:30 PM	04:30 PM - 07:30 PM

Buena Vista St/SR-134 Ramps/Riverside Dr

SOUTHBOUND

	↲	↓	↳	U	⇧
AM	46	280	266	0	742
NOON	0	0	0	0	0
PM	37	184	108	0	940
Lanes	1.5	1.5	1	0	

SR-134 Ramps/Riverside Dr

WESTBOUND

Lanes		PM	NOON	AM
1	↰	223	0	79
2	←	274	0	168
1	↙	65	0	20
0	U	0	0	0
	⇨	1033	0	1337

SR-134 Ramps/Riverside Dr

EASTBOUND

	AM	NOON	PM	Lanes
⇦	581	0	431	
U	0	0	0	0
↱	78	0	68	0
→	773	0	856	0
↘	1	0	0	0

CONTROL

Signalized

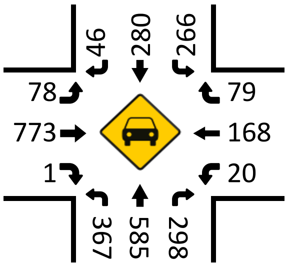
	AM	NOON	PM
TEV	2962	0	2653
PHF	0.95		0.96

NORTHBOUND

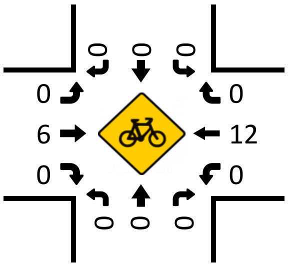
ena Vista St/SR-134 Ramps/Riverside

	⇩	U	↰	↑	↱
Lanes		0	1	1.5	0.5
PM	249	0	120	649	69
NOON	0	0	0	0	0
AM	302	1	367	585	298

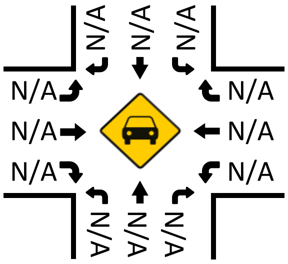
Total Vehicles (AM)



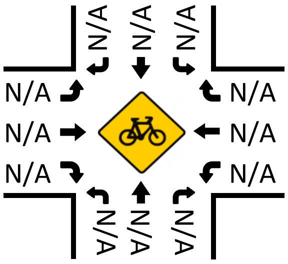
Bikes (AM)



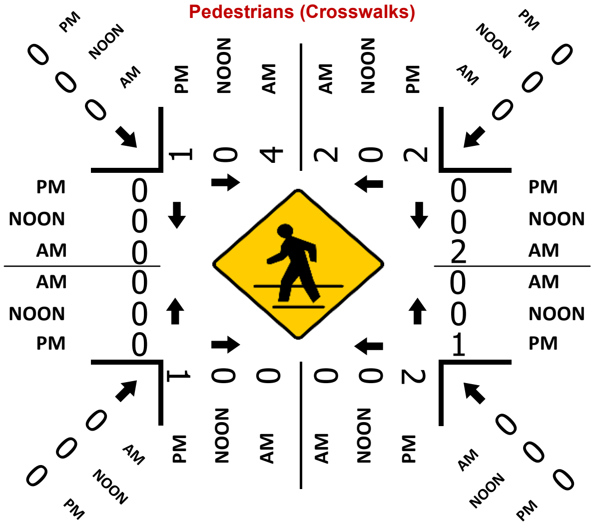
Total Vehicles (Noon)



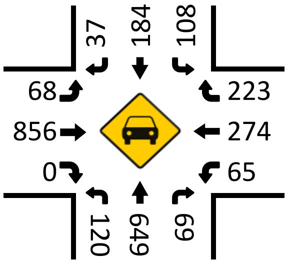
Bikes (NOON)



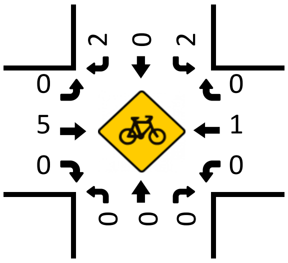
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

N Victory Blvd & W Burbank Blvd

Peak Hour Turning Movement Count

ID: 19-05223-024
City: Burbank

Day: Tuesday
Date: 04/23/2019

PEAK HOURS		COUNT PERIODS
07:45 AM - 08:45 AM	AM	07:00 AM - 10:00 AM
NONE	NOON	NONE
05:15 PM - 06:15 PM	PM	04:30 PM - 07:30 PM

N Victory Blvd

SOUTHBOUND

AM	52	527	636	0	754
NOON	0	0	0	0	0
PM	146	487	735	0	1217
	1	1.5	2.5	0	

W Burbank Blvd

EASTBOUND

AM	NOON	PM	
1544	0	2105	
4	0	11	0
36	0	131	2
1406	0	1214	3
313	0	246	1

CONTROL

Signalized

TEV	5671	0	6484
	AM	NOON	PM
PHF	0.93		0.99

W Burbank Blvd

WESTBOUND

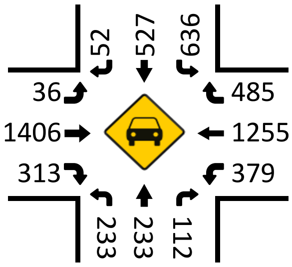
	PM	NOON	AM
1	578	0	485
3	1493	0	1255
2	252	0	379
0	0	0	0
	2177	0	2154

NORTHBOUND

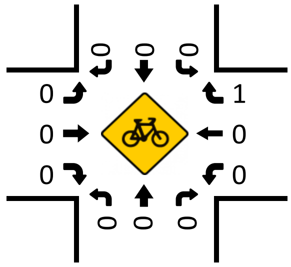
N Victory Blvd

		0	2	2	1
PM	985	0	455	508	228
NOON	0	0	0	0	0
AM	1219	0	233	233	112

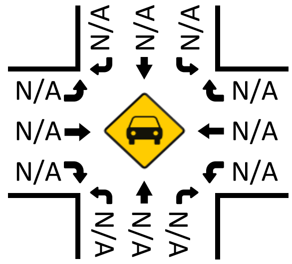
Total Vehicles (AM)



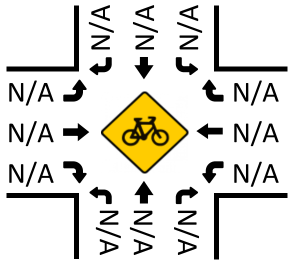
Bikes (AM)



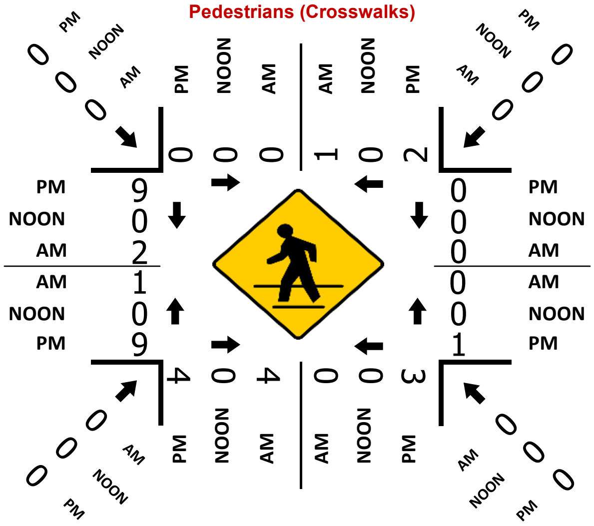
Total Vehicles (Noon)



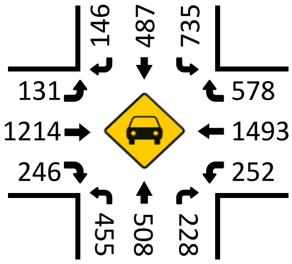
Bikes (NOON)



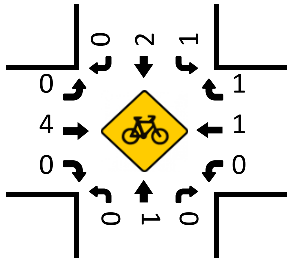
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



WILTEC

Phone: (626) 5

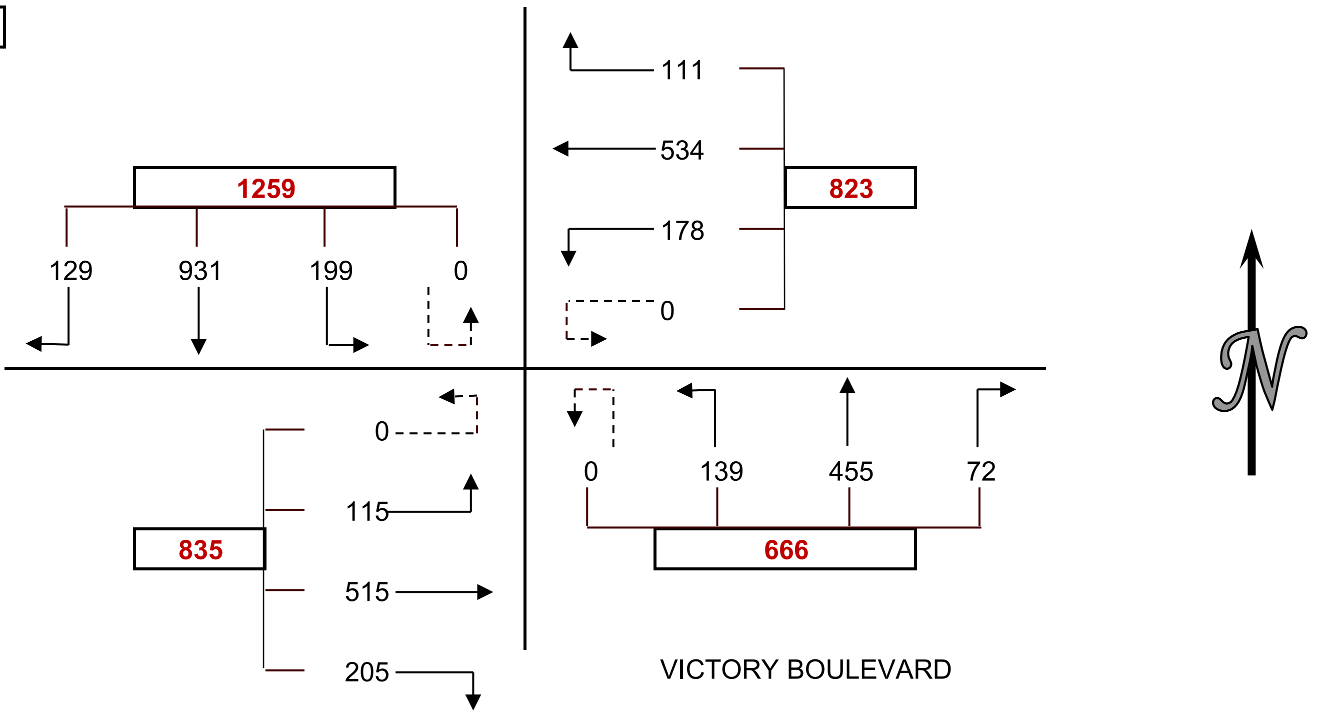
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		DUDEK
PROJECT:		BURBANK TRAFFIC COUNTS
DATE:		WEDNESDAY MAY 8, 2019
PERIOD:		7:00 AM TO 10:00 AM
INTERSECTION:	N/S	VICTORY BOULEVARD
	E/W	MAGNOLIA BOULEVARD
CITY:		BURBANK

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT
700-715	24	131	25	0	22	57	32	0	7	71	14	0	31
715-730	21	208	50	0	28	89	30	0	11	80	32	0	45
730-745	29	184	38	0	24	123	34	1	16	114	31	0	33
745-800	34	247	47	0	26	128	33	0	11	119	41	0	51
800-815	41	266	49	0	23	141	47	0	15	107	41	0	65
815-830	29	213	37	0	25	119	51	0	18	104	36	0	37
830-845	28	226	53	0	28	126	46	0	18	115	30	0	57
845-900	31	226	60	0	35	148	34	0	21	129	32	0	46
900-915	36	195	40	0	38	128	33	0	13	99	11	0	57
915-930	34	216	39	0	44	121	28	0	12	113	29	0	45
930-945	21	125	37	0	38	105	21	0	19	117	30	0	45
945-1000	25	169	39	0	29	136	31	0	23	128	28	0	40
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT
700-800	108	770	160	0	100	397	129	1	45	384	118	0	160
715-815	125	905	184	0	101	481	144	1	53	420	145	0	194
730-830	133	910	171	0	98	511	165	1	60	444	149	0	186
745-845	132	952	186	0	102	514	177	0	62	445	148	0	210
800-900	129	931	199	0	111	534	178	0	72	455	139	0	205
815-915	124	860	190	0	126	521	164	0	70	447	109	0	197
830-930	129	863	192	0	145	523	141	0	64	456	102	0	205
845-945	122	762	176	0	155	502	116	0	65	458	102	0	193
900-1000	116	705	155	0	149	490	113	0	67	457	98	0	187

PEAK HOUR	800-900



MAGNOLIA BOULEVARD

VICTORY BOULEVARD

PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	1	1	1	2	5
715-730	1	1	0	4	6

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST
PERIOD	LEG	LEG	LEG	LEG
700-715	0	1	0	0
715-730	2	0	0	2

730-745	2	2	2	1	7
745-800	3	3	4	2	12
800-815	5	5	2	1	13
815-830	2	2	1	1	6
830-845	0	0	1	2	3
845-900	2	2	2	2	8
900-915	3	3	0	2	8
915-930	1	1	2	6	10
930-945	3	3	3	1	10
945-1000	1	1	2	5	9
HOUR TOTALS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
PERIOD					
700-800	7	7	7	9	30
715-815	11	11	8	8	38
730-830	12	12	9	5	38
745-845	10	10	8	6	34
800-900	9	9	6	6	30

730-745	0	1	2	0
745-800	0	1	3	1
800-815	0	4	1	1
815-830	1	1	2	6
830-845	0	1	0	2
845-900	1	2	1	4
900-915	3	1	2	2
915-930	0	2	0	2
930-945	0	0	3	0
945-1000	1	0	1	0
HOUR TOTALS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG
PERIOD				
700-800	2	3	5	3
715-815	2	6	6	4
730-830	1	7	8	8
745-845	1	7	6	10
800-900	2	8	4	13

4-1944

11 EBTH
58
79
127
134
143
103
134
135
140
112
101
136
11 EBTH
398
483
507
514
515
512
521
488
489

TOTAL
1
4

3
5
6
10
3
8
8
4
3
2
TOTAL
13
18
24
24
27

WILTEC

Phone: (626) 56

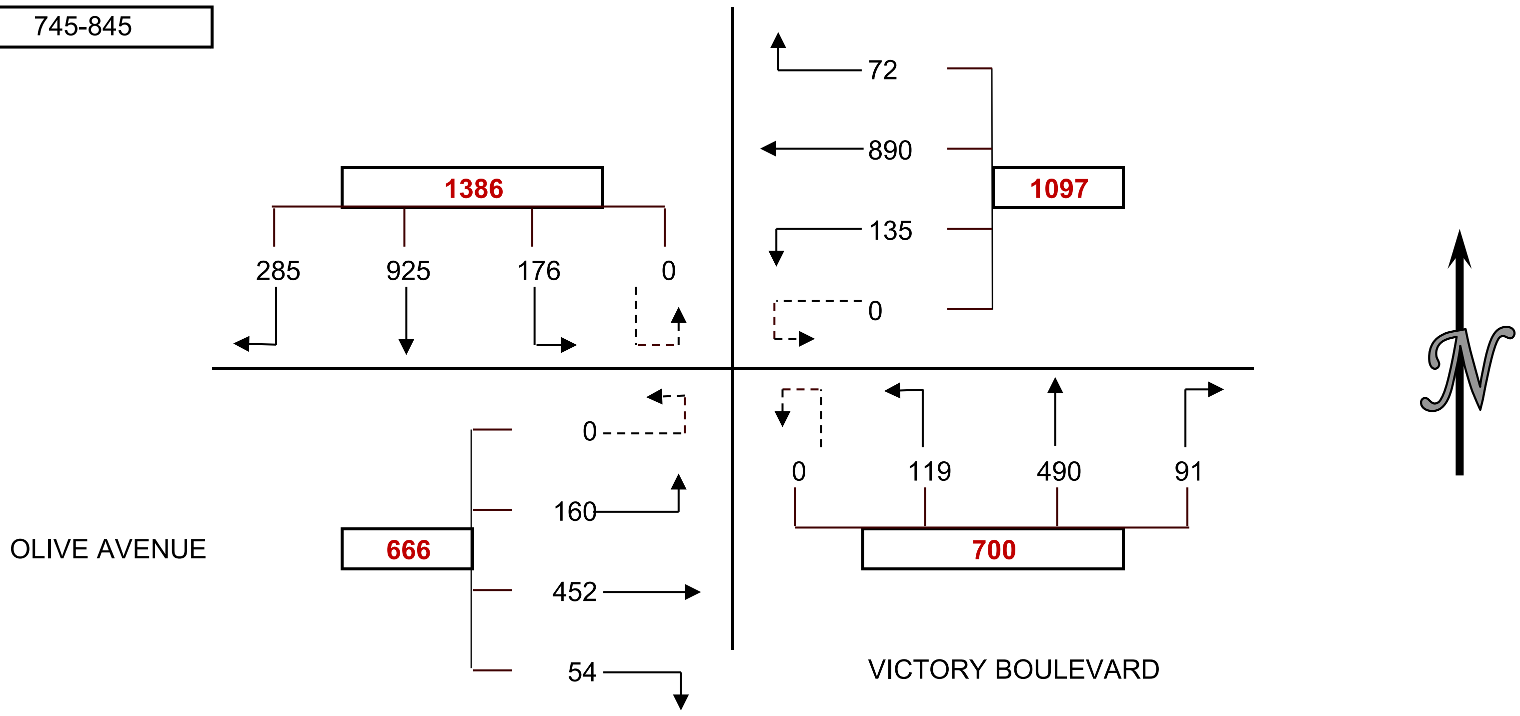
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT: DUDEK
PROJECT: BURBANK TRAFFIC COUNTS
DATE: WEDNESDAY MAY 8, 2019
PERIOD: 7:00 AM TO 10:00 AM
INTERSECTION: N/S VICTORY BOULEVARD
E/W OLIVE AVENUE
CITY: BURBANK

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT
700-715	43	136	21	0	14	119	17	0	9	56	7	0	5
715-730	41	198	30	0	15	141	17	0	15	64	3	0	4
730-745	39	202	20	0	25	180	22	0	19	84	17	0	13
745-800	60	258	39	0	22	252	37	0	28	123	35	0	10
800-815	71	215	41	0	17	215	28	0	18	120	33	0	16
815-830	70	229	37	0	24	221	40	0	29	121	40	0	16
830-845	84	223	59	0	9	202	30	0	16	126	11	0	12
845-900	66	188	37	1	30	241	30	0	16	106	15	0	8
900-915	61	173	46	0	28	243	27	0	26	94	11	0	14
915-930	48	172	29	0	35	169	24	0	20	91	15	0	7
930-945	60	153	36	0	25	190	28	0	36	90	13	0	8
945-1000	51	141	31	0	40	191	26	0	30	136	7	0	12
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT
700-800	183	794	110	0	76	692	93	0	71	327	62	0	32
715-815	211	873	130	0	79	788	104	0	80	391	88	0	43
730-830	240	904	137	0	88	868	127	0	94	448	125	0	55
745-845	285	925	176	0	72	890	135	0	91	490	119	0	54
800-900	291	855	174	1	80	879	128	0	79	473	99	0	52
815-915	281	813	179	1	91	907	127	0	87	447	77	0	50
830-930	259	756	171	1	102	855	111	0	78	417	52	0	41
845-945	235	686	148	1	118	843	109	0	98	381	54	0	37
900-1000	220	639	142	0	128	793	105	0	112	411	46	0	41

PEAK HOUR	745-845



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	2	2	3	0	7
715-730	5	5	2	1	13

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST
PERIOD	LEG	LEG	LEG	LEG
700-715	0	1	0	0
715-730	1	0	0	0

730-745	4	4	3	9	20
745-800	8	8	5	1	22
800-815	8	8	8	8	32
815-830	6	6	5	6	23
830-845	3	3	0	4	10
845-900	1	1	3	7	12
900-915	3	3	7	2	15
915-930	2	2	2	7	13
930-945	4	4	3	2	13
945-1000	4	4	3	1	12
HOUR TOTALS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
PERIOD					
700-800	19	19	13	11	62
715-815	25	25	18	19	87
730-830	26	26	21	24	97
745-845	25	25	18	19	87
800-900	18	18	16	25	77

730-745	0	1	0	0
745-800	1	1	3	2
800-815	1	2	1	1
815-830	0	0	1	6
830-845	3	2	0	2
845-900	4	0	0	2
900-915	2	1	1	0
915-930	0	1	1	1
930-945	0	0	0	0
945-1000	1	1	0	0
HOUR TOTALS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG
PERIOD				
700-800	2	3	3	2
715-815	3	4	4	3
730-830	2	4	5	9
745-845	5	5	5	11
800-900	8	4	2	11

4-1944

11 EBTH
47
77
91
118
104
109
121
153
106
131
124
103
11 EBTH
333
390
422
452
487
489
511
514
464

TOTAL
1
1

1
7
5
7
7
6
4
3
0
2
TOTAL
10
14
20
26
25

WILTEC

Phone: (626) 56

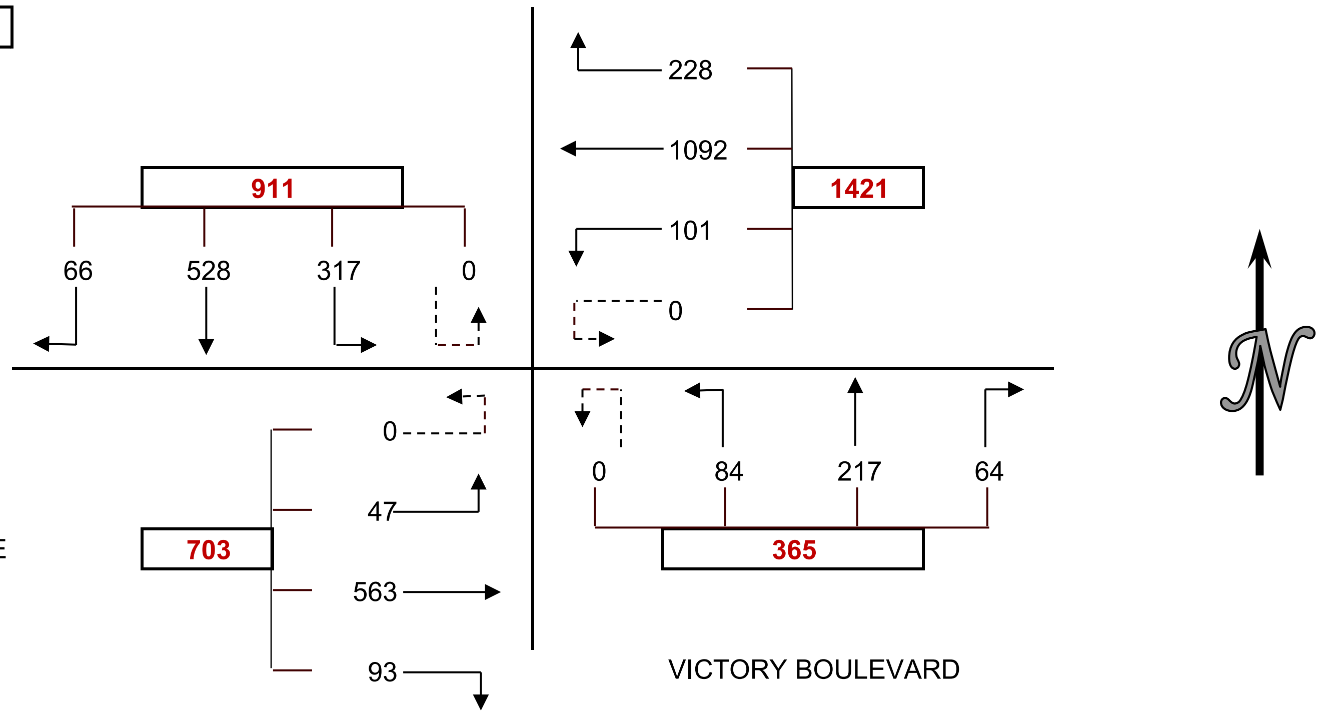
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		DUDEK
PROJECT:		BURBANK TRAFFIC COUNTS
DATE:		WEDNESDAY MAY 8, 2019
PERIOD:		7:00 AM TO 10:00 AM
INTERSECTION:	N/S	VICTORY BOULEVARD
	E/W	ALAMEDA AVENUE
CITY:		BURBANK

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT
700-715	8	87	41	0	31	140	22	0	12	19	16	0	39
715-730	4	85	59	0	35	180	28	0	8	25	10	0	16
730-745	0	88	50	0	66	218	37	0	8	37	18	0	33
745-800	10	125	74	0	65	276	20	0	13	49	18	0	25
800-815	22	116	78	0	57	271	21	0	18	63	28	0	21
815-830	16	106	80	0	67	283	27	0	13	55	18	0	32
830-845	18	181	85	0	39	262	33	0	20	50	20	0	15
845-900	9	104	42	0	72	328	22	0	17	56	18	0	24
900-915	15	100	63	0	53	299	31	0	12	44	20	0	16
915-930	10	78	66	0	56	280	28	0	18	51	24	0	24
930-945	11	78	82	0	55	197	31	0	20	60	16	0	18
945-1000	7	60	78	0	67	200	22	0	19	69	15	0	18
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT
700-800	22	385	224	0	197	814	107	0	41	130	62	0	113
715-815	36	414	261	0	223	945	106	0	47	174	74	0	95
730-830	48	435	282	0	255	1048	105	0	52	204	82	0	111
745-845	66	528	317	0	228	1092	101	0	64	217	84	0	93
800-900	65	507	285	0	235	1144	103	0	68	224	84	0	92
815-915	58	491	270	0	231	1172	113	0	62	205	76	0	87
830-930	52	463	256	0	220	1169	114	0	67	201	82	0	79
845-945	45	360	253	0	236	1104	112	0	67	211	78	0	82
900-1000	43	316	289	0	231	976	112	0	69	224	75	0	76

PEAK HOUR	745-845



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	1	1	2	1	5
715-730	1	1	3	6	11

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST
PERIOD	LEG	LEG	LEG	LEG
700-715	0	0	0	0
715-730	0	0	0	0

730-745	5	5	3	2	15
745-800	0	0	0	1	1
800-815	1	1	1	2	5
815-830	7	7	7	20	41
830-845	1	1	2	5	9
845-900	4	4	3	4	15
900-915	1	1	5	1	8
915-930	0	0	1	2	3
930-945	1	1	0	4	6
945-1000	1	1	2	0	4
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-800	7	7	8	10	32
715-815	7	7	7	11	32
730-830	13	13	11	25	62
745-845	9	9	10	28	56
800-900	13	13	13	31	70

730-745	1	1	0	1
745-800	2	0	0	0
800-815	0	2	0	0
815-830	0	0	1	1
830-845	0	0	1	1
845-900	0	0	0	1
900-915	0	0	0	0
915-930	0	1	0	0
930-945	1	0	0	0
945-1000	0	0	0	0
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG
700-800	3	1	0	1
715-815	3	3	0	1
730-830	3	3	1	2
745-845	2	2	2	2
800-900	0	2	2	3

11 EBTH
86
103
121
155
159
127
122
135
112
130
118
160
11 EBTH
465
538
562
563
543
496
499
495
520

TOTAL
0
0

3
2
2
2
2
1
0
1
1
0
TOTAL
5
7
9
8
7

Prepared by National Data & Surveying Services

N San Fernando Blvd & Burbank Blvd

Peak Hour Turning Movement Count

ID: 18-05253-004
City: Burbank

Day: Tuesday
Date: 04/24/2018

PEAK HOURS		COUNT PERIODS
07:30 AM - 08:30 AM	AM	07:00 AM - 10:00 AM
NONE	NOON	NONE
05:30 PM - 06:30 PM	PM	04:30 PM - 07:30 PM

N San Fernando Blvd — SOUTHBOUND

AM	631	200	49	0	655	AM
NOON	0	0	0	0	0	NOON
PM	445	169	70	0	1285	PM
	1	1	1	0		

Burbank Blvd — EASTBOUND

AM	NOON	PM	
1016	0	1101	⇦
0	0	0	0
487	0	834	2
462	0	648	2
281	0	575	1

Burbank Blvd — WESTBOUND

	PM	NOON	AM
1	86	0	70
2	411	0	320
1	20	0	18
0	0	0	0
⇨	737	0	514

CONTROL

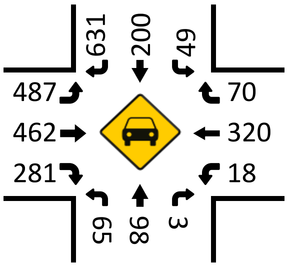
Signalized

	AM	NOON	PM
TEV	2684	0	3887
PHF	0.86		0.98

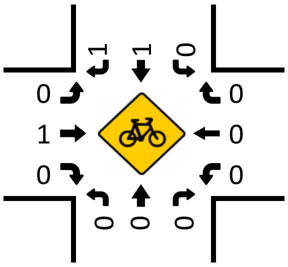
N San Fernando Blvd — NORTHBOUND

		0	2	1.5	0.5	
PM	764	0	245	365	19	PM
NOON	0	0	0	0	0	NOON
AM	499	0	65	98	3	AM

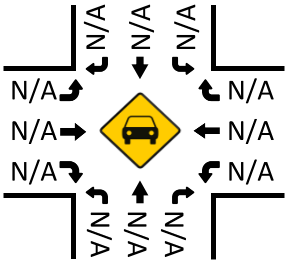
Total Vehicles (AM)



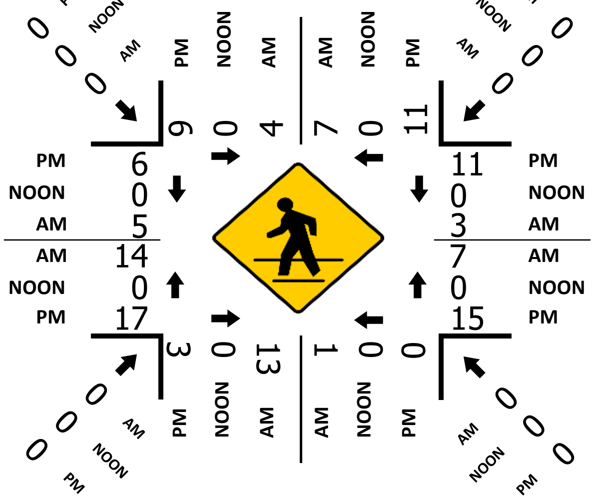
Bikes (AM)



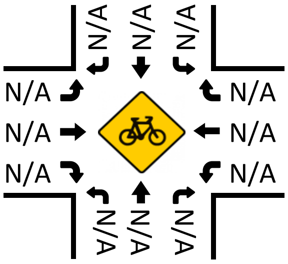
Total Vehicles (Noon)



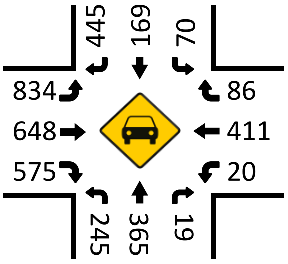
Pedestrians (Crosswalks)



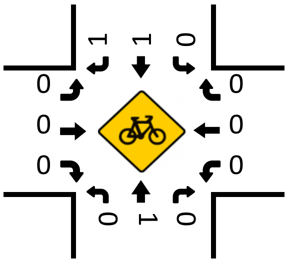
Bikes (NOON)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

N 1st St & E Magnolia Blvd

Peak Hour Turning Movement Count

ID: 17-05689-015
City: Burbank

Day: Tuesday
Date: 10/17/2017

PEAK HOURS		COUNT PERIODS
07:45 AM - 08:45 AM	AM	07:00 AM - 10:00 AM
NONE	NOON	NONE
05:30 PM - 06:30 PM	PM	04:30 PM - 07:30 PM

N 1st St
SOUTHBOUND

	↲	↓	↳	↶	⇧
AM	199	276	27	0	220
NOON	0	0	0	0	0
PM	224	358	147	0	782
	1	2	1	0	

E Magnolia Blvd
EASTBOUND

	AM	NOON	PM	
⇦	976	0	1020	
↶	0	0	0	0
↱	91	0	287	1
→	478	0	765	2
↴	149	0	315	0

E Magnolia Blvd
WESTBOUND

		PM	NOON	AM
1	↰	90	0	18
2	←	546	0	634
1	↲	39	0	39
0	↶	23	0	1
	⇨	1059	0	541

CONTROL

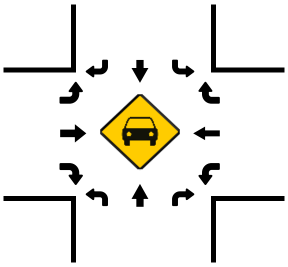
Signalized

	AM	NOON	PM
TEV	2201	0	3573
PHF	0.86		0.95

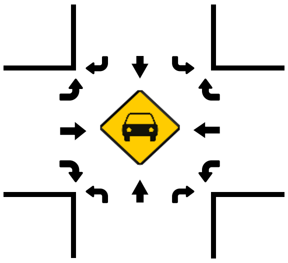
NORTHBOUND
N 1st St

	⇩	↶	↰	↑	↱
		0	1	2	1
PM	712	0	250	405	124
NOON	0	0	0	0	0
AM	464	0	143	111	35

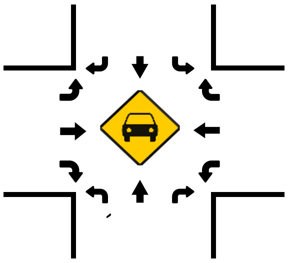
Total Vehicles (AM)



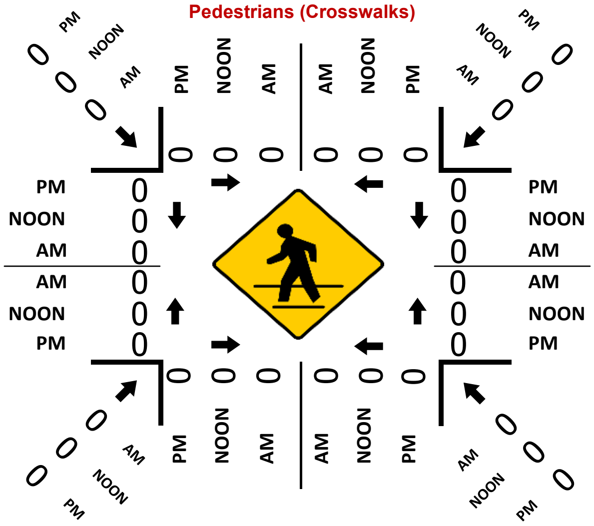
Total Vehicles (NOON)



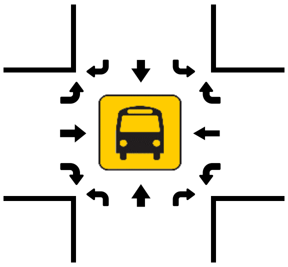
Total Vehicles (PM)



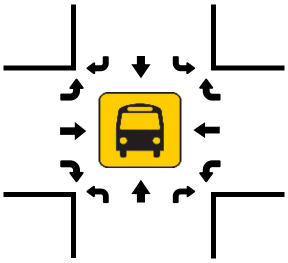
Pedestrians (Crosswalks)



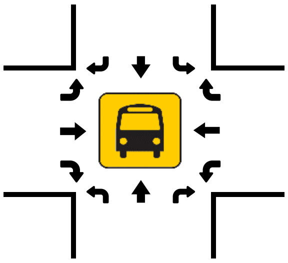
Total Vehicles (AM)



Total Vehicles (NOON)



Total Vehicles (PM)



Prepared by National Data & Surveying Services

S First St & E Olive Ave/ N Bonnywood Pl

Peak Hour Turning Movement Count

ID: 18-05253-014
City: Burbank

Day: Tuesday
Date: 04/24/2018

PEAK HOURS		COUNT PERIODS
08:45 AM - 09:45 AM	AM	07:00 AM - 10:00 AM
NONE	NOON	NONE
05:00 PM - 06:00 PM	PM	04:30 PM - 07:30 PM

S First St

SOUTHBOUND

AM	93	175	50	0	359	AM
NOON	0	0	0	0	0	NOON
PM	125	355	62	0	810	PM
	1	2	1	0		

E Olive Ave/ N Bonnywood Pl

EASTBOUND

AM	NOON	PM	
1010	0	774	
0	0	0	0
95	0	335	1
375	0	775	2
103	0	233	0
AM	NOON	PM	

CONTROL

Signalized

TEV	2153	0	3132
	AM	NOON	PM
PHF	0.93		0.94

E Olive Ave/ N Bonnywood Pl

WESTBOUND

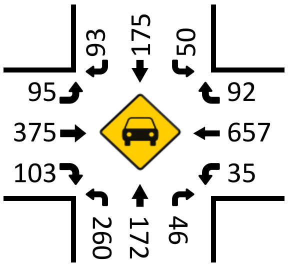
	PM	NOON	AM
1	133	0	92
2	465	0	657
1	54	0	35
0	0	0	0
	906	0	471
	PM	NOON	AM

		0	1	2	0	
PM	642	0	184	342	69	PM
NOON	0	0	0	0	0	NOON
AM	313	0	260	172	46	AM

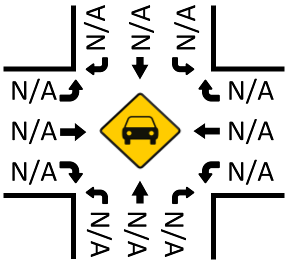
NORTHBOUND

S First St

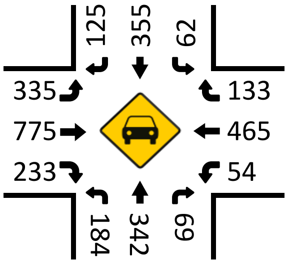
Total Vehicles (AM)



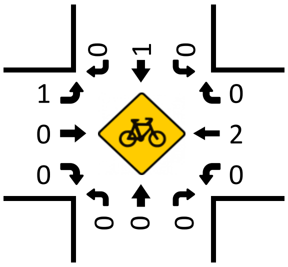
Total Vehicles (Noon)



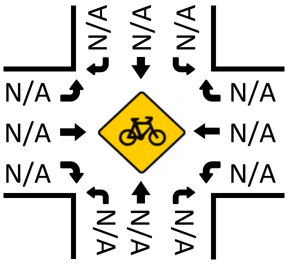
Total Vehicles (PM)



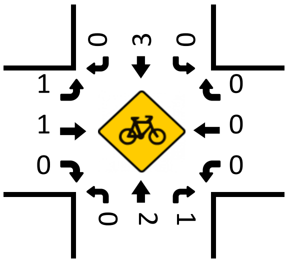
Bikes (AM)



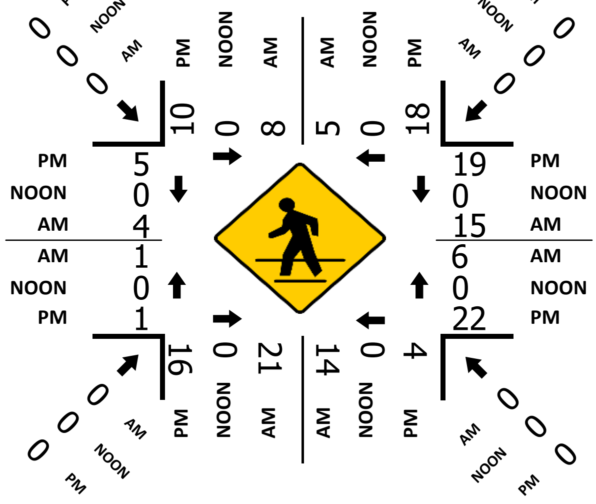
Bikes (NOON)



Bikes (PM)



Pedestrians (Crosswalks)



WILTEC

Phone: (626) 5

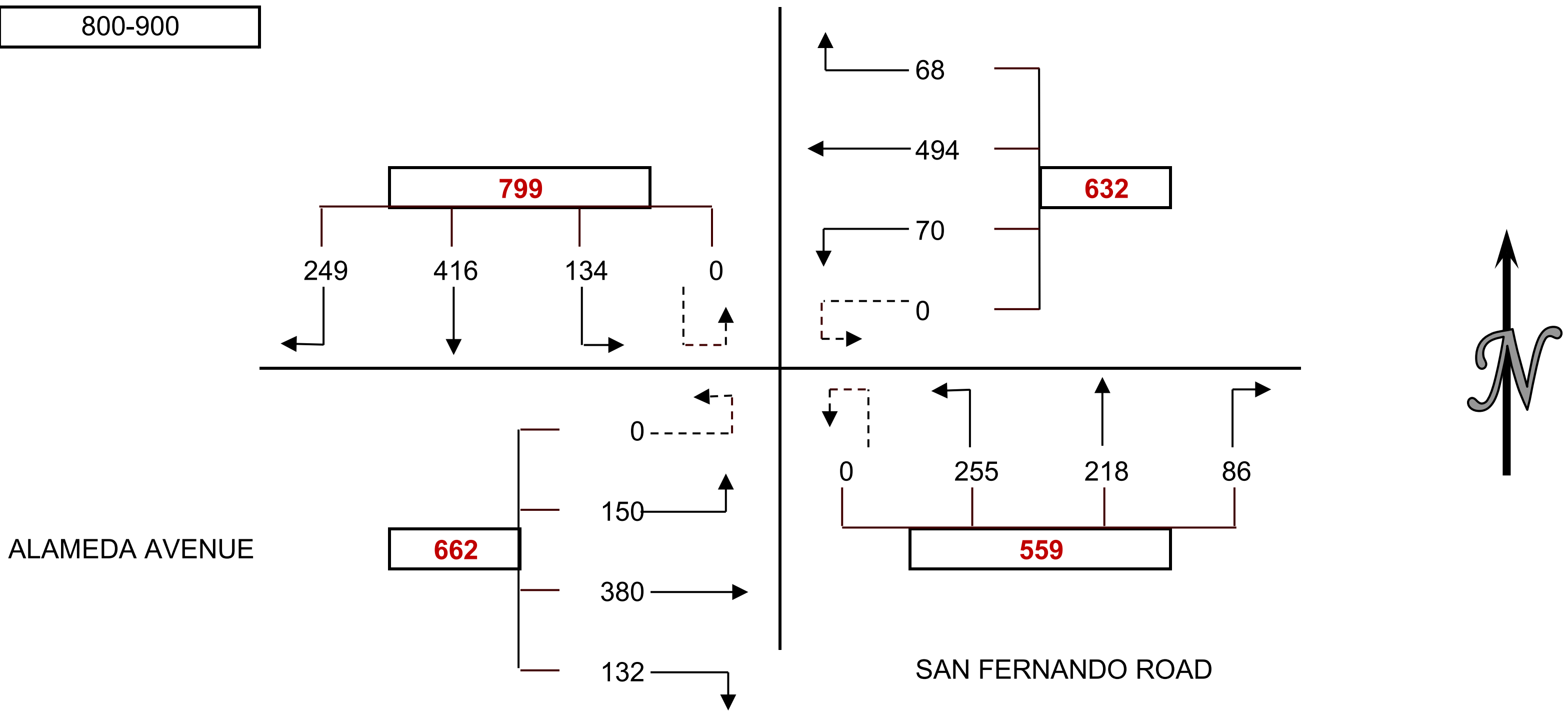
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		DUDEK
PROJECT:		BURBANK TRAFFIC COUNTS
DATE:		THURSDAY APRIL 25, 2019
PERIOD:		7:00 AM TO 10:00 AM
INTERSECTION:	N/S	SAN FERNANDO ROAD
	E/W	ALAMEDA AVENUE
CITY:		BURBANK

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT
700-715	42	93	27	0	12	24	11	0	24	31	48	0	22
715-730	31	103	30	0	4	241	17	0	16	21	39	0	22
730-745	50	106	30	0	9	117	15	0	17	62	42	0	42
745-800	47	134	32	0	11	100	6	0	23	51	62	0	31
800-815	66	105	32	0	16	120	23	0	16	62	43	0	36
815-830	54	115	41	0	15	129	14	0	25	63	62	0	37
830-845	67	107	28	0	25	118	17	0	29	42	82	0	30
845-900	62	89	33	0	12	127	16	0	16	51	68	0	29
900-915	58	111	37	0	6	103	10	0	27	55	76	0	30
915-930	51	83	20	0	18	136	12	0	17	46	64	0	37
930-945	58	73	23	0	9	126	9	0	18	62	70	0	34
945-1000	44	63	28	0	8	115	11	0	13	75	49	0	20
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT
700-800	170	436	119	0	36	482	49	0	80	165	191	0	117
715-815	194	448	124	0	40	578	61	0	72	196	186	0	131
730-830	217	460	135	0	51	466	58	0	81	238	209	0	146
745-845	234	461	133	0	67	467	60	0	93	218	249	0	134
800-900	249	416	134	0	68	494	70	0	86	218	255	0	132
815-915	241	422	139	0	58	477	57	0	97	211	288	0	126
830-930	238	390	118	0	61	484	55	0	89	194	290	0	126
845-945	229	356	113	0	45	492	47	0	78	214	278	0	130
900-1000	211	330	108	0	41	480	42	0	75	238	259	0	121

PEAK HOUR	800-900



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	2	2	5	7	16
715-730	9	9	9	4	31

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST
PERIOD	LEG	LEG	LEG	LEG
700-715	1	1	1	0
715-730	0	2	0	0

730-745	18	18	11	1	48
745-800	5	5	2	5	17
800-815	10	10	10	4	34
815-830	3	3	10	1	17
830-845	5	5	11	4	25
845-900	3	3	6	3	15
900-915	11	11	10	7	39
915-930	16	16	12	1	45
930-945	18	18	21	7	64
945-1000	7	7	7	3	24
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	34	34	27	17	112
715-815	42	42	32	14	130
730-830	36	36	33	11	116
745-845	23	23	33	14	93
800-900	21	21	37	12	91

730-745	1	0	1	2
745-800	0	2	1	0
800-815	1	1	0	1
815-830	2	0	0	0
830-845	1	1	0	1
845-900	0	0	0	0
900-915	1	0	0	0
915-930	0	0	0	0
930-945	0	1	0	1
945-1000	1	1	0	2
HOUR TOTALS	NORTH	EAST	SOUTH	WEST
PERIOD	LEG	LEG	LEG	LEG
700-800	2	5	3	2
715-815	2	5	2	3
730-830	4	3	2	3
745-845	4	4	1	2
800-900	4	2	0	2

11 EBTH
48
53
84
92
98
99
87
96
82
89
96
87
11 EBTH
277
327
373
376
380
364
354
363
354

TOTAL
3
2

4
3
3
2
3
0
1
0
2
4
TOTAL
12
12
12
11
8

WILTEC

Phone: (626) 56

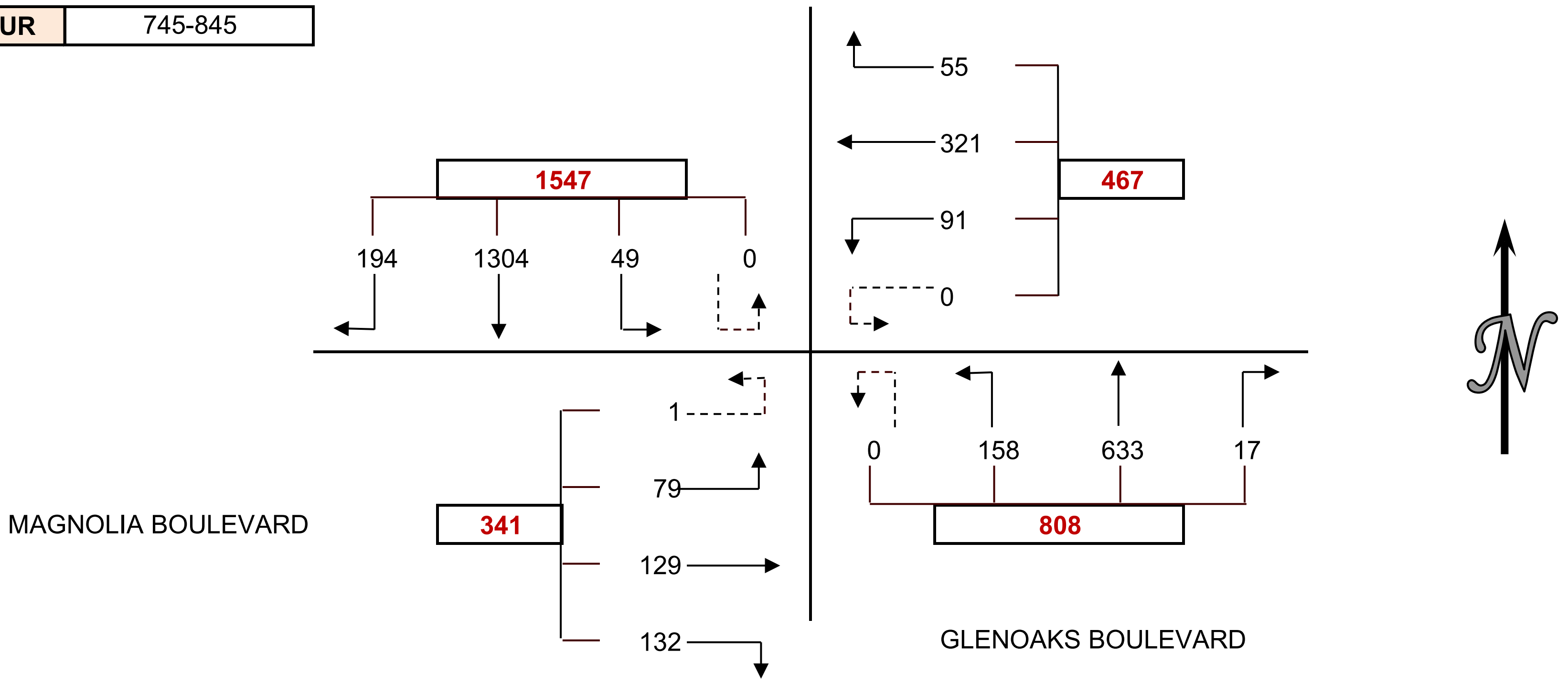
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT: DUDEK
PROJECT: BURBANK TRAFFIC COUNTS
DATE: THURSDAY APRIL 25, 2019
PERIOD: 7:00 AM TO 10:00 AM
INTERSECTION: N/S GLENOAKS BOULEVARD
E/W MAGNOLIA BOULEVARD
CITY: BURBANK

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT
700-715	25	222	6	0	6	46	19	0	2	99	29	0	13
715-730	30	239	6	0	9	57	11	0	1	112	30	0	12
730-745	35	287	10	0	16	59	14	0	4	156	38	0	21
745-800	35	279	15	0	19	105	25	0	3	201	44	0	30
800-815	53	360	20	0	6	65	13	0	2	146	13	0	30
815-830	45	316	10	0	16	77	25	0	7	162	47	0	34
830-845	61	349	4	0	14	74	28	0	5	124	54	0	38
845-900	38	323	9	0	13	80	14	0	6	139	37	1	41
900-915	59	259	5	0	10	46	4	0	9	121	46	0	39
915-930	53	206	7	0	10	67	17	0	6	133	49	0	33
930-945	39	229	7	0	16	61	8	0	0	123	32	0	37
945-1000	39	217	6	0	8	50	8	0	15	163	45	0	33
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U	10
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT	EBRT
700-800	125	1027	37	0	50	267	69	0	10	568	141	0	76
715-815	153	1165	51	0	50	286	63	0	10	615	125	0	93
730-830	168	1242	55	0	57	306	77	0	16	665	142	0	115
745-845	194	1304	49	0	55	321	91	0	17	633	158	0	132
800-900	197	1348	43	0	49	296	80	0	20	571	151	1	143
815-915	203	1247	28	0	53	277	71	0	27	546	184	1	152
830-930	211	1137	25	0	47	267	63	0	26	517	186	1	151
845-945	189	1017	28	0	49	254	43	0	21	516	164	1	150
900-1000	190	911	25	0	44	224	37	0	30	540	172	0	142

PEAK HOUR	745-845



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	5	5	0	0	10
715-730	0	0	6	2	8

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST
PERIOD	LEG	LEG	LEG	LEG
700-715	0	3	0	0
715-730	1	0	0	0

730-745	2	2	2	3	9
745-800	4	4	8	2	18
800-815	3	3	4	2	12
815-830	2	2	4	3	11
830-845	5	5	0	9	19
845-900	9	9	10	10	38
900-915	3	3	5	6	17
915-930	4	4	4	4	16
930-945	5	5	5	6	21
945-1000	10	10	4	4	28
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
700-800	11	11	16	7	45
715-815	9	9	20	9	47
730-830	11	11	18	10	50
745-845	14	14	16	16	60
800-900	19	19	18	24	80

730-745	0	0	0	0
745-800	0	0	0	2
800-815	10	0	0	0
815-830	-10	0	0	1
830-845	0	30	0	2
845-900	3	-30	0	0
900-915	0	1	1	2
915-930	0	0	1	0
930-945	0	1	0	0
945-1000	0	0	0	0
HOUR TOTALS PERIOD	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG
700-800	1	3	0	2
715-815	11	0	0	2
730-830	0	0	0	3
745-845	0	30	0	5
800-900	3	0	0	3

4-1944

11 EBTH
14
16
20
40
32
26
31
25
21
30
24
28
11 EBTH
90
108
118
129
114
103
107
100
103

TOTAL
3
1

0
2
10
-9
32
-27
4
1
1
0
TOTAL
6
13
3
35
6

Prepared by National Data & Surveying Services

N Glenoaks Blvd & E Olive Ave

Peak Hour Turning Movement Count

ID: 18-05253-027
City: Burbank

Day: Tuesday
Date: 04/24/2018

PEAK HOURS		COUNT PERIODS
08:00 AM - 09:00 AM	AM	07:00 AM - 10:00 AM
NONE	NOON	NONE
05:15 PM - 06:15 PM	PM	04:30 PM - 07:30 PM

N Glenoaks Blvd

SOUTHBOUND

AM	178	884	46	0	627	AM
NOON	0	0	0	0	0	NOON
PM	97	978	85	0	1291	PM
	↲	↓	↳	⮌	⇧	
	0	2	1	0		

E Olive Ave

EASTBOUND

AM	NOON	PM		
749	0	420	⇦	
0	0	0	⮌	0
93	0	186	↰	1
125	0	348	→	2
82	0	162	↴	0
AM	NOON	PM		

CONTROL

Signalized

	AM	NOON	PM
TEV	2645	0	3426
PHF	0.96		0.97

E Olive Ave

WESTBOUND

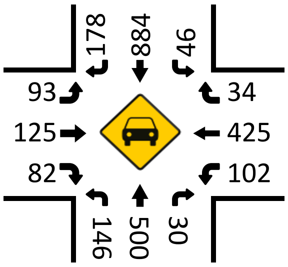
		PM	NOON	AM
0	↱	64	0	34
2	←	210	0	425
1	↙	65	0	102
0	⮌	0	0	0
	⇨	509	0	201
		PM	NOON	AM

		0	1	2	0	
	⇩	⮌	↰	↑	↱	
PM	1206	1	113	1041	76	PM
NOON	0	0	0	0	0	NOON
AM	1068	0	146	500	30	AM

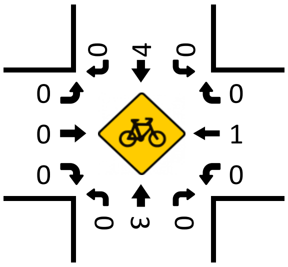
NORTHBOUND

N Glenoaks Blvd

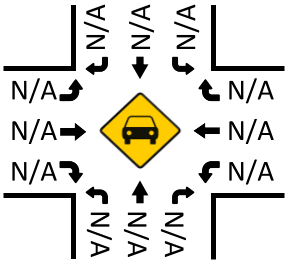
Total Vehicles (AM)



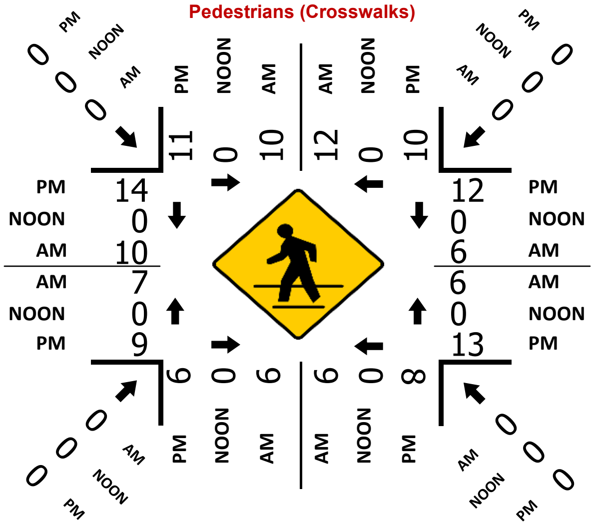
Bikes (AM)



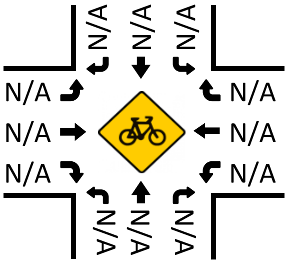
Total Vehicles (Noon)



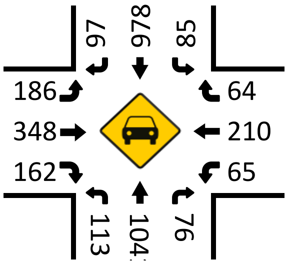
Pedestrians (Crosswalks)



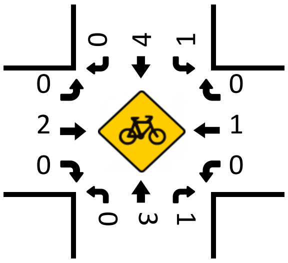
Bikes (NOON)



Total Vehicles (PM)



Bikes (PM)



WILTEC

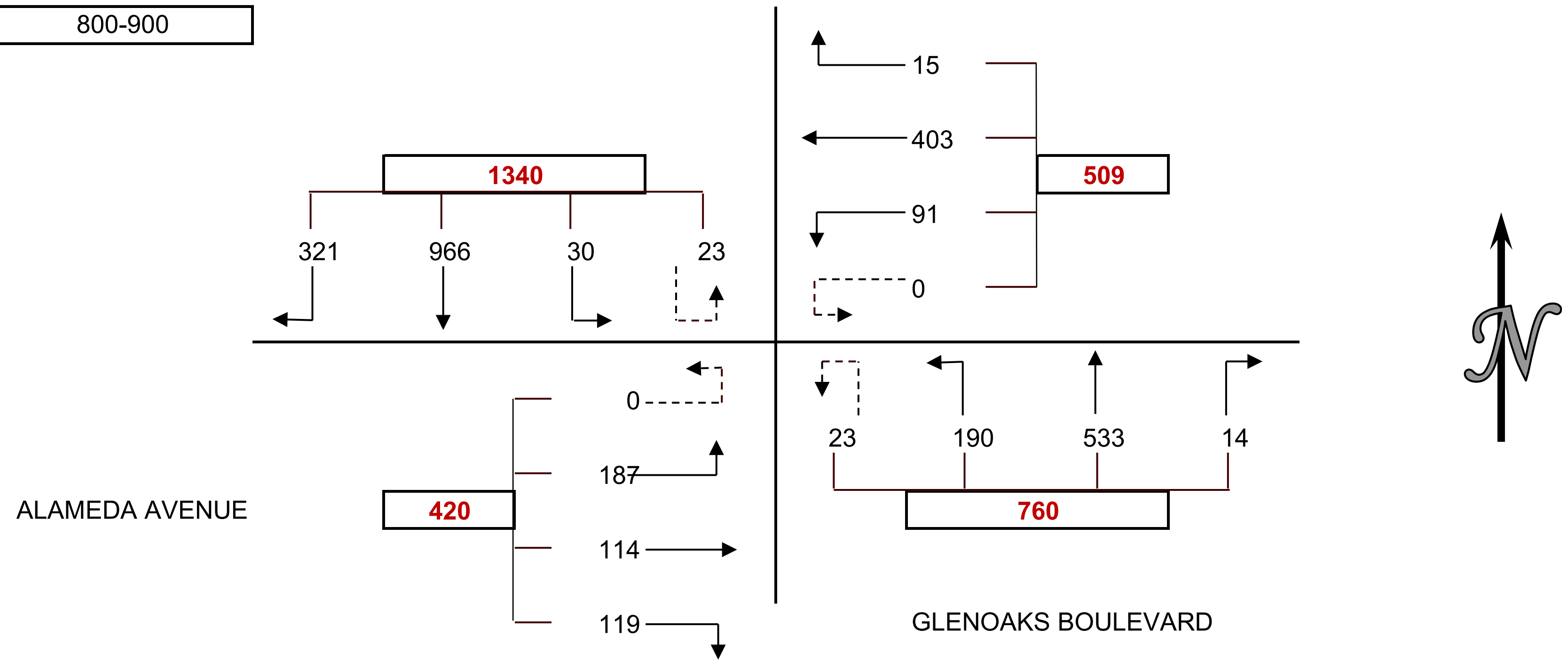
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT:		DUDEK
PROJECT:		BURBANK TRAFFIC COUNTS
DATE:		TUESDAY APRIL 30, 2019
PERIOD:		7:00 AM TO 10:00 AM
INTERSECTION:	N/S	GLENOAKS BOULEVARD
	E/W	ALAMEDA AVENUE
CITY:		BURBANK

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	3U	4	5	6	6U	7	8	9	9U
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT
700-715	43	150	4	3	4	7	11	0	2	62	30	3
715-730	48	187	3	3	5	168	9	0	0	88	29	0
730-745	65	209	8	6	4	90	20	0	5	104	40	4
745-800	59	209	10	4	3	103	24	0	6	134	51	6
800-815	74	216	10	5	2	117	24	0	5	124	33	7
815-830	69	225	7	5	6	94	22	0	3	164	61	5
830-845	97	267	6	7	4	98	27	0	3	117	54	6
845-900	81	258	7	6	3	94	18	0	3	128	42	5
900-915	82	180	3	7	7	74	14	0	2	144	44	5
915-930	68	164	12	4	5	69	13	0	5	120	29	7
930-945	63	144	6	5	6	65	11	0	5	166	44	3
945-1000	53	157	10	3	5	65	12	0	4	137	51	3
HOUR TOTALS	1	2	3	3U	4	5	6	6U	7	8	9	9U
PERIOD	SBRT	SBTH	SBLT	SBUT	WBRT	WBTH	WBLT	WBUT	NBRT	NBTH	NBLT	NBUT
700-800	215	755	25	16	16	368	64	0	13	388	150	13
715-815	246	821	31	18	14	478	77	0	16	450	153	17
730-830	267	859	35	20	15	404	90	0	19	526	185	22
745-845	299	917	33	21	15	412	97	0	17	539	199	24
800-900	321	966	30	23	15	403	91	0	14	533	190	23
815-915	329	930	23	25	20	360	81	0	11	553	201	21
830-930	328	869	28	24	19	335	72	0	13	509	169	23
845-945	294	746	28	22	21	302	56	0	15	558	159	20
900-1000	266	645	31	19	23	273	50	0	16	567	168	18

PEAK HOUR	800-900



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	5	5	2	0	12
715-730	1	1	2	1	5
730-745	1	1	1	1	4

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH
PERIOD	LEG	LEG	LEG
700-715	0	0	0
715-730	0	1	0
730-745	0	0	0

745-800	3	3	1	1	8
800-815	2	2	2	1	7
815-830	2	2	0	0	4
830-845	2	2	0	3	7
845-900	4	4	1	1	10
900-915	6	6	4	1	17
915-930	11	11	2	1	25
930-945	1	1	3	5	10
945-1000	4	4	4	4	16
HOUR TOTALS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
PERIOD					
700-800	10	10	6	3	29
715-815	7	7	6	4	24
730-830	8	8	4	3	23
745-845	9	9	3	5	26
800-900	10	10	3	5	28

745-800	0	0	1
800-815	0	0	0
815-830	0	0	0
830-845	0	0	0
845-900	0	1	0
900-915	0	0	0
915-930	0	0	1
930-945	0	2	0
945-1000	0	1	0
HOUR TOTALS	NORTH LEG	EAST LEG	SOUTH LEG
PERIOD			
700-800	0	1	1
715-815	0	1	1
730-830	0	0	1
745-845	0	0	1
800-900	0	1	0

Phone: (626) 564-194

10 EBRT	11 EBTH
14	14
19	21
27	25
21	34
32	29
31	39
32	26
24	20
27	26
25	21
31	17
21	25
10 EBRT	11 EBTH
81	94
99	109
111	127
116	128
119	114
114	111
108	93
107	84
104	89

WEST LEG	TOTAL
0	0
0	1
0	0

0	1
0	0
0	0
0	0
0	1
0	0
0	1
0	2
1	2
WEST LEG	TOTAL
0	2
0	2
0	1
0	1
0	1

APPENDIX:

Signal Timing Sheets

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

TRAFFIC SIGNAL
Coordination Timing
BiTrans 233RV2.x

197 Hollywood Way & Winona Ave			
Prepared by:	RICHARD LOCKYER	Date	05/05/20
Checked by:	JONATHAN YEE	Date	

		PLAN NUMBER								
		1	2	3	4	5	6	7	8	9
0	CYCLE	0	0	100	110	120	130	140	0	0
1	FORCE 1	0	0	55	60	65	65	70	0	0
2	FORCE 2	0	0	0	0	0	0	0	0	0
3	FORCE 3	0	0	0	0	0	0	0	0	0
4	FORCE 4	0	0	40	45	45	45	50	0	0
5	FORCE 5	0	0	55	60	65	65	70	0	0
6	FORCE 6	0	0	0	0	0	0	0	0	0
7	FORCE 7	0	0	0	0	0	0	0	0	0
8	FORCE 8	0	0	40	45	45	45	50	0	0
9	RING OFFSET	0	0	0	0	0	0	0	0	0
A	OFFSET 1	0	0	40	40	70	80	115	0	0
B	OFFSET 2	0	0	40	40	70	80	90	0	0
C	OFFSET 3	0	0	40	40	70	80	53	0	0
D	PERM 1 END	0	0	0	0	0	0	0	0	0
E	HOLD RELEASE	0	0	255	255	255	255	255	0	0
F	ZONE OFFSET	0	0	0	0	0	0	0	0	0

< C + 0 + C = 1 >

		COLUMN E										COLUMN F							
		1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8
0										0	LAG FREE	_	2	_	4	_	6	_	8
1	SYNC Plan 1	_	2	_	_	_	6	_	_	1	LAG PLAN 1	_	2	_	4	_	6	_	8
2	SYNC Plan 2	_	2	_	_	_	6	_	_	2	LAG PLAN 2	_	2	_	4	_	6	_	8
3	SYNC Plan 3	_	2	_	_	_	6	_	_	3	LAG PLAN 3	_	2	_	4	_	6	_	8
4	SYNC Plan 4	_	2	_	_	_	6	_	_	4	LAG PLAN 4	_	2	_	4	_	6	_	8
5	SYNC Plan 5	_	2	_	_	_	6	_	_	5	LAG PLAN 5	_	2	_	4	_	6	_	8
6	SYNC Plan 6	_	2	_	_	_	6	_	_	6	LAG PLAN 6	_	2	_	4	_	6	_	8
7	SYNC Plan 7	_	2	_	_	_	6	_	_	7	LAG PLAN 7	_	2	_	4	_	6	_	8
8	SYNC Plan 8	_	2	_	_	_	6	_	_	8	LAG PLAN 8	_	2	_	4	_	6	_	8
9	SYNC Plan 9	_	2	_	_	_	6	_	_	9	LAG PLAN 9	_	2	_	4	_	6	_	8
A	NEMA SYNC	_	_	_	_	_	_	_	_	A	EXT. LAG	_	_	_	_	_	_	_	_
B	NEMA HOLD	_	_	_	_	_	_	_	_	B	LAG HOLD	_	_	_	_	_	_	_	_
C										C									
D										D									
E	COORD EXTRA	_	2	_	_	_	_	_	_	E									
F										F									

COORDINATION EXTRA
1 = Programmed Walk Time
2 = FDW Begins at Sync Phase
Force Off minus FDW

< C + 0 + C = 1 >

COLUMN 2 Coord Min.	
1	15
2	26
3	0
4	35
5	15
6	26
7	0
8	35

< C + 0 + C = 5 >

TRANSITION TYPE:
< C/5 + 1 + 9 > = 1.3

0.X = SHORTWAY
1.X = DWELL
X.1 THRU .X4 = NUMBER OF
CYCLES WHEN LENGTHENING

LAG HOLD PHASES:
< C/5 + 1 + A > = ________

IEN STATUS: ON =/= 0
IEN Status < C/5 + 1 + B > = 1

LOCAL ALARM DISABLE
< C/5 + F + 0 > = ________

7 - Wire Master
Synch Time < C/5 + 1 + C > = 0.0

ROW	Plan # -->	1	2	3	4	5	6	7	8	9	ROW
0	PED ADJUST	0	0	0	0	0	0	0	0	0	0
1	PERM 2 START	0	0	0	0	0	0	0	0	0	1
2	PERM 2 END	0	0	0	0	0	0	0	0	0	2
3	PERM 3 START	0	0	0	0	0	0	0	0	0	3
4	PERM 3 END	0	0	0	0	0	0	0	0	0	4
5	RSRVC TIME	0	0	0	0	0	0	0	0	0	5
		1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	
6	RSRVC PH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	6
7											7
8	PRETIMED PH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	8
9	MAX RECALL	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	9
A	PERM 1 VEH	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	A
B	PERM 1 PED	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	B
C	PERM 2 VEH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	C
D	PERM 2 PED	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	D
E	PERM 3 VEH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	E
F	PERM 3 PED	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	F

COORDINATION PAGE 2 < C + 0 + C = 2 >

CURRENT DATE/TIME
(HR-MIN-DOW) = <8/0 + 0>
(Day-YR-MO) = <8/0 + 1>
(MN-S-1/10SEC) = <8/0 + F>

Daylight Savings Time

Begin Month	<C/5+2+A>	0
Begin Week	<C/5+2+B>	0
End Month	<C/5+2+C>	0
End Week	<C/5+2+D>	0

Advance Warning Beacon - Sign 1

Time Before Yellow	<F/1+C+E>	0.0
Phase Number	<F/1+C+F>	0

Advance Warning Beacon - Sign 2

Time Before Yellow	<F/1+D+E>	0.0
Phase Number	<F/1+D+F>	0

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

TRAFFIC SIGNAL
Coordination Timing
BiTrans 233RV2.x

192 Hollywood Way & Thornton Ave			
Prepared by:	RICHARD LOCKYER	Date	05/04/20
Checked by:	JONATHAN YEE	Date	

PLAN NUMBER

		1	2	3	4	5	6	7	8	9
0	CYCLE	0	0	100	110	120	130	140	0	0
1	FORCE 1	0	0	68	75	85	85	91	0	0
2	FORCE 2	0	0	0	0	0	0	0	0	0
3	FORCE 3	0	0	20	20	28	28	30	0	0
4	FORCE 4	0	0	52	56	64	64	66	0	0
5	FORCE 5	0	0	0	0	0	0	0	0	0
6	FORCE 6	0	0	0	0	0	0	0	0	0
7	FORCE 7	0	0	17	20	22	22	20	0	0
8	FORCE 8	0	0	52	56	64	64	66	0	0
9	RING OFFSET	0	0	0	0	0	0	0	0	0
A	OFFSET 1	0	0	5	105	55	60	92	0	0
B	OFFSET 2	0	0	5	105	55	60	65	0	0
C	OFFSET 3	0	0	5	105	55	60	40	0	0
D	PERM 1 END	0	0	0	0	0	0	0	0	0
E	HOLD RELEASE	0	0	255	255	255	255	255	0	0
F	ZONE OFFSET	0	0	0	0	0	0	0	0	0

< C + 0 + C = 1 >

COLUMN E

		1	2	3	4	5	6	7	8
0									
1	SYNC Plan 1	_	2	_	_	_	6	_	_
2	SYNC Plan 2	_	2	_	_	_	6	_	_
3	SYNC Plan 3	_	2	_	_	_	6	_	_
4	SYNC Plan 4	_	2	_	_	_	6	_	_
5	SYNC Plan 5	_	2	_	_	_	6	_	_
6	SYNC Plan 6	_	2	_	_	_	6	_	_
7	SYNC Plan 7	_	2	_	_	_	6	_	_
8	SYNC Plan 8	_	2	_	_	_	6	_	_
9	SYNC Plan 9	_	2	_	_	_	6	_	_
A	NEMA SYNC	_	_	_	_	_	_	_	_
B	NEMA HOLD	_	_	_	_	_	_	_	_
C									
D									
E	COORD EXTRA	_	2	_	_	_	_	_	_
F									

< C + 0 + C = 1 >

COLUMN F

		1	2	3	4	5	6	7	8
0	LAG FREE	_	2	_	4	_	6	_	8
1	LAG PLAN 1	_	2	_	4	_	6	_	8
2	LAG PLAN 2	_	2	_	4	_	6	_	8
3	LAG PLAN 3	_	2	_	4	_	6	_	8
4	LAG PLAN 4	_	2	_	4	_	6	_	8
5	LAG PLAN 5	_	2	_	4	_	6	_	8
6	LAG PLAN 6	_	2	_	4	_	6	_	8
7	LAG PLAN 7	_	2	_	4	_	6	_	8
8	LAG PLAN 8	_	2	_	4	_	6	_	8
9	LAG PLAN 9	_	2	_	4	_	6	_	8
A	EXT. LAG	_	_	_	_	_	_	_	_
B	LAG HOLD	_	_	_	_	_	_	_	_

C

D

E

F

COORDINATION EXTRA

1 = Programmed Walk Time

2 = FDW Begins at Sync Phase
Force Off minus FDW

COLUMN 2

Coord Min.	
1	15
2	30
3	16
4	31
5	0
6	23
7	16
8	31

< C + 0 + C = 5 >

TRANSITION TYPE:
< C/5 + 1 + 9 > = 1.2

0.X = SHORTWAY
1.X = DWELL
X.1 THRU .X4 = NUMBER OF CYCLES WHEN LENGTHENING

LAG HOLD PHASES:
< C/5 + 1 + A > =

IEN STATUS: ON =/= 0
IEN Status < C/5 + 1 + B > = 1

LOCAL ALARM DISABLE
< C/5 + F + 0 > =

7 - Wire Master
Synch Time < C/5 + 1 + C > = 0.0

ROW	Plan # -->	1	2	3	4	5	6	7	8	9	ROW
0	PED ADJUST	0	0	0	0	0	0	0	0	0	0
1	PERM 2 START	0	0	0	0	0	0	0	0	0	1
2	PERM 2 END	0	0	0	0	0	0	0	0	0	2
3	PERM 3 START	0	0	0	0	0	0	0	0	0	3
4	PERM 3 END	0	0	0	0	0	0	0	0	0	4
5	RSRVC TIME	0	0	0	0	0	0	0	0	0	5
		1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	
6	RSRVC PH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	6
7											7
8	PRETIMED PH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	8
9	MAX RECALL	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	9
A	PERM 1 VEH	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	A
B	PERM 1 PED	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	B
C	PERM 2 VEH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	C
D	PERM 2 PED	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	D
E	PERM 3 VEH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	E
F	PERM 3 PED	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	F

COORDINATION PAGE 2 < C + 0 + C = 2 >

CURRENT DATE/TIME
(HR-MIN-DOW) = <8/0 + 0>
(Day-YR-MO) = <8/0 + 1>
(MN-S-1/10SEC) = <8/0 + F>

Daylight Savings Time

Begin Month	<C/5+2+A>	0
Begin Week	<C/5+2+B>	0
End Month	<C/5+2+C>	0
End Week	<C/5+2+D>	0

Advance Warning Beacon - Sign 1

Time Before Yellow	<F/1+C+E>	0.0
Phase Number	<F/1+C+F>	0

Advance Warning Beacon - Sign 2

Time Before Yellow	<F/1+D+E>	0.0
Phase Number	<F/1+D+F>	0

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

TRAFFIC SIGNAL
Coordination Timing
BiTrans 233RV2.x

196 Hollywood Way & Victory Blvd			
Prepared by:	RICHARD LOCKYER	Date	05/04/20
Checked by:	JONATHAN YEE	Date	

		PLAN NUMBER								
		1	2	3	4	5	6	7	8	9
0	CYCLE	0	0	100	110	120	130	140	0	0
1	FORCE 1	0	0	15	17	20	22	21	0	0
2	FORCE 2	0	0	50	55	60	65	65	0	0
3	FORCE 3	0	0	65	72	80	87	83	0	0
4	FORCE 4	0	0	0	0	0	0	0	0	0
5	FORCE 5	0	0	15	17	20	22	21	0	0
6	FORCE 6	0	0	50	55	60	65	65	0	0
7	FORCE 7	0	0	65	72	80	87	90	0	0
8	FORCE 8	0	0	0	0	0	0	0	0	0
9	RING OFFSET	0	0	0	0	0	0	0	0	0
A	OFFSET 1	0	0	49	0	115	120	5	0	0
B	OFFSET 2	0	0	49	0	115	120	125	0	0
C	OFFSET 3	0	0	49	0	115	120	105	0	0
D	PERM 1 END	0	0	0	0	0	0	0	0	0
E	HOLD RELEASE	0	0	255	255	255	255	255	0	0
F	ZONE OFFSET	0	0	0	0	0	0	0	0	0

< C + 0 + C = 1 >

	COLUMN E									COLUMN F								
		1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8
0										0	LAG FREE	_	2	_	4	_	6	_	8
1	SYNC Plan 1	_	_	_	4	_	_	_	8	1	LAG PLAN 1	_	2	_	4	_	6	_	8
2	SYNC Plan 2	_	_	_	4	_	_	_	8	2	LAG PLAN 2	_	2	_	4	_	6	_	8
3	SYNC Plan 3	_	_	_	4	_	_	_	8	3	LAG PLAN 3	_	2	_	4	_	6	_	8
4	SYNC Plan 4	_	_	_	4	_	_	_	8	4	LAG PLAN 4	_	2	_	4	_	6	_	8
5	SYNC Plan 5	_	_	_	4	_	_	_	8	5	LAG PLAN 5	_	2	_	4	_	6	_	8
6	SYNC Plan 6	_	_	_	4	_	_	_	8	6	LAG PLAN 6	_	2	_	4	_	6	_	8
7	SYNC Plan 7	_	_	_	4	_	_	_	8	7	LAG PLAN 7	_	2	_	4	_	6	_	8
8	SYNC Plan 8	_	_	_	4	_	_	_	8	8	LAG PLAN 8	_	2	_	4	_	6	_	8
9	SYNC Plan 9	_	_	_	4	_	_	_	8	9	LAG PLAN 9	_	2	_	4	_	6	_	8
A	NEMA SYNC	_	_	_	_	_	_	_	_	A	EXT. LAG	_	_	_	_	_	_	_	_
B	NEMA HOLD	_	_	_	_	_	_	_	_	B	LAG HOLD	_	_	_	_	_	_	_	_
C										C									
D										D									
E	COORD EXTRA	_	2	_	_	_	_	_	_	E									
F										F									

< C + 0 + C = 1 >

COORDINATION EXTRA

1 = Programmed Walk Time

2 = FDW Begins at Sync Phase Force Off minus FDW

COLUMN 2	
Coord Min.	
1	15
2	27
3	15
4	31
5	15
6	28
7	15
8	29

< C + 0 + C = 5 >

TRANSITION TYPE:
< C/5 + 1 + 9 > = 1.3

0.X = SHORTWAY
1.X = DWELL
X.1 THRU .X4 = NUMBER OF CYCLES WHEN LENGTHENING

LAG HOLD PHASES:
< C/5 + 1 + A > = ____

IEN STATUS: ON =/= 0
IEN Status < C/5 + 1 + B > = 1

LOCAL ALARM DISABLE
< C/5 + F + 0 > = ____

7 - Wire Master
Synch Time < C/5 + 1 + C > = 0.0

ROW	Plan # -->	1	2	3	4	5	6	7	8	9	ROW
0	PED ADJUST	0	0	0	0	0	0	0	0	0	0
1	PERM 2 START	0	0	0	0	0	0	0	0	0	1
2	PERM 2 END	0	0	0	0	0	0	0	0	0	2
3	PERM 3 START	0	0	0	0	0	0	0	0	0	3
4	PERM 3 END	0	0	0	0	0	0	0	0	0	4
5	RSRVC TIME	0	0	0	0	0	0	0	0	0	5
		1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	
6	RSRVC PH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	6
7											7
8	PRETIMED PH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	8
9	MAX RECALL	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	9
A	PERM 1 VEH	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	A
B	PERM 1 PED	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	B
C	PERM 2 VEH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	C
D	PERM 2 PED	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	D
E	PERM 3 VEH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	E
F	PERM 3 PED	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	F

COORDINATION PAGE 2 < C + 0 + C = 2 >

CURRENT DATE/TIME
(HR-MIN-DOW) = <8/0 + 0>
(Day-YR-MO) = <8/0 + 1>
(MN-S-1/10SEC) = <8/0 + F>

Daylight Savings Time

Begin Month	<C/5+2+A>	0
Begin Week	<C/5+2+B>	0
End Month	<C/5+2+C>	0
End Week	<C/5+2+D>	0

Advance Warning Beacon - Sign 1

Time Before Yellow	<F/1+C+E>	0.0
Phase Number	<F/1+C+F>	0

Advance Warning Beacon - Sign 2

Time Before Yellow	<F/1+D+E>	0.0
Phase Number	<F/1+D+F>	0

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

TRAFFIC SIGNAL
Coordination Timing
BiTrans 233RV2.x

143 Burbank Blvd & Hollywood Way			
Prepared by:	RICHARD LOCKYER	Date	04/20/20
Checked by:	JONATHAN YEE	Date	

		PLAN NUMBER								
		1	2	3	4	5	6	7	8	9
0	CYCLE	0	0	100	110	120	130	140	0	0
1	FORCE 1	0	0	17	17	18	22	21	0	0
2	FORCE 2	0	0	49	55	55	65	60	0	0
3	FORCE 3	0	0	66	72	77	87	85	0	0
4	FORCE 4	0	0	0	0	0	0	0	0	0
5	FORCE 5	0	0	17	17	18	22	21	0	0
6	FORCE 6	0	0	49	55	55	65	60	0	0
7	FORCE 7	0	0	66	72	77	87	85	0	0
8	FORCE 8	0	0	0	0	0	0	0	0	0
9	RING OFFSET	0	0	0	0	0	0	0	0	0
A	OFFSET 1	0	0	84	57	60	55	80	0	0
B	OFFSET 2	0	0	84	57	60	55	55	0	0
C	OFFSET 3	0	0	84	57	60	55	35	0	0
D	PERM 1 END	0	0	0	0	0	0	0	0	0
E	HOLD RELEASE	0	0	255	255	255	255	255	0	0
F	ZONE OFFSET	0	0	0	0	0	0	0	0	0

< C + 0 + C = 1 >

	COLUMN E										COLUMN F							
		1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8
0										0	LAG FREE	_	2	_	4	_	6	_	8
1	SYNC Plan 1	_	_	_	4	_	_	_	8	1	LAG PLAN 1	_	2	_	4	_	6	_	8
2	SYNC Plan 2	_	_	_	4	_	_	_	8	2	LAG PLAN 2	_	2	_	4	_	6	_	8
3	SYNC Plan 3	_	_	_	4	_	_	_	8	3	LAG PLAN 3	_	2	_	4	_	6	_	8
4	SYNC Plan 4	_	_	_	4	_	_	_	8	4	LAG PLAN 4	_	2	_	4	_	6	_	8
5	SYNC Plan 5	_	_	_	4	_	_	_	8	5	LAG PLAN 5	_	2	_	4	_	6	_	8
6	SYNC Plan 6	_	_	_	4	_	_	_	8	6	LAG PLAN 6	_	2	_	4	_	6	_	8
7	SYNC Plan 7	_	_	_	4	_	_	_	8	7	LAG PLAN 7	_	2	_	4	_	6	_	8
8	SYNC Plan 8	_	_	_	4	_	_	_	8	8	LAG PLAN 8	_	2	_	4	_	6	_	8
9	SYNC Plan 9	_	_	_	4	_	_	_	8	9	LAG PLAN 9	_	2	_	4	_	6	_	8
A	NEMA SYNC	_	_	_	_	_	_	_	_	A	EXT. LAG	_	_	_	_	_	_	_	_
B	NEMA HOLD	_	_	_	_	_	_	_	_	B	LAG HOLD	_	_	_	_	_	_	_	_
C										C									
D										D									
E	COORD EXTRA	_	2	_	_	_	_	_	_	E									
F										F									

COORDINATION EXTRA

1 = Programmed Walk Time

2 = FDW Begins at Sync Phase

Force Off minus FDW

< C + 0 + C = 1 >

COLUMN 2	
Coord Min.	
1	17
2	29
3	16
4	32
5	17
6	28
7	15
8	27

< C + 0 + C = 5 >

TRANSITION TYPE:
< C/5 + 1 + 9 > = 0.3

0.X = SHORTWAY
1.X = DWELL
X.1 THRU .X4 = NUMBER OF CYCLES WHEN LENGTHENING

LAG HOLD PHASES:
< C/5 + 1 + A > = ______

IEN STATUS: ON =/= 0
IEN Status < C/5 + 1 + B > = 1

LOCAL ALARM DISABLE
< C/5 + F + 0 > = ______

7 - Wire Master
Synch Time < C/5 + 1 + C > = 0.0

ROW	Plan # -->	1	2	3	4	5	6	7	8	9	ROW
0	PED ADJUST	0	0	0	0	0	0	0	0	0	0
1	PERM 2 START	0	0	0	0	0	0	0	0	0	1
2	PERM 2 END	0	0	0	0	0	0	0	0	0	2
3	PERM 3 START	0	0	0	0	0	0	0	0	0	3
4	PERM 3 END	0	0	0	0	0	0	0	0	0	4
5	RSRVC TIME	0	0	0	0	0	0	0	0	0	5
		1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	
6	RSRVC PH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	6
7											7
8	PRETIMED PH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	8
9	MAX RECALL	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	9
A	PERM 1 VEH	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	A
B	PERM 1 PED	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	B
C	PERM 2 VEH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	C
D	PERM 2 PED	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	D
E	PERM 3 VEH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	E
F	PERM 3 PED	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	F

COORDINATION PAGE 2 < C + 0 + C = 2 >

CURRENT DATE/TIME
(HR-MIN-DOW) = <8/0 + 0>
(Day-YR-MO) = <8/0 + 1>
(MN-S-1/10SEC) = <8/0 + F>

Daylight Savings Time

Begin Month	<C/5+2+A>	0
Begin Week	<C/5+2+B>	0
End Month	<C/5+2+C>	0
End Week	<C/5+2+D>	0

Advance Warning Beacon - Sign 1

Time Before Yellow	<F/1+C+E>	0.0
Phase Number	<F/1+C+F>	0

Advance Warning Beacon - Sign 2

Time Before Yellow	<F/1+D+E>	0.0
Phase Number	<F/1+D+F>	0

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

TRAFFIC SIGNAL
Phase Timing / Phase Configuration
BiTrans 233RV2.x

Prepared by:	RICHARD LOCKYER	Date:	5/4/2020
Checked by:	JONATHAN YEE	Date:	
Approved by:	JONATHAN YEE	Date:	
Completed by:		Date:	

185 Hollywood Way & Magnolia Bl
(Intersection Name)

NOTES:

	Interval	PHASE 1	2	3	4	5	6	7	8
0	WALK	0	7	0	7	0	7	0	7
1	DONT WALK	0	15	0	14	0	14	0	14
2	MIN INITIAL	8	10	8	7	9	10	9	7
3	TYPE 3 LIMIT	0	20	0	20	0	20	0	20
4	ADD PER VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	VEH EXT	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
6	MAX GAP	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
7	MIN GAP	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0
8	MAX LIMIT	35	50	25	50	35	50	25	50
9	MAXIMUM 2	35	50	25	50	35	50	25	50
A	ADV/DLY WLK	0	0	0	0	0	0	0	0
B	PE MIN FDW	0	0	0	0	0	0	0	0
C	COND SRV CHK	0	0	0	0	0	0	0	0
D	REDUCE EVERY	0.5	1.0	0.5	0.5	0.5	1.0	0.5	0.5
E	YELLOW	3.6	4.0	3.6	4.0	3.6	4.0	3.6	4.0
F	RED CLEAR	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0

PHASE BANK 1 < C + 0 + F = 1 >

ALTERNATE TIMING

		9 Maximum Initial	A Alternate Walk	B Alternate FDW	C Alternate Initial	D Alternate Extension
1	Ph. 1	0	0	0	0	0.0
2	Ph. 2	0	0	0	0	0.0
3	Ph. 3	0	0	0	0	0.0
4	Ph. 4	0	0	0	0	0.0
5	Ph. 5	0	0	0	0	0.0
6	Ph. 6	0	0	0	0	0.0
7	Ph. 7	0	0	0	0	0.0
8	Ph. 8	0	0	0	0	0.0

START / REVERT TIMES

ALL RED STRT: **<F/1 + C + 0>** = 6.0
FLASH START: **<F/1 + 0 + E>** = 0
RED REVERT: **<F/1 + 0 + F>** = 3.0

PREEMPT

	E
RR1 DLY	0
RR1 CLR	0
EVA DLY	0
EVA CLR	0
EVB DLY	0
EVB CLR	0
EVC DLY	0
EVC CLR	0
EVD DLY	0
EVD CLR	0
RR2 DLY	0
RR2 CLR	0
EV CLR	- - -
EV DLY	- - -
RR CLR	- - -
RR DLY	- - -

PHASE FUNCTION FLAGS

	Column F	
0	PERMIT	12345678
1	RED LOCK	
2	YELLOW LOCK	
3	VEH MIN CALL	_2_4_6_8
4	PED RECALL	_2___6__
5	*View Set Peds*	*_2_4_6_8*
6	REST IN WALK	
7	RED REST	
8	DOUBLE ENTRY	_2_4_6_8
9	VEH MAX CALL	
A	SOFT RECALL	
B	MAXIMUM 2	
C	COND SERVICE	
D	MAN CONT CALL	
E	YELLOW START	
F	FIRST PHASES	_2___6__

< C + 0 + F = 1 >

SPECIALS

	Column F	
0	FAST GRN FLH	
1	GREEN FLSH	
2	FLASH WALK	
3	GUAR PASS	
4	SIMUL GAP	
5	SEQ TIMING	
6	ADV WALK	
7	DELAY WALK	
8	EXT RECALL	
9	Sart O'LapGreen	
A	MAX EXTEN	
B	INH PED RSRV	
C	SEMI ACTUA.	
D	Sart O'LapYellow	
E	STRT VEH CALL	12345678
F	STRT PED CALL	_2_4_6_8

Specials <C + 0 + F = 2>

CNTRLR INTERVALS
0 = Walk
1 = FDW
2 = MIN. Green
3 =
4 = Var. Initial
5 = Extension
6 =
7 = Reduce Gap
8 = Red Rest
9 = Preempt
A = Stop Time
B = Red Revrt
C = Gap Term.
D = MAX Term.
E = Forceoff
F = Red Clear.

MANUAL PLAN SELECT:
< C/0 + A + 1 > = 0
AUTO = 0 PLAN = 1 - 9
FREE = 14
FLASH= 15

MANUAL OFFSET SELECT:
< C/0 + B + 1 > = 0
AUTO = 0 OFFSET A = 1
OFFSET B = 2
OFFSET C = 3

COMM ADDRESS:
< C/0 + 0 + 0 > = 12

ZONE NUMBER:
< C/0 + 0 + 1 > = 1

AREA NUMBER:
< C/0 + 0 + 2 > = 2

AREA ADDRESS:
< C/0 + 0 + 3 > = 85

QUICNET CHANNEL:
UDP:8012:172.16.121.85

INPUT KEYSTROKES:
1) Set PAGE to required BANK #
< C+0+PAGE = BANK # >

EXCL. PED. PHASE
WALK (F/1+0+0) = 0
FDW (F/1+0+1) = 0
ALL RED (F/1+0+2) = 0.0
Assigned at E/127+A+E & F

EXTRA 1
1 = TBC Type 1
2 = NEMA External Coordinator
3 = Auto Daylight Savings
4 = EV Preempt Advance
5 = Expanded Status Report
7 = Clear Outputs During Flash
8 = Split Ring Operation

IC SELECT
2 = 2 Way Modem
3 = 7 Wire Slave
4 = Flash / Free
5 = Simplex Master
8 = Offset Interruptor

To Enable "E" Page, Set < F/1 + 9 + E = Not Zero **>**

CONTROLLER CONFIGURATION FLAGS

	Column E			Column F	
0	EXCLUSIVE		0		
1	RR 1 CLEAR		1	EXT PERMIT 1	
2	RR 2 CLEAR		2	EXT PERMIT 2	
3	RR 2 LTD SRV		3	EXCLU PED	
4	PROT/PERM	1_3_5_7_	4	Preemp Non Lock	
5	FLH TO PREMT		5	PED 2 P OUT	_2______
6	FLASH ENTRY		6	PED 6 P OUT	_____6__
7	DSABL MIN YEL		7	PED 4 P OUT	___4____
8	DSABL OVP YEL		8	PED 8 P OUT	_______8
9	OVP FLH YEL		9	FLH YELLOW	
A	EM. VEH. A		A	Low Prio A PH	
B	EM. VEH. B		B	Low Prio B PH	
C	EM. VEH. C		C	Low Prio C PH	
D	EM. VEH. D		D	Low Prio D PH	
E	EXTRA 1	1_3_5	E	RESTRICTED	
F	IC SELECT	_2	F	EXTRA 2	___4____

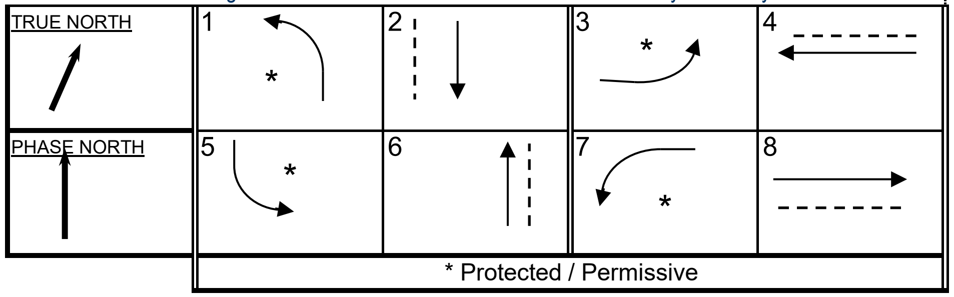
< C + 0 + E = 125 > **< C + 0 + E = 125 >**

Flash To Preempt / Preempt Non Lock
1 = EVP - A
2 = EVP - B
3 = EVP - C
4 = EVP - D
5 = RR - 1
6 = RR - 2
7 = Spl Ev - 1
8 = Spl Ev - 2

EXTRA 2
1 = AWB During Initial
2 = Flashing Yellow Arrow
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 =
7 = Reserved
8 =

PHASE DIAGRAM

E-W Street: Magnolia Blvd N-S Street : Hollywood Way



* Protected / Permissive

Coordination

Controller: 195 Hollywood Way & Verdugo Ave

Coordination - General - 3-1

Transition Type	**1.2**
0 = Shortway	
1 = Dwell	
2 = Shorten	
Tenths Digit: # Cycles to get in step (1–4)	
Coordination Extra	**_2______**
1 = Programmed Walk Time for Sync Phases	
2 = Always Terminate Sync Phase Peds	
3 = Floating Forceoffs	
4 = Reservice for Ped Calls	
5 = Start of Green Offset Reference	
8 = Maintain Coord. During Spec. Event Preempt	

Coordination - Phase Minimums - 3-1

Ph 1	Ph 2	Ph 3	Ph 4	Ph 5	Ph 6	Ph 7	Ph 8
13	**25**	**13**	**26**	**13**	**25**	**13**	**27**

Coordination - Cycle, Offsets, & Forceoffs - 3-2-[Plan Number]

	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
Cycle	**0**	**90**	**100**	**110**	**120**	**130**	**140**	**0**	**0**
Offset 1	**0**	**0**	**76**	**40**	**75**	**62**	**120**	**0**	**0**
Offset 2	**0**	**0**	**76**	**40**	**75**	**62**	**62**	**0**	**0**
Offset 3	**0**	**0**	**76**	**40**	**75**	**62**	**30**	**0**	**0**
Zone Offset	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Ring Offset	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Hold Release	**0**	**255**	**255**	**255**	**255**	**255**	**255**	**0**	**0**
Ped. Adjust	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Forceoff Phase 1	**0**	**60**	**65**	**73**	**80**	**90**	**85**	**0**	**0**
Forceoff Phase 2	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Forceoff Phase 3	**0**	**15**	**15**	**17**	**20**	**25**	**25**	**0**	**0**
Forceoff Phase 4	**0**	**45**	**50**	**55**	**60**	**70**	**65**	**0**	**0**
Forceoff Phase 5	**0**	**60**	**65**	**73**	**80**	**90**	**85**	**0**	**0**
Forceoff Phase 6	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Forceoff Phase 7	**0**	**15**	**15**	**17**	**20**	**25**	**25**	**0**	**0**
Forceoff Phase 8	**0**	**45**	**50**	**55**	**60**	**70**	**65**	**0**	**0**

Coordination - Permissives & Phase Sequences - 3-3-[Plan Number] and 3-4-[Plan Number]

	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
Perm 1 - Begin	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 1 - End	**0**	**2**	**2**	**2**	**2**	**2**	**2**	**0**	**0**
Perm 1 - Veh Phases	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**
Perm 1 - Ped Phases	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**
Perm 2 - Begin	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 2 - End	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 2 - Veh Phases	________	________	________	________	________	________	________	________	________
Perm 2 - Ped Phases	________	________	________	________	________	________	________	________	________
Perm 3 - Begin	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 3 - End	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 3 - Veh Phases	________	________	________	________	________	________	________	________	________
Perm 3 - Ped Phases	________	________	________	________	________	________	________	________	________
Max Inhibit Phases	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**
Max Recall Phases	________	________	________	________	________	________	________	________	________
Reservice Time	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Reservice Phases	________	________	________	________	________	________	________	________	________
Sync Phases	**_2___6__**	**_2___6__**	**_2___6__**	**_2___6__**	**_2___6__**	**_2___6__**	**_2___6__**	**_2___6__**	**_2___6__**
Lag Phases	**_2_4_6_8**	**_2_4_6_8**	**_2_4_6_8**	**_2_4_6_8**	**_2_4_6_8**	**_2_4_6_8**	**_2_4_6_8**	**_2_4_6_8**	**_2_4_6_8**
Pre-Timed Phases	________	________	________	________	________	________	________	________	________

Coordination - Adaptive Parameters - 3-5

QuicTrac Max Cycle Length	**255**
QuicTrac Max Cycle Length Change	**15**

Coordination - Adaptive Operation - 3-6

Adaptive Operation	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

0 = Non-Adaptive 1 = Adaptive

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

TRAFFIC SIGNAL
Detector Timing / Overlap Timing
BiTrans 233RV2.x

266 Alameda/Riverside/Evergreen			
Prepared by:	RICHARD LOCKYER	Date:	05/05/20
Checked by:	JONATHAN YEE	Date:	

DESCRIPTION	COL->	DELAY 1	CARRY OVER 3	Standard 332 CABINET LOCATION		Column 0 C1 PIN No.	Column 1 ATTRIBUTES 1 2 3 4 5 6 7 8	Column 2 PHASE(S) 1 2 3 4 5 6 7 8	Column 3 ASSIGNMENTS 1 2 3 4 5 6 7 8
EB ADV #1	0	0.0	0.0	I-2 U	0	39	_ _ _ • • _ • _	_ • _ _ _ _ _ _	• • • _ _ _ _ •
WB ADV #1	1	0.0	0.0	J-2 U	1	40	_ _ _ • • _ • _	_ _ _ _ _ • _ _	• • • _ _ _ _ •
SB PRES	2	0.0	0.0	I-6 U	2	41	_ _ _ • • _ • _	_ _ _ • _ _ _ _	• • • _ _ _ _ •
NB ADV #1	3	0.0	0.0	J-6 U	3	42	_ _ _ • • _ • _	_ _ _ _ _ _ _ •	• • • _ _ _ _ •
EB ADV #2	4	0.0	0.0	I-2 L	4	43	_ _ _ • • _ • _	_ • _ _ _ _ _ _	• • • _ _ _ _ •
WB ADV #2	5	0.0	0.0	J-2 L	5	44	_ _ _ • • _ • _	_ _ _ _ _ • _ _	• • • _ _ _ _ •
	6	0.0	0.0	I-6 L	6	45	_ _ _ • • _ • _	_ _ _ • _ _ _ _	• • • _ _ _ _ O
NB ADV #2	7	0.0	0.0	J-6 L	7	46	_ _ _ • • _ • _	_ _ _ _ _ _ _ •	• • • _ _ _ _ •
EB PRES (VIDEO)	8	0.0	0.0	I-4	8	47	_ _ _ _ _ • • _	_ • _ _ _ _ _ _	• • • _ _ _ _ •
WB PRES (VIDEO)	9	0.0	0.0	J-4	9	48	_ _ _ _ _ • • _	_ _ _ _ _ • _ _	• • • _ _ _ _ •
	A	0.0	0.0	I-8	A	49	_ _ _ _ _ • • _	_ _ _ • _ _ _ _	• • • _ _ _ _ O
NB PRES	B	0.0	0.0	J-8	B	50	_ _ _ _ _ • • _	_ _ _ _ _ _ _ •	• • • _ _ _ _ •
	C	0.0	0.0	J-1	C	55	_ _ _ • • _ • _	_ _ _ _ • _ _ _	• • • _ _ _ _ O
	D	0.0	0.0	I-1	D	56	_ _ _ • • _ • _	• _ _ _ _ _ _ _	• • • _ _ _ _ O
	E	0.0	0.0	J-5	E	57	_ _ _ • • _ • _	_ _ _ _ _ _ • _	• • • _ _ _ _ O
	F	0.0	0.0	I-5	F	58	_ _ _ • • _ • _	_ _ • _ _ _ _ _	• • • _ _ _ _ O
	< C + 0 + D = 0 >						DETECTOR ASSIGNMENTS, < C + O + E = 126 >		

DESCRIPTION	COL->	DELAY 2	CARRY OVER 4	Standard 332 CABINET LOCATION		Column 4 C1 PIN No.	Column 5 ATTRIBUTES 1 2 3 4 5 6 7 8	Column 6 PHASE(S) 1 2 3 4 5 6 7 8	Column 7 ASSIGNMENTS 1 2 3 4 5 6 7 8
	0	0.0	0.0	J-9 U	0	59	_ _ _ • • _ • _	_ _ _ _ • _ _ _	• • • _ _ _ _ O
	1	0.0	0.0	I-9 U	1	60	_ _ _ • • _ • _	• _ _ _ _ _ _ _	• • • _ _ _ _ O
	2	0.0	0.0	J-9 L	2	61	_ _ _ • • _ • _	_ _ _ _ _ _ • _	• • • _ _ _ _ O
	3	0.0	0.0	I-9 L	3	62	_ _ _ • • _ • _	_ _ • _ _ _ _ _	• • • _ _ _ _ O
EB LT REAR	4	0.0	0.0	I-3 U	4	63	_ _ _ • • _ • _	_ • _ _ _ _ _ _	• • • _ _ _ _ •
WB LT REAR	5	0.0	0.0	J-3 U	5	64	_ _ _ • • _ • _	_ _ _ _ _ • _ _	• • • _ _ _ _ •
EB LT BIKE (VIDEO)	6	0.0	0.0	J-13 U	6	72	_ _ _ • • _ • _	_ X _ 0 _ _ _ _	• • • _ _ _ _ O
NB LT REAR	7	0.0	0.0	J-7 U	7	66	_ _ _ • • _ • _	_ _ _ _ _ _ _ •	• • • _ _ _ _ •
Ph 2 PPB	8	0.0	0.0	I-12 U	8	67	_ • _ _ _ _ _ _	_ • _ _ _ _ _ _	• • • _ _ _ _ O
Ph 6 PPB	9	0.0	0.0	I-13 U	9	68	_ • _ _ _ _ _ _	_ _ _ _ _ • _ _	• • • _ _ _ _ O
	A	0.0	0.0	I-12 L	A	69	_ • _ _ _ _ _ _	_ _ _ 0 _ _ _ _	• • • _ _ _ _ O
Ph 8 PPB	B	0.0	0.0	I-13 L	B	70	_ • _ _ _ _ _ _	_ _ _ _ _ _ _ •	• • • _ _ _ _ O
EB LT FRONT	C	0.0	0.0	I-3 L	C	76	_ _ _ • • _ • _	_ • _ _ _ _ _ _	• • • _ _ _ _ •
WB LT FRONT	D	0.0	0.0	J-3 L	D	77	_ _ _ • • _ • _	_ _ _ _ _ • _ _	• • • _ _ _ _ •
WB LT BIKE (VIDEO)	E	0.0	0.0	J-13 L	E	74	_ _ _ • • _ • _	_ _ _ 0 _ X _ _	• • • _ _ _ _ O
NB LT FRONT	F	0.0	0.0	J-7 L	F	79	_ _ _ • • _ • _	_ _ _ _ _ _ _ •	• • • _ _ _ _ •
	< C + 0 + D = 0 >						DETECTOR ASSIGNMENTS, < C + O + E = 126 >		

Legend: "•" = Default Settings; "X" = New Settings; "O" = Cleared Default Settings

TO ENABLE "E" PAGE, SET < F + 9 + E =/= 0 >

Detector Monitor
MAX OFF:
< D/0 + 0 + 1 > = 250
MAX ON:
< D/0 + 0 + 2 > = 14
CHATTER TIME:
< D/0 + 0 + 4 > = 0

Power Cycle
Correction Factors
LONG FAILURE:
< F/1 + 0 + 6 > = 0.7
SHORT FAILURE:
< F/1 + 0 + 7 > = 0.7
NOTE:
Do Not Set To Zero
Default Value = 0.5 Sec.
NOTE:
< D/0 + 0 + 1 > = 255
Disables "Detector Stuck-Off" Failure Reporting

	OVERLAP #	1	2	3	4	5	6	7	8	
0	LOAD SWITCH #	1	0	0	0	0	0	0	0	0
		1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	
1	VEH SET 1	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	1
2	VEH SET 2	_ _ _ _ _ _ _ 8	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	2
3	VEH SET 3	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	3
4	NEG. VEH.	_ 2 _ 4 _ 6 _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	4
5	NEG. PED.	_ 2 _ _ _ 6 _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	5
6	GREEN OMIT	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	6
7	GRN CLR OMIT	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	7
8										8
9	QUE. JUMP PHASE	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	9
A	QUE. JUMP TIME	0	0	0	0	0	0	0	0	A
B										B
C										C
D	GREEN CLEAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	D
E	YELLOW CHANGE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	E
F	RED CLEAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	F

OVERLAP ASSIGNMENTS < C + 0 + E = 29 >

DET. ATTRIBUTES
1= Full Time Delay
2 = Pedestrian Call
3 =
4 = Count
5 = Extension
6 = Type 3
7 = Calling
8 = Alternate

DET. ASSIGNMENTS
1 = Det. Set # 1
2 = Det. Set # 2
3 = Det. Set # 3
4 =
5 =
6 = MIN Recall On Failure
7 = MAX Recall On Failure
8 = Report On Failure

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

Coordination

Controller: 113 Alameda Ave & Pass Ave

Coordination - General - 3-1

Transition Type	**1.3**
0 = Shortway	
1 = Dwell	
2 = Shorten	
Tenths Digit: # Cycles to get in step (1–4)	
Coordination Extra	**_2______**
1 = Programmed Walk Time for Sync Phases	
2 = Always Terminate Sync Phase Peds	
3 = Floating Forceoffs	
4 = Reservice for Ped Calls	
5 = Start of Green Offset Reference	
8 = Maintain Coord. During Spec. Event Preempt	

Coordination - Phase Minimums - 3-1

Ph 1	Ph 2	Ph 3	Ph 4	Ph 5	Ph 6	Ph 7	Ph 8
14	**27**	**14**	**30**	**14**	**27**	**16**	**30**

Coordination - Cycle, Offsets, & Forceoffs - 3-2-[Plan Number]

	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
Cycle	**120**	**0**	**100**	**110**	**120**	**130**	**140**	**0**	**0**
Offset 1	**19**	**0**	**0**	**41**	**19**	**19**	**89**	**0**	**0**
Offset 2	**22**	**0**	**22**	**22**	**22**	**22**	**81**	**0**	**0**
Offset 3	**19**	**0**	**0**	**19**	**16**	**19**	**53**	**0**	**0**
Zone Offset	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Ring Offset	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Hold Release	**255**	**0**	**255**	**255**	**255**	**255**	**255**	**0**	**0**
Ped. Adjust	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Forceoff Phase 1	**16**	**0**	**15**	**16**	**16**	**20**	**20**	**0**	**0**
Forceoff Phase 2	**50**	**0**	**48**	**50**	**50**	**57**	**62**	**0**	**0**
Forceoff Phase 3	**70**	**0**	**64**	**66**	**70**	**77**	**82**	**0**	**0**
Forceoff Phase 4	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Forceoff Phase 5	**16**	**0**	**18**	**16**	**16**	**20**	**20**	**0**	**0**
Forceoff Phase 6	**50**	**0**	**48**	**50**	**50**	**57**	**62**	**0**	**0**
Forceoff Phase 7	**80**	**0**	**68**	**75**	**80**	**85**	**90**	**0**	**0**
Forceoff Phase 8	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Coordination - Permissives & Phase Sequences - 3-3-[Plan Number] and 3-4-[Plan Number]

	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
Perm 1 - Begin	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 1 - End	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 1 - Veh Phases	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**
Perm 1 - Ped Phases	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**
Perm 2 - Begin	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 2 - End	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 2 - Veh Phases	________	________	________	________	________	________	________	________	________
Perm 2 - Ped Phases	________	________	________	________	________	________	________	________	________
Perm 3 - Begin	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 3 - End	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 3 - Veh Phases	________	________	________	________	________	________	________	________	________
Perm 3 - Ped Phases	________	________	________	________	________	________	________	________	________
Max Inhibit Phases	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**
Max Recall Phases	________	________	________	________	________	________	________	________	________
Reservice Time	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Reservice Phases	________	________	________	________	________	________	________	________	________
Sync Phases	**___4___8**	**___4___8**	**___4___8**	**___4___8**	**___4___8**	**___4___8**	**___4___8**	**___4___8**	**___4___8**
Lag Phases	**_2_4_6_8**	**_2_4_6_8**	**_2_4_6_8**	**_2_4_6_8**	**_2_4_6_8**	**_2_4_6_8**	**_2_4_6_8**	**_2_4_6_8**	**_2_4_6_8**
Pre-Timed Phases	________	________	________	________	________	________	________	________	________

Coordination - Adaptive Parameters - 3-5

QuicTrac Max Cycle Length	**255**
QuicTrac Max Cycle Length Change	**15**

Coordination - Adaptive Operation - 3-6

Adaptive Operation	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

0 = Non-Adaptive 1 = Adaptive

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

Coordination

Controller: 242 Olive Ave & Pass Ave

Coordination - General - 3-1

Transition Type	**1.3**
0 = Shortway	
1 = Dwell	
2 = Shorten	
Tenths Digit: # Cycles to get in step (1–4)	
Coordination Extra	**_2______**
1 = Programmed Walk Time for Sync Phases	
2 = Always Terminate Sync Phase Peds	
3 = Floating Forceoffs	
4 = Reservice for Ped Calls	
5 = Start of Green Offset Reference	
8 = Maintain Coord. During Spec. Event Preempt	

Coordination - Phase Minimums - 3-1

Ph 1	Ph 2	Ph 3	Ph 4	Ph 5	Ph 6	Ph 7	Ph 8
0	**25**	**14**	**16**	**13**	**29**	**0**	**0**

Coordination - Cycle, Offsets, & Forceoffs - 3-2-[Plan Number]

	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
Cycle	**0**	**90**	**100**	**110**	**120**	**130**	**140**	**0**	**0**
Offset 1	**0**	**0**	**0**	**26**	**3**	**120**	**100**	**0**	**0**
Offset 2	**0**	**84**	**30**	**26**	**3**	**120**	**100**	**0**	**0**
Offset 3	**0**	**0**	**0**	**26**	**3**	**120**	**100**	**0**	**0**
Zone Offset	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Ring Offset	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Hold Release	**0**	**255**	**255**	**255**	**255**	**255**	**255**	**0**	**0**
Ped. Adjust	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Forceoff Phase 1	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Forceoff Phase 2	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Forceoff Phase 3	**0**	**17**	**20**	**25**	**25**	**25**	**30**	**0**	**0**
Forceoff Phase 4	**0**	**36**	**40**	**45**	**50**	**50**	**55**	**0**	**0**
Forceoff Phase 5	**0**	**52**	**60**	**70**	**70**	**75**	**80**	**0**	**0**
Forceoff Phase 6	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Forceoff Phase 7	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Forceoff Phase 8	**0**	**36**	**40**	**45**	**50**	**50**	**55**	**0**	**0**

Coordination - Permissives & Phase Sequences - 3-3-[Plan Number] and 3-4-[Plan Number]

	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
Perm 1 - Begin	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 1 - End	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 1 - Veh Phases	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**
Perm 1 - Ped Phases	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**
Perm 2 - Begin	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 2 - End	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 2 - Veh Phases	________	________	________	________	________	________	________	________	________
Perm 2 - Ped Phases	________	________	________	________	________	________	________	________	________
Perm 3 - Begin	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 3 - End	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 3 - Veh Phases	________	________	________	________	________	________	________	________	________
Perm 3 - Ped Phases	________	________	________	________	________	________	________	________	________
Max Inhibit Phases	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**
Max Recall Phases	________	________	________	________	________	________	________	________	________
Reservice Time	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Reservice Phases	________	________	________	________	________	________	________	________	________
Sync Phases	**_2___6__**	**_2___6__**	**_2___6__**	**_2___6__**	**_2___6__**	**_2___6__**	**_2___6__**	**_2___6__**	**_2___6__**
Lag Phases	**_2_4_6_8**	**_2_4_6_8**	**_2_4_6_8**	**_2_4_6_8**	**_2_4_6_8**	**_2_4_6_8**	**_2_4_6_8**	**_2_4_6_8**	**_2_4_6_8**
Pre-Timed Phases	________	________	________	________	________	________	________	________	________

Coordination - Adaptive Parameters - 3-5

QuicTrac Max Cycle Length	**255**
QuicTrac Max Cycle Length Change	**15**

Coordination - Adaptive Operation - 3-6

Adaptive Operation	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

0 = Non-Adaptive 1 = Adaptive

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

TRAFFIC SIGNAL
Phase Timing / Phase Configuration
BiTrans 233RV2.x

Prepared by:	RICHARD LOCKYER	Date:	4/16/2020
Checked by:	JONATHAN YEE	Date:	
Approved by:	JONATHAN YEE	Date:	
Completed by:		Date:	

106 Alameda Ave & Hollywood Way
(Intersection Name)

NOTES:

	Interval	PHASE 1	2	3	4	5	6	7	8
0	WALK	0	7	0	7	0	7	0	7
1	DONT WALK	0	19	0	21	0	21	0	19
2	MIN INITIAL	9	11	9	11	9	11	11	11
3	TYPE 3 LIMIT	0	0	0	0	0	25	0	0
4	ADD PER VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	VEH EXT	2.0	3.0	2.0	4.0	2.0	3.0	4.0	3.0
6	MAX GAP	3.0	4.0	3.0	5.0	3.0	4.0	5.0	4.0
7	MIN GAP	1.5	2.0	1.5	3.0	1.5	2.0	2.5	2.0
8	MAX LIMIT	25	45	20	45	20	35	20	35
9	MAXIMUM 2	35	60	20	65	40	45	30	35
A	ADV/DLY WLK	0	0	0	0	0	0	0	0
B	PE MIN FDW	0	0	0	0	0	0	0	0
C	COND SRV CHK	0	0	0	0	0	0	0	0
D	REDUCE EVERY	1.3	1.0	0.7	1.5	0.7	1.0	1.2	1.0
E	YELLOW	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
F	RED CLEAR	1.0	2.0	2.0	2.0	1.0	2.0	1.0	2.0

PHASE BANK 1 **< C + 0 + F = 1 >**

ALTERNATE TIMING

		9	A	B	C	D
1	Ph. 1	0	0	0	0	0.0
2	Ph. 2	0	0	0	0	0.0
3	Ph. 3	0	0	0	0	0.0
4	Ph. 4	0	0	0	0	0.0
5	Ph. 5	0	0	0	0	0.0
6	Ph. 6	0	0	0	0	0.0
7	Ph. 7	0	0	0	0	0.0
8	Ph. 8	0	0	0	0	0.0
		Maximum Initial	Alternate Walk	Alternate FDW	Alternate Initial	Alternate Extension

PREEMPT

	E
RR1 DLY	0
RR1 CLR	0
EVA DLY	0
EVA CLR	0
EVB DLY	0
EVB CLR	0
EVC DLY	0
EVC CLR	0
EVD DLY	0
EVD CLR	0
RR2 DLY	0
RR2 CLR	0
EV CLR	- - -
EV DLY	- - -
RR CLR	- - -
RR DLY	- - -

START / REVERT TIMES

ALL RED STRT: **<F/1 + C + 0>** = 6.0
FLASH START: **<F/1 + 0 + E>** = 0
RED REVERT: **<F/1 + 0 + F>** = 3.0

PHASE FUNCTION FLAGS
Column F

0	PERMIT	12345678
1	RED LOCK	1_3_5_7_
2	YELLOW LOCK	1_3_5_7_
3	VEH MIN CALL	_2_4_6_8
4	PED RECALL	
5	*View Set Peds*	*_2_4_6_8*
6	REST IN WALK	
7	RED REST	
8	DOUBLE ENTRY	
9	VEH MAX CALL	
A	SOFT RECALL	
B	MAXIMUM 2	
C	COND SERVICE	
D	MAN CONT CALL	
E	YELLOW START	
F	FIRST PHASES	_2___6__

< C + 0 + F = 1 >

SPECIALS
Column F

0	FAST GRN FLH	
1	GREEN FLSH	
2	FLASH WALK	
3	GUAR PASS	
4	SIMUL GAP	
5	SEQ TIMING	
6	ADV WALK	
7	DELAY WALK	
8	EXT RECALL	
9	Sart O'LapGreen	
A	MAX EXTEN	
B	INH PED RSRV	
C	SEMI ACTUA.	
D	Sart O'LapYellow	
E	STRT VEH CALL	12345678
F	STRT PED CALL	_2_4_6_8

Specials <C + 0 + F = 2>

CNTRLR INTERVALS
0 = Walk
1 = FDW
2 = MIN. Green
3 =
4 = Var. Initial
5 = Extension
6 =
7 = Reduce Gap
8 = Red Rest
9 = Preempt
A = Stop Time
B = Red Revrt
C = Gap Term.
D = MAX Term.
E = Forceoff
F = Red Clear.

MANUAL PLAN SELECT:
< C/0 + A + 1 > = 0
AUTO = 0 PLAN = 1 - 9
FREE = 14
FLASH= 15

MANUAL OFFSET SELECT:
< C/0 + B + 1 > = 0
AUTO = 0 OFFSET A = 1
OFFSET B = 2
OFFSET C = 3

COMM ADDRESS:
< C/0 + 0 + 0 > = 6

ZONE NUMBER:
< C/0 + 0 + 1 > = 1

AREA NUMBER:
< C/0 + 0 + 2 > = 2

AREA ADDRESS:
< C/0 + 0 + 3 > = 6

QUICNET CHANNEL:
UDP:8018:172.16.121.6

INPUT KEYSTROKES:
1) Set PAGE to required BANK #
< C+0+PAGE = BANK # >

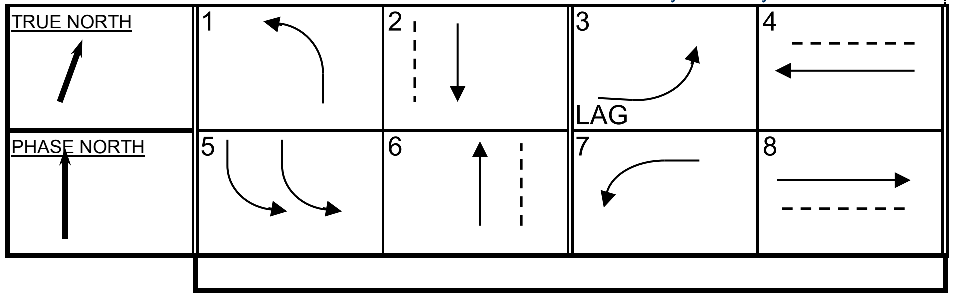
EXCL. PED. PHASE
WALK (F/1+0+0) = 0
FDW (F/1+0+1) = 0
ALL RED (F/1+0+2) = 0.0
Assigned at E/127+A+E & F

EXTRA 1
1 = TBC Type 1
2 = NEMA External Coordinator
3 = Auto Daylight Savings
4 = EV Preempt Advance
5 = Expanded Status Report
7 = Clear Outputs During Flash
8 = Split Ring Operation

IC SELECT
2 = 2 Way Modem
3 = 7 Wire Slave
4 = Flash / Free
5 = Simplex Master
8 = Offset Interruptor

PHASE DIAGRAM

E-W Street: Alameda Ave
N-S Street : Hollywood Way



To Enable "E" Page, Set < F/1 + 9 + E = Not Zero **>**

CONTROLLER CONFIGURATION FLAGS

Column E

0	EXCLUSIVE	
1	RR 1 CLEAR	
2	RR 2 CLEAR	
3	RR 2 LTD SRV	
4	PROT/PERM	
5	FLH TO PREMT	
6	FLASH ENTRY	
7	DSABL MIN YEL	
8	DSABL OVP YEL	
9	OVP FLH YEL	
A	EM. VEH. A	
B	EM. VEH. B	
C	EM. VEH. C	
D	EM. VEH. D	
E	EXTRA 1	1_3_5___
F	IC SELECT	_2______

< C + 0 + E = 125 >

Column F

0		
1	EXT PERMIT 1	
2	EXT PERMIT 2	
3	EXCLU PED	
4	Preemp Non Lock	
5	PED 2 P OUT	_2______
6	PED 6 P OUT	_____6__
7	PED 4 P OUT	___4____
8	PED 8 P OUT	_______8
9	FLH YELLOW	
A	Low Prio A PH	
B	Low Prio B PH	
C	Low Prio C PH	
D	Low Prio D PH	
E	RESTRICTED	
F	EXTRA 2	___4____

< C + 0 + E = 125 >

Flash To Preempt / Preempt Non Lock
1 = EVP - A
2 = EVP - B
3 = EVP - C
4 = EVP - D
5 = RR - 1
6 = RR - 2
7 = Spl Ev - 1
8 = Spl Ev - 2

EXTRA 2
1 = AWB During Initial
2 = Flashing Yellow Arrow
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 =
7 = Reserved
8 =

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

Phase Bank 1 & Phase Functions

Page 1 of 1

Controller: 190 Hollywood Wy & Riverside Dr

Phase Functions - Page 1 - 1-1	
Red Lock	________
Yellow Lock	________
Simultaneous Gap	________
Rest In Walk	________
Advance Walk	________
Flashing Walk	________
Max Extension	________
Red Rest	________
Dual Entry	___4___8
Sequential Timing	________
Inhibit Ped Reservice	________
Delay Walk	________
Guaranteed Passage	________
Conditional Service	________

Phase Functions - Page 2 - 1-2	
Minimum Recall	_2_4_6_8
Ped Recall	_2___6__
Maximum Recall	________
Green Flash	________
Overlap Green Flash	________
Flashing Yellow Arrow for PPLT	1_3_5___
Soft Recall	________
External Recall	________
Manual Control Calls	________
Fast Green Flash	________
Fast Overlap Green Flash	________
Semi-Actuated	________

Startup - 9-1	
Flash Start	0
All Red Start	6.0
Yellow Start Phases	________
First Green Phases	_2___6__
Startup Vehicle Calls	123456_8
Startup Ped Calls	_2_4_6_8

Detector Monitoring - 9-3	
Max On	14
Max Off	250
Chatter	255

Advance Warning Signs - 9-4		
	Sign 1	Sign 2
Phase Number	0	0
Time Before Yellow	0.0	0.0

Phase Timing - Bank 1 - 1-3-[1]								
	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8
Min Green	10	15	8	10	11	15	0	10
Extension	2.5	3.0	2.5	3.0	2.5	3.0	0.0	3.0
Max	15	45	15	45	15	45	0	45
Max 2	20	45	20	60	20	45	0	60
Cond Serve Check	0	0	0	0	0	0	0	0
Clearance Timing - 1-4-[1]								
Yellow Change	4.0	4.0	4.0	4.0	4.0	4.0	0.0	4.0
Red Clear	1.0	2.0	1.0	2.0	1.0	2.0	0.0	2.0
Pedestrian Timing - 1-5-[1]								
Walk	0	7	0	7	0	7	0	7
Pedestrian Change	0	18	0	19	0	21	0	21
Advance/Delay Walk	0	0	0	0	0	0	0	0
PE Min. Ped. Change	0	0	0	0	0	0	0	0
Volume-Density - 1-6-[1]								
Type 3 Disconnect	0	20	0	20	0	20	0	20
Add per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Added Initial	0	0	0	0	0	0	0	0
Min Gap	2.5	2.0	2.5	2.0	2.5	2.0	0.0	2.0
Max Gap	2.5	4.0	2.5	4.0	2.5	4.0	0.0	4.0
Reduce Every	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0
Alternate Timing - 1-7-[1]								
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped. Change	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Configuration - 9-5			
Exclusive Phases	________	Permitted Phases	123456_8
Protected/Permissive Phases	1_3_5___	Restricted Phases	________
Disable Phase Min. Yellow	________	Disable Overlap Min. Yellow	________
Free Lag Phases	_2_4_6_8	External Permit 1	________
External Lag Phases	_2_4_6_8	External Permit 2	________
Pedestrian Forceoff Phases	________	External Permit 3	________
Extra One	123_5___	Extra Two	___4__7_

1 = TBC Type 1
2 = (unused)
3 = Adjust Clock for Daylight Saving Time
4 = Terminate Ped. for EV Preempt
5 = QuicComm Extended Status
6 = International Style Pedestrian Change Interval
7 = (unused)
8 = Split Ring Operation

1 = Adv. Warn. Signs On During Min. Init.
2 = Siemens i2 Communications Protocol
3 = Disable Minimum Walk Check
4 = QuicNet System Communications
5 = Ignore Anti-Backup During Preempt
6 = Bridgeport Naztec TS 2 I/O Map
7 = Allow Remote Preemption Calls
8 = Caltrans Traf. Resp. FM Comm.

Phase Timing - Exclusive Pedestrian - 1-8	
Exclusive Ped Assignment	________
Exclusive Walk	0
Exclusive Pedestrian Change	0
Red Clear	0.0
Walk Output	0
Don't Walk Output	0

Clock Set - 9-6

Manual Operation - 9-7	
Manual Plan	0
1–9 = Coordination Plans	
14 = Free	
15 = Flash	
Manual Offset	0

Software Flash - 9-8	
Flash Entry Phases	________
Flash Yellow Phases	________
Flash Yellow Overlaps	________
Flash Type	0

0 = All On/All Off (1-2-3-4-5-6-7-8, dark)
1 = Main/Side (1-2-5-6, 3-4-7-8)
2 = Odd/Even (1-3-5-7, 2-4-6-8)
3 = Ring Pairs (1-6, 4-7, 2-5, 3-8)

Misc - 9-9	
Keyboard Beep	N
Backlight Timeout	10
Soft Recall Delay	3.0
Red Revert	3.0
FYA Delay	0

Daylight Saving Time - 9-C	
Start Month	0
Start Week	0
End Month	0
End Week	0

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

Phase Bank 1 & Phase Functions

Controller: 188 Hollywood Way & Olive Ave

Phase Functions - Page 1 - 1-1

Red Lock	________
Yellow Lock	________
Simultaneous Gap	________
Rest In Walk	________
Advance Walk	___4___8
Flashing Walk	________
Max Extension	________
Red Rest	________
Dual Entry	___4___8
Sequential Timing	________
Inhibit Ped Reservice	________
Delay Walk	________
Guaranteed Passage	________
Conditional Service	________

Phase Functions - Page 2 - 1-2

Minimum Recall	_2___6__
Ped Recall	_2___6__
Maximum Recall	________
Green Flash	________
Overlap Green Flash	________
Flashing Yellow Arrow for PPLT	1___5___
Soft Recall	________
External Recall	________
Manual Control Calls	________
Fast Green Flash	________
Fast Overlap Green Flash	________
Semi-Actuated	________

Startup - 9-1

Flash Start	0
All Red Start	6.0
Yellow Start Phases	________
First Green Phases	_2___6__
Startup Vehicle Calls	12_456_8
Startup Ped Calls	_2_4_6_8

Detector Monitoring - 9-3

Max On	14
Max Off	250
Chatter	255

Advance Warning Signs - 9-4

	Sign 1	Sign 2
Phase Number	0	0
Time Before Yellow	0.0	0.0

Phase Timing - Bank 1 - 1-3-[1]

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8
Min Green	9	20	0	14	9	10	0	14
Extension	3.0	3.0	0.0	3.0	3.0	3.0	0.0	3.0
Max	40	40	0	50	40	40	0	50
Max 2	40	40	0	50	40	40	0	50
Cond Serve Check	0	0	0	0	0	0	0	0
Clearance Timing - 1-4-[1]								
Yellow Change	4.0	4.0	0.0	4.0	4.0	4.0	0.0	4.0
Red Clear	1.0	2.0	0.0	1.0	1.0	2.0	0.0	1.0
Pedestrian Timing - 1-5-[1]								
Walk	0	7	0	7	0	7	0	7
Pedestrian Change	0	24	0	20	0	12	0	25
Advance/Delay Walk	0	0	0	7	0	0	0	7
PE Min. Ped. Change	0	0	0	0	0	0	0	0
Volume-Density - 1-6-[1]								
Type 3 Disconnect	0	20	0	0	0	20	0	0
Add per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Added Initial	0	0	0	0	0	0	0	0
Min Gap	3.0	2.0	0.0	3.0	3.0	2.0	0.0	3.0
Max Gap	3.0	4.0	0.0	3.0	3.0	4.0	0.0	3.0
Reduce Every	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0
Alternate Timing - 1-7-[1]								
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped. Change	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Configuration - 9-5

Exclusive Phases	________	Permitted Phases	12_456_8
Protected/Permissive Phases	1___5___	Restricted Phases	________
Disable Phase Min. Yellow	________	Disable Overlap Min. Yellow	________
Free Lag Phases	_2_4_6_8	External Permit 1	________
External Lag Phases	_2_4_6_8	External Permit 2	________
Pedestrian Forceoff Phases	________	External Permit 3	________
Extra One	1_3_5___	Extra Two	___4__7_

1 = TBC Type 1
2 = (unused)
3 = Adjust Clock for Daylight Saving Time
4 = Terminate Ped. for EV Preempt
5 = QuicComm Extended Status
6 = International Style Pedestrian Change Interval
7 = (unused)
8 = Split Ring Operation

1 = Adv. Warn. Signs On During Min. Init.
2 = Siemens i2 Communications Protocol
3 = Disable Minimum Walk Check
4 = QuicNet System Communications
5 = Ignore Anti-Backup During Preempt
6 = Bridgeport Naztec TS 2 I/O Map
7 = Allow Remote Preemption Calls
8 = Caltrans Traf. Resp. FM Comm.

Phase Timing - Exclusive Pedestrian - 1-8

Exclusive Ped Assignment	________
Exclusive Walk	0
Exclusive Pedestrian Change	0
Red Clear	0.0
Walk Output	0
Don't Walk Output	0

Clock Set - 9-6

Manual Operation - 9-7

Manual Plan	0

1–9 = Coordination Plans
14 = Free
15 = Flash

Manual Offset	0

Software Flash - 9-8

Flash Entry Phases	________
Flash Yellow Phases	________
Flash Yellow Overlaps	________
Flash Type	0

0 = All On/All Off (1-2-3-4-5-6-7-8, dark)
1 = Main/Side (1-2-5-6, 3-4-7-8)
2 = Odd/Even (1-3-5-7, 2-4-6-8)
3 = Ring Pairs (1-6, 4-7, 2-5, 3-8)

Misc - 9-9

Keyboard Beep	N
Backlight Timeout	10
Soft Recall Delay	3.0
Red Revert	3.0
FYA Delay	0

Daylight Saving Time - 9-C

Start Month	0
Start Week	0
End Month	0
End Week	0

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

System & Comm

Controller: 217 Olive Ave & Riverside Dr

QuicNet® System	
System ID	**117**
Central Control Grp	**#NAME?**
Field Master	**#NAME?**
N-S Street	**#NAME?**
E-W Street	**#NAME?**

Database Last Changed
7/16/2021 13:51

Prepared by:	RICHARD LOCKYER		Date:	**7/27/2021**
Checked by:	DAVID WILCOX		Date:	
Approved by:	VIKKI DAVTIAN		Date:	
Completed by:			Date:	

2070L / 2070E
McCain 2033

1	2	2P	3	4	4P
🔴 16 🟡 17 F 18	🔴 12 🟡 13 🟢 15	🔴 10 🟢 35 ⚪ 11	● 7 ● 8 ● 9	🔴 4 🟡 5 🟢 6	🔴 2 ● 37 ⚪ 3
5	**6**	**6P**	**7**	**8**	**8P**
🔴 32 🟡 33 F 34	🔴 29 🟡 30 🟢 31	🔴 27 🟢 36 ⚪ 28	● 24 ● 25 ● 26	🔴 21 🟡 22 🟢 23	🔴 19 ● 38 ⚪ 20
OLA	**OLB**		**OLC**	**OLD**	
● 97 ● 98 ● 99	● 94 ● 95 ● 96	● 91 ● 101 ● 93	● 88 ● 89 ● 90	● 85 ● 86 ● 87	● 83 ● 100 ● 84

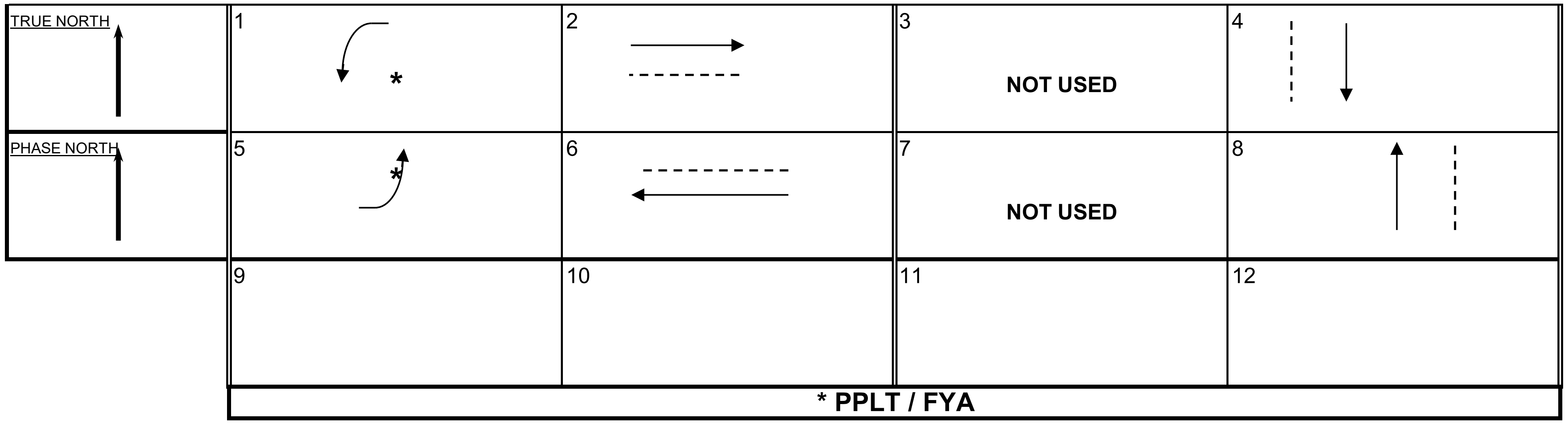
NOTES:

QuicNet Timing Notes

Ethernet Communications - 9-A	
QuicComm IP Port	**#NAME?**
AB3418E IP Port	**0**
FtHills IP Port	**0**
Opticom IP Port	**0**
IP Address	**#NAME?**
SubNet Mask	**255.255.255.0**
Gateway	**172.16.121.254**
Address	**9**
Area Number	**2**
Area Address	**117**

PHASE DIAGRAM

E-W Street: #NAME? **N-S Street :** #NAME?



Serial Communications - 9-2-1	
Port Number	1
Address	9
Area Number	2
Area Address	117
Protocol	QuicComm
Baud Rate	9600
Data Bits	8-EVEN-1
Comm Timeout	5
RTS HOLD	6
CTS DELAY	8

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

TRAFFIC SIGNAL
Phase Timing / Phase Configuration
BiTrans 233RV2.x

Prepared by:	RICHARD LOCKYER		Date: 4/16/2020
Checked by:	JONATHAN YEE		Date:
Approved by:	JONATHAN YEE		Date:
Completed by:			Date:

112 Alameda Ave & Olive Ave
(Intersection Name)

NOTES:

RED FLASH JUMPERS FOR PHASES 3 AND 7 MUST BE PROGRAMMED FOR YELLOW FLASH, CHANNELS ARE PED OUTPUTS

		PHASE							
	Interval	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
0	WALK	0	5	5	5	0	5	5	5
1	DONT WALK	0	24	16	10	0	26	12	13
2	MIN INITIAL	10	15	1	17	10	15	1	17
3	TYPE 3 LIMIT	0	25	0	0	0	25	0	0
4	ADD PER VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	VEH EXT	2.5	4.0	0.0	3.0	2.5	4.0	0.0	3.0
6	MAX GAP	2.5	5.0	0.0	3.0	2.5	5.0	0.0	3.0
7	MIN GAP	2.5	3.0	0.0	3.0	2.5	3.0	0.0	3.0
8	MAX LIMIT	30	45	1	45	30	45	1	45
9	MAXIMUM 2	30	45	1	45	30	45	1	45
A	ADV/DLY WLK	0	0	0	0	0	0	0	0
B	PE MIN FDW	0	0	0	0	0	0	0	0
C	COND SRV CHK	0	0	0	0	0	0	0	0
D	REDUCE EVERY	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0
E	YELLOW	4.0	4.0	0.0	4.0	4.0	4.0	0.0	4.0
F	RED CLEAR	3.5	4.0	1.0	2.5	3.5	4.0	1.0	2.5

PHASE BANK 1 **< C + 0 + F = 1 >**

		ALTERNATE TIMING				
		9	**A**	**B**	**C**	**D**
1	Ph. 1	0	0	0	18	5.0
2	Ph. 2	0	0	0	0	0.0
3	Ph. 3	0	0	0	0	0.0
4	Ph. 4	0	0	0	0	0.0
5	Ph. 5	0	0	0	17	5.0
6	Ph. 6	0	0	0	0	0.0
7	Ph. 7	0	0	0	0	0.0
8	Ph. 8	0	0	0	0	0.0
		Maximum Initial	Alternate Walk	Alternate FDW	Alternate Initial	Alternate Extension

START / REVERT TIMES

ALL RED STRT: **<F/1 + C + 0>** = 6.0
FLASH START: **<F/1 + 0 + E>** = 0
RED REVERT: **<F/1 + 0 + F>** = 3.0

PREEMPT	**E**
RR1 DLY	0
RR1 CLR	0
EVA DLY	0
EVA CLR	0
EVB DLY	0
EVB CLR	0
EVC DLY	0
EVC CLR	0
EVD DLY	0
EVD CLR	0
RR2 DLY	0
RR2 CLR	0
EV CLR	- - -
EV DLY	- - -
RR CLR	- - -
RR DLY	- - -

PHASE FUNCTION FLAGS
Column F

0	PERMIT	12345678
1	RED LOCK	1___5___
2	YELLOW LOCK	1___5___
3	VEH MIN CALL	_2_4_6_8
4	PED RECALL	
5	*View Set Peds*	*_234_678*
6	REST IN WALK	
7	RED REST	
8	DOUBLE ENTRY	_2_4_6_8
9	VEH MAX CALL	
A	SOFT RECALL	
B	MAXIMUM 2	
C	COND SERVICE	
D	MAN CONT CALL	
E	YELLOW START	
F	FIRST PHASES	___4___8

< C + 0 + F = 1 >

SPECIALS
Column F

0	FAST GRN FLH	
1	GREEN FLSH	
2	FLASH WALK	
3	GUAR PASS	
4	SIMUL GAP	
5	SEQ TIMING	
6	ADV WALK	
7	DELAY WALK	
8	EXT RECALL	
9	Sart O'LapGreen	
A	MAX EXTEN	
B	INH PED RSRV	__34__78
C	SEMI ACTUA.	
D	Sart O'LapYellow	
E	STRT VEH CALL	12_456_8
F	STRT PED CALL	_234_678

Specials <C + 0 + F = 2>

CNTRLR INTERVALS
0 = Walk
1 = FDW
2 = MIN. Green
3 =
4 = Var. Initial
5 = Extension
6 =
7 = Reduce Gap
8 = Red Rest
9 = Preempt
A = Stop Time
B = Red Revrt
C = Gap Term.
D = MAX Term.
E = Forceoff
F = Red Clear.

MANUAL PLAN SELECT:
< C/0 + A + 1 > = 0
AUTO = 0 PLAN = 1 - 9
FREE = 14
FLASH= 15

MANUAL OFFSET SELECT:
< C/0 + B + 1 > = 0
AUTO = 0 OFFSET A = 1
OFFSET B = 2
OFFSET C = 3

COMM ADDRESS:
< C/0 + 0 + 0 > = 12

ZONE NUMBER:
< C/0 + 0 + 1 > = 1

AREA NUMBER:
< C/0 + 0 + 2 > = 2

AREA ADDRESS:
< C/0 + 0 + 3 > = 12

QUICNET CHANNEL:
UDP:8018:172.16.121.12

INPUT KEYSTROKES:
1) Set PAGE to required BANK #
< C+0+PAGE = BANK # >
2) Key stroke: PAGE + COLUMN + ROW

EXCL. PED. PHASE
WALK (F/1+0+0) = 0
FDW (F/1+0+1) = 0
ALL RED (F/1+0+2) = 0.0
Assigned at E/127+A+E & F

EXTRA 1
1 = TBC Type 1
2 = NEMA External Coordinator
3 = Auto Daylight Savings
4 = EV Preempt Advance
5 = Expanded Status Report
7 = Clear Outputs During Flash
8 = Split Ring Operation

IC SELECT
2 = 2 Way Modem
3 = 7 Wire Slave
4 = Flash / Free
5 = Simplex Master
8 = Offset Interruptor

To Enable "E" Page, Set < F/1 + 9 + E = Not Zero **>**

CONTROLLER CONFIGURATION FLAGS

Column E

0	EXCLUSIVE	
1	RR 1 CLEAR	
2	RR 2 CLEAR	
3	RR 2 LTD SRV	
4	PROT/PERM	
5	FLH TO PREMT	
6	FLASH ENTRY	
7	DSABL MIN YEL	__3___7_
8	DSABL OVP YEL	
9	OVP FLH YEL	
A	EM. VEH. A	
B	EM. VEH. B	
C	EM. VEH. C	
D	EM. VEH. D	
E	EXTRA 1	1_3_5___
F	IC SELECT	_2______

< C + 0 + E = 125 >

Column F

0		
1	EXT PERMIT 1	
2	EXT PERMIT 2	
3	EXCLU PED	
4	Preemp Non Lock	
5	PED 2 P OUT	_2______
6	PED 6 P OUT	______6__
7	PED 4 P OUT	___4____
8	PED 8 P OUT	________8
9	FLH YELLOW	
A	Low Prio A PH	
B	Low Prio B PH	
C	Low Prio C PH	
D	Low Prio D PH	
E	RESTRICTED	
F	EXTRA 2	___4____

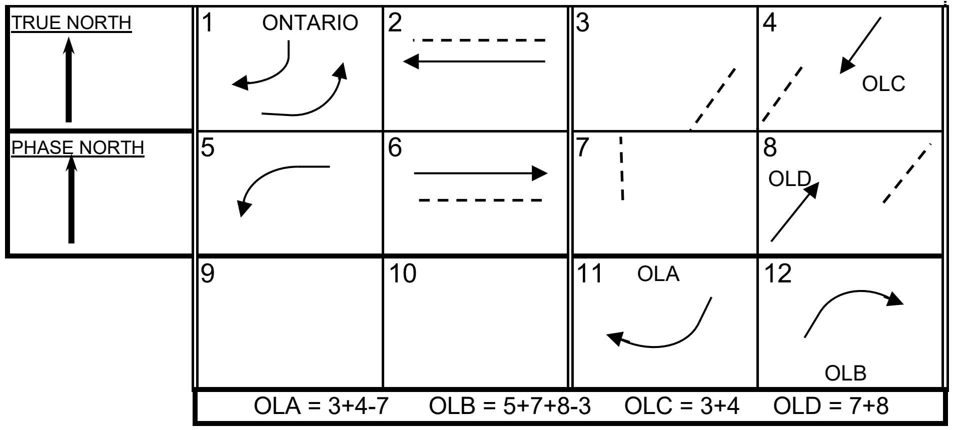
< C + 0 + E = 125 >

Flash To Preempt / Preempt Non Lock
1 = EVP - A
2 = EVP - B
3 = EVP - C
4 = EVP - D
5 = RR - 1
6 = RR - 2
7 = Spl Ev - 1
8 = Spl Ev - 2

EXTRA 2
1 = AWB During Initial
2 = Flashing Yellow Arrow
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 =
7 = Reserved
8 =

PHASE DIAGRAM

E-W Street: Alameda Ave N-S Street : Olive Ave



OLA = 3+4-7 OLB = 5+7+8-3 OLC = 3+4 OLD = 7+8

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

TRAFFIC SIGNAL
Phase Timing / Phase Configuration
BiTrans 233RV2.x

Prepared by:	RICHARD LOCKYER		Date: 7/27/2021
Checked by:	DAVID WILCOX		Date:
Approved by:	VIKKI DAVTIAN		Date:
Completed by:			Date:

129 Buena Vista St & Glenoaks Blvd

RESP CTRL GRP: GLENOAKS NORTH RESPONSIVE

NOTES:

	Interval	PHASE 1	2	3	4	5	6	7	8
0	WALK	0	7	0	7	0	7	0	7
1	DONT WALK	0	10	0	16	0	17	0	16
2	MIN INITIAL	0	10	0	10	6	10	6	10
3	TYPE 3 LIMIT	0	0	0	0	0	0	0	0
4	ADD PER VEH	0.0	0.5	0.0	0.0	0.0	0.5	0.0	0.0
5	VEH EXT	0.0	3.5	0.0	3.0	2.5	3.5	2.5	3.0
6	MAX GAP	0.0	4.5	0.0	4.0	2.5	4.5	2.5	4.0
7	MIN GAP	0.0	2.5	0.0	2.5	2.5	2.5	2.5	2.0
8	MAX LIMIT	0	50	0	50	20	50	10	50
9	MAXIMUM 2	0	50	0	50	20	50	15	50
A	ADV/DLY WLK	0	0	0	0	0	0	0	0
B	PE MIN FDW	0	0	0	0	0	0	0	0
C	COND SRV CHK	0	0	0	0	0	0	0	0
D	REDUCE EVERY	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0
E	YELLOW	0.0	4.5	0.0	4.0	4.0	4.5	3.6	4.0
F	RED CLEAR	0.0	2.0	0.0	2.0	1.0	2.0	1.0	2.0

PHASE BANK 1 < C + 0 + F = 1 >

ALTERNATE TIMING

		9 Maximum Initial	A Alternate Walk	B Alternate FDW	C Alternate Initial	D Alternate Extension
1	Ph. 1	0	0	0	0	0.0
2	Ph. 2	21	0	0	0	0.0
3	Ph. 3	0	0	0	0	0.0
4	Ph. 4	0	0	0	0	0.0
5	Ph. 5	0	0	0	0	0.0
6	Ph. 6	21	0	0	0	0.0
7	Ph. 7	0	0	0	0	0.0
8	Ph. 8	0	0	0	0	0.0

START / REVERT TIMES

ALL RED STRT: **<F/1 + C + 0>** = 6.0
FLASH START: **<F/1 + 0 + E>** = 0
RED REVERT: **<F/1 + 0 + F>** = 3.0

PREEMPT

	E
RR1 DLY	0
RR1 CLR	0
EVA DLY	0
EVA CLR	0
EVB DLY	0
EVB CLR	0
EVC DLY	0
EVC CLR	0
EVD DLY	0
EVD CLR	0
RR2 DLY	0
RR2 CLR	0
EV CLR	- - -
EV DLY	- - -
RR CLR	- - -
RR DLY	- - -

PHASE FUNCTION FLAGS Column F

0	PERMIT	#NAME?
1	RED LOCK	#NAME?
2	YELLOW LOCK	#NAME?
3	VEH MIN CALL	#NAME?
4	PED RECALL	#NAME?
5	*View Set Peds*	*#NAME?*
6	REST IN WALK	#NAME?
7	RED REST	#NAME?
8	DOUBLE ENTRY	#NAME?
9	VEH MAX CALL	#NAME?
A	SOFT RECALL	#NAME?
B	MAXIMUM 2	#NAME?
C	COND SERVICE	#NAME?
D	MAN CONT CALL	#NAME?
E	YELLOW START	#NAME?
F	FIRST PHASES	#NAME?

< C + 0 + F = 1 >

SPECIALS Column F

0	FAST GRN FLH	#NAME?
1	GREEN FLSH	#NAME?
2	FLASH WALK	#NAME?
3	GUAR PASS	#NAME?
4	SIMUL GAP	#NAME?
5	SEQ TIMING	#NAME?
6	ADV WALK	#NAME?
7	DELAY WALK	#NAME?
8	EXT RECALL	#NAME?
9	Sart O'LapGreen	#NAME?
A	MAX EXTEN	#NAME?
B	INH PED RSRV	#NAME?
C	SEMI ACTUA.	#NAME?
D	Sart O'LapYellow	#NAME?
E	STRT VEH CALL	#NAME?
F	STRT PED CALL	#NAME?

Specials <C + 0 + F = 2>

CNTRLR INTERVALS

0 = Walk
1 = FDW
2 = MIN. Green
3 =
4 = Var. Initial
5 = Extension
6 =
7 = Reduce Gap
8 = Red Rest
9 = Preempt
A = Stop Time
B = Red Revrt
C = Gap Term.
D = MAX Term.
E = Forceoff
F = Red Clear.

MANUAL PLAN SELECT:

< C/0 + A + 1 > = 0
AUTO = 0 PLAN = 1 - 9
FREE = 14
FLASH= 15

MANUAL OFFSET SELECT:

< C/0 + B + 1 > = 0
AUTO = 0 OFFSET A = 1
OFFSET B = 2
OFFSET C = 3

COMM ADDRESS:
< C/0 + 0 + 0 > = 7

ZONE NUMBER:
< C/0 + 0 + 1 > = 1

AREA NUMBER:
< C/0 + 0 + 2 > = 2

AREA ADDRESS:
< C/0 + 0 + 3 > = 29

QUICNET CHANNEL:
UDP:8015:172.16.121.29

INPUT KEYSTROKES:
1) Set PAGE to required BANK #
< C+0+PAGE = BANK # >

EXCL. PED. PHASE
WALK (F/1+0+0) = 0
FDW (F/1+0+1) = 0
ALL RED (F/1+0+2) = 0.0
Assigned at E/127+A+E & F

EXTRA 1
1 = TBC Type 1
2 = NEMA External Coordinator
3 = Auto Daylight Savings
4 = EV Preempt Advance
5 = Expanded Status Report
7 = Clear Outputs During Flash
8 = Split Ring Operation

IC SELECT
2 = 2 Way Modem
3 = 7 Wire Slave
4 = Flash / Free
5 = Simplex Master
8 = Offset Interruptor

To Enable "E" Page, Set < F/1 + 9 + E = Not Zero **>**

CONTROLLER CONFIGURATION FLAGS

	Column E			Column F	
0	EXCLUSIVE	#NAME?	0		
1	RR 1 CLEAR	#NAME?	1	EXT PERMIT 1	#NAME?
2	RR 2 CLEAR	#NAME?	2	EXT PERMIT 2	#NAME?
3	RR 2 LTD SRV	#NAME?	3	EXCLU PED	#NAME?
4	PROT/PERM	#NAME?	4	Preemp Non Lock	#NAME?
5	FLH TO PREMT	#NAME?	5	PED 2 P OUT	#NAME?
6	FLASH ENTRY	#NAME?	6	PED 6 P OUT	#NAME?
7	DSABL MIN YEL	#NAME?	7	PED 4 P OUT	#NAME?
8	DSABL OVP YEL	#NAME?	8	PED 8 P OUT	#NAME?
9	OVP FLH YEL	#NAME?	9	FLH YELLOW	#NAME?
A	EM. VEH. A	#NAME?	A	Low Prio A PH	#NAME?
B	EM. VEH. B	#NAME?	B	Low Prio B PH	#NAME?
C	EM. VEH. C	#NAME?	C	Low Prio C PH	#NAME?
D	EM. VEH. D	#NAME?	D	Low Prio D PH	#NAME?
E	EXTRA 1	#NAME?	E	RESTRICTED	#NAME?
F	IC SELECT	#NAME?	F	EXTRA 2	#NAME?

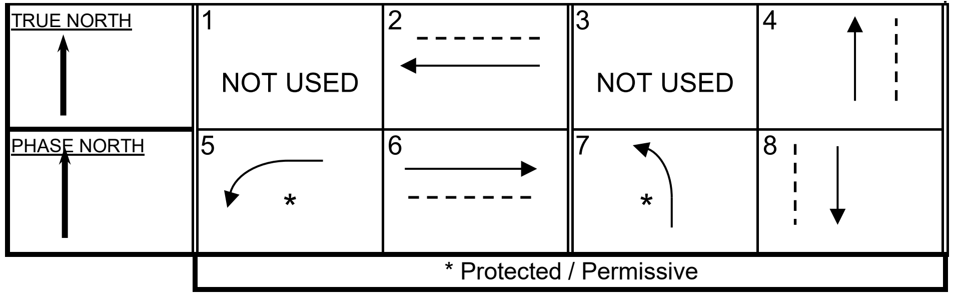
< C + 0 + E = 125 > **< C + 0 + E = 125 >**

Flash To Preempt / Preempt Non Lock
1 = EVP - A
2 = EVP - B
3 = EVP - C
4 = EVP - D
5 = RR - 1
6 = RR - 2
7 = Spl Ev - 1
8 = Spl Ev - 2

EXTRA 2
1 = AWB During Initial
2 = Flashing Yellow Arrow
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 =
7 = Reserved
8 =

PHASE DIAGRAM

E-W Street: #NAME? N-S Street : #NAME?



CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

Phase Bank 1 & Phase Functions

Controller: 134 Buena Vista & San Fernando

Phase Functions - Page 1 - 1-1

Red Lock	________
Yellow Lock	________
Simultaneous Gap	________
Rest In Walk	________
Advance Walk	________
Flashing Walk	________
Max Extension	________
Red Rest	________
Dual Entry	_2_4_6_8
Sequential Timing	________
Inhibit Ped Reservice	_2_4_6_8
Delay Walk	________
Guaranteed Passage	________
Conditional Service	______7_

Phase Functions - Page 2 - 1-2

Minimum Recall	_2_4_6_8
Ped Recall	________
Maximum Recall	________
Green Flash	________
Overlap Green Flash	________
Flashing Yellow Arrow for PPLT	________
Soft Recall	________
External Recall	________
Manual Control Calls	________
Fast Green Flash	________
Fast Overlap Green Flash	________
Semi-Actuated	________

Startup - 9-1

Flash Start	0
All Red Start	6.0
Yellow Start Phases	________
First Green Phases	___4___8
Startup Vehicle Calls	12345678
Startup Ped Calls	_2_4_6_8

Detector Monitoring - 9-3

Max On	21
Max Off	250
Chatter	255

Advance Warning Signs - 9-4

	Sign 1	Sign 2
Phase Number	0	0
Time Before Yellow	0.0	0.0

Phase Timing - Bank 1 - 1-3-[1]

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8
Min Green	6	6	6	10	6	6	10	10
Extension	2.0	4.0	2.0	5.0	2.0	4.0	3.5	4.0
Max	20	40	25	90	20	40	40	75
Max 2	20	40	25	40	20	40	25	60
Cond Serve Check	0	0	0	0	0	0	0	0
Clearance Timing - 1-4-[1]								
Yellow Change	3.6	4.0	3.6	4.0	3.6	4.0	4.0	4.0
Red Clear	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0
Pedestrian Timing - 1-5-[1]								
Walk	0	7	0	7	0	7	0	7
Pedestrian Change	0	27	0	26	0	25	0	26
Advance/Delay Walk	0	0	0	0	0	0	0	0
PE Min. Ped. Change	0	0	0	0	0	0	0	0
Volume-Density - 1-6-[1]								
Type 3 Disconnect	0	25	0	35	0	25	0	25
Add per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Added Initial	0	0	0	0	0	0	0	0
Min Gap	2.0	3.0	2.0	4.0	2.0	3.0	2.5	3.0
Max Gap	2.0	5.0	2.0	6.0	2.0	5.0	4.5	5.0
Reduce Every	0.0	1.0	0.0	1.0	0.0	1.0	1.0	1.0
Alternate Timing - 1-7-[1]								
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped. Change	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Configuration - 9-5

Exclusive Phases	________	Permitted Phases	12345678
Protected/Permissive Phases	1___5___	Restricted Phases	________
Disable Phase Min. Yellow	________	Disable Overlap Min. Yellow	________
Free Lag Phases	_2_4_6_8	External Permit 1	________
External Lag Phases	_2_4_6_8	External Permit 2	________
Pedestrian Forceoff Phases	________	External Permit 3	________
Extra One	1_3_5___	Extra Two	___4__7_

1 = TBC Type 1
2 = (unused)
3 = Adjust Clock for Daylight Saving Time
4 = Terminate Ped. for EV Preempt
5 = QuicComm Extended Status
6 = International Style Pedestrian Change Interval
7 = (unused)
8 = Split Ring Operation

1 = Adv. Warn. Signs On During Min. Init.
2 = Siemens i2 Communications Protocol
3 = Disable Minimum Walk Check
4 = QuicNet System Communications
5 = Ignore Anti-Backup During Preempt
6 = Bridgeport Naztec TS 2 I/O Map
7 = Allow Remote Preemption Calls
8 = Caltrans Traf. Resp. FM Comm.

Phase Timing - Exclusive Pedestrian - 1-8

Exclusive Ped Assignment	________
Exclusive Walk	0
Exclusive Pedestrian Change	0
Red Clear	0.0
Walk Output	0
Don't Walk Output	0

Clock Set - 9-6

Manual Operation - 9-7

Manual Plan	0

1–9 = Coordination Plans
14 = Free
15 = Flash

Manual Offset	0

Software Flash - 9-8

Flash Entry Phases	________
Flash Yellow Phases	________
Flash Yellow Overlaps	________
Flash Type	0

0 = All On/All Off (1-2-3-4-5-6-7-8, dark)
1 = Main/Side (1-2-5-6, 3-4-7-8)
2 = Odd/Even (1-3-5-7, 2-4-6-8)
3 = Ring Pairs (1-6, 4-7, 2-5, 3-8)

Misc - 9-9

Keyboard Beep	N
Backlight Timeout	10
Soft Recall Delay	3.0
Red Revert	3.0
FYA Delay	0

Daylight Saving Time - 9-C

Start Month	0
Start Week	0
End Month	0
End Week	0

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

Phase Bank 1 & Phase Functions

Controller: 128 Buena Vista St & Empire Ave

Phase Functions - Page 1 - 1-1

Red Lock	________
Yellow Lock	________
Simultaneous Gap	________
Rest In Walk	________
Advance Walk	________
Flashing Walk	________
Max Extension	________
Red Rest	________
Dual Entry	_2___6__
Sequential Timing	________
Inhibit Ped Reservice	________
Delay Walk	________
Guaranteed Passage	________
Conditional Service	________

Phase Functions - Page 2 - 1-2

Minimum Recall	___4___8
Ped Recall	___4___8
Maximum Recall	________
Green Flash	________
Overlap Green Flash	________
Flashing Yellow Arrow for PPLT	__3_5___
Soft Recall	________
External Recall	________
Manual Control Calls	________
Fast Green Flash	________
Fast Overlap Green Flash	________
Semi-Actuated	________

Startup - 9-1

Flash Start	0
All Red Start	6.0
Yellow Start Phases	________
First Green Phases	___4___8
Startup Vehicle Calls	12345678
Startup Ped Calls	_2_4_6_8

Detector Monitoring - 9-3

Max On	21
Max Off	250
Chatter	255

Advance Warning Signs - 9-4

	Sign 1	Sign 2
Phase Number	0	0
Time Before Yellow	0.0	0.0

Phase Timing - Bank 1 - 1-3-[1]

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8
Min Green	6	8	6	9	6	8	6	9
Extension	2.5	3.0	2.5	3.0	2.5	3.0	2.5	3.5
Max	30	60	20	60	20	60	20	60
Max 2	30	60	20	60	20	60	20	60
Cond Serve Check	0	0	0	0	0	0	0	0
Clearance Timing - 1-4-[1]								
Yellow Change	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clear	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0
Pedestrian Timing - 1-5-[1]								
Walk	0	7	0	7	0	7	0	7
Pedestrian Change	0	22	0	19	0	14	0	14
Advance/Delay Walk	0	0	0	0	0	0	0	0
PE Min. Ped. Change	0	0	0	0	0	0	0	0
Volume-Density - 1-6-[1]								
Type 3 Disconnect	0	20	0	20	0	20	0	20
Add per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Added Initial	0	0	0	0	0	0	0	0
Min Gap	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.5
Max Gap	3.5	4.0	3.5	4.0	3.5	4.0	3.5	4.5
Reduce Every	0.5	1.0	0.5	1.0	0.5	1.0	0.5	1.0
Alternate Timing - 1-7-[1]								
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped. Change	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Configuration - 9-5

Exclusive Phases	________	Permitted Phases	12345678
Protected/Permissive Phases	__3_5___	Restricted Phases	________
Disable Phase Min. Yellow	________	Disable Overlap Min. Yellow	________
Free Lag Phases	1__4_6_8	External Permit 1	________
External Lag Phases	1__4_6_8	External Permit 2	________
Pedestrian Forceoff Phases	________	External Permit 3	________
Extra One	1_3_5___	Extra Two	___4__7_

1 = TBC Type 1
2 = (unused)
3 = Adjust Clock for Daylight Saving Time
4 = Terminate Ped. for EV Preempt
5 = QuicComm Extended Status
6 = International Style Pedestrian Change Interval
7 = (unused)
8 = Split Ring Operation

1 = Adv. Warn. Signs On During Min. Init.
2 = Siemens i2 Communications Protocol
3 = Disable Minimum Walk Check
4 = QuicNet System Communications
5 = Ignore Anti-Backup During Preempt
6 = Bridgeport Naztec TS 2 I/O Map
7 = Allow Remote Preemption Calls
8 = Caltrans Traf. Resp. FM Comm.

Phase Timing - Exclusive Pedestrian - 1-8

Exclusive Ped Assignment	________
Exclusive Walk	0
Exclusive Pedestrian Change	0
Red Clear	0.0
Walk Output	0
Don't Walk Output	0

Clock Set - 9-6

Manual Operation - 9-7

Manual Plan	0

1–9 = Coordination Plans
14 = Free
15 = Flash

Manual Offset	0

Software Flash - 9-8

Flash Entry Phases	________
Flash Yellow Phases	________
Flash Yellow Overlaps	________
Flash Type	0

0 = All On/All Off (1-2-3-4-5-6-7-8, dark)
1 = Main/Side (1-2-5-6, 3-4-7-8)
2 = Odd/Even (1-3-5-7, 2-4-6-8)
3 = Ring Pairs (1-6, 4-7, 2-5, 3-8)

Misc - 9-9

Keyboard Beep	N
Backlight Timeout	10
Soft Recall Delay	3.0
Red Revert	3.0
FYA Delay	0

Daylight Saving Time - 9-C

Start Month	0
Start Week	0
End Month	0
End Week	0

CITY OF BURBANK

PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

System & Comm

Controller: 136 Buena Vista St & Vanowen St

QuicNet® System	
System ID	36
Group	#NAME?
Field Master	#NAME?
N-S Street	#NAME?
E-W Street	#NAME?

Database Last Changed
4/13/2020 7:43

Prepared by:	RICHARD LOCKYER		Date:	4/20/2020
Checked by:	JONATHAN YEE		Date:	
Approved by:	JONATHAN YEE		Date:	
Completed by:			Date:	

2070L / 2070E

McCain 2033

6 OLA	2	2P	3	4	4P
🔴 16 🟡 17 🟢 18	🔴 12 🟡 13 🟢 15	🔴 10 ● 35 ⚪ 11	🔴 7 🟡 8 🟢 9	🔴 4 🟡 5 🟢 6	🔴 2 ● 37 ⚪ 3
5	6 OLB	6P	7	8	8P
🔴 32 🟡 33 🟢 34	🔴 29 🟡 30 🟢 31	🔴 27 🔴 36 ⚪ 28	● 24 ● 25 ● 26	● 21 ● 22 ● 23	🔴 19 ● 38 ⚪ 20
			OLC	OLD	
● 97 ● 98 ● 99	● 94 ● 95 ● 96	● 91 ● 101 ● 93	● 88 ● 89 ● 90	● 85 ● 86 ● 87	● 83 ● 100 ● 84

NOTES:

INSTALL 332L CABINET WITH MTS RR3 INTERFACE PANEL CONNECTED TO 2070 CONTROLLER USING C11 INTERFACE CABLE

CONFIRM PED YELLOW MOLEX PLUG IN OUTPUT FILE DISCONNECTED

INSTALL 2010ECLip CMU AND PROGRAM TO 172.16.123.36

QuicNet Timing Notes

Offset A = Northbound Bias
Offset B = Balanced
Offset C = Southbound Bias
10-29-2019 - Increased Ø3 All-Red to 1s, Buena Vista to 2s

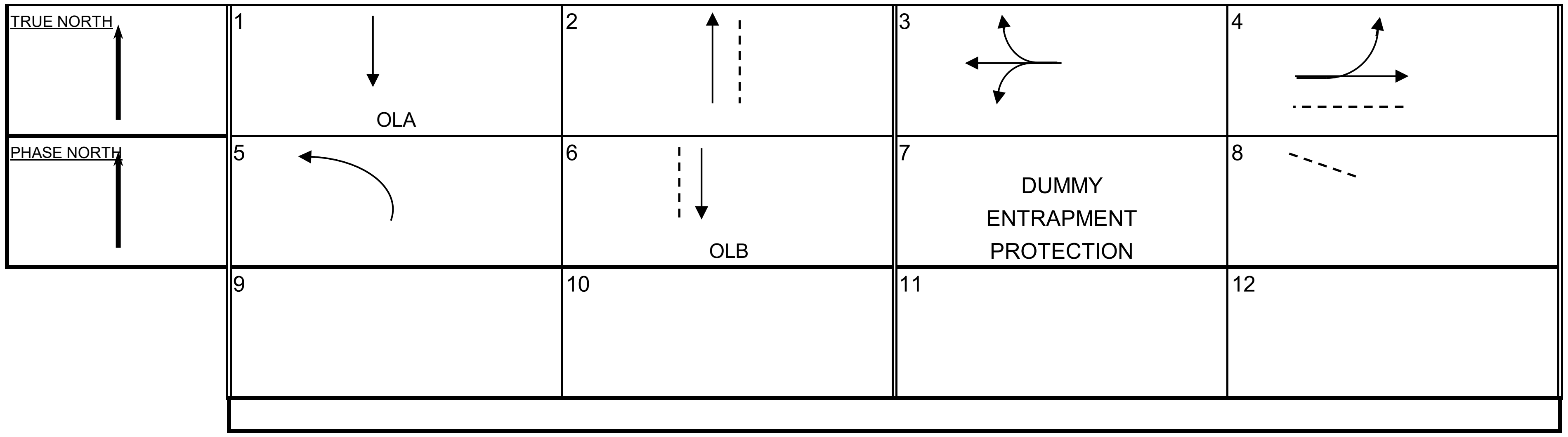
9600 Com CH 15

Ethernet Communications - 9-A	
Channel	#NAME?
NetMask	255.255.255.0
Gateway	172.16.121.254
Address	14
Area Number	2
Area Address	36

Serial Communications - 9-2-1	
Port Number	1
Address	14
Area Number	2
Area Address	36
Protocol	QuicComm
Baud Rate	9600
Data Bits	8-EVEN-1
Comm Timeout	5
RTS HOLD	6
CTS DELAY	8

PHASE DIAGRAM

E-W Street: **#NAME?** **N-S Street :** **#NAME?**



CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

Coordination

Controller: 138 Buena Vista St & Victory Bl

Coordination - General - 3-1	
Transition Type	1.3
0 = Shortway	
1 = Dwell	
2 = Shorten	
Tenths Digit: # Cycles to get in step (1–4)	
Coordination Extra	_2______
1 = Programmed Walk Time for Sync Phases	
2 = Always Terminate Sync Phase Peds	
3 = Floating Forceoffs	
4 = Reservice for Ped Calls	
5 = Start of Green Offset Reference	
8 = Maintain Coord. During Spec. Event Preempt	

Coordination - Phase Minimums - 3-1

Ph 1	Ph 2	Ph 3	Ph 4	Ph 5	Ph 6	Ph 7	Ph 8
12	30	12	29	12	27	12	28

Coordination - Cycle, Offsets, & Forceoffs - 3-2-[Plan Number]

	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
Cycle	0	0	100	110	120	130	140	0	0
Offset 1	0	0	4	60	55	50	65	0	0
Offset 2	0	0	4	60	55	50	50	0	0
Offset 3	0	0	4	60	55	50	55	0	0
Zone Offset	0	0	0	0	0	0	0	0	0
Ring Offset	0	0	0	0	0	0	0	0	0
Hold Release	0	0	255	255	255	255	255	0	0
Ped. Adjust	0	0	0	0	0	0	0	0	0
Forceoff Phase 1	0	0	15	19	21	23	25	0	0
Forceoff Phase 2	0	0	50	54	58	62	66	0	0
Forceoff Phase 3	0	0	65	77	85	93	106	0	0
Forceoff Phase 4	0	0	0	0	0	0	0	0	0
Forceoff Phase 5	0	0	15	19	21	23	25	0	0
Forceoff Phase 6	0	0	50	54	58	62	66	0	0
Forceoff Phase 7	0	0	65	77	85	93	106	0	0
Forceoff Phase 8	0	0	0	0	0	0	0	0	0

Coordination - Permissives & Phase Sequences - 3-3-[Plan Number] and 3-4-[Plan Number]

	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
Perm 1 - Begin	0	0	0	0	0	0	0	0	0
Perm 1 - End	0	0	0	0	0	0	0	0	0
Perm 1 - Veh Phases	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678
Perm 1 - Ped Phases	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678
Perm 2 - Begin	0	0	0	0	0	0	0	0	0
Perm 2 - End	0	0	0	0	0	0	0	0	0
Perm 2 - Veh Phases	________	________	________	________	________	________	________	________	________
Perm 2 - Ped Phases	________	________	________	________	________	________	________	________	________
Perm 3 - Begin	0	0	0	0	0	0	0	0	0
Perm 3 - End	0	0	0	0	0	0	0	0	0
Perm 3 - Veh Phases	________	________	________	________	________	________	________	________	________
Perm 3 - Ped Phases	________	________	________	________	________	________	________	________	________
Max Inhibit Phases	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678
Max Recall Phases	________	________	________	________	________	________	________	________	________
Reservice Time	0	0	0	0	0	0	0	0	0
Reservice Phases	________	________	________	________	________	________	________	________	________
Sync Phases	___4___8	___4___8	___4___8	___4___8	___4___8	___4___8	___4___8	___4___8	___4___8
Lag Phases	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8
Pre-Timed Phases	________	________	________	________	________	________	________	________	________

Coordination - Adaptive Parameters - 3-5	
QuicTrac Max Cycle Length	32
QuicTrac Max Cycle Length Change	110

Coordination - Adaptive Operation - 3-6

Adaptive Operation	0	0	0	0	0	0	0	0	0

0 = Non-Adaptive 1 = Adaptive

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

Coordination

Controller: 125 Buena Vista St & Burbank Bl

Coordination - General - 3-1	
Transition Type	**1.3**
0 = Shortway	
1 = Dwell	
2 = Shorten	
Tenths Digit: # Cycles to get in step (1–4)	
Coordination Extra	**_2______**
1 = Programmed Walk Time for Sync Phases	
2 = Always Terminate Sync Phase Peds	
3 = Floating Forceoffs	
4 = Reservice for Ped Calls	
5 = Start of Green Offset Reference	
8 = Maintain Coord. During Spec. Event Preempt	

Coordination - Phase Minimums - 3-1

Ph 1	Ph 2	Ph 3	Ph 4	Ph 5	Ph 6	Ph 7	Ph 8
15	**27**	**15**	**27**	**15**	**28**	**15**	**27**

Coordination - Cycle, Offsets, & Forceoffs - 3-2-[Plan Number]

	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
Cycle	**0**	**0**	**100**	**110**	**120**	**130**	**140**	**0**	**0**
Offset 1	**0**	**0**	**55**	**7**	**10**	**5**	**20**	**0**	**0**
Offset 2	**0**	**0**	**55**	**7**	**10**	**5**	**5**	**0**	**0**
Offset 3	**0**	**0**	**55**	**7**	**10**	**5**	**115**	**0**	**0**
Zone Offset	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Ring Offset	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Hold Release	**0**	**0**	**255**	**255**	**255**	**255**	**255**	**0**	**0**
Ped. Adjust	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Forceoff Phase 1	**0**	**0**	**15**	**19**	**21**	**21**	**21**	**0**	**0**
Forceoff Phase 2	**0**	**0**	**50**	**54**	**58**	**60**	**60**	**0**	**0**
Forceoff Phase 3	**0**	**0**	**65**	**77**	**85**	**93**	**103**	**0**	**0**
Forceoff Phase 4	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Forceoff Phase 5	**0**	**0**	**15**	**19**	**21**	**21**	**21**	**0**	**0**
Forceoff Phase 6	**0**	**0**	**50**	**54**	**58**	**60**	**60**	**0**	**0**
Forceoff Phase 7	**0**	**0**	**65**	**77**	**85**	**93**	**103**	**0**	**0**
Forceoff Phase 8	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Coordination - Permissives & Phase Sequences - 3-3-[Plan Number] and 3-4-[Plan Number]

	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
Perm 1 - Begin	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 1 - End	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 1 - Veh Phases	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**
Perm 1 - Ped Phases	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**
Perm 2 - Begin	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 2 - End	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 2 - Veh Phases	________	________	________	________	________	________	________	________	________
Perm 2 - Ped Phases	________	________	________	________	________	________	________	________	________
Perm 3 - Begin	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 3 - End	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 3 - Veh Phases	________	________	________	________	________	________	________	________	________
Perm 3 - Ped Phases	________	________	________	________	________	________	________	________	________
Max Inhibit Phases	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**
Max Recall Phases	________	________	________	________	________	________	________	________	________
Reservice Time	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Reservice Phases	________	________	________	________	________	________	________	________	________
Sync Phases	**___4___8**	**___4___8**	**___4___8**	**___4___8**	**___4___8**	**___4___8**	**___4___8**	**___4___8**	**___4___8**
Lag Phases	**_2_4_6_8**	**_2_4_6_8**	**_2_4_6_8**	**_2_4_6_8**	**_2_4_6_8**	**_2_4_6_8**	**_2_4_6_8**	**_2_4_6_8**	**_2_4_6_8**
Pre-Timed Phases	________	________	________	________	________	________	________	________	________

Coordination - Adaptive Parameters - 3-5	
QuicTrac Max Cycle Length	**255**
QuicTrac Max Cycle Length Change	**15**

Coordination - Adaptive Operation - 3-6

Adaptive Operation	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

0 = Non-Adaptive 1 = Adaptive

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

Coordination

Controller: 131 Buena Vista St & Magnolia Bl

Coordination - General - 3-1	
Transition Type	1.3
0 = Shortway	
1 = Dwell	
2 = Shorten	
Tenths Digit: # Cycles to get in step (1–4)	
Coordination Extra	_2______
1 = Programmed Walk Time for Sync Phases	
2 = Always Terminate Sync Phase Peds	
3 = Floating Forceoffs	
4 = Reservice for Ped Calls	
5 = Start of Green Offset Reference	
8 = Maintain Coord. During Spec. Event Preempt	

Coordination - Phase Minimums - 3-1

Ph 1	Ph 2	Ph 3	Ph 4	Ph 5	Ph 6	Ph 7	Ph 8
15	27	15	27	15	27	15	26

Coordination - Cycle, Offsets, & Forceoffs - 3-2-[Plan Number]

	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
Cycle	0	0	100	110	120	130	140	0	0
Offset 1	0	0	91	62	72	75	105	0	0
Offset 2	0	0	91	62	72	75	75	0	0
Offset 3	0	0	91	62	72	75	55	0	0
Zone Offset	0	0	0	0	0	0	0	0	0
Ring Offset	0	0	0	0	0	0	0	0	0
Hold Release	0	0	255	255	255	255	255	0	0
Ped. Adjust	0	0	0	0	0	0	0	0	0
Forceoff Phase 1	0	0	15	19	21	21	21	0	0
Forceoff Phase 2	0	0	50	54	58	60	60	0	0
Forceoff Phase 3	0	0	65	77	85	93	103	0	0
Forceoff Phase 4	0	0	0	0	0	0	0	0	0
Forceoff Phase 5	0	0	15	19	21	21	21	0	0
Forceoff Phase 6	0	0	50	54	58	60	60	0	0
Forceoff Phase 7	0	0	65	77	85	93	103	0	0
Forceoff Phase 8	0	0	0	0	0	0	0	0	0

Coordination - Permissives & Phase Sequences - 3-3-[Plan Number] and 3-4-[Plan Number]

	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
Perm 1 - Begin	0	0	0	0	0	0	0	0	0
Perm 1 - End	0	0	0	0	0	0	0	0	0
Perm 1 - Veh Phases	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678
Perm 1 - Ped Phases	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678
Perm 2 - Begin	0	0	0	0	0	0	0	0	0
Perm 2 - End	0	0	0	0	0	0	0	0	0
Perm 2 - Veh Phases	________	________	________	________	________	________	________	________	________
Perm 2 - Ped Phases	________	________	________	________	________	________	________	________	________
Perm 3 - Begin	0	0	0	0	0	0	0	0	0
Perm 3 - End	0	0	0	0	0	0	0	0	0
Perm 3 - Veh Phases	________	________	________	________	________	________	________	________	________
Perm 3 - Ped Phases	________	________	________	________	________	________	________	________	________
Max Inhibit Phases	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678	12345678
Max Recall Phases	________	________	________	________	________	________	________	________	________
Reservice Time	0	0	0	0	0	0	0	0	0
Reservice Phases	________	________	________	________	________	________	________	________	________
Sync Phases	___4___8	___4___8	___4___8	___4___8	___4___8	___4___8	___4___8	___4___8	___4___8
Lag Phases	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8	_2_4_6_8
Pre-Timed Phases	________	________	________	________	________	________	________	________	________

Coordination - Adaptive Parameters - 3-5	
QuicTrac Max Cycle Length	255
QuicTrac Max Cycle Length Change	15

Coordination - Adaptive Operation - 3-6

Adaptive Operation	0	0	0	0	0	0	0	0	0

0 = Non-Adaptive 1 = Adaptive

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

Phase Bank 1 & Phase Functions

Controller: 132 Buena Vista St & Olive Ave

Phase Functions - Page 1 - 1-1

Red Lock	________
Yellow Lock	________
Simultaneous Gap	________
Rest In Walk	________
Advance Walk	________
Flashing Walk	________
Max Extension	________
Red Rest	________
Dual Entry	_2___6__
Sequential Timing	________
Inhibit Ped Reservice	________
Delay Walk	________
Guaranteed Passage	________
Conditional Service	________

Phase Functions - Page 2 - 1-2

Minimum Recall	_2_4_6_8
Ped Recall	___4___8
Maximum Recall	________
Green Flash	________
Overlap Green Flash	________
Flashing Yellow Arrow for PPLT	__3___7_
Soft Recall	________
External Recall	________
Manual Control Calls	________
Fast Green Flash	________
Fast Overlap Green Flash	________
Semi-Actuated	________

Startup - 9-1

Flash Start	0
All Red Start	6.0
Yellow Start Phases	________
First Green Phases	___4___8
Startup Vehicle Calls	12345678
Startup Ped Calls	_2_4_6_8

Detector Monitoring - 9-3

Max On	21
Max Off	250
Chatter	255

Advance Warning Signs - 9-4

	Sign 1	Sign 2
Phase Number	0	0
Time Before Yellow	0.0	0.0

Phase Timing - Bank 1 - 1-3-[1]

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8
Min Green	6	8	6	8	6	8	6	8
Extension	2.5	3.0	2.5	3.0	2.5	3.0	2.5	3.0
Max	25	60	25	60	25	60	25	60
Max 2	25	60	25	60	25	60	25	60
Cond Serve Check	0	0	0	0	0	0	0	0
Clearance Timing - 1-4-[1]								
Yellow Change	3.6	4.0	4.0	4.0	3.6	4.0	4.0	4.0
Red Clear	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0
Pedestrian Timing - 1-5-[1]								
Walk	0	7	0	7	0	7	0	7
Pedestrian Change	0	18	0	18	0	21	0	22
Advance/Delay Walk	0	0	0	0	0	0	0	0
PE Min. Ped. Change	0	0	0	0	0	0	0	0
Volume-Density - 1-6-[1]								
Type 3 Disconnect	0	0	0	20	0	0	0	20
Add per Vehicle	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0
Max Added Initial	0	20	0	0	0	20	0	0
Min Gap	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Max Gap	3.5	4.0	3.5	4.0	3.5	4.0	3.5	4.0
Reduce Every	0.5	1.0	0.5	1.0	0.5	1.0	0.5	1.0
Alternate Timing - 1-7-[1]								
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped. Change	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Configuration - 9-5

Exclusive Phases	________	Permitted Phases	12345678
Protected/Permissive Phases	1_3_5_7_	Restricted Phases	________
Disable Phase Min. Yellow	________	Disable Overlap Min. Yellow	________
Free Lag Phases	_2_4_6_8	External Permit 1	________
External Lag Phases	_2_4_6_8	External Permit 2	________
Pedestrian Forceoff Phases	________	External Permit 3	________
Extra One	1_3_5___	Extra Two	___4__7_

1 = TBC Type 1	1 = Adv. Warn. Signs On During Min. Init.
2 = (unused)	2 = Siemens i2 Communications Protocol
3 = Adjust Clock for Daylight Saving Time	3 = Disable Minimum Walk Check
4 = Terminate Ped. for EV Preempt	4 = QuicNet System Communications
5 = QuicComm Extended Status	5 = Ignore Anti-Backup During Preempt
6 = International Style Pedestrian Change Interval	6 = Bridgeport Naztec TS 2 I/O Map
7 = (unused)	7 = Allow Remote Preemption Calls
8 = Split Ring Operation	8 = Caltrans Traf. Resp. FM Comm.

Phase Timing - Exclusive Pedestrian - 1-8

Exclusive Ped Assignment	________
Exclusive Walk	0
Exclusive Pedestrian Change	0
Red Clear	0.0
Walk Output	0
Don't Walk Output	0

Clock Set - 9-6

Manual Operation - 9-7

Manual Plan	0

1–9 = Coordination Plans
14 = Free
15 = Flash

Manual Offset	0

Software Flash - 9-8

Flash Entry Phases	________
Flash Yellow Phases	________
Flash Yellow Overlaps	________
Flash Type	0

0 = All On/All Off (1-2-3-4-5-6-7-8, dark)
1 = Main/Side (1-2-5-6, 3-4-7-8)
2 = Odd/Even (1-3-5-7, 2-4-6-8)
3 = Ring Pairs (1-6, 4-7, 2-5, 3-8)

Misc - 9-9

Keyboard Beep	N
Backlight Timeout	10
Soft Recall Delay	3.0
Red Revert	3.0
FYA Delay	0

Daylight Saving Time - 9-C

Start Month	0
Start Week	0
End Month	0
End Week	0

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

Coordination

Controller: 101 Alameda Ave & Buena Vista St

Coordination - General - 3-1

Transition Type	**1.3**
0 = Shortway	
1 = Dwell	
2 = Shorten	
Tenths Digit: # Cycles to get in step (1–4)	
Coordination Extra	**_2______**
1 = Programmed Walk Time for Sync Phases	
2 = Always Terminate Sync Phase Peds	
3 = Floating Forceoffs	
4 = Reservice for Ped Calls	
5 = Start of Green Offset Reference	
8 = Maintain Coord. During Spec. Event Preempt	

Coordination - Phase Minimums - 3-1

Ph 1	Ph 2	Ph 3	Ph 4	Ph 5	Ph 6	Ph 7	Ph 8
15	**28**	**15**	**29**	**15**	**28**	**15**	**28**

Coordination - Cycle, Offsets, & Forceoffs - 3-2-[Plan Number]

	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
Cycle	**0**	**0**	**100**	**110**	**120**	**130**	**140**	**0**	**0**
Offset 1	**0**	**0**	**22**	**50**	**82**	**80**	**70**	**0**	**0**
Offset 2	**0**	**0**	**22**	**50**	**82**	**80**	**70**	**0**	**0**
Offset 3	**0**	**0**	**22**	**50**	**82**	**80**	**70**	**0**	**0**
Zone Offset	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Ring Offset	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Hold Release	**0**	**0**	**255**	**255**	**255**	**255**	**255**	**0**	**0**
Ped. Adjust	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Forceoff Phase 1	**0**	**0**	**51**	**59**	**58**	**65**	**70**	**0**	**0**
Forceoff Phase 2	**0**	**0**	**35**	**41**	**40**	**45**	**50**	**0**	**0**
Forceoff Phase 3	**0**	**0**	**67**	**74**	**80**	**85**	**95**	**0**	**0**
Forceoff Phase 4	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Forceoff Phase 5	**0**	**0**	**16**	**17**	**18**	**20**	**20**	**0**	**0**
Forceoff Phase 6	**0**	**0**	**51**	**59**	**58**	**65**	**70**	**0**	**0**
Forceoff Phase 7	**0**	**0**	**67**	**74**	**81**	**90**	**97**	**0**	**0**
Forceoff Phase 8	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Coordination - Permissives & Phase Sequences - 3-3-[Plan Number] and 3-4-[Plan Number]

	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
Perm 1 - Begin	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 1 - End	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 1 - Veh Phases	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**
Perm 1 - Ped Phases	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**
Perm 2 - Begin	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 2 - End	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 2 - Veh Phases	________	________	________	________	________	________	________	________	________
Perm 2 - Ped Phases	________	________	________	________	________	________	________	________	________
Perm 3 - Begin	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 3 - End	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Perm 3 - Veh Phases	________	________	________	________	________	________	________	________	________
Perm 3 - Ped Phases	________	________	________	________	________	________	________	________	________
Max Inhibit Phases	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**	**12345678**
Max Recall Phases	________	________	________	________	________	________	________	________	________
Reservice Time	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Reservice Phases	________	________	________	________	________	________	________	________	________
Sync Phases	**___4___8**	**___4___8**	**___4___8**	**___4___8**	**___4___8**	**___4___8**	**___4___8**	**___4___8**	**___4___8**
Lag Phases	**1__4_6_8**	**1__4_6_8**	**1__4_6_8**	**1__4_6_8**	**1__4_6_8**	**1__4_6_8**	**1__4_6_8**	**1__4_6_8**	**1__4_6_8**
Pre-Timed Phases	________	________	________	________	________	________	________	________	________

Coordination - Adaptive Parameters - 3-5

QuicTrac Max Cycle Length	**255**
QuicTrac Max Cycle Length Change	**15**

Coordination - Adaptive Operation - 3-6

Adaptive Operation	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

0 = Non-Adaptive 1 = Adaptive

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

Phase Bank 1 & Phase Functions

Controller: 133 Buena Vista St & Riverside

Phase Functions - Page 1 - 1-1

Red Lock	1___5__8
Yellow Lock	1___5__8
Simultaneous Gap	________
Rest In Walk	________
Advance Walk	________
Flashing Walk	________
Max Extension	________
Red Rest	________
Dual Entry	_2___6__
Sequential Timing	________
Inhibit Ped Reservice	________
Delay Walk	________
Guaranteed Passage	________
Conditional Service	________

Phase Functions - Page 2 - 1-2

Minimum Recall	_2___67_
Ped Recall	________
Maximum Recall	________
Green Flash	________
Overlap Green Flash	________
Flashing Yellow Arrow for PPLT	________
Soft Recall	________
External Recall	________
Manual Control Calls	________
Fast Green Flash	________
Fast Overlap Green Flash	________
Semi-Actuated	________

Startup - 9-1

Flash Start	0
All Red Start	6.0
Yellow Start Phases	_______8
First Green Phases	_2___6__
Startup Vehicle Calls	12__5678
Startup Ped Calls	_____6_8

Detector Monitoring - 9-3

Max On	21
Max Off	250
Chatter	255

Advance Warning Signs - 9-4

	Sign 1	Sign 2
Phase Number	0	0
Time Before Yellow	0.0	0.0

Phase Timing - Bank 1 - 1-3-[1]

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8
Min Green	10	10	0	0	10	10	10	10
Extension	2.5	3.5	0.0	0.0	2.5	3.5	3.5	3.5
Max	30	50	0	0	30	50	50	50
Max 2	30	50	0	0	30	50	50	50
Cond Serve Check	0	0	0	0	0	0	0	0
Clearance Timing - 1-4-[1]								
Yellow Change	3.6	4.5	3.0	3.0	3.6	4.5	4.5	4.5
Red Clear	1.0	2.0	0.0	0.0	1.0	2.0	2.0	2.0
Pedestrian Timing - 1-5-[1]								
Walk	0	0	0	0	0	7	0	7
Pedestrian Change	0	0	0	0	0	16	0	16
Advance/Delay Walk	0	0	0	0	0	0	0	0
PE Min. Ped. Change	0	0	0	0	0	0	0	0
Volume-Density - 1-6-[1]								
Type 3 Disconnect	0	20	0	0	0	20	20	20
Add per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Added Initial	0	0	0	0	0	0	0	0
Min Gap	1.5	2.5	0.0	0.0	1.5	2.5	2.5	2.5
Max Gap	3.5	4.5	0.0	0.0	3.5	4.5	4.5	4.5
Reduce Every	0.7	0.7	0.0	0.0	0.7	0.7	0.7	0.7
Alternate Timing - 1-7-[1]								
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped. Change	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Configuration - 9-5

Exclusive Phases	________	Permitted Phases	12__5678
Protected/Permissive Phases	________	Restricted Phases	________
Disable Phase Min. Yellow	________	Disable Overlap Min. Yellow	________
Free Lag Phases	_2_4_6_8	External Permit 1	________
External Lag Phases	_2_4_6_8	External Permit 2	________
Pedestrian Forceoff Phases	________	External Permit 3	________
Extra One	1_3_5___	Extra Two	___4__7_

1 = TBC Type 1
2 = (unused)
3 = Adjust Clock for Daylight Saving Time
4 = Terminate Ped. for EV Preempt
5 = QuicComm Extended Status
6 = International Style Pedestrian Change Interval
7 = (unused)
8 = Split Ring Operation

1 = Adv. Warn. Signs On During Min. Init.
2 = Siemens i2 Communications Protocol
3 = Disable Minimum Walk Check
4 = QuicNet System Communications
5 = Ignore Anti-Backup During Preempt
6 = Bridgeport Naztec TS 2 I/O Map
7 = Allow Remote Preemption Calls
8 = Caltrans Traf. Resp. FM Comm.

Phase Timing - Exclusive Pedestrian - 1-8

Exclusive Ped Assignment	________
Exclusive Walk	0
Exclusive Pedestrian Change	0
Red Clear	0.0
Walk Output	0
Don't Walk Output	0

Clock Set - 9-6

Manual Operation - 9-7

Manual Plan	0

1–9 = Coordination Plans
14 = Free
15 = Flash

Manual Offset	0

Software Flash - 9-8

Flash Entry Phases	________
Flash Yellow Phases	________
Flash Yellow Overlaps	________
Flash Type	0

0 = All On/All Off (1-2-3-4-5-6-7-8, dark)
1 = Main/Side (1-2-5-6, 3-4-7-8)
2 = Odd/Even (1-3-5-7, 2-4-6-8)
3 = Ring Pairs (1-6, 4-7, 2-5, 3-8)

Misc - 9-9

Keyboard Beep	N
Backlight Timeout	10
Soft Recall Delay	3.0
Red Revert	3.0
FYA Delay	0

Daylight Saving Time - 9-C

Start Month	0
Start Week	0
End Month	0
End Week	0

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

TRAFFIC SIGNAL
Phase Timing /
Phase Configuration
BiTrans 233RV2.x

Prepared by:	RICHARD LOCKYER		Date:	4/20/2020
Checked by:	JONATHAN YEE		Date:	
Approved by:	JONATHAN YEE		Date:	
Completed by:			Date:	

148 Burbank @ Victory P&VictoryB
(Intersection Name)

NOTES:

	Interval	PHASE 1	2	3	4	5	6	7	8
0	WALK	0	7	0	0	0	7	0	7
1	DONT WALK	0	20	0	0	0	23	0	29
2	MIN INITIAL	6	10	10	1	6	10	10	6
3	TYPE 3 LIMIT	0	20	20	0	0	20	20	0
4	ADD PER VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	VEH EXT	2.5	3.0	3.0	0.0	2.0	3.0	3.0	0.0
6	MAX GAP	3.0	4.0	3.5	0.0	2.0	4.0	3.5	0.0
7	MIN GAP	2.0	2.5	2.5	0.0	2.0	2.5	2.5	0.0
8	MAX LIMIT	30	65	50	1	30	65	40	36
9	MAXIMUM 2	30	65	50	1	30	65	40	36
A	ADV/DLY WLK	0	0	0	0	0	0	0	0
B	PE MIN FDW	0	0	0	0	0	0	0	0
C	COND SRV CHK	0	0	0	0	0	0	0	0
D	REDUCE EVERY	0.5	1.0	1.0	0.0	0.0	0.7	0.7	0.0
E	YELLOW	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
F	RED CLEAR	1.0	2.0	2.0	2.0	1.0	2.0	2.0	2.0

PHASE BANK 1 < C + 0 + F = 1 >

ALTERNATE TIMING		9	A	B	C	D
1	Ph. 1	0	0	0	0	0.0
2	Ph. 2	0	0	0	0	0.0
3	Ph. 3	0	0	0	0	0.0
4	Ph. 4	0	0	0	0	0.0
5	Ph. 5	0	0	0	0	0.0
6	Ph. 6	0	0	0	0	0.0
7	Ph. 7	0	0	0	0	0.0
8	Ph. 8	0	0	0	0	0.0
		Maximum Initial	Alternate Walk	Alternate FDW	Alternate Initial	Alternate Extension

START / REVERT TIMES

ALL RED STRT: **<F/1 + C + 0>** = 6.0
FLASH START: **<F/1 + 0 + E>** = 0
RED REVERT: **<F/1 + 0 + F>** = 5.0

PREEMPT	E
RR1 DLY	0
RR1 CLR	0
EVA DLY	0
EVA CLR	0
EVB DLY	0
EVB CLR	0
EVC DLY	0
EVC CLR	0
EVD DLY	0
EVD CLR	0
RR2 DLY	0
RR2 CLR	0
EV CLR	- - -
EV DLY	- - -
RR CLR	- - -
RR DLY	- - -

PHASE FUNCTION FLAGS

	Column F	
0	PERMIT	123_5678
1	RED LOCK	
2	YELLOW LOCK	
3	VEH MIN CALL	_23__6__
4	PED RECALL	
5	*View Set Peds*	_2___6_8
6	REST IN WALK	
7	RED REST	
8	DOUBLE ENTRY	__3____8
9	VEH MAX CALL	
A	SOFT RECALL	
B	MAXIMUM 2	
C	COND SERVICE	
D	MAN CONT CALL	
E	YELLOW START	
F	FIRST PHASES	_2___6__

< C + 0 + F = 1 >

SPECIALS

	Column F	
0	FAST GRN FLH	
1	GREEN FLSH	
2	FLASH WALK	
3	GUAR PASS	
4	SIMUL GAP	
5	SEQ TIMING	
6	ADV WALK	
7	DELAY WALK	
8	EXT RECALL	
9	Sart O'LapGreen	
A	MAX EXTEN	
B	INH PED RSRV	
C	SEMI ACTUA.	
D	Sart O'LapYellow	
E	STRT VEH CALL	123_567_
F	STRT PED CALL	_2___6_8

Specials <C + 0 + F = 2>

CNTRLR INTERVALS

0 = Walk
1 = FDW
2 = MIN. Green
3 =
4 = Var. Initial
5 = Extension
6 =
7 = Reduce Gap
8 = Red Rest
9 = Preempt
A = Stop Time
B = Red Revrt
C = Gap Term.
D = MAX Term.
E = Forceoff
F = Red Clear.

MANUAL PLAN SELECT:
< C/0 + A + 1 > = 0
AUTO = 0 PLAN = 1 - 9
FREE = 14
FLASH= 15

MANUAL OFFSET SELECT:
< C/0 + B + 1 > = 0
AUTO = 0 OFFSET A = 1
OFFSET B = 2
OFFSET C = 3

COMM ADDRESS:
< C/0 + 0 + 0 > = 1

ZONE NUMBER:
< C/0 + 0 + 1 > = 1

AREA NUMBER:
< C/0 + 0 + 2 > = 2

AREA ADDRESS:
< C/0 + 0 + 3 > = 48

QUICNET CHANNEL:
UDP:8022:172.16.121.48

INPUT KEYSTROKES:
1) Set PAGE to required BANK #
< C+0+PAGE = BANK # >

EXCL. PED. PHASE
WALK (F/1+0+0) = 0
FDW (F/1+0+1) = 0
ALL RED (F/1+0+2) = 0.0
Assigned at E/127+A+E & F

EXTRA 1
1 = TBC Type 1
2 = NEMA External Coordinator
3 = Auto Daylight Savings
4 = EV Preempt Advance
5 = Expanded Status Report
7 = Clear Outputs During Flash
8 = Split Ring Operation

IC SELECT
2 = 2 Way Modem
3 = 7 Wire Slave
4 = Flash / Free
5 = Simplex Master
8 = Offset Interruptor

To Enable "E" Page, Set < F/1 + 9 + E = Not Zero **>**

CONTROLLER CONFIGURATION FLAGS

	Column E	
0	EXCLUSIVE	______7_
1	RR 1 CLEAR	
2	RR 2 CLEAR	
3	RR 2 LTD SRV	
4	PROT/PERM	
5	FLH TO PREMT	
6	FLASH ENTRY	
7	DSABL MIN YEL	
8	DSABL OVP YEL	
9	OVP FLH YEL	
A	EM. VEH. A	
B	EM. VEH. B	
C	EM. VEH. C	
D	EM. VEH. D	
E	EXTRA 1	1_3_5___
F	IC SELECT	_2______

< C + 0 + E = 125 >

	Column F	
0		
1	EXT PERMIT 1	
2	EXT PERMIT 2	
3	EXCLU PED	
4	Preemp Non Lock	
5	PED 2 P OUT	_2______
6	PED 6 P OUT	_____6__
7	PED 4 P OUT	
8	PED 8 P OUT	_______8
9	FLH YELLOW	
A	Low Prio A PH	
B	Low Prio B PH	
C	Low Prio C PH	
D	Low Prio D PH	
E	RESTRICTED	
F	EXTRA 2	___4____

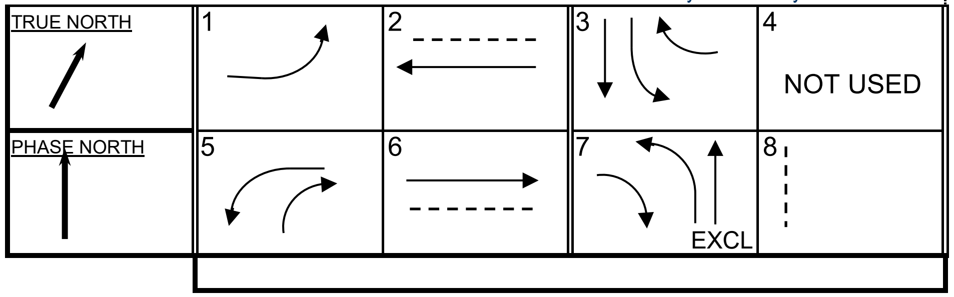
< C + 0 + E = 125 >

Flash To Preempt / Preempt Non Lock
1 = EVP - A
2 = EVP - B
3 = EVP - C
4 = EVP - D
5 = RR - 1
6 = RR - 2
7 = Spl Ev - 1
8 = Spl Ev - 2

EXTRA 2
1 = AWB During Initial
2 = Flashing Yellow Arrow
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 =
7 = Reserved
8 =

PHASE DIAGRAM

E-W Street: Burbank Blvd N-S Street : Victory Bl & Victory Pl



CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

TRAFFIC SIGNAL
Phase Timing / Phase Configuration
BiTrans 233RV2.x

Prepared by:	RICHARD LOCKYER	Date:	5/5/2020
Checked by:	JONATHAN YEE	Date:	
Approved by:	JONATHAN YEE	Date:	
Completed by:		Date:	

211 Magnolia Blvd & Victory Blvd
(Intersection Name)

NOTES:

		PHASE							
	Interval	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
0	WALK	0	7	0	7	0	7	0	7
1	DONT WALK	0	16	0	14	0	16	0	15
2	MIN INITIAL	6	6	6	6	6	6	6	6
3	TYPE 3 LIMIT	0	20	0	20	0	20	0	20
4	ADD PER VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	VEH EXT	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
6	MAX GAP	3.5	4.0	3.5	4.0	3.5	4.0	3.5	4.0
7	MIN GAP	1.5	2.0	1.5	2.0	1.5	2.0	1.5	2.0
8	MAX LIMIT	45	60	35	70	45	60	35	70
9	MAXIMUM 2	45	60	35	70	45	60	35	70
A	ADV/DLY WLK	0	0	0	0	0	0	0	0
B	PE MIN FDW	0	0	0	0	0	0	0	0
C	COND SRV CHK	0	0	0	0	0	0	0	0
D	REDUCE EVERY	0.5	0.7	0.5	0.7	0.5	0.7	0.5	0.7
E	YELLOW	3.6	4.0	3.6	4.0	3.6	4.0	3.6	4.0
F	RED CLEAR	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0

PHASE BANK 1 **< C + 0 + F = 1 >**

		ALTERNATE TIMING				
		9	**A**	**B**	**C**	**D**
1	Ph. 1	0	0	0	0	0.0
2	Ph. 2	0	0	0	0	0.0
3	Ph. 3	0	0	0	0	0.0
4	Ph. 4	0	0	0	0	0.0
5	Ph. 5	0	0	0	0	0.0
6	Ph. 6	0	0	0	0	0.0
7	Ph. 7	0	0	0	0	0.0
8	Ph. 8	0	0	0	0	0.0
		Maximum Initial	Alternate Walk	Alternate FDW	Alternate Initial	Alternate Extension

PREEMPT	**E**
RR1 DLY	0
RR1 CLR	0
EVA DLY	0
EVA CLR	0
EVB DLY	0
EVB CLR	0
EVC DLY	0
EVC CLR	0
EVD DLY	0
EVD CLR	0
RR2 DLY	0
RR2 CLR	0
EV CLR	- - -
EV DLY	- - -
RR CLR	- - -
RR DLY	- - -

START / REVERT TIMES

ALL RED STRT: **<F/1 + C + 0> =** 6.0
FLASH START: **<F/1 + 0 + E> =** 0
RED REVERT: **<F/1 + 0 + F> =** 3.0

	PHASE FUNCTION FLAGS Column F	
0	PERMIT	12345678
1	RED LOCK	
2	YELLOW LOCK	
3	VEH MIN CALL	2 6
4	PED RECALL	2 6
5	*View Set Peds*	_2_4_6_8
6	REST IN WALK	
7	RED REST	
8	DOUBLE ENTRY	4 8
9	VEH MAX CALL	
A	SOFT RECALL	
B	MAXIMUM 2	
C	COND SERVICE	
D	MAN CONT CALL	
E	YELLOW START	
F	FIRST PHASES	2 6

< C + 0 + F = 1 >

	SPECIALS Column F	
0	FAST GRN FLH	
1	GREEN FLSH	
2	FLASH WALK	
3	GUAR PASS	
4	SIMUL GAP	
5	SEQ TIMING	
6	ADV WALK	
7	DELAY WALK	
8	EXT RECALL	
9	Sart O'LapGreen	
A	MAX EXTEN	
B	INH PED RSRV	
C	SEMI ACTUA.	
D	Sart O'LapYellow	
E	STRT VEH CALL	12345678
F	STRT PED CALL	2 4 6 8

Specials <C + 0 + F = 2>

CNTRLR INTERVALS
0 = Walk
1 = FDW
2 = MIN. Green
3 =
4 = Var. Initial
5 = Extension
6 =
7 = Reduce Gap
8 = Red Rest
9 = Preempt
A = Stop Time
B = Red Revrt
C = Gap Term.
D = MAX Term.
E = Forceoff
F = Red Clear.

MANUAL PLAN SELECT:
< C/0 + A + 1 > = 0
AUTO = 0 PLAN = 1 - 9
FREE = 14
FLASH= 15

MANUAL OFFSET SELECT:
< C/0 + B + 1 > = 0
AUTO = 0 OFFSET A = 1
OFFSET B = 2
OFFSET C = 3

COMM ADDRESS:
< C/0 + 0 + 0 > = 24

ZONE NUMBER:
< C/0 + 0 + 1 > = 1

AREA NUMBER:
< C/0 + 0 + 2 > = 2

AREA ADDRESS:
< C/0 + 0 + 3 > = 111

QUICNET CHANNEL:
UDP:8022:172.16.121.111

INPUT KEYSTROKES:
1) Set PAGE to required BANK #
< C+0+PAGE = BANK # >

EXCL. PED. PHASE
WALK (F/1+0+0) = 0
FDW (F/1+0+1) = 0
ALL RED (F/1+0+2) = 0.0
Assigned at E/127+A+E & F

EXTRA 1
1 = TBC Type 1
2 = NEMA External Coordinator
3 = Auto Daylight Savings
4 = EV Preempt Advance
5 = Expanded Status Report
7 = Clear Outputs During Flash
8 = Split Ring Operation

IC SELECT
2 = 2 Way Modem
3 = 7 Wire Slave
4 = Flash / Free
5 = Simplex Master
8 = Offset Interruptor

To Enable "E" Page, Set < F/1 + 9 + E = Not Zero >

CONTROLLER CONFIGURATION FLAGS

	Column E			**Column F**	
0	EXCLUSIVE		0		
1	RR 1 CLEAR		1	EXT PERMIT 1	
2	RR 2 CLEAR		2	EXT PERMIT 2	
3	RR 2 LTD SRV		3	EXCLU PED	
4	PROT/PERM	1 3 5 7	4	Preemp Non Lock	
5	FLH TO PREMT		5	PED 2 P OUT	2
6	FLASH ENTRY		6	PED 6 P OUT	6
7	DSABL MIN YEL		7	PED 4 P OUT	4
8	DSABL OVP YEL		8	PED 8 P OUT	8
9	OVP FLH YEL		9	FLH YELLOW	
A	EM. VEH. A		A	Low Prio A PH	
B	EM. VEH. B		B	Low Prio B PH	
C	EM. VEH. C		C	Low Prio C PH	
D	EM. VEH. D		D	Low Prio D PH	
E	EXTRA 1	1 3 5	E	RESTRICTED	
F	IC SELECT	2	F	EXTRA 2	4

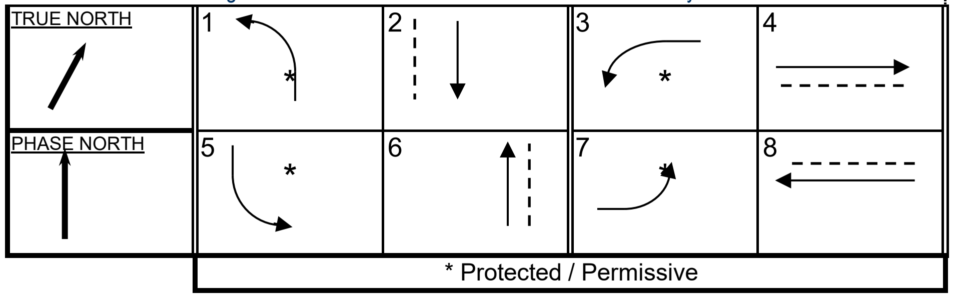
< C + 0 + E = 125 > **< C + 0 + E = 125 >**

Flash To Preempt / Preempt Non Lock
1 = EVP - A
2 = EVP - B
3 = EVP - C
4 = EVP - D
5 = RR - 1
6 = RR - 2
7 = Spl Ev - 1
8 = Spl Ev - 2

EXTRA 2
1 = AWB During Initial
2 = Flashing Yellow Arrow
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 =
7 = Reserved
8 =

PHASE DIAGRAM

E-W Street: Magnolia Blvd N-S Street : Victory Blvd



* Protected / Permissive

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

TRAFFIC SIGNAL
Coordination Timing
BiTrans 233RV2.x

221 Olive Ave & Victory St			
Prepared by:	RICHARD LOCKYER	Date	05/05/20
Checked by:	JONATHAN YEE	Date	

	PLAN NUMBER									
		1	2	3	4	5	6	7	8	9
0	CYCLE	0	0	100	110	120	130	140	0	0
1	FORCE 1	0	0	65	76	85	93	99	0	0
2	FORCE 2	0	0	0	0	0	0	0	0	0
3	FORCE 3	0	0	15	19	21	23	25	0	0
4	FORCE 4	0	0	50	54	58	62	64	0	0
5	FORCE 5	0	0	65	76	85	93	99	0	0
6	FORCE 6	0	0	0	0	0	0	0	0	0
7	FORCE 7	0	0	15	19	21	23	25	0	0
8	FORCE 8	0	0	50	54	58	62	64	0	0
9	RING OFFSET	0	0	0	0	0	0	0	0	0
A	OFFSET 1	0	0	56	104	46	79	20	0	0
B	OFFSET 2	0	0	56	104	46	79	79	0	0
C	OFFSET 3	0	0	56	104	46	79	84	0	0
D	PERM 1 END	0	0	0	0	0	0	0	0	0
E	HOLD RELEASE	0	0	255	255	255	255	255	0	0
F	ZONE OFFSET	0	0	0	0	0	0	0	0	0

< C + 0 + C = 1 >

	COLUMN E										COLUMN F							
		1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8
0										0	LAG FREE	_	2	_	4	_	6	_	8
1	SYNC Plan 1	_	2	_	_	_	6	_	_	1	LAG PLAN 1	_	2	_	4	_	6	_	8
2	SYNC Plan 2	_	2	_	_	_	6	_	_	2	LAG PLAN 2	_	2	_	4	_	6	_	8
3	SYNC Plan 3	_	2	_	_	_	6	_	_	3	LAG PLAN 3	_	2	_	4	_	6	_	8
4	SYNC Plan 4	_	2	_	_	_	6	_	_	4	LAG PLAN 4	_	2	_	4	_	6	_	8
5	SYNC Plan 5	_	2	_	_	_	6	_	_	5	LAG PLAN 5	_	2	_	4	_	6	_	8
6	SYNC Plan 6	_	2	_	_	_	6	_	_	6	LAG PLAN 6	_	2	_	4	_	6	_	8
7	SYNC Plan 7	_	2	_	_	_	6	_	_	7	LAG PLAN 7	_	2	_	4	_	6	_	8
8	SYNC Plan 8	_	2	_	_	_	6	_	_	8	LAG PLAN 8	_	2	_	4	_	6	_	8
9	SYNC Plan 9	_	2	_	_	_	6	_	_	9	LAG PLAN 9	_	2	_	4	_	6	_	8
A	NEMA SYNC	_	_	_	_	_	_	_	_	A	EXT. LAG	_	_	_	_	_	_	_	_
B	NEMA HOLD	_	_	_	_	_	_	_	_	B	LAG HOLD	_	_	_	_	_	_	_	_
C										C									
D										D									
E	COORD EXTRA	_	2	_	_	_	_	_	_	E									
F										F									

COORDINATION EXTRA
1 = Programmed Walk Time
2 = FDW Begins at Sync Phase
Force Off minus FDW

< C + 0 + C = 1 >

COLUMN 2	
Coord Min.	
1	12
2	33
3	12
4	32
5	12
6	33
7	12
8	33

< C + 0 + C = 5 >

TRANSITION TYPE:
< C/5 + 1 + 9 > = 1.3

0.X = SHORTWAY
1.X = DWELL
X.1 THRU .X4 = NUMBER OF CYCLES WHEN LENGTHENING

LAG HOLD PHASES:
< C/5 + 1 + A > =

IEN STATUS: ON =/= 0
IEN Status < C/5 + 1 + B > = 1

LOCAL ALARM DISABLE
< C/5 + F + 0 > =

7 - Wire Master
Synch Time < C/5 + 1 + C > = 0.0

ROW	Plan # -->	1	2	3	4	5	6	7	8	9	ROW
0	PED ADJUST	0	0	0	0	0	0	0	0	0	0
1	PERM 2 START	0	0	0	0	0	0	0	0	0	1
2	PERM 2 END	0	0	0	0	0	0	0	0	0	2
3	PERM 3 START	0	0	0	0	0	0	0	0	0	3
4	PERM 3 END	0	0	0	0	0	0	0	0	0	4
5	RSRVC TIME	0	0	0	0	0	0	0	0	0	5
		1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	
6	RSRVC PH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	6
7											7
8	PRETIMED PH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	8
9	MAX RECALL	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	9
A	PERM 1 VEH	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	A
B	PERM 1 PED	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	B
C	PERM 2 VEH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	C
D	PERM 2 PED	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	D
E	PERM 3 VEH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	E
F	PERM 3 PED	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	F

COORDINATION PAGE 2 < C + 0 + C = 2 >

CURRENT DATE/TIME
(HR-MIN-DOW) = <8/0 + 0>
(Day-YR-MO) = <8/0 + 1>
(MN-S-1/10SEC) = <8/0 + F>

Daylight Savings Time

Begin Month	<C/5+2+A>	0
Begin Week	<C/5+2+B>	0
End Month	<C/5+2+C>	0
End Week	<C/5+2+D>	0

Advance Warning Beacon - Sign 1

Time Before Yellow	<F/1+C+E>	0.0
Phase Number	<F/1+C+F>	0

Advance Warning Beacon - Sign 2

Time Before Yellow	<F/1+D+E>	0.0
Phase Number	<F/1+D+F>	0

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

TRAFFIC SIGNAL
Phase Timing / Phase Configuration
BiTrans 233RV2.x

Prepared by:	RICHARD LOCKYER		Date: 4/16/2020
Checked by:	JONATHAN YEE		Date:
Approved by:	JONATHAN YEE		Date:
Completed by:			Date:

116 Alameda Ave & Victory Blvd
(Intersection Name)

NOTES:

	Interval	PHASE 1	2	3	4	5	6	7	8
0	WALK	0	7	0	7	0	7	0	7
1	DONT WALK	0	17	0	15	0	17	0	15
2	MIN INITIAL	6	10	6	10	0	10	6	10
3	TYPE 3 LIMIT	0	0	0	20	0	0	0	20
4	ADD PER VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	VEH EXT	3.0	3.0	2.0	3.0	0.0	3.0	2.0	3.0
6	MAX GAP	3.0	4.0	2.0	4.0	0.0	4.0	2.0	4.0
7	MIN GAP	3.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
8	MAX LIMIT	45	45	20	40	0	45	20	40
9	MAXIMUM 2	45	45	20	40	0	45	20	40
A	ADV/DLY WLK	0	0	0	0	0	0	0	0
B	PE MIN FDW	0	0	0	0	0	0	0	0
C	COND SRV CHK	0	0	0	0	0	0	0	0
D	REDUCE EVERY	0.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0
E	YELLOW	3.6	4.0	3.6	4.0	0.0	4.0	3.6	4.0
F	RED CLEAR	1.0	2.0	1.0	2.0	0.0	2.0	1.0	2.0

PHASE BANK 1 **< C + 0 + F = 1 >**

ALTERNATE TIMING

		9	A	B	C	D
1	Ph. 1	0	0	0	0	0.0
2	Ph. 2	0	0	0	0	0.0
3	Ph. 3	0	0	0	0	0.0
4	Ph. 4	0	0	0	0	0.0
5	Ph. 5	0	0	0	0	0.0
6	Ph. 6	0	0	0	0	0.0
7	Ph. 7	0	0	0	0	0.0
8	Ph. 8	0	0	0	0	0.0
		Maximum Initial	Alternate Walk	Alternate FDW	Alternate Initial	Alternate Extension

START / REVERT TIMES

ALL RED STRT: **<F/1 + C + 0>** = 6.0
FLASH START: **<F/1 + 0 + E>** = 0
RED REVERT: **<F/1 + 0 + F>** = 3.0

PREEMPT

	E
RR1 DLY	0
RR1 CLR	0
EVA DLY	0
EVA CLR	0
EVB DLY	0
EVB CLR	0
EVC DLY	0
EVC CLR	0
EVD DLY	0
EVD CLR	0
RR2 DLY	0
RR2 CLR	0
EV CLR	- - -
EV DLY	- - -
RR CLR	- - -
RR DLY	- - -

PHASE FUNCTION FLAGS
Column F

0	PERMIT	1234_678
1	RED LOCK	
2	YELLOW LOCK	
3	VEH MIN CALL	4 8
4	PED RECALL	4 8
5	*View Set Peds*	*_2_4_6_8*
6	REST IN WALK	
7	RED REST	
8	DOUBLE ENTRY	2 6
9	VEH MAX CALL	
A	SOFT RECALL	
B	MAXIMUM 2	
C	COND SERVICE	
D	MAN CONT CALL	
E	YELLOW START	
F	FIRST PHASES	2 6

< C + 0 + F = 1 >

SPECIALS
Column F

0	FAST GRN FLH	
1	GREEN FLSH	
2	FLASH WALK	
3	GUAR PASS	
4	SIMUL GAP	
5	SEQ TIMING	
6	ADV WALK	
7	DELAY WALK	
8	EXT RECALL	
9	Sart O'LapGreen	
A	MAX EXTEN	
B	INH PED RSRV	
C	SEMI ACTUA.	
D	Sart O'LapYellow	
E	STRT VEH CALL	1234_678
F	STRT PED CALL	_2_4_6_8

Specials <C + 0 + F = 2>

CNTRLR INTERVALS

0 = Walk
1 = FDW
2 = MIN. Green
3 =
4 = Var. Initial
5 = Extension
6 =
7 = Reduce Gap
8 = Red Rest
9 = Preempt
A = Stop Time
B = Red Revrt
C = Gap Term.
D = MAX Term.
E = Forceoff
F = Red Clear.

MANUAL PLAN SELECT:
< C/0 + A + 1 > = 0
AUTO = 0
PLAN = 1 - 9
FREE = 14
FLASH= 15

MANUAL OFFSET SELECT:
< C/0 + B + 1 > = 0
AUTO = 0
OFFSET A = 1
OFFSET B = 2
OFFSET C = 3

COMM ADDRESS:
< C/0 + 0 + 0 > = 16

ZONE NUMBER:
< C/0 + 0 + 1 > = 1

AREA NUMBER:
< C/0 + 0 + 2 > = 2

AREA ADDRESS:
< C/0 + 0 + 3 > = 16

QUICNET CHANNEL:
UDP:8017:172.16.121.16

INPUT KEYSTROKES:
1) Set PAGE to required BANK #
< C+0+PAGE = BANK # >
2) Key stroke: PAGE + COLUMN + ROW

EXCL. PED. PHASE
WALK (F/1+0+0) = 0
FDW (F/1+0+1) = 0
ALL RED (F/1+0+2) = 0.0
Assigned at E/127+A+E & F

EXTRA 1
1 = TBC Type 1
2 = NEMA External Coordinator
3 = Auto Daylight Savings
4 = EV Preempt Advance
5 = Expanded Status Report
7 = Clear Outputs During Flash
8 = Split Ring Operation

IC SELECT
2 = 2 Way Modem
3 = 7 Wire Slave
4 = Flash / Free
5 = Simplex Master
8 = Offset Interruptor

To Enable "E" Page, Set < F/1 + 9 + E = Not Zero **>**

CONTROLLER CONFIGURATION FLAGS

Column E

0	EXCLUSIVE	
1	RR 1 CLEAR	
2	RR 2 CLEAR	
3	RR 2 LTD SRV	
4	PROT/PERM	1_3 7
5	FLH TO PREMT	
6	FLASH ENTRY	
7	DSABL MIN YEL	
8	DSABL OVP YEL	
9	OVP FLH YEL	
A	EM. VEH. A	
B	EM. VEH. B	
C	EM. VEH. C	
D	EM. VEH. D	
E	EXTRA 1	1_3_5
F	IC SELECT	2

< C + 0 + E = 125 >

Column F

0		
1	EXT PERMIT 1	
2	EXT PERMIT 2	
3	EXCLU PED	
4	Preemp Non Lock	
5	PED 2 P OUT	2
6	PED 6 P OUT	6
7	PED 4 P OUT	4
8	PED 8 P OUT	8
9	FLH YELLOW	
A	Low Prio A PH	
B	Low Prio B PH	
C	Low Prio C PH	
D	Low Prio D PH	
E	RESTRICTED	
F	EXTRA 2	4

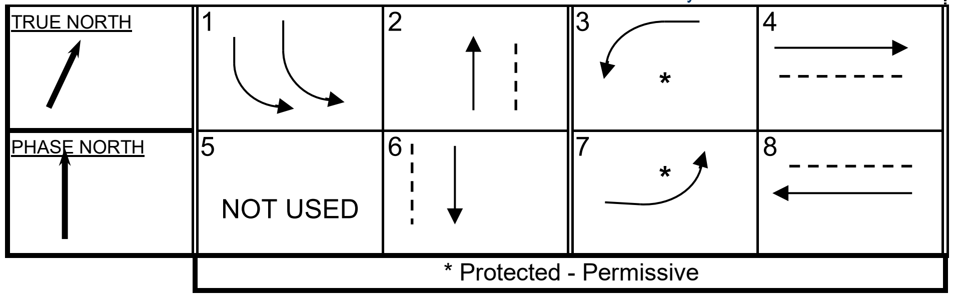
< C + 0 + E = 125 >

Flash To Preempt / Preempt Non Lock
1 = EVP - A
2 = EVP - B
3 = EVP - C
4 = EVP - D
5 = RR - 1
6 = RR - 2
7 = Spl Ev - 1
8 = Spl Ev - 2

EXTRA 2
1 = AWB During Initial
2 = Flashing Yellow Arrow
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 =
7 = Reserved
8 =

PHASE DIAGRAM

E-W Street: Alameda Ave
N-S Street : Victory Blvd



* Protected - Permissive

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

TRAFFIC SIGNAL
Phase Timing / Phase Configuration
BiTrans 233RV2.x

Prepared by:	RICHARD LOCKYER	Date:	4/20/2020
Checked by:	JONATHAN YEE	Date:	
Approved by:	JONATHAN YEE	Date:	
Completed by:		Date:	

147 Burbank & San Fernando Blvd
(Intersection Name)

NOTES:

	Interval	PHASE 1	2	3	4	5	6	7	8
0	WALK	0	7	0	7	0	7	0	7
1	DONT WALK	0	16	0	15	0	17	0	19
2	MIN INITIAL	6	10	6	10	10	10	10	10
3	TYPE 3 LIMIT	0	20	0	20	0	20	0	0
4	ADD PER VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	VEH EXT	2.0	3.5	2.0	3.5	5.0	2.5	3.5	3.5
6	MAX GAP	2.0	4.5	2.0	4.5	7.0	3.5	4.5	4.5
7	MIN GAP	2.0	2.5	2.0	2.5	3.5	2.0	2.5	2.5
8	MAX LIMIT	20	60	20	30	60	30	30	30
9	MAXIMUM 2	20	80	20	45	80	45	45	45
A	ADV/DLY WLK	0	0	0	0	0	0	0	0
B	PE MIN FDW	0	0	0	0	0	0	0	0
C	COND SRV CHK	0	0	0	0	0	0	0	0
D	REDUCE EVERY	0.0	1.0	0.0	1.0	1.2	0.7	1.0	0.5
E	YELLOW	4.0	4.3	4.0	4.0	4.3	4.0	4.0	4.0
F	RED CLEAR	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0

PHASE BANK 1 < C + 0 + F = 1 >

ALTERNATE TIMING

		9	A	B	C	D
1	Ph. 1	0	0	0	0	0.0
2	Ph. 2	0	0	0	0	0.0
3	Ph. 3	0	0	0	0	0.0
4	Ph. 4	0	0	0	0	0.0
5	Ph. 5	0	0	0	0	0.0
6	Ph. 6	0	0	0	0	0.0
7	Ph. 7	0	0	0	0	0.0
8	Ph. 8	0	0	0	0	0.0
		Maximum Initial	Alternate Walk	Alternate FDW	Alternate Initial	Alternate Extension

START / REVERT TIMES

ALL RED STRT: **<F/1 + C + 0>** = 6.0
FLASH START: **<F/1 + 0 + E>** = 0
RED REVERT: **<F/1 + 0 + F>** = 3.0

PREEMPT

	E
RR1 DLY	0
RR1 CLR	0
EVA DLY	0
EVA CLR	0
EVB DLY	0
EVB CLR	0
EVC DLY	0
EVC CLR	0
EVD DLY	0
EVD CLR	0
RR2 DLY	0
RR2 CLR	0
EV CLR	- - -
EV DLY	- - -
RR CLR	- - -
RR DLY	- - -

PHASE FUNCTION FLAGS

	Column F	
0	PERMIT	12345678
1	RED LOCK	
2	YELLOW LOCK	
3	VEH MIN CALL	_2__56__
4	PED RECALL	
5	*View Set Peds*	_2_4_6_8
6	REST IN WALK	
7	RED REST	
8	DOUBLE ENTRY	
9	VEH MAX CALL	
A	SOFT RECALL	
B	MAXIMUM 2	
C	COND SERVICE	
D	MAN CONT CALL	
E	YELLOW START	
F	FIRST PHASES	_2___6__

< C + 0 + F = 1 >

SPECIALS

	Column F	
0	FAST GRN FLH	
1	GREEN FLSH	
2	FLASH WALK	
3	GUAR PASS	
4	SIMUL GAP	
5	SEQ TIMING	
6	ADV WALK	
7	DELAY WALK	
8	EXT RECALL	
9	Sart O'LapGreen	
A	MAX EXTEN	
B	INH PED RSRV	
C	SEMI ACTUA.	
D	Sart O'LapYellow	
E	STRT VEH CALL	12345678
F	STRT PED CALL	_2_4_6_8

Specials <C + 0 + F = 2>

CNTRLR INTERVALS
0 = Walk
1 = FDW
2 = MIN. Green
3 =
4 = Var. Initial
5 = Extension
6 =
7 = Reduce Gap
8 = Red Rest
9 = Preempt
A = Stop Time
B = Red Revrt
C = Gap Term.
D = MAX Term.
E = Forceoff
F = Red Clear.

MANUAL PLAN SELECT:
< C/0 + A + 1 > = 0
AUTO = 0 PLAN = 1 - 9
FREE = 14
FLASH= 15

MANUAL OFFSET SELECT:
< C/0 + B + 1 > = 0
AUTO = 0 OFFSET A = 1
OFFSET B = 2
OFFSET C = 3

COMM ADDRESS:
< C/0 + 0 + 0 > = 1

ZONE NUMBER:
< C/0 + 0 + 1 > = 1

AREA NUMBER:
< C/0 + 0 + 2 > = 1

AREA ADDRESS:
< C/0 + 0 + 3 > = 47

QUICNET CHANNEL:
UDP:8029:172.16.121.47

INPUT KEYSTROKES:
1) Set PAGE to required BANK #
< C+0+PAGE = BANK # >

EXCL. PED. PHASE
WALK (F/1+0+0) = 0
FDW (F/1+0+1) = 0
ALL RED (F/1+0+2) = 0.0
Assigned at E/127+A+E & F

EXTRA 1
1 = TBC Type 1
2 = NEMA External Coordinator
3 = Auto Daylight Savings
4 = EV Preempt Advance
5 = Expanded Status Report
7 = Clear Outputs During Flash
8 = Split Ring Operation

IC SELECT
2 = 2 Way Modem
3 = 7 Wire Slave
4 = Flash / Free
5 = Simplex Master
8 = Offset Interruptor

To Enable "E" Page, Set < F/1 + 9 + E = Not Zero **>**

CONTROLLER CONFIGURATION FLAGS

	Column E	
0	EXCLUSIVE	
1	RR 1 CLEAR	
2	RR 2 CLEAR	
3	RR 2 LTD SRV	
4	PROT/PERM	
5	FLH TO PREMT	
6	FLASH ENTRY	
7	DSABL MIN YEL	
8	DSABL OVP YEL	
9	OVP FLH YEL	
A	EM. VEH. A	
B	EM. VEH. B	
C	EM. VEH. C	
D	EM. VEH. D	
E	EXTRA 1	1_3_5___
F	IC SELECT	_2______

< C + 0 + E = 125 >

	Column F	
0		
1	EXT PERMIT 1	
2	EXT PERMIT 2	
3	EXCLU PED	
4	Preemp Non Lock	
5	PED 2 P OUT	_2______
6	PED 6 P OUT	_____6__
7	PED 4 P OUT	___4____
8	PED 8 P OUT	_______8
9	FLH YELLOW	
A	Low Prio A PH	
B	Low Prio B PH	
C	Low Prio C PH	
D	Low Prio D PH	
E	RESTRICTED	1___5___
F	EXTRA 2	___4____

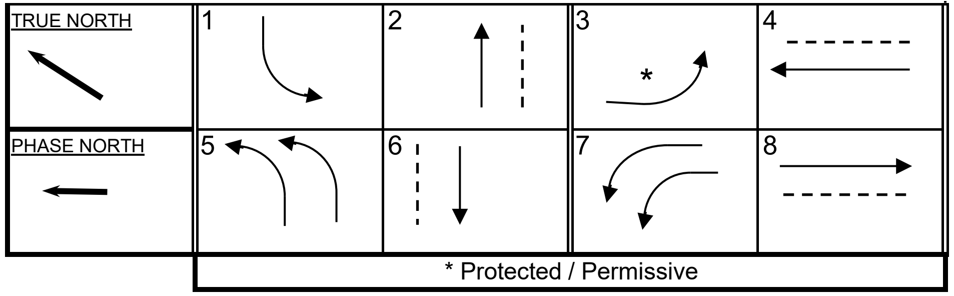
< C + 0 + E = 125 >

Flash To Preempt / Preempt Non Lock
1 = EVP - A
2 = EVP - B
3 = EVP - C
4 = EVP - D
5 = RR - 1
6 = RR - 2
7 = Spl Ev - 1
8 = Spl Ev - 2

EXTRA 2
1 = AWB During Initial
2 = Flashing Yellow Arrow
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 =
7 = Reserved
8 =

PHASE DIAGRAM

E-W Street: Burbank Blvd N-S Street : San Fernando Blvd



* Protected / Permissive

TEMPORARY

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

TRAFFIC SIGNAL
Phase Timing /
Phase Configuration
BiTrans 233RV2.x

Prepared by:	RICHARD LOCKYER		Date: 4/20/2020
Checked by:	JONATHAN YEE		Date:
Approved by:	JONATHAN YEE		Date:
Completed by:			Date:

147 Burbank & San Fernando Blvd
(Intersection Name)

NOTES: **TEMPORARY TIMING FOR CONSTRUCTION - BRIDGE CLOSURE**
REMOVE LS9 FROM AUX OUTPUT FILE, REPLACE CMU DIODE CARD AND STORE CURRENT CARD FOR REINSTALLATION

	Interval	**PHASE** 1	2	3	4	5	6	7	8
0	WALK	0	7	0	7	0	7	0	7
1	DONT WALK	0	16	0	15	0	17	0	19
2	MIN INITIAL	6	10	6	10	10	10	0	10
3	TYPE 3 LIMIT	0	20	0	20	0	20	0	0
4	ADD PER VEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	VEH EXT	2.0	3.5	2.0	3.5	5.0	2.5	0.0	3.5
6	MAX GAP	2.0	4.5	2.0	4.5	7.0	3.5	0.0	4.5
7	MIN GAP	2.0	2.5	2.0	2.5	3.5	2.0	0.0	2.5
8	MAX LIMIT	20	40	20	45	40	45	0	45
9	MAXIMUM 2	20	40	20	45	40	45	0	45
A	ADV/DLY WLK	0	0	0	0	0	0	0	0
B	PE MIN FDW	0	0	0	0	0	0	0	0
C	COND SRV CHK	0	0	0	0	0	0	0	0
D	REDUCE EVERY	0.0	1.0	0.0	1.0	1.2	0.7	0.0	0.5
E	YELLOW	4.0	4.3	4.0	4.0	4.3	4.0	0.0	4.0
F	RED CLEAR	1.0	2.0	1.0	2.0	1.0	2.0	0.0	2.0

PHASE BANK 1 **< C + 0 + F = 1 >**

		ALTERNATE TIMING 9	A	B	C	D
1	Ph. 1	0	0	0	0	0.0
2	Ph. 2	0	0	0	0	0.0
3	Ph. 3	0	0	0	0	0.0
4	Ph. 4	0	0	0	0	0.0
5	Ph. 5	0	0	0	0	0.0
6	Ph. 6	0	0	0	0	0.0
7	Ph. 7	0	0	0	0	0.0
8	Ph. 8	0	0	0	0	0.0
		Maximum Initial	Alternate Walk	Alternate FDW	Alternate Initial	Alternate Extension

START / REVERT TIMES
ALL RED STRT: **<F/1 + C + 0>** = 6.0
FLASH START: **<F/1 + 0 + E>** = 0
RED REVERT: **<F/1 + 0 + F>** = 3.0

PREEMPT	E
RR1 DLY	0
RR1 CLR	0
EVA DLY	0
EVA CLR	0
EVB DLY	0
EVB CLR	0
EVC DLY	0
EVC CLR	0
EVD DLY	0
EVD CLR	0
RR2 DLY	0
RR2 CLR	0
EV CLR	- - -
EV DLY	- - -
RR CLR	- - -
RR DLY	- - -

PHASE FUNCTION FLAGS

	Column F	
0	PERMIT	#NAME?
1	RED LOCK	#NAME?
2	YELLOW LOCK	#NAME?
3	VEH MIN CALL	#NAME?
4	PED RECALL	#NAME?
5	*View Set Peds*	*#NAME?*
6	REST IN WALK	#NAME?
7	RED REST	#NAME?
8	DOUBLE ENTRY	#NAME?
9	VEH MAX CALL	#NAME?
A	SOFT RECALL	#NAME?
B	MAXIMUM 2	#NAME?
C	COND SERVICE	#NAME?
D	MAN CONT CALL	#NAME?
E	YELLOW START	#NAME?
F	FIRST PHASES	#NAME?

< C + 0 + F = 1 >

SPECIALS

	Column F	
0	FAST GRN FLH	#NAME?
1	GREEN FLSH	#NAME?
2	FLASH WALK	#NAME?
3	GUAR PASS	#NAME?
4	SIMUL GAP	#NAME?
5	SEQ TIMING	#NAME?
6	ADV WALK	#NAME?
7	DELAY WALK	#NAME?
8	EXT RECALL	#NAME?
9	Sart O'LapGreen	#NAME?
A	MAX EXTEN	#NAME?
B	INH PED RSRV	#NAME?
C	SEMI ACTUA.	#NAME?
D	Sart O'LapYellow	#NAME?
E	STRT VEH CALL	#NAME?
F	STRT PED CALL	#NAME?

Specials <C + 0 + F = 2>

CNTRLR INTERVALS
0 = Walk
1 = FDW
2 = MIN. Green
3 =
4 = Var. Initial
5 = Extension
6 =
7 = Reduce Gap
8 = Red Rest
9 = Preempt
A = Stop Time
B = Red Revrt
C = Gap Term.
D = MAX Term.
E = Forceoff
F = Red Clear.

MANUAL PLAN SELECT:
< C/0 + A + 1 > = 0
AUTO = 0 PLAN = 1 - 9
FREE = 14
FLASH= 15

MANUAL OFFSET SELECT:
< C/0 + B + 1 > = 0
AUTO = 0 OFFSET A = 1
OFFSET B = 2
OFFSET C = 3

COMM ADDRESS:
< C/0 + 0 + 0 > = 1

ZONE NUMBER:
< C/0 + 0 + 1 > = 1

AREA NUMBER:
< C/0 + 0 + 2 > = 1

AREA ADDRESS:
< C/0 + 0 + 3 > = 47

QUICNET CHANNEL:
UDP:8029:172.16.121.47

INPUT KEYSTROKES:
1) Set PAGE to required BANK #
< C+0+PAGE = BANK # >

EXCL. PED. PHASE
WALK (F/1+0+0) = 0
FDW (F/1+0+1) = 0
ALL RED (F/1+0+2) = 0.0
Assigned at E/127+A+E & F

EXTRA 1
1 = TBC Type 1
2 = NEMA External Coordinator
3 = Auto Daylight Savings
4 = EV Preempt Advance
5 = Expanded Status Report
7 = Clear Outputs During Flash
8 = Split Ring Operation

IC SELECT
2 = 2 Way Modem
3 = 7 Wire Slave
4 = Flash / Free
5 = Simplex Master
8 = Offset Interruptor

To Enable "E" Page, Set **< F/1 + 9 + E = Not Zero >**

CONTROLLER CONFIGURATION FLAGS

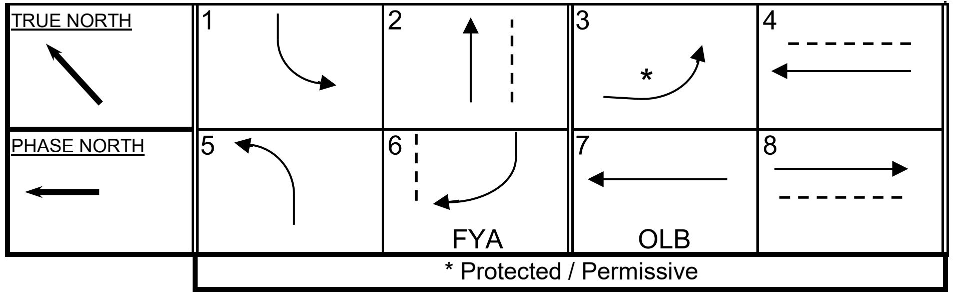
	Column E			**Column F**	
0	EXCLUSIVE	#NAME?	0		
1	RR 1 CLEAR	#NAME?	1	EXT PERMIT 1	#NAME?
2	RR 2 CLEAR	#NAME?	2	EXT PERMIT 2	#NAME?
3	RR 2 LTD SRV	#NAME?	3	EXCLU PED	#NAME?
4	PROT/PERM	#NAME?	4	Preemp Non Lock	#NAME?
5	FLH TO PREMT	#NAME?	5	PED 2 P OUT	#NAME?
6	FLASH ENTRY	#NAME?	6	PED 6 P OUT	#NAME?
7	DSABL MIN YEL	#NAME?	7	PED 4 P OUT	#NAME?
8	DSABL OVP YEL	#NAME?	8	PED 8 P OUT	#NAME?
9	OVP FLH YEL	#NAME?	9	FLH YELLOW	#NAME?
A	EM. VEH. A	#NAME?	A	Low Prio A PH	#NAME?
B	EM. VEH. B	#NAME?	B	Low Prio B PH	#NAME?
C	EM. VEH. C	#NAME?	C	Low Prio C PH	#NAME?
D	EM. VEH. D	#NAME?	D	Low Prio D PH	#NAME?
E	EXTRA 1	#NAME?	E	RESTRICTED	#NAME?
F	IC SELECT	#NAME?	F	EXTRA 2	#NAME?
	< C + 0 + E = 125 >			**< C + 0 + E = 125 >**	

Flash To Preempt / Preempt Non Lock
1 = EVP - A
2 = EVP - B
3 = EVP - C
4 = EVP - D
5 = RR - 1
6 = RR - 2
7 = Spl Ev - 1
8 = Spl Ev - 2

EXTRA 2
1 = AWB During Initial
2 = Flashing Yellow Arrow
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 =
7 = Reserved
8 =

PHASE DIAGRAM

E-W Street: #NAME? N-S Street : #NAME?



* Protected / Permissive

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

TRAFFIC SIGNAL
Coordination Timing
BiTrans 233RV2.x

167 First St & Magnolia Blvd			
Prepared by:	RICHARD LOCKYER	Date	04/24/20
Checked by:	JONATHAN YEE	Date	

	PLAN NUMBER	1	2	3	4	5	6	7	8	9
0	CYCLE	0	100	105	0	0	0	0	0	0
1	FORCE 1	0	65	67	0	0	0	0	0	0
2	FORCE 2	0	0	0	0	0	0	0	0	0
3	FORCE 3	0	15	15	0	0	0	0	0	0
4	FORCE 4	0	50	52	0	0	0	0	0	0
5	FORCE 5	0	65	67	0	0	0	0	0	0
6	FORCE 6	0	0	0	0	0	0	0	0	0
7	FORCE 7	0	15	15	0	0	0	0	0	0
8	FORCE 8	0	50	52	0	0	0	0	0	0
9	RING OFFSET	0	0	0	0	0	0	0	0	0
A	OFFSET 1	0	0	28	0	0	0	0	0	0
B	OFFSET 2	0	0	28	0	0	0	0	0	0
C	OFFSET 3	0	0	28	0	0	0	0	0	0
D	PERM 1 END	0	0	0	0	0	0	0	0	0
E	HOLD RELEASE	0	255	255	0	0	0	0	0	0
F	ZONE OFFSET	0	0	0	0	0	0	0	0	0

< C + 0 + C = 1 >

	COLUMN E	1	2	3	4	5	6	7	8
0									
1	SYNC Plan 1	_	2	_	_	_	6	_	_
2	SYNC Plan 2	_	2	_	_	_	6	_	_
3	SYNC Plan 3	_	2	_	_	_	6	_	_
4	SYNC Plan 4	_	2	_	_	_	6	_	_
5	SYNC Plan 5	_	2	_	_	_	6	_	_
6	SYNC Plan 6	_	2	_	_	_	6	_	_
7	SYNC Plan 7	_	2	_	_	_	6	_	_
8	SYNC Plan 8	_	2	_	_	_	6	_	_
9	SYNC Plan 9	_	2	_	_	_	6	_	_
A	NEMA SYNC	_	_	_	_	_	_	_	_
B	NEMA HOLD	_	_	_	_	_	_	_	_
C									
D									
E	COORD EXTRA	_	2	_	_	_	_	_	_
F									

	COLUMN F	1	2	3	4	5	6	7	8
0	LAG FREE	_	2	_	4	_	6	_	8
1	LAG PLAN 1	_	2	_	4	_	6	_	8
2	LAG PLAN 2	_	2	_	4	_	6	_	8
3	LAG PLAN 3	_	2	_	4	_	6	_	8
4	LAG PLAN 4	_	2	_	4	_	6	_	8
5	LAG PLAN 5	_	2	_	4	_	6	_	8
6	LAG PLAN 6	_	2	_	4	_	6	_	8
7	LAG PLAN 7	_	2	_	4	_	6	_	8
8	LAG PLAN 8	_	2	_	4	_	6	_	8
9	LAG PLAN 9	_	2	_	4	_	6	_	8
A	EXT. LAG	_	2	_	4	_	6	_	8
B	LAG HOLD	_	_	_	_	_	_	_	_
C									
D									
E									
F									

COORDINATION EXTRA

1 = Programmed Walk Time

2 = FDW Begins at Sync Phase

Force Off minus FDW

< C + 0 + C = 1 >

COLUMN 2
Coord Min.

1	12
2	26
3	12
4	34
5	12
6	29
7	12
8	15

< C + 0 + C = 5 >

TRANSITION TYPE:
< C/5 + 1 + 9 > = 1.3

0.X = SHORTWAY
1.X = DWELL
X.1 THRU .X4 = NUMBER OF
CYCLES WHEN LENGTHENING

LAG HOLD PHASES:
< C/5 + 1 + A > = ________

IEN STATUS: ON =/= 0
IEN Status < C/5 + 1 + B > = 1

LOCAL ALARM DISABLE
< C/5 + F + 0 > = ________

7 - Wire Master
Synch Time < C/5 + 1 + C > = 0.0

ROW	Plan # -->	1	2	3	4	5	6	7	8	9	ROW
0	PED ADJUST	0	0	0	0	0	0	0	0	0	0
1	PERM 2 START	0	0	0	0	0	0	0	0	0	1
2	PERM 2 END	0	0	0	0	0	0	0	0	0	2
3	PERM 3 START	0	0	0	0	0	0	0	0	0	3
4	PERM 3 END	0	0	0	0	0	0	0	0	0	4
5	RSRVC TIME	0	0	0	0	0	0	0	0	0	5
		1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	
6	RSRVC PH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	6
7											7
8	PRETIMED PH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	8
9	MAX RECALL	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	9
A	PERM 1 VEH	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	A
B	PERM 1 PED	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	B
C	PERM 2 VEH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	C
D	PERM 2 PED	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	D
E	PERM 3 VEH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	E
F	PERM 3 PED	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	F

COORDINATION PAGE 2 < C + 0 + C = 2 >

CURRENT DATE/TIME
(HR-MIN-DOW) = <8/0 + 0>
(Day-YR-MO) = <8/0 + 1>
(MN-S-1/10SEC) = <8/0 + F>

Daylight Savings Time

Begin Month	<C/5+2+A>	0
Begin Week	<C/5+2+B>	0
End Month	<C/5+2+C>	0
End Week	<C/5+2+D>	0

Advance Warning Beacon - Sign 1

Time Before Yellow	<F/1+C+E>	0.0
Phase Number	<F/1+C+F>	0

Advance Warning Beacon - Sign 2

Time Before Yellow	<F/1+D+E>	0.0
Phase Number	<F/1+D+F>	0

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

Phase Bank 1 & Phase Functions

Controller: 168 First St & Olive Ave

Phase Functions - Page 1 - 1-1

Red Lock	_2___6__
Yellow Lock	________
Simultaneous Gap	________
Rest In Walk	________
Advance Walk	________
Flashing Walk	________
Max Extension	________
Red Rest	________
Dual Entry	_2_4_6_8
Sequential Timing	________
Inhibit Ped Reservice	________
Delay Walk	________
Guaranteed Passage	________
Conditional Service	________

Phase Functions - Page 2 - 1-2

Minimum Recall	_2_4_6_8
Ped Recall	________
Maximum Recall	________
Green Flash	________
Overlap Green Flash	________
Flashing Yellow Arrow for PPLT	__3_5___
Soft Recall	________
External Recall	________
Manual Control Calls	________
Fast Green Flash	________
Fast Overlap Green Flash	________
Semi-Actuated	________

Startup - 9-1

Flash Start	0
All Red Start	6.0
Yellow Start Phases	________
First Green Phases	___4___8
Startup Vehicle Calls	12345678
Startup Ped Calls	_2_4_6_8

Detector Monitoring - 9-3

Max On	21
Max Off	250
Chatter	255

Advance Warning Signs - 9-4

	Sign 1	Sign 2
Phase Number	0	0
Time Before Yellow	0.0	0.0

Phase Timing - Bank 1 - 1-3-[1]

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8
Min Green	6	10	6	10	6	10	6	10
Extension	1.5	3.5	2.5	3.5	2.5	3.5	1.5	3.5
Max	20	50	20	50	20	50	20	50
Max 2	20	50	20	50	20	50	20	50
Cond Serve Check	0	0	0	0	0	0	0	0
Clearance Timing - 1-4-[1]								
Yellow Change	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clear	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0
Pedestrian Timing - 1-5-[1]								
Walk	0	7	0	7	0	7	0	7
Pedestrian Change	0	20	0	17	0	20	0	15
Advance/Delay Walk	0	0	0	0	0	0	0	0
PE Min. Ped. Change	0	0	0	0	0	0	0	0
Volume-Density - 1-6-[1]								
Type 3 Disconnect	0	20	0	20	0	20	0	20
Add per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Added Initial	0	0	0	0	0	0	0	0
Min Gap	1.5	2.5	1.5	3.5	1.5	2.5	1.5	2.5
Max Gap	1.5	4.5	3.5	4.5	3.5	4.5	1.5	4.5
Reduce Every	0.0	1.0	0.7	1.0	0.7	1.0	0.0	1.0
Alternate Timing - 1-7-[1]								
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped. Change	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Configuration - 9-5

Exclusive Phases	________	Permitted Phases	12345678
Protected/Permissive Phases	1_3_5_7_	Restricted Phases	________
Disable Phase Min. Yellow	________	Disable Overlap Min. Yellow	________
Free Lag Phases	_2_4_6_8	External Permit 1	________
External Lag Phases	_2_4_6_8	External Permit 2	________
Pedestrian Forceoff Phases	________	External Permit 3	________
Extra One	1_3_5___	Extra Two	___4__7_

1 = TBC Type 1	1 = Adv. Warn. Signs On During Min. Init.
2 = (unused)	2 = Siemens i2 Communications Protocol
3 = Adjust Clock for Daylight Saving Time	3 = Disable Minimum Walk Check
4 = Terminate Ped. for EV Preempt	4 = QuicNet System Communications
5 = QuicComm Extended Status	5 = Ignore Anti-Backup During Preempt
6 = International Style Pedestrian Change Interval	6 = Bridgeport Naztec TS 2 I/O Map
7 = (unused)	7 = Allow Remote Preemption Calls
8 = Split Ring Operation	8 = Caltrans Traf. Resp. FM Comm.

Phase Timing - Exclusive Pedestrian - 1-8

Exclusive Ped Assignment	________
Exclusive Walk	0
Exclusive Pedestrian Change	0
Red Clear	0.0
Walk Output	0
Don't Walk Output	0

Clock Set - 9-6

Manual Operation - 9-7

Manual Plan	0

1–9 = Coordination Plans
14 = Free
15 = Flash

Manual Offset	0

Software Flash - 9-8

Flash Entry Phases	________
Flash Yellow Phases	________
Flash Yellow Overlaps	________
Flash Type	0

0 = All On/All Off (1-2-3-4-5-6-7-8, dark)
1 = Main/Side (1-2-5-6, 3-4-7-8)
2 = Odd/Even (1-3-5-7, 2-4-6-8)
3 = Ring Pairs (1-6, 4-7, 2-5, 3-8)

Misc - 9-9

Keyboard Beep	N
Backlight Timeout	10
Soft Recall Delay	3.0
Red Revert	3.0
FYA Delay	0

Daylight Saving Time - 9-C

Start Month	0
Start Week	0
End Month	0
End Week	0

Printed: 11/1/2021 4:55 PM

Program 2033 RV
Template revised: 07/29/2015

31_TS-168 Olive & First 04-24-20 2033FYA

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

TRAFFIC SIGNAL
Coordination Timing
BiTrans 233RV2.x

115 Alameda Ave & San Fernando B			
Prepared by:	RICHARD LOCKYER	Date	04/16/20
Checked by:	JONATHAN YEE	Date	

		PLAN NUMBER								
		1	2	3	4	5	6	7	8	9
0	CYCLE	100	100	100	110	120	130	140	0	0
1	FORCE 1	36	36	36	40	47	47	52	0	0
2	FORCE 2	66	66	66	70	77	77	87	0	0
3	FORCE 3	18	18	18	22	25	25	27	0	0
4	FORCE 4	0	0	0	0	0	0	0	0	0
5	FORCE 5	33	33	33	40	45	45	45	0	0
6	FORCE 6	66	66	66	70	77	77	87	0	0
7	FORCE 7	83	83	83	88	95	98	115	0	0
8	FORCE 8	18	18	18	22	25	25	27	0	0
9	RING OFFSET	0	0	0	0	0	0	0	0	0
A	OFFSET 1	34	34	34	37	110	3	100	0	0
B	OFFSET 2	66	66	66	70	61	3	100	0	0
C	OFFSET 3	64	34	64	84	67	3	100	0	0
D	PERM 1 END	7	7	7	11	14	14	16	0	0
E	HOLD RELEASE	255	255	255	255	255	255	255	0	0
F	ZONE OFFSET	0	0	0	0	0	0	0	0	0

< C + 0 + C = 1 >

	COLUMN E	1	2	3	4	5	6	7	8
0									
1	SYNC Plan 1	_	_	_	4	_	_	_	8
2	SYNC Plan 2	_	_	_	4	_	_	_	8
3	SYNC Plan 3	_	_	_	4	_	_	_	8
4	SYNC Plan 4	_	_	_	4	_	_	_	8
5	SYNC Plan 5	_	_	_	4	_	_	_	8
6	SYNC Plan 6	_	_	_	4	_	_	_	8
7	SYNC Plan 7	_	_	_	4	_	_	_	8
8	SYNC Plan 8	_	_	_	4	_	_	_	8
9	SYNC Plan 9	_	_	_	4	_	_	_	8
A	NEMA SYNC	_	_	_	_	_	_	_	_
B	NEMA HOLD	_	_	_	_	_	_	_	_
C									
D									
E	COORD EXTRA	_	2	_	_	_	_	_	_
F									

< C + 0 + C = 1 >

	COLUMN F	1	2	3	4	5	6	7	8
0	LAG FREE	_	2	3	_	_	6	_	8
1	LAG PLAN 1	_	2	3	_	_	6	_	8
2	LAG PLAN 2	_	2	3	_	_	6	_	8
3	LAG PLAN 3	_	2	3	_	_	6	_	8
4	LAG PLAN 4	_	2	3	_	_	6	_	8
5	LAG PLAN 5	_	2	3	_	_	6	_	8
6	LAG PLAN 6	_	2	3	_	_	6	_	8
7	LAG PLAN 7	_	2	3	_	_	6	_	8
8	LAG PLAN 8	_	2	3	_	_	6	_	8
9	LAG PLAN 9	_	2	3	_	_	6	_	8
A	EXT. LAG	_	_	_	_	_	_	_	_
B	LAG HOLD	_	_	_	_	_	_	_	_
C									
D									
E									
F									

COORDINATION EXTRA

1 = Programmed Walk Time

2 = FDW Begins at Sync Phase

Force Off minus FDW

COLUMN 2	
Coord Min.	
1	12
2	28
3	12
4	31
5	12
6	28
7	12
8	29

< C + 0 + C = 5 >

TRANSITION TYPE:

< C/5 + 1 + 9 > = 1.3

0.X = SHORTWAY
1.X = DWELL
X.1 THRU .X4 = NUMBER OF CYCLES WHEN LENGTHENING

LAG HOLD PHASES:

< C/5 + 1 + A > = ______

IEN STATUS: ON =/= 0

IEN Status < C/5 + 1 + B > = 1

LOCAL ALARM DISABLE

< C/5 + F + 0 > = ______

7 - Wire Master

Synch Time < C/5 + 1 + C > = 0.0

ROW	Plan # -->	1	2	3	4	5	6	7	8	9	ROW
0	PED ADJUST	0	0	0	0	0	0	0	0	0	0
1	PERM 2 START	18	18	18	22	25	25	27	0	0	1
2	PERM 2 END	37	37	37	44	49	49	49	0	0	2
3	PERM 3 START	65	65	65	69	76	76	86	0	0	3
4	PERM 3 END	91	91	91	101	111	121	131	0	0	4
5	RSRVC TIME	0	0	0	0	0	0	0	0	0	5
		1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	
6	RSRVC PH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	6
7											7
8	PRETIMED PH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	8
9	MAX RECALL	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	9
A	PERM 1 VEH	_ _ 3 _ _ _ _ _	_ _ 3 _ _ _ _ _	_ _ 3 _ _ _ _ _	_ _ 3 _ _ _ _ _	_ _ 3 _ _ _ _ _	_ _ 3 _ _ _ _ _	_ _ 3 _ _ _ _ _	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	A
B	PERM 1 PED	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	B
C	PERM 2 VEH	1 2 _ _ 5 6 _ _	1 2 _ _ 5 6 _ _	1 2 _ _ 5 6 _ _	1 2 _ _ 5 6 _ _	1 2 _ _ 5 6 _ _	1 2 _ _ 5 6 _ _	1 2 _ _ 5 6 _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	C
D	PERM 2 PED	_ 2 _ _ _ 6 _ _	_ 2 _ _ _ 6 _ _	_ 2 _ _ _ 6 _ _	_ 2 _ _ _ 6 _ _	_ 2 _ _ _ 6 _ _	_ 2 _ _ _ 6 _ _	_ 2 _ _ _ 6 _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	D
E	PERM 3 VEH	_ _ _ _ _ _ 7 _	_ _ _ _ _ _ 7 _	_ _ _ _ _ _ 7 _	_ _ _ _ _ _ 7 _	_ _ _ _ _ _ 7 _	_ _ _ _ _ _ 7 _	_ _ _ _ _ _ 7 _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	E
F	PERM 3 PED	_ _ _ 4 _ _ _ 8	_ _ _ 4 _ _ _ 8	_ _ _ 4 _ _ _ 8	_ _ _ 4 _ _ _ 8	_ _ _ 4 _ _ _ 8	_ _ _ 4 _ _ _ 8	_ _ _ 4 _ _ _ 8	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	F

COORDINATION PAGE 2 < C + 0 + C = 2 >

CURRENT DATE/TIME

(HR-MIN-DOW) = <8/0 + 0>
(Day-YR-MO) = <8/0 + 1>
(MN-S-1/10SEC) = <8/0 + F>

Daylight Savings Time

Begin Month	<C/5+2+A>	0
Begin Week	<C/5+2+B>	0
End Month	<C/5+2+C>	0
End Week	<C/5+2+D>	0

Advance Warning Beacon - Sign 1

Time Before Yellow	<F/1+C+E>	0.0
Phase Number	<F/1+C+F>	0

Advance Warning Beacon - Sign 2

Time Before Yellow	<F/1+D+E>	0.0
Phase Number	<F/1+D+F>	0

CITY OF BURBANK

PUBLIC WORKS DEPARTMENT

Traffic Engineering Division

TRAFFIC SIGNAL
Coordination Timing
BiTrans 233RV2.x

173 Glenoaks Blvd & Magnolia Blv			
Prepared by:	RICHARD LOCKYER	Date	04/24/20
Checked by:	JONATHAN YEE	Date	

		PLAN NUMBER								
		1	2	3	4	5	6	7	8	9
0	CYCLE	0	90	100	110	120	140	140	0	0
1	FORCE 1	0	49	50	56	60	70	70	0	0
2	FORCE 2	0	0	0	0	0	0	0	0	0
3	FORCE 3	0	0	0	0	0	0	0	0	0
4	FORCE 4	0	34	35	38	40	50	50	0	0
5	FORCE 5	0	49	50	56	60	70	70	0	0
6	FORCE 6	0	0	0	0	0	0	0	0	0
7	FORCE 7	0	0	0	0	0	0	0	0	0
8	FORCE 8	0	34	35	38	40	50	50	0	0
9	RING OFFSET	0	0	0	0	0	0	0	0	0
A	OFFSET 1	0	78	70	82	96	96	96	0	0
B	OFFSET 2	0	5	29	39	114	123	123	0	0
C	OFFSET 3	0	41	29	99	102	86	86	0	0
D	PERM 1 END	0	0	0	0	0	0	0	0	0
E	HOLD RELEASE	0	255	255	255	255	255	255	0	0
F	ZONE OFFSET	0	0	0	0	0	0	0	0	0

< C + 0 + C = 1 >

		COLUMN E										COLUMN F							
		1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8
0										0	LAG FREE	_	2	_	4	_	6	_	8
1	SYNC Plan 1	_	2	_	_	_	6	_	_	1	LAG PLAN 1	_	2	_	4	_	6	_	8
2	SYNC Plan 2	_	2	_	_	_	6	_	_	2	LAG PLAN 2	_	2	_	4	_	6	_	8
3	SYNC Plan 3	_	2	_	_	_	6	_	_	3	LAG PLAN 3	_	2	_	4	_	6	_	8
4	SYNC Plan 4	_	2	_	_	_	6	_	_	4	LAG PLAN 4	_	2	_	4	_	6	_	8
5	SYNC Plan 5	_	2	_	_	_	6	_	_	5	LAG PLAN 5	_	2	_	4	_	6	_	8
6	SYNC Plan 6	_	2	_	_	_	6	_	_	6	LAG PLAN 6	_	2	_	4	_	6	_	8
7	SYNC Plan 7	_	2	_	_	_	6	_	_	7	LAG PLAN 7	_	2	_	4	_	6	_	8
8	SYNC Plan 8	_	2	_	_	_	6	_	_	8	LAG PLAN 8	_	2	_	4	_	6	_	8
9	SYNC Plan 9	_	2	_	_	_	6	_	_	9	LAG PLAN 9	_	2	_	4	_	6	_	8
A	NEMA SYNC	_	_	_	_	_	_	_	_	A	EXT. LAG	_	_	_	_	_	_	_	_
B	NEMA HOLD	_	_	_	_	_	_	_	_	B	LAG HOLD	_	_	_	_	_	_	_	_
C										C									
D										D									
E	COORD EXTRA	_	2	_	_	_	_	_	_	E									
F										F									

COORDINATION EXTRA

1 = Programmed Walk Time

2 = FDW Begins at Sync Phase

Force Off minus FDW

< C + 0 + C = 1 >

COLUMN 2	
Coord Min.	
1	15
2	26
3	0
4	28
5	15
6	26
7	0
8	28

< C + 0 + C = 5 >

TRANSITION TYPE:

< C/5 + 1 + 9 > = 1.3

0.X = SHORTWAY

1.X = DWELL

X.1 THRU .X4 = NUMBER OF CYCLES WHEN LENGTHENING

LAG HOLD PHASES:

< C/5 + 1 + A > = ________

IEN STATUS: ON =/= 0

IEN Status < C/5 + 1 + B > = 1

LOCAL ALARM DISABLE

< C/5 + F + 0 > = ________

7 - Wire Master

Synch Time < C/5 + 1 + C > = 0.0

ROW	Plan # -->	1	2	3	4	5	6	7	8	9	ROW
0	PED ADJUST	0	0	0	0	0	0	0	0	0	0
1	PERM 2 START	0	0	0	0	0	0	0	0	0	1
2	PERM 2 END	0	0	0	0	0	0	0	0	0	2
3	PERM 3 START	0	0	0	0	0	0	0	0	0	3
4	PERM 3 END	0	0	0	0	0	0	0	0	0	4
5	RSRVC TIME	0	0	0	0	0	0	0	0	0	5
		1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	
6	RSRVC PH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	6
7											7
8	PRETIMED PH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	8
9	MAX RECALL	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	9
A	PERM 1 VEH	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	A
B	PERM 1 PED	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	B
C	PERM 2 VEH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	C
D	PERM 2 PED	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	D
E	PERM 3 VEH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	E
F	PERM 3 PED	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	F

COORDINATION PAGE 2 < C + 0 + C = 2 >

CURRENT DATE/TIME

(HR-MIN-DOW) = <8/0 + 0>

(Day-YR-MO) = <8/0 + 1>

(MN-S-1/10SEC) = <8/0 + F>

Daylight Savings Time

Begin Month	<C/5+2+A>	0
Begin Week	<C/5+2+B>	0
End Month	<C/5+2+C>	0
End Week	<C/5+2+D>	0

Advance Warning Beacon - Sign 1

Time Before Yellow	<F/1+C+E>	0.0
Phase Number	<F/1+C+F>	0

Advance Warning Beacon - Sign 2

Time Before Yellow	<F/1+D+E>	0.0
Phase Number	<F/1+D+F>	0

CITY OF BURBANK

PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

TRAFFIC SIGNAL
Coordination Timing
BiTrans 233RV2.x

174 Glenoaks Blvd & Olive Ave			
Prepared by:	RICHARD LOCKYER	Date	04/24/20
Checked by:	JONATHAN YEE	Date	

		PLAN NUMBER								
		1	2	3	4	5	6	7	8	9
0	CYCLE	0	90	100	110	120	140	140	0	0
1	FORCE 1	0	58	60	65	71	75	75	0	0
2	FORCE 2	0	0	0	0	0	0	0	0	0
3	FORCE 3	0	15	15	17	19	20	20	0	0
4	FORCE 4	0	43	45	48	51	53	53	0	0
5	FORCE 5	0	58	60	65	71	75	75	0	0
6	FORCE 6	0	0	0	0	0	0	0	0	0
7	FORCE 7	0	15	15	17	19	20	20	0	0
8	FORCE 8	0	43	45	48	51	53	53	0	0
9	RING OFFSET	0	0	0	0	0	0	0	0	0
A	OFFSET 1	0	39	42	54	71	71	71	0	0
B	OFFSET 2	0	5	29	39	114	114	114	0	0
C	OFFSET 3	0	55	40	5	6	113	113	0	0
D	PERM 1 END	0	0	0	0	0	0	0	0	0
E	HOLD RELEASE	0	255	255	255	255	255	255	0	0
F	ZONE OFFSET	0	0	0	0	0	0	0	0	0

< C + 0 + C = 1 >

	COLUMN E	1	2	3	4	5	6	7	8
0									
1	SYNC Plan 1	_	2	_	_	_	6	_	_
2	SYNC Plan 2	_	2	_	_	_	6	_	_
3	SYNC Plan 3	_	2	_	_	_	6	_	_
4	SYNC Plan 4	_	2	_	_	_	6	_	_
5	SYNC Plan 5	_	2	_	_	_	6	_	_
6	SYNC Plan 6	_	2	_	_	_	6	_	_
7	SYNC Plan 7	_	2	_	_	_	6	_	_
8	SYNC Plan 8	_	2	_	_	_	6	_	_
9	SYNC Plan 9	_	2	_	_	_	6	_	_
A	NEMA SYNC	_	_	_	_	_	_	_	_
B	NEMA HOLD	_	_	_	_	_	_	_	_
C									
D									
E	COORD EXTRA	_	2	_	_	_	_	_	_
F									

	COLUMN F	1	2	3	4	5	6	7	8
0	LAG FREE	_	2	_	4	_	6	_	8
1	LAG PLAN 1	_	2	_	4	_	6	_	8
2	LAG PLAN 2	_	2	_	4	_	6	_	8
3	LAG PLAN 3	_	2	_	4	_	6	_	8
4	LAG PLAN 4	_	2	_	4	_	6	_	8
5	LAG PLAN 5	_	2	_	4	_	6	_	8
6	LAG PLAN 6	_	2	_	4	_	6	_	8
7	LAG PLAN 7	_	2	_	4	_	6	_	8
8	LAG PLAN 8	_	2	_	4	_	6	_	8
9	LAG PLAN 9	_	2	_	4	_	6	_	8
A	EXT. LAG	_	_	_	_	_	_	_	_
B	LAG HOLD	_	_	_	_	_	_	_	_
C									
D									
E									
F									

COORDINATION EXTRA

1 = Programmed Walk Time

2 = FDW Begins at Sync Phase

Force Off minus FDW

< C + 0 + C = 1 >

COLUMN 2	
	Coord Min.
1	12
2	29
3	12
4	26
5	12
6	26
7	12
8	28

< C + 0 + C = 5 >

TRANSITION TYPE:
< C/5 + 1 + 9 > = 1.3

0.X = SHORTWAY
1.X = DWELL
X.1 THRU .X4 = NUMBER OF CYCLES WHEN LENGTHENING

LAG HOLD PHASES:
< C/5 + 1 + A > =

IEN STATUS: ON =/= 0
IEN Status < C/5 + 1 + B > = 1

LOCAL ALARM DISABLE
< C/5 + F + 0 > =

7 - Wire Master
Synch Time < C/5 + 1 + C > = 0.0

ROW	Plan # -->	1	2	3	4	5	6	7	8	9	ROW
0	PED ADJUST	0	0	0	0	0	0	0	0	0	0
1	PERM 2 START	0	0	0	0	0	0	0	0	0	1
2	PERM 2 END	0	0	0	0	0	0	0	0	0	2
3	PERM 3 START	0	0	0	0	0	0	0	0	0	3
4	PERM 3 END	0	0	0	0	0	0	0	0	0	4
5	RSRVC TIME	0	0	0	0	0	0	0	0	0	5
		1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	
6	RSRVC PH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	6
7											7
8	PRETIMED PH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	8
9	MAX RECALL	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	9
A	PERM 1 VEH	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	A
B	PERM 1 PED	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	1 2 3 4 5 6 7 8	B
C	PERM 2 VEH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	C
D	PERM 2 PED	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	D
E	PERM 3 VEH	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	E
F	PERM 3 PED	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	_ _ _ _ _ _ _ _	F

COORDINATION PAGE 2 < C + 0 + C = 2 >

CURRENT DATE/TIME

(HR-MIN-DOW) = <8/0 + 0>
(Day-YR-MO) = <8/0 + 1>
(MN-S-1/10SEC) = <8/0 + F>

Daylight Savings Time

Begin Month	<C/5+2+A>	0
Begin Week	<C/5+2+B>	0
End Month	<C/5+2+C>	0
End Week	<C/5+2+D>	0

Advance Warning Beacon - Sign 1

Time Before Yellow	<F/1+C+E>	0.0
Phase Number	<F/1+C+F>	0

Advance Warning Beacon - Sign 2

Time Before Yellow	<F/1+D+E>	0.0
Phase Number	<F/1+D+F>	0

CITY OF BURBANK
PUBLIC WORKS DEPARTMENT
Traffic Engineering Division

TRAFFIC SIGNAL
Phase Timing / Phase Configuration
BiTrans 233RV2.x

Prepared by:	RICHARD LOCKYER		Date: **4/16/2020**
Checked by:	JONATHAN YEE		Date:
Approved by:	JONATHAN YEE		Date:
Completed by:			Date:

105 Alameda Ave & Glenoaks Bl
(Intersection Name)

NOTES:

		PHASE							
	Interval	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
0	WALK	0	7	0	7	0	7	0	7
1	DONT WALK	0	14	0	30	0	11	0	30
2	MIN INITIAL	6	10	6	10	6	10	6	10
3	TYPE 3 LIMIT	0	25	0	0	0	25	0	0
4	ADD PER VEH	0.0	1.5	0.0	0.0	0.0	1.5	0.0	0.0
5	VEH EXT	2.0	4.0	2.0	4.0	2.0	4.0	2.0	4.0
6	MAX GAP	3.0	5.0	3.0	5.0	3.0	5.0	3.0	5.0
7	MIN GAP	1.5	3.0	1.5	3.0	1.5	3.0	1.5	3.0
8	MAX LIMIT	30	45	40	50	25	45	20	50
9	MAXIMUM 2	30	45	40	50	25	45	20	50
A	ADV/DLY WLK	0	0	0	0	0	0	0	0
B	PE MIN FDW	0	0	0	0	0	0	0	0
C	COND SRV CHK	0	0	0	0	0	0	0	0
D	REDUCE EVERY	0.5	1.0	0.5	1.0	0.5	1.0	0.5	1.0
E	YELLOW	3.6	4.0	3.6	4.0	3.6	4.0	3.6	4.0
F	RED CLEAR	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0

PHASE BANK 1 **< C + 0 + F = 1 >**

		ALTERNATE TIMING					PREEMPT	
		9	**A**	**B**	**C**	**D**		**E**
							RR1 DLY	0
1	Ph. 1	0	0	0	0	0.0	RR1 CLR	0
2	Ph. 2	20	0	0	0	0.0	EVA DLY	0
3	Ph. 3	0	0	0	0	0.0	EVA CLR	0
4	Ph. 4	0	0	0	0	0.0	EVB DLY	0
5	Ph. 5	0	0	0	0	0.0	EVB CLR	0
6	Ph. 6	20	0	0	0	0.0	EVC DLY	0
7	Ph. 7	0	0	0	0	0.0	EVC CLR	0
8	Ph. 8	0	0	0	0	0.0	EVD DLY	0
		Maximum Initial	Alternate Walk	Alternate FDW	Alternate Initial	Alternate Extension	EVD CLR	0
							RR2 DLY	0
							RR2 CLR	0
							EV CLR	- - -
							EV DLY	- - -
							RR CLR	- - -
							RR DLY	- - -

START / REVERT TIMES

ALL RED STRT: **<F/1 + C + 0>** = 6.0
FLASH START: **<F/1 + 0 + E>** = 0
RED REVERT: **<F/1 + 0 + F>** = 3.0

PHASE FUNCTION FLAGS

	Column F	
0	PERMIT	12345678
1	RED LOCK	
2	YELLOW LOCK	
3	VEH MIN CALL	2 6
4	PED RECALL	
5	*View Set Peds*	_2_4_6_8
6	REST IN WALK	
7	RED REST	
8	DOUBLE ENTRY	4 8
9	VEH MAX CALL	
A	SOFT RECALL	
B	MAXIMUM 2	
C	COND SERVICE	
D	MAN CONT CALL	
E	YELLOW START	
F	FIRST PHASES	2 6

< C + 0 + F = 1 >

SPECIALS

	Column F	
0	FAST GRN FLH	
1	GREEN FLSH	
2	FLASH WALK	
3	GUAR PASS	
4	SIMUL GAP	
5	SEQ TIMING	
6	ADV WALK	
7	DELAY WALK	
8	EXT RECALL	
9	Sart O'LapGreen	
A	MAX EXTEN	
B	INH PED RSRV	
C	SEMI ACTUA.	
D	Sart O'LapYellow	
E	STRT VEH CALL	12345678
F	STRT PED CALL	2 4 6 8

Specials <C + 0 + F = 2>

CNTRLR INTERVALS
0 = Walk
1 = FDW
2 = MIN. Green
3 =
4 = Var. Initial
5 = Extension
6 =
7 = Reduce Gap
8 = Red Rest
9 = Preempt
A = Stop Time
B = Red Revrt
C = Gap Term.
D = MAX Term.
E = Forceoff
F = Red Clear.

MANUAL PLAN SELECT:
< C/0 + A + 1 > = 0
AUTO = 0 PLAN = 1 - 9
FREE = 14
FLASH= 15

MANUAL OFFSET SELECT:
< C/0 + B + 1 > = 0
AUTO = 0 OFFSET A = 1
OFFSET B = 2
OFFSET C = 3

COMM ADDRESS:
< C/0 + 0 + 0 > = 21

ZONE NUMBER:
< C/0 + 0 + 1 > = 1

AREA NUMBER:
< C/0 + 0 + 2 > = 2

AREA ADDRESS:
< C/0 + 0 + 3 > = 5

QUICNET CHANNEL:
UDP:8017:172.16.121.5

INPUT KEYSTROKES:
1) Set PAGE to required BANK #
< C+0+PAGE = BANK # >
2) Key stroke: PAGE + COLUMN + ROW

EXCL. PED. PHASE
WALK (F/1+0+0) = 0
FDW (F/1+0+1) = 0
ALL RED (F/1+0+2) = 0.0
Assigned at E/127+A+E & F

EXTRA 1
1 = TBC Type 1
2 = NEMA External Coordinator
3 = Auto Daylight Savings
4 = EV Preempt Advance
5 = Expanded Status Report
7 = Clear Outputs During Flash
8 = Split Ring Operation

IC SELECT
2 = 2 Way Modem
3 = 7 Wire Slave
4 = Flash / Free
5 = Simplex Master
8 = Offset Interruptor

To Enable "E" Page, Set < F/1 + 9 + E = Not Zero >

CONTROLLER CONFIGURATION FLAGS

	Column E			**Column F**	
0	EXCLUSIVE		0		
1	RR 1 CLEAR		1	EXT PERMIT 1	
2	RR 2 CLEAR		2	EXT PERMIT 2	
3	RR 2 LTD SRV		3	EXCLU PED	
4	PROT/PERM	3 7	4	Preemp Non Lock	
5	FLH TO PREMT		5	PED 2 P OUT	2
6	FLASH ENTRY		6	PED 6 P OUT	6
7	DSABL MIN YEL		7	PED 4 P OUT	4
8	DSABL OVP YEL		8	PED 8 P OUT	8
9	OVP FLH YEL		9	FLH YELLOW	
A	EM. VEH. A		A	Low Prio A PH	
B	EM. VEH. B		B	Low Prio B PH	
C	EM. VEH. C		C	Low Prio C PH	
D	EM. VEH. D		D	Low Prio D PH	
E	EXTRA 1	1 3 5	E	RESTRICTED	
F	IC SELECT	2	F	EXTRA 2	4

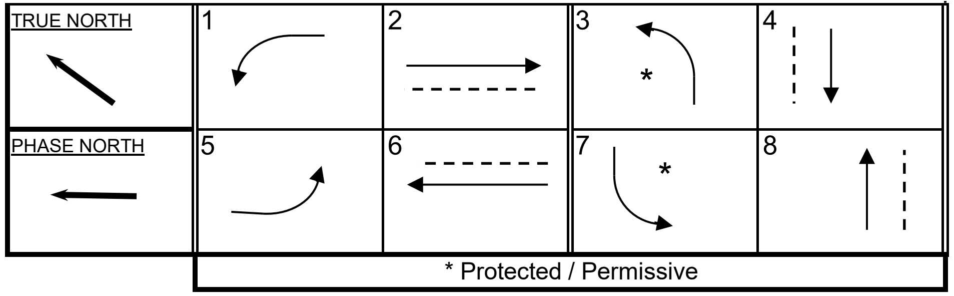
< C + 0 + E = 125 > **< C + 0 + E = 125 >**

Flash To Preempt / Preempt Non Lock
1 = EVP - A
2 = EVP - B
3 = EVP - C
4 = EVP - D
5 = RR - 1
6 = RR - 2
7 = Spl Ev - 1
8 = Spl Ev - 2

EXTRA 2
1 = AWB During Initial
2 = Flashing Yellow Arrow
3 = Disable Min Walk
4 = QuicNet System
5 = Ignore P/P on EV
6 =
7 = Reserved
8 =

PHASE DIAGRAM

E-W Street: Alameda Ave N-S Street : Glenoaks Blvd



* Protected / Permissive

APPENDIX:
LOS Analysis

Existing (2019)
Conditions

HCM 6th Signalized Intersection Summary
1: Winona Ave & Hollywood Way

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑↱		↰	↑↑↱	
Traffic Volume (veh/h)	0	0	20	35	1	35	29	857	82	210	1853	20
Future Volume (veh/h)	0	0	20	35	1	35	29	857	82	210	1853	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		0.99	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	0	0	21	36	1	36	30	884	85	216	1910	21
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	51	151	126	162	143	126	263	2417	232	525	3935	43
Arrive On Green	0.00	0.00	0.08	0.08	0.08	0.08	0.04	0.74	0.74	0.06	0.76	0.76
Sat Flow, veh/h	1371	1870	1561	1371	1777	1561	1781	3275	315	1781	5207	57
Grp Volume(v), veh/h	0	0	21	36	1	36	30	480	489	216	1248	683
Grp Sat Flow(s),veh/h/ln	1371	1870	1561	1371	1777	1561	1781	1777	1813	1781	1702	1860
Q Serve(g_s), s	0.0	0.0	1.8	3.5	0.1	3.0	0.5	13.6	13.6	4.0	19.8	19.8
Cycle Q Clear(g_c), s	0.0	0.0	1.8	3.5	0.1	3.0	0.5	13.6	13.6	4.0	19.8	19.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.17	1.00		0.03
Lane Grp Cap(c), veh/h	51	151	126	162	143	126	263	1311	1338	525	2572	1406
V/C Ratio(X)	0.00	0.00	0.17	0.22	0.01	0.29	0.11	0.37	0.37	0.41	0.49	0.49
Avail Cap(c_a), veh/h	367	581	485	477	552	485	371	1311	1338	601	2572	1406
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)	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	60.0	60.8	59.2	60.6	4.8	6.6	6.6	4.4	6.6	6.6
Incr Delay (d2), s/veh	0.0	0.0	0.6	0.7	0.0	1.2	0.1	0.8	0.8	0.4	0.7	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.7	1.2	0.0	1.3	0.2	5.1	5.2	1.3	6.8	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	60.6	61.4	59.2	61.8	4.9	7.4	7.4	4.8	7.3	7.8
LnGrp LOS	A	A	E	E	E	E	A	A	A	A	A	A
Approach Vol, veh/h		21			73			999			2147	
Approach Delay, s/veh		60.6			61.6			7.3			7.2	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.4	112.3		17.3	12.9	109.8		17.3
Change Period (Y+Rc), s	4.9	6.5		6.0	4.9	6.5		6.0
Max Green Setting (Gmax), s	14.0	65.1		43.5	14.0	65.1		43.5
Max Q Clear Time (g_c+I1), s	2.5	21.8		5.5	6.0	15.6		3.8
Green Ext Time (p_c), s	0.0	22.4		0.3	0.3	8.0		0.0

Intersection Summary			
HCM 6th Ctrl Delay			8.8
HCM 6th LOS			A

HCM 6th Signalized Intersection Summary
2: Thornton Ave & Hollywood Way

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑	↱	↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	156	49	157	101	120	44	122	760	168	101	1508	248
Future Volume (veh/h)	156	49	157	101	120	44	122	760	168	101	1508	248
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.97	0.98		0.97	1.00		0.99	1.00		0.99
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	164	52	165	106	126	46	128	800	177	106	1587	261
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	577	276	227	317	376	131	217	2345	1142	373	1994	880
Arrive On Green	0.07	0.15	0.15	0.07	0.15	0.15	0.06	0.66	0.66	0.56	0.56	0.56
Sat Flow, veh/h	3456	1870	1537	1781	2563	890	1781	3554	1562	573	3554	1569
Grp Volume(v), veh/h	164	52	165	106	85	87	128	800	177	106	1587	261
Grp Sat Flow(s),veh/h/ln	1728	1870	1537	1781	1777	1677	1781	1777	1562	573	1777	1569
Q Serve(g_s), s	5.5	3.4	14.4	6.9	6.0	6.5	3.9	13.8	4.8	13.9	49.6	12.3
Cycle Q Clear(g_c), s	5.5	3.4	14.4	6.9	6.0	6.5	3.9	13.8	4.8	13.9	49.6	12.3
Prop In Lane	1.00		1.00	1.00		0.53	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	577	276	227	317	261	246	217	2345	1142	373	1994	880
V/C Ratio(X)	0.28	0.19	0.73	0.33	0.33	0.35	0.59	0.34	0.15	0.28	0.80	0.30
Avail Cap(c_a), veh/h	911	553	454	364	399	376	345	2345	1142	373	1994	880
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	52.3	57.0	45.7	53.5	53.7	27.1	10.5	5.7	16.6	24.4	16.2
Incr Delay (d2), s/veh	0.3	0.3	4.4	0.2	0.7	0.9	1.9	0.4	0.3	1.9	3.4	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	1.6	5.9	3.1	2.8	2.8	2.6	5.5	1.6	2.0	21.3	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.4	52.6	61.4	45.9	54.3	54.6	29.0	10.8	6.0	18.5	27.8	17.0
LnGrp LOS	D	D	E	D	D	D	C	B	A	B	C	B
Approach Vol, veh/h		381			278			1105			1954	
Approach Delay, s/veh		53.3			51.2			12.2			25.8	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	13.8	85.0	14.6	26.5		98.9	14.4	26.7				
Change Period (Y+Rc), s	4.9	6.5	4.6	6.0		6.5	4.6	6.0				
Max Green Setting (Gmax), s	19.0	44.1	23.5	31.4		68.0	13.5	41.4				
Max Q Clear Time (g_c+I1), s	5.9	51.6	7.5	8.5		15.8	8.9	16.4				
Green Ext Time (p_c), s	0.2	0.0	0.4	0.9		7.7	0.0	0.8				

Intersection Summary			
HCM 6th Ctrl Delay			26.5
HCM 6th LOS			C

HCM 6th Signalized Intersection Summary
3: Victory Blvd & Hollywood Way

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	229	1000	192	111	525	122	87	738	89	230	1098	161
Future Volume (veh/h)	229	1000	192	111	525	122	87	738	89	230	1098	161
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
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	252	1099	211	122	577	134	96	811	98	253	1207	177
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	370	1256	667	186	1091	652	190	1165	611	321	1296	743
Arrive On Green	0.11	0.35	0.35	0.06	0.31	0.31	0.07	0.33	0.33	0.11	0.36	0.36
Sat Flow, veh/h	1781	3554	1576	1781	3554	1574	1781	3554	1569	1781	3554	1571
Grp Volume(v), veh/h	252	1099	211	122	577	134	96	811	98	253	1207	177
Grp Sat Flow(s),veh/h/ln	1781	1777	1576	1781	1777	1574	1781	1777	1569	1781	1777	1571
Q Serve(g_s), s	13.2	40.5	12.5	6.5	18.8	7.6	4.8	27.8	5.7	12.8	45.7	9.4
Cycle Q Clear(g_c), s	13.2	40.5	12.5	6.5	18.8	7.6	4.8	27.8	5.7	12.8	45.7	9.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	370	1256	667	186	1091	652	190	1165	611	321	1296	743
V/C Ratio(X)	0.68	0.88	0.32	0.65	0.53	0.21	0.50	0.70	0.16	0.79	0.93	0.24
Avail Cap(c_a), veh/h	370	1256	667	269	1091	652	219	1165	611	372	1330	758
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.0	42.4	26.9	35.7	40.1	26.3	34.0	41.0	27.9	30.2	42.8	22.0
Incr Delay (d2), s/veh	4.2	8.7	1.2	1.5	1.8	0.7	0.8	1.8	0.1	8.0	11.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	19.2	5.0	2.9	8.6	3.0	2.1	12.5	2.2	6.2	22.1	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.2	51.1	28.1	37.1	42.0	27.0	34.7	42.8	28.0	38.1	54.5	22.2
LnGrp LOS	C	D	C	D	D	C	C	D	C	D	D	C
Approach Vol, veh/h		1562			833			1005			1637	
Approach Delay, s/veh		45.1			38.8			40.6			48.5	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.1	55.5	14.4	57.1	19.6	49.0	19.5	51.9
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	15.0	39.4	12.0	52.4	15.0	39.4	19.0	45.4
Max Q Clear Time (g_c+I1), s	8.5	42.5	6.8	47.7	15.2	20.8	14.8	29.8
Green Ext Time (p_c), s	0.1	0.0	0.0	3.3	0.0	4.2	0.2	5.4

Intersection Summary			
HCM 6th Ctrl Delay			44.3
HCM 6th LOS			D

HCM 6th Signalized Intersection Summary
4: Burbank Blvd & Hollywood Way

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱	↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	147	761	95	171	499	77	62	616	83	186	1211	79
Future Volume (veh/h)	147	761	95	171	499	77	62	616	83	186	1211	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.99
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	158	818	102	184	537	83	67	662	89	200	1302	85
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	386	1129	141	274	1270	557	146	1021	137	311	1218	79
Arrive On Green	0.08	0.36	0.36	0.08	0.36	0.36	0.05	0.33	0.33	0.09	0.36	0.36
Sat Flow, veh/h	1781	3172	396	1781	3554	1558	1781	3141	422	1781	3383	220
Grp Volume(v), veh/h	158	458	462	184	537	83	67	374	377	200	682	705
Grp Sat Flow(s),veh/h/ln	1781	1777	1791	1781	1777	1558	1781	1777	1786	1781	1777	1827
Q Serve(g_s), s	7.7	31.3	31.3	9.1	16.0	5.1	3.4	25.2	25.3	10.1	50.4	50.4
Cycle Q Clear(g_c), s	7.7	31.3	31.3	9.1	16.0	5.1	3.4	25.2	25.3	10.1	50.4	50.4
Prop In Lane	1.00		0.22	1.00		1.00	1.00		0.24	1.00		0.12
Lane Grp Cap(c), veh/h	386	632	637	274	1270	557	146	578	581	311	640	658
V/C Ratio(X)	0.41	0.72	0.72	0.67	0.42	0.15	0.46	0.65	0.65	0.64	1.07	1.07
Avail Cap(c_a), veh/h	437	632	637	322	1270	557	293	640	643	396	640	658
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.7	39.1	39.1	29.9	34.1	30.5	35.5	40.4	40.4	29.6	44.8	44.8
Incr Delay (d2), s/veh	0.3	7.1	7.0	2.8	1.0	0.6	0.8	2.0	2.0	0.9	54.8	55.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	14.9	15.0	4.1	7.2	2.0	1.5	11.4	11.5	4.4	31.7	32.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.0	46.2	46.2	32.7	35.1	31.1	36.4	42.4	42.4	30.5	99.6	100.6
LnGrp LOS	C	D	D	C	D	C	D	D	D	C	F	F
Approach Vol, veh/h		1078			804			818			1587	
Approach Delay, s/veh		43.2			34.1			41.9			91.3	
Approach LOS		D			C			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.8	55.8	12.0	56.4	15.6	56.0	16.9	51.5
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	15.0	34.4	19.0	50.4	15.0	34.4	19.0	50.4
Max Q Clear Time (g_c+I1), s	11.1	33.3	5.4	52.4	9.7	18.0	12.1	27.3
Green Ext Time (p_c), s	0.1	0.6	0.1	0.0	0.1	3.6	0.2	5.0

Intersection Summary			
HCM 6th Ctrl Delay			59.1
HCM 6th LOS			E

HCM 6th Signalized Intersection Summary
5: Magnolia Blvd & Hollywood Way

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	130	670	131	124	370	84	76	492	102	206	1375	152
Future Volume (veh/h)	130	670	131	124	370	84	76	492	102	206	1375	152
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.89	1.00		0.89	1.00		0.97	1.00		0.97
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	133	684	134	127	378	86	78	502	104	210	1403	155
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	303	828	329	207	818	325	202	1677	725	498	1752	759
Arrive On Green	0.07	0.23	0.23	0.07	0.23	0.23	0.05	0.47	0.47	0.08	0.49	0.49
Sat Flow, veh/h	1781	3554	1412	1781	3554	1410	1781	3554	1538	1781	3554	1540
Grp Volume(v), veh/h	133	684	134	127	378	86	78	502	104	210	1403	155
Grp Sat Flow(s),veh/h/ln	1781	1777	1412	1781	1777	1410	1781	1777	1538	1781	1777	1540
Q Serve(g_s), s	7.9	25.6	11.3	7.5	12.8	7.0	3.0	12.2	5.4	8.4	46.3	7.9
Cycle Q Clear(g_c), s	7.9	25.6	11.3	7.5	12.8	7.0	3.0	12.2	5.4	8.4	46.3	7.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	303	828	329	207	818	325	202	1677	725	498	1752	759
V/C Ratio(X)	0.44	0.83	0.41	0.61	0.46	0.26	0.39	0.30	0.14	0.42	0.80	0.20
Avail Cap(c_a), veh/h	419	1152	458	327	1152	457	309	1677	725	567	1752	759
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	51.0	45.5	39.9	46.4	44.2	25.2	22.7	20.9	16.8	29.7	20.0
Incr Delay (d2), s/veh	0.4	3.6	0.8	1.1	0.4	0.4	0.4	0.5	0.4	0.2	4.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	11.8	4.1	3.4	5.8	2.5	1.3	5.3	2.1	3.5	20.5	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.0	54.6	46.3	41.0	46.8	44.6	25.7	23.2	21.4	17.1	33.7	20.6
LnGrp LOS	D	D	D	D	D	D	C	C	C	B	C	C
Approach Vol, veh/h		951			591			684			1768	
Approach Delay, s/veh		51.1			45.2			23.2			30.6	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.2	75.0	14.5	38.2	15.2	72.1	14.2	38.6
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	16.0	38.4	19.0	45.4	16.0	38.4	19.0	45.4
Max Q Clear Time (g_c+I1), s	5.0	48.3	9.9	14.8	10.4	14.2	9.5	27.6
Green Ext Time (p_c), s	0.1	0.0	0.1	3.0	0.1	3.9	0.1	5.0

Intersection Summary	
HCM 6th Ctrl Delay	36.4
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
6: Hollywood Way & Verdugo Ave

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	141	574	163	192	264	64	24	470	59	92	1302	117
Future Volume (veh/h)	141	574	163	192	264	64	24	470	59	92	1302	117
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
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	152	617	175	206	284	69	26	505	63	99	1400	126
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	435	647	542	229	687	575	108	1271	553	350	1332	581
Arrive On Green	0.07	0.35	0.35	0.09	0.37	0.37	0.03	0.36	0.36	0.05	0.37	0.37
Sat Flow, veh/h	1781	1870	1566	1781	1870	1567	1781	3554	1547	1781	3554	1549
Grp Volume(v), veh/h	152	617	175	206	284	69	26	505	63	99	1400	126
Grp Sat Flow(s),veh/h/ln	1781	1870	1566	1781	1870	1567	1781	1777	1547	1781	1777	1549
Q Serve(g_s), s	7.6	45.1	11.5	10.6	15.9	4.1	1.3	14.9	3.8	4.9	52.5	7.8
Cycle Q Clear(g_c), s	7.6	45.1	11.5	10.6	15.9	4.1	1.3	14.9	3.8	4.9	52.5	7.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	435	647	542	229	687	575	108	1271	553	350	1332	581
V/C Ratio(X)	0.35	0.95	0.32	0.90	0.41	0.12	0.24	0.40	0.11	0.28	1.05	0.22
Avail Cap(c_a), veh/h	490	668	559	246	687	575	293	1271	553	505	1332	581
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.9	44.7	33.7	34.9	33.1	29.3	35.4	33.7	30.1	27.0	43.8	29.8
Incr Delay (d2), s/veh	0.2	23.6	0.3	29.9	0.4	0.1	0.4	0.9	0.4	0.2	39.3	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	25.0	4.5	6.5	7.4	1.6	0.6	6.7	1.5	2.1	30.1	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.1	68.3	34.1	64.8	33.5	29.4	35.9	34.6	30.5	27.2	83.1	30.6
LnGrp LOS	C	E	C	E	C	C	D	C	C	C	F	C
Approach Vol, veh/h		944			559			594			1625	
Approach Delay, s/veh		55.3			44.5			34.2			75.6	
Approach LOS		E			D			C			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	58.5	14.7	57.4	11.9	56.1	17.7	54.4
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	19.0	35.0	14.0	50.0	19.0	35.0	14.0	50.0
Max Q Clear Time (g_c+I1), s	3.3	54.5	9.6	17.9	6.9	16.9	12.6	47.1
Green Ext Time (p_c), s	0.0	0.0	0.1	2.0	0.1	3.4	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	59.2
HCM 6th LOS	E

HCM 6th Signalized Intersection Summary
7: Riverside Dr & Alameda Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	✣			✣	
Traffic Volume (veh/h)	37	826	748	10	465	64	127	21	9	40	18	17
Future Volume (veh/h)	37	826	748	10	465	64	127	21	9	40	18	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	1.00		0.98	1.00		0.97	1.00		0.95
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	38	852	771	10	479	66	81	92	9	41	19	18
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	655	2481	1252	247	2185	300	190	179	17	56	26	25
Arrive On Green	0.70	0.70	0.70	1.00	1.00	1.00	0.11	0.11	0.11	0.06	0.06	0.06
Sat Flow, veh/h	853	3554	1551	310	3130	429	1781	1672	164	910	422	399
Grp Volume(v), veh/h	38	852	771	10	271	274	81	0	101	78	0	0
Grp Sat Flow(s),veh/h/ln	853	1777	1551	310	1777	1782	1781	0	1835	1731	0	0
Q Serve(g_s), s	1.7	11.4	23.1	0.6	0.0	0.0	5.1	0.0	6.2	5.3	0.0	0.0
Cycle Q Clear(g_c), s	1.7	11.4	23.1	12.0	0.0	0.0	5.1	0.0	6.2	5.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.24	1.00		0.09	0.53		0.23
Lane Grp Cap(c), veh/h	655	2481	1252	247	1241	1244	190	0	196	107	0	0
V/C Ratio(X)	0.06	0.34	0.62	0.04	0.22	0.22	0.43	0.00	0.52	0.73	0.00	0.00
Avail Cap(c_a), veh/h	655	2481	1252	247	1241	1244	683	0	704	173	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.81	0.81	0.81	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.7	7.2	4.5	0.8	0.0	0.0	50.2	0.0	50.7	55.3	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.4	2.3	0.2	0.3	0.3	1.5	0.0	2.1	9.2	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(50%),veh/ln	0.3	4.2	11.8	0.0	0.1	0.1	2.4	0.0	3.0	2.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.9	7.6	6.8	1.1	0.3	0.3	51.7	0.0	52.7	64.5	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	D	E	A	A
Approach Vol, veh/h		1661			555			182			78	
Approach Delay, s/veh		7.2			0.3			52.3			64.5	
Approach LOS		A			A			D			E	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		89.8		12.4		89.8		17.8				
Change Period (Y+Rc), s		6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s		46.0		12.0		46.0		46.0				
Max Q Clear Time (g_c+I1), s		25.1		7.3		14.0		8.2				
Green Ext Time (p_c), s		10.3		0.1		3.9		0.8				

Intersection Summary			
HCM 6th Ctrl Delay			10.8
HCM 6th LOS			B

Notes

User approved volume balancing among the lanes for turning movement.

User approved changes to right turn type.

HCM 6th Signalized Intersection Summary
8: Pass Ave & Alameda Ave

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	91	774	34	29	353	79	29	104	56	421	934	137
Future Volume (veh/h)	91	774	34	29	353	79	29	104	56	421	934	137
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	1.00		0.97	1.00		0.97	0.98		0.97
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	95	806	35	30	368	82	30	108	58	439	973	143
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	270	837	36	146	632	139	264	825	411	755	1520	223
Arrive On Green	0.13	0.48	0.48	0.04	0.22	0.22	0.04	0.36	0.36	0.17	0.49	0.49
Sat Flow, veh/h	1781	3464	150	1781	2876	632	1781	2267	1130	1781	3097	455
Grp Volume(v), veh/h	95	413	428	30	225	225	30	83	83	439	558	558
Grp Sat Flow(s),veh/h/ln	1781	1777	1838	1781	1777	1731	1781	1777	1620	1781	1777	1775
Q Serve(g_s), s	4.8	27.0	27.0	1.5	13.6	13.9	1.2	3.7	4.1	17.7	28.0	28.0
Cycle Q Clear(g_c), s	4.8	27.0	27.0	1.5	13.6	13.9	1.2	3.7	4.1	17.7	28.0	28.0
Prop In Lane	1.00		0.08	1.00		0.37	1.00		0.70	1.00		0.26
Lane Grp Cap(c), veh/h	270	429	444	146	391	381	264	646	589	755	872	871
V/C Ratio(X)	0.35	0.96	0.96	0.21	0.58	0.59	0.11	0.13	0.14	0.58	0.64	0.64
Avail Cap(c_a), veh/h	305	429	444	219	429	418	397	646	589	810	872	871
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.1	30.5	30.5	35.8	41.8	42.0	22.3	25.5	25.6	16.4	22.7	22.7
Incr Delay (d2), s/veh	0.3	32.6	32.0	0.3	1.6	1.8	0.1	0.4	0.5	0.9	3.6	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	12.7	13.1	0.7	6.1	6.2	0.5	1.7	1.7	7.2	12.3	12.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.4	63.1	62.5	36.1	43.4	43.8	22.3	25.9	26.1	17.3	26.3	26.3
LnGrp LOS	C	E	E	D	D	D	C	C	C	B	C	C
Approach Vol, veh/h		936			480			196			1555	
Approach Delay, s/veh		59.6			43.1			25.4			23.8	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	35.0	10.1	64.9	12.7	32.4	25.3	49.6
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	10.0	29.0	14.0	45.0	10.0	29.0	24.0	35.0
Max Q Clear Time (g_c+I1), s	3.5	29.0	3.2	30.0	6.8	15.9	19.7	6.1
Green Ext Time (p_c), s	0.0	0.0	0.0	6.7	0.0	2.2	0.6	1.0

Intersection Summary	
HCM 6th Ctrl Delay	37.4
HCM 6th LOS	D

HCM Signalized Intersection Capacity Analysis
9: Olive Ave & Pass Ave

10/27/2021

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰	↑↑↑	↑↑↱		↰	↱↱
Traffic Volume (vph)	190	1494	1435	36	89	743
Future Volume (vph)	190	1494	1435	36	89	743
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	6.0		5.0	5.0
Lane Util. Factor	1.00	0.91	0.91		1.00	0.88
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	5085	5059		1770	2787
Flt Permitted	0.10	1.00	1.00		0.95	1.00
Satd. Flow (perm)	194	5085	5059		1770	2787
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	196	1540	1479	37	92	766
RTOR Reduction (vph)	0	0	1	0	0	357
Lane Group Flow (vph)	196	1540	1515	0	92	409
Confl. Peds. (#/hr)	34			34		
Turn Type	pm+pt	NA	NA		Prot	pt+ov
Protected Phases	3 5	2	6		4	4 3
Permitted Phases	2	3				
Actuated Green, G (s)	92.4	92.4	64.1		11.6	31.6
Effective Green, g (s)	92.4	92.4	64.1		11.6	31.6
Actuated g/C Ratio	0.77	0.77	0.53		0.10	0.26
Clearance Time (s)		6.0	6.0		5.0	
Vehicle Extension (s)		3.0	3.0		2.0	
Lane Grp Cap (vph)	455	4169	2702		171	733
v/s Ratio Prot	0.08	c0.24	c0.30		0.05	c0.15
v/s Ratio Perm	0.25	0.06				
v/c Ratio	0.43	0.37	0.56		0.54	0.56
Uniform Delay, d1	10.8	4.4	18.6		51.6	38.2
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.2	0.0	0.8		1.6	0.5
Delay (s)	11.0	4.5	19.4		53.3	38.7
Level of Service	B	A	B		D	D
Approach Delay (s)		5.2	19.4		40.3	
Approach LOS		A	B		D	

Intersection Summary			
HCM 2000 Control Delay	17.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
10: Alameda Ave & Hollywood Way

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑↑	↱	↰	↑↑	↱	↰↰	↑↑	↱
Traffic Volume (veh/h)	72	648	141	154	853	257	57	233	49	186	1289	520
Future Volume (veh/h)	72	648	141	154	853	257	57	233	49	186	1289	520
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
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	73	661	144	157	870	262	58	238	50	190	1315	531
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	134	855	183	185	1148	348	114	1541	673	259	1579	690
Arrive On Green	0.07	0.20	0.20	0.10	0.22	0.22	0.06	0.43	0.43	0.07	0.44	0.44
Sat Flow, veh/h	1781	4187	897	1781	5106	1547	1781	3554	1552	3456	3554	1553
Grp Volume(v), veh/h	73	535	270	157	870	262	58	238	50	190	1315	531
Grp Sat Flow(s),veh/h/ln	1781	1702	1680	1781	1702	1547	1781	1777	1552	1728	1777	1553
Q Serve(g_s), s	4.7	17.8	18.3	10.4	19.1	14.9	3.8	4.9	2.3	6.5	39.2	23.7
Cycle Q Clear(g_c), s	4.7	17.8	18.3	10.4	19.1	14.9	3.8	4.9	2.3	6.5	39.2	23.7
Prop In Lane	1.00		0.53	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	134	695	343	185	1148	348	114	1541	673	259	1579	690
V/C Ratio(X)	0.55	0.77	0.79	0.85	0.76	0.75	0.51	0.15	0.07	0.73	0.83	0.77
Avail Cap(c_a), veh/h	208	851	420	223	1277	387	148	1541	673	432	1579	690
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.5	45.1	45.3	52.8	43.5	26.8	54.3	20.6	19.9	54.3	29.4	13.2
Incr Delay (d2), s/veh	1.3	3.5	7.8	23.8	2.7	8.1	1.3	0.2	0.2	1.5	5.3	8.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	7.8	8.3	5.9	8.3	6.3	1.7	2.1	0.9	2.9	17.5	9.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.8	48.6	53.1	76.6	46.1	34.9	55.6	20.8	20.1	55.9	34.7	21.3
LnGrp LOS	D	D	D	E	D	C	E	C	C	E	C	C
Approach Vol, veh/h		878			1289			346			2036	
Approach Delay, s/veh		50.5			47.6			26.6			33.2	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	59.3	15.0	33.0	14.0	58.0	17.5	30.5
Change Period (Y+Rc), s	5.0	6.0	6.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	10.0	43.0	14.0	30.0	15.0	38.0	15.0	30.0
Max Q Clear Time (g_c+I1), s	5.8	41.2	6.7	21.1	8.5	6.9	12.4	20.3
Green Ext Time (p_c), s	0.0	1.6	0.0	5.5	0.2	1.8	0.1	3.7

Intersection Summary	
HCM 6th Ctrl Delay	40.1
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
11: Hollywood Way & Riverside Dr

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	44	441	128	12	156	80	10	214	5	378	737	408
Future Volume (veh/h)	44	441	128	12	156	80	10	214	5	378	737	408
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.97	0.99		0.96	1.00		0.99	0.99		0.99
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	46	464	135	13	164	84	11	225	5	398	776	429
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	252	464	134	117	318	153	305	1880	42	812	2325	1026
Arrive On Green	0.07	0.17	0.17	0.03	0.14	0.14	1.00	1.00	1.00	0.14	1.00	1.00
Sat Flow, veh/h	1781	2698	778	1781	2289	1104	463	3553	79	1781	3554	1568
Grp Volume(v), veh/h	46	304	295	13	125	123	11	112	118	398	776	429
Grp Sat Flow(s),veh/h/ln	1781	1777	1699	1781	1777	1616	463	1777	1855	1781	1777	1568
Q Serve(g_s), s	2.5	20.5	20.6	0.7	7.8	8.5	0.0	0.0	0.0	10.0	0.0	0.0
Cycle Q Clear(g_c), s	2.5	20.5	20.6	0.7	7.8	8.5	0.0	0.0	0.0	10.0	0.0	0.0
Prop In Lane	1.00		0.46	1.00		0.68	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	252	305	292	117	247	224	305	940	982	812	2325	1026
V/C Ratio(X)	0.18	1.00	1.01	0.11	0.51	0.55	0.04	0.12	0.12	0.49	0.33	0.42
Avail Cap(c_a), veh/h	284	305	292	223	311	283	305	940	982	812	2325	1026
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.92	0.92	0.92	0.41	0.41	0.41
Uniform Delay (d), s/veh	38.6	49.6	49.7	42.7	47.9	48.2	0.0	0.0	0.0	10.8	0.0	0.0
Incr Delay (d2), s/veh	0.3	50.3	55.1	0.3	1.6	2.1	0.2	0.2	0.2	0.1	0.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	13.3	13.2	0.3	3.6	3.6	0.0	0.1	0.1	4.5	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.9	100.0	104.8	43.0	49.5	50.3	0.2	0.2	0.2	11.0	0.2	0.5
LnGrp LOS	D	F	F	D	D	D	A	A	A	B	A	A
Approach Vol, veh/h		645			261			241			1603	
Approach Delay, s/veh		97.8			49.5			0.2			2.9	
Approach LOS		F			D			A			A	

Timer - Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	12.8	22.7	15.0	69.5	8.9	26.6		84.5
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0		6.0
Max Green Setting (Gmax), s	10.0	21.0	10.0	57.0	11.0	20.0		72.0
Max Q Clear Time (g_c+I1), s	4.5	10.5	12.0	2.0	2.7	22.6		2.0
Green Ext Time (p_c), s	0.0	1.0	0.0	1.6	0.0	0.0		9.1

Intersection Summary	
HCM 6th Ctrl Delay	29.4
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
12: Hollywood Way & Olive Ave

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑↱			↰↑↱		↰	↑	↱↱
Traffic Volume (veh/h)	200	1053	80	55	1024	62	14	13	13	76	201	455
Future Volume (veh/h)	200	1053	80	55	1024	62	14	13	13	76	201	455
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	0.99		0.96	0.96		0.96
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	206	1086	82	57	1056	64	14	13	13	78	207	469
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	427	2863	216	401	2854	173	139	163	183	326	395	775
Arrive On Green	0.07	0.59	0.59	0.06	0.58	0.58	0.21	0.21	0.21	0.35	0.35	0.35
Sat Flow, veh/h	1781	4837	365	1781	4914	297	401	773	865	1335	1870	2683
Grp Volume(v), veh/h	206	764	404	57	731	389	17	0	23	78	207	469
Grp Sat Flow(s),veh/h/ln	1781	1702	1798	1781	1702	1808	533	0	1506	1335	1870	1341
Q Serve(g_s), s	5.4	14.2	14.2	1.4	13.8	13.8	1.1	0.0	1.4	5.2	10.5	17.4
Cycle Q Clear(g_c), s	5.4	14.2	14.2	1.4	13.8	13.8	11.7	0.0	1.4	6.6	10.5	17.4
Prop In Lane	1.00		0.20	1.00		0.16	0.81		0.57	1.00		1.00
Lane Grp Cap(c), veh/h	427	2015	1064	401	1977	1050	167	0	318	326	395	775
V/C Ratio(X)	0.48	0.38	0.38	0.14	0.37	0.37	0.10	0.00	0.07	0.24	0.52	0.60
Avail Cap(c_a), veh/h	590	2015	1064	584	1977	1050	264	0	489	478	608	1081
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.94	0.94	0.94
Uniform Delay (d), s/veh	9.4	12.9	12.9	8.6	13.4	13.4	41.9	0.0	37.9	33.3	34.1	30.2
Incr Delay (d2), s/veh	0.8	0.5	1.0	0.2	0.5	1.0	0.3	0.0	0.1	0.4	1.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	5.4	5.9	0.5	5.3	5.8	0.5	0.0	0.5	1.6	4.5	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.2	13.4	13.9	8.8	14.0	14.4	42.2	0.0	38.0	33.7	35.1	30.9
LnGrp LOS	B	B	B	A	B	B	D	A	D	C	D	C
Approach Vol, veh/h		1374			1177			40			754	
Approach Delay, s/veh		13.1			13.9			39.8			32.3	
Approach LOS		B			B			D			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.0	75.7		30.3	12.7	77.0		30.3
Change Period (Y+Rc), s	5.0	6.0		5.0	5.0	6.0		5.0
Max Green Setting (Gmax), s	20.0	45.0		39.0	20.0	45.0		39.0
Max Q Clear Time (g_c+I1), s	7.4	15.8		19.4	3.4	16.2		13.7
Green Ext Time (p_c), s	0.4	9.0		3.4	0.1	9.4		0.2

Intersection Summary	
HCM 6th Ctrl Delay	18.0
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary
13: Riverside Dr & Olive Ave

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	16	726	310	64	972	90	146	151	45	83	717	21
Future Volume (veh/h)	16	726	310	64	972	90	146	151	45	83	717	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	0.98		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	748	320	66	1002	93	151	156	46	86	739	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	156	946	412	256	1115	487	327	1365	388	607	1788	
Arrive On Green	0.04	0.27	0.27	0.09	0.31	0.31	0.50	0.50	0.50	0.50	0.50	0.00
Sat Flow, veh/h	1781	3554	1546	1781	3554	1552	716	2712	771	1160	3554	1585
Grp Volume(v), veh/h	16	748	320	66	1002	93	151	100	102	86	739	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1546	1781	1777	1552	716	1777	1706	1160	1777	1585
Q Serve(g_s), s	0.8	23.5	23.0	2.9	32.3	5.2	20.1	3.6	3.8	5.1	15.7	0.0
Cycle Q Clear(g_c), s	0.8	23.5	23.0	2.9	32.3	5.2	35.8	3.6	3.8	8.9	15.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.45	1.00		1.00
Lane Grp Cap(c), veh/h	156	946	412	256	1115	487	327	894	858	607	1788	
V/C Ratio(X)	0.10	0.79	0.78	0.26	0.90	0.19	0.46	0.11	0.12	0.14	0.41	
Avail Cap(c_a), veh/h	365	1185	515	379	1185	517	327	894	858	607	1788	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	32.1	40.9	40.7	27.7	39.3	30.1	29.9	15.7	15.7	18.1	18.7	0.0
Incr Delay (d2), s/veh	0.2	2.9	5.9	0.4	9.0	0.2	4.6	0.3	0.3	0.5	0.7	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(50%),veh/ln	0.3	10.6	9.4	1.3	15.3	2.0	3.9	1.5	1.5	1.5	6.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.3	43.9	46.6	28.1	48.4	30.2	34.5	15.9	16.0	18.6	19.4	0.0
LnGrp LOS	C	D	D	C	D	C	C	B	B	B	B	
Approach Vol, veh/h		1084			1161			353			825	A
Approach Delay, s/veh		44.5			45.8			23.9			19.3	
Approach LOS		D			D			C			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.7	37.9		66.4	10.0	43.7		66.4
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0		6.0
Max Green Setting (Gmax), s	19.0	40.0		44.0	19.0	40.0		44.0
Max Q Clear Time (g_c+I1), s	4.9	25.5		17.7	2.8	34.3		37.8
Green Ext Time (p_c), s	0.1	5.6		6.0	0.0	3.3		1.2

Intersection Summary	
HCM 6th Ctrl Delay	36.7
HCM 6th LOS	D

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM Signalized Intersection Capacity Analysis
14: Alameda Ave & Ontario St & Olive Ave

10/27/2021

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	SBT	SBR
Lane Configurations		↰↰	↑↑		↰↰	↑↑			↑↑	↱	↑↑	↱
Traffic Volume (vph)	12	171	515	21	235	358	13	11	439	331	949	420
Future Volume (vph)	12	171	515	21	235	358	13	11	439	331	949	420
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.5	8.0		7.5	8.0			6.5	7.5	6.5	3.0
Lane Util. Factor		0.97	0.95		0.97	0.95			0.95	1.00	0.95	1.00
Frpb, ped/bikes		1.00	1.00		1.00	1.00			1.00	0.98	1.00	0.95
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00
Frt		1.00	0.99		1.00	0.99			1.00	0.85	1.00	0.85
Flt Protected		0.95	1.00		0.95	1.00			1.00	1.00	1.00	1.00
Satd. Flow (prot)		3433	3514		3433	3501			3539	1556	3539	1508
Flt Permitted		0.95	1.00		0.95	1.00			1.00	1.00	1.00	1.00
Satd. Flow (perm)		3433	3514		3433	3501			3539	1556	3539	1508
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	12	176	531	22	242	369	13	11	453	341	978	433
RTOR Reduction (vph)	0	0	2	0	0	2	0	0	0	0	0	0
Lane Group Flow (vph)	0	188	551	0	242	391	0	0	453	341	978	441
Confl. Peds. (#/hr)	4	12		14	15		4	12		10		7
Turn Type	Prot	Prot	NA		Prot	NA			NA	custom	NA	custom
Protected Phases	1	1	6		5	2			8		4	
Permitted Phases										5 7 8		3 4
Actuated Green, G (s)		11.9	24.5		13.3	25.9			40.8	67.0	40.2	47.2
Effective Green, g (s)		11.9	24.5		13.3	25.9			40.8	57.5	40.2	47.2
Actuated g/C Ratio		0.11	0.23		0.12	0.24			0.38	0.54	0.38	0.44
Clearance Time (s)		7.5	8.0		7.5	8.0			6.5		6.5	
Vehicle Extension (s)		2.5	4.0		2.5	4.0			3.0		3.0	
Lane Grp Cap (vph)		381	804		426	847			1349	836	1329	665
v/s Ratio Prot		0.05	c0.16		c0.07	0.11			0.13		c0.28	
v/s Ratio Perm										0.22		c0.29
v/c Ratio		0.49	0.68		0.57	0.46			0.34	0.41	0.74	0.66
Uniform Delay, d1		44.7	37.7		44.1	34.6			23.5	14.7	28.8	23.6
Progression Factor		1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00
Incremental Delay, d2		0.7	2.6		1.4	0.5			0.1	0.2	2.2	2.5
Delay (s)		45.4	40.4		45.6	35.2			23.6	14.9	31.0	26.1
Level of Service		D	D		D	D			C	B	C	C
Approach Delay (s)			41.6			39.1			19.9		29.5	
Approach LOS			D			D			B		C	

Intersection Summary			
HCM 2000 Control Delay	31.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	107.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	82.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR2	SER2
Lane Configurations		↱
Traffic Volume (vph)	8	23
Future Volume (vph)	8	23
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		7.5
Lane Util. Factor		1.00
Frpb, ped/bikes		1.00
Flpb, ped/bikes		1.00
Frt		0.86
Flt Protected		1.00
Satd. Flow (prot)		1611
Flt Permitted		1.00
Satd. Flow (perm)		1611
Peak-hour factor, PHF	0.97	0.97
Adj. Flow (vph)	8	24
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	24
Confl. Peds. (#/hr)	4	7
Turn Type		Over
Protected Phases		1
Permitted Phases		
Actuated Green, G (s)		11.9
Effective Green, g (s)		11.9
Actuated g/C Ratio		0.11
Clearance Time (s)		7.5
Vehicle Extension (s)		2.5
Lane Grp Cap (vph)		179
v/s Ratio Prot		0.01
v/s Ratio Perm		
v/c Ratio		0.13
Uniform Delay, d1		42.9
Progression Factor		1.00
Incremental Delay, d2		0.2
Delay (s)		43.2
Level of Service		D
Approach Delay (s)		
Approach LOS		

Intersection Summary

HCM 6th Signalized Intersection Summary
15: Buena Vista St & Glenoaks Blvd

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↱			✣	
Traffic Volume (veh/h)	21	1200	111	101	570	9	145	107	91	35	157	9
Future Volume (veh/h)	21	1200	111	101	570	9	145	107	91	35	157	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	0.99		0.99
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	21	1224	113	103	582	9	148	109	93	36	160	9
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	450	1476	136	239	2028	31	382	274	234	79	228	12
Arrive On Green	0.45	0.45	0.45	0.06	0.57	0.57	0.09	0.29	0.29	0.16	0.16	0.16
Sat Flow, veh/h	824	3288	303	1781	3582	55	1781	930	793	205	1453	76
Grp Volume(v), veh/h	21	660	677	103	289	302	148	0	202	205	0	0
Grp Sat Flow(s),veh/h/ln	824	1777	1814	1781	1777	1860	1781	0	1723	1734	0	0
Q Serve(g_s), s	1.3	29.3	29.5	2.6	7.6	7.6	6.0	0.0	8.4	5.7	0.0	0.0
Cycle Q Clear(g_c), s	1.3	29.3	29.5	2.6	7.6	7.6	6.0	0.0	8.4	10.0	0.0	0.0
Prop In Lane	1.00		0.17	1.00		0.03	1.00		0.46	0.18		0.04
Lane Grp Cap(c), veh/h	450	798	815	239	1006	1053	382	0	508	319	0	0
V/C Ratio(X)	0.05	0.83	0.83	0.43	0.29	0.29	0.39	0.00	0.40	0.64	0.00	0.00
Avail Cap(c_a), veh/h	450	798	815	308	1006	1053	395	0	737	530	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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.0	21.7	21.8	17.8	10.1	10.1	26.4	0.0	25.3	36.1	0.0	0.0
Incr Delay (d2), s/veh	0.2	9.6	9.6	0.9	0.7	0.7	0.5	0.0	0.5	2.2	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(50%),veh/ln	0.3	13.6	13.9	1.0	2.9	3.1	2.5	0.0	3.4	4.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.2	31.4	31.4	18.7	10.8	10.8	26.9	0.0	25.8	38.2	0.0	0.0
LnGrp LOS	B	C	C	B	B	B	C	A	C	D	A	A
Approach Vol, veh/h		1358			694			350			205	
Approach Delay, s/veh		31.1			12.0			26.3			38.2	
Approach LOS		C			B			C			D	
Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		57.5		32.5	10.5	46.9	12.4	20.1				
Change Period (Y+Rc), s		6.5		6.0	5.0	6.5	4.6	6.0				
Max Green Setting (Gmax), s		39.0		38.5	9.0	25.0	8.5	25.4				
Max Q Clear Time (g_c+I1), s		9.6		10.4	4.6	31.5	8.0	12.0				
Green Ext Time (p_c), s		4.7		1.2	0.1	0.0	0.0	0.9				

Intersection Summary			
HCM 6th Ctrl Delay			25.9
HCM 6th LOS			C

16: San Fernando Blvd & Buena Vista St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱	↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	94	582	175	35	135	164	22	616	17	236	1144	219
Future Volume (veh/h)	94	582	175	35	135	164	22	616	17	236	1144	219
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	1.00		0.99	1.00		0.99	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	98	606	182	36	141	171	23	642	18	246	1192	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	396	739	221	165	904	399	48	1244	35	283	1733	
Arrive On Green	0.06	0.27	0.27	0.03	0.25	0.25	0.03	0.35	0.35	0.16	0.49	0.00
Sat Flow, veh/h	1781	2688	806	1781	3554	1570	1781	3529	99	1781	3554	1585
Grp Volume(v), veh/h	98	400	388	36	141	171	23	323	337	246	1192	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1717	1781	1777	1570	1781	1777	1851	1781	1777	1585
Q Serve(g_s), s	4.8	25.4	25.5	1.8	3.7	11.0	1.5	17.4	17.4	16.3	31.2	0.0
Cycle Q Clear(g_c), s	4.8	25.4	25.5	1.8	3.7	11.0	1.5	17.4	17.4	16.3	31.2	0.0
Prop In Lane	1.00		0.47	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	396	488	472	165	904	399	48	626	652	283	1733	
V/C Ratio(X)	0.25	0.82	0.82	0.22	0.16	0.43	0.48	0.52	0.52	0.87	0.69	
Avail Cap(c_a), veh/h	592	589	569	398	1178	521	375	1105	1151	591	2652	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	30.5	40.9	41.0	33.4	34.9	37.6	57.9	30.9	30.9	49.5	23.8	0.0
Incr Delay (d2), s/veh	0.1	8.4	8.8	0.2	0.1	1.0	2.8	0.9	0.9	9.5	1.0	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(50%),veh/ln	2.1	12.2	11.9	0.8	1.6	4.4	0.7	7.6	7.9	8.0	13.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.6	49.4	49.8	33.7	35.0	38.7	60.7	31.9	31.8	59.0	24.9	0.0
LnGrp LOS	C	D	D	C	D	D	E	C	C	E	C	
Approach Vol, veh/h		886			348			683			1438	A
Approach Delay, s/veh		47.5			36.7			32.8			30.7	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	39.2	7.8	64.8	11.3	36.7	24.2	48.5
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	5.0	6.0
Max Green Setting (Gmax), s	20.0	40.0	25.4	90.0	20.0	40.0	40.0	75.0
Max Q Clear Time (g_c+I1), s	3.8	27.5	3.5	33.2	6.8	13.0	18.3	19.4
Green Ext Time (p_c), s	0.0	5.4	0.0	25.7	0.1	2.2	0.9	7.1

Intersection Summary	
HCM 6th Ctrl Delay	36.2
HCM 6th LOS	D

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
17: Buena Vista St & Empire Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰↰	↑↱		↰	↑↑	↱	↰↰	↑↱	
Traffic Volume (veh/h)	68	252	168	167	120	55	145	465	356	114	874	93
Future Volume (veh/h)	68	252	168	167	120	55	145	465	356	114	874	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.98	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	70	260	173	172	124	57	149	479	367	118	901	96
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	162	544	237	225	427	186	367	2023	897	167	1837	196
Arrive On Green	0.05	0.15	0.15	0.07	0.18	0.18	0.05	0.57	0.57	0.05	0.57	0.57
Sat Flow, veh/h	1781	3554	1548	3456	2395	1040	1781	3554	1575	3456	3238	345
Grp Volume(v), veh/h	70	260	173	172	90	91	149	479	367	118	494	503
Grp Sat Flow(s),veh/h/ln	1781	1777	1548	1728	1777	1658	1781	1777	1575	1728	1777	1806
Q Serve(g_s), s	5.0	9.4	12.7	6.9	6.1	6.7	4.9	9.4	11.9	4.7	23.4	23.4
Cycle Q Clear(g_c), s	5.0	9.4	12.7	6.9	6.1	6.7	4.9	9.4	11.9	4.7	23.4	23.4
Prop In Lane	1.00		1.00	1.00		0.63	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	162	544	237	225	317	296	367	2023	897	167	1008	1024
V/C Ratio(X)	0.43	0.48	0.73	0.76	0.28	0.31	0.41	0.24	0.41	0.71	0.49	0.49
Avail Cap(c_a), veh/h	282	863	376	469	470	438	468	2023	897	296	1008	1024
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.2	54.2	40.6	64.4	49.8	50.0	13.8	15.0	7.1	65.7	18.2	18.2
Incr Delay (d2), s/veh	1.4	0.7	4.3	4.0	0.5	0.6	0.5	0.3	1.3	4.1	1.7	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	4.3	5.2	3.2	2.8	2.8	2.0	3.9	4.1	2.2	10.0	10.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.6	54.8	44.9	68.4	50.3	50.6	14.3	15.3	8.4	69.7	19.9	19.8
LnGrp LOS	E	D	D	E	D	D	B	B	A	E	B	B
Approach Vol, veh/h		503			353			995			1115	
Approach Delay, s/veh		51.7			59.2			12.6			25.1	
Approach LOS		D			E			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.1	27.4	12.0	85.4	11.6	31.0	11.7	85.7
Change Period (Y+Rc), s	6.0	* 6	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	19.0	* 34	15.0	50.0	16.0	37.0	12.0	53.0
Max Q Clear Time (g_c+I1), s	8.9	14.7	6.9	25.4	7.0	8.7	6.7	13.9
Green Ext Time (p_c), s	0.3	2.2	0.2	7.2	0.1	1.0	0.1	6.5

Intersection Summary	
HCM 6th Ctrl Delay	29.5
HCM 6th LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑	↱		✥		↰	↑↑			↑↑	↱
Traffic Volume (vph)	299	0	534	0	0	0	151	791	0	0	917	216
Future Volume (vph)	299	0	534	0	0	0	151	791	0	0	917	216
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.7	5.7				6.0	6.0			6.0	6.0
Lane Util. Factor	0.95	0.95	1.00				1.00	0.95			0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98				1.00	1.00			1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00				1.00	1.00			1.00	1.00
Frt	1.00	1.00	0.85				1.00	1.00			1.00	0.85
Flt Protected	0.95	0.95	1.00				0.95	1.00			1.00	1.00
Satd. Flow (prot)	1681	1681	1553				1770	3539			3539	1552
Flt Permitted	0.95	0.95	1.00				0.95	1.00			1.00	1.00
Satd. Flow (perm)	1681	1681	1553				1770	3539			3539	1552
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	318	0	568	0	0	0	161	841	0	0	976	230
RTOR Reduction (vph)	0	0	440	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	159	159	128	0	0	0	161	841	0	0	976	230
Confl. Peds. (#/hr)			3	3			3		4	4		3
Turn Type	Split	NA	Perm				Prot	NA			NA	Perm
Protected Phases	4	4			3		5	2			6	
Permitted Phases			4	3								6
Actuated Green, G (s)	24.7	24.7	24.7				17.4	108.1			84.7	84.7
Effective Green, g (s)	24.7	24.7	24.7				17.4	108.1			84.7	84.7
Actuated g/C Ratio	0.17	0.17	0.17				0.12	0.75			0.59	0.59
Clearance Time (s)	5.7	5.7	5.7				6.0	6.0			6.0	6.0
Vehicle Extension (s)	3.5	3.5	3.5				2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	287	287	265				213	2647			2074	909
v/s Ratio Prot	c0.09	0.09					c0.09	0.24			c0.28	
v/s Ratio Perm			0.08									0.15
v/c Ratio	0.55	0.55	0.48				0.76	0.32			0.47	0.25
Uniform Delay, d1	54.9	54.9	54.1				61.5	6.0			17.1	14.5
Progression Factor	1.00	1.00	1.00				1.00	1.00			1.00	1.00
Incremental Delay, d2	2.5	2.5	1.6				12.7	0.3			0.8	0.7
Delay (s)	57.4	57.4	55.8				74.2	6.3			17.9	15.2
Level of Service	E	E	E				E	A			B	B
Approach Delay (s)		56.3			0.0			17.2			17.3	
Approach LOS		E			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	28.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	144.5	Sum of lost time (s)	22.3
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
19: Victory Blvd & Buena Vista St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	142	776	292	92	544	207	200	599	42	393	1121	59
Future Volume (veh/h)	142	776	292	92	544	207	200	599	42	393	1121	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.99
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	146	800	301	95	561	213	206	618	43	405	1156	61
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	245	883	388	164	802	352	295	1408	620	526	1637	722
Arrive On Green	0.08	0.25	0.25	0.05	0.23	0.23	0.08	0.40	0.40	0.15	0.46	0.46
Sat Flow, veh/h	1781	3554	1560	1781	3554	1558	1781	3554	1565	1781	3554	1568
Grp Volume(v), veh/h	146	800	301	95	561	213	206	618	43	405	1156	61
Grp Sat Flow(s),veh/h/ln	1781	1777	1560	1781	1777	1558	1781	1777	1565	1781	1777	1568
Q Serve(g_s), s	8.7	30.6	25.1	5.7	20.3	17.2	9.5	17.8	2.4	18.1	36.4	3.1
Cycle Q Clear(g_c), s	8.7	30.6	25.1	5.7	20.3	17.2	9.5	17.8	2.4	18.1	36.4	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	245	883	388	164	802	352	295	1408	620	526	1637	722
V/C Ratio(X)	0.60	0.91	0.78	0.58	0.70	0.61	0.70	0.44	0.07	0.77	0.71	0.08
Avail Cap(c_a), veh/h	349	924	406	309	924	405	576	1408	620	692	1637	722
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.6	51.0	49.0	41.6	49.8	48.6	26.2	30.9	26.2	20.5	30.2	21.2
Incr Delay (d2), s/veh	1.7	12.0	8.8	2.4	2.0	2.0	2.2	1.0	0.2	3.4	2.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	15.1	10.8	2.6	9.3	6.9	4.2	7.9	0.9	7.9	16.1	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.3	63.0	57.8	44.0	51.8	50.6	28.4	31.9	26.5	23.8	32.8	21.4
LnGrp LOS	D	E	E	D	D	D	C	C	C	C	C	C
Approach Vol, veh/h		1247			869			867			1622	
Approach Delay, s/veh		59.1			50.6			30.8			30.1	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.2	40.8	16.5	70.5	15.4	37.6	25.5	61.5
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	19.0	36.4	34.0	29.4	19.0	36.4	34.0	29.4
Max Q Clear Time (g_c+I1), s	7.7	32.6	11.5	38.4	10.7	22.3	20.1	19.8
Green Ext Time (p_c), s	0.1	2.2	0.4	0.0	0.2	3.9	0.8	3.0

Intersection Summary			
HCM 6th Ctrl Delay			42.0
HCM 6th LOS			D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	94	521	306	153	443	85	197	747	91	153	1212	92
Future Volume (veh/h)	94	521	306	153	443	85	197	747	91	153	1212	92
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	548	322	161	466	89	207	786	96	161	1276	97
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	272	809	358	254	904	400	251	1676	745	368	1625	722
Arrive On Green	0.06	0.23	0.23	0.08	0.25	0.25	0.08	0.47	0.47	0.06	0.46	0.46
Sat Flow, veh/h	1781	3554	1573	1781	3554	1574	1781	3554	1579	1781	3554	1579
Grp Volume(v), veh/h	99	548	322	161	466	89	207	786	96	161	1276	97
Grp Sat Flow(s),veh/h/ln	1781	1777	1573	1781	1777	1574	1781	1777	1579	1781	1777	1579
Q Serve(g_s), s	5.9	19.7	27.8	9.5	15.8	6.3	8.5	21.0	4.8	6.7	42.6	5.0
Cycle Q Clear(g_c), s	5.9	19.7	27.8	9.5	15.8	6.3	8.5	21.0	4.8	6.7	42.6	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	272	809	358	254	904	400	251	1676	745	368	1625	722
V/C Ratio(X)	0.36	0.68	0.90	0.63	0.52	0.22	0.82	0.47	0.13	0.44	0.79	0.13
Avail Cap(c_a), veh/h	363	873	386	298	904	400	583	1676	745	725	1625	722
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.6	49.4	52.5	37.8	44.8	41.3	28.6	25.1	20.8	19.4	32.2	22.0
Incr Delay (d2), s/veh	0.6	1.9	22.3	2.8	0.5	0.3	5.0	0.9	0.4	0.6	3.9	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	9.0	13.2	4.4	7.1	2.5	3.9	9.1	1.9	2.8	19.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.2	51.3	74.8	40.6	45.3	41.5	33.6	26.0	21.2	20.0	36.1	22.4
LnGrp LOS	D	D	E	D	D	D	C	C	C	B	D	C
Approach Vol, veh/h		969			716			1089			1534	
Approach Delay, s/veh		57.9			43.8			27.1			33.5	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.2	37.9	16.0	70.0	12.4	41.6	14.0	72.0
Change Period (Y+Rc), s	4.6	6.0	5.0	6.0	4.6	6.0	5.0	6.0
Max Green Setting (Gmax), s	15.0	34.4	37.0	32.0	15.0	34.4	37.0	32.0
Max Q Clear Time (g_c+I1), s	11.5	29.8	10.5	44.6	7.9	17.8	8.7	23.0
Green Ext Time (p_c), s	0.1	2.0	0.4	0.0	0.1	3.1	0.3	3.8

Intersection Summary			
HCM 6th Ctrl Delay			39.1
HCM 6th LOS			D

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	110	649	137	133	519	211	122	553	83	404	1302	110
Future Volume (veh/h)	110	649	137	133	519	211	122	553	83	404	1302	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
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	128	755	159	155	603	245	142	643	97	470	1514	128
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	233	831	366	211	873	385	191	1236	547	525	1652	732
Arrive On Green	0.07	0.23	0.23	0.08	0.25	0.25	0.07	0.35	0.35	0.18	0.46	0.46
Sat Flow, veh/h	1781	3554	1565	1781	3554	1566	1781	3554	1571	1781	3554	1575
Grp Volume(v), veh/h	128	755	159	155	603	245	142	643	97	470	1514	128
Grp Sat Flow(s),veh/h/ln	1781	1777	1565	1781	1777	1566	1781	1777	1571	1781	1777	1575
Q Serve(g_s), s	7.6	28.9	12.1	9.2	21.6	19.6	7.1	20.2	6.0	22.8	55.6	6.6
Cycle Q Clear(g_c), s	7.6	28.9	12.1	9.2	21.6	19.6	7.1	20.2	6.0	22.8	55.6	6.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	233	831	366	211	873	385	191	1236	547	525	1652	732
V/C Ratio(X)	0.55	0.91	0.43	0.73	0.69	0.64	0.74	0.52	0.18	0.89	0.92	0.17
Avail Cap(c_a), veh/h	302	873	384	259	873	385	543	1236	547	669	1652	732
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.5	52.2	45.7	39.7	48.0	47.2	33.9	36.3	31.7	24.3	34.9	21.8
Incr Delay (d2), s/veh	1.5	12.9	0.8	7.3	2.3	3.5	4.2	1.6	0.7	11.7	9.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	14.4	4.8	4.5	9.9	8.0	3.3	9.1	2.4	11.1	25.8	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.0	65.0	46.5	47.0	50.3	50.7	38.1	37.9	32.4	36.1	44.4	22.3
LnGrp LOS	D	E	D	D	D	D	D	D	C	D	D	C
Approach Vol, veh/h		1042			1003			882			2112	
Approach Delay, s/veh		59.1			49.9			37.3			41.2	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.8	38.8	14.3	71.1	14.2	40.4	30.7	54.7
Change Period (Y+Rc), s	4.6	6.0	5.0	6.0	4.6	6.0	5.0	6.0
Max Green Setting (Gmax), s	15.0	34.4	37.0	32.0	15.0	34.4	37.0	32.0
Max Q Clear Time (g_c+I1), s	11.2	30.9	9.1	57.6	9.6	23.6	24.8	22.2
Green Ext Time (p_c), s	0.1	1.8	0.3	0.0	0.1	3.7	0.9	3.3

Intersection Summary	
HCM 6th Ctrl Delay	46.0
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
22: Olive Ave & Buena Vista St

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	171	468	108	168	914	48	97	355	113	100	1045	450
Future Volume (veh/h)	171	468	108	168	914	48	97	355	113	100	1045	450
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	180	493	114	177	962	51	102	374	119	105	1100	474
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	726	167	288	866	46	200	1627	713	485	1630	714
Arrive On Green	0.09	0.25	0.25	0.09	0.25	0.25	0.04	0.46	0.46	0.04	0.46	0.46
Sat Flow, veh/h	1781	2849	654	1781	3426	182	1781	3554	1557	1781	3554	1557
Grp Volume(v), veh/h	180	306	301	177	499	514	102	374	119	105	1100	474
Grp Sat Flow(s),veh/h/ln	1781	1777	1726	1781	1777	1830	1781	1777	1557	1781	1777	1557
Q Serve(g_s), s	10.3	21.7	22.0	10.2	35.4	35.4	4.2	8.9	6.3	4.4	34.0	33.2
Cycle Q Clear(g_c), s	10.3	21.7	22.0	10.2	35.4	35.4	4.2	8.9	6.3	4.4	34.0	33.2
Prop In Lane	1.00		0.38	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	212	453	440	288	449	463	200	1627	713	485	1630	714
V/C Ratio(X)	0.85	0.68	0.68	0.62	1.11	1.11	0.51	0.23	0.17	0.22	0.67	0.66
Avail Cap(c_a), veh/h	395	551	535	372	449	463	236	1627	713	520	1630	714
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.1	47.0	47.1	35.9	52.3	52.3	24.4	23.0	22.3	18.7	29.7	29.5
Incr Delay (d2), s/veh	6.9	2.5	2.7	1.6	76.1	75.5	1.5	0.3	0.5	0.2	2.3	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	10.0	9.8	4.6	25.2	25.9	1.9	3.9	2.4	1.9	15.0	13.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.0	49.4	49.8	37.5	128.4	127.8	25.9	23.3	22.8	18.9	32.0	34.3
LnGrp LOS	D	D	D	D	F	F	C	C	C	B	C	C
Approach Vol, veh/h		787			1190			595			1679	
Approach Delay, s/veh		48.6			114.6			23.7			31.8	
Approach LOS		D			F			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	41.7	11.2	70.2	17.2	41.4	11.3	70.1
Change Period (Y+Rc), s	4.6	6.0	5.0	6.0	4.6	6.0	5.0	6.0
Max Green Setting (Gmax), s	19.0	43.4	9.0	47.0	27.0	35.4	9.0	47.0
Max Q Clear Time (g_c+I1), s	12.2	24.0	6.2	36.0	12.3	37.4	6.4	10.9
Green Ext Time (p_c), s	0.2	3.7	0.0	6.9	0.3	0.0	0.0	3.1

Intersection Summary	
HCM 6th Ctrl Delay	57.0
HCM 6th LOS	E

HCM 6th Signalized Intersection Summary
23: Alameda Ave & Buena Vista St

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	202	616	123	234	590	117	213	302	219	271	687	188
Future Volume (veh/h)	202	616	123	234	590	117	213	302	219	271	687	188
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.95	0.99		0.95
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	224	684	137	260	656	130	237	336	243	301	763	209
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	274	826	355	308	887	382	370	1417	599	534	1492	633
Arrive On Green	0.08	0.23	0.23	0.09	0.25	0.25	0.09	0.40	0.40	0.12	0.42	0.42
Sat Flow, veh/h	3456	3554	1526	3456	3554	1530	1781	3554	1503	1781	3554	1507
Grp Volume(v), veh/h	224	684	137	260	656	130	237	336	243	301	763	209
Grp Sat Flow(s),veh/h/ln	1728	1777	1526	1728	1777	1530	1781	1777	1503	1781	1777	1507
Q Serve(g_s), s	8.9	25.6	8.2	10.4	23.8	9.8	10.9	8.8	11.5	13.8	22.2	13.1
Cycle Q Clear(g_c), s	8.9	25.6	8.2	10.4	23.8	9.8	10.9	8.8	11.5	13.8	22.2	13.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	274	826	355	308	887	382	370	1417	599	534	1492	633
V/C Ratio(X)	0.82	0.83	0.39	0.84	0.74	0.34	0.64	0.24	0.41	0.56	0.51	0.33
Avail Cap(c_a), veh/h	346	1142	490	346	1142	492	457	1417	599	595	1492	633
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.5	51.1	27.2	62.8	48.4	43.1	23.0	28.0	15.2	20.3	30.0	27.4
Incr Delay (d2), s/veh	10.7	3.7	0.7	15.1	1.9	0.5	1.7	0.4	2.0	0.7	1.3	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	11.8	3.1	5.2	10.8	3.8	4.8	3.9	4.3	5.9	9.8	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.1	54.8	27.9	77.9	50.2	43.6	24.7	28.4	17.2	21.1	31.3	28.7
LnGrp LOS	E	D	C	E	D	D	C	C	B	C	C	C
Approach Vol, veh/h		1045			1046			816			1273	
Approach Delay, s/veh		55.4			56.3			24.0			28.4	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.5	38.5	18.2	64.8	16.1	40.9	21.2	61.8
Change Period (Y+Rc), s	6.0	* 6	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	14.0	* 45	20.0	39.0	14.0	45.0	21.0	38.0
Max Q Clear Time (g_c+I1), s	12.4	27.6	12.9	24.2	10.9	25.8	15.8	13.5
Green Ext Time (p_c), s	0.1	4.9	0.3	5.4	0.2	4.9	0.3	3.2

Intersection Summary	
HCM 6th Ctrl Delay	41.3
HCM 6th LOS	D

Notes

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

Movement	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	SBR2	NEL
Lane Configurations	↰	↰	↰↑	↱	↰↰	↑↱		↰	↑↱		↱	↰
Traffic Volume (vph)	20	168	187	79	368	585	298	266	280	46	264	87
Future Volume (vph)	20	168	187	79	368	585	298	266	280	46	264	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	6.5	6.5	6.5	6.5	6.5		6.5	6.5		6.5	4.6
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	0.95		1.00	0.91		0.91	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.95		1.00	0.95		0.85	1.00
Flt Protected	0.95	0.95	0.99	1.00	0.95	1.00		0.95	1.00		1.00	0.95
Satd. Flow (prot)	1770	1681	1746	1544	1770	3342		1770	3231		1441	1770
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00		0.95	1.00		1.00	0.95
Satd. Flow (perm)	1770	1770	1770	1544	1770	3342		1770	3231		1441	1770
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	21	177	197	83	387	616	314	280	295	48	278	92
RTOR Reduction (vph)	0	0	0	58	0	29	0	0	0	0	0	0
Lane Group Flow (vph)	21	103	271	25	387	901	0	280	429	0	192	92
Confl. Peds. (#/hr)				6			2	2				6
Turn Type	Prot	Perm	NA	Perm	Split	NA		Split	NA		Perm	Prot
Protected Phases	1		6		8	8		7	7			5
Permitted Phases		6		6							7	
Actuated Green, G (s)	5.6	43.7	43.7	43.7	50.7	50.7		34.0	34.0		34.0	14.0
Effective Green, g (s)	5.6	43.7	43.7	43.7	50.7	50.7		34.0	34.0		34.0	14.0
Actuated g/C Ratio	0.03	0.26	0.26	0.26	0.30	0.30		0.20	0.20		0.20	0.08
Clearance Time (s)	4.6	6.5	6.5	6.5	6.5	6.5		6.5	6.5		6.5	4.6
Vehicle Extension (s)	2.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	2.5
Lane Grp Cap (vph)	59	464	464	405	538	1017		361	659		294	148
v/s Ratio Prot	0.01				0.22	c0.27		c0.16	0.13			c0.05
v/s Ratio Perm		0.06	0.15	0.02							0.13	
v/c Ratio	0.36	0.22	0.58	0.06	0.72	0.89		0.78	0.65		0.65	0.62
Uniform Delay, d1	78.7	48.1	53.5	46.0	51.6	55.1		62.6	60.8		60.8	73.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	2.7	0.3	2.0	0.1	4.7	9.6		10.3	2.4		5.3	6.8
Delay (s)	81.4	48.4	55.5	46.1	56.3	64.7		72.9	63.2		66.2	80.5
Level of Service	F	D	E	D	E	E		E	E		E	F
Approach Delay (s)			53.5			62.2			66.9			65.6
Approach LOS			D			E			E			E

Intersection Summary			
HCM 2000 Control Delay	63.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	166.5	Sum of lost time (s)	24.1
Intersection Capacity Utilization	101.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
24: Riverside Dr & SR 134 Ramps/Buena Vista St & SR 134 WB On Ramp

10/27/2021

Movement	NER	NER2
Lane Configurations		
Traffic Volume (vph)	773	1
Future Volume (vph)	773	1
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	6.5	
Lane Util. Factor	0.88	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.85	
Flt Protected	1.00	
Satd. Flow (prot)	2787	
Flt Permitted	1.00	
Satd. Flow (perm)	2787	
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	814	1
RTOR Reduction (vph)	54	0
Lane Group Flow (vph)	761	0
Confl. Peds. (#/hr)	2	
Turn Type	Prot	
Protected Phases	2	
Permitted Phases		
Actuated Green, G (s)	52.1	
Effective Green, g (s)	52.1	
Actuated g/C Ratio	0.31	
Clearance Time (s)	6.5	
Vehicle Extension (s)	3.5	
Lane Grp Cap (vph)	872	
v/s Ratio Prot	c0.27	
v/s Ratio Perm		
v/c Ratio	0.87	
Uniform Delay, d1	54.1	
Progression Factor	1.00	
Incremental Delay, d2	9.8	
Delay (s)	63.9	
Level of Service	E	
Approach Delay (s)		
Approach LOS		

Intersection Summary

HCM Signalized Intersection Capacity Analysis
25: Burbank Blvd & Victory Blvd

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑	↱	↰↰	↰↑	↱
Traffic Volume (vph)	40	1406	313	379	1255	485	233	233	112	636	527	52
Future Volume (vph)	40	1406	313	379	1255	485	233	233	112	636	527	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	6.0	5.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0	6.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.86	0.86	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00
Satd. Flow (prot)	3433	5085	1561	3433	5085	1570	3433	3539	1583	3044	3185	1557
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00
Satd. Flow (perm)	3433	5085	1561	3433	5085	1570	3433	3539	1583	3044	3185	1557
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	43	1512	337	408	1349	522	251	251	120	684	567	56
RTOR Reduction (vph)	0	0	22	0	0	122	0	0	35	0	0	41
Lane Group Flow (vph)	43	1512	315	408	1349	400	251	251	85	609	642	15
Confl. Peds. (#/hr)	1		4	4		1	3					3
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Split	NA	pm+ov	Split	NA	Perm
Protected Phases	1	6	7	5	2	3	7	7	5	3	3	
Permitted Phases			6			2			7			3
Actuated Green, G (s)	6.0	63.5	85.7	25.7	83.2	130.5	22.2	22.2	47.9	47.3	47.3	47.3
Effective Green, g (s)	6.0	63.5	85.7	25.7	83.2	130.5	22.2	22.2	47.9	47.3	47.3	47.3
Actuated g/C Ratio	0.03	0.35	0.47	0.14	0.46	0.72	0.12	0.12	0.26	0.26	0.26	0.26
Clearance Time (s)	5.0	6.0	6.0	5.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0	6.0
Vehicle Extension (s)	2.5	3.0	3.0	2.0	3.0	3.0	3.0	3.0	2.0	3.0	3.0	3.0
Lane Grp Cap (vph)	113	1777	736	485	2328	1179	419	432	417	792	829	405
v/s Ratio Prot	0.01	c0.30	0.05	c0.12	0.27	0.09	c0.07	0.07	0.03	0.20	c0.20	
v/s Ratio Perm			0.15			0.17			0.02			0.01
v/c Ratio	0.38	0.85	0.43	0.84	0.58	0.34	0.60	0.58	0.20	0.77	0.77	0.04
Uniform Delay, d1	86.0	54.7	31.8	76.0	36.3	9.5	75.5	75.4	52.1	62.1	62.3	50.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.6	4.1	0.4	12.0	0.4	0.2	2.3	2.0	0.1	4.5	4.6	0.0
Delay (s)	87.6	58.9	32.2	88.0	36.7	9.7	77.8	77.3	52.2	66.7	66.8	50.2
Level of Service	F	E	C	F	D	A	E	E	D	E	E	D
Approach Delay (s)		54.8			39.7			72.7			66.0	
Approach LOS		D			D			E			E	

Intersection Summary			
HCM 2000 Control Delay	53.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	181.7	Sum of lost time (s)	23.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
26: Victory Blvd/Victory Pl & Magnolia Blvd

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	115	515	205	178	534	111	139	455	72	199	931	129
Future Volume (veh/h)	115	515	205	178	534	111	139	455	72	199	931	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
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	126	566	225	196	587	122	153	500	79	219	1023	142
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	247	537	213	228	878	387	285	1603	711	498	1675	743
Arrive On Green	0.07	0.22	0.22	0.10	0.25	0.25	0.06	0.45	0.45	0.08	0.47	0.47
Sat Flow, veh/h	1781	2475	981	1781	3554	1568	1781	3554	1576	1781	3554	1576
Grp Volume(v), veh/h	126	406	385	196	587	122	153	500	79	219	1023	142
Grp Sat Flow(s),veh/h/ln	1781	1777	1679	1781	1777	1568	1781	1777	1576	1781	1777	1576
Q Serve(g_s), s	7.6	30.4	30.4	11.6	20.9	8.9	6.4	12.6	4.1	9.1	29.9	7.3
Cycle Q Clear(g_c), s	7.6	30.4	30.4	11.6	20.9	8.9	6.4	12.6	4.1	9.1	29.9	7.3
Prop In Lane	1.00		0.58	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	247	386	365	228	878	387	285	1603	711	498	1675	743
V/C Ratio(X)	0.51	1.05	1.06	0.86	0.67	0.32	0.54	0.31	0.11	0.44	0.61	0.19
Avail Cap(c_a), veh/h	442	386	365	370	878	387	545	1603	711	722	1675	743
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	54.8	54.8	39.2	47.5	43.0	22.1	24.6	22.2	18.1	27.5	21.5
Incr Delay (d2), s/veh	0.6	60.2	62.6	6.1	2.0	0.5	0.6	0.5	0.3	0.2	1.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	20.0	19.2	5.5	9.5	3.5	2.7	5.5	1.6	3.8	13.1	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.2	115.0	117.4	45.3	49.5	43.5	22.6	25.1	22.5	18.3	29.2	22.1
LnGrp LOS	D	F	F	D	D	D	C	C	C	B	C	C
Approach Vol, veh/h		917			905			732			1384	
Approach Delay, s/veh		105.7			47.8			24.3			26.7	
Approach LOS		F			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	72.0	18.4	36.4	16.0	69.1	14.3	40.6
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	29.0	34.4	25.0	30.4	29.0	34.4	25.0	30.4
Max Q Clear Time (g_c+I1), s	8.4	31.9	13.6	32.4	11.1	14.6	9.6	22.9
Green Ext Time (p_c), s	0.2	1.7	0.2	0.0	0.3	3.5	0.1	2.6

Intersection Summary	
HCM 6th Ctrl Delay	49.5
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
27: Olive Ave & Victory Blvd

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	160	452	54	135	890	72	119	490	91	176	925	285
Future Volume (veh/h)	160	452	54	135	890	72	119	490	91	176	925	285
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	168	476	57	142	937	76	125	516	96	185	974	300
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	322	1527	182	487	1672	734	173	782	337	289	873	378
Arrive On Green	0.06	0.48	0.48	0.06	0.47	0.47	0.07	0.22	0.22	0.09	0.25	0.25
Sat Flow, veh/h	1781	3191	380	1781	3554	1560	1781	3554	1531	1781	3554	1537
Grp Volume(v), veh/h	168	264	269	142	937	76	125	516	96	185	974	300
Grp Sat Flow(s),veh/h/ln	1781	1777	1795	1781	1777	1560	1781	1777	1531	1781	1777	1537
Q Serve(g_s), s	6.8	12.7	12.9	5.7	26.5	3.8	7.5	18.5	7.3	11.0	34.4	25.6
Cycle Q Clear(g_c), s	6.8	12.7	12.9	5.7	26.5	3.8	7.5	18.5	7.3	11.0	34.4	25.6
Prop In Lane	1.00		0.21	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	322	850	859	487	1672	734	173	782	337	289	873	378
V/C Ratio(X)	0.52	0.31	0.31	0.29	0.56	0.10	0.72	0.66	0.28	0.64	1.12	0.79
Avail Cap(c_a), veh/h	577	850	859	756	1672	734	293	873	376	364	873	378
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.3	22.4	22.4	17.6	26.7	20.6	41.5	49.8	45.4	37.8	52.8	49.5
Incr Delay (d2), s/veh	0.5	1.0	1.0	0.1	1.4	0.3	2.1	1.6	0.5	1.1	67.3	11.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	5.6	5.7	2.4	11.6	1.5	3.4	8.4	2.9	4.9	23.5	11.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.8	23.3	23.4	17.7	28.0	20.9	43.7	51.4	45.9	38.8	120.1	60.6
LnGrp LOS	C	C	C	B	C	C	D	D	D	D	F	E
Approach Vol, veh/h		701			1155			737			1459	
Approach Delay, s/veh		22.7			26.3			49.4			97.6	
Approach LOS		C			C			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.5	73.0	14.1	40.4	13.6	71.9	17.7	36.8
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	29.0	36.4	19.0	34.4	29.0	36.4	19.0	34.4
Max Q Clear Time (g_c+I1), s	7.7	14.9	9.5	36.4	8.8	28.5	13.0	20.5
Green Ext Time (p_c), s	0.2	3.2	0.1	0.0	0.2	4.0	0.1	3.2

Intersection Summary	
HCM 6th Ctrl Delay	55.5
HCM 6th LOS	E

HCM 6th Signalized Intersection Summary
28: Alameda Ave & Victory Blvd

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑↱		↰↰	↑↱	
Traffic Volume (veh/h)	47	563	93	101	1092	228	84	217	64	317	528	66
Future Volume (veh/h)	47	563	93	101	1092	228	84	217	64	317	528	66
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.98		0.95	0.96		0.97
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	48	574	95	103	1114	233	86	221	65	323	539	67
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	258	1947	863	480	1967	873	168	440	125	608	924	114
Arrive On Green	0.04	0.55	0.55	0.04	0.55	0.55	0.16	0.16	0.16	0.10	0.29	0.29
Sat Flow, veh/h	1781	3554	1576	1781	3554	1576	797	2694	766	3456	3170	393
Grp Volume(v), veh/h	48	574	95	103	1114	233	86	143	143	323	301	305
Grp Sat Flow(s),veh/h/ln	1781	1777	1576	1781	1777	1576	797	1777	1683	1728	1777	1786
Q Serve(g_s), s	1.6	12.2	4.1	3.5	28.5	10.8	14.5	10.3	10.9	10.5	20.2	20.4
Cycle Q Clear(g_c), s	1.6	12.2	4.1	3.5	28.5	10.8	16.9	10.3	10.9	10.5	20.2	20.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.46	1.00		0.22
Lane Grp Cap(c), veh/h	258	1947	863	480	1967	873	168	291	275	608	518	521
V/C Ratio(X)	0.19	0.29	0.11	0.21	0.57	0.27	0.51	0.49	0.52	0.53	0.58	0.59
Avail Cap(c_a), veh/h	320	1947	863	532	1967	873	210	386	366	846	736	740
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.6	17.1	15.2	13.1	20.3	16.4	57.2	53.3	53.5	41.5	42.3	42.4
Incr Delay (d2), s/veh	0.1	0.4	0.3	0.1	1.2	0.7	2.4	1.3	1.5	0.7	1.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	5.1	1.5	1.4	12.1	4.1	3.0	4.7	4.7	4.6	9.1	9.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.7	17.5	15.5	13.2	21.5	17.1	59.7	54.6	55.0	42.2	43.3	43.4
LnGrp LOS	B	B	B	B	C	B	E	D	E	D	D	D
Approach Vol, veh/h		717			1450			372			929	
Approach Delay, s/veh		17.1			20.2			55.9			43.0	
Approach LOS		B			C			E			D	

Timer - Assigned Phs	1	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	17.9	28.9	10.5	82.7		46.8	9.7	83.5
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0		6.0	4.6	6.0
Max Green Setting (Gmax), s	23.0	30.4	10.0	55.4		58.0	10.0	55.4
Max Q Clear Time (g_c+I1), s	12.5	18.9	5.5	14.2		22.4	3.6	30.5
Green Ext Time (p_c), s	0.8	1.7	0.0	4.8		4.2	0.0	10.2

Intersection Summary	
HCM 6th Ctrl Delay	29.5
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
29: Burbank Blvd & San Fernando Blvd

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰	↑↑	↱	↰↰	↑↱		↰	↑	↱↱
Traffic Volume (veh/h)	489	464	282	19	322	71	66	99	4	50	201	634
Future Volume (veh/h)	489	464	282	19	322	71	66	99	4	50	201	634
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.95		1.00	1.00		0.98	1.00		0.98	1.00		0.97
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	569	540	0	22	374	83	77	115	5	58	234	737
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	675	939		86	631	275	430	1234	53	97	511	736
Arrive On Green	0.12	0.26	0.00	0.05	0.18	0.18	0.12	0.36	0.36	0.05	0.27	0.27
Sat Flow, veh/h	3456	3554	1585	1781	3554	1548	3456	3468	150	1781	1870	2693
Grp Volume(v), veh/h	569	540	0	22	374	83	77	59	61	58	234	737
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1548	1728	1777	1841	1781	1870	1346
Q Serve(g_s), s	6.9	10.6	0.0	1.0	7.8	3.7	1.6	1.8	1.8	2.6	8.4	16.4
Cycle Q Clear(g_c), s	6.9	10.6	0.0	1.0	7.8	3.7	1.6	1.8	1.8	2.6	8.4	16.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.08	1.00		1.00
Lane Grp Cap(c), veh/h	675	939		86	631	275	430	633	655	97	511	736
V/C Ratio(X)	0.84	0.57		0.26	0.59	0.30	0.18	0.09	0.09	0.60	0.46	1.00
Avail Cap(c_a), veh/h	1111	1326		664	1326	577	2578	1326	1373	443	698	1004
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	25.7	0.0	36.9	30.4	28.7	31.5	17.2	17.3	37.2	24.3	16.2
Incr Delay (d2), s/veh	1.4	0.7	0.0	1.9	1.1	0.7	0.4	0.1	0.1	2.2	0.5	24.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	4.4	0.0	0.5	3.3	1.4	0.7	0.7	0.7	1.2	3.6	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.7	26.3	0.0	38.7	31.5	29.5	32.0	17.3	17.3	39.4	24.7	41.1
LnGrp LOS	C	C		D	C	C	C	B	B	D	C	F
Approach Vol, veh/h		1109	A		479			197			1029	
Approach Delay, s/veh		30.1			31.5			23.0			37.3	
Approach LOS		C			C			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.4	34.9	15.9	20.3	16.3	28.0	8.9	27.3				
Change Period (Y+Rc), s	5.0	6.3	6.0	* 6	6.3	* 6	5.0	6.0				
Max Green Setting (Gmax), s	20.0	60.0	20.0	* 30	60.0	* 30	30.0	30.0				
Max Q Clear Time (g_c+I1), s	4.6	3.8	8.9	9.8	3.6	18.4	3.0	12.6				
Green Ext Time (p_c), s	0.0	0.9	1.0	3.2	0.6	3.1	0.0	4.0				
Intersection Summary												
HCM 6th Ctrl Delay			32.5									
HCM 6th LOS			C									

Notes

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

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

30: Magnolia Blvd & First St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱	↱	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	94	492	154	42	653	19	148	115	37	28	284	205
Future Volume (veh/h)	94	492	154	42	653	19	148	115	37	28	284	205
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		0.99	0.99		0.99
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	109	572	179	49	759	22	172	134	43	33	330	238
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	397	1825	771	427	1693	809	303	823	365	349	644	372
Arrive On Green	0.05	0.49	0.49	0.04	0.48	0.48	0.09	0.23	0.23	0.04	0.18	0.18
Sat Flow, veh/h	1781	3741	1580	1781	3554	1580	1781	3554	1575	1781	3554	1572
Grp Volume(v), veh/h	109	572	179	49	759	22	172	134	43	33	330	238
Grp Sat Flow(s),veh/h/ln	1781	1870	1580	1781	1777	1580	1781	1777	1575	1781	1777	1572
Q Serve(g_s), s	3.2	9.7	6.9	1.4	14.9	0.7	8.0	3.2	2.3	1.6	8.8	14.3
Cycle Q Clear(g_c), s	3.2	9.7	6.9	1.4	14.9	0.7	8.0	3.2	2.3	1.6	8.8	14.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	397	1825	771	427	1693	809	303	823	365	349	644	372
V/C Ratio(X)	0.27	0.31	0.23	0.11	0.45	0.03	0.57	0.16	0.12	0.09	0.51	0.64
Avail Cap(c_a), veh/h	452	1825	771	502	1693	809	303	1097	486	439	1097	572
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.5	16.3	15.5	12.8	18.3	12.7	30.3	32.2	31.9	32.8	38.8	36.1
Incr Delay (d2), s/veh	0.1	0.4	0.7	0.0	0.9	0.1	1.6	0.1	0.1	0.0	0.6	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	4.2	2.6	0.6	6.2	0.3	3.5	1.4	0.9	0.7	3.9	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.7	16.7	16.2	12.9	19.2	12.8	31.9	32.3	32.0	32.9	39.4	38.0
LnGrp LOS	B	B	B	B	B	B	C	C	C	C	D	D
Approach Vol, veh/h		860			830			349			601	
Approach Delay, s/veh		16.2			18.6			32.1			38.5	
Approach LOS		B			B			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	57.2	8.3	30.3	10.4	56.0	13.6	25.0
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	9.0	33.4	9.0	32.4	9.0	33.4	9.0	32.4
Max Q Clear Time (g_c+I1), s	3.4	11.7	3.6	5.2	5.2	16.9	10.0	16.3
Green Ext Time (p_c), s	0.0	4.6	0.0	0.9	0.0	4.9	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	24.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
31: Olive Ave & First St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱	↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	97	376	104	36	681	93	263	173	47	51	176	109
Future Volume (veh/h)	97	376	104	36	681	93	263	173	47	51	176	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	0.99		0.98	0.98		0.98	0.97		0.96
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	104	404	112	39	732	100	283	186	51	55	189	117
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	362	1275	349	460	1602	698	422	697	185	333	603	342
Arrive On Green	0.05	0.47	0.47	0.04	0.45	0.45	0.13	0.25	0.25	0.04	0.17	0.17
Sat Flow, veh/h	1781	2741	751	1781	3554	1548	1781	2759	734	1781	3554	1526
Grp Volume(v), veh/h	104	260	256	39	732	100	283	118	119	55	189	117
Grp Sat Flow(s),veh/h/ln	1781	1777	1715	1781	1777	1548	1781	1777	1716	1781	1777	1526
Q Serve(g_s), s	3.4	10.1	10.3	1.3	15.7	4.2	14.0	5.8	6.1	2.8	5.1	7.1
Cycle Q Clear(g_c), s	3.4	10.1	10.3	1.3	15.7	4.2	14.0	5.8	6.1	2.8	5.1	7.1
Prop In Lane	1.00		0.44	1.00		1.00	1.00		0.43	1.00		1.00
Lane Grp Cap(c), veh/h	362	827	798	460	1602	698	422	449	433	333	603	342
V/C Ratio(X)	0.29	0.31	0.32	0.08	0.46	0.14	0.67	0.26	0.28	0.17	0.31	0.34
Avail Cap(c_a), veh/h	447	827	798	570	1602	698	422	565	546	400	969	499
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.7	18.4	18.5	15.1	20.9	17.7	31.1	32.9	33.0	35.1	40.1	36.1
Incr Delay (d2), s/veh	0.3	1.0	1.1	0.0	0.9	0.4	3.8	0.4	0.4	0.1	0.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	4.3	4.3	0.5	6.6	1.6	6.5	2.6	2.6	1.2	2.3	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.1	19.4	19.6	15.1	21.8	18.2	34.9	33.3	33.4	35.2	40.4	36.8
LnGrp LOS	B	B	B	B	C	B	C	C	C	D	D	D
Approach Vol, veh/h		620			871			520			361	
Approach Delay, s/veh		18.9			21.1			34.2			38.4	
Approach LOS		B			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	33.8	10.7	55.6	19.0	24.7	9.2	57.2
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	9.0	35.0	11.0	33.0	14.0	30.0	11.0	33.0
Max Q Clear Time (g_c+I1), s	4.8	8.1	5.4	17.7	16.0	9.1	3.3	12.3
Green Ext Time (p_c), s	0.0	1.7	0.1	5.6	0.0	1.8	0.0	3.7

Intersection Summary			
HCM 6th Ctrl Delay			26.0
HCM 6th LOS			C

HCM 6th Signalized Intersection Summary
32: Alameda Ave & San Fernando Blvd

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↱		↰	↑↱		↰↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	150	380	132	70	494	68	255	218	86	134	416	249
Future Volume (veh/h)	150	380	132	70	494	68	255	218	86	134	416	249
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.95	0.98		0.96	0.98		0.96
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	155	392	136	72	509	70	263	225	89	138	429	257
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1357	1424	487	92	632	86	444	403	153	269	569	244
Arrive On Green	0.39	0.55	0.55	0.05	0.20	0.20	0.08	0.16	0.16	0.08	0.16	0.16
Sat Flow, veh/h	3456	2583	884	1781	3115	426	3456	2486	946	1781	3554	1523
Grp Volume(v), veh/h	155	268	260	72	289	290	263	158	156	138	429	257
Grp Sat Flow(s),veh/h/ln	1728	1777	1690	1781	1777	1765	1728	1777	1655	1781	1777	1523
Q Serve(g_s), s	4.0	11.2	11.4	5.6	21.7	21.9	8.8	11.5	12.2	9.0	16.1	9.7
Cycle Q Clear(g_c), s	4.0	11.2	11.4	5.6	21.7	21.9	8.8	11.5	12.2	9.0	16.1	9.7
Prop In Lane	1.00		0.52	1.00		0.24	1.00		0.57	1.00		1.00
Lane Grp Cap(c), veh/h	1357	979	931	92	360	358	444	288	268	269	569	244
V/C Ratio(X)	0.11	0.27	0.28	0.78	0.80	0.81	0.59	0.55	0.58	0.51	0.75	1.05
Avail Cap(c_a), veh/h	1357	979	931	280	609	605	637	470	437	283	762	326
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.0	16.6	16.7	65.6	53.1	53.2	44.9	53.9	54.2	44.6	56.1	10.9
Incr Delay (d2), s/veh	0.0	0.7	0.7	10.4	17.0	17.8	0.9	2.0	2.4	1.1	3.3	62.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	4.8	4.7	2.8	11.4	11.5	3.8	5.3	5.3	4.1	7.5	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.1	17.3	17.4	76.0	70.2	71.0	45.8	55.9	56.6	45.7	59.5	73.4
LnGrp LOS	C	B	B	E	E	E	D	E	E	D	E	F
Approach Vol, veh/h		683			651			577			824	
Approach Delay, s/veh		19.6			71.2			51.5			61.5	
Approach LOS		B			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.2	28.4	61.0	34.4	15.9	28.7	12.2	83.2
Change Period (Y+Rc), s	5.0	6.0	6.0	* 6	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	19.0	30.0	21.0	* 48	12.0	37.0	22.0	47.0
Max Q Clear Time (g_c+I1), s	10.8	18.1	6.0	23.9	11.0	14.2	7.6	13.4
Green Ext Time (p_c), s	0.4	3.5	0.3	4.5	0.0	2.2	0.1	4.4

Intersection Summary	
HCM 6th Ctrl Delay	51.2
HCM 6th LOS	D

Notes

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

HCM 6th Signalized Intersection Summary
33: Magnolia Blvd & Glenoaks Blvd

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	80	129	132	91	321	55	158	633	17	49	1304	194
Future Volume (veh/h)	80	129	132	91	321	55	158	633	17	49	1304	194
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.99	1.00		0.98
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	82	133	136	94	331	57	163	653	18	51	1344	200
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	207	422	350	262	683	116	248	1914	53	501	1626	240
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.07	0.54	0.54	0.05	0.52	0.52
Sat Flow, veh/h	986	1870	1551	1096	3026	515	1781	3531	97	1781	3100	457
Grp Volume(v), veh/h	82	133	136	94	193	195	163	328	343	51	765	779
Grp Sat Flow(s),veh/h/ln	986	1870	1551	1096	1777	1764	1781	1777	1852	1781	1777	1780
Q Serve(g_s), s	7.1	5.3	6.7	7.0	8.5	8.7	3.7	9.3	9.4	1.1	32.3	33.3
Cycle Q Clear(g_c), s	15.8	5.3	6.7	12.4	8.5	8.7	3.7	9.3	9.4	1.1	32.3	33.3
Prop In Lane	1.00		1.00	1.00		0.29	1.00		0.05	1.00		0.26
Lane Grp Cap(c), veh/h	207	422	350	262	401	398	248	963	1004	501	932	933
V/C Ratio(X)	0.40	0.32	0.39	0.36	0.48	0.49	0.66	0.34	0.34	0.10	0.82	0.83
Avail Cap(c_a), veh/h	292	582	483	356	553	549	310	963	1004	593	932	933
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.2	29.1	29.6	34.2	30.3	30.4	18.5	11.6	11.6	8.8	17.9	18.1
Incr Delay (d2), s/veh	1.2	0.4	0.7	0.8	0.9	0.9	1.7	1.0	0.9	0.0	8.0	8.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	2.4	2.5	1.9	3.7	3.7	1.8	3.7	3.9	0.4	14.1	14.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.4	29.5	30.3	35.0	31.2	31.3	20.3	12.5	12.5	8.9	25.9	26.8
LnGrp LOS	D	C	C	D	C	C	C	B	B	A	C	C
Approach Vol, veh/h		351			482			834			1595	
Approach Delay, s/veh		31.9			32.0			14.0			25.8	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.9	54.8		26.3	10.5	53.2		26.3				
Change Period (Y+Rc), s	4.6	6.0		6.0	4.6	6.0		6.0				
Max Green Setting (Gmax), s	9.0	36.4		28.0	9.0	36.4		28.0				
Max Q Clear Time (g_c+I1), s	3.1	11.4		14.4	5.7	35.3		17.8				
Green Ext Time (p_c), s	0.0	4.4		2.3	0.1	0.9		1.1				

Intersection Summary			
HCM 6th Ctrl Delay			24.4
HCM 6th LOS			C

HCM 6th Signalized Intersection Summary
34: Olive Ave & Glenoaks Blvd

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	95	127	83	104	431	35	148	506	31	47	895	181
Future Volume (veh/h)	95	127	83	104	431	35	148	506	31	47	895	181
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.98	0.99		0.98
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	132	86	108	449	36	154	527	32	49	932	189
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	425	759	460	551	1201	96	227	1004	61	304	762	154
Arrive On Green	0.06	0.36	0.36	0.06	0.36	0.36	0.08	0.30	0.30	0.05	0.26	0.26
Sat Flow, veh/h	1781	2110	1279	1781	3328	266	1781	3400	206	1781	2932	594
Grp Volume(v), veh/h	99	110	108	108	239	246	154	275	284	49	564	557
Grp Sat Flow(s),veh/h/ln	1781	1777	1612	1781	1777	1817	1781	1777	1829	1781	1777	1749
Q Serve(g_s), s	3.1	3.8	4.2	3.4	8.9	9.0	5.5	11.6	11.7	1.8	23.4	23.4
Cycle Q Clear(g_c), s	3.1	3.8	4.2	3.4	8.9	9.0	5.5	11.6	11.7	1.8	23.4	23.4
Prop In Lane	1.00		0.79	1.00		0.15	1.00		0.11	1.00		0.34
Lane Grp Cap(c), veh/h	425	639	580	551	641	656	227	525	540	304	462	455
V/C Ratio(X)	0.23	0.17	0.19	0.20	0.37	0.38	0.68	0.52	0.53	0.16	1.22	1.22
Avail Cap(c_a), veh/h	494	639	580	619	641	656	258	525	540	398	462	455
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.5	19.7	19.8	16.1	21.2	21.3	24.1	26.4	26.4	22.6	33.3	33.3
Incr Delay (d2), s/veh	0.2	0.6	0.7	0.1	1.7	1.6	5.2	1.0	0.9	0.2	118.0	118.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	1.6	1.6	1.3	3.9	4.0	2.6	4.9	5.1	0.7	24.9	24.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.7	20.2	20.5	16.2	22.9	22.9	29.3	27.4	27.4	22.8	151.3	152.2
LnGrp LOS	B	C	C	B	C	C	C	C	C	C	F	F
Approach Vol, veh/h		317			593			713			1170	
Approach Delay, s/veh		19.2			21.7			27.8			146.4	
Approach LOS		B			C			C			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	38.4	12.0	29.4	10.1	38.5	8.8	32.6
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	9.0	27.4	9.0	23.4	9.0	27.4	9.0	23.4
Max Q Clear Time (g_c+I1), s	5.4	6.2	7.5	25.4	5.1	11.0	3.8	13.7
Green Ext Time (p_c), s	0.1	1.7	0.0	0.0	0.1	3.6	0.0	2.4

Intersection Summary	
HCM 6th Ctrl Delay	75.2
HCM 6th LOS	E

HCM 6th Signalized Intersection Summary
35: Alameda Ave & Glenoaks Blvd

10/27/2021

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↱		↰	↑↑↑	↱	↰	↑↑↱	
Traffic Volume (veh/h)	187	114	119	91	403	15	213	533	14	53	966	321
Future Volume (veh/h)	187	114	119	91	403	15	213	533	14	53	966	321
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	0.99		0.99
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	195	119	124	95	420	16	222	555	15	55	1006	334
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	222	611	513	119	482	18	270	2036	624	401	1299	431
Arrive On Green	0.12	0.33	0.33	0.07	0.27	0.27	0.10	0.40	0.40	0.04	0.34	0.34
Sat Flow, veh/h	1781	1870	1570	1781	1789	68	1781	5106	1565	1781	3781	1254
Grp Volume(v), veh/h	195	119	124	95	0	436	222	555	15	55	906	434
Grp Sat Flow(s),veh/h/ln	1781	1870	1570	1781	0	1857	1781	1702	1565	1781	1702	1632
Q Serve(g_s), s	13.7	5.8	7.3	6.7	0.0	28.5	9.9	9.3	0.7	2.5	30.2	30.2
Cycle Q Clear(g_c), s	13.7	5.8	7.3	6.7	0.0	28.5	9.9	9.3	0.7	2.5	30.2	30.2
Prop In Lane	1.00		1.00	1.00		0.04	1.00		1.00	1.00		0.77
Lane Grp Cap(c), veh/h	222	611	513	119	0	500	270	2036	624	401	1169	560
V/C Ratio(X)	0.88	0.19	0.24	0.80	0.00	0.87	0.82	0.27	0.02	0.14	0.77	0.78
Avail Cap(c_a), veh/h	351	663	557	420	0	731	661	2413	740	750	1341	643
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.6	30.7	31.2	58.4	0.0	44.3	28.4	25.8	23.2	24.9	37.3	37.3
Incr Delay (d2), s/veh	9.2	0.2	0.3	8.6	0.0	9.3	2.4	0.1	0.0	0.1	2.8	5.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	2.7	2.9	3.3	0.0	14.3	4.3	3.8	0.3	1.1	13.0	12.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.8	30.9	31.6	66.9	0.0	53.6	30.8	25.9	23.2	24.9	40.1	43.1
LnGrp LOS	E	C	C	E	A	D	C	C	C	C	D	D
Approach Vol, veh/h		438			531			792			1395	
Approach Delay, s/veh		45.7			56.0			27.2			40.4	
Approach LOS		D			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.1	47.5	16.8	49.6	20.4	40.2	9.7	56.6
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	29.9	45.0	40.0	50.0	25.0	50.0	30.0	60.0
Max Q Clear Time (g_c+I1), s	8.7	9.3	11.9	32.2	15.7	30.5	4.5	11.3
Green Ext Time (p_c), s	0.2	1.7	0.3	11.3	0.2	3.7	0.1	6.4

Intersection Summary	
HCM 6th Ctrl Delay	40.5
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
1: Winona Ave & Hollywood Way

10/27/2021

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑↱		↰	↑↑↱	
Traffic Volume (veh/h)	20	4	24	98	3	238	29	1639	58	59	1161	7
Future Volume (veh/h)	20	4	24	98	3	238	29	1639	58	59	1161	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	4	26	107	3	259	32	1782	63	64	1262	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	90	360	305	314	342	305	355	2209	78	206	3364	21
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.04	0.63	0.63	0.05	0.64	0.64
Sat Flow, veh/h	1117	1870	1583	1378	1777	1583	1781	3501	123	1781	5235	33
Grp Volume(v), veh/h	22	4	26	107	3	259	32	900	945	64	821	449
Grp Sat Flow(s),veh/h/ln	1117	1870	1583	1378	1777	1583	1781	1777	1848	1781	1702	1864
Q Serve(g_s), s	2.7	0.2	1.9	9.5	0.2	22.1	0.8	53.0	54.1	1.7	15.9	15.9
Cycle Q Clear(g_c), s	24.8	0.2	1.9	9.8	0.2	22.1	0.8	53.0	54.1	1.7	15.9	15.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.07	1.00		0.02
Lane Grp Cap(c), veh/h	90	360	305	314	342	305	355	1121	1166	206	2187	1198
V/C Ratio(X)	0.24	0.01	0.09	0.34	0.01	0.85	0.09	0.80	0.81	0.31	0.38	0.38
Avail Cap(c_a), veh/h	222	581	492	477	552	492	460	1121	1166	291	2187	1198
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.6	45.7	46.4	49.7	45.7	54.6	8.5	19.3	19.5	21.3	11.8	11.8
Incr Delay (d2), s/veh	1.4	0.0	0.1	0.6	0.0	7.8	0.1	6.1	6.2	0.6	0.5	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.1	0.8	3.4	0.1	9.5	0.3	22.8	24.2	1.1	6.1	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.0	45.8	46.5	50.3	45.7	62.4	8.6	25.4	25.7	22.0	12.3	12.7
LnGrp LOS	E	D	D	D	D	E	A	C	C	C	B	B
Approach Vol, veh/h		52			369			1877			1334	
Approach Delay, s/veh		55.5			58.7			25.3			12.9	
Approach LOS		E			E			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.6	96.5		32.9	12.2	94.8		32.9				
Change Period (Y+Rc), s	4.9	6.5		6.0	4.9	6.5		6.0				
Max Green Setting (Gmax), s	14.0	65.1		43.5	14.0	65.1		43.5				
Max Q Clear Time (g_c+I1), s	2.8	17.9		24.1	3.7	56.1		26.8				
Green Ext Time (p_c), s	0.0	11.9		1.9	0.1	7.3		0.1				

Intersection Summary			
HCM 6th Ctrl Delay			24.6
HCM 6th LOS			C

HCM 6th Signalized Intersection Summary
2: Thornton Ave & Hollywood Way

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑	↱	↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	222	28	122	162	112	148	134	1317	122	48	1085	117
Future Volume (veh/h)	222	28	122	162	112	148	134	1317	122	48	1085	117
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.97	0.98		0.97	1.00		0.99	1.00		0.99
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	239	30	131	174	120	159	144	1416	131	52	1167	126
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	484	249	204	365	270	234	306	2304	1172	190	1952	865
Arrive On Green	0.08	0.13	0.13	0.10	0.15	0.15	0.06	0.65	0.65	0.55	0.55	0.55
Sat Flow, veh/h	3456	1870	1535	1781	1777	1541	1781	3554	1572	334	3554	1576
Grp Volume(v), veh/h	239	30	131	174	120	159	144	1416	131	52	1167	126
Grp Sat Flow(s),veh/h/ln	1728	1870	1535	1781	1777	1541	1781	1777	1572	334	1777	1576
Q Serve(g_s), s	8.2	2.0	11.3	11.7	8.6	13.7	4.6	32.6	3.2	15.1	30.9	5.5
Cycle Q Clear(g_c), s	8.2	2.0	11.3	11.7	8.6	13.7	4.6	32.6	3.2	33.8	30.9	5.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	484	249	204	365	270	234	306	2304	1172	190	1952	865
V/C Ratio(X)	0.49	0.12	0.64	0.48	0.44	0.68	0.47	0.61	0.11	0.27	0.60	0.15
Avail Cap(c_a), veh/h	796	553	454	365	399	346	434	2304	1172	190	1952	865
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.3	53.5	57.5	46.0	54.0	56.1	16.4	14.4	5.0	28.3	21.2	15.5
Incr Delay (d2), s/veh	0.8	0.2	3.3	0.4	1.1	3.4	0.8	1.2	0.2	3.5	1.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	1.0	4.6	5.2	4.0	5.6	1.9	13.1	1.1	1.4	13.1	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.1	53.7	60.8	46.4	55.1	59.6	17.2	15.6	5.2	31.8	22.5	15.8
LnGrp LOS	D	D	E	D	E	E	B	B	A	C	C	B
Approach Vol, veh/h		400			453			1691			1345	
Approach Delay, s/veh		52.7			53.3			15.0			22.3	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	13.9	83.4	15.5	27.3		97.3	18.1	24.6
Change Period (Y+Rc), s	4.9	6.5	4.6	6.0		6.5	4.6	6.0
Max Green Setting (Gmax), s	19.0	44.1	23.5	31.4		68.0	13.5	41.4
Max Q Clear Time (g_c+I1), s	6.6	35.8	10.2	15.7		34.6	13.7	13.3
Green Ext Time (p_c), s	0.2	5.5	0.6	1.5		15.0	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	25.8
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
3: Victory Blvd & Hollywood Way

10/27/2021

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	230	806	93	102	935	151	161	935	92	191	809	315
Future Volume (veh/h)	230	806	93	102	935	151	161	935	92	191	809	315
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
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	235	822	95	104	954	154	164	954	94	195	826	321
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	287	1431	756	287	1293	715	241	1064	556	235	1110	638
Arrive On Green	0.09	0.40	0.40	0.06	0.36	0.36	0.08	0.30	0.30	0.09	0.31	0.31
Sat Flow, veh/h	1781	3554	1572	1781	3554	1571	1781	3554	1560	1781	3554	1561
Grp Volume(v), veh/h	235	822	95	104	954	154	164	954	94	195	826	321
Grp Sat Flow(s),veh/h/ln	1781	1777	1572	1781	1777	1571	1781	1777	1560	1781	1777	1561
Q Serve(g_s), s	11.2	25.2	4.7	5.0	32.7	8.3	8.8	36.0	5.8	10.5	29.2	21.5
Cycle Q Clear(g_c), s	11.2	25.2	4.7	5.0	32.7	8.3	8.8	36.0	5.8	10.5	29.2	21.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	287	1431	756	287	1293	715	241	1064	556	235	1110	638
V/C Ratio(X)	0.82	0.57	0.13	0.36	0.74	0.22	0.68	0.90	0.17	0.83	0.74	0.50
Avail Cap(c_a), veh/h	309	1431	756	378	1293	715	255	1152	595	316	1330	734
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	32.5	20.1	26.7	38.7	23.1	33.9	47.0	30.9	35.2	43.1	31.0
Incr Delay (d2), s/veh	13.7	1.7	0.3	0.3	3.8	0.7	5.3	9.0	0.1	9.8	1.9	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	11.2	1.8	2.2	14.9	3.3	4.2	17.2	2.2	5.2	13.1	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.5	34.2	20.5	27.0	42.5	23.8	39.2	55.9	31.1	45.0	45.0	31.6
LnGrp LOS	D	C	C	C	D	C	D	E	C	D	D	C
Approach Vol, veh/h		1152			1212			1212			1342	
Approach Delay, s/veh		35.0			38.8			51.7			41.8	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.5	62.4	15.5	49.7	17.9	56.9	17.2	47.9
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	15.0	39.4	12.0	52.4	15.0	39.4	19.0	45.4
Max Q Clear Time (g_c+I1), s	7.0	27.2	10.8	31.2	13.2	34.7	12.5	38.0
Green Ext Time (p_c), s	0.1	4.8	0.0	7.3	0.1	2.8	0.1	3.9

Intersection Summary			
HCM 6th Ctrl Delay			41.9
HCM 6th LOS			D

HCM 6th Signalized Intersection Summary
4: Burbank Blvd & Hollywood Way

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱	↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	180	694	27	151	767	106	107	1005	104	127	718	137
Future Volume (veh/h)	180	694	27	151	767	106	107	1005	104	127	718	137
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
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	184	708	28	154	783	108	109	1026	106	130	733	140
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	308	1274	50	338	1298	574	237	1113	115	181	1034	197
Arrive On Green	0.08	0.37	0.37	0.08	0.37	0.37	0.06	0.34	0.34	0.06	0.35	0.35
Sat Flow, veh/h	1781	3483	138	1781	3554	1573	1781	3247	335	1781	2970	567
Grp Volume(v), veh/h	184	361	375	154	783	108	109	561	571	130	438	435
Grp Sat Flow(s),veh/h/ln	1781	1777	1844	1781	1777	1573	1781	1777	1805	1781	1777	1761
Q Serve(g_s), s	9.0	22.6	22.7	7.4	25.1	6.6	5.5	42.5	42.5	6.6	29.9	29.9
Cycle Q Clear(g_c), s	9.0	22.6	22.7	7.4	25.1	6.6	5.5	42.5	42.5	6.6	29.9	29.9
Prop In Lane	1.00		0.07	1.00		1.00	1.00		0.19	1.00		0.32
Lane Grp Cap(c), veh/h	308	650	674	338	1298	574	237	609	619	181	619	613
V/C Ratio(X)	0.60	0.56	0.56	0.46	0.60	0.19	0.46	0.92	0.92	0.72	0.71	0.71
Avail Cap(c_a), veh/h	358	650	674	389	1298	574	379	640	650	313	640	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.3	35.3	35.4	26.0	36.2	30.3	30.6	44.2	44.2	34.6	39.5	39.5
Incr Delay (d2), s/veh	0.9	3.4	3.3	0.4	2.1	0.7	0.5	18.4	18.3	2.0	3.5	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	10.5	10.9	3.2	11.3	2.6	2.4	21.7	22.1	2.9	13.7	13.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.2	38.7	38.6	26.4	38.3	31.0	31.1	62.5	62.5	36.6	43.0	43.0
LnGrp LOS	C	D	D	C	D	C	C	E	E	D	D	D
Approach Vol, veh/h		920			1045			1241			1003	
Approach Delay, s/veh		36.6			35.8			59.7			42.2	
Approach LOS		D			D			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.6	57.2	12.5	54.7	15.7	57.1	13.2	54.0				
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0				
Max Green Setting (Gmax), s	15.0	34.4	19.0	50.4	15.0	34.4	19.0	50.4				
Max Q Clear Time (g_c+I1), s	9.4	24.7	7.5	31.9	11.0	27.1	8.6	44.5				
Green Ext Time (p_c), s	0.1	3.2	0.1	5.6	0.1	3.3	0.1	3.5				
Intersection Summary												
HCM 6th Ctrl Delay			44.5									
HCM 6th LOS			D									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	177	588	95	111	692	185	157	964	123	184	619	269
Future Volume (veh/h)	177	588	95	111	692	185	157	964	123	184	619	269
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	0.99		0.93	1.00		0.98	1.00		0.98
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	181	600	97	113	706	189	160	984	126	188	632	274
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	244	948	396	252	854	354	371	1586	694	299	1617	707
Arrive On Green	0.09	0.27	0.27	0.06	0.24	0.24	0.06	0.45	0.45	0.07	0.45	0.45
Sat Flow, veh/h	1781	3554	1483	1781	3554	1472	1781	3554	1554	1781	3554	1555
Grp Volume(v), veh/h	181	600	97	113	706	189	160	984	126	188	632	274
Grp Sat Flow(s),veh/h/ln	1781	1777	1483	1781	1777	1472	1781	1777	1554	1781	1777	1555
Q Serve(g_s), s	10.5	20.9	7.2	6.6	26.4	15.7	6.8	29.7	6.8	8.0	16.5	16.3
Cycle Q Clear(g_c), s	10.5	20.9	7.2	6.6	26.4	15.7	6.8	29.7	6.8	8.0	16.5	16.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	244	948	396	252	854	354	371	1586	694	299	1617	707
V/C Ratio(X)	0.74	0.63	0.25	0.45	0.83	0.53	0.43	0.62	0.18	0.63	0.39	0.39
Avail Cap(c_a), veh/h	325	1152	481	381	1152	477	462	1586	694	374	1617	707
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.8	45.3	40.3	37.5	50.4	46.4	19.6	29.7	23.4	23.2	25.3	25.2
Incr Delay (d2), s/veh	3.8	0.8	0.3	0.5	3.8	1.3	0.3	1.8	0.6	0.9	0.7	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	9.4	2.7	2.9	12.2	5.9	2.9	13.1	2.7	3.4	7.2	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.6	46.1	40.6	37.9	54.2	47.6	19.9	31.5	23.9	24.0	26.0	26.9
LnGrp LOS	D	D	D	D	D	D	B	C	C	C	C	C
Approach Vol, veh/h		878			1008			1270			1094	
Approach Delay, s/veh		44.5			51.1			29.3			25.9	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.5	69.7	17.2	39.6	14.7	68.5	13.5	43.4
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	16.0	38.4	19.0	45.4	16.0	38.4	19.0	45.4
Max Q Clear Time (g_c+I1), s	8.8	18.5	12.5	28.4	10.0	31.7	8.6	22.9
Green Ext Time (p_c), s	0.1	5.3	0.1	5.3	0.1	3.8	0.1	4.6

Intersection Summary	
HCM 6th Ctrl Delay	36.7
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
6: Hollywood Way & Verdugo Ave

10/27/2021

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	222	517	35	101	460	56	94	989	102	78	526	121
Future Volume (veh/h)	222	517	35	101	460	56	94	989	102	78	526	121
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.96	1.00		0.96
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	239	556	38	109	495	60	101	1063	110	84	566	130
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	258	623	522	194	541	453	357	1441	618	210	1437	617
Arrive On Green	0.10	0.33	0.33	0.06	0.29	0.29	0.05	0.41	0.41	0.05	0.40	0.40
Sat Flow, veh/h	1781	1870	1568	1781	1870	1565	1781	3554	1524	1781	3554	1524
Grp Volume(v), veh/h	239	556	38	109	495	60	101	1063	110	84	566	130
Grp Sat Flow(s),veh/h/ln	1781	1870	1568	1781	1870	1565	1781	1777	1524	1781	1777	1524
Q Serve(g_s), s	12.9	39.5	2.3	6.0	35.8	4.0	4.6	35.5	6.5	3.8	15.8	7.8
Cycle Q Clear(g_c), s	12.9	39.5	2.3	6.0	35.8	4.0	4.6	35.5	6.5	3.8	15.8	7.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	623	522	194	541	453	357	1441	618	210	1437	617
V/C Ratio(X)	0.93	0.89	0.07	0.56	0.91	0.13	0.28	0.74	0.18	0.40	0.39	0.21
Avail Cap(c_a), veh/h	258	668	560	271	668	559	511	1441	618	366	1437	617
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.9	44.3	31.9	36.5	48.1	36.8	23.2	35.3	26.7	27.4	29.5	27.1
Incr Delay (d2), s/veh	36.0	13.8	0.1	1.0	15.2	0.1	0.2	3.4	0.6	0.5	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	20.6	0.9	2.7	18.9	1.6	2.0	16.0	2.5	1.6	7.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.0	58.1	32.0	37.5	63.3	36.9	23.4	38.7	27.3	27.9	30.3	27.9
LnGrp LOS	E	E	C	D	E	D	C	D	C	C	C	C
Approach Vol, veh/h		833			664			1274			780	
Approach Delay, s/veh		60.6			56.6			36.5			29.7	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	62.6	19.0	46.5	11.7	62.8	12.9	52.6
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	19.0	35.0	14.0	50.0	19.0	35.0	14.0	50.0
Max Q Clear Time (g_c+I1), s	6.6	17.8	14.9	37.8	5.8	37.5	8.0	41.5
Green Ext Time (p_c), s	0.1	4.0	0.0	2.7	0.0	0.0	0.0	2.4

Intersection Summary	
HCM 6th Ctrl Delay	44.4
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
7: Riverside Dr & Alameda Ave

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	✥			✥	
Traffic Volume (veh/h)	2	551	349	12	936	21	763	8	26	36	16	31
Future Volume (veh/h)	2	551	349	12	936	21	763	8	26	36	16	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	1.00		0.97	1.00		1.00	1.00		0.91
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	2	574	364	12	975	22	826	0	0	38	17	32
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	361	1907	1245	326	1905	43	942	495	0	47	21	40
Arrive On Green	0.54	0.54	0.54	1.00	1.00	1.00	0.26	0.00	0.00	0.07	0.07	0.07
Sat Flow, veh/h	561	3554	1539	594	3550	80	3563	1870	0	724	324	610
Grp Volume(v), veh/h	2	574	364	12	488	509	826	0	0	87	0	0
Grp Sat Flow(s),veh/h/ln	561	1777	1539	594	1777	1853	1781	1870	0	1657	0	0
Q Serve(g_s), s	0.2	10.7	7.4	0.4	0.0	0.0	26.6	0.0	0.0	6.2	0.0	0.0
Cycle Q Clear(g_c), s	0.2	10.7	7.4	11.1	0.0	0.0	26.6	0.0	0.0	6.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.00	0.44		0.37
Lane Grp Cap(c), veh/h	361	1907	1245	326	954	995	942	495	0	109	0	0
V/C Ratio(X)	0.01	0.30	0.29	0.04	0.51	0.51	0.88	0.00	0.00	0.80	0.00	0.00
Avail Cap(c_a), veh/h	361	1907	1245	326	954	995	1366	717	0	166	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.56	0.56	0.56	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.9	15.4	3.1	0.9	0.0	0.0	42.3	0.0	0.0	55.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.6	0.1	1.1	1.1	4.8	0.0	0.0	14.7	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(50%),veh/ln	0.0	4.4	6.2	0.0	0.3	0.3	12.3	0.0	0.0	3.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.0	15.8	3.7	1.0	1.1	1.1	47.0	0.0	0.0	70.0	0.0	0.0
LnGrp LOS	B	B	A	A	A	A	D	A	A	E	A	A
Approach Vol, veh/h		940			1009			826			87	
Approach Delay, s/veh		11.1			1.1			47.0			70.0	
Approach LOS		B			A			D			E	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		70.4		12.9		70.4		36.7				
Change Period (Y+Rc), s		6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s		46.0		12.0		46.0		46.0				
Max Q Clear Time (g_c+I1), s		12.7		8.2		13.1		28.6				
Green Ext Time (p_c), s		6.0		0.1		7.9		3.1				

Intersection Summary	
HCM 6th Ctrl Delay	19.7
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

User approved changes to right turn type.

HCM 6th Signalized Intersection Summary
8: Pass Ave & Alameda Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	139	474	12	39	661	145	113	352	34	236	381	188
Future Volume (veh/h)	139	474	12	39	661	145	113	352	34	236	381	188
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	0.99		0.98	0.99		0.97	0.99		0.97
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	145	494	12	41	689	151	118	367	35	246	397	196
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	199	952	23	307	697	153	431	1301	123	551	992	482
Arrive On Green	0.15	0.54	0.54	0.05	0.24	0.24	0.07	0.40	0.40	0.10	0.43	0.43
Sat Flow, veh/h	1781	3544	86	1781	2884	632	1781	3269	310	1781	2291	1114
Grp Volume(v), veh/h	145	247	259	41	424	416	118	198	204	246	306	287
Grp Sat Flow(s),veh/h/ln	1781	1777	1853	1781	1777	1739	1781	1777	1802	1781	1777	1629
Q Serve(g_s), s	7.3	10.7	10.7	2.0	28.5	28.6	4.6	9.1	9.2	9.5	14.2	14.5
Cycle Q Clear(g_c), s	7.3	10.7	10.7	2.0	28.5	28.6	4.6	9.1	9.2	9.5	14.2	14.5
Prop In Lane	1.00		0.05	1.00		0.36	1.00		0.17	1.00		0.68
Lane Grp Cap(c), veh/h	199	478	498	307	429	420	431	707	717	551	769	705
V/C Ratio(X)	0.73	0.52	0.52	0.13	0.99	0.99	0.27	0.28	0.28	0.45	0.40	0.41
Avail Cap(c_a), veh/h	211	478	498	367	429	420	523	707	717	729	769	705
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.9	22.8	22.8	31.1	45.3	45.3	19.0	24.5	24.5	17.4	23.3	23.4
Incr Delay (d2), s/veh	9.2	0.9	0.9	0.1	40.2	41.0	0.1	1.0	1.0	0.6	1.5	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	3.8	4.0	0.9	17.3	17.0	1.9	4.0	4.1	3.9	6.3	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.1	23.7	23.7	31.2	85.5	86.3	19.1	25.5	25.5	18.0	24.9	25.2
LnGrp LOS	D	C	C	C	F	F	B	C	C	B	C	C
Approach Vol, veh/h		651			881			520			839	
Approach Delay, s/veh		27.4			83.4			24.0			23.0	
Approach LOS		C			F			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	38.2	12.8	57.9	14.2	35.0	17.0	53.8
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	10.0	29.0	14.0	45.0	10.0	29.0	24.0	35.0
Max Q Clear Time (g_c+I1), s	4.0	12.7	6.6	16.5	9.3	30.6	11.5	11.2
Green Ext Time (p_c), s	0.0	2.7	0.1	4.1	0.0	0.0	0.6	2.4

Intersection Summary	
HCM 6th Ctrl Delay	42.5
HCM 6th LOS	D

HCM Signalized Intersection Capacity Analysis
9: Olive Ave & Pass Ave

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰	↑↑↑	↑↑↑↱		↰	↱↱
Traffic Volume (vph)	491	1363	1419	105	29	410
Future Volume (vph)	491	1363	1419	105	29	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	6.0		5.0	5.0
Lane Util. Factor	1.00	0.91	0.91		1.00	0.88
Frpb, ped/bikes	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	5085	5006		1770	2787
Flt Permitted	0.07	1.00	1.00		0.95	1.00
Satd. Flow (perm)	134	5085	5006		1770	2787
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	522	1450	1510	112	31	436
RTOR Reduction (vph)	0	0	6	0	0	310
Lane Group Flow (vph)	522	1450	1616	0	31	126
Confl. Peds. (#/hr)	43			43		
Turn Type	pm+pt	NA	NA		Prot	pt+ov
Protected Phases	3 5	2	6		4	4 3
Permitted Phases	2	3				
Actuated Green, G (s)	94.0	94.0	50.4		10.0	34.8
Effective Green, g (s)	94.0	94.0	50.4		10.0	34.8
Actuated g/C Ratio	0.78	0.78	0.42		0.08	0.29
Clearance Time (s)		6.0	6.0		5.0	
Vehicle Extension (s)		3.0	3.0		2.0	
Lane Grp Cap (vph)	631	4237	2102		147	808
v/s Ratio Prot	c0.27	0.21	0.32		c0.02	0.05
v/s Ratio Perm	c0.38	0.07				
v/c Ratio	0.83	0.34	0.77		0.21	0.16
Uniform Delay, d1	31.1	3.8	29.8		51.3	31.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	8.3	0.0	2.8		0.3	0.0
Delay (s)	39.4	3.9	32.6		51.6	31.7
Level of Service	D	A	C		D	C
Approach Delay (s)		13.3	32.6		33.0	
Approach LOS		B	C		C	

Intersection Summary			
HCM 2000 Control Delay	23.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	78.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
10: Alameda Ave & Hollywood Way

10/27/2021

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑↑	↱	↰	↑↑	↱	↰↰	↑↑	↱
Traffic Volume (veh/h)	200	818	70	31	907	383	283	637	277	111	389	262
Future Volume (veh/h)	200	818	70	31	907	383	283	637	277	111	389	262
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.97
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	220	899	77	34	997	421	311	700	304	122	427	288
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	223	1486	127	111	1222	373	297	1316	575	255	986	428
Arrive On Green	0.13	0.31	0.31	0.06	0.24	0.24	0.33	0.74	0.74	0.07	0.28	0.28
Sat Flow, veh/h	1781	4786	409	1781	5106	1559	1781	3554	1553	3456	3554	1542
Grp Volume(v), veh/h	220	639	337	34	997	421	311	700	304	122	427	288
Grp Sat Flow(s),veh/h/ln	1781	1702	1791	1781	1702	1559	1781	1777	1553	1728	1777	1542
Q Serve(g_s), s	14.8	19.1	19.2	2.2	22.1	22.5	20.0	10.1	10.0	4.1	11.8	13.7
Cycle Q Clear(g_c), s	14.8	19.1	19.2	2.2	22.1	22.5	20.0	10.1	10.0	4.1	11.8	13.7
Prop In Lane	1.00		0.23	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	223	1057	556	111	1222	373	297	1316	575	255	986	428
V/C Ratio(X)	0.99	0.60	0.61	0.31	0.82	1.13	1.05	0.53	0.53	0.48	0.43	0.67
Avail Cap(c_a), veh/h	223	1057	556	238	1277	390	297	1316	575	288	986	428
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.79	0.79	0.79	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.4	35.1	35.2	53.8	43.1	28.0	40.0	11.1	11.1	53.4	35.6	18.3
Incr Delay (d2), s/veh	56.7	1.0	1.9	2.2	4.3	86.2	59.4	1.2	2.7	0.5	1.4	8.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.1	8.0	8.7	1.1	9.8	17.2	12.2	3.1	2.9	1.8	5.3	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	109.1	36.1	37.0	56.0	47.5	114.1	99.4	12.3	13.8	53.9	37.0	26.5
LnGrp LOS	F	D	D	E	D	F	F	B	B	D	D	C
Approach Vol, veh/h		1196			1452			1315			837	
Approach Delay, s/veh		49.8			67.0			33.3			35.8	
Approach LOS		D			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	39.3	21.0	34.7	13.8	50.4	12.5	43.3
Change Period (Y+Rc), s	5.0	6.0	6.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	20.0	32.0	15.0	30.0	10.0	42.0	16.0	30.0
Max Q Clear Time (g_c+I1), s	22.0	15.7	16.8	24.5	6.1	12.1	4.2	21.2
Green Ext Time (p_c), s	0.0	3.6	0.0	4.2	0.1	6.8	0.1	4.1

Intersection Summary	
HCM 6th Ctrl Delay	48.0
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
11: Hollywood Way & Riverside Dr

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	113	260	28	6	442	437	87	656	21	82	225	182
Future Volume (veh/h)	113	260	28	6	442	437	87	656	21	82	225	182
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	0.99		0.98	0.99		0.99	1.00		0.99
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	123	283	30	7	480	475	95	713	23	89	245	198
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	222	1259	132	436	579	505	385	1214	39	345	1601	707
Arrive On Green	0.08	0.39	0.39	0.02	0.33	0.33	0.69	0.69	0.69	0.11	0.75	0.75
Sat Flow, veh/h	1781	3238	340	1781	1777	1549	940	3512	113	1781	3554	1570
Grp Volume(v), veh/h	123	154	159	7	480	475	95	361	375	89	245	198
Grp Sat Flow(s),veh/h/ln	1781	1777	1801	1781	1777	1549	940	1777	1848	1781	1777	1570
Q Serve(g_s), s	5.1	7.0	7.1	0.3	29.9	35.8	4.7	12.7	12.7	3.6	2.3	4.7
Cycle Q Clear(g_c), s	5.1	7.0	7.1	0.3	29.9	35.8	4.7	12.7	12.7	3.6	2.3	4.7
Prop In Lane	1.00		0.19	1.00		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	222	691	700	436	579	505	385	614	639	345	1601	707
V/C Ratio(X)	0.55	0.22	0.23	0.02	0.83	0.94	0.25	0.59	0.59	0.26	0.15	0.28
Avail Cap(c_a), veh/h	225	691	700	566	592	516	385	614	639	381	1601	707
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.73	0.73	0.73	0.76	0.76	0.76
Uniform Delay (d), s/veh	28.2	24.5	24.6	25.8	37.4	39.3	12.9	14.1	14.1	20.9	8.5	8.8
Incr Delay (d2), s/veh	2.4	0.2	0.2	0.0	9.4	25.4	1.1	3.0	2.9	0.2	0.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	3.0	3.1	0.1	14.4	17.0	1.0	4.1	4.2	1.5	0.9	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	24.7	24.7	25.9	46.8	64.8	14.0	17.1	17.0	21.1	8.6	9.5
LnGrp LOS	C	C	C	C	D	E	B	B	B	C	A	A
Approach Vol, veh/h		436			962			831			532	
Approach Delay, s/veh		26.4			55.5			16.7			11.0	
Approach LOS		C			E			B			B	
Timer - Assigned Phs	1	2	3	4	5	6		8				
Phs Duration (G+Y+Rc), s	14.8	45.1	12.6	47.5	7.3	52.7		60.1				
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0		6.0				
Max Green Setting (Gmax), s	10.0	40.0	10.0	38.0	11.0	39.0		53.0				
Max Q Clear Time (g_c+I1), s	7.1	37.8	5.6	14.7	2.3	9.1		6.7				
Green Ext Time (p_c), s	0.1	1.3	0.0	5.4	0.0	1.9		2.4				
Intersection Summary												
HCM 6th Ctrl Delay			30.6									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary
12: Hollywood Way & Olive Ave

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑↱			↰↑↱		↰	↑	↱↱
Traffic Volume (veh/h)	407	933	26	7	1048	57	43	198	27	28	18	220
Future Volume (veh/h)	407	933	26	7	1048	57	43	198	27	28	18	220
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		0.99	0.99		0.99
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	433	993	28	7	1115	61	46	211	29	30	19	234
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	490	3580	101	423	3007	164	97	376	52	141	280	718
Arrive On Green	0.11	0.70	0.70	0.02	0.61	0.61	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1781	5104	144	1781	4951	271	387	2510	345	1132	1870	2751
Grp Volume(v), veh/h	433	662	359	7	766	410	149	0	137	30	19	234
Grp Sat Flow(s),veh/h/ln	1781	1702	1843	1781	1702	1817	1608	0	1634	1132	1870	1375
Q Serve(g_s), s	10.3	8.7	8.7	0.2	13.7	13.7	6.7	0.0	9.4	3.0	1.0	8.3
Cycle Q Clear(g_c), s	10.3	8.7	8.7	0.2	13.7	13.7	10.1	0.0	9.4	12.4	1.0	8.3
Prop In Lane	1.00		0.08	1.00		0.15	0.31		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	490	2388	1293	423	2067	1104	280	0	244	141	280	718
V/C Ratio(X)	0.88	0.28	0.28	0.02	0.37	0.37	0.53	0.00	0.56	0.21	0.07	0.33
Avail Cap(c_a), veh/h	592	2388	1293	692	2067	1104	551	0	531	340	608	1200
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.9	6.6	6.6	8.6	11.9	11.9	47.5	0.0	47.4	53.1	43.8	36.0
Incr Delay (d2), s/veh	12.9	0.3	0.5	0.0	0.5	1.0	1.6	0.0	2.0	0.7	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	3.0	3.3	0.1	5.2	5.7	4.3	0.0	4.0	0.9	0.5	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.8	6.9	7.2	8.6	12.5	12.9	49.0	0.0	49.4	53.9	43.9	36.2
LnGrp LOS	C	A	A	A	B	B	D	A	D	D	D	D
Approach Vol, veh/h		1454			1183			286			283	
Approach Delay, s/veh		12.6			12.6			49.2			38.6	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.2	78.9		23.0	6.9	90.2		23.0				
Change Period (Y+Rc), s	5.0	6.0		5.0	5.0	6.0		5.0				
Max Green Setting (Gmax), s	20.0	45.0		39.0	20.0	45.0		39.0				
Max Q Clear Time (g_c+I1), s	12.3	15.7		14.4	2.2	10.7		12.1				
Green Ext Time (p_c), s	0.9	9.5		1.1	0.0	8.2		1.8				

Intersection Summary			
HCM 6th Ctrl Delay			18.2
HCM 6th LOS			B

HCM 6th Signalized Intersection Summary
13: Riverside Dr & Olive Ave

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	47	856	127	24	772	188	309	633	68	72	268	16
Future Volume (veh/h)	47	856	127	24	772	188	309	633	68	72	268	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	0.99		0.98	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	52	941	140	26	848	207	340	696	75	79	295	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	238	1092	478	193	1005	439	539	1592	171	306	1752	
Arrive On Green	0.08	0.31	0.31	0.06	0.28	0.28	0.49	0.49	0.49	0.49	0.49	0.00
Sat Flow, veh/h	1781	3554	1556	1781	3554	1553	1071	3227	347	696	3554	1585
Grp Volume(v), veh/h	52	941	140	26	848	207	340	383	388	79	295	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1556	1781	1777	1553	1071	1777	1798	696	1777	1585
Q Serve(g_s), s	2.3	29.9	8.2	1.2	27.0	13.2	30.9	16.7	16.7	9.9	5.5	0.0
Cycle Q Clear(g_c), s	2.3	29.9	8.2	1.2	27.0	13.2	36.4	16.7	16.7	26.7	5.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	238	1092	478	193	1005	439	539	876	887	306	1752	
V/C Ratio(X)	0.22	0.86	0.29	0.13	0.84	0.47	0.63	0.44	0.44	0.26	0.17	
Avail Cap(c_a), veh/h	373	1185	519	372	1185	518	539	876	887	306	1752	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	28.3	39.2	31.6	29.7	40.5	35.6	26.9	19.6	19.7	28.3	16.8	0.0
Incr Delay (d2), s/veh	0.3	6.3	0.3	0.2	5.0	0.8	5.5	1.6	1.6	2.0	0.2	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(50%),veh/ln	1.0	13.9	3.2	0.5	12.4	5.1	8.6	7.2	7.3	1.8	2.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.6	45.5	32.0	29.9	45.5	36.4	32.4	21.2	21.2	30.3	17.0	0.0
LnGrp LOS	C	D	C	C	D	D	C	C	C	C	B	
Approach Vol, veh/h		1133			1081			1111			374	A
Approach Delay, s/veh		43.1			43.4			24.6			19.8	
Approach LOS		D			D			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	42.9		65.2	14.9	39.9		65.2				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0		6.0				
Max Green Setting (Gmax), s	19.0	40.0		44.0	19.0	40.0		44.0				
Max Q Clear Time (g_c+I1), s	3.2	31.9		28.7	4.3	29.0		38.4				
Green Ext Time (p_c), s	0.0	4.2		2.2	0.1	5.0		3.0				

Intersection Summary			
HCM 6th Ctrl Delay			35.3
HCM 6th LOS			D

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM Signalized Intersection Capacity Analysis
14: Alameda Ave & Ontario St & Olive Ave

10/29/2021

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	SBT	SBR
Lane Configurations		↶↰	↑↑		↰↰	↑↑			↑↑	↱	↑↑	↲
Traffic Volume (vph)	10	303	340	13	247	694	25	6	879	248	540	281
Future Volume (vph)	10	303	340	13	247	694	25	6	879	248	540	281
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.5	8.0		7.5	8.0			6.5	7.5	6.5	3.0
Lane Util. Factor		0.97	0.95		0.97	0.95			0.95	1.00	0.95	1.00
Frpb, ped/bikes		1.00	1.00		1.00	1.00			1.00	0.98	1.00	0.91
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00
Frt		1.00	0.99		1.00	0.99			1.00	0.85	1.00	0.85
Flt Protected		0.95	1.00		0.95	1.00			1.00	1.00	1.00	1.00
Satd. Flow (prot)		3433	3516		3433	3510			3539	1547	3539	1443
Flt Permitted		0.95	1.00		0.95	1.00			1.00	1.00	1.00	1.00
Satd. Flow (perm)		3433	3516		3433	3510			3539	1547	3539	1443
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	10	316	354	14	257	723	26	6	916	258	562	293
RTOR Reduction (vph)	0	0	2	0	0	1	0	0	0	0	0	0
Lane Group Flow (vph)	0	326	366	0	257	754	0	0	916	258	563	304
Confl. Peds. (#/hr)	4	19		12	12		15	10		18		10
Turn Type	Prot	Prot	NA		Prot	NA			NA	custom	NA	custom
Protected Phases	1	1	6		5	2			8		4	
Permitted Phases										5 7 8		3 4
Actuated Green, G (s)		16.9	35.8		14.6	33.5			38.7	66.3	38.1	45.2
Effective Green, g (s)		16.9	35.8		14.6	33.5			38.7	56.8	38.1	45.2
Actuated g/C Ratio		0.14	0.30		0.12	0.28			0.33	0.48	0.32	0.38
Clearance Time (s)		7.5	8.0		7.5	8.0			6.5		6.5	
Vehicle Extension (s)		2.5	4.0		2.5	4.0			3.0		3.0	
Lane Grp Cap (vph)		493	1070		426	999			1164	747	1146	554
v/s Ratio Prot		c0.09	0.10		0.07	c0.21			c0.26		0.16	
v/s Ratio Perm										0.17		c0.21
v/c Ratio		0.66	0.34		0.60	0.76			0.79	0.35	0.49	0.55
Uniform Delay, d1		47.6	31.8		48.8	38.3			35.7	18.9	32.0	28.2
Progression Factor		1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00
Incremental Delay, d2		3.0	0.3		2.0	3.5			3.6	0.2	0.3	1.1
Delay (s)		50.6	32.0		50.8	41.8			39.3	19.1	32.3	29.4
Level of Service		D	C		D	D			D	B	C	C
Approach Delay (s)			40.8			44.1			34.9		31.3	
Approach LOS			D			D			C		C	

Intersection Summary			
HCM 2000 Control Delay	37.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	117.6	Sum of lost time (s)	25.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR2	SER2
Lane Configurations		↱
Traffic Volume (vph)	11	53
Future Volume (vph)	11	53
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		7.5
Lane Util. Factor		1.00
Frpb, ped/bikes		1.00
Flpb, ped/bikes		1.00
Frt		0.86
Flt Protected		1.00
Satd. Flow (prot)		1611
Flt Permitted		1.00
Satd. Flow (perm)		1611
Peak-hour factor, PHF	0.96	0.96
Adj. Flow (vph)	11	55
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	55
Confl. Peds. (#/hr)	15	10
Turn Type		Over
Protected Phases		1
Permitted Phases		
Actuated Green, G (s)		16.9
Effective Green, g (s)		16.9
Actuated g/C Ratio		0.14
Clearance Time (s)		7.5
Vehicle Extension (s)		2.5
Lane Grp Cap (vph)		231
v/s Ratio Prot		0.03
v/s Ratio Perm		
v/c Ratio		0.24
Uniform Delay, d1		44.6
Progression Factor		1.00
Incremental Delay, d2		0.4
Delay (s)		45.0
Level of Service		D
Approach Delay (s)		
Approach LOS		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↱			✣	
Traffic Volume (veh/h)	26	827	128	105	813	22	224	177	94	20	98	11
Future Volume (veh/h)	26	827	128	105	813	22	224	177	94	20	98	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		0.99	0.99		0.99
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	27	844	131	107	830	22	229	181	96	20	100	11
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	378	1446	224	346	2076	55	407	314	167	66	184	19
Arrive On Green	0.47	0.47	0.47	0.06	0.59	0.59	0.09	0.27	0.27	0.13	0.13	0.13
Sat Flow, veh/h	646	3080	478	1781	3536	94	1781	1148	609	152	1436	146
Grp Volume(v), veh/h	27	487	488	107	417	435	229	0	277	131	0	0
Grp Sat Flow(s),veh/h/ln	646	1777	1781	1781	1777	1853	1781	0	1757	1734	0	0
Q Serve(g_s), s	2.1	18.0	18.0	2.6	11.4	11.4	8.5	0.0	12.2	1.5	0.0	0.0
Cycle Q Clear(g_c), s	2.9	18.0	18.0	2.6	11.4	11.4	8.5	0.0	12.2	6.2	0.0	0.0
Prop In Lane	1.00		0.27	1.00		0.05	1.00		0.35	0.15		0.08
Lane Grp Cap(c), veh/h	378	834	836	346	1043	1088	407	0	481	269	0	0
V/C Ratio(X)	0.07	0.58	0.58	0.31	0.40	0.40	0.56	0.00	0.58	0.49	0.00	0.00
Avail Cap(c_a), veh/h	378	834	836	413	1043	1088	407	0	752	525	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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.7	17.4	17.4	12.3	10.0	10.0	29.5	0.0	28.2	36.8	0.0	0.0
Incr Delay (d2), s/veh	0.4	3.0	3.0	0.4	1.1	1.1	1.5	0.0	1.1	1.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	7.7	7.7	1.0	4.4	4.6	4.4	0.0	5.2	2.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.0	20.4	20.4	12.6	11.2	11.1	31.1	0.0	29.3	38.2	0.0	0.0
LnGrp LOS	B	C	C	B	B	B	C	A	C	D	A	A
Approach Vol, veh/h		1002			959			506			131	
Approach Delay, s/veh		20.2			11.3			30.1			38.2	
Approach LOS		C			B			C			D	
Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		59.3		30.7	10.6	48.8	13.1	17.6				
Change Period (Y+Rc), s		6.5		6.0	5.0	6.5	4.6	6.0				
Max Green Setting (Gmax), s		39.0		38.5	9.0	25.0	8.5	25.4				
Max Q Clear Time (g_c+I1), s		13.4		14.2	4.6	20.0	10.5	8.2				
Green Ext Time (p_c), s		7.1		1.7	0.1	3.0	0.0	0.6				
Intersection Summary												
HCM 6th Ctrl Delay			19.8									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary
16: San Fernando Blvd & Buena Vista St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱	↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	161	301	61	50	317	502	63	1090	26	195	745	113
Future Volume (veh/h)	161	301	61	50	317	502	63	1090	26	195	745	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	171	320	65	53	337	534	67	1160	28	207	793	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	306	895	179	324	910	402	85	1389	34	234	1699	
Arrive On Green	0.08	0.30	0.30	0.03	0.26	0.26	0.05	0.39	0.39	0.13	0.48	0.00
Sat Flow, veh/h	1781	2946	590	1781	3554	1572	1781	3546	86	1781	3554	1585
Grp Volume(v), veh/h	171	191	194	53	337	534	67	581	607	207	793	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1759	1781	1777	1572	1781	1777	1854	1781	1777	1585
Q Serve(g_s), s	10.8	13.1	13.5	3.4	12.2	40.0	5.8	46.2	46.2	17.8	23.4	0.0
Cycle Q Clear(g_c), s	10.8	13.1	13.5	3.4	12.2	40.0	5.8	46.2	46.2	17.8	23.4	0.0
Prop In Lane	1.00		0.34	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	306	540	535	324	910	402	85	696	726	234	1699	
V/C Ratio(X)	0.56	0.35	0.36	0.16	0.37	1.33	0.79	0.84	0.84	0.88	0.47	
Avail Cap(c_a), veh/h	387	540	535	491	910	402	290	853	890	456	2047	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	37.2	42.4	42.5	40.6	47.8	58.1	73.6	43.0	43.0	66.7	27.4	0.0
Incr Delay (d2), s/veh	0.6	0.6	0.6	0.1	0.4	163.4	6.0	6.7	6.5	12.3	0.4	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(50%),veh/ln	4.8	5.9	6.0	1.5	5.5	34.2	2.8	21.6	22.5	8.9	10.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.8	43.0	43.1	40.7	48.1	221.5	79.6	49.7	49.4	79.0	27.8	0.0
LnGrp LOS	D	D	D	D	D	F	E	D	D	E	C	
Approach Vol, veh/h		556			924			1255			1000	A
Approach Delay, s/veh		41.4			147.9			51.2			38.4	
Approach LOS		D			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	53.5	12.0	80.7	17.5	46.0	25.6	67.2
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	5.0	6.0
Max Green Setting (Gmax), s	20.0	40.0	25.4	90.0	20.0	40.0	40.0	75.0
Max Q Clear Time (g_c+I1), s	5.4	15.5	7.8	25.4	12.8	42.0	19.8	48.2
Green Ext Time (p_c), s	0.0	3.3	0.1	14.4	0.1	0.0	0.7	13.0

Intersection Summary	
HCM 6th Ctrl Delay	70.2
HCM 6th LOS	E

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
17: Buena Vista St & Empire Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰↰	↑↱		↰	↑↑	↱	↰↰	↑↱	
Traffic Volume (veh/h)	129	171	190	377	273	141	181	808	423	99	540	86
Future Volume (veh/h)	129	171	190	377	273	141	181	808	423	99	540	86
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	134	178	198	393	284	147	189	842	441	103	562	90
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	201	586	254	441	490	246	452	1776	788	150	1453	232
Arrive On Green	0.08	0.17	0.17	0.13	0.22	0.22	0.07	0.50	0.50	0.04	0.47	0.47
Sat Flow, veh/h	1781	3554	1539	3456	2272	1140	1781	3554	1576	3456	3066	490
Grp Volume(v), veh/h	134	178	198	393	220	211	189	842	441	103	325	327
Grp Sat Flow(s),veh/h/ln	1781	1777	1539	1728	1777	1635	1781	1777	1576	1728	1777	1779
Q Serve(g_s), s	9.8	6.2	14.2	15.7	15.5	16.3	7.5	21.7	15.6	4.1	16.5	16.6
Cycle Q Clear(g_c), s	9.8	6.2	14.2	15.7	15.5	16.3	7.5	21.7	15.6	4.1	16.5	16.6
Prop In Lane	1.00		1.00	1.00		0.70	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	201	586	254	441	383	352	452	1776	788	150	842	843
V/C Ratio(X)	0.67	0.30	0.78	0.89	0.57	0.60	0.42	0.47	0.56	0.68	0.39	0.39
Avail Cap(c_a), veh/h	255	863	374	469	470	432	519	1776	788	296	842	843
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.89	0.89	0.89	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.8	51.4	37.9	60.1	49.2	49.5	17.4	23.0	8.0	66.0	23.7	23.7
Incr Delay (d2), s/veh	3.5	0.3	6.2	17.9	1.4	1.6	0.4	0.8	2.6	4.1	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	2.8	5.9	8.0	7.1	6.8	3.2	9.3	5.6	1.9	7.3	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.3	51.7	44.1	78.0	50.5	51.1	17.8	23.8	10.6	70.1	25.0	25.1
LnGrp LOS	E	D	D	E	D	D	B	C	B	E	C	C
Approach Vol, veh/h		510			824			1472			755	
Approach Delay, s/veh		50.8			63.8			19.1			31.2	
Approach LOS		D			E			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.9	29.1	14.7	72.4	16.8	36.2	11.1	76.0
Change Period (Y+Rc), s	6.0	* 6	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	19.0	* 34	15.0	50.0	16.0	37.0	12.0	53.0
Max Q Clear Time (g_c+I1), s	17.7	16.2	9.5	18.6	11.8	18.3	6.1	23.7
Green Ext Time (p_c), s	0.2	1.7	0.2	4.5	0.1	2.5	0.1	11.0

Intersection Summary	
HCM 6th Ctrl Delay	36.5
HCM 6th LOS	D

Notes

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

HCM Signalized Intersection Capacity Analysis
18: Vanowen St/Driveway & Buena Vista St

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰	↱		✥		↰	↑↑			↑↑	↱
Traffic Volume (vph)	392	0	342	0	0	0	230	1000	0	0	918	285
Future Volume (vph)	392	0	342	0	0	0	230	1000	0	0	918	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.7	5.7				6.0	6.0			6.0	6.0
Lane Util. Factor	0.95	0.95	1.00				1.00	0.95			0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.97				1.00	1.00			1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00				1.00	1.00			1.00	1.00
Frt	1.00	1.00	0.85				1.00	1.00			1.00	0.85
Flt Protected	0.95	0.95	1.00				0.95	1.00			1.00	1.00
Satd. Flow (prot)	1681	1681	1538				1770	3539			3539	1560
Flt Permitted	0.95	0.95	1.00				0.95	1.00			1.00	1.00
Satd. Flow (perm)	1681	1681	1538				1770	3539			3539	1560
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	426	0	372	0	0	0	250	1087	0	0	998	310
RTOR Reduction (vph)	0	0	302	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	213	213	70	0	0	0	250	1087	0	0	998	310
Confl. Peds. (#/hr)	7		7	7		7	1					1
Turn Type	Split	NA	Perm				Prot	NA			NA	Perm
Protected Phases	4	4			3		5	2			6	
Permitted Phases			4	3								6
Actuated Green, G (s)	27.2	27.2	27.2				27.6	105.6			72.0	72.0
Effective Green, g (s)	27.2	27.2	27.2				27.6	105.6			72.0	72.0
Actuated g/C Ratio	0.19	0.19	0.19				0.19	0.73			0.50	0.50
Clearance Time (s)	5.7	5.7	5.7				6.0	6.0			6.0	6.0
Vehicle Extension (s)	3.5	3.5	3.5				2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	316	316	289				338	2586			1763	777
v/s Ratio Prot	c0.13	0.13					c0.14	0.31			c0.28	
v/s Ratio Perm			0.05									0.20
v/c Ratio	0.67	0.67	0.24				0.74	0.42			0.57	0.40
Uniform Delay, d1	54.5	54.5	49.9				55.1	7.6			25.3	22.7
Progression Factor	1.00	1.00	1.00				1.00	1.00			1.00	1.00
Incremental Delay, d2	5.8	5.8	0.5				7.1	0.5			1.3	1.5
Delay (s)	60.3	60.3	50.4				62.2	8.1			26.7	24.2
Level of Service	E	E	D				E	A			C	C
Approach Delay (s)		55.7			0.0			18.2			26.1	
Approach LOS		E			A			B			C	

Intersection Summary			
HCM 2000 Control Delay	29.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	144.5	Sum of lost time (s)	22.3
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
19: Victory Blvd & Buena Vista St

10/27/2021

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	200	766	160	123	127	211	273	858	70	320	851	107
Future Volume (veh/h)	200	766	160	123	127	211	273	858	70	320	851	107
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	1.00		0.97	1.00		0.97	1.00		0.97
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	208	798	167	128	132	220	284	894	73	333	886	111
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	422	879	381	194	759	327	377	1436	622	396	1495	648
Arrive On Green	0.10	0.25	0.25	0.07	0.21	0.21	0.11	0.40	0.40	0.13	0.42	0.42
Sat Flow, veh/h	1781	3554	1539	1781	3554	1532	1781	3554	1539	1781	3554	1541
Grp Volume(v), veh/h	208	798	167	128	132	220	284	894	73	333	886	111
Grp Sat Flow(s),veh/h/ln	1781	1777	1539	1781	1777	1532	1781	1777	1539	1781	1777	1541
Q Serve(g_s), s	12.4	30.5	12.8	7.8	4.2	18.5	12.9	28.0	4.2	15.1	26.9	6.3
Cycle Q Clear(g_c), s	12.4	30.5	12.8	7.8	4.2	18.5	12.9	28.0	4.2	15.1	26.9	6.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	422	879	381	194	759	327	377	1436	622	396	1495	648
V/C Ratio(X)	0.49	0.91	0.44	0.66	0.17	0.67	0.75	0.62	0.12	0.84	0.59	0.17
Avail Cap(c_a), veh/h	479	924	400	310	924	398	613	1436	622	602	1495	648
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	51.1	44.5	41.6	44.9	50.5	24.0	33.2	26.1	25.3	31.3	25.3
Incr Delay (d2), s/veh	0.7	12.3	0.8	2.9	0.1	3.3	2.3	2.0	0.4	5.6	1.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	15.1	5.0	3.6	1.9	7.4	5.6	12.5	1.6	6.9	12.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.2	63.4	45.3	44.4	45.1	53.8	26.3	35.3	26.5	30.9	33.0	25.9
LnGrp LOS	D	E	D	D	D	D	C	D	C	C	C	C
Approach Vol, veh/h		1173			480			1251			1330	
Approach Delay, s/veh		56.0			48.9			32.7			31.9	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.4	40.6	20.1	64.9	19.1	35.9	22.4	62.6
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	19.0	36.4	34.0	29.4	19.0	36.4	34.0	29.4
Max Q Clear Time (g_c+I1), s	9.8	32.5	14.9	28.9	14.4	20.5	17.1	30.0
Green Ext Time (p_c), s	0.1	2.1	0.6	0.3	0.2	1.4	0.7	0.0

Intersection Summary			
HCM 6th Ctrl Delay			40.7
HCM 6th LOS			D

HCM 6th Signalized Intersection Summary
20: Burbank Blvd & Buena Vista St

10/27/2021

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	147	578	188	145	550	123	206	974	120	142	888	208
Future Volume (veh/h)	147	578	188	145	550	123	206	974	120	142	888	208
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
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	153	602	196	151	573	128	215	1015	125	148	925	217
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	232	714	316	222	711	315	340	1798	798	306	1727	766
Arrive On Green	0.08	0.20	0.20	0.08	0.20	0.20	0.08	0.51	0.51	0.06	0.49	0.49
Sat Flow, veh/h	1781	3554	1573	1781	3554	1573	1781	3554	1577	1781	3554	1576
Grp Volume(v), veh/h	153	602	196	151	573	128	215	1015	125	148	925	217
Grp Sat Flow(s),veh/h/ln	1781	1777	1573	1781	1777	1573	1781	1777	1577	1781	1777	1576
Q Serve(g_s), s	9.4	22.8	15.9	9.3	21.5	9.9	8.4	27.7	6.0	5.8	25.3	11.5
Cycle Q Clear(g_c), s	9.4	22.8	15.9	9.3	21.5	9.9	8.4	27.7	6.0	5.8	25.3	11.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	232	714	316	222	711	315	340	1798	798	306	1727	766
V/C Ratio(X)	0.66	0.84	0.62	0.68	0.81	0.41	0.63	0.56	0.16	0.48	0.54	0.28
Avail Cap(c_a), veh/h	277	873	387	268	873	387	673	1798	798	674	1727	766
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.5	53.8	51.0	41.8	53.4	48.7	19.2	23.9	18.6	19.1	25.0	21.4
Incr Delay (d2), s/veh	3.6	6.4	2.1	4.4	4.6	0.8	1.5	1.3	0.4	0.9	1.2	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	10.8	6.5	4.4	10.1	4.0	3.6	11.9	2.3	2.5	11.0	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.2	60.1	53.1	46.3	58.0	49.6	20.7	25.2	19.0	19.9	26.2	22.4
LnGrp LOS	D	E	D	D	E	D	C	C	B	B	C	C
Approach Vol, veh/h		951			852			1355			1290	
Approach Delay, s/veh		56.3			54.6			23.9			24.8	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	34.1	15.8	74.0	16.1	34.0	13.1	76.8
Change Period (Y+Rc), s	4.6	6.0	5.0	6.0	4.6	6.0	5.0	6.0
Max Green Setting (Gmax), s	15.0	34.4	37.0	32.0	15.0	34.4	37.0	32.0
Max Q Clear Time (g_c+I1), s	11.3	24.8	10.4	27.3	11.4	23.5	7.8	29.7
Green Ext Time (p_c), s	0.1	3.3	0.4	2.8	0.1	3.2	0.3	1.6

Intersection Summary			
HCM 6th Ctrl Delay			37.0
HCM 6th LOS			D

HCM 6th Signalized Intersection Summary
21: Magnolia Blvd & Buena Vista St

10/27/2021

	⤴	→	⤵	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	175	762	92	107	785	217	149	930	187	263	647	129
Future Volume (veh/h)	175	762	92	107	785	217	149	930	187	263	647	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	180	786	95	110	809	224	154	959	193	271	667	133
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	220	965	425	199	862	379	386	1462	641	329	1594	699
Arrive On Green	0.09	0.27	0.27	0.06	0.24	0.24	0.07	0.41	0.41	0.10	0.45	0.45
Sat Flow, veh/h	1781	3554	1564	1781	3554	1562	1781	3554	1557	1781	3554	1560
Grp Volume(v), veh/h	180	786	95	110	809	224	154	959	193	271	667	133
Grp Sat Flow(s),veh/h/ln	1781	1777	1564	1781	1777	1562	1781	1777	1557	1781	1777	1560
Q Serve(g_s), s	10.4	29.0	6.6	6.4	31.3	17.8	6.9	30.5	11.7	11.8	17.8	7.2
Cycle Q Clear(g_c), s	10.4	29.0	6.6	6.4	31.3	17.8	6.9	30.5	11.7	11.8	17.8	7.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	220	965	425	199	862	379	386	1462	641	329	1594	699
V/C Ratio(X)	0.82	0.81	0.22	0.55	0.94	0.59	0.40	0.66	0.30	0.82	0.42	0.19
Avail Cap(c_a), veh/h	253	965	425	283	873	384	740	1462	641	617	1594	699
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.1	47.7	39.6	39.0	52.0	46.9	21.7	33.2	27.7	26.3	26.2	23.3
Incr Delay (d2), s/veh	15.8	5.5	0.3	1.8	17.3	2.4	0.5	2.3	1.2	3.9	0.8	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	13.6	2.6	2.9	16.0	7.2	3.0	13.6	4.6	5.3	7.8	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.9	53.2	39.8	40.7	69.3	49.2	22.2	35.5	28.9	30.2	27.0	23.9
LnGrp LOS	D	D	D	D	E	D	C	D	C	C	C	C
Approach Vol, veh/h		1061			1143			1306			1071	
Approach Delay, s/veh		52.1			62.6			33.0			27.4	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	44.0	14.2	68.8	17.0	40.0	19.4	63.6
Change Period (Y+Rc), s	4.6	6.0	5.0	6.0	4.6	6.0	5.0	6.0
Max Green Setting (Gmax), s	15.0	34.4	37.0	32.0	15.0	34.4	37.0	32.0
Max Q Clear Time (g_c+I1), s	8.4	31.0	8.9	19.8	12.4	33.3	13.8	32.5
Green Ext Time (p_c), s	0.1	1.8	0.3	4.0	0.1	0.7	0.6	0.0

Intersection Summary	
HCM 6th Ctrl Delay	43.5
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
22: Olive Ave & Buena Vista St

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	339	951	96	124	615	57	101	801	156	95	397	186
Future Volume (veh/h)	339	951	96	124	615	57	101	801	156	95	397	186
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.99	1.00		0.98
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	361	1012	102	132	654	61	107	852	166	101	422	198
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	384	1065	107	190	736	69	393	1423	625	252	1415	622
Arrive On Green	0.17	0.33	0.33	0.07	0.22	0.22	0.05	0.40	0.40	0.05	0.40	0.40
Sat Flow, veh/h	1781	3255	328	1781	3279	305	1781	3554	1561	1781	3554	1561
Grp Volume(v), veh/h	361	552	562	132	354	361	107	852	166	101	422	198
Grp Sat Flow(s),veh/h/ln	1781	1777	1806	1781	1777	1808	1781	1777	1561	1781	1777	1561
Q Serve(g_s), s	22.1	42.5	42.5	7.9	27.0	27.1	4.9	26.5	10.0	4.7	11.4	12.2
Cycle Q Clear(g_c), s	22.1	42.5	42.5	7.9	27.0	27.1	4.9	26.5	10.0	4.7	11.4	12.2
Prop In Lane	1.00		0.18	1.00		0.17	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	384	581	591	190	399	406	393	1423	625	252	1415	622
V/C Ratio(X)	0.94	0.95	0.95	0.69	0.89	0.89	0.27	0.60	0.27	0.40	0.30	0.32
Avail Cap(c_a), veh/h	418	581	591	305	449	457	420	1423	625	283	1415	622
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	46.0	46.0	40.9	52.6	52.6	23.3	33.1	28.2	25.8	28.8	29.0
Incr Delay (d2), s/veh	27.9	25.5	25.3	3.4	17.6	17.7	0.3	1.9	1.0	0.8	0.5	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.6	22.8	23.1	3.7	14.0	14.3	2.1	11.8	4.0	2.1	5.0	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.4	71.4	71.3	44.2	70.2	70.3	23.6	35.0	29.2	26.6	29.3	30.4
LnGrp LOS	E	E	E	D	E	E	C	C	C	C	C	C
Approach Vol, veh/h		1475			847			1125			721	
Approach Delay, s/veh		69.9			66.2			33.0			29.2	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.6	51.8	11.9	61.7	28.9	37.4	11.6	62.0
Change Period (Y+Rc), s	4.6	6.0	5.0	6.0	4.6	6.0	5.0	6.0
Max Green Setting (Gmax), s	19.0	43.4	9.0	47.0	27.0	35.4	9.0	47.0
Max Q Clear Time (g_c+I1), s	9.9	44.5	6.9	14.2	24.1	29.1	6.7	28.5
Green Ext Time (p_c), s	0.2	0.0	0.0	3.8	0.3	2.3	0.0	6.5

Intersection Summary	
HCM 6th Ctrl Delay	52.2
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
23: Alameda Ave & Buena Vista St

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	225	987	133	231	545	215	107	693	134	269	320	61
Future Volume (veh/h)	225	987	133	231	545	215	107	693	134	269	320	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	0.98		0.96	1.00		0.97
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	239	1050	141	246	580	229	114	737	143	286	340	65
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	288	1120	491	295	1152	506	453	1115	479	352	1342	581
Arrive On Green	0.08	0.32	0.32	0.09	0.32	0.32	0.06	0.31	0.31	0.12	0.38	0.38
Sat Flow, veh/h	3456	3554	1559	3456	3554	1560	1781	3554	1527	1781	3554	1537
Grp Volume(v), veh/h	239	1050	141	246	580	229	114	737	143	286	340	65
Grp Sat Flow(s),veh/h/ln	1728	1777	1559	1728	1777	1560	1781	1777	1527	1781	1777	1537
Q Serve(g_s), s	9.5	40.2	7.6	9.8	18.5	16.3	6.0	25.1	7.4	14.7	9.2	3.8
Cycle Q Clear(g_c), s	9.5	40.2	7.6	9.8	18.5	16.3	6.0	25.1	7.4	14.7	9.2	3.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	288	1120	491	295	1152	506	453	1115	479	352	1342	581
V/C Ratio(X)	0.83	0.94	0.29	0.83	0.50	0.45	0.25	0.66	0.30	0.81	0.25	0.11
Avail Cap(c_a), veh/h	346	1142	501	346	1152	506	605	1115	479	403	1342	581
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.2	46.6	23.2	63.0	38.2	37.5	29.5	41.6	20.5	30.0	30.0	28.3
Incr Delay (d2), s/veh	12.5	14.1	0.3	13.4	0.4	0.6	0.2	3.1	1.6	10.1	0.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	19.9	2.9	4.9	8.2	6.4	2.6	11.5	2.9	7.3	4.1	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.7	60.7	23.5	76.4	38.6	38.1	29.8	44.7	22.1	40.1	30.4	28.7
LnGrp LOS	E	E	C	E	D	D	C	D	C	D	C	C
Approach Vol, veh/h		1430			1055			994			691	
Approach Delay, s/veh		59.5			47.3			39.7			34.3	
Approach LOS		E			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	50.1	13.1	58.9	16.7	51.4	22.0	49.9
Change Period (Y+Rc), s	6.0	* 6	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	14.0	* 45	20.0	39.0	14.0	45.0	21.0	38.0
Max Q Clear Time (g_c+I1), s	11.8	42.2	8.0	11.2	11.5	20.5	16.7	27.1
Green Ext Time (p_c), s	0.1	1.9	0.1	2.5	0.2	5.0	0.3	4.2

Intersection Summary	
HCM 6th Ctrl Delay	47.5
HCM 6th LOS	D

Notes

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

HCM Signalized Intersection Capacity Analysis
24: Riverside Dr & SR 134 Ramps/Buena Vista St & SR 134 WB On Ramp

10/27/2021

Movement	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	SBR2	NEL
Lane Configurations	↰	↰	↰↑	↱	↰	↑↱		↰	↑↱		↱	↰
Traffic Volume (vph)	65	274	310	223	120	649	69	108	184	37	329	101
Future Volume (vph)	65	274	310	223	120	649	69	108	184	37	329	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	6.5	6.5	6.5	6.5	6.5		6.5	6.5		6.5	4.6
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	0.95		1.00	0.91		0.91	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.98	1.00	1.00		1.00	0.99		0.98	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.99		1.00	0.92		0.85	1.00
Flt Protected	0.95	0.95	0.99	1.00	0.95	1.00		0.95	1.00		1.00	0.95
Satd. Flow (prot)	1770	1681	1746	1555	1770	3483		1770	3104		1416	1770
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00		0.95	1.00		1.00	0.95
Satd. Flow (perm)	1770	1770	1770	1555	1770	3483		1770	3104		1416	1770
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	68	285	323	232	125	676	72	112	192	39	343	105
RTOR Reduction (vph)	0	0	0	53	0	4	0	0	0	0	0	0
Lane Group Flow (vph)	68	168	440	179	125	744	0	113	392	0	182	105
Confl. Peds. (#/hr)		3		3	3		1	1			3	3
Turn Type	Prot	Perm	NA	Perm	Split	NA		Split	NA		Perm	Prot
Protected Phases	1		6		8	8		7	7			5
Permitted Phases		6		6							7	
Actuated Green, G (s)	12.2	50.7	50.7	50.7	41.5	41.5		28.7	28.7		28.7	15.0
Effective Green, g (s)	12.2	50.7	50.7	50.7	41.5	41.5		28.7	28.7		28.7	15.0
Actuated g/C Ratio	0.08	0.32	0.32	0.32	0.26	0.26		0.18	0.18		0.18	0.09
Clearance Time (s)	4.6	6.5	6.5	6.5	6.5	6.5		6.5	6.5		6.5	4.6
Vehicle Extension (s)	2.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	2.5
Lane Grp Cap (vph)	134	560	560	492	459	903		317	556		253	165
v/s Ratio Prot	0.04				0.07	c0.21		0.06	0.13			c0.06
v/s Ratio Perm		0.09	0.25	0.11							c0.13	
v/c Ratio	0.51	0.30	0.79	0.36	0.27	0.82		0.36	0.71		0.72	0.64
Uniform Delay, d1	71.0	41.3	49.7	42.2	47.2	55.8		57.6	61.7		61.9	69.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	2.2	0.4	7.4	0.5	0.4	6.3		0.8	4.2		9.7	6.9
Delay (s)	73.2	41.6	57.1	42.7	47.6	62.2		58.4	65.9		71.6	76.7
Level of Service	E	D	E	D	D	E		E	E		E	E
Approach Delay (s)			51.8			60.1			66.2			72.6
Approach LOS			D			E			E			E

Intersection Summary			
HCM 2000 Control Delay	62.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.1
Intersection Capacity Utilization	96.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

	↗
Movement	NER
Lane Configurations	↱↱
Traffic Volume (vph)	856
Future Volume (vph)	856
Ideal Flow (vphpl)	1900
Total Lost time (s)	6.5
Lane Util. Factor	0.88
Frpb, ped/bikes	1.00
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	2787
Flt Permitted	1.00
Satd. Flow (perm)	2787
Peak-hour factor, PHF	0.96
Adj. Flow (vph)	892
RTOR Reduction (vph)	0
Lane Group Flow (vph)	892
Confl. Peds. (#/hr)	1
Turn Type	Prot
Protected Phases	2
Permitted Phases	
Actuated Green, G (s)	53.5
Effective Green, g (s)	53.5
Actuated g/C Ratio	0.33
Clearance Time (s)	6.5
Vehicle Extension (s)	3.5
Lane Grp Cap (vph)	931
v/s Ratio Prot	c0.32
v/s Ratio Perm	
v/c Ratio	0.96
Uniform Delay, d1	52.2
Progression Factor	1.00
Incremental Delay, d2	20.0
Delay (s)	72.1
Level of Service	E
Approach Delay (s)	
Approach LOS	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
25: Burbank Blvd & Victory Blvd

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑	↱	↰↰	↰↑	↱
Traffic Volume (vph)	142	1214	246	252	1493	578	455	508	228	735	487	146
Future Volume (vph)	142	1214	246	252	1493	578	455	508	228	735	487	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	6.0	5.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0	6.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.86	0.86	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00
Satd. Flow (prot)	3433	5085	1559	3433	5085	1570	3433	3539	1570	3044	3170	1522
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00
Satd. Flow (perm)	3433	5085	1559	3433	5085	1570	3433	3539	1570	3044	3170	1522
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	143	1226	248	255	1508	584	460	513	230	742	492	147
RTOR Reduction (vph)	0	0	37	0	0	57	0	0	33	0	0	54
Lane Group Flow (vph)	143	1226	211	255	1508	527	460	513	197	608	626	93
Confl. Peds. (#/hr)	2		7	7		2	18		1	1		18
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Split	NA	pm+ov	Split	NA	Perm
Protected Phases	1	6	7	5	2	3	7	7	5	3	3	
Permitted Phases			6			2			7			3
Actuated Green, G (s)	12.7	57.9	93.0	18.3	63.5	111.2	35.1	35.1	53.4	47.7	47.7	47.7
Effective Green, g (s)	12.7	57.9	93.0	18.3	63.5	111.2	35.1	35.1	53.4	47.7	47.7	47.7
Actuated g/C Ratio	0.07	0.32	0.51	0.10	0.35	0.61	0.19	0.19	0.29	0.26	0.26	0.26
Clearance Time (s)	5.0	6.0	6.0	5.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0	6.0
Vehicle Extension (s)	2.5	3.0	3.0	2.0	3.0	3.0	3.0	3.0	2.0	3.0	3.0	3.0
Lane Grp Cap (vph)	239	1617	796	345	1774	1011	662	682	460	797	830	398
v/s Ratio Prot	0.04	0.24	0.05	c0.07	c0.30	0.14	0.13	c0.14	0.04	c0.20	0.20	
v/s Ratio Perm			0.08			0.20			0.08			0.06
v/c Ratio	0.60	0.76	0.27	0.74	0.85	0.52	0.69	0.75	0.43	0.76	0.75	0.23
Uniform Delay, d1	82.2	55.8	25.2	79.5	54.8	20.2	68.5	69.3	52.0	61.9	61.8	52.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.3	2.1	0.2	7.0	4.1	0.5	3.2	4.7	0.2	4.4	3.9	0.3
Delay (s)	85.5	57.8	25.4	86.5	59.0	20.7	71.6	74.0	52.2	66.3	65.7	53.1
Level of Service	F	E	C	F	E	C	E	E	D	E	E	D
Approach Delay (s)		55.3			52.4			68.9			64.6	
Approach LOS		E			D			E			E	

Intersection Summary			
HCM 2000 Control Delay	58.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	182.0	Sum of lost time (s)	23.0
Intersection Capacity Utilization	90.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
26: Victory Blvd/Victory Pl & Magnolia Blvd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	159	852	211	144	607	179	219	832	147	266	884	140
Future Volume (veh/h)	159	852	211	144	607	179	219	832	147	266	884	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.99
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	161	861	213	145	613	181	221	840	148	269	893	141
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	234	611	151	191	746	327	357	1624	716	387	1676	739
Arrive On Green	0.09	0.22	0.22	0.08	0.21	0.21	0.08	0.46	0.46	0.10	0.47	0.47
Sat Flow, veh/h	1781	2812	695	1781	3554	1556	1781	3554	1567	1781	3554	1568
Grp Volume(v), veh/h	161	544	530	145	613	181	221	840	148	269	893	141
Grp Sat Flow(s),veh/h/ln	1781	1777	1730	1781	1777	1556	1781	1777	1567	1781	1777	1568
Q Serve(g_s), s	9.8	30.4	30.4	8.8	23.1	14.6	9.1	23.5	7.9	11.1	24.8	7.3
Cycle Q Clear(g_c), s	9.8	30.4	30.4	8.8	23.1	14.6	9.1	23.5	7.9	11.1	24.8	7.3
Prop In Lane	1.00		0.40	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	234	386	376	191	746	327	357	1624	716	387	1676	739
V/C Ratio(X)	0.69	1.41	1.41	0.76	0.82	0.55	0.62	0.52	0.21	0.69	0.53	0.19
Avail Cap(c_a), veh/h	400	386	376	370	772	338	581	1624	716	585	1676	739
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	54.8	54.8	41.7	52.8	49.4	20.1	27.0	22.8	20.2	26.1	21.5
Incr Delay (d2), s/veh	1.3	199.2	200.1	2.4	6.9	1.8	0.7	1.2	0.7	0.8	1.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	34.9	34.1	4.0	11.0	5.9	3.9	10.3	3.1	4.7	10.8	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.0	254.0	254.9	44.1	59.7	51.3	20.8	28.2	23.4	21.0	27.3	22.0
LnGrp LOS	D	F	F	D	E	D	C	C	C	C	C	C
Approach Vol, veh/h		1235			939			1209			1303	
Approach Delay, s/veh		226.8			55.7			26.3			25.5	
Approach LOS		F			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	72.0	15.5	36.4	18.1	70.0	16.5	35.4
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	29.0	34.4	25.0	30.4	29.0	34.4	25.0	30.4
Max Q Clear Time (g_c+I1), s	11.1	26.8	10.8	32.4	13.1	25.5	11.8	25.1
Green Ext Time (p_c), s	0.3	3.9	0.2	0.0	0.3	4.1	0.2	2.2

Intersection Summary	
HCM 6th Ctrl Delay	84.8
HCM 6th LOS	F

27: Olive Ave & Victory Blvd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	226	934	41	113	679	198	82	761	165	159	798	244
Future Volume (veh/h)	226	934	41	113	679	198	82	761	165	159	798	244
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.97
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	231	953	42	115	693	202	84	777	168	162	814	249
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	394	1661	73	299	1580	692	166	845	364	211	964	417
Arrive On Green	0.08	0.48	0.48	0.05	0.44	0.44	0.05	0.24	0.24	0.08	0.27	0.27
Sat Flow, veh/h	1781	3464	153	1781	3554	1556	1781	3554	1531	1781	3554	1538
Grp Volume(v), veh/h	231	489	506	115	693	202	84	777	168	162	814	249
Grp Sat Flow(s),veh/h/ln	1781	1777	1840	1781	1777	1556	1781	1777	1531	1781	1777	1538
Q Serve(g_s), s	9.5	27.7	27.7	4.9	18.8	11.6	4.9	29.9	13.2	9.3	30.3	19.7
Cycle Q Clear(g_c), s	9.5	27.7	27.7	4.9	18.8	11.6	4.9	29.9	13.2	9.3	30.3	19.7
Prop In Lane	1.00		0.08	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	394	852	882	299	1580	692	166	845	364	211	964	417
V/C Ratio(X)	0.59	0.57	0.57	0.38	0.44	0.29	0.51	0.92	0.46	0.77	0.84	0.60
Avail Cap(c_a), veh/h	613	852	882	580	1580	692	322	873	376	308	964	417
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.2	26.2	26.2	21.5	26.8	24.8	40.2	52.1	45.7	38.5	48.2	44.4
Incr Delay (d2), s/veh	0.5	2.8	2.7	0.3	0.9	1.1	0.9	14.4	0.9	3.5	7.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	12.4	12.8	2.1	8.3	4.5	2.2	15.0	5.1	4.3	14.4	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.8	29.0	28.9	21.8	27.7	25.9	41.1	66.5	46.6	42.0	55.2	46.7
LnGrp LOS	B	C	C	C	C	C	D	E	D	D	E	D
Approach Vol, veh/h		1226			1010			1029			1225	
Approach Delay, s/veh		27.2			26.7			61.2			51.7	
Approach LOS		C			C			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	73.1	11.3	44.0	16.4	68.3	16.0	39.3
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	29.0	36.4	19.0	34.4	29.0	36.4	19.0	34.4
Max Q Clear Time (g_c+I1), s	6.9	29.7	6.9	32.3	11.5	20.8	11.3	31.9
Green Ext Time (p_c), s	0.1	3.4	0.1	1.3	0.3	5.0	0.1	1.4

Intersection Summary	
HCM 6th Ctrl Delay	41.5
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑↱		↰↰	↑↱	
Traffic Volume (veh/h)	72	1365	135	111	578	256	120	442	132	367	538	42
Future Volume (veh/h)	72	1365	135	111	578	256	120	442	132	367	538	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		0.98	1.00		0.99
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	74	1407	139	114	596	264	124	456	136	378	555	43
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	386	1790	793	191	1806	800	210	524	155	513	1112	86
Arrive On Green	0.04	0.50	0.50	0.04	0.51	0.51	0.19	0.19	0.19	0.11	0.33	0.33
Sat Flow, veh/h	1781	3554	1575	1781	3554	1575	814	2692	796	3456	3339	258
Grp Volume(v), veh/h	74	1407	139	114	596	264	124	300	292	378	295	303
Grp Sat Flow(s),veh/h/ln	1781	1777	1575	1781	1777	1575	814	1777	1711	1728	1777	1821
Q Serve(g_s), s	2.8	45.5	6.7	4.3	13.9	13.9	20.3	22.9	23.2	11.8	18.6	18.7
Cycle Q Clear(g_c), s	2.8	45.5	6.7	4.3	13.9	13.9	20.3	22.9	23.2	11.8	18.6	18.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.47	1.00		0.14
Lane Grp Cap(c), veh/h	386	1790	793	191	1806	800	210	346	333	513	591	606
V/C Ratio(X)	0.19	0.79	0.18	0.60	0.33	0.33	0.59	0.87	0.88	0.74	0.50	0.50
Avail Cap(c_a), veh/h	441	1790	793	238	1806	800	228	386	372	717	736	754
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.9	28.6	18.9	26.5	20.4	20.3	53.5	54.6	54.7	39.8	37.3	37.4
Incr Delay (d2), s/veh	0.1	3.6	0.5	1.1	0.5	1.1	3.4	17.0	19.1	2.5	0.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	20.0	2.6	1.8	5.9	5.4	4.4	11.9	11.8	5.2	8.3	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.0	32.1	19.4	27.6	20.8	21.5	57.0	71.6	73.9	42.3	38.0	38.0
LnGrp LOS	B	C	B	C	C	C	E	E	E	D	D	D
Approach Vol, veh/h		1620			974			716			976	
Approach Delay, s/veh		30.3			21.8			70.0			39.7	
Approach LOS		C			C			E			D	
Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	19.3	33.3	10.9	76.5		52.6	10.3	77.1				
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0		6.0	4.6	6.0				
Max Green Setting (Gmax), s	23.0	30.4	10.0	55.4		58.0	10.0	55.4				
Max Q Clear Time (g_c+I1), s	13.8	25.2	6.3	47.5		20.7	4.8	15.9				
Green Ext Time (p_c), s	0.9	2.0	0.0	5.7		4.1	0.0	5.8				
Intersection Summary												
HCM 6th Ctrl Delay			37.1									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary
29: Burbank Blvd & San Fernando Blvd

10/27/2021

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰	↑↑	↱	↰↰	↑↱		↰	↑	↱↱
Traffic Volume (veh/h)	836	649	576	21	412	87	246	366	20	71	170	446
Future Volume (veh/h)	836	649	576	21	412	87	246	366	20	71	170	446
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.95		1.00	1.00		0.97	1.00		0.98	1.00		0.94
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	853	662	0	21	420	89	251	373	20	72	173	455
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	946	1256		82	683	295	412	952	51	103	383	539
Arrive On Green	0.20	0.35	0.00	0.05	0.19	0.19	0.12	0.28	0.28	0.06	0.20	0.20
Sat Flow, veh/h	3456	3554	1585	1781	3554	1536	3456	3426	183	1781	1870	2633
Grp Volume(v), veh/h	853	662	0	21	420	89	251	193	200	72	173	455
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1536	1728	1777	1832	1781	1870	1317
Q Serve(g_s), s	13.5	12.5	0.0	1.0	9.1	4.2	5.8	7.4	7.5	3.3	6.8	10.9
Cycle Q Clear(g_c), s	13.5	12.5	0.0	1.0	9.1	4.2	5.8	7.4	7.5	3.3	6.8	10.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	946	1256		82	683	295	412	494	509	103	383	539
V/C Ratio(X)	0.90	0.53		0.26	0.62	0.30	0.61	0.39	0.39	0.70	0.45	0.84
Avail Cap(c_a), veh/h	1090	1265		634	1265	547	2461	1265	1305	423	666	938
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	21.6	0.0	38.8	31.2	29.2	35.2	24.6	24.7	39.0	29.3	19.5
Incr Delay (d2), s/veh	8.8	0.5	0.0	2.0	1.1	0.7	3.1	0.6	0.6	3.1	0.6	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	5.1	0.0	0.5	3.9	1.6	2.6	3.1	3.2	1.5	3.1	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.0	22.1	0.0	40.7	32.3	29.9	38.4	25.3	25.3	42.1	30.0	22.3
LnGrp LOS	D	C		D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1515	A		530			644			700	
Approach Delay, s/veh		31.6			32.2			30.4			26.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	29.7	22.5	22.2	16.3	23.3	8.9	35.8
Change Period (Y+Rc), s	5.0	6.3	6.0	* 6	6.3	* 6	5.0	6.0
Max Green Setting (Gmax), s	20.0	60.0	20.0	* 30	60.0	* 30	30.0	30.0
Max Q Clear Time (g_c+I1), s	5.3	9.5	15.5	11.1	7.8	12.9	3.0	14.5
Green Ext Time (p_c), s	0.1	3.1	1.0	3.5	2.2	2.2	0.0	4.7

Intersection Summary	
HCM 6th Ctrl Delay	30.4
HCM 6th LOS	C

Notes

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

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
30: Magnolia Blvd & First St

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱	↱	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	296	788	325	64	563	93	258	417	128	152	369	231
Future Volume (veh/h)	296	788	325	64	563	93	258	417	128	152	369	231
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		0.99	1.00		0.99
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	312	829	342	67	593	98	272	439	135	160	388	243
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	471	1798	760	315	1578	837	287	649	287	278	649	423
Arrive On Green	0.09	0.48	0.48	0.05	0.44	0.44	0.09	0.18	0.18	0.09	0.18	0.18
Sat Flow, veh/h	1781	3741	1580	1781	3554	1580	1781	3554	1572	1781	3554	1572
Grp Volume(v), veh/h	312	829	342	67	593	98	272	439	135	160	388	243
Grp Sat Flow(s),veh/h/ln	1781	1870	1580	1781	1777	1580	1781	1777	1572	1781	1777	1572
Q Serve(g_s), s	9.0	15.5	15.1	2.1	11.7	3.3	9.0	12.1	8.1	7.6	10.5	14.0
Cycle Q Clear(g_c), s	9.0	15.5	15.1	2.1	11.7	3.3	9.0	12.1	8.1	7.6	10.5	14.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	471	1798	760	315	1578	837	287	649	287	278	649	423
V/C Ratio(X)	0.66	0.46	0.45	0.21	0.38	0.12	0.95	0.68	0.47	0.58	0.60	0.57
Avail Cap(c_a), veh/h	471	1798	760	381	1578	837	287	1097	485	278	1097	621
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.0	18.2	18.1	14.8	19.5	12.4	38.2	40.0	38.4	31.7	39.4	33.2
Incr Delay (d2), s/veh	2.8	0.9	1.9	0.1	0.7	0.3	39.1	1.2	1.2	1.9	0.9	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	6.7	5.7	0.8	4.9	1.2	5.8	5.4	3.2	3.4	4.6	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.8	19.0	20.0	14.9	20.2	12.7	77.3	41.3	39.6	33.7	40.3	34.5
LnGrp LOS	B	B	B	B	C	B	E	D	D	C	D	C
Approach Vol, veh/h		1483			758			846			791	
Approach Delay, s/veh		19.2			18.7			52.6			37.2	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	56.5	13.6	25.2	13.6	52.6	13.6	25.2
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	9.0	33.4	9.0	32.4	9.0	33.4	9.0	32.4
Max Q Clear Time (g_c+I1), s	4.1	17.5	9.6	14.1	11.0	13.7	11.0	16.0
Green Ext Time (p_c), s	0.0	6.5	0.0	3.2	0.0	4.3	0.0	3.1

Intersection Summary	
HCM 6th Ctrl Delay	30.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
31: Olive Ave & First St

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱	↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	338	780	235	55	492	134	188	344	70	63	358	133
Future Volume (veh/h)	338	780	235	55	492	134	188	344	70	63	358	133
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	0.98		0.95	0.97		0.93
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	360	830	250	59	523	143	200	366	74	67	381	141
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	512	1398	421	280	1636	716	302	705	140	245	649	428
Arrive On Green	0.10	0.52	0.52	0.04	0.46	0.46	0.10	0.24	0.24	0.04	0.18	0.18
Sat Flow, veh/h	1781	2680	807	1781	3554	1556	1781	2923	583	1781	3554	1478
Grp Volume(v), veh/h	360	550	530	59	523	143	200	221	219	67	381	141
Grp Sat Flow(s),veh/h/ln	1781	1777	1710	1781	1777	1556	1781	1777	1728	1781	1777	1478
Q Serve(g_s), s	14.0	30.0	30.1	2.4	13.0	7.6	12.5	15.1	15.5	4.2	13.7	10.6
Cycle Q Clear(g_c), s	14.0	30.0	30.1	2.4	13.0	7.6	12.5	15.1	15.5	4.2	13.7	10.6
Prop In Lane	1.00		0.47	1.00		1.00	1.00		0.34	1.00		1.00
Lane Grp Cap(c), veh/h	512	927	892	280	1636	716	302	428	417	245	649	428
V/C Ratio(X)	0.70	0.59	0.59	0.21	0.32	0.20	0.66	0.51	0.53	0.27	0.59	0.33
Avail Cap(c_a), veh/h	512	927	892	390	1636	716	302	571	556	350	1142	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.3	23.2	23.2	20.0	23.9	22.5	40.1	46.0	46.2	44.0	52.4	39.8
Incr Delay (d2), s/veh	4.1	2.8	2.9	0.1	0.5	0.6	4.9	1.2	1.2	0.2	1.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	13.2	12.8	1.0	5.7	3.0	5.9	6.8	6.8	1.9	6.3	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.4	26.0	26.1	20.2	24.4	23.1	45.0	47.2	47.4	44.2	53.4	40.4
LnGrp LOS	C	C	C	C	C	C	D	D	D	D	D	D
Approach Vol, veh/h		1440			725			640			589	
Approach Delay, s/veh		25.1			23.8			46.6			49.3	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	39.7	19.0	70.4	19.0	31.6	10.4	79.1
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	14.0	45.0	14.0	45.0	14.0	45.0	14.0	45.0
Max Q Clear Time (g_c+I1), s	6.2	17.5	16.0	15.0	14.5	15.7	4.4	32.1
Green Ext Time (p_c), s	0.0	3.4	0.0	5.3	0.0	3.9	0.0	6.8

Intersection Summary	
HCM 6th Ctrl Delay	33.1
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
32: Alameda Ave & San Fernando Blvd

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↱		↰	↑↱		↰↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	351	852	249	60	467	67	410	585	93	133	471	185
Future Volume (veh/h)	351	852	249	60	467	67	410	585	93	133	471	185
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.95	0.99		0.96	1.00		0.95
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	373	906	265	64	497	71	436	622	99	141	501	197
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1128	1314	383	82	618	88	591	711	113	215	692	293
Arrive On Green	0.33	0.49	0.49	0.05	0.20	0.20	0.12	0.23	0.23	0.08	0.19	0.19
Sat Flow, veh/h	3456	2699	787	1781	3100	440	3456	3050	484	1781	3554	1504
Grp Volume(v), veh/h	373	596	575	64	284	284	436	362	359	141	501	197
Grp Sat Flow(s),veh/h/ln	1728	1777	1709	1781	1777	1764	1728	1777	1758	1781	1777	1504
Q Serve(g_s), s	11.4	36.2	36.4	5.0	21.3	21.5	13.7	27.4	27.6	8.8	18.5	8.3
Cycle Q Clear(g_c), s	11.4	36.2	36.4	5.0	21.3	21.5	13.7	27.4	27.6	8.8	18.5	8.3
Prop In Lane	1.00		0.46	1.00		0.25	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	1128	865	832	82	354	352	591	414	410	215	692	293
V/C Ratio(X)	0.33	0.69	0.69	0.78	0.80	0.81	0.74	0.87	0.88	0.66	0.72	0.67
Avail Cap(c_a), veh/h	1128	865	832	280	609	605	662	470	465	230	762	322
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.6	27.7	27.8	66.1	53.4	53.5	38.7	51.7	51.8	42.5	52.8	12.4
Incr Delay (d2), s/veh	0.1	4.5	4.7	11.1	17.1	17.9	3.6	15.6	16.1	5.4	3.3	5.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	16.4	15.9	2.5	11.2	11.3	6.1	14.0	14.0	4.2	8.6	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.7	32.2	32.5	77.1	70.5	71.4	42.3	67.3	67.9	47.9	56.1	17.6
LnGrp LOS	D	C	C	E	E	E	D	E	E	D	E	B
Approach Vol, veh/h		1544			632			1157			839	
Approach Delay, s/veh		33.1			71.6			58.1			45.7	
Approach LOS		C			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.1	33.3	51.7	33.9	15.8	38.6	11.5	74.2
Change Period (Y+Rc), s	5.0	6.0	6.0	* 6	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	19.0	30.0	21.0	* 48	12.0	37.0	22.0	47.0
Max Q Clear Time (g_c+I1), s	15.7	20.5	13.4	23.5	10.8	29.6	7.0	38.4
Green Ext Time (p_c), s	0.5	3.3	0.7	4.4	0.0	3.0	0.1	5.4

Intersection Summary	
HCM 6th Ctrl Delay	48.4
HCM 6th LOS	D

Notes

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

HCM 6th Signalized Intersection Summary
33: Magnolia Blvd & Glenoaks Blvd

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	186	275	208	35	238	45	175	1212	62	85	983	146
Future Volume (veh/h)	186	275	208	35	238	45	175	1212	62	85	983	146
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.95	0.98		0.95	1.00		0.97	1.00		0.95
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	194	286	217	36	248	47	182	1262	65	89	1024	152
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	306	527	423	214	835	155	304	1628	84	255	1412	209
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.08	0.47	0.47	0.06	0.46	0.46
Sat Flow, veh/h	1053	1870	1502	880	2963	550	1781	3432	177	1781	3078	456
Grp Volume(v), veh/h	194	286	217	36	147	148	182	652	675	89	590	586
Grp Sat Flow(s),veh/h/ln	1053	1870	1502	880	1777	1736	1781	1777	1832	1781	1777	1758
Q Serve(g_s), s	16.0	11.7	10.9	3.3	5.8	6.0	4.8	27.5	27.6	2.3	24.2	24.3
Cycle Q Clear(g_c), s	22.0	11.7	10.9	14.9	5.8	6.0	4.8	27.5	27.6	2.3	24.2	24.3
Prop In Lane	1.00		1.00	1.00		0.32	1.00		0.10	1.00		0.26
Lane Grp Cap(c), veh/h	306	527	423	214	501	489	304	843	869	255	815	806
V/C Ratio(X)	0.63	0.54	0.51	0.17	0.29	0.30	0.60	0.77	0.78	0.35	0.72	0.73
Avail Cap(c_a), veh/h	337	582	467	240	553	540	348	843	869	327	815	806
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.0	27.4	27.1	33.7	25.3	25.4	16.2	19.7	19.7	15.8	19.8	19.8
Incr Delay (d2), s/veh	3.3	0.9	1.0	0.4	0.3	0.3	1.1	6.9	6.7	0.3	5.6	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	5.2	3.9	0.7	2.5	2.5	1.9	12.2	12.6	0.9	10.7	10.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.4	28.3	28.1	34.1	25.6	25.7	17.3	26.5	26.4	16.2	25.3	25.4
LnGrp LOS	D	C	C	C	C	C	B	C	C	B	C	C
Approach Vol, veh/h		697			331			1509			1265	
Approach Delay, s/veh		30.8			26.6			25.4			24.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	48.7		31.4	11.4	47.3		31.4
Change Period (Y+Rc), s	4.6	6.0		6.0	4.6	6.0		6.0
Max Green Setting (Gmax), s	9.0	36.4		28.0	9.0	36.4		28.0
Max Q Clear Time (g_c+I1), s	4.3	29.6		16.9	6.8	26.3		24.0
Green Ext Time (p_c), s	0.0	4.5		1.4	0.1	5.5		1.3

Intersection Summary	
HCM 6th Ctrl Delay	26.2
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
34: Olive Ave & Glenoaks Blvd

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	188	351	164	66	212	65	115	1048	77	86	985	98
Future Volume (veh/h)	188	351	164	66	212	65	115	1048	77	86	985	98
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.97	1.00		0.97
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	194	362	169	68	219	67	119	1080	79	89	1015	101
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	552	900	413	409	933	277	200	897	66	186	846	84
Arrive On Green	0.09	0.38	0.38	0.05	0.35	0.35	0.07	0.27	0.27	0.06	0.26	0.26
Sat Flow, veh/h	1781	2353	1079	1781	2687	799	1781	3350	245	1781	3254	324
Grp Volume(v), veh/h	194	272	259	68	143	143	119	573	586	89	554	562
Grp Sat Flow(s),veh/h/ln	1781	1777	1655	1781	1777	1709	1781	1777	1818	1781	1777	1801
Q Serve(g_s), s	6.1	10.0	10.3	2.1	5.1	5.4	4.3	24.1	24.1	3.2	23.4	23.4
Cycle Q Clear(g_c), s	6.1	10.0	10.3	2.1	5.1	5.4	4.3	24.1	24.1	3.2	23.4	23.4
Prop In Lane	1.00		0.65	1.00		0.47	1.00		0.13	1.00		0.18
Lane Grp Cap(c), veh/h	552	680	633	409	617	593	200	476	487	186	462	468
V/C Ratio(X)	0.35	0.40	0.41	0.17	0.23	0.24	0.60	1.20	1.20	0.48	1.20	1.20
Avail Cap(c_a), veh/h	570	680	633	490	617	593	258	476	487	258	462	468
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.9	20.2	20.3	17.1	20.8	20.9	24.9	32.9	32.9	25.0	33.3	33.3
Incr Delay (d2), s/veh	0.3	1.8	2.0	0.1	0.9	1.0	2.1	110.0	110.2	1.4	109.0	109.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	4.4	4.2	0.9	2.2	2.3	1.9	24.6	25.2	1.4	23.7	24.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.2	22.0	22.3	17.2	21.7	21.9	27.0	143.0	143.1	26.4	142.3	142.4
LnGrp LOS	B	C	C	B	C	C	C	F	F	C	F	F
Approach Vol, veh/h		725			354			1278			1205	
Approach Delay, s/veh		20.5			20.9			132.2			133.8	
Approach LOS		C			C			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	40.4	10.7	29.4	12.7	37.3	10.0	30.1
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	9.0	27.4	9.0	23.4	9.0	27.4	9.0	23.4
Max Q Clear Time (g_c+I1), s	4.1	12.3	6.3	25.4	8.1	7.4	5.2	26.1
Green Ext Time (p_c), s	0.0	3.9	0.0	0.0	0.0	2.2	0.0	0.0

Intersection Summary			
HCM 6th Ctrl Delay			99.0
HCM 6th LOS			F

HCM 6th Signalized Intersection Summary
35: Alameda Ave & Glenoaks Blvd

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↱		↰	↑↑↑	↱	↰	↑↑↱	
Traffic Volume (veh/h)	391	318	235	59	203	27	208	1052	43	76	916	176
Future Volume (veh/h)	391	318	235	59	203	27	208	1052	43	76	916	176
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.95	1.00		0.96	0.99		0.97
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	407	331	245	61	211	28	217	1096	45	79	954	183
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	397	638	527	81	263	35	304	1915	572	251	1397	267
Arrive On Green	0.22	0.34	0.34	0.05	0.16	0.16	0.10	0.38	0.38	0.05	0.33	0.33
Sat Flow, veh/h	1781	1870	1545	1781	1605	213	1781	5106	1524	1781	4282	818
Grp Volume(v), veh/h	407	331	245	61	0	239	217	1096	45	79	758	379
Grp Sat Flow(s),veh/h/ln	1781	1870	1545	1781	0	1818	1781	1702	1524	1781	1702	1697
Q Serve(g_s), s	25.0	15.9	13.9	3.8	0.0	14.2	8.7	19.1	2.1	3.3	21.6	21.7
Cycle Q Clear(g_c), s	25.0	15.9	13.9	3.8	0.0	14.2	8.7	19.1	2.1	3.3	21.6	21.7
Prop In Lane	1.00		1.00	1.00		0.12	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	397	638	527	81	0	298	304	1915	572	251	1111	553
V/C Ratio(X)	1.02	0.52	0.46	0.75	0.00	0.80	0.71	0.57	0.08	0.31	0.68	0.69
Avail Cap(c_a), veh/h	397	751	620	475	0	811	765	2733	816	641	1519	757
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.5	29.5	28.9	52.9	0.0	45.1	24.3	27.9	22.5	23.9	32.7	32.8
Incr Delay (d2), s/veh	51.5	0.9	0.9	9.9	0.0	7.0	1.2	0.4	0.1	0.3	1.1	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.6	7.3	5.3	1.9	0.0	7.0	3.7	7.8	0.8	1.4	9.0	9.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	95.1	30.5	29.8	62.8	0.0	52.2	25.5	28.3	22.6	24.1	33.8	34.9
LnGrp LOS	F	C	C	E	A	D	C	C	C	C	C	C
Approach Vol, veh/h		983			300			1358			1216	
Approach Delay, s/veh		57.1			54.3			27.6			33.5	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	44.3	15.6	42.6	29.6	24.4	10.1	48.0
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	29.9	45.0	40.0	50.0	25.0	50.0	30.0	60.0
Max Q Clear Time (g_c+I1), s	5.8	17.9	10.7	23.7	27.0	16.2	5.3	21.1
Green Ext Time (p_c), s	0.1	4.5	0.3	12.2	0.0	2.2	0.1	14.6

Intersection Summary	
HCM 6th Ctrl Delay	39.1
HCM 6th LOS	D

Future (2029)
Plus Project
Conditions

HCM 6th Signalized Intersection Summary
1: Winona Ave & Hollywood Way

10/27/2021

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑↱		↰	↑↑↱	
Traffic Volume (veh/h)	0	0	23	39	2	39	32	946	91	232	2045	23
Future Volume (veh/h)	0	0	23	39	2	39	32	946	91	232	2045	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		0.99	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	0	0	24	40	2	40	33	975	94	239	2108	24
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	51	152	127	162	144	127	236	2414	233	484	3920	45
Arrive On Green	0.00	0.00	0.08	0.08	0.08	0.08	0.04	0.74	0.74	0.06	0.75	0.75
Sat Flow, veh/h	1365	1870	1562	1367	1777	1562	1781	3274	316	1781	5204	59
Grp Volume(v), veh/h	0	0	24	40	2	40	33	529	540	239	1378	754
Grp Sat Flow(s),veh/h/ln	1365	1870	1562	1367	1777	1562	1781	1777	1813	1781	1702	1860
Q Serve(g_s), s	0.0	0.0	2.0	3.9	0.1	3.4	0.6	15.6	15.6	4.5	23.5	23.6
Cycle Q Clear(g_c), s	0.0	0.0	2.0	3.9	0.1	3.4	0.6	15.6	15.6	4.5	23.5	23.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.17	1.00		0.03
Lane Grp Cap(c), veh/h	51	152	127	162	144	127	236	1310	1337	484	2564	1401
V/C Ratio(X)	0.00	0.00	0.19	0.25	0.01	0.32	0.14	0.40	0.40	0.49	0.54	0.54
Avail Cap(c_a), veh/h	365	581	485	476	552	485	340	1310	1337	560	2564	1401
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)	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	60.0	60.9	59.2	60.6	5.5	6.9	6.9	5.0	7.2	7.2
Incr Delay (d2), s/veh	0.0	0.0	0.7	0.8	0.0	1.4	0.2	0.9	0.9	0.6	0.8	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.8	1.4	0.1	1.4	0.2	5.8	6.0	1.5	8.1	9.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	60.7	61.7	59.2	62.1	5.7	7.8	7.8	5.6	8.0	8.7
LnGrp LOS	A	A	E	E	E	E	A	A	A	A	A	A
Approach Vol, veh/h		24			82			1102			2371	
Approach Delay, s/veh		60.7			61.8			7.7			8.0	
Approach LOS		E			E			A			A	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.7	111.9		17.4	12.9	109.7		17.4				
Change Period (Y+Rc), s	4.9	6.5		6.0	4.9	6.5		6.0				
Max Green Setting (Gmax), s	14.0	65.1		43.5	14.0	65.1		43.5				
Max Q Clear Time (g_c+I1), s	2.6	25.6		5.9	6.5	17.6		4.0				
Green Ext Time (p_c), s	0.0	24.5		0.3	0.3	9.2		0.1				

Intersection Summary			
HCM 6th Ctrl Delay			9.5
HCM 6th LOS			A

HCM 6th Signalized Intersection Summary
2: Thornton Ave & Hollywood Way

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑	↱	↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	167	53	168	109	129	48	131	813	180	109	1614	266
Future Volume (veh/h)	167	53	168	109	129	48	131	813	180	109	1614	266
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.97	0.98		0.97	1.00		0.99	1.00		0.99
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	176	56	177	115	136	51	138	856	189	115	1699	280
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	576	285	234	319	385	138	198	2328	1135	345	1976	872
Arrive On Green	0.07	0.15	0.15	0.07	0.15	0.15	0.06	0.66	0.66	0.56	0.56	0.56
Sat Flow, veh/h	3456	1870	1538	1781	2543	908	1781	3554	1562	538	3554	1569
Grp Volume(v), veh/h	176	56	177	115	93	94	138	856	189	115	1699	280
Grp Sat Flow(s),veh/h/ln	1728	1870	1538	1781	1777	1674	1781	1777	1562	538	1777	1569
Q Serve(g_s), s	5.8	3.7	15.4	7.5	6.6	7.1	4.3	15.3	5.3	17.3	56.9	13.5
Cycle Q Clear(g_c), s	5.8	3.7	15.4	7.5	6.6	7.1	4.3	15.3	5.3	18.8	56.9	13.5
Prop In Lane	1.00		1.00	1.00		0.54	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	576	285	234	319	269	254	198	2328	1135	345	1976	872
V/C Ratio(X)	0.31	0.20	0.76	0.36	0.35	0.37	0.70	0.37	0.17	0.33	0.86	0.32
Avail Cap(c_a), veh/h	910	553	455	365	399	375	326	2328	1135	345	1976	872
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.7	51.9	56.9	45.3	53.2	53.4	30.4	11.0	6.0	18.4	26.4	16.8
Incr Delay (d2), s/veh	0.3	0.3	4.9	0.3	0.8	0.9	3.3	0.4	0.3	2.6	5.2	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	1.8	6.3	3.4	3.0	3.1	2.8	6.1	1.8	2.4	24.8	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.0	52.2	61.8	45.6	53.9	54.3	33.7	11.4	6.3	21.0	31.6	17.8
LnGrp LOS	D	D	E	D	D	D	C	B	A	C	C	B
Approach Vol, veh/h		409			302			1183			2094	
Approach Delay, s/veh		53.3			50.9			13.2			29.2	
Approach LOS		D			D			B			C	
Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	13.9	84.3	14.6	27.2		98.2	14.5	27.3				
Change Period (Y+Rc), s	4.9	6.5	4.6	6.0		6.5	4.6	6.0				
Max Green Setting (Gmax), s	19.0	44.1	23.5	31.4		68.0	13.5	41.4				
Max Q Clear Time (g_c+I1), s	6.3	58.9	7.8	9.1		17.3	9.5	17.4				
Green Ext Time (p_c), s	0.2	0.0	0.5	1.0		8.5	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay			28.5									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary
3: Victory Blvd & Hollywood Way

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	243	1058	203	118	556	129	92	781	95	244	1161	171
Future Volume (veh/h)	243	1058	203	118	556	129	92	781	95	244	1161	171
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
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	267	1163	223	130	611	142	101	858	104	268	1276	188
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	351	1213	649	175	1062	647	184	1177	622	319	1324	755
Arrive On Green	0.11	0.34	0.34	0.06	0.30	0.30	0.07	0.33	0.33	0.11	0.37	0.37
Sat Flow, veh/h	1781	3554	1575	1781	3554	1574	1781	3554	1569	1781	3554	1571
Grp Volume(v), veh/h	267	1163	223	130	611	142	101	858	104	268	1276	188
Grp Sat Flow(s),veh/h/ln	1781	1777	1575	1781	1777	1574	1781	1777	1569	1781	1777	1571
Q Serve(g_s), s	14.3	44.9	13.6	7.0	20.4	8.2	5.0	29.8	6.0	13.5	49.2	9.9
Cycle Q Clear(g_c), s	14.3	44.9	13.6	7.0	20.4	8.2	5.0	29.8	6.0	13.5	49.2	9.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	351	1213	649	175	1062	647	184	1177	622	319	1324	755
V/C Ratio(X)	0.76	0.96	0.34	0.74	0.58	0.22	0.55	0.73	0.17	0.84	0.96	0.25
Avail Cap(c_a), veh/h	351	1213	649	250	1062	647	212	1177	622	362	1330	758
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	45.1	28.2	36.8	41.6	26.8	34.2	41.3	27.4	30.5	43.0	21.5
Incr Delay (d2), s/veh	8.4	17.6	1.4	3.4	2.3	0.8	1.0	2.3	0.1	13.1	16.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	22.6	5.5	3.2	9.3	3.3	2.2	13.5	0.0	6.9	24.5	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.0	62.8	29.7	40.1	43.8	27.5	35.1	43.6	27.5	43.6	59.7	21.7
LnGrp LOS	D	E	C	D	D	C	D	D	C	D	E	C
Approach Vol, veh/h		1653			883			1063			1732	
Approach Delay, s/veh		54.5			40.7			41.2			53.1	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.6	53.8	14.4	58.2	19.6	47.8	20.2	52.4
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	15.0	39.4	12.0	52.4	15.0	39.4	19.0	45.4
Max Q Clear Time (g_c+I1), s	9.0	46.9	7.0	51.2	16.3	22.4	15.5	31.8
Green Ext Time (p_c), s	0.1	0.0	0.0	1.0	0.0	4.3	0.1	5.4

Intersection Summary	
HCM 6th Ctrl Delay	49.1
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
4: Burbank Blvd & Hollywood Way

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱	↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	154	794	100	179	521	81	65	643	87	195	1264	83
Future Volume (veh/h)	154	794	100	179	521	81	65	643	87	195	1264	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.98	1.00		0.99
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	166	854	108	192	560	87	70	691	94	210	1359	89
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	376	1115	141	265	1268	556	147	1008	137	304	1218	80
Arrive On Green	0.08	0.35	0.35	0.08	0.36	0.36	0.05	0.32	0.32	0.09	0.36	0.36
Sat Flow, veh/h	1781	3166	400	1781	3554	1558	1781	3136	426	1781	3383	221
Grp Volume(v), veh/h	166	479	483	192	560	87	70	391	394	210	712	736
Grp Sat Flow(s),veh/h/ln	1781	1777	1790	1781	1777	1558	1781	1777	1785	1781	1777	1827
Q Serve(g_s), s	8.2	33.5	33.5	9.6	16.8	5.3	3.6	26.8	26.9	10.7	50.4	50.4
Cycle Q Clear(g_c), s	8.2	33.5	33.5	9.6	16.8	5.3	3.6	26.8	26.9	10.7	50.4	50.4
Prop In Lane	1.00		0.22	1.00		1.00	1.00		0.24	1.00		0.12
Lane Grp Cap(c), veh/h	376	626	630	265	1268	556	147	571	574	304	640	658
V/C Ratio(X)	0.44	0.77	0.77	0.72	0.44	0.16	0.48	0.68	0.69	0.69	1.11	1.12
Avail Cap(c_a), veh/h	427	626	630	308	1268	556	293	640	643	382	640	658
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.2	40.2	40.2	31.0	34.4	30.7	35.7	41.3	41.3	30.3	44.8	44.8
Incr Delay (d2), s/veh	0.3	8.7	8.6	5.2	1.1	0.6	0.9	2.6	2.6	2.2	70.8	72.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	16.2	16.3	4.5	7.6	2.1	1.6	12.2	12.3	4.8	34.6	35.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.5	48.9	48.9	36.2	35.5	31.3	36.6	44.0	44.0	32.5	115.6	117.5
LnGrp LOS	C	D	D	D	D	C	D	D	D	C	F	F
Approach Vol, veh/h		1128			839			855			1658	
Approach Delay, s/veh		45.6			35.2			43.4			105.9	
Approach LOS		D			D			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.2	55.3	12.1	56.4	15.6	55.9	17.5	51.0
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	15.0	34.4	19.0	50.4	15.0	34.4	19.0	50.4
Max Q Clear Time (g_c+I1), s	11.6	35.5	5.6	52.4	10.2	18.8	12.7	28.9
Green Ext Time (p_c), s	0.1	0.0	0.1	0.0	0.1	3.7	0.2	5.1

Intersection Summary	
HCM 6th Ctrl Delay	65.5
HCM 6th LOS	E

HCM 6th Signalized Intersection Summary
5: Magnolia Blvd & Hollywood Way

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	139	714	140	133	394	90	81	524	109	220	1465	162
Future Volume (veh/h)	139	714	140	133	394	90	81	524	109	220	1465	162
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.90	1.00		0.90	1.00		0.97	1.00		0.97
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	142	729	143	136	402	92	83	535	111	224	1495	165
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	313	873	349	211	864	345	178	1599	691	472	1694	733
Arrive On Green	0.07	0.25	0.25	0.07	0.24	0.24	0.05	0.45	0.45	0.08	0.48	0.48
Sat Flow, veh/h	1781	3554	1421	1781	3554	1419	1781	3554	1535	1781	3554	1538
Grp Volume(v), veh/h	142	729	143	136	402	92	83	535	111	224	1495	165
Grp Sat Flow(s),veh/h/ln	1781	1777	1421	1781	1777	1419	1781	1777	1535	1781	1777	1538
Q Serve(g_s), s	8.3	27.3	11.8	7.9	13.5	7.3	3.4	13.6	6.0	9.3	53.2	8.8
Cycle Q Clear(g_c), s	8.3	27.3	11.8	7.9	13.5	7.3	3.4	13.6	6.0	9.3	53.2	8.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	313	873	349	211	864	345	178	1599	691	472	1694	733
V/C Ratio(X)	0.45	0.83	0.41	0.64	0.47	0.27	0.47	0.33	0.16	0.47	0.88	0.23
Avail Cap(c_a), veh/h	423	1152	461	326	1152	460	284	1599	691	531	1694	733
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.2	50.1	44.3	38.9	45.2	42.9	29.8	24.9	22.8	18.1	33.1	21.5
Incr Delay (d2), s/veh	0.4	4.2	0.8	1.2	0.4	0.4	0.7	0.6	0.5	0.3	7.1	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	12.6	4.3	3.6	6.1	2.6	1.5	6.0	2.3	3.9	24.2	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.6	54.3	45.0	40.1	45.6	43.3	30.5	25.5	23.3	18.3	40.2	22.2
LnGrp LOS	D	D	D	D	D	D	C	C	C	B	D	C
Approach Vol, veh/h		1014			630			729			1884	
Approach Delay, s/veh		50.5			44.1			25.7			36.0	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.3	72.7	15.0	40.0	16.0	69.0	14.6	40.4
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	16.0	38.4	19.0	45.4	16.0	38.4	19.0	45.4
Max Q Clear Time (g_c+I1), s	5.4	55.2	10.3	15.5	11.3	15.6	9.9	29.3
Green Ext Time (p_c), s	0.1	0.0	0.1	3.2	0.1	4.1	0.1	5.2

Intersection Summary	
HCM 6th Ctrl Delay	38.9
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
6: Hollywood Way & Verdugo Ave

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	154	626	178	210	288	70	27	512	65	101	1418	128
Future Volume (veh/h)	154	626	178	210	288	70	27	512	65	101	1418	128
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.97	1.00		0.98
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	166	673	191	226	310	75	29	551	70	109	1525	138
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	442	668	559	230	718	602	112	1179	512	315	1251	544
Arrive On Green	0.07	0.36	0.36	0.10	0.38	0.38	0.03	0.33	0.33	0.05	0.35	0.35
Sat Flow, veh/h	1781	1870	1566	1781	1870	1568	1781	3554	1544	1781	3554	1547
Grp Volume(v), veh/h	166	673	191	226	310	75	29	551	70	109	1525	138
Grp Sat Flow(s),veh/h/ln	1781	1870	1566	1781	1870	1568	1781	1777	1544	1781	1777	1547
Q Serve(g_s), s	8.2	50.0	12.5	13.7	17.1	4.3	1.5	17.2	4.4	5.6	49.3	8.9
Cycle Q Clear(g_c), s	8.2	50.0	12.5	13.7	17.1	4.3	1.5	17.2	4.4	5.6	49.3	8.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	442	668	559	230	718	602	112	1179	512	315	1251	544
V/C Ratio(X)	0.38	1.01	0.34	0.98	0.43	0.12	0.26	0.47	0.14	0.35	1.22	0.25
Avail Cap(c_a), veh/h	490	668	559	230	718	602	293	1179	512	461	1251	544
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.8	45.0	32.9	44.2	31.9	27.9	36.3	37.0	32.7	29.4	45.4	32.3
Incr Delay (d2), s/veh	0.2	36.7	0.4	54.7	0.4	0.1	0.5	1.3	0.6	0.2	106.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	29.8	4.9	11.5	7.9	1.7	0.7	7.7	1.8	2.5	40.0	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.0	81.7	33.3	98.9	32.3	28.0	36.8	38.3	33.3	29.6	151.6	33.4
LnGrp LOS	C	F	C	F	C	C	D	D	C	C	F	C
Approach Vol, veh/h		1030			611			650			1772	
Approach Delay, s/veh		63.7			56.4			37.7			134.9	
Approach LOS		E			E			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	55.3	15.3	59.7	12.6	52.4	19.0	56.0
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	19.0	35.0	14.0	50.0	19.0	35.0	14.0	50.0
Max Q Clear Time (g_c+I1), s	3.5	51.3	10.2	19.1	7.6	19.2	15.7	52.0
Green Ext Time (p_c), s	0.0	0.0	0.1	2.2	0.1	3.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	89.5
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary
7: Riverside Dr & Alameda Ave

10/27/2021

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	✣			✣	
Traffic Volume (veh/h)	41	904	818	11	509	70	139	23	10	44	20	19
Future Volume (veh/h)	41	904	818	11	509	70	139	23	10	44	20	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	1.00		0.98	1.00		0.97	1.00		0.95
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	42	932	843	11	525	72	88	100	10	45	21	20
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	627	2477	1250	218	2183	298	190	178	18	57	27	25
Arrive On Green	0.70	0.70	0.70	1.00	1.00	1.00	0.11	0.11	0.11	0.06	0.06	0.06
Sat Flow, veh/h	813	3554	1551	268	3131	428	1781	1668	167	905	423	402
Grp Volume(v), veh/h	42	932	843	11	297	300	88	0	110	86	0	0
Grp Sat Flow(s),veh/h/ln	813	1777	1551	268	1777	1782	1781	0	1835	1730	0	0
Q Serve(g_s), s	2.0	12.9	28.0	0.8	0.0	0.0	5.6	0.0	6.8	5.9	0.0	0.0
Cycle Q Clear(g_c), s	2.0	12.9	28.0	13.7	0.0	0.0	5.6	0.0	6.8	5.9	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.24	1.00		0.09	0.52		0.23
Lane Grp Cap(c), veh/h	627	2477	1250	218	1238	1242	190	0	196	109	0	0
V/C Ratio(X)	0.07	0.38	0.67	0.05	0.24	0.24	0.46	0.00	0.56	0.79	0.00	0.00
Avail Cap(c_a), veh/h	627	2477	1250	218	1238	1242	683	0	703	173	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.82	0.82	0.82	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.8	7.5	5.1	1.1	0.0	0.0	50.4	0.0	50.9	55.4	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.4	2.9	0.4	0.4	0.4	1.7	0.0	2.5	12.0	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(50%),veh/ln	0.4	4.7	14.3	0.0	0.1	0.1	2.6	0.0	3.3	2.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.0	7.9	8.0	1.4	0.4	0.4	52.1	0.0	53.4	67.4	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	D	E	A	A
Approach Vol, veh/h		1817			608			198			86	
Approach Delay, s/veh		7.9			0.4			52.8			67.4	
Approach LOS		A			A			D			E	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	89.6	12.5	89.6	17.8
Change Period (Y+Rc), s	6.0	5.0	6.0	5.0
Max Green Setting (Gmax), s	46.0	12.0	46.0	46.0
Max Q Clear Time (g_c+I1), s	30.0	7.9	15.7	8.8
Green Ext Time (p_c), s	9.7	0.1	4.4	0.9

Intersection Summary	
HCM 6th Ctrl Delay	11.4
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

User approved changes to right turn type.

HCM 6th Signalized Intersection Summary
8: Pass Ave & Alameda Ave

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	99	840	37	32	383	86	32	113	61	457	1014	149
Future Volume (veh/h)	99	840	37	32	383	86	32	113	61	457	1014	149
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	1.00		0.97	1.00		0.96	0.98		0.97
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	103	875	39	33	399	90	33	118	64	476	1056	155
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	260	836	37	139	636	142	240	779	393	751	1506	221
Arrive On Green	0.13	0.48	0.48	0.04	0.22	0.22	0.04	0.35	0.35	0.19	0.49	0.49
Sat Flow, veh/h	1781	3460	154	1781	2867	639	1781	2256	1137	1781	3098	454
Grp Volume(v), veh/h	103	449	465	33	245	244	33	91	91	476	605	606
Grp Sat Flow(s),veh/h/ln	1781	1777	1837	1781	1777	1730	1781	1777	1616	1781	1777	1775
Q Serve(g_s), s	5.2	29.0	29.0	1.7	15.0	15.3	1.4	4.2	4.7	19.8	31.8	32.0
Cycle Q Clear(g_c), s	5.2	29.0	29.0	1.7	15.0	15.3	1.4	4.2	4.7	19.8	31.8	32.0
Prop In Lane	1.00		0.08	1.00		0.37	1.00		0.70	1.00		0.26
Lane Grp Cap(c), veh/h	260	429	444	139	394	383	240	614	558	751	864	863
V/C Ratio(X)	0.40	1.05	1.05	0.24	0.62	0.64	0.14	0.15	0.16	0.63	0.70	0.70
Avail Cap(c_a), veh/h	293	429	444	208	429	418	369	614	558	777	864	863
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.2	31.0	31.0	35.9	42.2	42.3	23.8	27.1	27.2	17.1	24.0	24.1
Incr Delay (d2), s/veh	0.3	54.3	53.7	0.3	2.4	2.8	0.1	0.5	0.6	1.6	4.7	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	16.0	16.4	0.7	6.8	6.8	0.6	1.9	1.9	8.2	14.2	14.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.6	85.3	84.7	36.2	44.6	45.1	23.9	27.6	27.9	18.7	28.7	28.8
LnGrp LOS	C	F	F	D	D	D	C	C	C	B	C	C
Approach Vol, veh/h		1017			522			215			1687	
Approach Delay, s/veh		79.6			44.3			27.1			25.9	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	35.0	10.3	64.3	12.7	32.6	27.2	47.4
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	10.0	29.0	14.0	45.0	10.0	29.0	24.0	35.0
Max Q Clear Time (g_c+I1), s	3.7	31.0	3.4	34.0	7.2	17.3	21.8	6.7
Green Ext Time (p_c), s	0.0	0.0	0.0	6.0	0.0	2.3	0.4	1.1

Intersection Summary			
HCM 6th Ctrl Delay			44.7
HCM 6th LOS			D

HCM Signalized Intersection Capacity Analysis
9: Olive Ave & Pass Ave

10/27/2021

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰	↑↑↑	↑↑↱		↰	↱↱
Traffic Volume (vph)	194	1523	1463	37	91	758
Future Volume (vph)	194	1523	1463	37	91	758
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	6.0		5.0	5.0
Lane Util. Factor	1.00	0.91	0.91		1.00	0.88
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	5085	5059		1770	2787
Flt Permitted	0.10	1.00	1.00		0.95	1.00
Satd. Flow (perm)	184	5085	5059		1770	2787
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	200	1570	1508	38	94	781
RTOR Reduction (vph)	0	0	1	0	0	355
Lane Group Flow (vph)	200	1570	1545	0	94	426
Confl. Peds. (#/hr)	34			34		
Turn Type	pm+pt	NA	NA		Prot	pt+ov
Protected Phases	3 5	2	6		4	4 3
Permitted Phases	2	3				
Actuated Green, G (s)	92.3	92.3	63.7		11.7	32.0
Effective Green, g (s)	92.3	92.3	63.7		11.7	32.0
Actuated g/C Ratio	0.77	0.77	0.53		0.10	0.27
Clearance Time (s)		6.0	6.0		5.0	
Vehicle Extension (s)		3.0	3.0		2.0	
Lane Grp Cap (vph)	453	4165	2685		172	743
v/s Ratio Prot	0.09	c0.24	c0.31		0.05	c0.15
v/s Ratio Perm	0.25	0.07				
v/c Ratio	0.44	0.38	0.58		0.55	0.57
Uniform Delay, d1	13.2	4.5	19.0		51.6	38.1
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.3	0.0	0.9		1.9	0.7
Delay (s)	13.5	4.5	19.9		53.5	38.8
Level of Service	B	A	B		D	D
Approach Delay (s)		5.5	19.9		40.3	
Approach LOS		A	B		D	

Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
10: Alameda Ave & Hollywood Way

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑↑	↱	↰	↑↑	↱	↰↰	↑↑	↱
Traffic Volume (veh/h)	77	693	151	165	912	275	61	250	53	199	1378	556
Future Volume (veh/h)	77	693	151	165	912	275	61	250	53	199	1378	556
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.98	1.00		0.98
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	79	707	154	168	931	281	62	255	54	203	1406	567
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	147	886	190	196	1179	357	117	1490	650	262	1527	667
Arrive On Green	0.08	0.21	0.21	0.11	0.23	0.23	0.07	0.42	0.42	0.08	0.43	0.43
Sat Flow, veh/h	1781	4186	899	1781	5106	1548	1781	3554	1551	3456	3554	1552
Grp Volume(v), veh/h	79	573	288	168	931	281	62	255	54	203	1406	567
Grp Sat Flow(s),veh/h/ln	1781	1702	1681	1781	1702	1548	1781	1777	1551	1728	1777	1552
Q Serve(g_s), s	5.1	19.2	19.6	11.1	20.6	16.0	4.0	5.4	2.5	6.9	44.8	26.8
Cycle Q Clear(g_c), s	5.1	19.2	19.6	11.1	20.6	16.0	4.0	5.4	2.5	6.9	44.8	26.8
Prop In Lane	1.00		0.53	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	147	720	356	196	1179	357	117	1490	650	262	1527	667
V/C Ratio(X)	0.54	0.80	0.81	0.86	0.79	0.79	0.53	0.17	0.08	0.77	0.92	0.85
Avail Cap(c_a), veh/h	208	851	420	223	1277	387	148	1490	650	432	1527	667
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.9	44.8	45.0	52.5	43.4	26.5	54.3	21.8	21.0	54.4	32.3	14.2
Incr Delay (d2), s/veh	1.1	4.5	9.8	26.0	3.5	10.4	1.4	0.2	0.2	1.9	10.6	12.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	8.5	9.1	6.4	9.0	6.9	1.9	2.3	1.0	3.1	21.0	11.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.0	49.4	54.8	78.5	46.9	36.9	55.7	22.0	21.2	56.3	42.9	27.1
LnGrp LOS	D	D	D	E	D	D	E	C	C	E	D	C
Approach Vol, veh/h		940			1380			371			2176	
Approach Delay, s/veh		51.4			48.7			27.5			40.0	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.9	57.6	15.9	33.7	14.1	56.3	18.2	31.4
Change Period (Y+Rc), s	5.0	6.0	6.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	10.0	43.0	14.0	30.0	15.0	38.0	15.0	30.0
Max Q Clear Time (g_c+I1), s	6.0	46.8	7.1	22.6	8.9	7.4	13.1	21.6
Green Ext Time (p_c), s	0.0	0.0	0.0	5.0	0.2	1.9	0.1	3.6

Intersection Summary	
HCM 6th Ctrl Delay	43.7
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
11: Hollywood Way & Riverside Dr

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱	↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	47	469	136	13	166	85	11	228	6	402	783	434
Future Volume (veh/h)	47	469	136	13	166	85	11	228	6	402	783	434
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.97	1.00		0.96	1.00		0.99	0.99		0.99
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	49	494	143	14	175	89	12	240	6	423	824	457
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	282	464	133	121	493	211	287	1868	47	802	2319	1023
Arrive On Green	0.07	0.17	0.17	0.03	0.14	0.14	1.00	1.00	1.00	0.14	1.00	1.00
Sat Flow, veh/h	1781	2700	776	1781	3554	1520	431	3542	88	1781	3554	1568
Grp Volume(v), veh/h	49	324	313	14	175	89	12	120	126	423	824	457
Grp Sat Flow(s),veh/h/ln	1781	1777	1699	1781	1777	1520	431	1777	1853	1781	1777	1568
Q Serve(g_s), s	2.7	20.6	20.6	0.8	5.4	6.4	0.0	0.0	0.0	10.0	0.0	0.0
Cycle Q Clear(g_c), s	2.7	20.6	20.6	0.8	5.4	6.4	0.0	0.0	0.0	10.0	0.0	0.0
Prop In Lane	1.00		0.46	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	282	305	292	121	493	211	287	937	977	802	2319	1023
V/C Ratio(X)	0.17	1.06	1.07	0.12	0.35	0.42	0.04	0.13	0.13	0.53	0.36	0.45
Avail Cap(c_a), veh/h	311	305	292	223	622	266	287	937	977	802	2319	1023
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.92	0.92	0.92	0.26	0.26	0.26
Uniform Delay (d), s/veh	38.3	49.7	49.7	42.5	46.8	47.3	0.0	0.0	0.0	11.4	0.0	0.0
Incr Delay (d2), s/veh	0.2	68.8	73.6	0.3	0.4	1.3	0.3	0.3	0.3	0.1	0.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	14.9	14.7	0.4	2.4	2.5	0.0	0.1	0.1	4.9	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.5	118.5	123.3	42.8	47.2	48.6	0.3	0.3	0.3	11.5	0.1	0.4
LnGrp LOS	D	F	F	D	D	D	A	A	A	B	A	A
Approach Vol, veh/h		686			278			258			1704	
Approach Delay, s/veh		115.0			47.5			0.3			3.0	
Approach LOS		F			D			A			A	

Timer - Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	13.0	22.7	15.0	69.3	9.1	26.6		84.3
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0		6.0
Max Green Setting (Gmax), s	10.0	21.0	10.0	57.0	11.0	20.0		72.0
Max Q Clear Time (g_c+I1), s	4.7	8.4	12.0	2.0	2.8	22.6		2.0
Green Ext Time (p_c), s	0.0	1.1	0.0	1.7	0.0	0.0		10.1

Intersection Summary	
HCM 6th Ctrl Delay	33.2
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
12: Hollywood Way & Olive Ave

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑↱			↰↑↱		↰	↑	↱↱
Traffic Volume (veh/h)	202	1060	81	56	1030	63	15	14	14	77	203	458
Future Volume (veh/h)	202	1060	81	56	1030	63	15	14	14	77	203	458
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	0.99		0.96	0.96		0.96
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	208	1093	84	58	1062	65	15	14	14	79	209	472
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	425	2854	219	399	2849	174	138	163	183	325	396	777
Arrive On Green	0.07	0.59	0.59	0.06	0.58	0.58	0.21	0.21	0.21	0.35	0.35	0.35
Sat Flow, veh/h	1781	4830	371	1781	4911	300	397	773	864	1333	1870	2683
Grp Volume(v), veh/h	208	770	407	58	736	391	19	0	24	79	209	472
Grp Sat Flow(s),veh/h/ln	1781	1702	1797	1781	1702	1807	528	0	1506	1333	1870	1341
Q Serve(g_s), s	5.5	14.3	14.4	1.4	13.9	13.9	1.3	0.0	1.6	5.3	10.7	17.5
Cycle Q Clear(g_c), s	5.5	14.3	14.4	1.4	13.9	13.9	11.9	0.0	1.6	6.8	10.7	17.5
Prop In Lane	1.00		0.21	1.00		0.17	0.81		0.57	1.00		1.00
Lane Grp Cap(c), veh/h	425	2012	1062	399	1975	1048	166	0	319	325	396	777
V/C Ratio(X)	0.49	0.38	0.38	0.15	0.37	0.37	0.11	0.00	0.08	0.24	0.53	0.61
Avail Cap(c_a), veh/h	588	2012	1062	581	1975	1048	262	0	489	476	608	1081
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.92	0.92	0.92
Uniform Delay (d), s/veh	9.5	13.0	13.0	8.7	13.5	13.5	42.3	0.0	37.9	33.4	34.0	30.2
Incr Delay (d2), s/veh	0.9	0.6	1.0	0.2	0.5	1.0	0.3	0.0	0.1	0.4	1.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	5.5	6.0	0.6	5.4	5.8	0.5	0.0	0.6	1.7	4.5	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.3	13.5	14.0	8.8	14.0	14.5	42.6	0.0	38.0	33.7	35.0	30.9
LnGrp LOS	B	B	B	A	B	B	D	A	D	C	D	C
Approach Vol, veh/h		1385			1185			43			760	
Approach Delay, s/veh		13.2			13.9			40.0			32.3	
Approach LOS		B			B			D			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.0	75.6		30.4	12.7	76.9		30.4				
Change Period (Y+Rc), s	5.0	6.0		5.0	5.0	6.0		5.0				
Max Green Setting (Gmax), s	20.0	45.0		39.0	20.0	45.0		39.0				
Max Q Clear Time (g_c+I1), s	7.5	15.9		19.5	3.4	16.4		13.9				
Green Ext Time (p_c), s	0.5	9.0		3.5	0.1	9.5		0.2				
Intersection Summary												
HCM 6th Ctrl Delay			18.1									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary
13: Riverside Dr & Olive Ave

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	18	784	335	70	1050	98	158	164	49	90	775	23
Future Volume (veh/h)	18	784	335	70	1050	98	158	164	49	90	775	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	0.98		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	19	808	345	72	1082	101	163	169	51	93	799	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	159	1004	437	257	1160	507	287	1307	380	572	1723	
Arrive On Green	0.05	0.28	0.28	0.09	0.33	0.33	0.48	0.48	0.48	0.48	0.48	0.00
Sat Flow, veh/h	1781	3554	1548	1781	3554	1553	678	2695	784	1141	3554	1585
Grp Volume(v), veh/h	19	808	345	72	1082	101	163	109	111	93	799	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1548	1781	1777	1553	678	1777	1702	1141	1777	1585
Q Serve(g_s), s	0.9	25.3	24.7	3.1	35.4	5.6	25.3	4.1	4.3	5.9	17.9	0.0
Cycle Q Clear(g_c), s	0.9	25.3	24.7	3.1	35.4	5.6	43.2	4.1	4.3	10.2	17.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	159	1004	437	257	1160	507	287	862	825	572	1723	
V/C Ratio(X)	0.12	0.80	0.79	0.28	0.93	0.20	0.57	0.13	0.13	0.16	0.46	
Avail Cap(c_a), veh/h	357	1185	516	377	1185	518	287	862	825	572	1723	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	31.2	40.0	39.8	26.9	39.1	29.1	34.9	17.0	17.0	19.8	20.5	0.0
Incr Delay (d2), s/veh	0.2	3.6	6.9	0.4	13.0	0.2	7.9	0.3	0.3	0.6	0.9	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(50%),veh/ln	0.4	11.5	10.2	1.3	17.3	2.1	4.8	1.7	1.8	1.7	7.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.5	43.5	46.6	27.4	52.1	29.3	42.8	17.3	17.4	20.4	21.4	0.0
LnGrp LOS	C	D	D	C	D	C	D	B	B	C	C	
Approach Vol, veh/h		1172			1255			383			892	A
Approach Delay, s/veh		44.3			48.9			28.1			21.3	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.9	39.9		64.2	10.6	45.2		64.2				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0		6.0				
Max Green Setting (Gmax), s	19.0	40.0		44.0	19.0	40.0		44.0				
Max Q Clear Time (g_c+I1), s	5.1	27.3		19.9	2.9	37.4		45.2				
Green Ext Time (p_c), s	0.1	5.6		6.4	0.0	1.8		0.0				

Intersection Summary			
HCM 6th Ctrl Delay			38.6
HCM 6th LOS			D

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM Signalized Intersection Capacity Analysis
14: Alameda Ave & Ontario St & Olive Ave

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	178	537	22	245	373	14	12	457	345	988	438
Future Volume (vph)	13	178	537	22	245	373	14	12	457	345	988	438
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.5	8.0		7.5	8.0			6.5	7.5	6.5	3.0
Lane Util. Factor		0.97	0.95		0.97	0.95			0.95	1.00	0.95	1.00
Frpb, ped/bikes		1.00	1.00		1.00	1.00			1.00	0.98	1.00	0.95
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00
Frt		1.00	0.99		1.00	0.99			1.00	0.85	1.00	0.85
Flt Protected		0.95	1.00		0.95	1.00			1.00	1.00	1.00	1.00
Satd. Flow (prot)		3433	3514		3433	3499			3539	1556	3539	1507
Flt Permitted		0.95	1.00		0.95	1.00			1.00	1.00	1.00	1.00
Satd. Flow (perm)		3433	3514		3433	3499			3539	1556	3539	1507
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	13	184	554	23	253	385	14	12	471	356	1019	452
RTOR Reduction (vph)	0	0	2	0	0	2	0	0	0	0	0	0
Lane Group Flow (vph)	0	197	575	0	253	409	0	0	471	356	1019	461
Confl. Peds. (#/hr)	4	12		14	15		4	12		10		7
Turn Type	Prot	Prot	NA		Prot	NA			NA	custom	NA	custom
Protected Phases	1	1	6		5	2			8		4	
Permitted Phases										5 7 8		3 4
Actuated Green, G (s)		12.2	25.9		13.8	27.5			42.8	69.5	42.2	49.2
Effective Green, g (s)		12.2	25.9		13.8	27.5			42.8	60.0	42.2	49.2
Actuated g/C Ratio		0.11	0.23		0.12	0.25			0.39	0.54	0.38	0.44
Clearance Time (s)		7.5	8.0		7.5	8.0			6.5		6.5	
Vehicle Extension (s)		2.5	4.0		2.5	4.0			3.0		3.0	
Lane Grp Cap (vph)		377	820		427	867			1365	841	1346	668
v/s Ratio Prot		0.06	c0.16		c0.07	0.12			0.13		c0.29	
v/s Ratio Perm										0.23		c0.31
v/c Ratio		0.52	0.70		0.59	0.47			0.35	0.42	0.76	0.69
Uniform Delay, d1		46.6	38.9		45.9	35.5			24.1	15.2	29.9	24.7
Progression Factor		1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00
Incremental Delay, d2		1.0	2.9		1.8	0.6			0.2	0.3	2.5	3.1
Delay (s)		47.6	41.9		47.7	36.1			24.3	15.4	32.4	27.8
Level of Service		D	D		D	D			C	B	C	C
Approach Delay (s)			43.3			40.5			20.5		31.0	
Approach LOS			D			D			C		C	

Intersection Summary			
HCM 2000 Control Delay	33.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	110.9	Sum of lost time (s)	25.0
Intersection Capacity Utilization	84.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR2	SER2
Lane Configurations		↱
Traffic Volume (vph)	9	24
Future Volume (vph)	9	24
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		7.5
Lane Util. Factor		1.00
Frpb, ped/bikes		1.00
Flpb, ped/bikes		1.00
Frt		0.86
Flt Protected		1.00
Satd. Flow (prot)		1611
Flt Permitted		1.00
Satd. Flow (perm)		1611
Peak-hour factor, PHF	0.97	0.97
Adj. Flow (vph)	9	25
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	25
Confl. Peds. (#/hr)	4	7
Turn Type		Over
Protected Phases		1
Permitted Phases		
Actuated Green, G (s)		12.2
Effective Green, g (s)		12.2
Actuated g/C Ratio		0.11
Clearance Time (s)		7.5
Vehicle Extension (s)		2.5
Lane Grp Cap (vph)		177
v/s Ratio Prot		0.02
v/s Ratio Perm		
v/c Ratio		0.14
Uniform Delay, d1		44.6
Progression Factor		1.00
Incremental Delay, d2		0.3
Delay (s)		44.9
Level of Service		D
Approach Delay (s)		
Approach LOS		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↱			✥	
Traffic Volume (veh/h)	23	1313	122	111	624	10	159	118	100	39	172	10
Future Volume (veh/h)	23	1313	122	111	624	10	159	118	100	39	172	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	0.99		0.99
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	23	1340	124	113	637	10	162	120	102	40	176	10
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	417	1416	130	205	1966	31	393	291	247	82	243	13
Arrive On Green	0.43	0.43	0.43	0.06	0.55	0.55	0.09	0.31	0.31	0.17	0.17	0.17
Sat Flow, veh/h	782	3288	303	1781	3581	56	1781	932	792	210	1439	76
Grp Volume(v), veh/h	23	722	742	113	316	331	162	0	222	226	0	0
Grp Sat Flow(s),veh/h/ln	782	1777	1814	1781	1777	1860	1781	0	1723	1725	0	0
Q Serve(g_s), s	1.6	35.0	35.5	3.0	8.8	8.8	6.5	0.0	9.2	6.7	0.0	0.0
Cycle Q Clear(g_c), s	1.6	35.0	35.5	3.0	8.8	8.8	6.5	0.0	9.2	11.1	0.0	0.0
Prop In Lane	1.00		0.17	1.00		0.03	1.00		0.46	0.18		0.04
Lane Grp Cap(c), veh/h	417	765	781	205	975	1021	393	0	538	338	0	0
V/C Ratio(X)	0.06	0.94	0.95	0.55	0.32	0.32	0.41	0.00	0.41	0.67	0.00	0.00
Avail Cap(c_a), veh/h	417	765	781	271	975	1021	396	0	737	528	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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.0	24.6	24.7	20.3	11.1	11.1	25.4	0.0	24.4	35.6	0.0	0.0
Incr Delay (d2), s/veh	0.3	21.3	22.1	1.7	0.9	0.8	0.5	0.0	0.5	2.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	18.3	19.1	1.2	3.5	3.6	2.7	0.0	3.7	4.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.3	45.8	46.8	22.0	12.0	12.0	25.9	0.0	25.0	37.9	0.0	0.0
LnGrp LOS	B	D	D	C	B	B	C	A	C	D	A	A
Approach Vol, veh/h		1487			760			384			226	
Approach Delay, s/veh		45.8			13.5			25.4			37.9	
Approach LOS		D			B			C			D	
Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		55.9		34.1	10.6	45.3	12.9	21.2				
Change Period (Y+Rc), s		6.5		6.0	5.0	6.5	4.6	6.0				
Max Green Setting (Gmax), s		39.0		38.5	9.0	25.0	8.5	25.4				
Max Q Clear Time (g_c+I1), s		10.8		11.2	5.0	37.5	8.5	13.1				
Green Ext Time (p_c), s		5.2		1.4	0.1	0.0	0.0	1.0				
Intersection Summary												
HCM 6th Ctrl Delay			33.9									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary
16: San Fernando Blvd & Buena Vista St

10/27/2021

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱	↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	99	609	184	37	142	172	24	645	18	247	1197	230
Future Volume (veh/h)	99	609	184	37	142	172	24	645	18	247	1197	230
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	1.00		0.99	1.00		0.99	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	103	634	192	39	148	179	25	672	19	257	1247	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	390	740	224	153	903	399	49	1258	36	292	1762	
Arrive On Green	0.06	0.28	0.28	0.04	0.25	0.25	0.03	0.36	0.36	0.16	0.50	0.00
Sat Flow, veh/h	1781	2682	811	1781	3554	1570	1781	3528	100	1781	3554	1585
Grp Volume(v), veh/h	103	420	406	39	148	179	25	338	353	257	1247	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1716	1781	1777	1570	1781	1777	1851	1781	1777	1585
Q Serve(g_s), s	5.4	28.7	28.8	2.0	4.2	12.3	1.8	19.4	19.4	18.1	34.9	0.0
Cycle Q Clear(g_c), s	5.4	28.7	28.8	2.0	4.2	12.3	1.8	19.4	19.4	18.1	34.9	0.0
Prop In Lane	1.00		0.47	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	390	490	473	153	903	399	49	633	660	292	1762	
V/C Ratio(X)	0.26	0.86	0.86	0.26	0.16	0.45	0.51	0.53	0.53	0.88	0.71	
Avail Cap(c_a), veh/h	567	555	536	368	1110	491	353	1041	1084	556	2498	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	32.2	43.9	44.0	35.9	37.2	40.2	61.4	32.8	32.8	52.3	25.1	0.0
Incr Delay (d2), s/veh	0.1	12.2	12.7	0.3	0.1	1.1	3.0	1.0	1.0	10.0	1.1	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(50%),veh/ln	2.4	14.2	13.8	0.9	1.8	4.9	0.8	8.5	8.9	8.9	14.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.3	56.1	56.7	36.2	37.3	41.3	64.4	33.8	33.7	62.3	26.2	0.0
LnGrp LOS	C	E	E	D	D	D	E	C	C	E	C	
Approach Vol, veh/h		929			366			716			1504	A
Approach Delay, s/veh		53.7			39.1			34.8			32.4	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.1	41.3	8.1	69.5	11.9	38.5	26.0	51.6
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	5.0	6.0
Max Green Setting (Gmax), s	20.0	40.0	25.4	90.0	20.0	40.0	40.0	75.0
Max Q Clear Time (g_c+I1), s	4.0	30.8	3.8	36.9	7.4	14.3	20.1	21.4
Green Ext Time (p_c), s	0.0	4.6	0.0	26.6	0.1	2.3	0.9	7.5

Intersection Summary	
HCM 6th Ctrl Delay	39.2
HCM 6th LOS	D

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
17: Buena Vista St & Empire Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰↰	↑↱		↰	↑↑	↱	↰↰	↑↱	
Traffic Volume (veh/h)	76	279	186	185	133	61	161	515	394	127	967	103
Future Volume (veh/h)	76	279	186	185	133	61	161	515	394	127	967	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.98	1.00		0.98	1.00		0.99	1.00		0.99
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	78	288	192	191	137	63	166	531	406	131	997	106
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	167	568	248	245	446	194	329	1965	871	180	1778	189
Arrive On Green	0.05	0.16	0.16	0.07	0.19	0.19	0.06	0.55	0.55	0.05	0.55	0.55
Sat Flow, veh/h	1781	3554	1549	3456	2393	1042	1781	3554	1575	3456	3238	344
Grp Volume(v), veh/h	78	288	192	191	100	100	166	531	406	131	547	556
Grp Sat Flow(s),veh/h/ln	1781	1777	1549	1728	1777	1659	1781	1777	1575	1728	1777	1806
Q Serve(g_s), s	5.5	10.4	14.0	7.6	6.8	7.3	5.7	11.0	14.1	5.2	28.1	28.1
Cycle Q Clear(g_c), s	5.5	10.4	14.0	7.6	6.8	7.3	5.7	11.0	14.1	5.2	28.1	28.1
Prop In Lane	1.00		1.00	1.00		0.63	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	167	568	248	245	331	309	329	1965	871	180	975	991
V/C Ratio(X)	0.47	0.51	0.78	0.78	0.30	0.32	0.50	0.27	0.47	0.73	0.56	0.56
Avail Cap(c_a), veh/h	278	863	376	469	470	438	420	1965	871	296	975	991
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.7	53.8	39.8	64.0	49.1	49.3	16.2	16.4	8.0	65.4	20.6	20.6
Incr Delay (d2), s/veh	1.5	0.7	5.5	4.0	0.5	0.6	0.8	0.3	1.7	4.1	2.3	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	4.7	5.8	3.5	3.1	3.1	2.4	4.6	5.0	2.4	12.2	12.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.2	54.5	45.3	68.0	49.6	49.9	17.0	16.8	9.6	69.5	22.9	22.9
LnGrp LOS	E	D	D	E	D	D	B	B	A	E	C	C
Approach Vol, veh/h		558			391			1103			1234	
Approach Delay, s/veh		51.6			58.7			14.2			27.8	
Approach LOS		D			E			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.9	28.4	12.9	82.9	12.2	32.1	12.3	83.4
Change Period (Y+Rc), s	6.0	* 6	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	19.0	* 34	15.0	50.0	16.0	37.0	12.0	53.0
Max Q Clear Time (g_c+I1), s	9.6	16.0	7.7	30.1	7.5	9.3	7.2	16.1
Green Ext Time (p_c), s	0.3	2.4	0.2	7.6	0.1	1.2	0.1	7.3

Intersection Summary	
HCM 6th Ctrl Delay	30.9
HCM 6th LOS	C

Notes

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

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰	↱		✥		↰	↑↑			↑↑	↱
Traffic Volume (vph)	330	0	589	0	0	0	167	872	0	0	1010	238
Future Volume (vph)	330	0	589	0	0	0	167	872	0	0	1010	238
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.7	5.7				6.0	6.0			6.0	6.0
Lane Util. Factor	0.95	0.95	1.00				1.00	0.95			0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.98				1.00	1.00			1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00				1.00	1.00			1.00	1.00
Frt	1.00	1.00	0.85				1.00	1.00			1.00	0.85
Flt Protected	0.95	0.95	1.00				0.95	1.00			1.00	1.00
Satd. Flow (prot)	1681	1681	1553				1770	3539			3539	1552
Flt Permitted	0.95	0.95	1.00				0.95	1.00			1.00	1.00
Satd. Flow (perm)	1681	1681	1553				1770	3539			3539	1552
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	351	0	627	0	0	0	178	928	0	0	1074	253
RTOR Reduction (vph)	0	0	423	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	175	176	204	0	0	0	178	928	0	0	1074	253
Confl. Peds. (#/hr)			3	3			3		4	4		3
Turn Type	Split	NA	Perm				Prot	NA			NA	Perm
Protected Phases	4	4			3		5	2			6	
Permitted Phases			4	3								6
Actuated Green, G (s)	29.3	29.3	29.3				18.9	103.5			78.6	78.6
Effective Green, g (s)	29.3	29.3	29.3				18.9	103.5			78.6	78.6
Actuated g/C Ratio	0.20	0.20	0.20				0.13	0.72			0.54	0.54
Clearance Time (s)	5.7	5.7	5.7				6.0	6.0			6.0	6.0
Vehicle Extension (s)	3.5	3.5	3.5				2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	340	340	314				231	2534			1925	844
v/s Ratio Prot	0.10	0.10					c0.10	0.26			c0.30	
v/s Ratio Perm			c0.13									0.16
v/c Ratio	0.51	0.52	0.65				0.77	0.37			0.56	0.30
Uniform Delay, d1	51.3	51.3	52.9				60.7	7.9			21.6	18.0
Progression Factor	1.00	1.00	1.00				1.00	1.00			1.00	1.00
Incremental Delay, d2	1.5	1.5	5.0				13.4	0.4			1.2	0.9
Delay (s)	52.8	52.9	57.9				74.1	8.3			22.7	18.9
Level of Service	D	D	E				E	A			C	B
Approach Delay (s)		56.1			0.0			18.9			22.0	
Approach LOS		E			A			B			C	

Intersection Summary			
HCM 2000 Control Delay	30.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	144.5	Sum of lost time (s)	22.3
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
19: Victory Blvd & Buena Vista St

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	151	823	310	98	577	220	213	635	45	417	1189	63
Future Volume (veh/h)	151	823	310	98	577	220	213	635	45	417	1189	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	156	848	320	101	595	227	220	655	46	430	1226	65
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	247	909	399	163	823	361	281	1325	583	514	1576	695
Arrive On Green	0.08	0.26	0.26	0.06	0.23	0.23	0.09	0.37	0.37	0.16	0.44	0.44
Sat Flow, veh/h	1781	3554	1561	1781	3554	1558	1781	3554	1563	1781	3554	1567
Grp Volume(v), veh/h	156	848	320	101	595	227	220	655	46	430	1226	65
Grp Sat Flow(s),veh/h/ln	1781	1777	1561	1781	1777	1558	1781	1777	1563	1781	1777	1567
Q Serve(g_s), s	9.2	32.7	26.9	6.0	21.6	18.3	10.5	19.8	2.7	20.0	41.0	3.4
Cycle Q Clear(g_c), s	9.2	32.7	26.9	6.0	21.6	18.3	10.5	19.8	2.7	20.0	41.0	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	247	909	399	163	823	361	281	1325	583	514	1576	695
V/C Ratio(X)	0.63	0.93	0.80	0.62	0.72	0.63	0.78	0.49	0.08	0.84	0.78	0.09
Avail Cap(c_a), veh/h	345	924	406	304	924	405	548	1325	583	656	1576	695
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.0	50.9	48.8	41.2	49.6	48.4	29.5	33.8	28.4	22.7	33.1	22.6
Incr Delay (d2), s/veh	2.0	15.8	10.9	2.8	2.5	2.6	3.6	1.3	0.3	6.9	3.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	16.5	11.7	2.8	9.9	7.4	4.8	8.9	1.1	9.2	18.4	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.0	66.7	59.6	44.0	52.1	50.9	33.1	35.1	28.6	29.5	37.0	22.9
LnGrp LOS	D	E	E	D	D	D	C	D	C	C	D	C
Approach Vol, veh/h		1324			923			921			1721	
Approach Delay, s/veh		61.8			50.9			34.3			34.6	
Approach LOS		E			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.5	41.8	17.6	68.1	15.9	38.4	27.5	58.2				
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0				
Max Green Setting (Gmax), s	19.0	36.4	34.0	29.4	19.0	36.4	34.0	29.4				
Max Q Clear Time (g_c+I1), s	8.0	34.7	12.5	43.0	11.2	23.6	22.0	21.8				
Green Ext Time (p_c), s	0.1	1.2	0.4	0.0	0.2	4.0	0.8	2.7				

Intersection Summary			
HCM 6th Ctrl Delay			45.0
HCM 6th LOS			D

HCM 6th Signalized Intersection Summary
20: Burbank Blvd & Buena Vista St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	101	556	327	164	473	91	211	797	98	164	1293	99
Future Volume (veh/h)	101	556	327	164	473	91	211	797	98	164	1293	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	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	106	585	344	173	498	96	222	839	103	173	1361	104
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	275	842	373	258	942	417	249	1603	712	345	1509	670
Arrive On Green	0.06	0.24	0.24	0.09	0.27	0.27	0.10	0.45	0.45	0.07	0.42	0.42
Sat Flow, veh/h	1781	3554	1573	1781	3554	1574	1781	3554	1579	1781	3554	1578
Grp Volume(v), veh/h	106	585	344	173	498	96	222	839	103	173	1361	104
Grp Sat Flow(s),veh/h/ln	1781	1777	1573	1781	1777	1574	1781	1777	1579	1781	1777	1578
Q Serve(g_s), s	6.2	21.0	29.9	10.0	16.8	6.7	11.2	23.7	5.4	7.6	50.0	5.7
Cycle Q Clear(g_c), s	6.2	21.0	29.9	10.0	16.8	6.7	11.2	23.7	5.4	7.6	50.0	5.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	275	842	373	258	942	417	249	1603	712	345	1509	670
V/C Ratio(X)	0.39	0.69	0.92	0.67	0.53	0.23	0.89	0.52	0.14	0.50	0.90	0.16
Avail Cap(c_a), veh/h	362	873	387	295	942	417	547	1603	712	690	1509	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	48.8	52.1	37.0	44.0	40.3	37.0	27.6	22.6	21.7	37.5	24.8
Incr Delay (d2), s/veh	0.7	2.3	26.9	4.2	0.6	0.3	8.1	1.2	0.4	0.8	9.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	9.7	14.6	4.7	7.5	2.7	8.3	10.4	2.1	3.3	23.4	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.3	51.1	79.0	41.2	44.5	40.5	45.1	28.8	23.0	22.6	46.6	25.3
LnGrp LOS	D	D	E	D	D	D	D	C	C	C	D	C
Approach Vol, veh/h		1035			767			1164			1638	
Approach Delay, s/veh		59.0			43.3			31.4			42.7	
Approach LOS		E			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.7	39.2	18.6	65.5	12.8	43.1	14.9	69.2
Change Period (Y+Rc), s	4.6	6.0	5.0	6.0	4.6	6.0	5.0	6.0
Max Green Setting (Gmax), s	15.0	34.4	37.0	32.0	15.0	34.4	37.0	32.0
Max Q Clear Time (g_c+I1), s	12.0	31.9	13.2	52.0	8.2	18.8	9.6	25.7
Green Ext Time (p_c), s	0.1	1.3	0.4	0.0	0.1	3.3	0.3	3.1

Intersection Summary	
HCM 6th Ctrl Delay	43.6
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
21: Magnolia Blvd & Buena Vista St

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	119	702	149	144	562	229	132	599	90	437	1409	119
Future Volume (veh/h)	119	702	149	144	562	229	132	599	90	437	1409	119
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
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	138	816	173	167	653	266	153	697	105	508	1638	138
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	234	865	381	212	909	401	186	1043	461	533	1572	696
Arrive On Green	0.07	0.24	0.24	0.08	0.26	0.26	0.08	0.29	0.29	0.22	0.44	0.44
Sat Flow, veh/h	1781	3554	1566	1781	3554	1566	1781	3554	1569	1781	3554	1574
Grp Volume(v), veh/h	138	816	173	167	653	266	153	697	105	508	1638	138
Grp Sat Flow(s),veh/h/ln	1781	1777	1566	1781	1777	1566	1781	1777	1569	1781	1777	1574
Q Serve(g_s), s	8.0	31.6	13.2	9.7	23.5	21.3	8.3	24.1	7.1	28.6	61.9	7.5
Cycle Q Clear(g_c), s	8.0	31.6	13.2	9.7	23.5	21.3	8.3	24.1	7.1	28.6	61.9	7.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	234	865	381	212	909	401	186	1043	461	533	1572	696
V/C Ratio(X)	0.59	0.94	0.45	0.79	0.72	0.66	0.82	0.67	0.23	0.95	1.04	0.20
Avail Cap(c_a), veh/h	296	873	385	253	909	401	522	1043	461	604	1572	696
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.7	52.0	45.0	39.0	47.5	46.7	36.5	43.4	37.4	30.9	39.0	23.9
Incr Delay (d2), s/veh	1.8	18.1	0.8	12.1	2.8	4.1	6.7	3.4	1.1	23.6	34.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	16.2	5.2	5.0	10.8	8.8	4.0	11.1	2.9	15.6	34.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.5	70.1	45.9	51.0	50.3	50.8	43.2	46.8	38.6	54.5	73.5	24.5
LnGrp LOS	D	E	D	D	D	D	D	D	D	D	F	C
Approach Vol, veh/h		1127			1086			955			2284	
Approach Delay, s/veh		62.7			50.5			45.3			66.3	
Approach LOS		E			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.4	40.1	15.6	67.9	14.7	41.8	36.4	47.1
Change Period (Y+Rc), s	4.6	6.0	5.0	6.0	4.6	6.0	5.0	6.0
Max Green Setting (Gmax), s	15.0	34.4	37.0	32.0	15.0	34.4	37.0	32.0
Max Q Clear Time (g_c+I1), s	11.7	33.6	10.3	63.9	10.0	25.5	30.6	26.1
Green Ext Time (p_c), s	0.1	0.5	0.3	0.0	0.1	3.6	0.8	2.5

Intersection Summary			
HCM 6th Ctrl Delay			58.7
HCM 6th LOS			E

HCM 6th Signalized Intersection Summary
22: Olive Ave & Buena Vista St

10/27/2021

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	184	503	117	181	982	52	105	382	122	108	1123	484
Future Volume (veh/h)	184	503	117	181	982	52	105	382	122	108	1123	484
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.98	0.99		0.98
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	194	529	123	191	1034	55	111	402	128	114	1182	509
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	223	725	168	284	866	46	187	1593	698	466	1597	699
Arrive On Green	0.10	0.25	0.25	0.09	0.25	0.25	0.05	0.45	0.45	0.05	0.45	0.45
Sat Flow, veh/h	1781	2844	658	1781	3425	182	1781	3554	1556	1781	3554	1556
Grp Volume(v), veh/h	194	329	323	191	536	553	111	402	128	114	1182	509
Grp Sat Flow(s),veh/h/ln	1781	1777	1725	1781	1777	1830	1781	1777	1556	1781	1777	1556
Q Serve(g_s), s	11.1	23.7	24.0	11.0	35.4	35.4	4.7	9.9	6.9	4.8	38.4	37.5
Cycle Q Clear(g_c), s	11.1	23.7	24.0	11.0	35.4	35.4	4.7	9.9	6.9	4.8	38.4	37.5
Prop In Lane	1.00		0.38	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	223	453	440	284	449	463	187	1593	698	466	1597	699
V/C Ratio(X)	0.87	0.73	0.73	0.67	1.19	1.19	0.59	0.25	0.18	0.24	0.74	0.73
Avail Cap(c_a), veh/h	395	551	535	358	449	463	217	1593	698	494	1597	699
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.8	47.7	47.8	36.1	52.3	52.3	27.4	24.0	23.2	19.3	31.8	31.5
Incr Delay (d2), s/veh	7.8	3.8	4.1	2.8	107.3	106.9	2.5	0.4	0.6	0.2	3.1	6.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	11.0	10.9	5.0	29.1	29.9	2.1	4.3	2.7	2.1	17.1	15.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.5	51.5	51.9	38.9	159.6	159.2	30.0	24.4	23.8	19.5	34.9	38.1
LnGrp LOS	D	D	D	D	F	F	C	C	C	B	C	D
Approach Vol, veh/h		846			1280			641			1805	
Approach Delay, s/veh		50.3			141.4			25.2			34.8	
Approach LOS		D			F			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.8	41.7	11.6	68.9	18.1	41.4	11.8	68.8
Change Period (Y+Rc), s	4.6	6.0	5.0	6.0	4.6	6.0	5.0	6.0
Max Green Setting (Gmax), s	19.0	43.4	9.0	47.0	27.0	35.4	9.0	47.0
Max Q Clear Time (g_c+I1), s	13.0	26.0	6.7	40.4	13.1	37.4	6.8	11.9
Green Ext Time (p_c), s	0.2	3.9	0.0	4.8	0.3	0.0	0.0	3.4

Intersection Summary			
HCM 6th Ctrl Delay			66.2
HCM 6th LOS			E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	210	638	128	243	611	122	221	313	227	281	712	195
Future Volume (veh/h)	210	638	128	243	611	122	221	313	227	281	712	195
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.97	1.00		0.95	0.99		0.95
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	233	709	142	270	679	136	246	348	252	312	791	217
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	283	851	366	318	913	393	359	1360	574	523	1439	609
Arrive On Green	0.08	0.24	0.24	0.09	0.26	0.26	0.10	0.38	0.38	0.12	0.40	0.40
Sat Flow, veh/h	3456	3554	1527	3456	3554	1531	1781	3554	1499	1781	3554	1504
Grp Volume(v), veh/h	233	709	142	270	679	136	246	348	252	312	791	217
Grp Sat Flow(s),veh/h/ln	1728	1777	1527	1728	1777	1531	1781	1777	1499	1781	1777	1504
Q Serve(g_s), s	9.3	26.5	8.4	10.8	24.6	10.1	11.6	9.4	12.4	14.7	23.9	14.0
Cycle Q Clear(g_c), s	9.3	26.5	8.4	10.8	24.6	10.1	11.6	9.4	12.4	14.7	23.9	14.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	283	851	366	318	913	393	359	1360	574	523	1439	609
V/C Ratio(X)	0.82	0.83	0.39	0.85	0.74	0.35	0.68	0.26	0.44	0.60	0.55	0.36
Avail Cap(c_a), veh/h	346	1142	491	346	1142	492	437	1360	574	574	1439	609
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.3	50.6	26.2	62.6	47.8	42.4	24.5	29.6	16.3	21.3	31.9	29.0
Incr Delay (d2), s/veh	11.8	4.1	0.7	16.3	2.0	0.5	2.8	0.5	2.4	1.2	1.5	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	12.3	3.2	5.5	11.2	3.9	5.2	4.2	4.7	6.3	10.6	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.0	54.6	26.9	78.9	49.8	42.9	27.4	30.0	18.7	22.5	33.4	30.6
LnGrp LOS	E	D	C	E	D	D	C	C	B	C	C	C
Approach Vol, veh/h		1084			1085			846			1320	
Approach Delay, s/veh		55.4			56.2			25.9			30.4	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.9	39.5	18.9	62.7	16.5	42.0	22.0	59.6
Change Period (Y+Rc), s	6.0	* 6	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	14.0	* 45	20.0	39.0	14.0	45.0	21.0	38.0
Max Q Clear Time (g_c+I1), s	12.8	28.5	13.6	25.9	11.3	26.6	16.7	14.4
Green Ext Time (p_c), s	0.1	5.0	0.3	5.2	0.2	5.0	0.3	3.3

Intersection Summary	
HCM 6th Ctrl Delay	42.2
HCM 6th LOS	D

Notes

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

HCM Signalized Intersection Capacity Analysis
24: Riverside Dr & SR 134 Ramps/Buena Vista St & SR 134 WB On Ramp

10/27/2021

Movement	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	SBR2	NEL
Lane Configurations	↰	↰	↰↑	↱	↰	↑↑↱		↰	↑↑↱		↱	↰
Traffic Volume (vph)	22	177	197	84	388	615	314	280	295	49	278	92
Future Volume (vph)	22	177	197	84	388	615	314	280	295	49	278	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	6.5	6.5	6.5	6.5	6.5		6.5	6.5		6.5	4.6
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	0.95		1.00	0.91		0.91	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.98	1.00	0.99		1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.95		1.00	0.95		0.85	1.00
Flt Protected	0.95	0.95	0.99	1.00	0.95	1.00		0.95	1.00		1.00	0.95
Satd. Flow (prot)	1770	1681	1746	1544	1770	3341		1770	3230		1441	1770
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00		0.95	1.00		1.00	0.95
Satd. Flow (perm)	1770	1770	1770	1544	1770	3341		1770	3230		1441	1770
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	23	186	207	88	408	647	331	295	311	52	293	97
RTOR Reduction (vph)	0	0	0	58	0	29	0	0	0	0	0	0
Lane Group Flow (vph)	23	108	285	30	408	949	0	295	454	0	202	97
Confl. Peds. (#/hr)				6			2	2				6
Turn Type	Prot	Perm	NA	Perm	Split	NA		Split	NA		Perm	Prot
Protected Phases	1		6		8	8		7	7			5
Permitted Phases		6		6							7	
Actuated Green, G (s)	5.6	43.8	43.8	43.8	50.7	50.7		35.7	35.7		35.7	14.6
Effective Green, g (s)	5.6	43.8	43.8	43.8	50.7	50.7		35.7	35.7		35.7	14.6
Actuated g/C Ratio	0.03	0.26	0.26	0.26	0.30	0.30		0.21	0.21		0.21	0.09
Clearance Time (s)	4.6	6.5	6.5	6.5	6.5	6.5		6.5	6.5		6.5	4.6
Vehicle Extension (s)	2.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	2.5
Lane Grp Cap (vph)	58	459	459	400	531	1002		374	682		304	153
v/s Ratio Prot	0.01				0.23	c0.28		c0.17	0.14			c0.05
v/s Ratio Perm		0.06	0.16	0.02							0.14	
v/c Ratio	0.40	0.24	0.62	0.08	0.77	0.95		0.79	0.67		0.66	0.63
Uniform Delay, d1	80.0	49.3	55.2	47.3	53.8	57.8		63.0	61.1		61.1	74.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	3.2	0.3	2.7	0.1	6.8	17.1		10.8	2.6		5.6	7.3
Delay (s)	83.2	49.7	58.0	47.4	60.6	74.9		73.9	63.7		66.7	81.9
Level of Service	F	D	E	D	E	E		E	E		E	F
Approach Delay (s)			55.5			70.6			67.5			72.5
Approach LOS			E			E			E			E

Intersection Summary			
HCM 2000 Control Delay	68.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	168.9	Sum of lost time (s)	24.1
Intersection Capacity Utilization	105.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
24: Riverside Dr & SR 134 Ramps/Buena Vista St & SR 134 WB On Ramp

10/27/2021

Movement	NER	NER2
Lane Configurations	↱↱	
Traffic Volume (vph)	813	2
Future Volume (vph)	813	2
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	6.5	
Lane Util. Factor	0.88	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	0.85	
Flt Protected	1.00	
Satd. Flow (prot)	2787	
Flt Permitted	1.00	
Satd. Flow (perm)	2787	
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	856	2
RTOR Reduction (vph)	54	0
Lane Group Flow (vph)	804	0
Confl. Peds. (#/hr)	2	
Turn Type	Prot	
Protected Phases	2	
Permitted Phases		
Actuated Green, G (s)	52.8	
Effective Green, g (s)	52.8	
Actuated g/C Ratio	0.31	
Clearance Time (s)	6.5	
Vehicle Extension (s)	3.5	
Lane Grp Cap (vph)	871	
v/s Ratio Prot	c0.29	
v/s Ratio Perm		
v/c Ratio	0.92	
Uniform Delay, d1	56.1	
Progression Factor	1.00	
Incremental Delay, d2	15.3	
Delay (s)	71.4	
Level of Service	E	
Approach Delay (s)		
Approach LOS		

Intersection Summary

HCM Signalized Intersection Capacity Analysis
25: Burbank Blvd & Victory Blvd

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑	↱	↰↰	↰↑	↱
Traffic Volume (vph)	42	1457	325	393	1300	503	242	242	116	659	546	54
Future Volume (vph)	42	1457	325	393	1300	503	242	242	116	659	546	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	6.0	5.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0	6.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.86	0.86	1.00
Frpb, ped/bikes	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00
Satd. Flow (prot)	3433	5085	1561	3433	5085	1570	3433	3539	1583	3044	3185	1557
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00
Satd. Flow (perm)	3433	5085	1561	3433	5085	1570	3433	3539	1583	3044	3185	1557
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	45	1567	349	423	1398	541	260	260	125	709	587	58
RTOR Reduction (vph)	0	0	22	0	0	118	0	0	34	0	0	43
Lane Group Flow (vph)	45	1567	327	423	1398	423	260	260	91	631	665	15
Confl. Peds. (#/hr)	1		4	4		1	3					3
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Split	NA	pm+ov	Split	NA	Perm
Protected Phases	1	6	7	5	2	3	7	7	5	3	3	
Permitted Phases			6			2			7			3
Actuated Green, G (s)	6.1	65.3	88.7	26.6	85.8	134.0	23.4	23.4	50.0	48.2	48.2	48.2
Effective Green, g (s)	6.1	65.3	88.7	26.6	85.8	134.0	23.4	23.4	50.0	48.2	48.2	48.2
Actuated g/C Ratio	0.03	0.35	0.48	0.14	0.46	0.72	0.13	0.13	0.27	0.26	0.26	0.26
Clearance Time (s)	5.0	6.0	6.0	5.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0	6.0
Vehicle Extension (s)	2.5	3.0	3.0	2.0	3.0	3.0	3.0	3.0	2.0	3.0	3.0	3.0
Lane Grp Cap (vph)	112	1780	742	489	2339	1178	430	444	424	786	823	402
v/s Ratio Prot	0.01	c0.31	0.06	c0.12	0.27	0.09	c0.08	0.07	0.03	0.21	c0.21	
v/s Ratio Perm			0.15			0.18			0.03			0.01
v/c Ratio	0.40	0.88	0.44	0.87	0.60	0.36	0.60	0.59	0.21	0.80	0.81	0.04
Uniform Delay, d1	88.4	56.9	32.4	78.2	37.5	10.0	77.2	77.0	53.0	64.7	64.8	51.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.7	5.5	0.4	14.3	0.4	0.2	2.4	2.0	0.1	5.9	5.9	0.0
Delay (s)	90.1	62.4	32.9	92.5	37.9	10.1	79.6	78.9	53.1	70.6	70.7	51.8
Level of Service	F	E	C	F	D	B	E	E	D	E	E	D
Approach Delay (s)		57.8			41.3			74.2			69.9	
Approach LOS		E			D			E			E	

Intersection Summary			
HCM 2000 Control Delay	55.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	186.5	Sum of lost time (s)	23.0
Intersection Capacity Utilization	85.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
26: Victory Blvd/Victory Pl & Magnolia Blvd

10/27/2021

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	125	558	222	193	579	121	151	493	78	216	1008	140
Future Volume (veh/h)	125	558	222	193	579	121	151	493	78	216	1008	140
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
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	137	613	244	212	636	133	166	542	86	237	1108	154
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	243	537	213	239	884	390	264	1554	689	477	1632	724
Arrive On Green	0.07	0.22	0.22	0.11	0.25	0.25	0.07	0.44	0.44	0.09	0.46	0.46
Sat Flow, veh/h	1781	2472	983	1781	3554	1568	1781	3554	1575	1781	3554	1576
Grp Volume(v), veh/h	137	440	417	212	636	133	166	542	86	237	1108	154
Grp Sat Flow(s),veh/h/ln	1781	1777	1679	1781	1777	1568	1781	1777	1575	1781	1777	1576
Q Serve(g_s), s	8.3	30.4	30.4	12.6	22.9	9.7	7.1	14.2	4.5	10.1	34.3	8.2
Cycle Q Clear(g_c), s	8.3	30.4	30.4	12.6	22.9	9.7	7.1	14.2	4.5	10.1	34.3	8.2
Prop In Lane	1.00		0.59	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	386	365	239	884	390	264	1554	689	477	1632	724
V/C Ratio(X)	0.56	1.14	1.14	0.89	0.72	0.34	0.63	0.35	0.12	0.50	0.68	0.21
Avail Cap(c_a), veh/h	429	386	365	370	884	390	515	1554	689	688	1632	724
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	54.8	54.8	38.8	48.1	43.2	24.6	26.2	23.5	19.0	29.7	22.7
Incr Delay (d2), s/veh	0.8	90.2	92.0	10.4	2.9	0.5	0.9	0.6	0.4	0.3	2.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	23.2	22.1	6.2	10.5	3.9	3.1	6.2	1.8	4.2	15.1	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.4	145.0	146.8	49.2	51.0	43.7	25.5	26.8	23.8	19.3	32.0	23.4
LnGrp LOS	D	F	F	D	D	D	C	C	C	B	C	C
Approach Vol, veh/h		994			981			794			1499	
Approach Delay, s/veh		131.3			49.6			26.2			29.1	
Approach LOS		F			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.9	70.3	19.4	36.4	17.0	67.2	15.0	40.8
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	29.0	34.4	25.0	30.4	29.0	34.4	25.0	30.4
Max Q Clear Time (g_c+I1), s	9.1	36.3	14.6	32.4	12.1	16.2	10.3	24.9
Green Ext Time (p_c), s	0.2	0.0	0.2	0.0	0.3	3.8	0.1	2.2

Intersection Summary			
HCM 6th Ctrl Delay			57.1
HCM 6th LOS			E

HCM 6th Signalized Intersection Summary
27: Olive Ave & Victory Blvd

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	164	463	56	139	911	74	122	502	94	180	946	292
Future Volume (veh/h)	164	463	56	139	911	74	122	502	94	180	946	292
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	173	487	59	146	959	78	128	528	99	189	996	307
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	316	1515	183	480	1661	729	175	781	336	288	873	378
Arrive On Green	0.07	0.48	0.48	0.06	0.47	0.47	0.07	0.22	0.22	0.10	0.25	0.25
Sat Flow, veh/h	1781	3186	384	1781	3554	1560	1781	3554	1531	1781	3554	1537
Grp Volume(v), veh/h	173	271	275	146	959	78	128	528	99	189	996	307
Grp Sat Flow(s),veh/h/ln	1781	1777	1794	1781	1777	1560	1781	1777	1531	1781	1777	1537
Q Serve(g_s), s	7.0	13.2	13.3	5.9	27.6	3.9	7.7	19.1	7.6	11.3	34.4	26.4
Cycle Q Clear(g_c), s	7.0	13.2	13.3	5.9	27.6	3.9	7.7	19.1	7.6	11.3	34.4	26.4
Prop In Lane	1.00		0.21	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	316	845	853	480	1661	729	175	781	336	288	873	378
V/C Ratio(X)	0.55	0.32	0.32	0.30	0.58	0.11	0.73	0.68	0.29	0.66	1.14	0.81
Avail Cap(c_a), veh/h	568	845	853	747	1661	729	293	873	376	360	873	378
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.9	22.7	22.7	17.8	27.2	20.9	41.5	50.1	45.6	37.8	52.8	49.8
Incr Delay (d2), s/veh	0.6	1.0	1.0	0.1	1.5	0.3	2.2	1.8	0.5	1.5	77.0	12.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	5.8	5.9	2.5	12.0	1.5	3.5	8.7	2.9	5.1	24.6	11.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.4	23.7	23.7	18.0	28.7	21.2	43.7	51.9	46.0	39.3	129.8	62.5
LnGrp LOS	C	C	C	B	C	C	D	D	D	D	F	E
Approach Vol, veh/h		719			1183			755			1492	
Approach Delay, s/veh		23.2			26.9			49.7			104.5	
Approach LOS		C			C			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	72.6	14.3	40.4	13.8	71.4	18.0	36.8
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	29.0	36.4	19.0	34.4	29.0	36.4	19.0	34.4
Max Q Clear Time (g_c+I1), s	7.9	15.3	9.7	36.4	9.0	29.6	13.3	21.1
Green Ext Time (p_c), s	0.2	3.3	0.1	0.0	0.2	3.7	0.1	3.2

Intersection Summary	
HCM 6th Ctrl Delay	58.3
HCM 6th LOS	E

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑↱		↰↰	↑↱	
Traffic Volume (veh/h)	51	603	100	109	1170	245	90	233	69	340	566	71
Future Volume (veh/h)	51	603	100	109	1170	245	90	233	69	340	566	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.98		0.95	0.97		0.97
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	52	615	102	111	1194	250	92	238	70	347	578	72
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	232	1907	846	449	1925	854	164	456	130	623	959	119
Arrive On Green	0.04	0.54	0.54	0.04	0.54	0.54	0.17	0.17	0.17	0.10	0.30	0.30
Sat Flow, veh/h	1781	3554	1576	1781	3554	1576	767	2694	768	3456	3169	394
Grp Volume(v), veh/h	52	615	102	111	1194	250	92	154	154	347	323	327
Grp Sat Flow(s),veh/h/ln	1781	1777	1576	1781	1777	1576	767	1777	1685	1728	1777	1786
Q Serve(g_s), s	1.8	13.6	4.5	3.9	32.5	12.1	16.3	11.1	11.7	11.2	21.7	21.9
Cycle Q Clear(g_c), s	1.8	13.6	4.5	3.9	32.5	12.1	19.5	11.1	11.7	11.2	21.7	21.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.46	1.00		0.22
Lane Grp Cap(c), veh/h	232	1907	846	449	1925	854	164	301	285	623	538	541
V/C Ratio(X)	0.22	0.32	0.12	0.25	0.62	0.29	0.56	0.51	0.54	0.56	0.60	0.60
Avail Cap(c_a), veh/h	293	1907	846	501	1925	854	201	386	366	843	736	740
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.3	18.2	16.1	14.0	22.2	17.5	57.9	52.9	53.2	40.7	41.6	41.7
Incr Delay (d2), s/veh	0.2	0.4	0.3	0.1	1.5	0.9	3.0	1.4	1.6	0.8	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	5.7	1.7	1.6	13.8	4.6	3.3	5.1	5.1	4.9	9.7	9.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.5	18.6	16.4	14.1	23.7	18.4	60.9	54.3	54.7	41.5	42.7	42.8
LnGrp LOS	B	B	B	B	C	B	E	D	D	D	D	D
Approach Vol, veh/h		769			1555			400			997	
Approach Delay, s/veh		18.3			22.1			56.0			42.3	
Approach LOS		B			C			E			D	

Timer - Assigned Phs	1	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	18.7	29.7	10.5	81.1		48.4	9.8	81.8
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0		6.0	4.6	6.0
Max Green Setting (Gmax), s	23.0	30.4	10.0	55.4		58.0	10.0	55.4
Max Q Clear Time (g_c+I1), s	13.2	21.5	5.9	15.6		23.9	3.8	34.5
Green Ext Time (p_c), s	0.9	1.6	0.0	5.2		4.5	0.0	10.2

Intersection Summary	
HCM 6th Ctrl Delay	30.4
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
29: Burbank Blvd & San Fernando Blvd

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰	↑↑	↱	↰↰	↑↱		↰	↑	↱↱
Traffic Volume (veh/h)	506	481	292	20	334	74	69	103	5	52	208	656
Future Volume (veh/h)	506	481	292	20	334	74	69	103	5	52	208	656
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.95		1.00	1.00		0.98	1.00		0.98	1.00		0.97
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	588	559	0	23	388	86	80	120	6	60	242	763
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	693	960		89	642	279	423	1213	60	97	509	733
Arrive On Green	0.13	0.27	0.00	0.05	0.18	0.18	0.12	0.35	0.35	0.05	0.27	0.27
Sat Flow, veh/h	3456	3554	1585	1781	3554	1548	3456	3442	171	1781	1870	2692
Grp Volume(v), veh/h	588	559	0	23	388	86	80	62	64	60	242	763
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1548	1728	1777	1836	1781	1870	1346
Q Serve(g_s), s	7.4	11.1	0.0	1.0	8.2	3.9	1.7	1.9	1.9	2.7	8.8	16.6
Cycle Q Clear(g_c), s	7.4	11.1	0.0	1.0	8.2	3.9	1.7	1.9	1.9	2.7	8.8	16.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	693	960		89	642	279	423	626	647	97	509	733
V/C Ratio(X)	0.85	0.58		0.26	0.60	0.31	0.19	0.10	0.10	0.62	0.48	1.04
Avail Cap(c_a), veh/h	1099	1305		654	1305	568	2538	1305	1349	436	687	989
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.5	25.8	0.0	37.4	30.8	29.0	32.2	17.7	17.8	37.8	24.8	16.6
Incr Delay (d2), s/veh	2.1	0.7	0.0	1.8	1.1	0.7	0.5	0.1	0.1	2.4	0.5	37.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	4.6	0.0	0.5	3.5	1.5	0.7	0.8	0.8	1.2	3.9	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.6	26.5	0.0	39.2	31.9	29.8	32.7	17.8	17.8	40.1	25.4	53.8
LnGrp LOS	C	C		D	C	C	C	B	B	D	C	F
Approach Vol, veh/h		1147	A		497			206			1065	
Approach Delay, s/veh		30.6			31.9			23.6			46.6	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	35.1	16.4	20.7	16.3	28.3	9.1	28.1
Change Period (Y+Rc), s	5.0	6.3	6.0	* 6	6.3	* 6	5.0	6.0
Max Green Setting (Gmax), s	20.0	60.0	20.0	* 30	60.0	* 30	30.0	30.0
Max Q Clear Time (g_c+I1), s	4.7	3.9	9.4	10.2	3.7	18.6	3.0	13.1
Green Ext Time (p_c), s	0.0	0.9	1.0	3.3	0.6	3.2	0.0	4.1

Intersection Summary			
HCM 6th Ctrl Delay			36.2
HCM 6th LOS			D

Notes

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

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
30: Magnolia Blvd & First St

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱	↱	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	108	564	177	49	748	22	170	132	43	33	326	235
Future Volume (veh/h)	108	564	177	49	748	22	170	132	43	33	326	235
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		0.99	0.99		0.99
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	126	656	206	57	870	26	198	153	50	38	379	273
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	339	1732	731	375	1612	777	305	890	395	375	722	408
Arrive On Green	0.06	0.46	0.46	0.05	0.45	0.45	0.09	0.25	0.25	0.04	0.20	0.20
Sat Flow, veh/h	1781	3741	1580	1781	3554	1580	1781	3554	1576	1781	3554	1573
Grp Volume(v), veh/h	126	656	206	57	870	26	198	153	50	38	379	273
Grp Sat Flow(s),veh/h/ln	1781	1870	1580	1781	1777	1580	1781	1777	1576	1781	1777	1573
Q Serve(g_s), s	3.9	12.0	8.5	1.7	18.6	0.9	9.0	3.5	2.6	1.7	10.0	16.3
Cycle Q Clear(g_c), s	3.9	12.0	8.5	1.7	18.6	0.9	9.0	3.5	2.6	1.7	10.0	16.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	339	1732	731	375	1612	777	305	890	395	375	722	408
V/C Ratio(X)	0.37	0.38	0.28	0.15	0.54	0.03	0.65	0.17	0.13	0.10	0.53	0.67
Avail Cap(c_a), veh/h	393	1732	731	445	1612	777	305	1097	486	459	1097	574
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.7	18.4	17.4	14.2	20.8	13.8	29.3	30.8	30.5	30.9	37.3	34.9
Incr Delay (d2), s/veh	0.3	0.6	1.0	0.1	1.3	0.1	3.8	0.1	0.1	0.0	0.6	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	5.2	3.2	0.7	7.8	0.3	4.2	1.5	1.0	0.7	4.4	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.9	19.0	18.4	14.3	22.1	13.9	33.1	30.9	30.6	30.9	37.9	36.8
LnGrp LOS	B	B	B	B	C	B	C	C	C	C	D	D
Approach Vol, veh/h		988			953			401			690	
Approach Delay, s/veh		18.5			21.4			31.9			37.1	
Approach LOS		B			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	54.6	8.6	32.3	10.4	53.6	13.6	27.3
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	9.0	33.4	9.0	32.4	9.0	33.4	9.0	32.4
Max Q Clear Time (g_c+I1), s	3.7	14.0	3.7	5.5	5.9	20.6	11.0	18.3
Green Ext Time (p_c), s	0.0	5.2	0.0	1.1	0.0	5.0	0.0	3.0

Intersection Summary	
HCM 6th Ctrl Delay	25.4
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
31: Olive Ave & First St

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱	↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	98	377	105	37	683	94	264	174	48	52	177	110
Future Volume (veh/h)	98	377	105	37	683	94	264	174	48	52	177	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	0.99		0.98	0.98		0.98	0.97		0.96
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	105	405	113	40	734	101	284	187	52	56	190	118
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	360	1271	350	459	1601	697	422	694	187	334	604	342
Arrive On Green	0.05	0.46	0.46	0.04	0.45	0.45	0.13	0.25	0.25	0.04	0.17	0.17
Sat Flow, veh/h	1781	2736	754	1781	3554	1548	1781	2750	741	1781	3554	1526
Grp Volume(v), veh/h	105	261	257	40	734	101	284	119	120	56	190	118
Grp Sat Flow(s),veh/h/ln	1781	1777	1714	1781	1777	1548	1781	1777	1715	1781	1777	1526
Q Serve(g_s), s	3.4	10.2	10.4	1.3	15.7	4.2	14.0	5.9	6.2	2.8	5.2	7.2
Cycle Q Clear(g_c), s	3.4	10.2	10.4	1.3	15.7	4.2	14.0	5.9	6.2	2.8	5.2	7.2
Prop In Lane	1.00		0.44	1.00		1.00	1.00		0.43	1.00		1.00
Lane Grp Cap(c), veh/h	360	825	796	459	1601	697	422	449	433	334	604	342
V/C Ratio(X)	0.29	0.32	0.32	0.09	0.46	0.14	0.67	0.26	0.28	0.17	0.31	0.34
Avail Cap(c_a), veh/h	445	825	796	568	1601	697	422	565	546	400	969	499
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.8	18.5	18.6	15.1	20.9	17.8	31.1	32.9	33.1	35.0	40.0	36.1
Incr Delay (d2), s/veh	0.3	1.0	1.1	0.0	0.9	0.4	3.9	0.4	0.4	0.1	0.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	4.4	4.3	0.5	6.6	1.6	6.5	2.6	2.6	1.2	2.3	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.1	19.5	19.6	15.1	21.9	18.2	35.0	33.3	33.5	35.1	40.4	36.8
LnGrp LOS	B	B	B	B	C	B	D	C	C	D	D	D
Approach Vol, veh/h		623			875			523			364	
Approach Delay, s/veh		19.0			21.1			34.3			38.4	
Approach LOS		B			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	33.8	10.8	55.6	19.0	24.7	9.2	57.1
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	9.0	35.0	11.0	33.0	14.0	30.0	11.0	33.0
Max Q Clear Time (g_c+I1), s	4.8	8.2	5.4	17.7	16.0	9.2	3.3	12.4
Green Ext Time (p_c), s	0.0	1.7	0.1	5.6	0.0	1.8	0.0	3.8

Intersection Summary	
HCM 6th Ctrl Delay	26.1
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
32: Alameda Ave & San Fernando Blvd

10/27/2021

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↱		↰	↑↱		↰↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	171	433	151	80	563	78	291	249	98	153	474	284
Future Volume (veh/h)	171	433	151	80	563	78	291	249	98	153	474	284
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.95	0.99		0.96	0.99		0.96
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	176	446	156	82	580	80	300	257	101	158	489	293
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1205	1351	468	103	708	97	460	433	165	280	611	262
Arrive On Green	0.35	0.53	0.53	0.06	0.23	0.23	0.09	0.17	0.17	0.09	0.17	0.17
Sat Flow, veh/h	3456	2573	891	1781	3116	428	3456	2489	946	1781	3554	1527
Grp Volume(v), veh/h	176	307	295	82	330	330	300	181	177	158	489	293
Grp Sat Flow(s),veh/h/ln	1728	1777	1687	1781	1777	1767	1728	1777	1658	1781	1777	1527
Q Serve(g_s), s	4.9	13.9	14.1	6.4	24.7	24.8	9.9	13.1	13.8	10.1	18.5	11.4
Cycle Q Clear(g_c), s	4.9	13.9	14.1	6.4	24.7	24.8	9.9	13.1	13.8	10.1	18.5	11.4
Prop In Lane	1.00		0.53	1.00		0.24	1.00		0.57	1.00		1.00
Lane Grp Cap(c), veh/h	1205	933	886	103	404	402	460	309	289	280	611	262
V/C Ratio(X)	0.15	0.33	0.33	0.79	0.82	0.82	0.65	0.59	0.61	0.56	0.80	1.12
Avail Cap(c_a), veh/h	1205	933	886	280	609	606	624	470	438	280	762	327
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.3	19.1	19.1	65.1	51.3	51.4	43.6	53.2	53.4	43.1	55.7	13.1
Incr Delay (d2), s/veh	0.0	0.9	1.0	9.8	16.6	17.0	1.2	2.1	2.5	2.2	5.3	86.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	6.0	5.8	3.2	12.9	12.9	4.3	6.1	6.0	4.7	8.8	10.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.3	20.0	20.2	74.9	67.9	68.4	44.7	55.3	56.0	45.3	61.0	99.5
LnGrp LOS	C	C	C	E	E	E	D	E	E	D	E	F
Approach Vol, veh/h		778			742			658			940	
Approach Delay, s/veh		22.6			68.9			50.7			70.3	
Approach LOS		C			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.3	30.1	54.8	37.8	17.0	30.4	13.1	79.5
Change Period (Y+Rc), s	5.0	6.0	6.0	* 6	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	19.0	30.0	21.0	* 48	12.0	37.0	22.0	47.0
Max Q Clear Time (g_c+I1), s	11.9	20.5	6.9	26.8	12.1	15.8	8.4	16.1
Green Ext Time (p_c), s	0.5	3.6	0.3	5.0	0.0	2.5	0.1	5.0

Intersection Summary			
HCM 6th Ctrl Delay			53.9
HCM 6th LOS			D

Notes

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

HCM 6th Signalized Intersection Summary
33: Magnolia Blvd & Glenoaks Blvd

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	96	155	159	110	385	66	190	759	21	59	1563	233
Future Volume (veh/h)	96	155	159	110	385	66	190	759	21	59	1563	233
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.99	1.00		0.98
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	160	164	113	397	68	196	782	22	61	1611	240
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	208	474	394	272	767	130	231	1801	51	424	1483	216
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.08	0.51	0.51	0.05	0.48	0.48
Sat Flow, veh/h	920	1870	1555	1045	3029	514	1781	3529	99	1781	3105	452
Grp Volume(v), veh/h	99	160	164	113	231	234	196	394	410	61	906	945
Grp Sat Flow(s),veh/h/ln	920	1870	1555	1045	1777	1766	1781	1777	1851	1781	1777	1780
Q Serve(g_s), s	9.3	6.3	7.9	8.9	10.1	10.2	5.6	12.5	12.6	1.5	43.0	43.0
Cycle Q Clear(g_c), s	19.6	6.3	7.9	15.2	10.1	10.2	5.6	12.5	12.6	1.5	43.0	43.0
Prop In Lane	1.00		1.00	1.00		0.29	1.00		0.05	1.00		0.25
Lane Grp Cap(c), veh/h	208	474	394	272	450	447	231	907	945	424	849	850
V/C Ratio(X)	0.48	0.34	0.42	0.42	0.51	0.52	0.85	0.43	0.43	0.14	1.07	1.11
Avail Cap(c_a), veh/h	262	582	484	332	553	549	258	907	945	509	849	850
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	27.4	28.1	33.7	28.9	28.9	23.2	13.9	13.9	10.9	23.5	23.5
Incr Delay (d2), s/veh	1.7	0.4	0.7	1.0	0.9	0.9	19.0	1.5	1.5	0.1	50.6	66.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	2.8	3.0	2.3	4.3	4.4	3.4	5.1	5.3	0.6	28.5	32.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.0	27.9	28.8	34.7	29.8	29.9	42.2	15.4	15.3	10.9	74.1	89.7
LnGrp LOS	D	C	C	C	C	C	D	B	B	B	F	F
Approach Vol, veh/h		423			578			1000			1912	
Approach Delay, s/veh		30.8			30.8			20.6			79.8	
Approach LOS		C			C			C			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.3	51.9		28.8	12.2	49.0		28.8				
Change Period (Y+Rc), s	4.6	6.0		6.0	4.6	6.0		6.0				
Max Green Setting (Gmax), s	9.0	36.4		28.0	9.0	36.4		28.0				
Max Q Clear Time (g_c+I1), s	3.5	14.6		17.2	7.6	45.0		21.6				
Green Ext Time (p_c), s	0.0	5.2		2.5	0.0	0.0		1.1				

Intersection Summary			
HCM 6th Ctrl Delay			52.1
HCM 6th LOS			D

HCM 6th Signalized Intersection Summary
34: Olive Ave & Glenoaks Blvd

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	107	143	93	117	482	40	166	566	35	53	1001	203
Future Volume (veh/h)	107	143	93	117	482	40	166	566	35	53	1001	203
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.98	0.99		0.98
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	111	149	97	122	502	42	173	590	36	55	1043	211
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	394	739	450	527	1166	97	240	1020	62	290	763	154
Arrive On Green	0.06	0.35	0.35	0.06	0.35	0.35	0.09	0.30	0.30	0.05	0.26	0.26
Sat Flow, veh/h	1781	2106	1281	1781	3315	276	1781	3399	207	1781	2935	592
Grp Volume(v), veh/h	111	124	122	122	268	276	173	308	318	55	630	624
Grp Sat Flow(s),veh/h/ln	1781	1777	1611	1781	1777	1814	1781	1777	1829	1781	1777	1750
Q Serve(g_s), s	3.5	4.4	4.8	3.9	10.4	10.4	6.2	13.2	13.3	2.0	23.4	23.4
Cycle Q Clear(g_c), s	3.5	4.4	4.8	3.9	10.4	10.4	6.2	13.2	13.3	2.0	23.4	23.4
Prop In Lane	1.00		0.80	1.00		0.15	1.00		0.11	1.00		0.34
Lane Grp Cap(c), veh/h	394	623	565	527	625	638	240	533	549	290	462	455
V/C Ratio(X)	0.28	0.20	0.22	0.23	0.43	0.43	0.72	0.58	0.58	0.19	1.36	1.37
Avail Cap(c_a), veh/h	460	623	565	592	625	638	258	533	549	380	462	455
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.2	20.4	20.5	16.7	22.3	22.3	23.6	26.7	26.7	22.7	33.3	33.3
Incr Delay (d2), s/veh	0.3	0.7	0.9	0.2	2.1	2.1	8.1	1.5	1.5	0.2	177.3	180.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.9	1.9	1.6	4.6	4.7	3.0	5.7	5.8	0.8	32.5	32.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.5	21.1	21.4	16.9	24.4	24.4	31.7	28.2	28.2	22.9	210.6	213.9
LnGrp LOS	B	C	C	B	C	C	C	C	C	C	F	F
Approach Vol, veh/h		357			666			799			1309	
Approach Delay, s/veh		20.1			23.0			29.0			204.3	
Approach LOS		C			C			C			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	37.6	12.7	29.4	10.2	37.7	9.1	33.0
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	9.0	27.4	9.0	23.4	9.0	27.4	9.0	23.4
Max Q Clear Time (g_c+I1), s	5.9	6.8	8.2	25.4	5.5	12.4	4.0	15.3
Green Ext Time (p_c), s	0.1	1.9	0.0	0.0	0.1	3.9	0.0	2.4

Intersection Summary			
HCM 6th Ctrl Delay			100.0
HCM 6th LOS			F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑↑↑	↱	↰	↑↑↱	
Traffic Volume (veh/h)	208	127	133	101	448	17	237	592	16	59	1072	357
Future Volume (veh/h)	208	127	133	101	448	17	237	592	16	59	1072	357
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	0.99		0.99
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	217	132	139	105	467	18	247	617	17	61	1117	372
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	239	650	546	127	509	20	271	2067	634	367	1224	408
Arrive On Green	0.13	0.35	0.35	0.07	0.28	0.28	0.12	0.40	0.40	0.04	0.32	0.32
Sat Flow, veh/h	1781	1870	1571	1781	1788	69	1781	5106	1565	1781	3777	1258
Grp Volume(v), veh/h	217	132	139	105	0	485	247	617	17	61	1007	482
Grp Sat Flow(s),veh/h/ln	1781	1870	1571	1781	0	1857	1781	1702	1565	1781	1702	1630
Q Serve(g_s), s	18.2	7.5	9.6	8.8	0.0	38.4	15.5	12.4	1.0	3.4	43.1	43.1
Cycle Q Clear(g_c), s	18.2	7.5	9.6	8.8	0.0	38.4	15.5	12.4	1.0	3.4	43.1	43.1
Prop In Lane	1.00		1.00	1.00		0.04	1.00		1.00	1.00		0.77
Lane Grp Cap(c), veh/h	239	650	546	127	0	529	271	2067	634	367	1103	528
V/C Ratio(X)	0.91	0.20	0.25	0.82	0.00	0.92	0.91	0.30	0.03	0.17	0.91	0.91
Avail Cap(c_a), veh/h	293	650	546	351	0	612	531	2067	634	654	1121	537
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.8	34.8	35.5	69.5	0.0	52.6	43.2	30.6	27.2	32.1	49.2	49.2
Incr Delay (d2), s/veh	24.4	0.2	0.3	9.4	0.0	18.1	5.0	0.1	0.0	0.1	11.4	20.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.9	3.5	3.8	4.4	0.0	20.6	9.8	5.2	0.4	1.5	20.1	20.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.2	35.0	35.8	79.0	0.0	70.7	48.2	30.7	27.2	32.2	60.6	69.4
LnGrp LOS	F	D	D	E	A	E	D	C	C	C	E	E
Approach Vol, veh/h		488			590			881			1550	
Approach Delay, s/veh		59.3			72.1			35.5			62.2	
Approach LOS		E			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.5	58.7	22.4	55.2	25.0	49.2	10.1	67.5
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	29.9	45.0	40.0	50.0	25.0	50.0	30.0	60.0
Max Q Clear Time (g_c+I1), s	10.8	11.6	17.5	45.1	20.2	40.4	5.4	14.4
Green Ext Time (p_c), s	0.2	1.9	0.3	4.1	0.1	2.8	0.1	7.2

Intersection Summary			
HCM 6th Ctrl Delay			56.8
HCM 6th LOS			E

HCM 6th Signalized Intersection Summary
1: Winona Ave & Hollywood Way

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑↱		↰	↑↑↱	
Traffic Volume (veh/h)	23	5	27	110	4	266	33	1828	65	66	1295	8
Future Volume (veh/h)	23	5	27	110	4	266	33	1828	65	66	1295	8
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	25	5	29	120	4	289	36	1987	71	72	1408	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	92	399	338	342	379	338	310	2130	76	165	3242	21
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.04	0.61	0.61	0.05	0.62	0.62
Sat Flow, veh/h	1086	1870	1583	1373	1777	1583	1781	3500	124	1781	5235	33
Grp Volume(v), veh/h	25	5	29	120	4	289	36	1003	1055	72	916	501
Grp Sat Flow(s),veh/h/ln	1086	1870	1583	1373	1777	1583	1781	1777	1847	1781	1702	1864
Q Serve(g_s), s	3.2	0.3	2.1	10.6	0.2	24.6	1.0	71.0	73.0	2.0	19.6	19.6
Cycle Q Clear(g_c), s	27.8	0.3	2.1	10.9	0.2	24.6	1.0	71.0	73.0	2.0	19.6	19.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.07	1.00		0.02
Lane Grp Cap(c), veh/h	92	399	338	342	379	338	310	1081	1124	165	2108	1154
V/C Ratio(X)	0.27	0.01	0.09	0.35	0.01	0.86	0.12	0.93	0.94	0.44	0.43	0.43
Avail Cap(c_a), veh/h	198	581	492	475	552	492	411	1081	1124	247	2108	1154
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.3	43.4	44.1	47.7	43.4	53.0	10.0	24.6	25.0	32.7	13.9	13.9
Incr Delay (d2), s/veh	1.6	0.0	0.1	0.6	0.0	9.7	0.1	14.6	15.6	1.4	0.7	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.1	0.8	3.7	0.1	10.7	0.4	32.8	35.2	1.6	7.7	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.9	43.4	44.2	48.3	43.4	62.7	10.1	39.3	40.6	34.1	14.5	15.1
LnGrp LOS	E	D	D	D	D	E	B	D	D	C	B	B
Approach Vol, veh/h		59			413			2094			1489	
Approach Delay, s/veh		54.2			58.3			39.5			15.7	
Approach LOS		D			E			D			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.9	93.2		35.9	12.4	91.7		35.9				
Change Period (Y+Rc), s	4.9	6.5		6.0	4.9	6.5		6.0				
Max Green Setting (Gmax), s	14.0	65.1		43.5	14.0	65.1		43.5				
Max Q Clear Time (g_c+I1), s	3.0	21.6		26.6	4.0	75.0		29.8				
Green Ext Time (p_c), s	0.0	13.8		2.1	0.1	0.0		0.1				

Intersection Summary			
HCM 6th Ctrl Delay			32.9
HCM 6th LOS			C

HCM 6th Signalized Intersection Summary
2: Thornton Ave & Hollywood Way

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑	↱	↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	237	30	131	173	120	158	144	1406	131	52	1159	125
Future Volume (veh/h)	237	30	131	173	120	158	144	1406	131	52	1159	125
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.97	0.98		0.97	1.00		0.99	1.00		0.99
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	255	32	141	186	129	170	155	1512	141	56	1246	134
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	480	256	210	368	270	234	283	2290	1166	167	1938	859
Arrive On Green	0.08	0.14	0.14	0.10	0.15	0.15	0.06	0.64	0.64	0.55	0.55	0.55
Sat Flow, veh/h	3456	1870	1536	1781	1777	1541	1781	3554	1572	302	3554	1575
Grp Volume(v), veh/h	255	32	141	186	129	170	155	1512	141	56	1246	134
Grp Sat Flow(s),veh/h/ln	1728	1870	1536	1781	1777	1541	1781	1777	1572	302	1777	1575
Q Serve(g_s), s	8.7	2.1	12.2	12.5	9.3	14.7	5.0	36.9	3.6	19.7	34.4	5.9
Cycle Q Clear(g_c), s	8.7	2.1	12.2	12.5	9.3	14.7	5.0	36.9	3.6	42.7	34.4	5.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	480	256	210	368	270	234	283	2290	1166	167	1938	859
V/C Ratio(X)	0.53	0.12	0.67	0.51	0.48	0.73	0.55	0.66	0.12	0.34	0.64	0.16
Avail Cap(c_a), veh/h	779	553	454	368	399	346	411	2290	1166	167	1938	859
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.8	53.1	57.4	46.0	54.3	56.6	18.7	15.4	5.2	32.9	22.3	15.8
Incr Delay (d2), s/veh	0.9	0.2	3.7	0.5	1.3	4.3	1.2	1.5	0.2	5.4	1.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	1.0	5.0	5.6	4.3	6.0	2.1	14.9	1.2	1.7	14.6	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.7	53.3	61.1	46.4	55.6	60.9	19.9	16.9	5.4	38.3	23.9	16.2
LnGrp LOS	D	D	E	D	E	E	B	B	A	D	C	B
Approach Vol, veh/h		428			485			1808			1436	
Approach Delay, s/veh		52.5			53.9			16.3			23.8	
Approach LOS		D			D			B			C	

Timer - Assigned Phs	1	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	13.9	82.9	16.0	27.3		96.7	18.1	25.2
Change Period (Y+Rc), s	4.9	6.5	4.6	6.0		6.5	4.6	6.0
Max Green Setting (Gmax), s	19.0	44.1	23.5	31.4		68.0	13.5	41.4
Max Q Clear Time (g_c+I1), s	7.0	44.7	10.7	16.7		38.9	14.5	14.2
Green Ext Time (p_c), s	0.2	0.0	0.7	1.5		15.4	0.0	0.6

Intersection Summary			
HCM 6th Ctrl Delay			27.0
HCM 6th LOS			C

HCM 6th Signalized Intersection Summary
3: Victory Blvd & Hollywood Way

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	247	865	100	110	1004	163	173	1004	99	205	869	339
Future Volume (veh/h)	247	865	100	110	1004	163	173	1004	99	205	869	339
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.99
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	252	883	102	112	1024	166	177	1024	101	209	887	346
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	273	1370	735	256	1190	675	242	1110	577	236	1156	678
Arrive On Green	0.11	0.39	0.39	0.06	0.33	0.33	0.08	0.31	0.31	0.09	0.33	0.33
Sat Flow, veh/h	1781	3554	1571	1781	3554	1569	1781	3554	1561	1781	3554	1562
Grp Volume(v), veh/h	252	883	102	112	1024	166	177	1024	101	209	887	346
Grp Sat Flow(s),veh/h/ln	1781	1777	1571	1781	1777	1569	1781	1777	1561	1781	1777	1562
Q Serve(g_s), s	13.1	28.4	5.2	5.7	37.7	9.5	9.4	39.0	6.1	11.0	31.4	22.6
Cycle Q Clear(g_c), s	13.1	28.4	5.2	5.7	37.7	9.5	9.4	39.0	6.1	11.0	31.4	22.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	273	1370	735	256	1190	675	242	1110	577	236	1156	678
V/C Ratio(X)	0.92	0.64	0.14	0.44	0.86	0.25	0.73	0.92	0.18	0.88	0.77	0.51
Avail Cap(c_a), veh/h	273	1370	735	347	1190	675	250	1152	596	310	1330	754
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	35.2	21.3	29.7	43.5	25.5	33.6	46.5	29.8	34.6	42.5	29.0
Incr Delay (d2), s/veh	34.0	2.3	0.4	0.4	8.2	0.9	8.8	11.9	0.1	17.5	2.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	12.8	2.0	2.5	17.9	3.7	4.7	19.0	2.4	5.9	14.2	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.1	37.5	21.7	30.1	51.8	26.4	42.4	58.4	30.0	52.0	44.9	29.6
LnGrp LOS	E	D	C	C	D	C	D	E	C	D	D	C
Approach Vol, veh/h		1237			1302			1302			1442	
Approach Delay, s/veh		42.4			46.7			54.0			42.2	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.5	60.0	16.0	51.5	19.6	52.9	17.8	49.7
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	15.0	39.4	12.0	52.4	15.0	39.4	19.0	45.4
Max Q Clear Time (g_c+I1), s	7.7	30.4	11.4	33.4	15.1	39.7	13.0	41.0
Green Ext Time (p_c), s	0.1	4.2	0.0	7.6	0.0	0.0	0.2	2.8

Intersection Summary			
HCM 6th Ctrl Delay			46.3
HCM 6th LOS			D

HCM 6th Signalized Intersection Summary
4: Burbank Blvd & Hollywood Way

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱	↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	193	744	29	162	822	114	115	1077	112	137	770	147
Future Volume (veh/h)	193	744	29	162	822	114	115	1077	112	137	770	147
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
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	197	759	30	165	839	116	117	1099	114	140	786	150
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	287	1220	48	307	1218	539	232	1154	120	178	1079	206
Arrive On Green	0.09	0.35	0.35	0.08	0.34	0.34	0.06	0.36	0.36	0.06	0.36	0.36
Sat Flow, veh/h	1781	3484	138	1781	3554	1573	1781	3246	336	1781	2971	567
Grp Volume(v), veh/h	197	387	402	165	839	116	117	601	612	140	470	466
Grp Sat Flow(s),veh/h/ln	1781	1777	1844	1781	1777	1573	1781	1777	1805	1781	1777	1761
Q Serve(g_s), s	9.9	25.3	25.3	8.3	28.4	7.3	5.8	46.1	46.3	6.9	32.1	32.1
Cycle Q Clear(g_c), s	9.9	25.3	25.3	8.3	28.4	7.3	5.8	46.1	46.3	6.9	32.1	32.1
Prop In Lane	1.00		0.07	1.00		1.00	1.00		0.19	1.00		0.32
Lane Grp Cap(c), veh/h	287	622	646	307	1218	539	232	632	642	178	646	640
V/C Ratio(X)	0.69	0.62	0.62	0.54	0.69	0.22	0.50	0.95	0.95	0.79	0.73	0.73
Avail Cap(c_a), veh/h	324	622	646	358	1218	539	374	640	650	305	646	640
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	37.8	37.8	28.6	39.6	32.6	30.2	43.9	44.0	34.3	38.6	38.6
Incr Delay (d2), s/veh	3.7	4.6	4.5	0.5	3.2	0.9	0.6	24.1	24.2	2.9	4.1	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	11.9	12.3	3.6	13.0	3.0	2.5	24.4	24.9	3.1	14.7	14.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.8	42.4	42.3	29.2	42.8	33.6	30.8	68.0	68.2	37.2	42.7	42.8
LnGrp LOS	C	D	D	C	D	C	C	E	E	D	D	D
Approach Vol, veh/h		986			1120			1330			1076	
Approach Delay, s/veh		40.6			39.8			64.8			42.0	
Approach LOS		D			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.6	55.0	12.5	56.9	16.6	54.0	13.6	55.8
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	15.0	34.4	19.0	50.4	15.0	34.4	19.0	50.4
Max Q Clear Time (g_c+I1), s	10.3	27.3	7.8	34.1	11.9	30.4	8.9	48.3
Green Ext Time (p_c), s	0.1	2.8	0.1	5.7	0.1	2.2	0.1	1.5

Intersection Summary			
HCM 6th Ctrl Delay			47.9
HCM 6th LOS			D

HCM 6th Signalized Intersection Summary
5: Magnolia Blvd & Hollywood Way

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	202	670	109	127	788	211	179	1098	141	210	705	307
Future Volume (veh/h)	202	670	109	127	788	211	179	1098	141	210	705	307
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.94	1.00		0.98	1.00		0.98
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	206	684	111	130	804	215	183	1120	144	214	719	313
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	253	1055	444	259	949	396	327	1418	619	257	1455	635
Arrive On Green	0.10	0.30	0.30	0.07	0.27	0.27	0.08	0.40	0.40	0.09	0.41	0.41
Sat Flow, veh/h	1781	3554	1494	1781	3554	1484	1781	3554	1550	1781	3554	1551
Grp Volume(v), veh/h	206	684	111	130	804	215	183	1120	144	214	719	313
Grp Sat Flow(s),veh/h/ln	1781	1777	1494	1781	1777	1484	1781	1777	1550	1781	1777	1551
Q Serve(g_s), s	11.4	23.5	7.9	7.3	30.0	17.4	8.4	38.7	8.6	9.9	21.0	20.9
Cycle Q Clear(g_c), s	11.4	23.5	7.9	7.3	30.0	17.4	8.4	38.7	8.6	9.9	21.0	20.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	253	1055	444	259	949	396	327	1418	619	257	1455	635
V/C Ratio(X)	0.81	0.65	0.25	0.50	0.85	0.54	0.56	0.79	0.23	0.83	0.49	0.49
Avail Cap(c_a), veh/h	322	1152	484	381	1152	481	397	1418	619	309	1455	635
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.8	42.8	37.4	35.1	48.6	44.0	23.6	36.9	27.9	30.1	30.6	30.6
Incr Delay (d2), s/veh	9.4	1.1	0.3	0.6	5.1	1.2	0.6	4.5	0.9	12.8	1.2	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	10.5	3.0	3.3	14.0	6.6	3.6	17.6	3.4	5.1	9.3	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.1	44.0	37.7	35.7	53.8	45.1	24.2	41.5	28.7	42.9	31.8	33.3
LnGrp LOS	D	D	D	D	D	D	C	D	C	D	C	C
Approach Vol, veh/h		1001			1149			1447			1246	
Approach Delay, s/veh		43.5			50.1			38.0			34.1	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.1	63.3	18.2	43.4	16.6	61.9	14.0	47.6
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	16.0	38.4	19.0	45.4	16.0	38.4	19.0	45.4
Max Q Clear Time (g_c+I1), s	10.4	23.0	13.4	32.0	11.9	40.7	9.3	25.5
Green Ext Time (p_c), s	0.1	5.5	0.1	5.4	0.1	0.0	0.1	5.1

Intersection Summary	
HCM 6th Ctrl Delay	41.0
HCM 6th LOS	D

6: Hollywood Way & Verdugo Ave

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	249	580	40	114	516	63	106	1109	115	88	590	136
Future Volume (veh/h)	249	580	40	114	516	63	106	1109	115	88	590	136
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.96	1.00		0.96
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	268	624	43	123	555	68	114	1192	124	95	634	146
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	255	671	563	187	596	499	309	1334	571	163	1318	563
Arrive On Green	0.10	0.36	0.36	0.06	0.32	0.32	0.05	0.38	0.38	0.05	0.37	0.37
Sat Flow, veh/h	1781	1870	1569	1781	1870	1567	1781	3554	1520	1781	3554	1519
Grp Volume(v), veh/h	268	624	43	123	555	68	114	1192	124	95	634	146
Grp Sat Flow(s),veh/h/ln	1781	1870	1569	1781	1870	1567	1781	1777	1520	1781	1777	1519
Q Serve(g_s), s	14.0	45.0	2.5	6.5	40.2	4.3	5.5	44.1	7.8	4.6	19.1	9.4
Cycle Q Clear(g_c), s	14.0	45.0	2.5	6.5	40.2	4.3	5.5	44.1	7.8	4.6	19.1	9.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	255	671	563	187	596	499	309	1334	571	163	1318	563
V/C Ratio(X)	1.05	0.93	0.08	0.66	0.93	0.14	0.37	0.89	0.22	0.58	0.48	0.26
Avail Cap(c_a), veh/h	255	671	563	258	668	560	455	1334	571	318	1318	563
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.9	43.2	29.6	35.5	46.2	34.0	26.4	41.1	29.7	33.4	33.7	30.7
Incr Delay (d2), s/veh	71.0	19.7	0.1	1.5	18.7	0.1	0.3	9.4	0.9	1.2	1.3	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.1	24.3	1.0	2.9	21.7	1.7	2.4	21.0	3.0	2.0	8.6	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	107.8	62.9	29.7	37.0	64.9	34.1	26.6	50.5	30.6	34.6	35.0	31.8
LnGrp LOS	F	E	C	D	E	C	C	D	C	C	C	C
Approach Vol, veh/h		935			746			1430			875	
Approach Delay, s/veh		74.3			57.5			46.9			34.4	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.5	57.9	19.0	50.6	11.8	58.6	13.4	56.2
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	19.0	35.0	14.0	50.0	19.0	35.0	14.0	50.0
Max Q Clear Time (g_c+I1), s	7.5	21.1	16.0	42.2	6.6	46.1	8.5	47.0
Green Ext Time (p_c), s	0.1	4.1	0.0	2.4	0.1	0.0	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	52.6
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
7: Riverside Dr & Alameda Ave

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↱		↰	✥			✥	
Traffic Volume (veh/h)	3	634	402	14	1077	25	878	10	30	42	19	36
Future Volume (veh/h)	3	634	402	14	1077	25	878	10	30	42	19	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	1.00		0.97	1.00		1.00	1.00		0.92
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	3	660	419	15	1122	26	951	0	0	44	20	38
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	293	1747	1230	256	1744	40	1067	560	0	54	25	47
Arrive On Green	0.49	0.49	0.49	0.98	0.98	0.98	0.30	0.00	0.00	0.08	0.08	0.08
Sat Flow, veh/h	487	3554	1535	521	3547	82	3563	1870	0	717	326	620
Grp Volume(v), veh/h	3	660	419	15	562	586	951	0	0	102	0	0
Grp Sat Flow(s),veh/h/ln	487	1777	1535	521	1777	1852	1781	1870	0	1663	0	0
Q Serve(g_s), s	0.4	13.9	9.4	0.9	1.7	1.7	30.6	0.0	0.0	7.2	0.0	0.0
Cycle Q Clear(g_c), s	2.1	13.9	9.4	14.8	1.7	1.7	30.6	0.0	0.0	7.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.00	0.43		0.37
Lane Grp Cap(c), veh/h	293	1747	1230	256	874	911	1067	560	0	125	0	0
V/C Ratio(X)	0.01	0.38	0.34	0.06	0.64	0.64	0.89	0.00	0.00	0.81	0.00	0.00
Avail Cap(c_a), veh/h	293	1747	1230	256	874	911	1366	717	0	166	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.52	0.52	0.52	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.5	19.0	3.6	2.5	0.5	0.5	40.2	0.0	0.0	54.7	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.6	0.8	0.2	1.9	1.8	6.4	0.0	0.0	20.0	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(50%),veh/ln	0.0	5.8	8.3	0.1	0.7	0.7	14.2	0.0	0.0	3.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.5	19.7	4.3	2.7	2.4	2.4	46.5	0.0	0.0	74.7	0.0	0.0
LnGrp LOS	B	B	A	A	A	A	D	A	A	E	A	A
Approach Vol, veh/h		1082			1163			951			102	
Approach Delay, s/veh		13.7			2.4			46.5			74.7	
Approach LOS		B			A			D			E	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		65.0		14.0		65.0		41.0				
Change Period (Y+Rc), s		6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s		46.0		12.0		46.0		46.0				
Max Q Clear Time (g_c+I1), s		15.9		9.2		16.8		32.6				
Green Ext Time (p_c), s		7.1		0.1		9.4		3.3				

Intersection Summary			
HCM 6th Ctrl Delay			21.1
HCM 6th LOS			C

Notes
User approved volume balancing among the lanes for turning movement.
User approved changes to right turn type.

HCM 6th Signalized Intersection Summary
8: Pass Ave & Alameda Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	153	522	14	43	728	160	125	388	38	260	420	207
Future Volume (veh/h)	153	522	14	43	728	160	125	388	38	260	420	207
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	0.99		0.98	0.99		0.97	0.99		0.97
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	159	544	15	45	758	167	130	404	40	271	438	216
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	207	962	26	296	696	153	401	1246	123	532	976	476
Arrive On Green	0.17	0.54	0.54	0.05	0.24	0.24	0.07	0.38	0.38	0.11	0.43	0.43
Sat Flow, veh/h	1781	3530	97	1781	2880	635	1781	3256	320	1781	2288	1116
Grp Volume(v), veh/h	159	274	285	45	468	457	130	219	225	271	339	315
Grp Sat Flow(s),veh/h/ln	1781	1777	1850	1781	1777	1738	1781	1777	1799	1781	1777	1627
Q Serve(g_s), s	8.0	12.2	12.2	2.2	29.0	29.0	5.2	10.4	10.6	10.6	16.2	16.5
Cycle Q Clear(g_c), s	8.0	12.2	12.2	2.2	29.0	29.0	5.2	10.4	10.6	10.6	16.2	16.5
Prop In Lane	1.00		0.05	1.00		0.37	1.00		0.18	1.00		0.69
Lane Grp Cap(c), veh/h	207	484	504	296	429	420	401	680	688	532	758	694
V/C Ratio(X)	0.77	0.57	0.57	0.15	1.09	1.09	0.32	0.32	0.33	0.51	0.45	0.45
Avail Cap(c_a), veh/h	208	484	504	353	429	420	491	680	688	692	758	694
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	22.6	22.6	31.0	45.5	45.5	20.3	26.1	26.1	18.0	24.4	24.5
Incr Delay (d2), s/veh	13.1	1.4	1.3	0.1	69.5	70.1	0.2	1.3	1.3	0.8	1.9	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	4.2	4.4	1.0	21.0	20.6	2.2	4.7	4.8	4.4	7.2	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.4	24.0	24.0	31.1	115.0	115.6	20.5	27.3	27.4	18.7	26.3	26.6
LnGrp LOS	D	C	C	C	F	F	C	C	C	B	C	C
Approach Vol, veh/h		718			970			574			925	
Approach Delay, s/veh		28.3			111.4			25.8			24.2	
Approach LOS		C			F			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	38.7	12.9	57.2	14.9	35.0	18.2	51.9
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	10.0	29.0	14.0	45.0	10.0	29.0	24.0	35.0
Max Q Clear Time (g_c+I1), s	4.2	14.2	7.2	18.5	10.0	31.0	12.6	12.6
Green Ext Time (p_c), s	0.0	3.0	0.1	4.5	0.0	0.0	0.6	2.6

Intersection Summary			
HCM 6th Ctrl Delay			51.9
HCM 6th LOS			D

HCM Signalized Intersection Capacity Analysis
9: Olive Ave & Pass Ave

10/27/2021

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰	↑↑↑	↑↑↱		↰	↱↱
Traffic Volume (vph)	503	1397	1454	108	30	420
Future Volume (vph)	503	1397	1454	108	30	420
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	6.0		5.0	5.0
Lane Util. Factor	1.00	0.91	0.91		1.00	0.88
Frpb, ped/bikes	1.00	1.00	0.99		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	5085	5005		1770	2787
Flt Permitted	0.07	1.00	1.00		0.95	1.00
Satd. Flow (perm)	137	5085	5005		1770	2787
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	535	1486	1547	115	32	447
RTOR Reduction (vph)	0	0	6	0	0	318
Lane Group Flow (vph)	535	1486	1656	0	32	129
Confl. Peds. (#/hr)	43			43		
Turn Type	pm+pt	NA	NA		Prot	pt+ov
Protected Phases	3 5	2	6		4	4 3
Permitted Phases	2	3				
Actuated Green, G (s)	94.0	94.0	49.2		10.0	34.6
Effective Green, g (s)	94.0	94.0	49.2		10.0	34.6
Actuated g/C Ratio	0.78	0.78	0.41		0.08	0.29
Clearance Time (s)		6.0	6.0		5.0	
Vehicle Extension (s)		3.0	3.0		2.0	
Lane Grp Cap (vph)	648	4237	2052		147	803
v/s Ratio Prot	c0.27	0.22	0.33		c0.02	0.05
v/s Ratio Perm	c0.37	0.07				
v/c Ratio	0.83	0.35	0.81		0.22	0.16
Uniform Delay, d1	30.6	3.9	31.2		51.3	31.9
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	8.1	0.0	3.5		0.3	0.0
Delay (s)	38.7	3.9	34.7		51.6	31.9
Level of Service	D	A	C		D	C
Approach Delay (s)		13.1	34.7		33.2	
Approach LOS		B	C		C	

Intersection Summary			
HCM 2000 Control Delay	24.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
10: Alameda Ave & Hollywood Way

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↑↱		↰	↑↑↑	↱	↰	↑↑	↱	↰↰	↑↑	↱
Traffic Volume (veh/h)	223	911	78	35	1010	427	316	710	309	124	434	292
Future Volume (veh/h)	223	911	78	35	1010	427	316	710	309	124	434	292
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.97
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	245	1001	86	38	1110	469	347	780	340	136	477	321
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	223	1502	129	117	1258	384	297	1289	563	256	960	417
Arrive On Green	0.13	0.31	0.31	0.07	0.25	0.25	0.33	0.73	0.73	0.07	0.27	0.27
Sat Flow, veh/h	1781	4784	410	1781	5106	1560	1781	3554	1552	3456	3554	1541
Grp Volume(v), veh/h	245	712	375	38	1110	469	347	780	340	136	477	321
Grp Sat Flow(s),veh/h/ln	1781	1702	1790	1781	1702	1560	1781	1777	1552	1728	1777	1541
Q Serve(g_s), s	15.0	21.8	21.8	2.4	25.1	23.1	20.0	12.9	12.8	4.6	13.6	15.9
Cycle Q Clear(g_c), s	15.0	21.8	21.8	2.4	25.1	23.1	20.0	12.9	12.8	4.6	13.6	15.9
Prop In Lane	1.00		0.23	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	223	1068	562	117	1258	384	297	1289	563	256	960	417
V/C Ratio(X)	1.10	0.67	0.67	0.32	0.88	1.22	1.17	0.61	0.60	0.53	0.50	0.77
Avail Cap(c_a), veh/h	223	1068	562	238	1277	390	297	1289	563	288	960	417
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.61	0.61	0.61	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	35.7	35.7	53.5	43.5	27.5	40.0	12.3	12.3	53.5	36.9	19.3
Incr Delay (d2), s/veh	89.7	1.6	3.0	2.2	7.7	120.5	96.2	1.3	2.9	0.6	1.8	12.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	9.2	10.0	1.2	11.4	21.4	15.3	3.6	3.4	2.0	6.1	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	142.2	37.3	38.8	55.7	51.2	148.0	136.2	13.6	15.2	54.2	38.7	32.2
LnGrp LOS	F	D	D	E	D	F	F	B	B	D	D	C
Approach Vol, veh/h		1332			1617			1467			934	
Approach Delay, s/veh		57.0			79.4			42.9			38.7	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	38.4	21.0	35.6	13.9	49.5	12.9	43.7
Change Period (Y+Rc), s	5.0	6.0	6.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	20.0	32.0	15.0	30.0	10.0	42.0	16.0	30.0
Max Q Clear Time (g_c+I1), s	22.0	17.9	17.0	27.1	6.6	14.9	4.4	23.8
Green Ext Time (p_c), s	0.0	3.8	0.0	2.4	0.1	7.6	0.1	3.5

Intersection Summary	
HCM 6th Ctrl Delay	56.7
HCM 6th LOS	E

HCM 6th Signalized Intersection Summary
11: Hollywood Way & Riverside Dr

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱	↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	133	306	33	8	520	514	103	772	25	97	265	215
Future Volume (veh/h)	133	306	33	8	520	514	103	772	25	97	265	215
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	0.99		0.98	0.99		0.99	1.00		0.99
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	145	333	36	9	565	559	112	839	27	105	288	234
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	311	1267	136	424	1185	516	354	1180	38	294	1572	694
Arrive On Green	0.08	0.39	0.39	0.02	0.33	0.33	0.67	0.67	0.67	0.11	0.74	0.74
Sat Flow, veh/h	1781	3230	346	1781	3554	1549	875	3512	113	1781	3554	1570
Grp Volume(v), veh/h	145	182	187	9	565	559	112	424	442	105	288	234
Grp Sat Flow(s),veh/h/ln	1781	1777	1800	1781	1777	1549	875	1777	1848	1781	1777	1570
Q Serve(g_s), s	6.0	8.3	8.5	0.4	15.1	40.0	6.8	18.0	18.0	4.4	2.9	6.2
Cycle Q Clear(g_c), s	6.0	8.3	8.5	0.4	15.1	40.0	6.8	18.0	18.0	4.4	2.9	6.2
Prop In Lane	1.00		0.19	1.00		1.00	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	311	697	706	424	1185	516	354	597	621	294	1572	694
V/C Ratio(X)	0.47	0.26	0.26	0.02	0.48	1.08	0.32	0.71	0.71	0.36	0.18	0.34
Avail Cap(c_a), veh/h	312	697	706	545	1185	516	354	597	621	327	1572	694
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.72	0.72	0.72	0.73	0.73	0.73
Uniform Delay (d), s/veh	22.7	24.7	24.7	24.9	31.7	40.0	14.2	16.0	16.0	22.5	9.1	9.6
Incr Delay (d2), s/veh	0.8	0.2	0.2	0.0	0.3	63.7	1.7	5.1	4.9	0.4	0.2	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	3.6	3.7	0.2	6.5	24.1	1.3	5.4	5.6	1.8	1.1	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.6	24.9	24.9	24.9	32.0	103.7	15.9	21.2	21.0	22.9	9.3	10.5
LnGrp LOS	C	C	C	C	C	F	B	C	C	C	A	B
Approach Vol, veh/h		514			1133			978			627	
Approach Delay, s/veh		24.5			67.3			20.5			12.0	
Approach LOS		C			E			C			B	

Timer - Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	14.9	46.0	12.8	46.3	7.9	53.1		59.1
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0		6.0
Max Green Setting (Gmax), s	10.0	40.0	10.0	38.0	11.0	39.0		53.0
Max Q Clear Time (g_c+I1), s	8.0	42.0	6.4	20.0	2.4	10.5		8.2
Green Ext Time (p_c), s	0.1	0.0	0.1	6.0	0.0	2.3		2.9

Intersection Summary			
HCM 6th Ctrl Delay			35.8
HCM 6th LOS			D

HCM 6th Signalized Intersection Summary
12: Hollywood Way & Olive Ave

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑↱			↰↑↱		↰	↑	↱↱
Traffic Volume (veh/h)	421	964	27	8	1083	59	45	205	28	29	19	228
Future Volume (veh/h)	421	964	27	8	1083	59	45	205	28	29	19	228
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		0.99	0.99		0.99
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	448	1026	29	9	1152	63	48	218	30	31	20	243
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	484	3543	100	414	2965	162	100	382	53	141	286	741
Arrive On Green	0.11	0.69	0.69	0.02	0.60	0.60	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1781	5103	144	1781	4951	271	393	2495	344	1124	1870	2751
Grp Volume(v), veh/h	448	684	371	9	792	423	154	0	142	31	20	243
Grp Sat Flow(s),veh/h/ln	1781	1702	1843	1781	1702	1817	1599	0	1634	1124	1870	1376
Q Serve(g_s), s	10.9	9.2	9.2	0.2	14.6	14.6	7.1	0.0	9.7	3.2	1.1	8.5
Cycle Q Clear(g_c), s	10.9	9.2	9.2	0.2	14.6	14.6	10.5	0.0	9.7	12.9	1.1	8.5
Prop In Lane	1.00		0.08	1.00		0.15	0.31		0.21	1.00		1.00
Lane Grp Cap(c), veh/h	484	2363	1280	414	2038	1088	284	0	250	141	286	741
V/C Ratio(X)	0.93	0.29	0.29	0.02	0.39	0.39	0.54	0.00	0.57	0.22	0.07	0.33
Avail Cap(c_a), veh/h	576	2363	1280	677	2038	1088	549	0	531	334	608	1215
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	14.6	7.0	7.0	8.8	12.6	12.6	47.3	0.0	47.2	53.1	43.5	35.3
Incr Delay (d2), s/veh	19.3	0.3	0.6	0.0	0.6	1.0	1.6	0.0	2.0	0.8	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.5	3.2	3.6	0.1	5.6	6.1	4.4	0.0	4.1	0.9	0.5	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.9	7.3	7.6	8.8	13.1	13.6	48.9	0.0	49.2	53.9	43.6	35.5
LnGrp LOS	C	A	A	A	B	B	D	A	D	D	D	D
Approach Vol, veh/h		1503			1224			296			294	
Approach Delay, s/veh		15.3			13.3			49.0			38.0	
Approach LOS		B			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.8	77.9		23.4	7.3	89.3		23.4
Change Period (Y+Rc), s	5.0	6.0		5.0	5.0	6.0		5.0
Max Green Setting (Gmax), s	20.0	45.0		39.0	20.0	45.0		39.0
Max Q Clear Time (g_c+I1), s	12.9	16.6		14.9	2.2	11.2		12.5
Green Ext Time (p_c), s	0.9	9.8		1.2	0.0	8.6		1.8

Intersection Summary			
HCM 6th Ctrl Delay			19.6
HCM 6th LOS			B

HCM 6th Signalized Intersection Summary
13: Riverside Dr & Olive Ave

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	53	953	142	27	860	210	344	705	76	81	299	18
Future Volume (veh/h)	53	953	142	27	860	210	344	705	76	81	299	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	0.99		0.98	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	58	1047	156	30	945	231	378	775	84	89	329	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	237	1162	509	194	1082	474	490	1510	164	253	1664	
Arrive On Green	0.09	0.33	0.33	0.06	0.30	0.30	0.47	0.47	0.47	0.47	0.47	0.00
Sat Flow, veh/h	1781	3554	1557	1781	3554	1555	1038	3225	349	642	3554	1585
Grp Volume(v), veh/h	58	1047	156	30	945	231	378	427	432	89	329	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1557	1781	1777	1555	1038	1777	1797	642	1777	1585
Q Serve(g_s), s	2.5	33.7	9.0	1.3	30.2	14.6	40.3	20.2	20.2	13.5	6.5	0.0
Cycle Q Clear(g_c), s	2.5	33.7	9.0	1.3	30.2	14.6	46.8	20.2	20.2	33.7	6.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.19	1.00		1.00
Lane Grp Cap(c), veh/h	237	1162	509	194	1082	474	490	832	841	253	1664	
V/C Ratio(X)	0.24	0.90	0.31	0.15	0.87	0.49	0.77	0.51	0.51	0.35	0.20	
Avail Cap(c_a), veh/h	367	1185	519	363	1185	518	490	832	841	253	1664	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	27.4	38.5	30.2	28.7	39.5	34.1	32.4	22.3	22.3	34.1	18.7	0.0
Incr Delay (d2), s/veh	0.4	9.5	0.3	0.3	7.0	0.8	11.2	2.3	2.2	3.8	0.3	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(50%),veh/ln	1.1	16.0	3.4	0.6	14.1	5.6	11.4	8.9	9.0	2.4	2.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.8	48.1	30.5	29.0	46.5	34.9	43.6	24.6	24.6	38.0	19.0	0.0
LnGrp LOS	C	D	C	C	D	C	D	C	C	D	B	
Approach Vol, veh/h		1261			1206			1237			418	A
Approach Delay, s/veh		45.0			43.8			30.4			23.0	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.6	45.2		62.2	15.3	42.5		62.2				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0		6.0				
Max Green Setting (Gmax), s	19.0	40.0		44.0	19.0	40.0		44.0				
Max Q Clear Time (g_c+I1), s	3.3	35.7		35.7	4.5	32.2		48.8				
Green Ext Time (p_c), s	0.0	2.8		1.8	0.1	4.3		0.0				

Intersection Summary

HCM 6th Ctrl Delay	38.0
HCM 6th LOS	D

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBT	NBR	SBT	SBR
Lane Configurations		↰↰	↑↑		↰↰	↑↑			↑↑	↱	↑↑	↱
Traffic Volume (vph)	11	319	358	14	260	731	27	7	925	261	569	296
Future Volume (vph)	11	319	358	14	260	731	27	7	925	261	569	296
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.5	8.0		7.5	8.0			6.5	7.5	6.5	3.0
Lane Util. Factor		0.97	0.95		0.97	0.95			0.95	1.00	0.95	1.00
Frpb, ped/bikes		1.00	1.00		1.00	1.00			1.00	0.98	1.00	0.91
Flpb, ped/bikes		1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00
Frt		1.00	0.99		1.00	0.99			1.00	0.85	1.00	0.85
Flt Protected		0.95	1.00		0.95	1.00			1.00	1.00	1.00	1.00
Satd. Flow (prot)		3433	3515		3433	3509			3539	1547	3539	1438
Flt Permitted		0.95	1.00		0.95	1.00			1.00	1.00	1.00	1.00
Satd. Flow (perm)		3433	3515		3433	3509			3539	1547	3539	1438
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	11	332	373	15	271	761	28	7	964	272	593	308
RTOR Reduction (vph)	0	0	2	0	0	1	0	0	0	0	0	0
Lane Group Flow (vph)	0	343	386	0	271	795	0	0	964	272	593	321
Confl. Peds. (#/hr)	4	19		12	12		15	10		18		10
Turn Type	Prot	Prot	NA		Prot	NA			NA	custom	NA	custom
Protected Phases	1	1	6		5	2			8		4	
Permitted Phases										5 7 8		3 4
Actuated Green, G (s)		17.9	38.1		15.2	35.4			41.6	69.8	41.0	48.1
Effective Green, g (s)		17.9	38.1		15.2	35.4			41.6	60.3	41.0	48.1
Actuated g/C Ratio		0.15	0.31		0.12	0.29			0.34	0.49	0.33	0.39
Clearance Time (s)		7.5	8.0		7.5	8.0			6.5		6.5	
Vehicle Extension (s)		2.5	4.0		2.5	4.0			3.0		3.0	
Lane Grp Cap (vph)		497	1085		422	1006			1193	755	1175	560
v/s Ratio Prot		c0.10	c0.11		0.08	c0.23			c0.27		0.17	
v/s Ratio Perm										0.18		c0.22
v/c Ratio		0.69	0.36		0.64	0.79			0.81	0.36	0.50	0.57
Uniform Delay, d1		50.1	33.1		51.5	40.6			37.3	19.6	33.1	29.6
Progression Factor		1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00
Incremental Delay, d2		3.8	0.3		2.9	4.5			4.1	0.2	0.3	1.4
Delay (s)		53.9	33.4		54.5	45.1			41.4	19.8	33.4	31.0
Level of Service		D	C		D	D			D	B	C	C
Approach Delay (s)			43.0			47.5			36.6		32.6	
Approach LOS			D			D			D		C	

Intersection Summary			
HCM 2000 Control Delay	39.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	123.4	Sum of lost time (s)	25.0
Intersection Capacity Utilization	85.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBR2	SER2
Lane Configurations		↱
Traffic Volume (vph)	12	56
Future Volume (vph)	12	56
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		7.5
Lane Util. Factor		1.00
Frpb, ped/bikes		1.00
Flpb, ped/bikes		1.00
Frt		0.86
Flt Protected		1.00
Satd. Flow (prot)		1611
Flt Permitted		1.00
Satd. Flow (perm)		1611
Peak-hour factor, PHF	0.96	0.96
Adj. Flow (vph)	12	58
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	58
Confl. Peds. (#/hr)	15	10
Turn Type		Over
Protected Phases		1
Permitted Phases		
Actuated Green, G (s)		17.9
Effective Green, g (s)		17.9
Actuated g/C Ratio		0.15
Clearance Time (s)		7.5
Vehicle Extension (s)		2.5
Lane Grp Cap (vph)		233
v/s Ratio Prot		0.04
v/s Ratio Perm		
v/c Ratio		0.25
Uniform Delay, d1		46.8
Progression Factor		1.00
Incremental Delay, d2		0.4
Delay (s)		47.2
Level of Service		D
Approach Delay (s)		
Approach LOS		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↱			✥	
Traffic Volume (veh/h)	29	902	140	115	887	24	245	193	103	22	107	12
Future Volume (veh/h)	29	902	140	115	887	24	245	193	103	22	107	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	0.99		0.99	0.99		0.99
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	30	920	143	117	905	24	250	197	105	22	109	12
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	348	1443	224	321	2076	55	397	314	167	66	183	19
Arrive On Green	0.47	0.47	0.47	0.06	0.59	0.59	0.09	0.27	0.27	0.13	0.13	0.13
Sat Flow, veh/h	602	3079	479	1781	3536	94	1781	1146	611	157	1422	145
Grp Volume(v), veh/h	30	531	532	117	455	474	250	0	302	143	0	0
Grp Sat Flow(s),veh/h/ln	602	1777	1781	1781	1777	1853	1781	0	1756	1724	0	0
Q Serve(g_s), s	2.6	20.4	20.4	2.8	12.8	12.8	8.5	0.0	13.6	2.5	0.0	0.0
Cycle Q Clear(g_c), s	4.7	20.4	20.4	2.8	12.8	12.8	8.5	0.0	13.6	6.9	0.0	0.0
Prop In Lane	1.00		0.27	1.00		0.05	1.00		0.35	0.15		0.08
Lane Grp Cap(c), veh/h	348	832	835	321	1043	1088	397	0	481	268	0	0
V/C Ratio(X)	0.09	0.64	0.64	0.36	0.44	0.44	0.63	0.00	0.63	0.53	0.00	0.00
Avail Cap(c_a), veh/h	348	832	835	387	1043	1088	397	0	751	522	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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.6	18.1	18.1	13.2	10.3	10.3	30.2	0.0	28.6	37.1	0.0	0.0
Incr Delay (d2), s/veh	0.5	3.7	3.7	0.5	1.3	1.3	2.8	0.0	1.4	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(50%),veh/ln	0.4	8.7	8.8	1.1	4.9	5.1	5.0	0.0	5.8	3.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.1	21.8	21.8	13.7	11.6	11.6	33.0	0.0	30.0	38.8	0.0	0.0
LnGrp LOS	B	C	C	B	B	B	C	A	C	D	A	A
Approach Vol, veh/h		1093			1046			552			143	
Approach Delay, s/veh		21.7			11.8			31.4			38.8	
Approach LOS		C			B			C			D	

Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		59.3		30.7	10.7	48.7	13.1	17.6				
Change Period (Y+Rc), s		6.5		6.0	5.0	6.5	4.6	6.0				
Max Green Setting (Gmax), s		39.0		38.5	9.0	25.0	8.5	25.4				
Max Q Clear Time (g_c+I1), s		14.8		15.6	4.8	22.4	10.5	8.9				
Green Ext Time (p_c), s		7.8		1.9	0.1	1.8	0.0	0.6				

Intersection Summary			
HCM 6th Ctrl Delay			20.8
HCM 6th LOS			C

HCM 6th Signalized Intersection Summary
16: San Fernando Blvd & Buena Vista St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱	↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	173	323	66	54	340	538	68	1168	28	209	799	122
Future Volume (veh/h)	173	323	66	54	340	538	68	1168	28	209	799	122
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	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	184	344	70	57	362	572	72	1243	30	222	850	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	293	867	174	297	852	377	90	1430	34	248	1756	
Arrive On Green	0.09	0.29	0.29	0.03	0.24	0.24	0.05	0.40	0.40	0.14	0.49	0.00
Sat Flow, veh/h	1781	2944	592	1781	3554	1571	1781	3546	86	1781	3554	1585
Grp Volume(v), veh/h	184	206	208	57	362	572	72	623	650	222	850	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1759	1781	1777	1571	1781	1777	1854	1781	1777	1585
Q Serve(g_s), s	12.7	15.4	15.8	4.0	14.4	40.0	6.7	53.7	53.8	20.5	26.5	0.0
Cycle Q Clear(g_c), s	12.7	15.4	15.8	4.0	14.4	40.0	6.7	53.7	53.8	20.5	26.5	0.0
Prop In Lane	1.00		0.34	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	293	524	518	297	852	377	90	716	748	248	1756	
V/C Ratio(X)	0.63	0.39	0.40	0.19	0.43	1.52	0.80	0.87	0.87	0.90	0.48	
Avail Cap(c_a), veh/h	348	524	518	450	852	377	271	799	833	427	1916	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	41.7	47.0	47.1	45.7	53.7	63.4	78.4	45.7	45.8	70.7	28.1	0.0
Incr Delay (d2), s/veh	1.4	0.7	0.7	0.1	0.5	246.8	6.0	9.9	9.6	14.1	0.4	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(50%),veh/ln	5.8	7.0	7.1	1.8	6.6	41.8	3.2	25.7	26.8	10.4	11.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.0	47.6	47.8	45.8	54.2	310.2	84.4	55.7	55.4	84.7	28.5	0.0
LnGrp LOS	D	D	D	D	D	F	F	E	E	F	C	
Approach Vol, veh/h		598			991			1345			1072	A
Approach Delay, s/veh		46.3			201.5			57.1			40.2	
Approach LOS		D			F			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	55.2	13.0	88.5	19.4	46.0	28.2	73.3
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	5.0	6.0
Max Green Setting (Gmax), s	20.0	40.0	25.4	90.0	20.0	40.0	40.0	75.0
Max Q Clear Time (g_c+I1), s	6.0	17.8	8.7	28.5	14.7	42.0	22.5	55.8
Green Ext Time (p_c), s	0.0	3.5	0.1	15.8	0.1	0.0	0.7	11.5

Intersection Summary	
HCM 6th Ctrl Delay	86.7
HCM 6th LOS	F

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
17: Buena Vista St & Empire Ave

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰↰	↑↱		↰	↑↑	↱	↰↰	↑↱	
Traffic Volume (veh/h)	145	191	213	422	305	158	203	903	473	111	604	97
Future Volume (veh/h)	145	191	213	422	305	158	203	903	473	111	604	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.99	1.00		0.99
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	151	199	222	440	318	165	211	941	493	116	629	101
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	218	611	265	469	501	254	413	1708	758	164	1380	221
Arrive On Green	0.09	0.17	0.17	0.14	0.22	0.22	0.08	0.48	0.48	0.05	0.45	0.45
Sat Flow, veh/h	1781	3554	1541	3456	2265	1146	1781	3554	1576	3456	3064	491
Grp Volume(v), veh/h	151	199	222	440	248	235	211	941	493	116	364	366
Grp Sat Flow(s),veh/h/ln	1781	1777	1541	1728	1777	1634	1781	1777	1576	1728	1777	1778
Q Serve(g_s), s	11.0	6.9	15.8	17.7	17.7	18.3	8.7	26.2	19.0	4.6	19.8	19.9
Cycle Q Clear(g_c), s	11.0	6.9	15.8	17.7	17.7	18.3	8.7	26.2	19.0	4.6	19.8	19.9
Prop In Lane	1.00		1.00	1.00		0.70	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	218	611	265	469	393	362	413	1708	758	164	800	801
V/C Ratio(X)	0.69	0.33	0.84	0.94	0.63	0.65	0.51	0.55	0.65	0.71	0.46	0.46
Avail Cap(c_a), veh/h	255	863	374	469	470	432	466	1708	758	296	800	801
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.4	50.9	36.9	59.9	49.3	49.6	19.3	25.7	9.0	65.7	26.6	26.6
Incr Delay (d2), s/veh	5.7	0.3	11.1	26.7	2.0	2.6	0.6	1.1	3.7	4.1	1.9	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	3.1	6.8	9.5	8.1	7.8	3.7	11.3	7.0	2.1	8.9	8.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.1	51.2	48.0	86.6	51.3	52.2	19.9	26.8	12.7	69.8	28.5	28.5
LnGrp LOS	E	D	D	F	D	D	B	C	B	E	C	C
Approach Vol, veh/h		572			923			1645			846	
Approach Delay, s/veh		52.6			68.3			21.7			34.1	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	30.1	15.9	69.1	18.1	37.0	11.7	73.3
Change Period (Y+Rc), s	6.0	* 6	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	19.0	* 34	15.0	50.0	16.0	37.0	12.0	53.0
Max Q Clear Time (g_c+I1), s	19.7	17.8	10.7	21.9	13.0	20.3	6.6	28.2
Green Ext Time (p_c), s	0.0	1.8	0.2	5.1	0.1	2.7	0.1	11.7

Intersection Summary	
HCM 6th Ctrl Delay	39.6
HCM 6th LOS	D

Notes

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

HCM Signalized Intersection Capacity Analysis
18: Vanowen St/Driveway & Buena Vista St

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↰↑	↱		✥		↰	↑↑			↑↑	↱
Traffic Volume (vph)	439	0	383	0	0	0	258	1120	0	0	1028	320
Future Volume (vph)	439	0	383	0	0	0	258	1120	0	0	1028	320
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.7	5.7				6.0	6.0			6.0	6.0
Lane Util. Factor	0.95	0.95	1.00				1.00	0.95			0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.97				1.00	1.00			1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00				1.00	1.00			1.00	1.00
Frt	1.00	1.00	0.85				1.00	1.00			1.00	0.85
Flt Protected	0.95	0.95	1.00				0.95	1.00			1.00	1.00
Satd. Flow (prot)	1681	1681	1538				1770	3539			3539	1560
Flt Permitted	0.95	0.95	1.00				0.95	1.00			1.00	1.00
Satd. Flow (perm)	1681	1681	1538				1770	3539			3539	1560
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	477	0	416	0	0	0	280	1217	0	0	1117	348
RTOR Reduction (vph)	0	0	329	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	238	239	87	0	0	0	280	1217	0	0	1117	348
Confl. Peds. (#/hr)	7		7	7		7	1					1
Turn Type	Split	NA	Perm				Prot	NA			NA	Perm
Protected Phases	4	4			3		5	2			6	
Permitted Phases			4	3								6
Actuated Green, G (s)	30.2	30.2	30.2				33.2	102.6			63.4	63.4
Effective Green, g (s)	30.2	30.2	30.2				33.2	102.6			63.4	63.4
Actuated g/C Ratio	0.21	0.21	0.21				0.23	0.71			0.44	0.44
Clearance Time (s)	5.7	5.7	5.7				6.0	6.0			6.0	6.0
Vehicle Extension (s)	3.5	3.5	3.5				2.0	4.0			4.0	4.0
Lane Grp Cap (vph)	351	351	321				406	2512			1552	684
v/s Ratio Prot	0.14	c0.14					c0.16	0.34			c0.32	
v/s Ratio Perm			0.06									0.22
v/c Ratio	0.68	0.68	0.27				0.69	0.48			0.72	0.51
Uniform Delay, d1	52.7	52.7	47.9				50.9	9.3			33.3	29.3
Progression Factor	1.00	1.00	1.00				1.00	1.00			1.00	1.00
Incremental Delay, d2	5.3	5.6	0.5				3.9	0.7			2.9	2.7
Delay (s)	58.0	58.3	48.5				54.8	9.9			36.2	32.0
Level of Service	E	E	D				D	A			D	C
Approach Delay (s)		53.6			0.0			18.3			35.2	
Approach LOS		D			A			B			D	

Intersection Summary			
HCM 2000 Control Delay	32.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	144.5	Sum of lost time (s)	22.3
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
19: Victory Blvd & Buena Vista St

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	216	827	173	133	138	228	295	926	76	346	919	116
Future Volume (veh/h)	216	827	173	133	138	228	295	926	76	346	919	116
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	1.00		0.97	1.00		0.97	1.00		0.97
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	225	861	180	139	144	238	307	965	79	360	957	121
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	434	914	396	195	788	340	361	1310	566	387	1395	604
Arrive On Green	0.11	0.26	0.26	0.07	0.22	0.22	0.12	0.37	0.37	0.15	0.39	0.39
Sat Flow, veh/h	1781	3554	1541	1781	3554	1534	1781	3554	1535	1781	3554	1538
Grp Volume(v), veh/h	225	861	180	139	144	238	307	965	79	360	957	121
Grp Sat Flow(s),veh/h/ln	1781	1777	1541	1781	1777	1534	1781	1777	1535	1781	1777	1538
Q Serve(g_s), s	13.2	33.3	13.8	8.3	4.6	20.0	14.8	32.9	4.8	18.0	31.3	7.3
Cycle Q Clear(g_c), s	13.2	33.3	13.8	8.3	4.6	20.0	14.8	32.9	4.8	18.0	31.3	7.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	434	914	396	195	788	340	361	1310	566	387	1395	604
V/C Ratio(X)	0.52	0.94	0.45	0.71	0.18	0.70	0.85	0.74	0.14	0.93	0.69	0.20
Avail Cap(c_a), veh/h	480	924	401	304	924	399	572	1310	566	556	1395	604
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.5	51.0	43.7	40.9	44.2	50.2	27.9	38.3	29.4	30.6	35.3	28.0
Incr Delay (d2), s/veh	0.7	17.3	0.8	3.6	0.1	4.4	5.8	3.7	0.5	16.4	2.8	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	17.0	5.4	3.9	2.1	8.1	6.8	15.0	1.9	9.4	14.1	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.2	68.3	44.6	44.5	44.3	54.6	33.6	42.0	29.9	47.0	38.1	28.8
LnGrp LOS	D	E	D	D	D	D	C	D	C	D	D	C
Approach Vol, veh/h		1266			521			1351			1438	
Approach Delay, s/veh		59.0			49.1			39.4			39.5	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	42.0	22.0	61.0	20.0	37.0	25.3	57.6
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	19.0	36.4	34.0	29.4	19.0	36.4	34.0	29.4
Max Q Clear Time (g_c+I1), s	10.3	35.3	16.8	33.3	15.2	22.0	20.0	34.9
Green Ext Time (p_c), s	0.2	0.7	0.6	0.0	0.2	1.5	0.7	0.0

Intersection Summary			
HCM 6th Ctrl Delay			46.0
HCM 6th LOS			D

HCM 6th Signalized Intersection Summary
20: Burbank Blvd & Buena Vista St

10/27/2021

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	159	625	204	157	595	133	223	1053	130	154	960	225
Future Volume (veh/h)	159	625	204	157	595	133	223	1053	130	154	960	225
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.99	1.00		0.99
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	166	651	212	164	620	139	232	1097	135	160	1000	234
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	238	757	335	228	754	334	317	1718	762	279	1639	727
Arrive On Green	0.09	0.21	0.21	0.09	0.21	0.21	0.09	0.48	0.48	0.06	0.46	0.46
Sat Flow, veh/h	1781	3554	1574	1781	3554	1574	1781	3554	1576	1781	3554	1576
Grp Volume(v), veh/h	166	651	212	164	620	139	232	1097	135	160	1000	234
Grp Sat Flow(s),veh/h/ln	1781	1777	1574	1781	1777	1574	1781	1777	1576	1781	1777	1576
Q Serve(g_s), s	10.1	24.7	17.1	10.0	23.3	10.7	9.5	32.3	6.8	6.6	29.5	13.2
Cycle Q Clear(g_c), s	10.1	24.7	17.1	10.0	23.3	10.7	9.5	32.3	6.8	6.6	29.5	13.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	238	757	335	228	754	334	317	1718	762	279	1639	727
V/C Ratio(X)	0.70	0.86	0.63	0.72	0.82	0.42	0.73	0.64	0.18	0.57	0.61	0.32
Avail Cap(c_a), veh/h	275	873	387	266	873	387	635	1718	762	636	1639	727
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.5	53.1	50.1	40.8	52.6	47.6	22.9	27.0	20.4	22.1	28.3	23.9
Incr Delay (d2), s/veh	5.6	7.8	2.6	6.9	5.6	0.8	2.4	1.8	0.5	1.4	1.7	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	11.9	7.0	4.8	11.0	4.3	4.1	14.1	2.6	2.8	13.0	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.0	60.9	52.7	47.6	58.2	48.5	25.4	28.9	20.9	23.5	30.0	25.0
LnGrp LOS	D	E	D	D	E	D	C	C	C	C	C	C
Approach Vol, veh/h		1029			923			1464			1394	
Approach Delay, s/veh		56.8			54.9			27.6			28.4	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.6	35.8	17.0	70.6	16.8	35.7	13.9	73.7
Change Period (Y+Rc), s	4.6	6.0	5.0	6.0	4.6	6.0	5.0	6.0
Max Green Setting (Gmax), s	15.0	34.4	37.0	32.0	15.0	34.4	37.0	32.0
Max Q Clear Time (g_c+I1), s	12.0	26.7	11.5	31.5	12.1	25.3	8.6	34.3
Green Ext Time (p_c), s	0.1	3.1	0.5	0.3	0.1	3.2	0.3	0.0

Intersection Summary			
HCM 6th Ctrl Delay			39.3
HCM 6th LOS			D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	192	832	101	117	858	237	163	1016	205	288	707	141
Future Volume (veh/h)	192	832	101	117	858	237	163	1016	205	288	707	141
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.98	1.00		0.98
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	198	858	104	121	885	244	168	1047	211	297	729	145
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	222	983	433	194	873	384	362	1356	593	325	1532	672
Arrive On Green	0.10	0.28	0.28	0.06	0.25	0.25	0.07	0.38	0.38	0.12	0.43	0.43
Sat Flow, veh/h	1781	3554	1564	1781	3554	1562	1781	3554	1555	1781	3554	1559
Grp Volume(v), veh/h	198	858	104	121	885	244	168	1047	211	297	729	145
Grp Sat Flow(s),veh/h/ln	1781	1777	1564	1781	1777	1562	1781	1777	1555	1781	1777	1559
Q Serve(g_s), s	11.3	32.2	7.2	7.0	34.4	19.6	7.9	36.2	13.6	14.6	20.6	8.2
Cycle Q Clear(g_c), s	11.3	32.2	7.2	7.0	34.4	19.6	7.9	36.2	13.6	14.6	20.6	8.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	222	983	433	194	873	384	362	1356	593	325	1532	672
V/C Ratio(X)	0.89	0.87	0.24	0.62	1.01	0.64	0.46	0.77	0.36	0.91	0.48	0.22
Avail Cap(c_a), veh/h	242	983	433	269	873	384	702	1356	593	577	1532	672
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	48.3	39.2	39.2	52.8	47.2	23.9	38.0	31.0	32.1	28.5	25.0
Incr Delay (d2), s/veh	29.3	8.7	0.3	2.4	33.9	3.4	0.7	4.3	1.7	9.0	1.1	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	15.5	2.8	3.2	19.4	8.0	3.5	16.5	5.4	7.0	9.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.8	57.0	39.5	41.7	86.7	50.6	24.6	42.3	32.6	41.0	29.6	25.7
LnGrp LOS	E	E	D	D	F	D	C	D	C	D	C	C
Approach Vol, veh/h		1160			1250			1426			1171	
Approach Delay, s/veh		57.1			75.3			38.8			32.0	
Approach LOS		E			E			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.7	44.7	15.3	66.4	18.0	40.4	22.2	59.4				
Change Period (Y+Rc), s	4.6	6.0	5.0	6.0	4.6	6.0	5.0	6.0				
Max Green Setting (Gmax), s	15.0	34.4	37.0	32.0	15.0	34.4	37.0	32.0				
Max Q Clear Time (g_c+I1), s	9.0	34.2	9.9	22.6	13.3	36.4	16.6	38.2				
Green Ext Time (p_c), s	0.1	0.1	0.3	3.8	0.1	0.0	0.6	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			50.5									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary
22: Olive Ave & Buena Vista St

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	366	1025	104	134	663	62	109	864	169	103	428	201
Future Volume (veh/h)	366	1025	104	134	663	62	109	864	169	103	428	201
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.98
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	389	1090	111	143	705	66	116	919	180	110	455	214
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	409	1143	116	197	775	73	356	1303	572	219	1295	568
Arrive On Green	0.19	0.35	0.35	0.08	0.24	0.24	0.05	0.37	0.37	0.05	0.36	0.36
Sat Flow, veh/h	1781	3251	331	1781	3278	307	1781	3554	1559	1781	3554	1559
Grp Volume(v), veh/h	389	595	606	143	382	389	116	919	180	110	455	214
Grp Sat Flow(s),veh/h/ln	1781	1777	1805	1781	1777	1808	1781	1777	1559	1781	1777	1559
Q Serve(g_s), s	24.6	45.7	45.8	8.4	29.3	29.3	5.7	30.9	11.6	5.4	13.1	14.2
Cycle Q Clear(g_c), s	24.6	45.7	45.8	8.4	29.3	29.3	5.7	30.9	11.6	5.4	13.1	14.2
Prop In Lane	1.00		0.18	1.00		0.17	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	409	625	635	197	420	428	356	1303	572	219	1295	568
V/C Ratio(X)	0.95	0.95	0.95	0.73	0.91	0.91	0.33	0.71	0.31	0.50	0.35	0.38
Avail Cap(c_a), veh/h	414	625	635	304	449	457	374	1303	572	241	1295	568
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	44.2	44.3	39.8	52.0	52.0	26.0	37.9	31.7	29.7	32.4	32.8
Incr Delay (d2), s/veh	31.4	24.8	24.9	3.8	21.4	21.4	0.4	3.2	1.4	1.3	0.8	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.3	24.3	24.8	3.9	15.5	15.8	2.5	14.1	4.7	2.4	5.8	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.8	69.0	69.2	43.6	73.4	73.3	26.4	41.1	33.2	31.0	33.2	34.7
LnGrp LOS	E	E	E	D	E	E	C	D	C	C	C	C
Approach Vol, veh/h		1590			914			1215			779	
Approach Delay, s/veh		69.5			68.7			38.5			33.3	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.1	55.2	12.6	57.0	31.2	39.1	12.3	57.3
Change Period (Y+Rc), s	4.6	6.0	5.0	6.0	4.6	6.0	5.0	6.0
Max Green Setting (Gmax), s	19.0	43.4	9.0	47.0	27.0	35.4	9.0	47.0
Max Q Clear Time (g_c+I1), s	10.4	47.8	7.7	16.2	26.6	31.3	7.4	32.9
Green Ext Time (p_c), s	0.2	0.0	0.0	4.1	0.1	1.8	0.0	6.1

Intersection Summary	
HCM 6th Ctrl Delay	54.7
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
23: Alameda Ave & Buena Vista St

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	233	1022	138	240	564	223	111	718	139	279	332	64
Future Volume (veh/h)	233	1022	138	240	564	223	111	718	139	279	332	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	0.98		0.96	1.00		0.97
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	248	1087	147	255	600	237	118	764	148	297	353	68
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	297	1135	498	304	1168	513	441	1069	459	345	1309	566
Arrive On Green	0.09	0.32	0.32	0.09	0.33	0.33	0.06	0.30	0.30	0.13	0.37	0.37
Sat Flow, veh/h	3456	3554	1560	3456	3554	1560	1781	3554	1525	1781	3554	1536
Grp Volume(v), veh/h	248	1087	147	255	600	237	118	764	148	297	353	68
Grp Sat Flow(s),veh/h/ln	1728	1777	1560	1728	1777	1560	1781	1777	1525	1781	1777	1536
Q Serve(g_s), s	9.9	42.0	7.9	10.2	19.1	16.8	6.3	26.8	7.9	15.6	9.8	4.1
Cycle Q Clear(g_c), s	9.9	42.0	7.9	10.2	19.1	16.8	6.3	26.8	7.9	15.6	9.8	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	297	1135	498	304	1168	513	441	1069	459	345	1309	566
V/C Ratio(X)	0.83	0.96	0.29	0.84	0.51	0.46	0.27	0.71	0.32	0.86	0.27	0.12
Avail Cap(c_a), veh/h	346	1142	501	346	1168	513	588	1069	459	386	1309	566
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.0	46.7	22.7	62.9	38.0	37.2	30.6	43.6	21.4	31.3	31.0	29.2
Incr Delay (d2), s/veh	13.6	17.3	0.3	14.5	0.4	0.7	0.2	4.1	1.9	15.7	0.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	21.2	3.0	5.1	8.5	6.6	2.8	12.4	3.1	8.2	4.3	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.6	64.0	23.0	77.4	38.4	37.9	30.9	47.7	23.3	47.0	31.5	29.7
LnGrp LOS	E	E	C	E	D	D	C	D	C	D	C	C
Approach Vol, veh/h		1482			1092			1030			718	
Approach Delay, s/veh		62.0			47.4			42.2			37.8	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.3	50.7	13.4	57.6	17.0	52.0	22.8	48.1
Change Period (Y+Rc), s	6.0	* 6	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	14.0	* 45	20.0	39.0	14.0	45.0	21.0	38.0
Max Q Clear Time (g_c+I1), s	12.2	44.0	8.3	11.8	11.9	21.1	17.6	28.8
Green Ext Time (p_c), s	0.1	0.7	0.2	2.6	0.1	5.2	0.2	3.9

Intersection Summary			
HCM 6th Ctrl Delay			49.6
HCM 6th LOS			D

Notes

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

HCM Signalized Intersection Capacity Analysis
24: Riverside Dr & SR 134 Ramps/Buena Vista St & SR 134 WB On Ramp

10/27/2021

Movement	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	SBR2	NEL
Lane Configurations	↰	↰	↰	↱	↰	↑↱		↰	↑↱		↱	↰
Traffic Volume (vph)	70	292	330	238	128	691	74	115	196	40	351	109
Future Volume (vph)	70	292	330	238	128	691	74	115	196	40	351	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	6.5	6.5	6.5	6.5	6.5		6.5	6.5		6.5	4.6
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	0.95		1.00	0.91		0.91	1.00
Frpb, ped/bikes	1.00	1.00	1.00	0.98	1.00	1.00		1.00	0.99		0.98	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.99		1.00	0.92		0.85	1.00
Flt Protected	0.95	0.95	0.99	1.00	0.95	1.00		0.95	1.00		1.00	0.95
Satd. Flow (prot)	1770	1681	1746	1554	1770	3483		1770	3103		1417	1770
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00		0.95	1.00		1.00	0.95
Satd. Flow (perm)	1770	1770	1770	1554	1770	3483		1770	3103		1417	1770
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	73	304	344	248	133	720	77	120	204	42	366	114
RTOR Reduction (vph)	0	0	0	54	0	4	0	0	0	0	0	0
Lane Group Flow (vph)	73	176	472	194	133	793	0	120	418	0	194	114
Confl. Peds. (#/hr)		3		3	3		1	1			3	3
Turn Type	Prot	Perm	NA	Perm	Split	NA		Split	NA		Perm	Prot
Protected Phases	1		6		8	8		7	7			5
Permitted Phases		6		6							7	
Actuated Green, G (s)	12.7	50.6	50.6	50.6	45.0	45.0		31.0	31.0		31.0	16.0
Effective Green, g (s)	12.7	50.6	50.6	50.6	45.0	45.0		31.0	31.0		31.0	16.0
Actuated g/C Ratio	0.08	0.30	0.30	0.30	0.27	0.27		0.19	0.19		0.19	0.10
Clearance Time (s)	4.6	6.5	6.5	6.5	6.5	6.5		6.5	6.5		6.5	4.6
Vehicle Extension (s)	2.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	2.5
Lane Grp Cap (vph)	134	537	537	471	477	940		329	577		263	169
v/s Ratio Prot	0.04				0.08	c0.23		0.07	0.13			c0.06
v/s Ratio Perm		0.10	0.27	0.12							c0.14	
v/c Ratio	0.54	0.33	0.88	0.41	0.28	0.84		0.36	0.72		0.74	0.67
Uniform Delay, d1	74.2	44.9	55.1	46.2	48.0	57.5		59.3	63.8		64.0	72.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	3.5	0.4	15.4	0.7	0.4	7.2		0.8	4.6		10.6	9.3
Delay (s)	77.8	45.3	70.5	46.9	48.4	64.7		60.1	68.5		74.6	82.1
Level of Service	E	D	E	D	D	E		E	E		E	F
Approach Delay (s)			60.5			62.4			68.7			99.3
Approach LOS			E			E			E			F

Intersection Summary			
HCM 2000 Control Delay	73.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	166.7	Sum of lost time (s)	24.1
Intersection Capacity Utilization	101.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
24: Riverside Dr & SR 134 Ramps/Buena Vista St & SR 134 WB On Ramp

10/27/2021

	↗
Movement	NER
Lane Configurations	↱↱
Traffic Volume (vph)	911
Future Volume (vph)	911
Ideal Flow (vphpl)	1900
Total Lost time (s)	6.5
Lane Util. Factor	0.88
Frpb, ped/bikes	1.00
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	2787
Flt Permitted	1.00
Satd. Flow (perm)	2787
Peak-hour factor, PHF	0.96
Adj. Flow (vph)	949
RTOR Reduction (vph)	0
Lane Group Flow (vph)	949
Confl. Peds. (#/hr)	1
Turn Type	Prot
Protected Phases	2
Permitted Phases	
Actuated Green, G (s)	53.9
Effective Green, g (s)	53.9
Actuated g/C Ratio	0.32
Clearance Time (s)	6.5
Vehicle Extension (s)	3.5
Lane Grp Cap (vph)	901
v/s Ratio Prot	c0.34
v/s Ratio Perm	
v/c Ratio	1.05
Uniform Delay, d1	56.4
Progression Factor	1.00
Incremental Delay, d2	45.0
Delay (s)	101.4
Level of Service	F
Approach Delay (s)	
Approach LOS	
Intersection Summary	

	↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑↑	↱	↰↰	↑↑↑	↱	↰↰	↑↑	↱	↰↰	↰↑	↱
Traffic Volume (vph)	148	1263	256	262	1553	601	474	529	238	765	507	152
Future Volume (vph)	148	1263	256	262	1553	601	474	529	238	765	507	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	6.0	5.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0	6.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.86	0.86	1.00
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00
Satd. Flow (prot)	3433	5085	1559	3433	5085	1570	3433	3539	1570	3044	3170	1521
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00
Satd. Flow (perm)	3433	5085	1559	3433	5085	1570	3433	3539	1570	3044	3170	1521
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	149	1276	259	265	1569	607	479	534	240	773	512	154
RTOR Reduction (vph)	0	0	33	0	0	52	0	0	33	0	0	54
Lane Group Flow (vph)	149	1276	226	265	1569	555	479	534	207	634	651	100
Confl. Peds. (#/hr)	2		7	7		2	18		1	1		18
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Split	NA	pm+ov	Split	NA	Perm
Protected Phases	1	6	7	5	2	3	7	7	5	3	3	
Permitted Phases			6			2			7			3
Actuated Green, G (s)	13.2	60.8	96.9	19.1	66.7	115.1	36.1	36.1	55.2	48.4	48.4	48.4
Effective Green, g (s)	13.2	60.8	96.9	19.1	66.7	115.1	36.1	36.1	55.2	48.4	48.4	48.4
Actuated g/C Ratio	0.07	0.32	0.52	0.10	0.36	0.61	0.19	0.19	0.29	0.26	0.26	0.26
Clearance Time (s)	5.0	6.0	6.0	5.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0	6.0
Vehicle Extension (s)	2.5	3.0	3.0	2.0	3.0	3.0	3.0	3.0	2.0	3.0	3.0	3.0
Lane Grp Cap (vph)	241	1649	806	349	1809	1014	661	681	462	786	818	392
v/s Ratio Prot	0.04	0.25	0.05	c0.08	c0.31	0.14	0.14	c0.15	0.05	c0.21	0.21	
v/s Ratio Perm			0.09			0.21			0.09			0.07
v/c Ratio	0.62	0.77	0.28	0.76	0.87	0.55	0.72	0.78	0.45	0.81	0.80	0.25
Uniform Delay, d1	84.7	57.1	25.6	81.9	56.2	21.0	71.0	71.9	53.7	65.1	64.9	55.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.0	2.3	0.2	8.2	4.7	0.6	3.9	5.9	0.3	6.1	5.4	0.3
Delay (s)	88.6	59.4	25.8	90.1	60.9	21.6	74.9	77.8	54.0	71.2	70.3	55.5
Level of Service	F	E	C	F	E	C	E	E	D	E	E	E
Approach Delay (s)		56.8			54.3			72.2			69.1	
Approach LOS		E			D			E			E	

Intersection Summary			
HCM 2000 Control Delay	61.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	187.4	Sum of lost time (s)	23.0
Intersection Capacity Utilization	92.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM 6th Signalized Intersection Summary
26: Victory Blvd/Victory Pl & Magnolia Blvd

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	172	918	228	156	654	193	236	896	159	287	952	151
Future Volume (veh/h)	172	918	228	156	654	193	236	896	159	287	952	151
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.99	1.00		0.99
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	174	927	230	158	661	195	238	905	161	290	962	153
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	233	610	151	201	746	327	340	1572	693	372	1630	719
Arrive On Green	0.09	0.22	0.22	0.08	0.21	0.21	0.09	0.44	0.44	0.10	0.46	0.46
Sat Flow, veh/h	1781	2811	696	1781	3554	1556	1781	3554	1567	1781	3554	1567
Grp Volume(v), veh/h	174	585	572	158	661	195	238	905	161	290	962	153
Grp Sat Flow(s),veh/h/ln	1781	1777	1730	1781	1777	1556	1781	1777	1567	1781	1777	1567
Q Serve(g_s), s	10.6	30.4	30.4	9.6	25.3	15.9	10.1	26.7	8.9	12.3	28.1	8.2
Cycle Q Clear(g_c), s	10.6	30.4	30.4	9.6	25.3	15.9	10.1	26.7	8.9	12.3	28.1	8.2
Prop In Lane	1.00		0.40	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	233	386	376	201	746	327	340	1572	693	372	1630	719
V/C Ratio(X)	0.75	1.52	1.52	0.79	0.89	0.60	0.70	0.58	0.23	0.78	0.59	0.21
Avail Cap(c_a), veh/h	389	386	376	370	772	338	551	1572	693	554	1630	719
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.7	54.8	54.8	41.4	53.7	49.9	22.3	29.2	24.2	22.7	28.1	22.7
Incr Delay (d2), s/veh	1.8	245.8	247.9	2.6	11.8	2.7	1.0	1.5	0.8	2.1	1.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	39.9	39.1	4.4	12.5	6.4	4.3	11.7	3.5	5.3	12.3	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.6	300.6	302.7	43.9	65.5	52.7	23.3	30.7	25.0	24.8	29.7	23.4
LnGrp LOS	D	F	F	D	E	D	C	C	C	C	C	C
Approach Vol, veh/h		1331			1014			1304			1405	
Approach Delay, s/veh		267.8			59.6			28.7			28.0	
Approach LOS		F			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.0	70.2	16.4	36.4	19.3	67.9	17.4	35.4
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	29.0	34.4	25.0	30.4	29.0	34.4	25.0	30.4
Max Q Clear Time (g_c+I1), s	12.1	30.1	11.6	32.4	14.3	28.7	12.6	27.3
Green Ext Time (p_c), s	0.3	2.6	0.2	0.0	0.4	3.2	0.2	1.5

Intersection Summary			
HCM 6th Ctrl Delay			97.7
HCM 6th LOS			F

HCM 6th Signalized Intersection Summary
27: Olive Ave & Victory Blvd

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	237	979	43	119	712	208	86	798	173	167	837	256
Future Volume (veh/h)	237	979	43	119	712	208	86	798	173	167	837	256
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.97	1.00		0.97
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	242	999	44	121	727	212	88	814	177	170	854	261
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	381	1622	71	282	1533	671	165	864	373	212	988	428
Arrive On Green	0.09	0.47	0.47	0.05	0.43	0.43	0.05	0.24	0.24	0.08	0.28	0.28
Sat Flow, veh/h	1781	3464	153	1781	3554	1555	1781	3554	1532	1781	3554	1539
Grp Volume(v), veh/h	242	512	531	121	727	212	88	814	177	170	854	261
Grp Sat Flow(s),veh/h/ln	1781	1777	1840	1781	1777	1555	1781	1777	1532	1781	1777	1539
Q Serve(g_s), s	10.2	30.2	30.2	5.3	20.5	12.6	5.1	31.5	13.8	9.7	32.0	20.6
Cycle Q Clear(g_c), s	10.2	30.2	30.2	5.3	20.5	12.6	5.1	31.5	13.8	9.7	32.0	20.6
Prop In Lane	1.00		0.08	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	381	832	862	282	1533	671	165	864	373	212	988	428
V/C Ratio(X)	0.64	0.62	0.62	0.43	0.47	0.32	0.53	0.94	0.47	0.80	0.86	0.61
Avail Cap(c_a), veh/h	590	832	862	557	1533	671	318	873	376	304	988	428
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.5	27.8	27.8	22.9	28.5	26.2	40.0	52.0	45.3	38.1	48.0	44.0
Incr Delay (d2), s/veh	0.7	3.4	3.3	0.4	1.1	1.2	1.0	17.9	0.9	6.1	8.1	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	13.6	14.1	2.3	9.0	4.9	2.3	16.2	5.4	4.6	15.3	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.2	31.2	31.1	23.3	29.5	27.5	41.0	69.9	46.3	44.1	56.1	46.5
LnGrp LOS	C	C	C	C	C	C	D	E	D	D	E	D
Approach Vol, veh/h		1285			1060			1079			1285	
Approach Delay, s/veh		29.3			28.4			63.7			52.6	
Approach LOS		C			C			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	71.6	11.6	44.9	17.1	66.4	16.4	40.1
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	29.0	36.4	19.0	34.4	29.0	36.4	19.0	34.4
Max Q Clear Time (g_c+I1), s	7.3	32.2	7.1	34.0	12.2	22.5	11.7	33.5
Green Ext Time (p_c), s	0.1	2.5	0.1	0.3	0.3	5.0	0.1	0.6

Intersection Summary			
HCM 6th Ctrl Delay			43.3
HCM 6th LOS			D

HCM 6th Signalized Intersection Summary
28: Alameda Ave & Victory Blvd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑	↱	↰	↑↑	↱	↰	↑↱		↰↰	↑↱	
Traffic Volume (veh/h)	79	1483	147	121	628	278	131	480	144	399	585	46
Future Volume (veh/h)	79	1483	147	121	628	278	131	480	144	399	585	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		0.98	1.00		0.99
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	81	1529	152	125	647	287	135	495	148	411	603	47
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	350	1713	759	166	1743	772	211	552	164	526	1168	91
Arrive On Green	0.04	0.48	0.48	0.05	0.49	0.49	0.21	0.21	0.21	0.11	0.35	0.35
Sat Flow, veh/h	1781	3554	1574	1781	3554	1574	777	2689	799	3456	3338	260
Grp Volume(v), veh/h	81	1529	152	125	647	287	135	326	317	411	321	329
Grp Sat Flow(s),veh/h/ln	1781	1777	1574	1781	1777	1574	777	1777	1711	1728	1777	1821
Q Serve(g_s), s	3.2	54.8	7.8	4.9	15.9	15.9	23.4	25.0	25.3	12.6	20.0	20.1
Cycle Q Clear(g_c), s	3.2	54.8	7.8	4.9	15.9	15.9	23.4	25.0	25.3	12.6	20.0	20.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.47	1.00		0.14
Lane Grp Cap(c), veh/h	350	1713	759	166	1743	772	211	365	351	526	622	637
V/C Ratio(X)	0.23	0.89	0.20	0.75	0.37	0.37	0.64	0.89	0.90	0.78	0.52	0.52
Avail Cap(c_a), veh/h	405	1713	759	205	1743	772	220	386	372	708	736	754
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	33.0	20.8	31.4	22.2	22.2	53.5	54.1	54.2	38.7	36.1	36.1
Incr Delay (d2), s/veh	0.1	7.6	0.6	8.5	0.6	1.4	5.8	21.6	23.6	4.0	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	25.0	3.0	2.4	6.8	6.2	4.9	13.4	13.2	5.7	8.9	9.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.7	40.5	21.4	39.9	22.8	23.6	59.3	75.7	77.9	42.7	36.8	36.8
LnGrp LOS	B	D	C	D	C	C	E	E	E	D	D	D
Approach Vol, veh/h		1762			1059			778			1061	
Approach Delay, s/veh		37.8			25.1			73.7			39.1	
Approach LOS		D			C			E			D	

Timer - Assigned Phs	1	2	3	4		6	7	8
Phs Duration (G+Y+Rc), s	20.2	34.8	11.5	73.5		55.0	10.3	74.7
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0		6.0	4.6	6.0
Max Green Setting (Gmax), s	23.0	30.4	10.0	55.4		58.0	10.0	55.4
Max Q Clear Time (g_c+I1), s	14.6	27.3	6.9	56.8		22.1	5.2	17.9
Green Ext Time (p_c), s	1.0	1.5	0.0	0.0		4.5	0.0	6.4

Intersection Summary			
HCM 6th Ctrl Delay			41.2
HCM 6th LOS			D

HCM 6th Signalized Intersection Summary
29: Burbank Blvd & San Fernando Blvd

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↑	↱	↰	↑↑	↱	↰↰	↑↱		↰	↑	↱↱
Traffic Volume (veh/h)	847	657	583	22	417	89	249	371	21	72	173	452
Future Volume (veh/h)	847	657	583	22	417	89	249	371	21	72	173	452
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.96		1.00	1.00		0.97	1.00		0.98	1.00		0.94
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	864	670	0	22	426	91	254	379	21	73	177	461
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	952	1263		85	684	295	413	953	53	103	384	541
Arrive On Green	0.20	0.36	0.00	0.05	0.19	0.19	0.12	0.28	0.28	0.06	0.21	0.21
Sat Flow, veh/h	3456	3554	1585	1781	3554	1536	3456	3419	189	1781	1870	2633
Grp Volume(v), veh/h	864	670	0	22	426	91	254	196	204	73	177	461
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1536	1728	1777	1831	1781	1870	1317
Q Serve(g_s), s	14.1	12.8	0.0	1.0	9.4	4.4	6.0	7.7	7.7	3.4	7.1	11.2
Cycle Q Clear(g_c), s	14.1	12.8	0.0	1.0	9.4	4.4	6.0	7.7	7.7	3.4	7.1	11.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.10	1.00		1.00
Lane Grp Cap(c), veh/h	952	1263		85	684	295	413	495	510	103	384	541
V/C Ratio(X)	0.91	0.53		0.26	0.62	0.31	0.62	0.40	0.40	0.71	0.46	0.85
Avail Cap(c_a), veh/h	1072	1263		624	1246	538	2422	1246	1283	416	656	923
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.7	21.9	0.0	39.3	31.7	29.7	35.8	25.0	25.0	39.6	29.9	19.8
Incr Delay (d2), s/veh	9.7	0.5	0.0	1.9	1.1	0.7	3.2	0.6	0.6	3.3	0.6	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.5	5.2	0.0	0.5	4.1	1.6	2.7	3.2	3.4	1.6	3.2	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.3	22.4	0.0	41.2	32.8	30.4	39.0	25.6	25.7	43.0	30.5	22.8
LnGrp LOS	D	C		D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		1534	A		539			654			711	
Approach Delay, s/veh		32.5			32.8			30.8			26.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	30.2	23.0	22.5	16.5	23.6	9.1	36.4
Change Period (Y+Rc), s	5.0	6.3	6.0	* 6	6.3	* 6	5.0	6.0
Max Green Setting (Gmax), s	20.0	60.0	20.0	* 30	60.0	* 30	30.0	30.0
Max Q Clear Time (g_c+I1), s	5.4	9.7	16.1	11.4	8.0	13.2	3.0	14.8
Green Ext Time (p_c), s	0.1	3.2	0.9	3.5	2.2	2.3	0.0	4.7

Intersection Summary	
HCM 6th Ctrl Delay	31.0
HCM 6th LOS	C

Notes

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

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
30: Magnolia Blvd & First St

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱	↱	↰	↑↑	↱	↰	↑↑	↱	↰	↑↑	↱
Traffic Volume (veh/h)	340	905	374	74	647	107	297	479	147	175	424	266
Future Volume (veh/h)	340	905	374	74	647	107	297	479	147	175	424	266
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		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	358	953	394	78	681	113	313	504	155	184	446	280
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	415	1705	720	269	1497	801	288	730	323	279	730	459
Arrive On Green	0.09	0.46	0.46	0.05	0.42	0.42	0.09	0.21	0.21	0.09	0.21	0.21
Sat Flow, veh/h	1781	3741	1580	1781	3554	1579	1781	3554	1573	1781	3554	1573
Grp Volume(v), veh/h	358	953	394	78	681	113	313	504	155	184	446	280
Grp Sat Flow(s),veh/h/ln	1781	1870	1580	1781	1777	1579	1781	1777	1573	1781	1777	1573
Q Serve(g_s), s	9.0	19.5	19.0	2.5	14.4	4.0	9.0	13.8	9.1	8.6	12.0	16.1
Cycle Q Clear(g_c), s	9.0	19.5	19.0	2.5	14.4	4.0	9.0	13.8	9.1	8.6	12.0	16.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	415	1705	720	269	1497	801	288	730	323	279	730	459
V/C Ratio(X)	0.86	0.56	0.55	0.29	0.45	0.14	1.09	0.69	0.48	0.66	0.61	0.61
Avail Cap(c_a), veh/h	415	1705	720	331	1497	801	288	1097	486	279	1097	621
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.2	20.9	20.7	16.8	21.8	13.7	37.6	38.6	36.8	30.6	37.9	32.1
Incr Delay (d2), s/veh	16.0	1.3	3.0	0.2	1.0	0.4	78.6	1.2	1.1	4.6	0.8	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	8.6	7.4	1.0	6.1	1.5	9.4	6.1	3.6	4.0	5.3	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.2	22.2	23.7	17.0	22.8	14.1	116.2	39.8	37.9	35.2	38.7	33.4
LnGrp LOS	D	C	C	B	C	B	F	D	D	D	D	C
Approach Vol, veh/h		1705			872			972			910	
Approach Delay, s/veh		26.1			21.1			64.1			36.4	
Approach LOS		C			C			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	53.8	13.6	27.6	13.6	50.2	13.6	27.6
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	9.0	33.4	9.0	32.4	9.0	33.4	9.0	32.4
Max Q Clear Time (g_c+I1), s	4.5	21.5	10.6	15.8	11.0	16.4	11.0	18.1
Green Ext Time (p_c), s	0.0	6.3	0.0	3.6	0.0	4.7	0.0	3.5

Intersection Summary	
HCM 6th Ctrl Delay	35.5
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
31: Olive Ave & First St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↑↱		↰	↑↑	↱	↰	↑↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	358	825	249	59	521	142	199	364	74	67	379	141
Future Volume (veh/h)	358	825	249	59	521	142	199	364	74	67	379	141
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	0.98		0.95	0.97		0.93
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	381	878	265	63	554	151	212	387	79	71	403	150
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	496	1392	419	261	1630	714	296	701	141	239	654	431
Arrive On Green	0.10	0.52	0.52	0.04	0.46	0.46	0.10	0.24	0.24	0.04	0.18	0.18
Sat Flow, veh/h	1781	2679	807	1781	3554	1556	1781	2916	588	1781	3554	1479
Grp Volume(v), veh/h	381	582	561	63	554	151	212	234	232	71	403	150
Grp Sat Flow(s),veh/h/ln	1781	1777	1709	1781	1777	1556	1781	1777	1727	1781	1777	1479
Q Serve(g_s), s	14.0	32.7	32.9	2.6	14.0	8.1	13.3	16.1	16.5	4.5	14.6	11.3
Cycle Q Clear(g_c), s	14.0	32.7	32.9	2.6	14.0	8.1	13.3	16.1	16.5	4.5	14.6	11.3
Prop In Lane	1.00		0.47	1.00		1.00	1.00		0.34	1.00		1.00
Lane Grp Cap(c), veh/h	496	923	888	261	1630	714	296	427	415	239	654	431
V/C Ratio(X)	0.77	0.63	0.63	0.24	0.34	0.21	0.72	0.55	0.56	0.30	0.62	0.35
Avail Cap(c_a), veh/h	496	923	888	370	1630	714	296	571	555	340	1142	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.3	24.0	24.0	20.7	24.3	22.7	40.4	46.5	46.6	43.8	52.6	39.9
Incr Delay (d2), s/veh	6.9	3.3	3.4	0.2	0.6	0.7	7.5	1.3	1.4	0.3	1.1	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	14.5	14.0	1.1	6.1	3.2	6.5	7.3	7.3	2.0	6.7	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.2	27.3	27.5	20.9	24.9	23.4	47.9	47.8	48.1	44.0	53.7	40.5
LnGrp LOS	C	C	C	C	C	C	D	D	D	D	D	D
Approach Vol, veh/h		1524			768			678			624	
Approach Delay, s/veh		27.3			24.2			47.9			49.4	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.1	39.7	19.0	70.2	19.0	31.8	10.5	78.7
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	14.0	45.0	14.0	45.0	14.0	45.0	14.0	45.0
Max Q Clear Time (g_c+I1), s	6.5	18.5	16.0	16.0	15.3	16.6	4.6	34.9
Green Ext Time (p_c), s	0.0	3.6	0.0	5.6	0.0	4.1	0.0	6.0

Intersection Summary	
HCM 6th Ctrl Delay	34.4
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰↰	↑↱		↰	↑↱		↰↰	↑↱		↰	↑↑	↱
Traffic Volume (veh/h)	389	942	276	67	517	75	454	647	103	148	521	205
Future Volume (veh/h)	389	942	276	67	517	75	454	647	103	148	521	205
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.95	1.00		0.96	1.00		0.95
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	414	1002	294	71	550	80	483	688	110	157	554	218
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	987	1242	362	91	676	98	613	759	121	219	742	315
Arrive On Green	0.29	0.46	0.46	0.05	0.22	0.22	0.12	0.25	0.25	0.08	0.21	0.21
Sat Flow, veh/h	3456	2698	787	1781	3093	448	3456	3049	487	1781	3554	1510
Grp Volume(v), veh/h	414	658	638	71	315	315	483	401	397	157	554	218
Grp Sat Flow(s),veh/h/ln	1728	1777	1708	1781	1777	1765	1728	1777	1759	1781	1777	1510
Q Serve(g_s), s	13.6	44.4	45.1	5.5	23.6	23.8	14.9	30.6	30.7	9.6	20.5	9.9
Cycle Q Clear(g_c), s	13.6	44.4	45.1	5.5	23.6	23.8	14.9	30.6	30.7	9.6	20.5	9.9
Prop In Lane	1.00		0.46	1.00		0.25	1.00		0.28	1.00		1.00
Lane Grp Cap(c), veh/h	987	818	786	91	388	385	613	443	438	219	742	315
V/C Ratio(X)	0.42	0.80	0.81	0.78	0.81	0.82	0.79	0.91	0.91	0.72	0.75	0.69
Avail Cap(c_a), veh/h	987	818	786	280	609	605	656	470	465	224	762	324
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.6	32.4	32.6	65.7	52.0	52.1	37.5	51.0	51.0	41.3	51.9	14.4
Incr Delay (d2), s/veh	0.2	8.3	8.9	10.4	16.7	17.3	5.7	20.5	21.0	9.6	4.1	6.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	20.8	20.4	2.8	12.3	12.4	6.8	16.1	16.1	4.8	9.6	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.8	40.6	41.5	76.1	68.7	69.3	43.3	71.5	72.0	50.9	56.1	20.8
LnGrp LOS	D	D	D	E	E	E	D	E	E	D	E	C
Approach Vol, veh/h		1710			701			1281			929	
Approach Delay, s/veh		41.0			69.7			61.0			46.9	
Approach LOS		D			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.2	35.2	46.0	36.6	16.6	40.9	12.1	70.4
Change Period (Y+Rc), s	5.0	6.0	6.0	* 6	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	19.0	30.0	21.0	* 48	12.0	37.0	22.0	47.0
Max Q Clear Time (g_c+I1), s	16.9	22.5	15.6	25.8	11.6	32.7	7.5	47.1
Green Ext Time (p_c), s	0.4	3.1	0.6	4.8	0.0	2.2	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	52.1
HCM 6th LOS	D

Notes

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

HCM 6th Signalized Intersection Summary
33: Magnolia Blvd & Glenoaks Blvd

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	206	305	230	39	264	50	194	1340	69	94	1087	162
Future Volume (veh/h)	206	305	230	39	264	50	194	1340	69	94	1087	162
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.95	0.99		0.95	1.00		0.97	1.00		0.94
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	215	318	240	41	275	52	202	1396	72	98	1132	169
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	318	569	459	216	901	167	269	1547	80	215	1313	195
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.08	0.45	0.45	0.06	0.43	0.43
Sat Flow, veh/h	1027	1870	1508	840	2965	550	1781	3432	177	1781	3075	457
Grp Volume(v), veh/h	215	318	240	41	163	164	202	721	747	98	652	649
Grp Sat Flow(s),veh/h/ln	1027	1870	1508	840	1777	1738	1781	1777	1832	1781	1777	1755
Q Serve(g_s), s	18.3	12.8	11.9	3.9	6.3	6.5	5.6	33.8	34.1	2.7	29.9	30.2
Cycle Q Clear(g_c), s	24.9	12.8	11.9	16.7	6.3	6.5	5.6	33.8	34.1	2.7	29.9	30.2
Prop In Lane	1.00		1.00	1.00		0.32	1.00		0.10	1.00		0.26
Lane Grp Cap(c), veh/h	318	569	459	216	540	528	269	801	825	215	759	749
V/C Ratio(X)	0.68	0.56	0.52	0.19	0.30	0.31	0.75	0.90	0.91	0.46	0.86	0.87
Avail Cap(c_a), veh/h	325	582	469	222	553	541	297	801	825	284	759	749
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.6	26.3	25.9	33.3	24.0	24.1	19.5	22.9	22.9	19.8	23.3	23.4
Incr Delay (d2), s/veh	5.4	1.2	1.0	0.4	0.3	0.3	7.8	15.2	15.3	0.6	12.2	12.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	5.7	4.3	0.8	2.6	2.7	2.7	16.5	17.2	1.1	14.3	14.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.0	27.4	26.9	33.7	24.3	24.4	27.3	38.0	38.3	20.4	35.5	36.2
LnGrp LOS	D	C	C	C	C	C	C	D	D	C	D	D
Approach Vol, veh/h		773			368			1670			1399	
Approach Delay, s/veh		30.5			25.4			36.8			34.8	
Approach LOS		C			C			D			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.1	46.6		33.4	12.2	44.4		33.4				
Change Period (Y+Rc), s	4.6	6.0		6.0	4.6	6.0		6.0				
Max Green Setting (Gmax), s	9.0	36.4		28.0	9.0	36.4		28.0				
Max Q Clear Time (g_c+I1), s	4.7	36.1		18.7	7.6	32.2		26.9				
Green Ext Time (p_c), s	0.0	0.3		1.4	0.0	2.9		0.5				
Intersection Summary												
HCM 6th Ctrl Delay			34.0									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary
34: Olive Ave & Glenoaks Blvd

10/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑↱		↰	↑↱		↰	↑↱		↰	↑↱	
Traffic Volume (veh/h)	200	374	175	71	226	70	123	1114	82	92	1047	105
Future Volume (veh/h)	200	374	175	71	226	70	123	1114	82	92	1047	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		0.97	1.00		0.97
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	206	386	180	73	233	72	127	1148	85	95	1079	108
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	540	888	408	392	907	273	207	905	67	188	846	85
Arrive On Green	0.09	0.38	0.38	0.06	0.34	0.34	0.07	0.27	0.27	0.06	0.26	0.26
Sat Flow, veh/h	1781	2351	1080	1781	2679	805	1781	3347	248	1781	3252	325
Grp Volume(v), veh/h	206	290	276	73	152	153	127	609	624	95	589	598
Grp Sat Flow(s),veh/h/ln	1781	1777	1654	1781	1777	1707	1781	1777	1817	1781	1777	1800
Q Serve(g_s), s	6.6	10.9	11.2	2.3	5.6	5.8	4.6	24.3	24.3	3.4	23.4	23.4
Cycle Q Clear(g_c), s	6.6	10.9	11.2	2.3	5.6	5.8	4.6	24.3	24.3	3.4	23.4	23.4
Prop In Lane	1.00		0.65	1.00		0.47	1.00		0.14	1.00		0.18
Lane Grp Cap(c), veh/h	540	671	625	392	602	578	207	481	492	188	462	468
V/C Ratio(X)	0.38	0.43	0.44	0.19	0.25	0.26	0.61	1.27	1.27	0.51	1.28	1.28
Avail Cap(c_a), veh/h	550	671	625	471	602	578	258	481	492	258	462	468
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.1	20.8	20.9	17.6	21.5	21.6	24.7	32.8	32.8	25.0	33.3	33.3
Incr Delay (d2), s/veh	0.3	2.0	2.3	0.2	1.0	1.1	2.2	135.7	136.5	1.6	139.8	140.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	4.8	4.6	0.9	2.4	2.5	2.0	28.2	29.0	1.5	27.7	28.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.4	22.9	23.2	17.7	22.5	22.7	26.9	168.5	169.3	26.6	173.1	173.8
LnGrp LOS	B	C	C	B	C	C	C	F	F	C	F	F
Approach Vol, veh/h		772			378			1360			1282	
Approach Delay, s/veh		21.3			21.7			155.7			162.6	
Approach LOS		C			C			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	40.0	11.0	29.4	13.1	36.5	10.0	30.3
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	9.0	27.4	9.0	23.4	9.0	27.4	9.0	23.4
Max Q Clear Time (g_c+I1), s	4.3	13.2	6.6	25.4	8.6	7.8	5.4	26.3
Green Ext Time (p_c), s	0.0	4.1	0.0	0.0	0.0	2.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	117.3
HCM 6th LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑↱		↰	↑↑↑	↱	↰	↑↑↑↱	
Traffic Volume (veh/h)	422	343	254	64	219	30	225	1134	47	82	988	190
Future Volume (veh/h)	422	343	254	64	219	30	225	1134	47	82	988	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.95	1.00		0.96	0.99		0.97
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	440	357	265	67	228	31	234	1181	49	85	1029	198
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	377	630	520	87	278	38	298	1978	591	237	1423	273
Arrive On Green	0.21	0.34	0.34	0.05	0.17	0.17	0.10	0.39	0.39	0.05	0.33	0.33
Sat Flow, veh/h	1781	1870	1544	1781	1600	218	1781	5106	1526	1781	4279	822
Grp Volume(v), veh/h	440	357	265	67	0	259	234	1181	49	85	818	409
Grp Sat Flow(s),veh/h/ln	1781	1870	1544	1781	0	1818	1781	1702	1526	1781	1702	1696
Q Serve(g_s), s	25.0	18.5	16.2	4.4	0.0	16.2	9.8	21.8	2.4	3.7	25.0	25.0
Cycle Q Clear(g_c), s	25.0	18.5	16.2	4.4	0.0	16.2	9.8	21.8	2.4	3.7	25.0	25.0
Prop In Lane	1.00		1.00	1.00		0.12	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	377	630	520	87	0	316	298	1978	591	237	1132	564
V/C Ratio(X)	1.17	0.57	0.51	0.77	0.00	0.82	0.78	0.60	0.08	0.36	0.72	0.72
Avail Cap(c_a), veh/h	377	712	588	451	0	769	718	2592	774	605	1440	718
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.6	32.1	31.4	55.6	0.0	47.0	26.0	28.8	22.9	25.1	34.7	34.7
Incr Delay (d2), s/veh	100.5	1.2	1.1	10.1	0.0	7.3	1.7	0.4	0.1	0.3	1.6	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.5	8.5	6.2	2.2	0.0	8.0	4.2	8.9	0.9	1.6	10.5	10.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	147.1	33.3	32.5	65.7	0.0	54.3	27.7	29.3	23.0	25.4	36.3	38.0
LnGrp LOS	F	C	C	E	A	D	C	C	C	C	D	D
Approach Vol, veh/h		1062			326			1464			1312	
Approach Delay, s/veh		80.3			56.6			28.8			36.1	
Approach LOS		F			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.4	45.8	16.7	45.3	29.6	26.6	10.2	51.8
Change Period (Y+Rc), s	4.6	6.0	4.6	6.0	4.6	6.0	4.6	6.0
Max Green Setting (Gmax), s	29.9	45.0	40.0	50.0	25.0	50.0	30.0	60.0
Max Q Clear Time (g_c+I1), s	6.4	20.5	11.8	27.0	27.0	18.2	5.7	23.8
Green Ext Time (p_c), s	0.1	4.8	0.3	12.3	0.0	2.3	0.1	15.6

Intersection Summary			
HCM 6th Ctrl Delay			46.4
HCM 6th LOS			D

Appendix F

Hazardous Materials Sites

DTSC Envirostor Database

SITE NAMES	ADDRESS	CITY	STATUS	STATUS DATE	SITE TYPE - ENVIROSTOR	LEAD AGENCY
AFP #14		Burbank	Inactive - Needs Evaluation	7/1/2005	Military Evaluation	SMBRP
AFP #14, Storage Annex		Los Angeles	Inactive - Needs Evaluation	7/1/2005	Military Evaluation	SMBRP
A-H Plating, Inc.	1837 Victory Place	Burbank	Refer: Other Agency	NONE	Tiered Permit	NONE SPECIFIED
All Metals Processing Co., Inc.	264 W. Spazier Avenue	Burbank	Refer: Other Agency	7/2/2014	Tiered Permit	US EPA
Alumtreat Inc	2905 Winoma Avenue	Burbank	Certified O&M - Land Use Restrictions Only	9/19/1997	Corrective Action	WM
Brass Production Company	3059-3063 North California Street	Burbank	No Further Action	10/25/1994	Historical	NONE SPECIFIED
Burbank Transit Center Southern Pacific	201 N Front St	Burbank	Active	4/30/2014	Corrective Action	WM
Circuit Craft Company	205 South Flower Street	Burbank	Refer: Other Agency	8/31/1995	Historical	NONE SPECIFIED
Fiber Resin Corp Michigan	170 W. Providencia Avenue	Burbank	No Further Action	2/1/1995	Historical	NONE SPECIFIED
Former Dynamic Plating Company Site	1102 West Isabel Street	Burbank	Active	1/31/2007	State Response	SMBRP
Haskel Inc	100 East Graham Place	Burbank	Refer: RWQCB	12/12/1996	Historical	RWQCB 4 - Los Angeles
Hughey & Phillips Inc	3050 California Street	Burbank	No Further Action	2/2/1995	Historical	HWMP
J&M Anodizing, Inc.	525 S. Flower Street	Burbank	Refer: Other Agency	NONE	Tiered Permit	NONE SPECIFIED
Janco Corp.	3111 Winona Avenue	Burbank	Refer: Other Agency	NONE	Tiered Permit	NONE SPECIFIED
Lockheed Aeronautical Systems Co.	2555 N. Hollywood Way	Burbank	Refer: Other Agency	NONE	Tiered Permit	NONE SPECIFIED
Lockheed Air Terminal	2627 North Hollywood Way	Burbank	Refer: RWQCB	5/12/1995	Historical	NONE SPECIFIED
Lockheed Air Termnal		Burbank	Inactive - Needs Evaluation	7/1/2005	Military Evaluation	SMBRP
Lockheed Aircraft Corporation	2555 North Hollywood Way	Burbank	Refer: RWQCB	6/1/1995	Historical	NONE SPECIFIED
Lockheed Corp./Env Systems & Tech	2550 N. Hollywood Way #305	Burbank	Refer: Other Agency	NONE	Tiered Permit	NONE SPECIFIED
Lockheed Martin Corporation	1705 Victory Pl	Burbank	Refer: RWQCB	1/1/2008	Corrective Action	RWQCB 4 - Los Angeles
Lockheed-California		Burbank	Inactive - Needs Evaluation	7/1/2005	Military Evaluation	SMBRP
Magna Plating Co., Inc.	3063 N. California Street	Burbank	Refer: Other Agency	NONE	Tiered Permit	NONE SPECIFIED
Magnolia Housing Project		Burbank	Inactive - Needs Evaluation	7/1/2005	Military Evaluation	SMBRP
Magnolia Power Plant	164 West Magnolia Blvd.	Burbank	No Further Action	6/5/2003	Voluntary Cleanup	HWMP
Mel Bernie & Co., Inc.	3000 Empire Avenue	Burbank	Refer: Other Agency	NONE	Tiered Permit	NONE SPECIFIED
Menasco Manufacturing		Burbank	Inactive - Needs Evaluation	7/1/2005	Military Evaluation	SMBRP
Ovrom Park And School	601 South San Fernando Boulvard	Burbank	Certified	6/25/2004	School Cleanup	SMBRP
Pac Aircraft Engineering Center	3000 Clybourn Avenue	Burbank	No Further Action	10/25/1994	Evaluation	SMBRP
Pacific Airmotive	2940 North Hollywood Way	Burbank	Refer: RWQCB	8/15/1995	Historical	NONE SPECIFIED
Pacific Airmotive	217 South Front Street	Burbank	Refer: Other Agency	2/1/1995	Historical	NONE SPECIFIED
Price Club #415	10950 Sherman Way	Burbank	Refer: Other Agency	NONE	Tiered Permit	NONE SPECIFIED
Process Control	2520 N. Ontario Street #D	Burbank	Refer: Other Agency	NONE	Tiered Permit	NONE SPECIFIED
Qualex, Inc. #461	211 S. Lake Street	Burbank	Refer: Other Agency	NONE	Tiered Permit	NONE SPECIFIED
Rail Chemical Division	201 Front Street	Burbank	Refer: RCRA	4/14/1995	Historical	NONE SPECIFIED
Steve'S Plating Corp.	3111 N. San Fernando Boulevard	Burbank	Refer: Other Agency	NONE	Tiered Permit	NONE SPECIFIED
Tech Graphics, Inc.(Former)	315 S. Flower St.	Burbank	Refer: 1248 Local Agency	3/16/2004	Evaluation	NONE SPECIFIED
Vega Aircraft		Burbank	Inactive - Needs Evaluation	7/1/2005	Military Evaluation	SMBRP
Vega Aircraft		Burbank	Inactive - Needs Evaluation	7/1/2005	Military Evaluation	SMBRP
West LA Area Station Hosp		Los Angeles	Inactive - Needs Evaluation	7/1/2005	Military Evaluation	SMBRP
Western Pacific Circuits	2033 North Lincoln	Burbank	Refer: Other Agency	10/25/1994	Historical	NONE SPECIFIED

SWRCB - Geotracker Database

BUSINESS NAME	STREET NUM	STREET NAME	CITY	CASE_TYPE	STATUS	STATUS_DAT	LEAD_AGENC
Carter Plating Inc		1842 N Keystone St.	Burbank	Non-Case Information	Pending Review	9/23/2019	LOS ANGELES RWQCB (REGION 4)
Nasmyth Tmf, Inc. (Burbank Facility)		3401 Pacific Ave	Burbank	Non-Case Information	Pending Review	9/23/2019	LOS ANGELES RWQCB (REGION 4)
Process Control Laboratory		2520 N Ontario St Bldg D	Burbank	Non-Case Information	Pending Review	9/23/2019	LOS ANGELES RWQCB (REGION 4)
K L Anodizing Corporation		1200 S Victory Blvd	Burbank	Non-Case Information	Pending Review	9/23/2019	LOS ANGELES RWQCB (REGION 4)
BOB HOPE	2627	Hollywood Way	Burbank	Non-Case Information	Pending Review	3/11/2019	LOS ANGELES RWQCB (REGION 4)
Connell Processing Inc		3080-3094 N Avon St	Burbank	Non-Case Information	Pending Review	9/23/2019	LOS ANGELES RWQCB (REGION 4)
Crane Co	3000	WINONA AVE	BURBANK	Cleanup Program Site	Open - Verification Monitoring	1/1/1998	LOS ANGELES RWQCB (REGION 4)
LOCKHEED A-1 EAST	3401	W. EMPIRE AVE.	BURBANK	Cleanup Program Site	Open - Site Assessment	7/17/1996	LOS ANGELES RWQCB (REGION 4)
LOCKHEED A-1, B85, LOTS 16,16A	3220	W. THORTON	BURBANK	Cleanup Program Site	Open - Site Assessment	1/3/1990	LOS ANGELES RWQCB (REGION 4)
CARTER PLATING	1842	N. KEYSTONE ST.	BURBANK	Cleanup Program Site	Open - Site Assessment	9/28/2005	LOS ANGELES RWQCB (REGION 4)
STAINLESS STEEL PRODUCTS INC.	2980	N. SAN FERNANDO BLVD.	BURBANK	Cleanup Program Site	Open - Site Assessment	9/21/2012	LOS ANGELES RWQCB (REGION 4)
Technical Metal Finishing	3401	Pacific Avenue	Burbank	Cleanup Program Site	Open - Site Assessment	6/25/2018	LOS ANGELES RWQCB (REGION 4)
A H PLATING, INC.	1837	VICTORY PL.	BURBANK	Cleanup Program Site	Open - Site Assessment	5/9/2018	LOS ANGELES RWQCB (REGION 4)
MAGNA PLATING CO.	3063	N. CALIFORNIA ST.	BURBANK	Cleanup Program Site	Open - Site Assessment	9/29/2005	LOS ANGELES RWQCB (REGION 4)
Pacific Airmotive Corporation	2960	North Hollywood Way	Burbank	Cleanup Program Site	Open - Site Assessment	1/27/2015	LOS ANGELES RWQCB (REGION 4)
COMMERCIAL INSPECTION SERVICES	156	W. PROVIDENCIA AVE.	BURBANK	Cleanup Program Site	Open - Site Assessment	3/11/2013	LOS ANGELES RWQCB (REGION 4)
Hollywood Burbank Airport Replacement Terminal	2801	North Hollywood Way	Burbank	Cleanup Program Site	Open - Site Assessment	7/20/2016	LOS ANGELES RWQCB (REGION 4)
FORD LEASING DEVELOPMENT COMPANY (FORMER ZERO CORP)	777	FRONT STREET	BURBANK	Cleanup Program Site	Open - Remediation	11/3/2020	LOS ANGELES RWQCB (REGION 4)
LOCKHEED PLANT B6	2801	N. HOLLYWOOD WAY.	BURBANK	Cleanup Program Site	Open - Remediation	10/31/1996	LOS ANGELES RWQCB (REGION 4)
LOCKHEED PLANT A1-SOUTH	2311	N. HOLLYWOOD WAY.	BURBANK	Cleanup Program Site	Open - Remediation	5/24/1995	LOS ANGELES RWQCB (REGION 4)
HOME DEPOT - ITT AEROSPACE CONTROLS-DIV.	1200	SOUTH FLOWER STREET	BURBANK	Cleanup Program Site	Open - Remediation	7/13/2009	LOS ANGELES RWQCB (REGION 4)
FORMER AVIALL SERVICES INC.	3111	N. KENWOOD ST.	BURBANK	Cleanup Program Site	Open - Remediation	3/25/1996	LOS ANGELES RWQCB (REGION 4)
PACIFIC AIRMOTIVE CORPORATION	2940/2840	NORTH HOLLYWOOD WY	BURBANK	Cleanup Program Site	Open - Remediation	5/31/1999	LOS ANGELES RWQCB (REGION 4)
BURBANK LANDFILL	1600	Lockheed View	BURBANK	Land Disposal Site	Open - Operating	5/31/2016	LOS ANGELES RWQCB (REGION 4)
BURBANK STEAM PLANT	164	W. MAGNOLIA BLVD.	BURBANK	Cleanup Program Site	Open - Inactive	1/28/2016	LOS ANGELES RWQCB (REGION 4)
ALL METALS PROCESSING CO. INC.	264	W. SPAZIER AVE.	BURBANK	Cleanup Program Site	Open - Inactive	11/3/2014	LOS ANGELES RWQCB (REGION 4)
5 WEST OLIVE AVENUE			BURBANK	Cleanup Program Site	Open - Inactive	1/1/1965	LOS ANGELES RWQCB (REGION 4)
STEVE'S PLATING CORP.	3111	N. SAN FERNANDO BLVD.	BURBANK	Cleanup Program Site	Open - Inactive	1/28/2016	LOS ANGELES RWQCB (REGION 4)
FORMER TWISS HEATING & TREATING	2503	NORTH ONTARIO BLVD.	BURBANK	Cleanup Program Site	Open - Inactive	1/1/1965	LOS ANGELES RWQCB (REGION 4)
SUNSET CANYON DEBRIS AREA		1100 - 1500 Country Club Drive	BURBANK	Land Disposal Site	Open - Inactive	8/18/1975	LOS ANGELES RWQCB (REGION 4)
ACME AUTOWORK	738	N. VICTORY BLVD.	BURBANK	Cleanup Program Site	Open - Inactive	10/29/2014	LOS ANGELES RWQCB (REGION 4)
KAHR BEARING-SARGENT/FLETCHER	3010	N. SAN FERNANDO BLVD.	BURBANK	Cleanup Program Site	Open - Inactive	10/29/2014	LOS ANGELES RWQCB (REGION 4)
INTERNATIONAL ELECTRONIC RESEARCH CORPORATION (IERC)	135	W. MAGNOLIA BLVD.	BURBANK	Cleanup Program Site	Open - Inactive	9/29/2017	LOS ANGELES RWQCB (REGION 4)
SIERRACIN-HARRISON	3020	EMPIRE AVE.	BURBANK	Cleanup Program Site	Open - Inactive	10/29/2014	LOS ANGELES RWQCB (REGION 4)
INTERSTATE BRANDS CORP.	10	E. LINDEN AVE.	BURBANK	Cleanup Program Site	Open - Inactive	11/3/2014	LOS ANGELES RWQCB (REGION 4)
ECOLA SERVICES	1207	ISABEL ST.	BURBANK	Cleanup Program Site	Open - Inactive	11/3/2014	DEPARTMENT OF TOXIC SUBSTANCES CONTROL
J & M ANODIZING INC.	525	SOUTH FLOWER STREET	BURBANK	Cleanup Program Site	Open - Inactive	2/3/2016	LOS ANGELES RWQCB (REGION 4)
BET	811	S. SAN FERNANDO BLVD.	BURBANK	Cleanup Program Site	Open - Inactive	11/3/2014	LOS ANGELES RWQCB (REGION 4)
LOCKHEED PLANT A-1 NORTH	2555	N. HOLLYWOOD WAY.	BURBANK	Cleanup Program Site	Open - Eligible for Closure	9/27/2016	LOS ANGELES RWQCB (REGION 4)
KEYSTON BROTHERS	1100	Scott Rd.	Burbank	Cleanup Program Site	Open - Eligible for Closure	1/1/1985	LOS ANGELES RWQCB (REGION 4)
VICTORY SILK SCREEN PROCESSING	2701	W. Burbank Blvd.	Burbank	Cleanup Program Site	Open - Eligible for Closure	1/1/1985	LOS ANGELES RWQCB (REGION 4)
ALAMEDA DRY CLEANERS	940	W. ALAMEDA AVE.	BURBANK	Cleanup Program Site	Open - Eligible for Closure	5/19/2021	LOS ANGELES RWQCB (REGION 4)
MAGNOLIA CAR WASH	910	MAGNOLIA BLVD W	BURBANK	LUST Cleanup Site	Open - Eligible for Closure	5/14/2021	LOS ANGELES RWQCB (REGION 4)
LOCKHEED PLANT B1	1705	VICTORY PL.	BURBANK	Cleanup Program Site	Open - Assessment & Interim Remec	1/1/2011	LOS ANGELES RWQCB (REGION 4)
FORMER MENASCO AEROSPACE	100	East Cedar Avenue	BURBANK	Cleanup Program Site	Open - Assessment & Interim Remec	1/1/1965	LOS ANGELES RWQCB (REGION 4)
Former Fiber Resin Corp.	170	W. Providencia Avenue	Burbank	Non-Case Information	Informational Item	10/24/2018	
Former Pacific Airmotive Corporation	3003	North Hollywood Way	Burbank	Non-Case Information	Informational Item	2/11/2016	LOS ANGELES RWQCB (REGION 4)
SHELL SERVICE STATION	2501	VICTORY BLVD W	BURBANK	LUST Cleanup Site	Completed - Case Closed	9/26/1996	LOS ANGELES RWQCB (REGION 4)
WORLD OIL #12	3805	OLIVE AVE W	BURBANK	LUST Cleanup Site	Completed - Case Closed	5/28/2003	LOS ANGELES RWQCB (REGION 4)
CITY OF BURBANK ENVIRONMENTAL	500	S. FLOWER ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/22/2014	LOS ANGELES RWQCB (REGION 4)
JOSEFF PRECISION CASTINGS	129	E. PROVIDENCIA AVE.	BURBANK	Cleanup Program Site	Completed - Case Closed	3/2/2015	LOS ANGELES RWQCB (REGION 4)
GILDERFLUKE & CO.	205	S. FLOWER ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/22/2014	LOS ANGELES RWQCB (REGION 4)
INTERVALVE	1835	N. Keystone St.	Burbank	Cleanup Program Site	Completed - Case Closed	6/8/1988	LOS ANGELES RWQCB (REGION 4)
KLEEN-LINE CORP	1060	N. Lake St.	Burbank	Cleanup Program Site	Completed - Case Closed	9/14/1989	LOS ANGELES RWQCB (REGION 4)
JACKS AUTO BODY INC.	2821	N. Lima St.	Burbank	Cleanup Program Site	Completed - Case Closed	1/8/1988	LOS ANGELES RWQCB (REGION 4)
G.W. BANDY INCORPORATED	3420	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	1/12/1988	LOS ANGELES RWQCB (REGION 4)
D.K. JONES	1853	Victory Pl.	Burbank	Cleanup Program Site	Completed - Case Closed	5/3/1988	LOS ANGELES RWQCB (REGION 4)
PACIFIC AERO SUPPLY CORP.	1630	Wilson Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	3/22/1988	LOS ANGELES RWQCB (REGION 4)
LANGLEY'S CUSTOM CABINETS	2823	Lima St.	Burbank	Cleanup Program Site	Completed - Case Closed	12/8/1987	LOS ANGELES RWQCB (REGION 4)
PURIFIED DOWN PRODUCTS	2815	Winona Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	1/8/1988	LOS ANGELES RWQCB (REGION 4)
INTERTEK METALLURGICAL LAB	1023	N. Victory Pl.	Burbank	Cleanup Program Site	Completed - Case Closed	2/21/1995	LOS ANGELES RWQCB (REGION 4)
FILM-KOTE INC.	4114	Vanowen St.	Burbank	Cleanup Program Site	Completed - Case Closed	10/9/1990	LOS ANGELES RWQCB (REGION 4)
DWYER MANUFACTURING CO.	3329	Burton Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	1/8/1988	LOS ANGELES RWQCB (REGION 4)
JEAN'S CLEANERS AND TAILORS	2903	N. Glenoaks Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	3/31/1994	LOS ANGELES RWQCB (REGION 4)
PACAERO	2810	N. Lima St.	Burbank	Cleanup Program Site	Completed - Case Closed	1/12/1988	LOS ANGELES RWQCB (REGION 4)
GLOBAL CONSUMER SERVICES, INC.	3607	W. Pacific Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	12/4/1990	LOS ANGELES RWQCB (REGION 4)
MATTHEWS STUDIO EQUIPMENT, INC.	2405	Empire Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	4/19/1988	LOS ANGELES RWQCB (REGION 4)
CITY OF BURBANK FIRE STA. 13	2244	Buena Vista	Burbank	Cleanup Program Site	Completed - Case Closed	6/30/1988	LOS ANGELES RWQCB (REGION 4)
BELAS FOREIGN CAR REPAIR	2525	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	5/30/1988	LOS ANGELES RWQCB (REGION 4)
DYNATROL NATIONAL CORPORATION	2937	N. Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	2/26/1988	LOS ANGELES RWQCB (REGION 4)
GERHARDT GEAR COMPANY, INC.	3060	N. California St.	Burbank	Cleanup Program Site	Completed - Case Closed	2/18/1988	LOS ANGELES RWQCB (REGION 4)
A.J. LEVIN CO.	3108	Valhalla Dr.	Burbank	Cleanup Program Site	Completed - Case Closed	1/18/1990	LOS ANGELES RWQCB (REGION 4)
PACIFIC DESIGN COMPANY	2530	Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	11/6/1987	LOS ANGELES RWQCB (REGION 4)
ARCO #1274	800	HOLLYWOOD WAY N	BURBANK	LUST Cleanup Site	Completed - Case Closed	5/22/1990	LOS ANGELES COUNTY
UNITED #14	2500	MAGNOLIA BLVD W	BURBANK	LUST Cleanup Site	Completed - Case Closed	8/26/2015	LOS ANGELES RWQCB (REGION 4)
UNOCAL #4188	2128	GLENOAKS BLVD N	BURBANK	LUST Cleanup Site	Completed - Case Closed	11/5/2001	LOS ANGELES RWQCB (REGION 4)
BFIC AUTO CENTER	1617	WEST MAGNOLIA BOULEVARD	BURBANK	Cleanup Program Site	Completed - Case Closed	6/11/2013	LOS ANGELES RWQCB (REGION 4)
JOHN'S MOBIL	2501	MAGNOLIA AVE W	BURBANK	LUST Cleanup Site	Completed - Case Closed	2/9/1995	BURBANK, CITY OF
MOBIL GAS STATION	2501	OLIVE AVE W	BURBANK	LUST Cleanup Site	Completed - Case Closed	11/30/1995	LOS ANGELES RWQCB (REGION 4)
BUILDIT ENGINEERING	3074	N. LIMA ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	9/9/2005	LOS ANGELES RWQCB (REGION 4)
BURMAHTECH SERV.	700	S. FLOWER ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	1/30/1997	LOS ANGELES RWQCB (REGION 4)
ALLIED SIGNAL AEROSPACE CO.	117	E. PROVIDENCIA AVE.	BURBANK	Cleanup Program Site	Completed - Case Closed	2/10/1997	LOS ANGELES RWQCB (REGION 4)
RYAN HERCO PRODUCTS CORP.	2449	N. Naomi St.	Burbank	Cleanup Program Site	Completed - Case Closed	11/17/1987	LOS ANGELES RWQCB (REGION 4)
PACIFIC AIR LOGISTICS, INC.	2823	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	11/16/1987	LOS ANGELES RWQCB (REGION 4)
BURBANK YAMAHA	1801	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	2/6/1989	LOS ANGELES RWQCB (REGION 4)
THOUGHT FACTORY	3103	Valhalla Dr.	Burbank	Cleanup Program Site	Completed - Case Closed	1/18/1990	LOS ANGELES RWQCB (REGION 4)
STUDIO STAR MOBIL	3020	OLIVE AVE W	BURBANK	LUST Cleanup Site	Completed - Case Closed	7/12/2007	LOS ANGELES RWQCB (REGION 4)
J.T. SUPPLIES INCORPORATED	2526	N. Naomi St.	Burbank	Cleanup Program Site	Completed - Case Closed	11/17/1987	LOS ANGELES RWQCB (REGION 4)
PINS UNLIMITED INC.	2720	Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	1/8/1988	LOS ANGELES RWQCB (REGION 4)
UNITED CURRIER INCORPORATED	3220	Winona Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	12/10/1987	LOS ANGELES RWQCB (REGION 4)
HANNA CAR WASH SYSTEMS	3210	Valhalla Dr.	Burbank	Cleanup Program Site	Completed - Case Closed	7/3/1992	LOS ANGELES RWQCB (REGION 4)
ESTRADA HARDWARE CO., INC.	3110	Damon Way	Burbank	Cleanup Program Site	Completed - Case Closed	6/8/1990	LOS ANGELES RWQCB (REGION 4)
B & I FRAME & AXLE SERVICE	2713	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	4/10/1989	LOS ANGELES RWQCB (REGION 4)
ARA SERVICES-MAGAZINE	2950	N. Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	6/26/1995	LOS ANGELES RWQCB (REGION 4)
DAVIS MACHINING CO.	3216	Winona Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	9/8/1997	LOS ANGELES RWQCB (REGION 4)
MIDAS MUFFLER SHOP	3514	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	5/21/1991	LOS ANGELES RWQCB (REGION 4)
SALERNO AUTO BODY	2814	N. San Fernando Blvd. Suite B	Burbank	Cleanup Program Site	Completed - Case Closed	9/9/1991	LOS ANGELES RWQCB (REGION 4)
FLANIGAN PRINTERS, INC.	2101	Floyd St.	Burbank	Cleanup Program Site	Completed - Case Closed	3/29/1988	LOS ANGELES RWQCB (REGION 4)
PRECISION AUTO CARE	1411	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	3/8/1989	LOS ANGELES RWQCB (REGION 4)
DIX INDUSTRIES	2521	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	4/10/1989	LOS ANGELES RWQCB (REGION 4)

KENS RAPID LUBE	1417	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	3/8/1989	LOS ANGELES RWQCB (REGION 4)
DONALD M. DAVIS & COMPANY	2920	N. Naomi St.	Burbank	Cleanup Program Site	Completed - Case Closed	3/31/1994	LOS ANGELES RWQCB (REGION 4)
WRIGHT PLASTIC PRODUCTS	100	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	11/16/1990	LOS ANGELES RWQCB (REGION 4)
STUDIO IMAGE	3110	Clybourn Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	8/15/1990	LOS ANGELES RWQCB (REGION 4)
MULLER AUTO BODY	1617	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	3/22/1988	LOS ANGELES RWQCB (REGION 4)
FILM CONVERTOR CO. OF AMERICA	10	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	4/13/1989	LOS ANGELES RWQCB (REGION 4)
BURBANK PUB WKS YARD	500	FLOWER ST., SOUTH	BURBANK	LUST Cleanup Site	Completed - Case Closed	4/25/2007	BURBANK, CITY OF
SUN ART PLATING CO.	1021	ISABEL ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	10/7/2005	LOS ANGELES RWQCB (REGION 4)
WORLD OIL #25	2417	SAN FERNANDO BLVD N	BURBANK	LUST Cleanup Site	Completed - Case Closed	6/26/2006	LOS ANGELES RWQCB (REGION 4)
ANGEL'S AUTO BODY	603	S. VICTORY BLVD.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/22/2014	LOS ANGELES RWQCB (REGION 4)
SHELL SERVICE STATION	550	HOLLYWOOD WAY N.	BURBANK	LUST Cleanup Site	Completed - Case Closed	6/24/2009	LOS ANGELES RWQCB (REGION 4)
AEROQUIP FACILITY (FORMER)	3015	WINONA AVE	BURBANK	LUST Cleanup Site	Completed - Case Closed	8/30/1996	LOS ANGELES RWQCB (REGION 4)
SEVAN GAS STATION	1638	SAN FERNANDO BLVD N	BURBANK	LUST Cleanup Site	Completed - Case Closed	3/17/2006	LOS ANGELES RWQCB (REGION 4)
HYRAIL	415	N. FRONT ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/22/2014	LOS ANGELES RWQCB (REGION 4)
R.C. MERCER FILM PATCH	106	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	4/13/1989	LOS ANGELES RWQCB (REGION 4)
MAX ERB INSTRUMENT COMPANY	2112	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	2/6/1989	LOS ANGELES RWQCB (REGION 4)
INDUSTRIAL METAL SUPPLY	3303	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	11/16/1987	LOS ANGELES RWQCB (REGION 4)
TRANS BOX	3318	Burton Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	12/10/1987	LOS ANGELES RWQCB (REGION 4)
CADAM	2919	Empire Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	4/19/1988	LOS ANGELES RWQCB (REGION 4)
KEYSTON BROTHERS	1100	Scott Rd.	Burbank	Cleanup Program Site	Completed - Case Closed	3/22/1988	LOS ANGELES RWQCB (REGION 4)
ALL-PHASE ELECTRICAL SUPPLY CO.	2101	Empire Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	4/12/1988	LOS ANGELES RWQCB (REGION 4)
AMERICAN HAKKO PRODUCTS	3086	N. Lima St.	Burbank	Cleanup Program Site	Completed - Case Closed	2/11/1988	LOS ANGELES RWQCB (REGION 4)
A & S WROUGHT IRON CO.	2305	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	3/22/1988	LOS ANGELES RWQCB (REGION 4)
DELTRON ENGINEERING INC.	2800	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	1/30/1997	LOS ANGELES RWQCB (REGION 4)
ACCRATRONICS SEALS CORP.	2211	Kenmere Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	7/19/1996	LOS ANGELES RWQCB (REGION 4)
BURBANK FIRE DEPT. #4	2305	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	1/30/1997	LOS ANGELES RWQCB (REGION 4)
OHARA PUBLICATIONS, INC.	1813	N. Victory Pl.	Burbank	Cleanup Program Site	Completed - Case Closed	3/22/1988	LOS ANGELES RWQCB (REGION 4)
BURBANK HIGH SCHOOL AUTO SHOP	902	N. 003rd St.	Burbank	Cleanup Program Site	Completed - Case Closed	8/9/1990	LOS ANGELES RWQCB (REGION 4)
HARRY HECHTER CO. INC.	2515	Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	11/18/1987	LOS ANGELES RWQCB (REGION 4)
AERO BELLOWS MFG. INC.	2113	Kenmere Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	3/29/1988	LOS ANGELES RWQCB (REGION 4)
PACIFIC SPINNING & DRAWING	3216	Vanowen St.	Burbank	Cleanup Program Site	Completed - Case Closed	11/13/1990	LOS ANGELES RWQCB (REGION 4)
CHEVRON #9-0839	2650	HOLLYWOOD WY N	BURBANK	LUST Cleanup Site	Completed - Case Closed	11/5/2001	LOS ANGELES RWQCB (REGION 4)
ARC LITHO	110	E. VERDUGO AVE.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/22/2014	LOS ANGELES RWQCB (REGION 4)
CRANE COMPANY	3000	WINONA AVE	BURBANK	Cleanup Program Site	Completed - Case Closed	3/30/2005	LOS ANGELES RWQCB (REGION 4)
CAL. INSULATED WIRE & CABLE	3050	N. California St.	Burbank	Cleanup Program Site	Completed - Case Closed	5/3/1988	LOS ANGELES RWQCB (REGION 4)
SIMU-SYSTEMS TECHNOLOGIES CO.	2115	Floyd St.	Burbank	Cleanup Program Site	Completed - Case Closed	3/29/1988	LOS ANGELES RWQCB (REGION 4)
BURBANK MOTOR WORKS	2208	Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	1/30/1997	LOS ANGELES RWQCB (REGION 4)
JOHN FLUKE MFG.	2020	Lincoln Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	4/5/1988	LOS ANGELES RWQCB (REGION 4)
FIDELITY MFG. CO. INC.	3120	Damon Way	Burbank	Cleanup Program Site	Completed - Case Closed	8/15/1990	LOS ANGELES RWQCB (REGION 4)
1928 JEWELRY COMPANY	1000	N. LAKE ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/22/2014	LOS ANGELES RWQCB (REGION 4)
JAMES G. BOONE CO.	2100	Floyd St.	Burbank	Cleanup Program Site	Completed - Case Closed	5/3/1988	LOS ANGELES RWQCB (REGION 4)
N. HOLLYWOOD PRINTING	3915	Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	4/18/1989	LOS ANGELES RWQCB (REGION 4)
RHR ENTERPRISES	2721	Empire Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	12/6/1990	LOS ANGELES RWQCB (REGION 4)
BROADWAY SASH & DOOR CO.	3234	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	11/16/1987	LOS ANGELES RWQCB (REGION 4)
HASKEL, INC.	100	E. GRAHAM PL.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/23/2014	LOS ANGELES RWQCB (REGION 4)
OROAMERICA	443	N. VARNEY ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/22/2014	LOS ANGELES RWQCB (REGION 4)
ANDREW JERGEN	99	W. VERDUGO AVE.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/22/2014	LOS ANGELES RWQCB (REGION 4)
NBC-FIELD SHOP	3000	ALAMEDA AVE W	BURBANK	LUST Cleanup Site	Completed - Case Closed	5/28/2003	LOS ANGELES RWQCB (REGION 4)
Ikea Property Site	725 and 805-807	South San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	3/13/2018	LOS ANGELES RWQCB (REGION 4)
QUEEN CITY SHELL INC.	2801	SAN FERNANDO BLVD N	BURBANK	LUST Cleanup Site	Completed - Case Closed	11/5/2001	LOS ANGELES RWQCB (REGION 4)
CAMELOT PRESS	2815	LIMA ST N	BURBANK	LUST Cleanup Site	Completed - Case Closed	12/27/1996	LOS ANGELES RWQCB (REGION 4)
NETWORK ART SERVICE	630	S. MARIPOSA ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/22/2014	LOS ANGELES RWQCB (REGION 4)
Align-Rite International / Photronics Inc.	2422-2428	North Ontario Street	Burbank	Cleanup Program Site	Completed - Case Closed	11/27/2013	LOS ANGELES RWQCB (REGION 4)
THOMSON AUTOMOTIVE	2300	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	1/30/1997	LOS ANGELES RWQCB (REGION 4)
WARNER BROS. STUDIO FAC.	4000	WARNER BLVD.	BURBANK	LUST Cleanup Site	Completed - Case Closed	7/22/2009	LOS ANGELES RWQCB (REGION 4)
JAY DEE AIRCRAFT SUPPLY	2917	THORNTON AVE.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/19/2014	LOS ANGELES RWQCB (REGION 4)
WENDELIGHTING	2445	N. Naomi St.	Burbank	Cleanup Program Site	Completed - Case Closed	11/3/1987	LOS ANGELES RWQCB (REGION 4)
CALIFORNIA AUTO WORKS	3510	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	4/18/1989	LOS ANGELES RWQCB (REGION 4)
CRYSTAL LIKE PLASTIC	2547	N. Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	9/7/1988	LOS ANGELES RWQCB (REGION 4)
NEW RENAISSANCE RECORDS	2130	Floyd St.	Burbank	Cleanup Program Site	Completed - Case Closed	3/29/1988	LOS ANGELES RWQCB (REGION 4)
MICRO FORM PRECISION	2317	San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	3/22/1988	LOS ANGELES RWQCB (REGION 4)
THE DISNEY STORE, INC.	1919	N. Victory Pl.	Burbank	Cleanup Program Site	Completed - Case Closed	12/6/1990	LOS ANGELES RWQCB (REGION 4)
A & M ENGINEERING	2935	Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	1/28/1988	LOS ANGELES RWQCB (REGION 4)
NORMAN ENTERPRISES	2621	Empire Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	4/12/1988	LOS ANGELES RWQCB (REGION 4)
CIRCLE WELD. MFG. CO. INC.	2609	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	11/16/1987	LOS ANGELES RWQCB (REGION 4)
UNIQUE TRADING COMPANY	2619	Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	11/6/1987	LOS ANGELES RWQCB (REGION 4)
HOWMEDICA	4535	Valerio St.	Burbank	Cleanup Program Site	Completed - Case Closed	4/27/1990	LOS ANGELES RWQCB (REGION 4)
PACIFIC BELL	3001	Thornton Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	12/10/1987	LOS ANGELES RWQCB (REGION 4)
GERALD L. CRAWFORD	3031	Thornton Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	8/7/1995	LOS ANGELES RWQCB (REGION 4)
CLASSIC CLEANERS & SHOE REPAIR	1034	W. Alameda	Burbank	Cleanup Program Site	Completed - Case Closed	9/13/1994	LOS ANGELES RWQCB (REGION 4)
BURBANK METAL SUPPLY INC.	2506	Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	11/16/1987	LOS ANGELES RWQCB (REGION 4)
JACK & GARY AUTO CENTER	2523	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	4/10/1989	LOS ANGELES RWQCB (REGION 4)
MEDICAL EQUIPMENT SUPPLY, INC.	3041	N. California St.	Burbank	Cleanup Program Site	Completed - Case Closed	2/18/1988	LOS ANGELES RWQCB (REGION 4)
SHADES OF LIGHT	2980	N. ONTARIO ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/23/2014	LOS ANGELES RWQCB (REGION 4)
NBC STUDIOS	3000	W. ALAMEDA AVE.	BURBANK	Cleanup Program Site	Completed - Case Closed	1/14/2019	LOS ANGELES RWQCB (REGION 4)
TD QUILTING MACHINERY	3640	Valhalla Dr.	Burbank	Cleanup Program Site	Completed - Case Closed	1/18/1990	LOS ANGELES RWQCB (REGION 4)
CHEVRON #9-5538	923	VICTORY BLVD N	BURBANK	LUST Cleanup Site	Completed - Case Closed	8/29/1997	BURBANK, CITY OF
Avibank Manufacturing	210	South Victory Boulevard	Burbank	Cleanup Program Site	Completed - Case Closed	12/26/2018	LOS ANGELES RWQCB (REGION 4)
GALSWORTHY STUDIOS	4126	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	11/16/1990	LOS ANGELES RWQCB (REGION 4)
UNOCAL #1188	3701	MAGNOLIA BLVD W	BURBANK	LUST Cleanup Site	Completed - Case Closed	1/12/2005	LOS ANGELES RWQCB (REGION 4)
PRD INDUSTRIES	2121	Floyd St.	Burbank	Cleanup Program Site	Completed - Case Closed	3/29/1988	LOS ANGELES RWQCB (REGION 4)
BURBANK WATER SKI COMPANY	1861	Victory Pl.	Burbank	Cleanup Program Site	Completed - Case Closed	5/13/1988	LOS ANGELES RWQCB (REGION 4)
SAFETY SHOP INCORPORATED	3007	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	4/18/1989	LOS ANGELES RWQCB (REGION 4)
ELECTRICAL ADVERTISING INC.	2545	Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	11/18/1987	LOS ANGELES RWQCB (REGION 4)
L.H. METAL SPINNING INC.	3098	N. California St.	Burbank	Cleanup Program Site	Completed - Case Closed	11/2/1997	LOS ANGELES RWQCB (REGION 4)
SCREENLAND STUDIOS	3800	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	11/16/1990	LOS ANGELES RWQCB (REGION 4)
ZEPCO	101	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	4/13/1989	LOS ANGELES RWQCB (REGION 4)
MOBIL #17-LYY	141	ALAMEDA AVE E	BURBANK	LUST Cleanup Site	Completed - Case Closed	11/26/1997	BURBANK, CITY OF
PHOTO STOP	1121	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	3/22/1988	LOS ANGELES RWQCB (REGION 4)
BOB'S AUTOMOTIVE	2716	N. California	Burbank	Cleanup Program Site	Completed - Case Closed	12/27/1996	LOS ANGELES RWQCB (REGION 4)
MID VALLEY ANODIZING	3075	N. CALIFORNIA ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	11/3/2015	LOS ANGELES RWQCB (REGION 4)
PSI PRODUCTS	3073	N. California St.	Burbank	Cleanup Program Site	Completed - Case Closed	4/26/1988	LOS ANGELES RWQCB (REGION 4)
WALLEN GREEN COLOR LAB.	4200	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	1/28/1992	LOS ANGELES RWQCB (REGION 4)
CAL-LEAF HEALTH PRODUCTS, INC.	1840	Valpreda St.	Burbank	Cleanup Program Site	Completed - Case Closed	3/29/1988	LOS ANGELES RWQCB (REGION 4)
YCM	2312	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	4/13/1989	LOS ANGELES RWQCB (REGION 4)
AL'S AUTOMOTIVE CARE CENTER	4012	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	12/27/1996	LOS ANGELES RWQCB (REGION 4)
MEDIA AVIATION	3000	N. CLYBOURN AVE.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/23/2014	LOS ANGELES RWQCB (REGION 4)
METICULOUS PRODUCTIONS	3115	W. Olive Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	1/30/1995	LOS ANGELES RWQCB (REGION 4)
COPY-R OFFICE SYSTEMS	4540	Chermak St.	Burbank	Cleanup Program Site	Completed - Case Closed	6/8/1990	LOS ANGELES RWQCB (REGION 4)
NORTH LAKE STAGE	1011	N. Lake St.	Burbank	Cleanup Program Site	Completed - Case Closed	11/27/1996	LOS ANGELES RWQCB (REGION 4)
ALWAYS BETTER CLOSETS	2134	Floyd St.	Burbank	Cleanup Program Site	Completed - Case Closed	3/29/1988	LOS ANGELES RWQCB (REGION 4)

K.L.M. WELDING INC.	2113	Kenmere Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	3/29/1988	LOS ANGELES RWQCB (REGION 4)
WORTHINGTON FOUNDRY	2508	N. Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	11/17/1987	LOS ANGELES RWQCB (REGION 4)
BOBBY'S V.W. SERVICE	1525	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	4/13/1989	LOS ANGELES RWQCB (REGION 4)
RYAN HERCO	2509	Winona Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	3/16/1988	LOS ANGELES RWQCB (REGION 4)
MEISSNER MFG. CO. INC.	3750	Cohassett St.	Burbank	Cleanup Program Site	Completed - Case Closed	6/8/1990	LOS ANGELES RWQCB (REGION 4)
GENERAL MOTORS TRAINING CENTER	1105	RIVERSIDE DR.	BURBANK	Cleanup Program Site	Completed - Case Closed	8/25/1995	LOS ANGELES RWQCB (REGION 4)
CITY OF BURBANK FIRE #15	1420	VERDUGO AVE W	BURBANK	LUST Cleanup Site	Completed - Case Closed	11/16/2011	BURBANK, CITY OF
RICH CRAFT	2817	Empire Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	4/19/1988	LOS ANGELES RWQCB (REGION 4)
L & M BLACK OXIDE CO. INC.	1019	VICTORY PL.	BURBANK	Cleanup Program Site	Completed - Case Closed	10/29/2014	LOS ANGELES RWQCB (REGION 4)
MARTINO'S BAKERY, INC.	901	W. ALAMEDA AVE.	BURBANK	Cleanup Program Site	Completed - Case Closed	3/2/2015	LOS ANGELES RWQCB (REGION 4)
UNOCAL #0881	900	BURBANK BLVD W	BURBANK	LUST Cleanup Site	Completed - Case Closed	6/20/1994	LOS ANGELES RWQCB (REGION 4)
SOUND TRAX STUDIOS	2815	W. BURBANK BLVD.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/19/2014	LOS ANGELES RWQCB (REGION 4)
DEVAL WOOD PRODUCTS, INC.	2900	N. Naomi St.	Burbank	Cleanup Program Site	Completed - Case Closed	2/26/1988	LOS ANGELES RWQCB (REGION 4)
WILSON'S METAL EXCHANGE INC.	1062	N. Victory Pl.	Burbank	Cleanup Program Site	Completed - Case Closed	2/5/1990	LOS ANGELES RWQCB (REGION 4)
GREEN, CROWE & COMPANY	3083	N. Lima St.	Burbank	Cleanup Program Site	Completed - Case Closed	2/18/1988	LOS ANGELES RWQCB (REGION 4)
MARICHU INCORPORATED	20	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	1/28/1992	LOS ANGELES RWQCB (REGION 4)
DE KING SCREW PRODUCTS	3330	Burton Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	3/4/1988	LOS ANGELES RWQCB (REGION 4)
ASSOCIATED COMPONENTS MFG. INC.	3030	Empire Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	4/19/1988	LOS ANGELES RWQCB (REGION 4)
G.E. GUNDERSON MANUFACTORING	2540	N. Naomi St.	Burbank	Cleanup Program Site	Completed - Case Closed	12/11/1987	LOS ANGELES RWQCB (REGION 4)
COLOR HOUSE	1814	Valpreda St.	Burbank	Cleanup Program Site	Completed - Case Closed	4/12/1988	LOS ANGELES RWQCB (REGION 4)
STEVEN'S GRINDING	3072	N. Lima St.	Burbank	Cleanup Program Site	Completed - Case Closed	2/11/1988	LOS ANGELES RWQCB (REGION 4)
NATIONAL CAR RENTAL SYSTEM, INC.	4511	Empire Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	4/7/1995	LOS ANGELES RWQCB (REGION 4)
ELECTRO-DIAGNOSTIC INSTRUMENTS	3401	Winona Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	3/16/1988	LOS ANGELES RWQCB (REGION 4)
G.S.M.	2940	N. Naomi St.	Burbank	Cleanup Program Site	Completed - Case Closed	2/26/1988	LOS ANGELES RWQCB (REGION 4)
UNITED OIL #10	280	ALAMEDA AVE W	BURBANK	LUST Cleanup Site	Completed - Case Closed	10/28/2010	LOS ANGELES RWQCB (REGION 4)
B.J. GRINDING CO.	2632	Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	9/16/1996	LOS ANGELES RWQCB (REGION 4)
MAX ERB INSTRUMENT CO.	2112	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	2/6/1989	LOS ANGELES RWQCB (REGION 4)
BESTO MFG.	3051	California St.	Burbank	Cleanup Program Site	Completed - Case Closed	2/18/1988	LOS ANGELES RWQCB (REGION 4)
EVERGREEN CLEANERS	2436	W. Victory Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	1/29/1997	LOS ANGELES RWQCB (REGION 4)
MARATHON FLIGHTRONICS	2511	Winona Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	11/16/1987	LOS ANGELES RWQCB (REGION 4)
AIR HARDWARE INCORPORATED	3082	N. Lima St.	Burbank	Cleanup Program Site	Completed - Case Closed	2/11/1988	LOS ANGELES RWQCB (REGION 4)
NATIONAL BROADCASTING STUDIOS	330	BOB HOPE DR.	BURBANK	Cleanup Program Site	Completed - Case Closed	4/1/2020	LOS ANGELES RWQCB (REGION 4)
TYLIE JONES AND ASSOCIATES	2240	Screenland Dr.	Burbank	Cleanup Program Site	Completed - Case Closed	4/19/1990	LOS ANGELES RWQCB (REGION 4)
CHIEF AUTO BODY AND PAINT	4008	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	8/25/1995	LOS ANGELES RWQCB (REGION 4)
NOVACAP	2221	Empire Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	4/13/1995	LOS ANGELES RWQCB (REGION 4)
ANTIMITE TERMITE & PEST	2320	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	2/23/1989	LOS ANGELES RWQCB (REGION 4)
ISTOPE PRODUCTS CABS	2317	Empire Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	4/12/1988	LOS ANGELES RWQCB (REGION 4)
RELIABLE AUTO REPAIRE	2346	Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	11/6/1987	LOS ANGELES RWQCB (REGION 4)
GSP PRECISION INCORPORATED	2827	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	12/8/1987	LOS ANGELES RWQCB (REGION 4)
SHELL OIL CO.	2501	Victory Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	1/30/1997	LOS ANGELES RWQCB (REGION 4)
POLY-CRAFT SYS-DIV. OF BLINKS	3403	Pacific Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	1/17/1990	LOS ANGELES RWQCB (REGION 4)
HOLLIDAY MFG. COMPANY	3018	N. Hollywood Way	Burbank	Cleanup Program Site	Completed - Case Closed	12/15/1987	LOS ANGELES RWQCB (REGION 4)
LITTLE PRINCE PRODUCTIONS INC.	3809	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	4/18/1989	LOS ANGELES RWQCB (REGION 4)
MOBIL #11-FX4	2005	GLENOAKS BLVD N	BURBANK	LUST Cleanup Site	Completed - Case Closed	5/22/1992	BURBANK, CITY OF
KBC AMERICA INC.	730	N. MARIPOSA ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	11/14/2014	LOS ANGELES RWQCB (REGION 4)
BURBANK FOUNDRY INC.	3083	N. CALIFORNIA ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	8/25/1995	LOS ANGELES RWQCB (REGION 4)
U.S. LABEL CORP.	3100	W.. VANOWEN ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/19/2014	LOS ANGELES RWQCB (REGION 4)
VALLEY ENAMELLING CORP.	2509	ONTARIO ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/23/2014	LOS ANGELES RWQCB (REGION 4)
IKEA Property Site	805	S San Fernando Boulevard	Burbank	Cleanup Program Site	Completed - Case Closed	3/13/2018	LOS ANGELES RWQCB (REGION 4)
BARRY CONTROLS	2323	VALLEY STREET	BURBANK	Cleanup Program Site	Completed - Case Closed	8/28/2014	LOS ANGELES RWQCB (REGION 4)
CITY OF BURBANK	5	OLIVE ST W	BURBANK	LUST Cleanup Site	Completed - Case Closed	6/30/2000	LOS ANGELES RWQCB (REGION 4)
BURBANK ENVIRONMENTAL CENTER	500	FLOWER ST S	BURBANK	LUST Cleanup Site	Completed - Case Closed	7/1/2013	SWRCB
BURBANK COACH WORKS INC.	515	S.. VARNEY ST..	BURBANK	Cleanup Program Site	Completed - Case Closed	12/22/2014	LOS ANGELES RWQCB (REGION 4)
THE HERTZ CORP.	4521	EMPIRE AVE.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/22/2014	LOS ANGELES RWQCB (REGION 4)
MOBIL #11-FD3	1951	HOLLYWOOD WY N	BURBANK	LUST Cleanup Site	Completed - Case Closed	11/5/2001	LOS ANGELES RWQCB (REGION 4)
BARROW FABRICS INC. OF CALIF.	3520	Valhalla Dr.	Burbank	Cleanup Program Site	Completed - Case Closed	1/18/1990	LOS ANGELES RWQCB (REGION 4)
WORLD OIL #12	3805	OLIVE AVE W	BURBANK	LUST Cleanup Site	Completed - Case Closed	7/23/1996	LOS ANGELES RWQCB (REGION 4)
JOHANSON DIELECTRICS	3515	W. Pacific Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	1/16/1990	LOS ANGELES RWQCB (REGION 4)
MIDWEST COMMUNICATION CORP.	1117	ISABEL ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/22/2014	LOS ANGELES RWQCB (REGION 4)
AMER. FINE ARTS FOUNDRY	2520	N.. ONTARIO ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/22/2014	LOS ANGELES RWQCB (REGION 4)
SOUTHERN PACIFIC TRANSPORTATION CO./RAILCHEM, INC	201	NORTH FRONT STREET	BURBANK	Cleanup Program Site	Completed - Case Closed	9/30/2015	LOS ANGELES RWQCB (REGION 4)
ACE CAMERA CLINIC	3506	W. MAGNOLIA BLVD.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/19/2014	LOS ANGELES RWQCB (REGION 4)
BEST CLEANERS	3425	W. Victory Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	5/18/1990	LOS ANGELES RWQCB (REGION 4)
DICK CEPEK	1055	N. Victory Pl.	Burbank	Cleanup Program Site	Completed - Case Closed	3/22/1988	LOS ANGELES RWQCB (REGION 4)
KOESSLER SALES CO.	2010	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	3/31/1989	LOS ANGELES RWQCB (REGION 4)
WELCO ELECTRONICS INC.	4555	Chermak St.	Burbank	Cleanup Program Site	Completed - Case Closed	6/8/1990	LOS ANGELES RWQCB (REGION 4)
CALAM MFG. CO. INC.	2820	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	12/29/1987	LOS ANGELES RWQCB (REGION 4)
NEWPORT ENTERPRISES INC.	2313	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	2/16/1989	LOS ANGELES RWQCB (REGION 4)
BUSY BS UPHOLSTERY	2110	Glenoaks Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	3/16/1988	LOS ANGELES RWQCB (REGION 4)
DAV-LO & SPACE AGE ENG'G	2521	Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	5/3/1988	LOS ANGELES RWQCB (REGION 4)
ACCURATE LASER INTERNATIONAL	3310	Vanowen St.	Burbank	Cleanup Program Site	Completed - Case Closed	1/28/1992	LOS ANGELES RWQCB (REGION 4)
PSI TECHNOLOGIES, INC.	3333	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	1/8/1988	LOS ANGELES RWQCB (REGION 4)
MOLDING CORPORATION OF AMERICA	2701	N. Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	11/18/1987	LOS ANGELES RWQCB (REGION 4)
INTERNATIONAL COLOR IMAGE LABS	2301	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	6/26/1995	LOS ANGELES RWQCB (REGION 4)
OCEAN TECHNOLOGY, INC.	2835	N. Naomi St.	Burbank	Cleanup Program Site	Completed - Case Closed	2/7/1997	LOS ANGELES RWQCB (REGION 4)
FROST INDUST. ELECT.	2430	N. Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	1/6/1988	LOS ANGELES RWQCB (REGION 4)
VIKING INSULATION COMPANY	3014	Floyd St.	Burbank	Cleanup Program Site	Completed - Case Closed	2/4/1995	LOS ANGELES RWQCB (REGION 4)
FLO-SYSTEMS INCORPORATED	3010	Floyd St.	Burbank	Cleanup Program Site	Completed - Case Closed	12/8/1987	LOS ANGELES RWQCB (REGION 4)
A.F. JOHNSON COMPANY, INC.	2706	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	4/10/1989	LOS ANGELES RWQCB (REGION 4)
MIKE DUNCAN'S FOUR X DOCTOR	1031	N. Victory Pl	Burbank	Cleanup Program Site	Completed - Case Closed	6/12/1990	LOS ANGELES RWQCB (REGION 4)
LOCKHEED PLANT B-6	2801	HOLLYWOOD WY N	BURBANK	LUST Cleanup Site	Completed - Case Closed	10/30/1996	LOS ANGELES RWQCB (REGION 4)
UNOCAL #1188	3701	MAGNOLIA BLVD W	BURBANK	LUST Cleanup Site	Completed - Case Closed	5/11/1998	LOS ANGELES RWQCB (REGION 4)
NORMAN ENTERPRISES INC.	2601	Empire Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	4/12/1988	LOS ANGELES RWQCB (REGION 4)
MERCURY AIR SERVICES	4331	EMPIRE AVE W	BURBANK	LUST Cleanup Site	Completed - Case Closed	11/16/2011	BURBANK, CITY OF
PHOTO-SONICS INC.	820	S. MARIPOSA ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	11/15/1991	
AMERICAN INT. RENT-A-CAR	2820	N. Hollywood Way	Burbank	Cleanup Program Site	Completed - Case Closed	11/16/1987	LOS ANGELES RWQCB (REGION 4)
STUDIO VAN & STORAGE	2901	Thornton Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	12/10/1987	LOS ANGELES RWQCB (REGION 4)
PMI PROP MASTER INC	912	ISABEL ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/22/1995	LOS ANGELES RWQCB (REGION 4)
ARTCRAFT PLATING	76	E. SANTA ANITA AVE.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/23/2014	LOS ANGELES RWQCB (REGION 4)
TECH-GRAPHIC	315	SOUTH FLOWER STREET	BURBANK	Cleanup Program Site	Completed - Case Closed	5/17/2017	LOS ANGELES RWQCB (REGION 4)
FRANK MFG. CO.	1118	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	4/13/1989	LOS ANGELES RWQCB (REGION 4)
UNATECH MFG. AND SALES CORP.	2711	Empire Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	4/19/1988	LOS ANGELES RWQCB (REGION 4)
SHELL	140	ALAMEDA AVE E	BURBANK	LUST Cleanup Site	Completed - Case Closed	1/28/1986	BURBANK, CITY OF
SPENCE ELECTROPLATING COMPANY	1001	CHESTNUT ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	11/19/2014	LOS ANGELES RWQCB (REGION 4)
AIRMOTIVE, INC.	3400	Winona Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	11/18/1987	LOS ANGELES RWQCB (REGION 4)
BARRY CONTROLS	4400	Vanowen St.	Burbank	Cleanup Program Site	Completed - Case Closed	5/18/1990	LOS ANGELES RWQCB (REGION 4)
WARNER BROTHER STUDIOS	4000	WARNER BLVD	BURBANK	LUST Cleanup Site	Completed - Case Closed	1/21/1998	LOS ANGELES RWQCB (REGION 4)
ED & D ELECTRONICS, INC.	3110	Winona Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	12/10/1987	LOS ANGELES RWQCB (REGION 4)
AUTOMOTIVE ASSOCIATES	2227	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	4/13/1989	LOS ANGELES RWQCB (REGION 4)
BRU-STER PRINTING CO / G.R. HUTT	1953	Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	1/2/1985	LOS ANGELES RWQCB (REGION 4)
HESS RADIATOR SERVICE	3512	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	4/18/1989	LOS ANGELES RWQCB (REGION 4)

HOBAK PRECISION METALS	2529	Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	11/16/1987	LOS ANGELES RWQCB (REGION 4)
HYDRA-ELECTRIC CO.	3151	Kenwood St.	Burbank	Cleanup Program Site	Completed - Case Closed	7/10/1997	LOS ANGELES RWQCB (REGION 4)
AIRCRAFT GOVERNOR INC.	4110	Vanowen Pl.	Burbank	Cleanup Program Site	Completed - Case Closed	5/18/1990	LOS ANGELES RWQCB (REGION 4)
IMPORTS UNLIMITED	2204	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	8/7/1995	LOS ANGELES RWQCB (REGION 4)
FEDERAL EXPRESS	3405	Pacific Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	2/4/1992	LOS ANGELES RWQCB (REGION 4)
MIYANO MACHINERY USA INC.	2907	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	12/9/1987	LOS ANGELES RWQCB (REGION 4)
SAWYER PRECISION SHEET METAL	3066	N. Lima St.	Burbank	Cleanup Program Site	Completed - Case Closed	3/22/1988	LOS ANGELES RWQCB (REGION 4)
MAASDAM POW'R PULL-INC.	2212	Kenmere Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	6/7/1990	LOS ANGELES RWQCB (REGION 4)
TRI-WESTERN DATA SYSTEMS INC.	2309	San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	3/22/1988	LOS ANGELES RWQCB (REGION 4)
FORTING LAMINATING CORP.	4114	Vanowen Pl.	Burbank	Cleanup Program Site	Completed - Case Closed	10/9/1990	LOS ANGELES RWQCB (REGION 4)
RYAN HERCO PRODUCTS CORP.	2509	N. Naomi St.	Burbank	Cleanup Program Site	Completed - Case Closed	11/17/1987	LOS ANGELES RWQCB (REGION 4)
LILLY PACKING CO.	1210	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	3/8/1989	LOS ANGELES RWQCB (REGION 4)
MONARCH ATHLETIC SUPPLY	1040	N. Victory Pl.	Burbank	Cleanup Program Site	Completed - Case Closed	5/25/1989	LOS ANGELES RWQCB (REGION 4)
F & F AIR PARTS	2211	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	2/6/1989	LOS ANGELES RWQCB (REGION 4)
BROWNFIELD COMPANY INC.	3062	N. Lima St.	Burbank	Cleanup Program Site	Completed - Case Closed	2/26/1988	LOS ANGELES RWQCB (REGION 4)
MASTERGAGE & TOOL CO. INC.	2617	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	11/16/1987	LOS ANGELES RWQCB (REGION 4)
ELECTRORENT	4514	Empire Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	10/9/1990	LOS ANGELES RWQCB (REGION 4)
BUDGET RENT-A-CAR	2220	N. HOLLYWOOD WAY.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/22/2014	LOS ANGELES RWQCB (REGION 4)
MODERN ALBUM OF CALIF.	3116	Vanowen St.	Burbank	Cleanup Program Site	Completed - Case Closed	9/13/1990	LOS ANGELES RWQCB (REGION 4)
QUAD COLOR	2124	Floyd St.	Burbank	Cleanup Program Site	Completed - Case Closed	5/10/1988	LOS ANGELES RWQCB (REGION 4)
AVIBANK MFG., INC.	210	VICTORY BLVD S	BURBANK	LUST Cleanup Site	Completed - Case Closed	5/6/2009	BURBANK, CITY OF
TOSCO S.S. #1999	1976	HOLLYWOOD WAY	BURBANK	LUST Cleanup Site	Completed - Case Closed	11/5/2001	LOS ANGELES RWQCB (REGION 4)
AUTO MATTERS	2812	N. SAN FERNANDO BLVD.	BURBANK	Cleanup Program Site	Completed - Case Closed	6/16/2006	LOS ANGELES RWQCB (REGION 4)
BURBANK PUBLIC SERVICE DEPT.	164	MAGNOLIA BLVD W	BURBANK	LUST Cleanup Site	Completed - Case Closed	11/16/2011	BURBANK, CITY OF
LOCKHEED PLANT B-1	17505	VICTORY PL	BURBANK	LUST Cleanup Site	Completed - Case Closed	6/29/1995	LOS ANGELES RWQCB (REGION 4)
CHEVRON #9-0839	2650	HOLLYWOOD WY N	BURBANK	LUST Cleanup Site	Completed - Case Closed	10/4/1996	LOS ANGELES RWQCB (REGION 4)
ARCO #5039	201	ALAMEDA AVE W	BURBANK	LUST Cleanup Site	Completed - Case Closed	7/20/2004	LOS ANGELES RWQCB (REGION 4)
SURFACE FINISHING	2501	Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	1/30/1997	LOS ANGELES RWQCB (REGION 4)
FLO CONTROL	3210	Winona Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	1/6/1988	LOS ANGELES RWQCB (REGION 4)
FORMER LOCKHEED PLANT B-5	4207	EMPIRE AVE.	BURBANK	Cleanup Program Site	Completed - Case Closed	6/29/2004	LOS ANGELES RWQCB (REGION 4)
CORDELL INDUST. INC.	3079	Lima St.	Burbank	Cleanup Program Site	Completed - Case Closed	9/8/1988	LOS ANGELES RWQCB (REGION 4)
TONY'S AUTO REPAIR	2420	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	3/31/1989	LOS ANGELES RWQCB (REGION 4)
ACSCO PRODUCTS, INCORPORATED	313	N. LAKE ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/19/2014	LOS ANGELES RWQCB (REGION 4)
SIMCO CORPORATION	2201	Hollywood Way	Burbank	Cleanup Program Site	Completed - Case Closed	6/8/1990	LOS ANGELES RWQCB (REGION 4)
INDUSTRIAL ENGRAVING CO. INC.	3808	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	4/18/1989	LOS ANGELES RWQCB (REGION 4)
AGFA-GEVAERT, INC.	914	N. VICTORY BLVD.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/22/2014	LOS ANGELES RWQCB (REGION 4)
DELTA SCIENTIFIC CORP.	2033	N. Lincoln St.	Burbank	Cleanup Program Site	Completed - Case Closed	4/5/1988	LOS ANGELES RWQCB (REGION 4)
AIRLINE PARTS COMPANY INC.	3050	N. Lima St.	Burbank	Cleanup Program Site	Completed - Case Closed	2/26/1988	LOS ANGELES RWQCB (REGION 4)
PRODUCTION GRIP EQUIPMENT INC.	3321	Burton Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	12/29/1987	LOS ANGELES RWQCB (REGION 4)
WEST COAST ELECTRIC SALES	2802	N. Naomi St.	Burbank	Cleanup Program Site	Completed - Case Closed	2/26/1987	LOS ANGELES RWQCB (REGION 4)
YCM	2316	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	5/3/1989	LOS ANGELES RWQCB (REGION 4)
RUFFS AUTOMOTIVE SPECIALISTS	3711	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	5/2/1997	LOS ANGELES RWQCB (REGION 4)
ROYAL DIE CASTING	1816	N. Keystone St.	Burbank	Cleanup Program Site	Completed - Case Closed	1/30/1997	LOS ANGELES RWQCB (REGION 4)
EVELYN'S BEAUTY SALON	1308	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	5/25/1989	LOS ANGELES RWQCB (REGION 4)
CELEBRITY CLEANERS	1121	N. San Fernando Rd.	Burbank	Cleanup Program Site	Completed - Case Closed	3/14/1995	LOS ANGELES RWQCB (REGION 4)
AMBROSE TERMITE CONTROL CO.	3402	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	4/18/1989	LOS ANGELES RWQCB (REGION 4)
INDUSTRY SAW BLADES INC.	2811	N. Lima St.	Burbank	Cleanup Program Site	Completed - Case Closed	12/8/1987	LOS ANGELES RWQCB (REGION 4)
ELECTROPEDIC	3223	Burton Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	1/12/1988	LOS ANGELES RWQCB (REGION 4)
LOVIE, HAL PRINTING	2609	Wyoming Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	4/19/1990	LOS ANGELES RWQCB (REGION 4)
MODE O'DAY	2130	Hollywood Way	Burbank	Cleanup Program Site	Completed - Case Closed	4/19/1990	LOS ANGELES RWQCB (REGION 4)
CONRAD DRY CLEANER	4416	W. Victory Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	5/18/1990	LOS ANGELES RWQCB (REGION 4)
ZAG MACHINING	2523	N. Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	11/17/1987	LOS ANGELES RWQCB (REGION 4)
SOUND TRAX STUDIOS WAREHOUSE	2821	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	1/28/1992	LOS ANGELES RWQCB (REGION 4)
K & L ANODIZING CORP.	1200	S. VICTORY BLVD.	BURBANK	Cleanup Program Site	Completed - Case Closed	11/6/1995	LOS ANGELES RWQCB (REGION 4)
UNI-PLATE INCORPORATED	6	W. BURBANK BLVD.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/23/2014	LOS ANGELES RWQCB (REGION 4)
ANDREW JERGENS COMPANY	99	VERDUGO AVE W	BURBANK	LUST Cleanup Site	Completed - Case Closed	5/29/1996	BURBANK, CITY OF
JOHN'S MOBIL	2501	MAGNOLIA BLVD W	BURBANK	LUST Cleanup Site	Completed - Case Closed	5/28/2003	LOS ANGELES RWQCB (REGION 4)
Former B-G Detection Service Facility	3071	N. Lima Street	Burbank	Cleanup Program Site	Completed - Case Closed	3/25/2013	LOS ANGELES RWQCB (REGION 4)
VERADYNE CORP.	330	N. VICTORY BLVD.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/22/2014	LOS ANGELES RWQCB (REGION 4)
BURBANK STEEL TREATING, INC.	415	S. VARNEY ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/22/2014	LOS ANGELES RWQCB (REGION 4)
ROCK SOLID	801	S. MAIN ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/22/2014	LOS ANGELES RWQCB (REGION 4)
PREMIER DRY CLEANING	3238	N. SAN FERNANDO BLVD.	BURBANK	Cleanup Program Site	Completed - Case Closed	4/15/1988	LOS ANGELES RWQCB (REGION 4)
WEBER AIRCRAFT	2820	ONTARIO ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	10/19/2019	LOS ANGELES RWQCB (REGION 4)
MASTERCRAFT METAL	1010	VICTORY PL.	BURBANK	Cleanup Program Site	Completed - Case Closed	2/14/1997	LOS ANGELES RWQCB (REGION 4)
SATURN FASTENERS	425	S.. VARNEY ST..	BURBANK	Cleanup Program Site	Completed - Case Closed	12/23/2014	LOS ANGELES RWQCB (REGION 4)
THE IDEA FACTORY	1114	Burbank Blvd. Suite C	Burbank	Cleanup Program Site	Completed - Case Closed	3/31/1989	LOS ANGELES RWQCB (REGION 4)
MANENTE SELF SERVE STATION	2829	N. Glenoaks Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	9/25/1989	LOS ANGELES RWQCB (REGION 4)
PLASTI WARE COMPANY	1033	N. Victory Pl.	Burbank	Cleanup Program Site	Completed - Case Closed	5/25/1989	LOS ANGELES RWQCB (REGION 4)
RAINBOW PUBLICATIONS INC.	1813	Victory Pl.	Burbank	Cleanup Program Site	Completed - Case Closed	3/22/1988	LOS ANGELES RWQCB (REGION 4)
SYD'S ELECTRICAL COMPANY	1610	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	2/6/1989	LOS ANGELES RWQCB (REGION 4)
SANDS DRAPERY INC.	4321	MAGNOLIA BLVD W	BURBANK	LUST Cleanup Site	Completed - Case Closed	7/29/1996	LOS ANGELES RWQCB (REGION 4)
SIDMAR PRINTING CO.	618	Birmingham Rd.	Burbank	Cleanup Program Site	Completed - Case Closed	3/22/1988	LOS ANGELES RWQCB (REGION 4)
BERC BROADCAST EQUIPMENT CO.	4545	Chermak St.	Burbank	Cleanup Program Site	Completed - Case Closed	2/13/1991	LOS ANGELES RWQCB (REGION 4)
C R SMOKE & MFG.	1448	N. Myers St.	Burbank	Cleanup Program Site	Completed - Case Closed	3/8/1989	LOS ANGELES RWQCB (REGION 4)
IRVINE OPTICAL INCORPORATED	3140	Clybourn Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	6/7/1990	LOS ANGELES RWQCB (REGION 4)
A& L GRAPHICO., INC.	2070	Floyd St.	Burbank	Cleanup Program Site	Completed - Case Closed	3/29/1988	LOS ANGELES RWQCB (REGION 4)
MYERS CLEANERS & LAUNDRY	1907	N. Glenoaks Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	3/17/1995	LOS ANGELES RWQCB (REGION 4)
CALTRANS-BUENA VISTA MAINT.	2600	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	11/16/1987	LOS ANGELES RWQCB (REGION 4)
IWERKS ENTERTAINMENT INC.	4540	Valerio St.	Burbank	Cleanup Program Site	Completed - Case Closed	6/14/1990	LOS ANGELES RWQCB (REGION 4)
ALLEN'S #2 CLEANERS	1516	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	3/31/1994	LOS ANGELES RWQCB (REGION 4)
LARSON SOUND CENTER	4109	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	6/7/1990	LOS ANGELES RWQCB (REGION 4)
K-BEL TOOL & MFG. CO.	2935	N. Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	2/18/1988	LOS ANGELES RWQCB (REGION 4)
PERMALUSTER INC.	1844	N. Keystone St.	Burbank	Cleanup Program Site	Completed - Case Closed	4/26/1988	LOS ANGELES RWQCB (REGION 4)
KENNY'S PLUMBING SUPPLY	3314	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	11/16/1987	LOS ANGELES RWQCB (REGION 4)
AMERICAN FABRICATION	4200	Vanowen St.	Burbank	Cleanup Program Site	Completed - Case Closed	10/9/1990	LOS ANGELES RWQCB (REGION 4)
WESSEL AIR CONDITIONING	3228	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	11/16/1987	LOS ANGELES RWQCB (REGION 4)
BANGS MANUFACTURING	1601	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	6/6/1990	LOS ANGELES RWQCB (REGION 4)
VICTORY SILK SCREEN PROCESSING	2701	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	4/10/1989	LOS ANGELES RWQCB (REGION 4)
N B INDUSTRIES	2301	Empire Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	4/12/1988	LOS ANGELES RWQCB (REGION 4)
ST. JOSEPH MED CTR.	501	S. BUENA VISTA ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/22/2014	LOS ANGELES RWQCB (REGION 4)
AERO QUALITY SALES	2821	Burton Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	1/12/1988	LOS ANGELES RWQCB (REGION 4)
ARIES SUPPLY & EQUIPMENT CO.	3000	Floyd St.	Burbank	Cleanup Program Site	Completed - Case Closed	12/8/1987	LOS ANGELES RWQCB (REGION 4)
OLIVE ARCO	1820	OLIVE AVE W	BURBANK	LUST Cleanup Site	Completed - Case Closed	1/31/2002	BURBANK, CITY OF
FIBER RESIN CORP.	170	W. PROVIDENCIA AVE.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/23/2014	LOS ANGELES RWQCB (REGION 4)
FOTO-KEM INDUSTRIES,INC.	2800	W. OLIVE AVE.	BURBANK	Cleanup Program Site	Completed - Case Closed	2/11/2005	LOS ANGELES RWQCB (REGION 4)
TEXACO	2616	GLENOAKS BLVD N	BURBANK	LUST Cleanup Site	Completed - Case Closed	11/5/2001	LOS ANGELES RWQCB (REGION 4)
Mestas Plating	108	East Prospect Avenue	Burbank	Cleanup Program Site	Completed - Case Closed	11/25/2015	LOS ANGELES RWQCB (REGION 4)
BURBANK GATEWAY CENTER	0	3RD & MAGNOLIA BLVD.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/12/2014	LOS ANGELES RWQCB (REGION 4)
SANDS DRAPER, INC.	4321	MAGNOLIA BLVD W	BURBANK	LUST Cleanup Site	Completed - Case Closed	5/28/2003	LOS ANGELES RWQCB (REGION 4)
TRANSCORD ENTERPRISES	2890	Empire Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	4/19/1988	LOS ANGELES RWQCB (REGION 4)
DIGILITH	2720	W. BURBANK BLVD.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/23/2003	

CALTRON CO.	2118	Jannetta Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	3/29/1988	LOS ANGELES RWQCB (REGION 4)
KONOGRAPHICS, INC.	2521	Empire Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	4/19/1988	LOS ANGELES RWQCB (REGION 4)
ADVANCED ADVERTISING	3129	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	3/16/1993	LOS ANGELES RWQCB (REGION 4)
MERCURY REFUELING	4513	Empire Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	1/30/1997	LOS ANGELES RWQCB (REGION 4)
ADLER SCREW PRODUCTS INC.	3047	N. California St.	Burbank	Cleanup Program Site	Completed - Case Closed	7/30/1996	LOS ANGELES RWQCB (REGION 4)
U.S. INSTRUMENT RENTALS	4525	Valerio St.	Burbank	Cleanup Program Site	Completed - Case Closed	12/6/1990	LOS ANGELES RWQCB (REGION 4)
HURON MACHINE PRODUCTS INC.	2805	N. Glenoaks Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	4/16/1988	LOS ANGELES RWQCB (REGION 4)
COMMUNITY AUTO BODY	300	S. LAKE ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	1/30/1997	LOS ANGELES RWQCB (REGION 4)
BREMNER PRINTING	3419	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	1/18/1990	LOS ANGELES RWQCB (REGION 4)
WESTERN LIGHTING INDUST. INC.	3540	Valhalla Dr.	Burbank	Cleanup Program Site	Completed - Case Closed	1/18/1990	LOS ANGELES RWQCB (REGION 4)
SARQUIZ CHEVRON (FORMER MEPCO SERVICE STA.)	2501	OLIVE AVE	BURBANK	LUST Cleanup Site	Completed - Case Closed	12/22/2004	LOS ANGELES RWQCB (REGION 4)
JOHANSON DIELECTRICS	3113	W. Pacific Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	2/3/1990	LOS ANGELES RWQCB (REGION 4)
VISTA CLEANERS	2411	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	10/15/1997	LOS ANGELES RWQCB (REGION 4)
J. PIEDMONT ADVERTISING INC.	3311	Winona Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	12/10/1987	LOS ANGELES RWQCB (REGION 4)
FAIR WELDING	2523	N. Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	5/3/1988	LOS ANGELES RWQCB (REGION 4)
MEDICI MARBLE & GRANITE INC.	3099	N. California St.	Burbank	Cleanup Program Site	Completed - Case Closed	2/26/1988	LOS ANGELES RWQCB (REGION 4)
WILLIAMS ENGRAVING CO.	3101	Valhalla Dr.	Burbank	Cleanup Program Site	Completed - Case Closed	1/30/1997	LOS ANGELES RWQCB (REGION 4)
MATTHEWS STUDIO EQUIPMENT	2015	Lincoln St.	Burbank	Cleanup Program Site	Completed - Case Closed	4/5/1988	LOS ANGELES RWQCB (REGION 4)
QUALITY HEAT TREATING	3305	Burton Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	9/4/1996	LOS ANGELES RWQCB (REGION 4)
UNITED TECHNOLOGIES/CARRIER	2625	Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	1/8/1988	LOS ANGELES RWQCB (REGION 4)
MEDLON	3325	Glenoaks Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	3/31/1994	LOS ANGELES RWQCB (REGION 4)
HAL LOVIE PRINTING	2609	W. Wyoming Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	4/19/1990	LOS ANGELES RWQCB (REGION 4)
CLEMCO	2911	Winona Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	11/19/1990	LOS ANGELES RWQCB (REGION 4)
OTTO SERVICE	2014	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	2/6/1989	LOS ANGELES RWQCB (REGION 4)
ASII TANK FARM (SITE #1)	2761	HOLLYWOOD WAY	BURBANK	LUST Cleanup Site	Completed - Case Closed	11/5/2001	LOS ANGELES RWQCB (REGION 4)
LA SIGN & GRAPHICS	100	E. VERDUGO AVE.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/23/2014	LOS ANGELES RWQCB (REGION 4)
UNITED OIL #14	2500	MAGNOLIA BLVD W	BURBANK	LUST Cleanup Site	Completed - Case Closed	10/19/1998	BURBANK, CITY OF
ABBY RENTS	2333	N. VALLEY ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/23/2014	LOS ANGELES RWQCB (REGION 4)
SHELL SERVICE STATION	2501	VICTORY BLVD W	BURBANK	LUST Cleanup Site	Completed - Case Closed	11/5/2001	LOS ANGELES RWQCB (REGION 4)
CHEVRON #9-610	3610	BURBANK BLVD	BURBANK	LUST Cleanup Site	Completed - Case Closed	4/30/1991	BURBANK, CITY OF
Lyn-Tron, Incorporated	3150	N. Damon Way	Burbank	Cleanup Program Site	Completed - Case Closed	12/16/2013	LOS ANGELES RWQCB (REGION 4)
SCIENTIFIC CUTTING TOOLS	3012	Hollywood Way	Burbank	Cleanup Program Site	Completed - Case Closed	11/16/1987	LOS ANGELES RWQCB (REGION 4)
A & T ENGINEERING	2609	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	1/12/1988	LOS ANGELES RWQCB (REGION 4)
CARTERS SUPPLY INC.	2504	Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	11/18/1987	LOS ANGELES RWQCB (REGION 4)
CHEVRON #9-5538	923	VICTORY BLVD N	BURBANK	LUST Cleanup Site	Completed - Case Closed	11/5/2001	LOS ANGELES RWQCB (REGION 4)
SAM ENTERPRISES	1834	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	2/16/1989	LOS ANGELES RWQCB (REGION 4)
PARDE AUTO BROKERS	3226	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	1/30/1997	LOS ANGELES RWQCB (REGION 4)
CRICKET WEST DRY CLEANERS	2320	N. Keeler St.	Burbank	Cleanup Program Site	Completed - Case Closed	7/22/1997	LOS ANGELES RWQCB (REGION 4)
A.G.L. RADIATOR SERVICE	1411	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	3/8/1989	LOS ANGELES RWQCB (REGION 4)
STUDIO SPECTRUM INCORPORATED	1056	N. Lake St.	Burbank	Cleanup Program Site	Completed - Case Closed	12/20/1989	LOS ANGELES RWQCB (REGION 4)
CHEVRON #9-610	3610	BURBANK BLVD	BURBANK	LUST Cleanup Site	Completed - Case Closed	5/16/2003	LOS ANGELES RWQCB (REGION 4)
PSI	3000	N. Hollywood Way	Burbank	Cleanup Program Site	Completed - Case Closed	12/6/1990	LOS ANGELES RWQCB (REGION 4)
SATELLITE RECORDS	2325	W. Victory Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	4/13/1989	LOS ANGELES RWQCB (REGION 4)
SULLIVAN BLUTH ANIMATION	4209	Vanowen Pl.	Burbank	Cleanup Program Site	Completed - Case Closed	5/25/1990	LOS ANGELES RWQCB (REGION 4)
FIVE MFG. CO.	1855	Victory Pl.	Burbank	Cleanup Program Site	Completed - Case Closed	5/3/1988	LOS ANGELES RWQCB (REGION 4)
MATTHEW STUDIO EQUIPMENT, INC.	2021	N. Lincoln St.	Burbank	Cleanup Program Site	Completed - Case Closed	4/5/1988	LOS ANGELES RWQCB (REGION 4)
IMPERIAL FILM SERVICES, INC.	3160	Damon Way	Burbank	Cleanup Program Site	Completed - Case Closed	6/8/1990	LOS ANGELES RWQCB (REGION 4)
WALT DISNEY STUDIOS	500	SOUTH BUENA VISTA STREET	BURBANK	Cleanup Program Site	Completed - Case Closed	8/24/2012	LOS ANGELES RWQCB (REGION 4)
ARTISANA SIGNS	4212	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	6/7/1990	LOS ANGELES RWQCB (REGION 4)
ALLEN BOLT & INDUSTRIAL SUPPLY	1711	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	2/6/1989	LOS ANGELES RWQCB (REGION 4)
HOSPITALITY CONSTRUCTION CORP.	4111	Vanowen Pl.	Burbank	Cleanup Program Site	Completed - Case Closed	4/27/1990	LOS ANGELES RWQCB (REGION 4)
Top Rank Collision	163	West Magnolia Blvd	Burbank	Cleanup Program Site	Completed - Case Closed	9/12/2017	LOS ANGELES RWQCB (REGION 4)
GENERAL AUTOMATION	2520	Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	11/16/1987	LOS ANGELES RWQCB (REGION 4)
G & B ENTERPRISE METAL POL.	2520	Ontario St. Suite C-1	Burbank	Cleanup Program Site	Completed - Case Closed	10/22/1991	LOS ANGELES RWQCB (REGION 4)
ANAHEIM PET & AQUARIUM	3314	Burton Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	12/10/1987	LOS ANGELES RWQCB (REGION 4)
RAMADA INN	2900	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	8/15/1990	LOS ANGELES RWQCB (REGION 4)
QUEEN CITY STEEL INCORPORATED	2636	Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	11/17/1987	LOS ANGELES RWQCB (REGION 4)
R. SCHER & ASSOCIATES INC.	2516	Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	11/6/1987	LOS ANGELES RWQCB (REGION 4)
CONNELL PROCESSING INC.	3080	N. AVON ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	3/27/1987	LOS ANGELES RWQCB (REGION 4)
D S D AUTOMOTIVE	4212	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	1/30/1997	LOS ANGELES RWQCB (REGION 4)
RAPID GAS #43	250	GLENOAKS BLVD S	BURBANK	LUST Cleanup Site	Completed - Case Closed	11/5/2010	LOS ANGELES RWQCB (REGION 4)
BICO, INC.	3116	Valhalla Dr.	Burbank	Cleanup Program Site	Completed - Case Closed	6/25/1990	LOS ANGELES RWQCB (REGION 4)
CALIFORNIA NATIONAL GUARD	3800	Valhalla Dr.	Burbank	Cleanup Program Site	Completed - Case Closed	12/27/1996	LOS ANGELES RWQCB (REGION 4)
GTR MARBLE INC.	1102	ISABEL ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	10/23/1989	DEPARTMENT OF TOXIC SUBSTANCES CONTROL
QUALITY READY MIX	1061	N. Victory Pl.	Burbank	Cleanup Program Site	Completed - Case Closed	12/27/1996	LOS ANGELES RWQCB (REGION 4)
VECTOR INTERIOR CONTRACTING	2115	Kenmere Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	3/29/1988	LOS ANGELES RWQCB (REGION 4)
LIGHTSTORM ENTERTAINMENT, INC.	3100	Damon Way	Burbank	Cleanup Program Site	Completed - Case Closed	8/15/1990	LOS ANGELES RWQCB (REGION 4)
QUEEN CITY IRON & METAL CO.	2801	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	3/16/1988	LOS ANGELES RWQCB (REGION 4)
JANCO CORPORATION	3111	WINONA AVE.	BURBANK	Cleanup Program Site	Completed - Case Closed	3/2/2015	LOS ANGELES RWQCB (REGION 4)
LEE FILTERS	2237	HOLLYWOOD WAY.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/19/2014	LOS ANGELES RWQCB (REGION 4)
HAMOUI MOBIL	349	GLENOAKS BLVD S	BURBANK	LUST Cleanup Site	Completed - Case Closed	10/30/1995	BURBANK, CITY OF
LOCKHEED PLANT A-1-F	2555	HOLLYWOOD WY	BURBANK	LUST Cleanup Site	Completed - Case Closed	5/1/1994	LOS ANGELES RWQCB (REGION 4)
AL-SAL OIL CO #3	2421	VICTORY BLVD W	BURBANK	LUST Cleanup Site	Completed - Case Closed	10/19/1998	BURBANK, CITY OF
IMAGE LABORATORIES	3611	N. SAN FERNANDO BLVD.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/31/1996	LOS ANGELES RWQCB (REGION 4)
JAY-DEE AIRCRAFT SUPPLY CO.INC	2921	THORNTON AVE.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/19/2014	LOS ANGELES RWQCB (REGION 4)
AM/PM DOOR REPAIR	80	E. SANTA ANITA AVE.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/22/2014	LOS ANGELES RWQCB (REGION 4)
MOBIL #11-FX4	2005	GLENOAKS BLVD N	BURBANK	LUST Cleanup Site	Completed - Case Closed	11/5/2001	LOS ANGELES RWQCB (REGION 4)
CRE	116	PROSPECT AVE.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/22/2014	LOS ANGELES RWQCB (REGION 4)
LOCKHEED A-1 EAST, BLDG 90	3110	W. THORNTON AVE.	BURBANK	Cleanup Program Site	Completed - Case Closed	8/31/2016	LOS ANGELES RWQCB (REGION 4)
EDGCOMB ENGINEERING	1112	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	3/31/1989	LOS ANGELES RWQCB (REGION 4)
SPEC PLASTICS	2445	Winona Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	3/16/1988	LOS ANGELES RWQCB (REGION 4)
KEIM PRECISION MIRRORS CORP.	2117	Empire Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	4/12/1988	LOS ANGELES RWQCB (REGION 4)
MACH TECH, INC.	1021	N. Victory Pl.	Burbank	Cleanup Program Site	Completed - Case Closed	5/25/1989	LOS ANGELES RWQCB (REGION 4)
SHELTER MEDIA COMM., INC.	2514	N. Naomi St.	Burbank	Cleanup Program Site	Completed - Case Closed	11/17/1987	LOS ANGELES RWQCB (REGION 4)
DELTA SCIENTIFIC CORP.	2031	Lincoln Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	4/5/1988	LOS ANGELES RWQCB (REGION 4)
BASKIN ROBBINS	1201	S. Victory Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	1/30/1997	LOS ANGELES RWQCB (REGION 4)
LEFLER MFG. & DEVELOPMENT	1845	Victory Pl.	Burbank	Cleanup Program Site	Completed - Case Closed	2/24/1995	LOS ANGELES RWQCB (REGION 4)
CARTER VSP AIRPORT PARKING	2616	N. Hollywood Way	Burbank	Cleanup Program Site	Completed - Case Closed	12/11/1987	LOS ANGELES RWQCB (REGION 4)
HURST LABELING SYSTEMS	3625	W. Pacific Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	12/31/1996	LOS ANGELES RWQCB (REGION 4)
RASMUSSEN'S GARAGE	110	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	5/2/1990	LOS ANGELES RWQCB (REGION 4)
CANNON EQUIPMENT INC.	1120, 1122	Scott Rd.	Burbank	Cleanup Program Site	Completed - Case Closed	5/3/1988	LOS ANGELES RWQCB (REGION 4)
AUDIOTEK CORPORATION	2025	N. Lincoln St.	Burbank	Cleanup Program Site	Completed - Case Closed	9/6/1988	LOS ANGELES RWQCB (REGION 4)
B.M. PEARCE COMPANY	107	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	4/13/1989	LOS ANGELES RWQCB (REGION 4)
CALIFORNIA TERMITE & PEST	124	E. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	10/9/1990	LOS ANGELES RWQCB (REGION 4)
SPRINGER COMPANY INTERNATIONAL	2101	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	10/12/1989	LOS ANGELES RWQCB (REGION 4)
VENTS WALLPAPER & BLINDS	1509	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	5/3/1988	LOS ANGELES RWQCB (REGION 4)
COLOR MEDIA	2932	N. Naomi St.	Burbank	Cleanup Program Site	Completed - Case Closed	4/27/1994	LOS ANGELES RWQCB (REGION 4)
LOCKHEED PLANT A-1	2555	HOLLYWOOD WY N	BURBANK	LUST Cleanup Site	Completed - Case Closed	5/1/1994	LOS ANGELES RWQCB (REGION 4)
WESTLAND GRAPHICS	1400	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	3/31/1989	LOS ANGELES RWQCB (REGION 4)
J & J AUTO BODY	2717	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	4/10/1989	LOS ANGELES RWQCB (REGION 4)
SAMURAI SIGNS	1427	N. Avon St.	Burbank	Cleanup Program Site	Completed - Case Closed	10/9/1990	LOS ANGELES RWQCB (REGION 4)

ASHMAN SERVICES	1514	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	10/2/1989	LOS ANGELES RWQCB (REGION 4)
SCREEN GRAPHICS CO. INC.	3216	Valhalla Dr.	Burbank	Cleanup Program Site	Completed - Case Closed	6/11/1995	LOS ANGELES RWQCB (REGION 4)
WARNER BROTHER STUDIOS	4000	WARNER BLVD	BURBANK	LUST Cleanup Site	Completed - Case Closed	5/28/2003	LOS ANGELES RWQCB (REGION 4)
DIALYSIS AT HOME	4530	Chermak St.	Burbank	Cleanup Program Site	Completed - Case Closed	1/18/1990	LOS ANGELES RWQCB (REGION 4)
GM SIGNS CORP.	3334	Burton Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	1/30/1997	LOS ANGELES RWQCB (REGION 4)
KEYSTONE METAL PRODUCTS	2711	California St.	Burbank	Cleanup Program Site	Completed - Case Closed	1/12/1988	LOS ANGELES RWQCB (REGION 4)
E.I.DUPONT DE NEMOURS & CO.INC	3300	PACIFIC AVE.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/23/2014	LOS ANGELES RWQCB (REGION 4)
CAL-AIR PROCESSING	3014	N. HOLLYWOOD WAY.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/23/2014	LOS ANGELES RWQCB (REGION 4)
PUBLIC WORKS YARD	124	LAKE ST S	BURBANK	LUST Cleanup Site	Completed - Case Closed	1/22/2013	SWRCB
BOCK COMPANY	132	PROVIDENCIA AVE W	BURBANK	LUST Cleanup Site	Completed - Case Closed	10/26/2011	BURBANK, CITY OF
CONNELL PROCESSING INC.	3094	N. AVON ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	3/27/1987	LOS ANGELES RWQCB (REGION 4)
SUN BANK	3110	WINONA AVE	BURBANK	LUST Cleanup Site	Completed - Case Closed	11/5/2001	LOS ANGELES RWQCB (REGION 4)
MOBIL	439	ALAMEDA AVE W	BURBANK	LUST Cleanup Site	Completed - Case Closed	12/16/1997	LOS ANGELES RWQCB (REGION 4)
VORELCO INC.	825	N. VICTORY BLVD.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/12/1991	LOS ANGELES RWQCB (REGION 4)
COMCO, INC	2151	NORTH LINCOLN STREET	BURBANK	Cleanup Program Site	Completed - Case Closed	9/22/2015	LOS ANGELES RWQCB (REGION 4)
WARNER BROTHERS	3701	OAK ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/12/2014	LOS ANGELES RWQCB (REGION 4)
PROCESS CONTROL LABS	2520	N. ONTARIO ST. #D	BURBANK	Cleanup Program Site	Completed - Case Closed	8/25/1995	LOS ANGELES RWQCB (REGION 4)
THE PATRICK TATOPOULOS DESIGNS	1951	ONTARIO ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	8/25/1995	LOS ANGELES RWQCB (REGION 4)
ROTO-JET OF AMERICA CO., INC.	2819	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	11/16/1987	LOS ANGELES RWQCB (REGION 4)
DUN-RITE METAL REFINISHING INC.	3055	N. California St.	Burbank	Cleanup Program Site	Completed - Case Closed	3/4/1988	LOS ANGELES RWQCB (REGION 4)
J & M PRODUCTS	2435	N. Naomi St.	Burbank	Cleanup Program Site	Completed - Case Closed	4/11/1988	LOS ANGELES RWQCB (REGION 4)
DC AUTOCRAFT	25	E. PROVIDENCIA AVE.	BURBANK	Cleanup Program Site	Completed - Case Closed	2/14/1997	LOS ANGELES RWQCB (REGION 4)
MATTHEWS STUDIO EQUIPMENT	2411	Empire Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	4/19/1988	LOS ANGELES RWQCB (REGION 4)
NORTH HOLLYWOOD PRINTING CO.	3915	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	4/18/1989	LOS ANGELES RWQCB (REGION 4)
CAL-AM SWITCH & RELAY	4555	Chermak St.	Burbank	Cleanup Program Site	Completed - Case Closed	6/8/1990	LOS ANGELES RWQCB (REGION 4)
THE FISHING FACTORY	2313	N. San Fernando Rd.	Burbank	Cleanup Program Site	Completed - Case Closed	10/12/1989	LOS ANGELES RWQCB (REGION 4)
LAAGCO SALES	2930	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	11/23/1992	LOS ANGELES RWQCB (REGION 4)
CHEN ENGINEERING & SERVICES	3540	Valhalla Dr.	Burbank	Cleanup Program Site	Completed - Case Closed	1/18/1990	LOS ANGELES RWQCB (REGION 4)
DE KING INC. CO.	3326	Burton Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	2/27/1998	LOS ANGELES RWQCB (REGION 4)
FAUCI & SON, INC.	2310	W. Victory Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	5/3/1989	LOS ANGELES RWQCB (REGION 4)
DICKS GERMAN CAR SERVICE INC.	1819	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	4/7/1995	LOS ANGELES RWQCB (REGION 4)
PALM CLEANERS	2212	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	2/16/1989	LOS ANGELES RWQCB (REGION 4)
R.C. PROVISION	1016	Victory Pl.	Burbank	Cleanup Program Site	Completed - Case Closed	12/27/1996	LOS ANGELES RWQCB (REGION 4)
JIM & DOUG CARTER'S AUTOMOTIVE	2612	N. Hollywood Way	Burbank	Cleanup Program Site	Completed - Case Closed	12/11/1987	LOS ANGELES RWQCB (REGION 4)
BURBANK TIRE SUPPLY	1313	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	2/6/1989	LOS ANGELES RWQCB (REGION 4)
3M	3130	Damon Way	Burbank	Cleanup Program Site	Completed - Case Closed	12/4/1990	LOS ANGELES RWQCB (REGION 4)
ILONA DRAPERIES, INC.	3130	Clybourn Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	6/7/1990	LOS ANGELES RWQCB (REGION 4)
VALENTINE CLEANERS	2300	W. Victory Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	5/3/1989	LOS ANGELES RWQCB (REGION 4)
EMPIRE STEEL TREATING	1627	Maria St.	Burbank	Cleanup Program Site	Completed - Case Closed	6/30/1988	LOS ANGELES RWQCB (REGION 4)
STRANG MACHINE SHOP	1124	Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	2/23/1989	LOS ANGELES RWQCB (REGION 4)
BUCONE CORP.	1017	N. Lake St.	Burbank	Cleanup Program Site	Completed - Case Closed	10/4/1989	LOS ANGELES RWQCB (REGION 4)
WEBER AIRCRAFT	2820	ONTARIO ST	BURBANK	LUST Cleanup Site	Completed - Case Closed	8/18/1987	LOS ANGELES RWQCB (REGION 4)
FRANK STUBBS CO. INC.	4518	Vanowen St.	Burbank	Cleanup Program Site	Completed - Case Closed	10/9/1990	LOS ANGELES RWQCB (REGION 4)
BURBANK AIRPORT HILTON	2500	Hollywood Way	Burbank	Cleanup Program Site	Completed - Case Closed	4/27/1990	LOS ANGELES RWQCB (REGION 4)
CANDLELIGHT PRESS	2443	N. Naomi St.	Burbank	Cleanup Program Site	Completed - Case Closed	3/4/1988	LOS ANGELES RWQCB (REGION 4)
TEXON SERVICE CENTER	249	GLENOAKS BLVD S	BURBANK	LUST Cleanup Site	Completed - Case Closed	9/26/1996	BURBANK, CITY OF
STERLING TIRE	201	001ST ST N	BURBANK	LUST Cleanup Site	Completed - Case Closed	11/19/1997	LOS ANGELES RWQCB (REGION 4)
COLOR HOUSE	1919	W. Empire Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	4/12/1988	LOS ANGELES RWQCB (REGION 4)
OLYMPIC RENT-A-CAR	3317	Burton Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	12/30/1987	LOS ANGELES RWQCB (REGION 4)
PRO WEST AUTOMOTIVE	1800	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	3/13/1998	LOS ANGELES RWQCB (REGION 4)
CANTEBURY TERMITE & PEST CONTROL	1048	N. Lake St.	Burbank	Cleanup Program Site	Completed - Case Closed	9/14/1989	LOS ANGELES RWQCB (REGION 4)
SPENCE ELECTROPLATING	917	W. CHESTNUT ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	11/14/2014	
RSD	715	S. FLOWER ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/22/2014	LOS ANGELES RWQCB (REGION 4)
ADB INDUSTRIES	2523	NORTH ONTARIO STREET	BURBANK	Cleanup Program Site	Completed - Case Closed	8/26/2014	LOS ANGELES RWQCB (REGION 4)
AL-SAL OIL CO #3	2421	VICTORY BLVD W	BURBANK	LUST Cleanup Site	Completed - Case Closed	11/5/2001	LOS ANGELES RWQCB (REGION 4)
SHELL #204-1026-0101	181	ALAMEDA AVE W	BURBANK	LUST Cleanup Site	Completed - Case Closed	7/19/2017	LOS ANGELES RWQCB (REGION 4)
SHINE JEWELRY MFG.	116	E. ALAMEDA AVE.	BURBANK	Cleanup Program Site	Completed - Case Closed	9/28/2004	LOS ANGELES RWQCB (REGION 4)
GRAFICS WEST/DON AULD & SONS	4304	W. VICTORY BLVD.	BURBANK	Cleanup Program Site	Completed - Case Closed	8/25/1995	LOS ANGELES RWQCB (REGION 4)
L & M EDITORIAL	222	W. PALM AVE.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/23/2014	LOS ANGELES RWQCB (REGION 4)
LA FILMCO	2080	Floyd St.	Burbank	Cleanup Program Site	Completed - Case Closed	3/29/1988	LOS ANGELES RWQCB (REGION 4)
3 R WOOD DISIGN INC.	1116	S. VARNEY ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	7/27/2009	LOS ANGELES RWQCB (REGION 4)
BONDED SERVICES	3205	BURTON AVE.	BURBANK	Cleanup Program Site	Completed - Case Closed	10/29/2014	LOS ANGELES RWQCB (REGION 4)
BUILD REHAB INDUSTRIES	2205	Hollywood Way	Burbank	Cleanup Program Site	Completed - Case Closed	4/19/1990	LOS ANGELES RWQCB (REGION 4)
MOLDING CORP. OF AMERICA	2840	N. Lima St.	Burbank	Cleanup Program Site	Completed - Case Closed	11/18/1987	LOS ANGELES RWQCB (REGION 4)
FOUR MEDIA COMPANY	2813	W. Alameda Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	5/19/1998	LOS ANGELES RWQCB (REGION 4)
COLOR WEST	2228	Hollywood Way	Burbank	Cleanup Program Site	Completed - Case Closed	6/8/1990	LOS ANGELES RWQCB (REGION 4)
G & M GRINDING CO.	1025	N. Lake St.	Burbank	Cleanup Program Site	Completed - Case Closed	9/14/1989	LOS ANGELES RWQCB (REGION 4)
STATE PAINT CO.	3920	W. MAGNOLIA BLVD.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/22/2014	LOS ANGELES RWQCB (REGION 4)
Burbank Water and Power	164	W Magnolia Blvd	Burbank	LUST Cleanup Site	Completed - Case Closed	8/6/2009	BURBANK, CITY OF
DIMON INDUSTRIES	3001	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	3/16/1988	LOS ANGELES RWQCB (REGION 4)
PAGLIUSO ENGINEERING	3307	N. Glenoaks Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	4/11/1997	LOS ANGELES RWQCB (REGION 4)
NEW WORLD PUBLICATIONS	2808	N. Naomi St.	Burbank	Cleanup Program Site	Completed - Case Closed	4/26/1988	LOS ANGELES RWQCB (REGION 4)
AERO COMPONENT ENGINEERING CO.	1810	N. Keystone St.	Burbank	Cleanup Program Site	Completed - Case Closed	3/29/1988	LOS ANGELES RWQCB (REGION 4)
BURBANK UNIFIED SCHOOL DISTRIC	501	SHELTON ST S	BURBANK	LUST Cleanup Site	Completed - Case Closed	12/29/1989	LOS ANGELES COUNTY
LYN-TRON	3140	Damon Way	Burbank	Cleanup Program Site	Completed - Case Closed	3/16/1993	LOS ANGELES RWQCB (REGION 4)
PIONEER TECHNOLOGY CORPORATION	1021	N. Lake St.	CA	Cleanup Program Site	Completed - Case Closed	9/14/1989	LOS ANGELES RWQCB (REGION 4)
CAL-WIRE PRECISION METAL	2801	Empire Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	4/19/1988	LOS ANGELES RWQCB (REGION 4)
MIYANO MACHINERY USA INC.	2831	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	12/9/1987	LOS ANGELES RWQCB (REGION 4)
BURBANK SOUND	1321	W. MAGNOLIA BLVD.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/22/2014	LOS ANGELES RWQCB (REGION 4)
BRANCH MACHINE PARTS, INC.	2419	Empire Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	4/12/1988	LOS ANGELES RWQCB (REGION 4)
BRANCH GRINDING CORP.	2417	Empire Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	12/20/1988	LOS ANGELES RWQCB (REGION 4)
ALUMTREAT, INC.	2905	Winona Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	12/8/1997	LOS ANGELES RWQCB (REGION 4)
ULTRAMARE AVIATION USA, INC.	3088	Clybourn Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	6/8/1990	LOS ANGELES RWQCB (REGION 4)
PAUL HOPPENFELD DISPLAY INC.	3120	Clybourn Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	6/7/1990	LOS ANGELES RWQCB (REGION 4)
CAPTIVE AIR INCORPORATED	2909	Thornton Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	1/12/1988	LOS ANGELES RWQCB (REGION 4)
VIC'S AUTO REPAIR	1403	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	5/3/1989	LOS ANGELES RWQCB (REGION 4)
I.K. CURTIS SERVICES INC.	2907	Empire Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	4/12/1988	LOS ANGELES RWQCB (REGION 4)
MR. CLEAN DRYCLEANING SERVICE	2318	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	4/13/1989	LOS ANGELES RWQCB (REGION 4)
CITY OF BURBANK PW YARD	124	LAKE ST S	BURBANK	LUST Cleanup Site	Completed - Case Closed	9/4/1998	BURBANK, CITY OF
2 L SCREEN PRINTING CO.	2513	Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	9/17/1996	LOS ANGELES RWQCB (REGION 4)
CHESYSTEMS	2150	N. LINCOLN ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/22/2014	LOS ANGELES RWQCB (REGION 4)
BUCY DIE CASTING CORP.	633	S. GLENWOOD PL.	BURBANK	Cleanup Program Site	Completed - Case Closed	11/14/2014	LOS ANGELES RWQCB (REGION 4)
1928 JEWELRY COMPANY	3000	W.. EMPIRE AVE.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/23/2014	LOS ANGELES RWQCB (REGION 4)
AJC ENTERPRISES	731	S. GLENWOOD PL.	BURBANK	Cleanup Program Site	Completed - Case Closed	1/30/1997	LOS ANGELES RWQCB (REGION 4)
TECHNIBILT CORPORATION	1	WEST ALAMEDA AVENUE	BURBANK	Cleanup Program Site	Completed - Case Closed	7/14/2014	LOS ANGELES RWQCB (REGION 4)
AMERIFLIGHT, INC.	4700	EMPIRE AVE	BURBANK	LUST Cleanup Site	Completed - Case Closed	12/15/1992	BURBANK, CITY OF
SPACE-LOK	2526	NORTH ONTARIO STREET	BURBANK	Cleanup Program Site	Completed - Case Closed	10/21/2015	LOS ANGELES RWQCB (REGION 4)
CALIFORNIA COAST COLOR	1121	ISABEL ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/22/2014	LOS ANGELES RWQCB (REGION 4)
ARTISTS & SCULPTORS FOUNDRY	825	N. LAKE ST.	BURBANK	Cleanup Program Site	Completed - Case Closed	1/30/1997	LOS ANGELES RWQCB (REGION 4)
JAY MANUFACTURING CO.	3098	N. Lima St.	Burbank	Cleanup Program Site	Completed - Case Closed	12/11/1988	LOS ANGELES RWQCB (REGION 4)
BUCCANEER ENTERPRISES	3020	N. Hollywood Way	Burbank	Cleanup Program Site	Completed - Case Closed	11/16/1987	LOS ANGELES RWQCB (REGION 4)

CAPTIVE AIR	2919	Thornton Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	1/12/1988	LOS ANGELES RWQCB (REGION 4)
VILLA DI ROMA CREATIONS, INC.	1060	N. Lake St.	Burbank	Cleanup Program Site	Completed - Case Closed	9/14/1989	LOS ANGELES RWQCB (REGION 4)
HEYWOOD & HEYWOOD PRINTING	2023	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	2/16/1989	LOS ANGELES RWQCB (REGION 4)
BURBANK TOOL GRINDING SERVICE	1613	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	3/8/1989	LOS ANGELES RWQCB (REGION 4)
REX CLEANERS	1212	N. San Fernando Rd.	Burbank	Cleanup Program Site	Completed - Case Closed	10/9/1996	LOS ANGELES RWQCB (REGION 4)
PROVENZANO CERAMICS	3210	Vanowen St.	Burbank	Cleanup Program Site	Completed - Case Closed	7/29/1998	LOS ANGELES RWQCB (REGION 4)
AMERICAN INDUSTRIAL SUPPLY	4514	Vanowen St.	Burbank	Cleanup Program Site	Completed - Case Closed	10/9/1991	LOS ANGELES RWQCB (REGION 4)
ADVANCES SEMICONDUCTOR PROD.	2601	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	11/16/1987	LOS ANGELES RWQCB (REGION 4)
AMERIFLIGHT	4700	Empire Ave. Suite 1	Burbank	Cleanup Program Site	Completed - Case Closed	8/16/1995	LOS ANGELES RWQCB (REGION 4)
G.W. BANDY INCORPORATED	3086	N. Avon St.	Burbank	Cleanup Program Site	Completed - Case Closed	7/18/1988	LOS ANGELES RWQCB (REGION 4)
FROST INDUSTRIAL ELECTRICAL CO.	2500	Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	1/6/1988	LOS ANGELES RWQCB (REGION 4)
BURBANK METAL SUPPLY	3207	N. San Fernando Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	11/16/1987	LOS ANGELES RWQCB (REGION 4)
BURBANK DENTAL LABORATORY	1804	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	5/3/1989	LOS ANGELES RWQCB (REGION 4)
CARDONA MFG.	1869	Victory Pl.	Burbank	Cleanup Program Site	Completed - Case Closed	12/27/1996	LOS ANGELES RWQCB (REGION 4)
AUDIBLE SYSTEM	1631	Maria St.	Burbank	Cleanup Program Site	Completed - Case Closed	3/29/1988	LOS ANGELES RWQCB (REGION 4)
HYDRODYNE DIVISION/FPI INC.	3125	Damon Way	Burbank	Cleanup Program Site	Completed - Case Closed	3/26/1993	LOS ANGELES RWQCB (REGION 4)
NELSON AEROSPACE INCORPORATED	1037	N. Victory Pl.	Burbank	Cleanup Program Site	Completed - Case Closed	3/22/1988	LOS ANGELES RWQCB (REGION 4)
OBERON SYSTEM, INC.	3815	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	4/18/1989	LOS ANGELES RWQCB (REGION 4)
VISION SYSTEMS	3099	N. Lima St.	Burbank	Cleanup Program Site	Completed - Case Closed	2/11/1988	LOS ANGELES RWQCB (REGION 4)
SCHMID INSULATION	2909	Thornton Ave.	Burbank	Cleanup Program Site	Completed - Case Closed	12/29/1987	LOS ANGELES RWQCB (REGION 4)
VCC	2514	Ontario St.	Burbank	Cleanup Program Site	Completed - Case Closed	11/17/1987	LOS ANGELES RWQCB (REGION 4)
SHELL (TEXACO FOOD MART #0251)	400	VICTORY BLVD N	BURBANK	LUST Cleanup Site	Completed - Case Closed	3/25/2009	LOS ANGELES RWQCB (REGION 4)
OCEAN TECHNOLOGY INC	2835	NAOMI ST N	BURBANK	LUST Cleanup Site	Completed - Case Closed	2/11/1997	LOS ANGELES RWQCB (REGION 4)
PREMIER CLEANERS (FORMER)	2708	NORTH HOLLYWOOD WAY	BURBANK	Cleanup Program Site	Completed - Case Closed	4/28/2011	LOS ANGELES RWQCB (REGION 4)
MERSOLA PROPERTY	70	E. VERDUGO AVE.	BURBANK	Cleanup Program Site	Completed - Case Closed	12/23/2003	LOS ANGELES RWQCB (REGION 4)
BURBANK FIRE STATION #11	353	OLIVE AVE E	Burbank	LUST Cleanup Site	Completed - Case Closed	3/10/2000	BURBANK, CITY OF
BOB'S AUTOMOTIVE	2716	N. California St.	Burbank	Cleanup Program Site	Completed - Case Closed	1/12/1988	LOS ANGELES RWQCB (REGION 4)
PRESTIGE WOOD PRODUCTS INC.	3087	N. California St.	Burbank	Cleanup Program Site	Completed - Case Closed	2/18/1988	LOS ANGELES RWQCB (REGION 4)
EVANS EXTERMINATING CO., INC.	1616	W. Burbank Blvd.	Burbank	Cleanup Program Site	Completed - Case Closed	3/8/1989	LOS ANGELES RWQCB (REGION 4)
MULTI-LAB INC.	1633	Maria St.	Burbank	Cleanup Program Site	Completed - Case Closed	5/3/1988	LOS ANGELES RWQCB (REGION 4)

SWRCB - Geotracker Database UST

FACILITY_I	BUSINESS NAME	ADDRESS	CITY	PERMITTING
LACoFA0046000	THE BURBANK STUDIO	3000 W Alameda Ave Unit 130	Burbank	Los Angeles County Fire Department
LACoFA0002069	CF BURBANK OFFICE LP C/O TRANSWESTERN	2901 W Alameda Ave.	Burbank	Los Angeles County Fire Department
675	UNITED #110	280 W Alameda Ave	Burbank	Los Angeles County Fire Department
LACoFA0009834	WALT DISNEY PICTURES & TV	2139 W EMPIRE AVE	BURBANK	Los Angeles County Fire Department
365	Magnolia Park SKN Gasoline Inc	3701 W Magnolia Blvd	Burbank	Los Angeles County Fire Department
357	UNITED #114	2500 W MAGNOLIA BLVD	BURBANK	Los Angeles County Fire Department
553	BURBANK FIRE STATION 13	2713 THORNTON AVE	BURBANK	Los Angeles County Fire Department
228	SHELL #135108 (SALTON SHELL)	550 N HOLLYWOOD WAY	BURBANK	Los Angeles County Fire Department
LACoFA0011090	BURRTEC WASTE INDUSTRIES, INC	500 S FLOWER ST	BURBANK	Los Angeles County Fire Department
203	Naphtha, Inc.	2616 N GLENOAKS BLVD # A	BURBANK	Los Angeles County Fire Department
225	Burbank Union 76	200 N HOLLYWOOD WAY	BURBANK	Los Angeles County Fire Department
246	LOGIX FEDERAL CREDIT UNION	2340 N HOLLYWOOD WAY	BURBANK	Los Angeles County Fire Department
LACoFA0012725	G&M OIL CO #73	100 S GLENOAKS BLVD	BURBANK	Los Angeles County Fire Department
LACoFA0019130	UNITED RENTALS #408	203 W OLIVE AVE	BURBANK	Los Angeles County Fire Department
LACoFA0019163	STUDIO STAR MOBIL	3020 W OLIVE AVE	BURBANK	Los Angeles County Fire Department
999	BURBANK FIRE STATION 11	311 E ORANGE GROVE AVE	BURBANK	Los Angeles County Fire Department
14	FUEL DEPOT	1919 W ALAMEDA AVE	BURBANK	Los Angeles County Fire Department
421	BUSINESS ARTS PLAZA INC	3601 W OLIVE AVE	BURBANK	Los Angeles County Fire Department
LACoFA0022061	Studio Plaza Building	3400 RIVERSIDE DR	BURBANK	Los Angeles County Fire Department
640	United Pacific 0638	2421 W VICTORY BLVD	BURBANK	Los Angeles County Fire Department
508	Armag Oil Inc #3	1638 N San Fernando Blvd	Burbank	Los Angeles County Fire Department
LACoAR0023251	WORLD OIL MARKETING CO #25	2417 N SAN FERNANDO BLVD	BURBANK	Los Angeles County Fire Department
555	AT&T California - K3123	3001 Thornton Ave	Burbank	Los Angeles County Fire Department
174	BURBANK RECYCLE CENTER	500 S Flower St # A	Burbank	Los Angeles County Fire Department
LACoFA0012700	BURBANK OIL COMPANY, INC.	349 S GLENOAKS BLVD	BURBANK	Los Angeles County Fire Department
21	TOWER BURBANK OWNER, LLC	3900 W Alameda Ave Ste 100	Burbank	Los Angeles County Fire Department
589	BURBANK FIRE STATION 15	1420 W VERDUGO AVE	BURBANK	Los Angeles County Fire Department
9	CHEVRON	439 W ALAMEDA AVE	BURBANK	Los Angeles County Fire Department
26	BURBANK FIRE STATION 16	1600 N BEL AIRE DR	BURBANK	Los Angeles County Fire Department
205	Universal Service Station Inc	2005 N GLENOAKS BLVD	BURBANK	Los Angeles County Fire Department
674	UNITED #143	250 S GLENOAKS BLVD # B	BURBANK	Los Angeles County Fire Department
605	MAGNOLIA PARK SCS GASOLINE LCC	341 N VICTORY BLVD	BURBANK	Los Angeles County Fire Department
238	Rhys Tilleys Union 76	1401 N HOLLYWOOD WAY	BURBANK	Los Angeles County Fire Department
230	AVIMAX	800 N Hollywood Way	Burbank	Los Angeles County Fire Department
295	PUBLIC WORKS	124 S LAKE ST	BURBANK	Los Angeles County Fire Department
663	Contract Services Administration Trust Fund Building	2710 WINONA AVE	BURBANK	Los Angeles County Fire Department
5	SMOG PROS	201 W ALAMEDA AVE	BURBANK	Los Angeles County Fire Department
LACoFA0016866	BURBANK WATER AND POWER	164 W Magnolia Blvd	Burbank	Los Angeles County Fire Department
18	NBC WEST LLC	3000 W ALAMEDA AVE	BURBANK	Los Angeles County Fire Department
33	Providence St Joseph Medical Center	501 S Buena Vista ST	Burbank	Los Angeles County Fire Department
61	BURBANK FIRE STATION 14	2305 W BURBANK BLVD	BURBANK	Los Angeles County Fire Department
164	Hertz Rent-A-Car (1102-11A)	4521 EMPIRE AVE	BURBANK	Los Angeles County Fire Department
496	CHUCK MERCIER'S UNION 76	901 N SAN FERNANDO BLVD	BURBANK	Los Angeles County Fire Department
186	CARMAX #7126	1000 S FLOWER ST	BURBANK	Los Angeles County Fire Department
LACoFA0009842	ALAMO RENT A CAR	4529 W EMPIRE AVE	BURBANK	Los Angeles County Fire Department
LACoFA0006014	DISNEY ENTERPRISES, INC	500 S BUENA VISTA ST	BURBANK	Los Angeles County Fire Department
LACoFA0002074	TESORO (SHELL) 68509	181 W ALAMEDA AVE	BURBANK	Los Angeles County Fire Department
LACoFA0028280	AE COM	1705 N VICTORY PL	BURBANK	Los Angeles County Fire Department
602	TESORO (SHELL) 68507	400 N VICTORY BLVD	BURBANK	Los Angeles County Fire Department
LACoFA0040639	THE POINTE	2900 W ALAMEDA AVE # 100	BURBANK	Los Angeles County Fire Department
80	HWB AUTO DETAIL & WASH INC.	3600 W BURBANK BLVD	BURBANK	Los Angeles County Fire Department
LACoFA0042730	DR SMOG N LUBE	3701 W MAGNOLIA BLVD # 1	BURBANK	Los Angeles County Fire Department
658	DEBELL GOLF COURSE	1155 WALNUT AVE	BURBANK	Los Angeles County Fire Department
171	PENHALL COMPANY	255 S FLOWER ST	BURBANK	Los Angeles County Fire Department
239	Shawkat & Rima Inc.	1951 N HOLLYWOOD WAY	BURBANK	Los Angeles County Fire Department
229	BURBANK FIRE STATION 12	644 N HOLLYWOOD WAY	BURBANK	Los Angeles County Fire Department
LACoFA0013825	FAA - BUR ATCT	2821 N HOLLYWOOD WAY	BURBANK	Los Angeles County Fire Department
296	BURBANK CITY PARKS	126 S Lake St	Burbank	Los Angeles County Fire Department
AR0043504	AT&T California - K3100	280 E Palm Ave	Burbank	Los Angeles County Fire Department
670	ENTERPRISE RENT-A-CAR	3220 WINONA AVE	BURBANK	Los Angeles County Fire Department

LACoFA0022063	MEDIA CENTER CHEVRON	3701 W RIVERSIDE DR	BURBANK	Los Angeles County Fire Department
535	Costco Wholesale #677 (Gas Station)	1041 W Burbank Blvd	Burbank	Los Angeles County Fire Department
165	AVIS Rent a Car System, LLC	4527 EMPIRE AVE	Burbank	Los Angeles County Fire Department
694	Sprint Burbank POP CABRBB	100 S FLOWER ST # A	BURBANK	Los Angeles County Fire Department
690	G&M OIL CO., #74	140 E ALAMEDA AVE	Burbank	Los Angeles County Fire Department
691	Chevron (G&M #75)	2501 W OLIVE AVE	Burbank	Los Angeles County Fire Department
661	Warner Bros. Studio Facilities	4000 WARNER BLVD	BURBANK	Los Angeles County Fire Department
106	Sprint Burbank Switch CABRBA	3099 N CALIFORNIA ST	BURBANK	Los Angeles County Fire Department
LACoFA0019164	3500 PARTNERS LLC	3500 W Olive Ave Ste 101	Burbank	Los Angeles County Fire Department
LACoFA0047248	AvAirPros Services	2501 N Hollywood Way	Burbank	Los Angeles County Fire Department

Appendix G

Noise and Vibration Calculations

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                        Roadway Construction Noise Model (RCNM),Version 1.1

Report date:             11/03/2021
Case Description:        Burbank Housing Element

                                **** Receptor #1 ****

                                           Baselines (dBA)
Description                  Land Use        Daytime    Evening    Night
-----------                  --------        -------    -------    -----
50 Feet from Construction    Residential        65.0       65.0     65.0

                                     Equipment
                                     ---------
                               Spec    Actual    Receptor    Estimated
              Impact  Usage    Lmax    Lmax      Distance    Shielding
Description   Device   (%)     (dBA)   (dBA)      (feet)       (dBA)
-----------   ------  -----    -----   -----     --------    ---------
Excavator         No     40             80.7         50.0          0.0
Dozer             No     40             81.7         50.0          0.0
Jackhammer       Yes     20             88.9         50.0          0.0


                                     Results
                                     -------
                                                            Noise Limits (dBA)
                    Noise Limit Exceedance (dBA)

----------------------------------------------
----------------------------------------------
                        Calculated (dBA)       Day           Evening
Night              Day           Evening        Night
                        ----------------   --------------   -------------

--------------    --------------  --------------  --------------
Equipment                  Lmax    Leq        Lmax    Leq      Lmax    Leq      Lmax
  Leq       Lmax    Leq     Lmax    Leq     Lmax    Leq
----------------------  ------  ------     ------  ------  ------  ------  ------
------    ------  ------  ------  ------  ------  ------
Excavator                 80.7    76.7        N/A     N/A     N/A     N/A     N/A
  N/A       N/A     N/A     N/A     N/A     N/A     N/A
Dozer                     81.7    77.7        N/A     N/A     N/A     N/A     N/A
  N/A       N/A     N/A     N/A     N/A     N/A     N/A
Jackhammer                88.9    81.9        N/A     N/A     N/A     N/A     N/A
  N/A       N/A     N/A     N/A     N/A     N/A     N/A
               Total      88.9    84.2        N/A     N/A     N/A     N/A     N/A
  N/A       N/A     N/A     N/A     N/A     N/A     N/A
```

Groundborne Noise and Vibration Modeling

Variables	
V_{ref}	1E-06
Crest Factor (PPV/RMS)	4
Soil Type *(Choice: default, hard, or sands)*	default
n value	1.1

Notes

The reference distance is measured from the nearest anticipated point of construction equipment to the nearest structure. Last Updated: 09/29/2021

	Reference Level Inputs			
Equipment	**PPV_{ref} (in/sec)**	**Lv_{ref} (VdB)**	**RMS_{ref} (in/sec)**	**Reference Distance**
Impact Pile Driver	0.644	112	0.398	25
Sonic Pile Driver	0.17	105	0.178	25
Vibratory Roller	0.21	94	0.050	25
Hoe Ram	0.089	87	0.022	25
Large bulldozer	0.089	87	0.022	25
Caisson drilling	0.089	87	0.022	25
Loaded trucks	0.076	83	0.014	25
Jack hammer	0.035	79	0.009	25
Small bulldozer	0.003	58	0.001	25

	Vibration Level at Receiver			
Equipment	**Distance (feet)**	**PPV_{x} (in/sec)**	**Lv_{x} (VdB)**	**RMS_{x} (in/sec)**
Impact Pile Driver	25	0.6440	112	0.398
Sonic Pile Driver	25	0.1700	105	0.178
Vibratory Roller	25	0.2100	94	0.050
Hoe Ram	25	0.0890	87	0.022
Large bulldozer	25	0.0890	87	0.022
Caisson drilling	25	0.0890	87	0.022
Loaded trucks	25	0.0760	83	0.014
Jack hammer	25	0.0350	79	0.009
Small bulldozer	25	0.0030	58	0.001

	Vibration Contours		
	Distance to (feet)		
Equipment	**0.100 PPV**	**72.0 VdB**	**0.0080 RMS**
Impact Pile Driver	136	1645	872
Sonic Pile Driver	40	791	419
Vibratory Roller	49	250	133
Hoe Ram	22	120	64
Large bulldozer	22	120	64
Caisson drilling	22	120	64
Loaded trucks	19	79	42
Jack hammer	10	52	28
Small bulldozer	1	6	3

Sources

California Department of Transportation (Caltrans). 2020. Transportation and Construction Vibration Guidance Manual. April 2020. Available at: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf

Federal Transit Administration (FTA). 2018. Transit Noise and Vibration Imapact Assessment Manual. September 2018. Available at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf

Groundborne Noise and Vibration Modeling

Notes

The reference distance is measured from the nearest anticipated point of construction equipment to the nearest structure. Last Updated: 09/29/2021

	Reference Level Inputs			
Equipment	**PPV_{ref} (in/sec)**	**Lv_{ref} (VdB)**	**RMS_{ref} (in/sec)**	**Reference Distance**
Impact Pile Driver	0.644	112	0.398	25
Sonic Pile Driver	0.17	105	0.178	25
Vibratory Roller	0.21	94	0.050	25
Hoe Ram	0.089	87	0.022	25
Large bulldozer	0.089	87	0.022	25
Caisson drilling	0.089	87	0.022	25
Loaded trucks	0.076	83	0.014	25
Jack hammer	0.035	79	0.009	25
Small bulldozer	0.003	58	0.001	25

	Vibration Level at Receiver			
Equipment	**Distance (feet)**	**PPV_x (in/sec)**	**Lv_x (VdB)**	**RMS_x (in/sec)**
Impact Pile Driver	50	0.3004	105	0.186
Sonic Pile Driver	50	0.0793	98	0.083
Vibratory Roller	50	0.0980	87	0.023
Hoe Ram	50	0.0415	80	0.010
Large bulldozer	50	0.0415	80	0.010
Caisson drilling	50	0.0415	80	0.010
Loaded trucks	50	0.0355	76	0.007
Jack hammer	50	0.0163	72	0.004
Small bulldozer	50	0.0014	51	0.000

	Vibration Contours		
	Distance to (feet)		
Equipment	**0.100 PPV**	**72.0 VdB**	**0.0080 RMS**
Impact Pile Driver	136	1645	872
Sonic Pile Driver	40	791	419
Vibratory Roller	49	250	133
Hoe Ram	22	120	64
Large bulldozer	22	120	64
Caisson drilling	22	120	64
Loaded trucks	19	79	42
Jack hammer	10	52	28
Small bulldozer	1	6	3

Sources

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Federal Transit Administration (FTA). 2018. Transit Noise and Vibration Imapact Assessment Manual. September 2018. Available at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf

Variables	
V_{ref}	1E-06
Crest Factor (PPV/RMS)	4
Soil Type *(Choice: default, hard, or sands)*	default
n value	1.1

Groundborne Noise and Vibration Modeling

Notes

The reference distance is measured from the nearest anticipated point of construction equipment to the nearest structure. Last Updated: 09/29/2021

Variables	
V_{ref}	1E-06
Crest Factor (PPV/RMS)	4
Soil Type *(Choice: default, hard, or sands)*	default
n value	1.1

	Reference Level Inputs			
Equipment	**PPV_{ref} (in/sec)**	**Lv_{ref} (VdB)**	**RMS_{ref} (in/sec)**	**Reference Distance**
Impact Pile Driver	0.644	112	0.398	25
Sonic Pile Driver	0.17	105	0.178	25
Vibratory Roller	0.21	94	0.050	25
Hoe Ram	0.089	87	0.022	25
Large bulldozer	0.089	87	0.022	25
Caisson drilling	0.089	87	0.022	25
Loaded trucks	0.076	83	0.014	25
Jack hammer	0.035	79	0.009	25
Small bulldozer	0.003	58	0.001	25

	Vibration Level at Receiver			
Equipment	**Distance (feet)**	**PPV_x (in/sec)**	**Lv_x (VdB)**	**RMS_x (in/sec)**
Impact Pile Driver	75	0.1923	102	0.119
Sonic Pile Driver	75	0.0508	95	0.053
Vibratory Roller	75	0.0627	84	0.015
Hoe Ram	75	0.0266	77	0.007
Large bulldozer	75	0.0266	77	0.007
Caisson drilling	75	0.0266	77	0.007
Loaded trucks	75	0.0227	73	0.004
Jack hammer	75	0.0105	69	0.003
Small bulldozer	75	0.0009	48	0.000

	Vibration Contours		
	Distance to (feet)		
Equipment	**0.100 PPV**	**72.0 VdB**	**0.0080 RMS**
Impact Pile Driver	136	1645	872
Sonic Pile Driver	40	791	419
Vibratory Roller	49	250	133
Hoe Ram	22	120	64
Large bulldozer	22	120	64
Caisson drilling	22	120	64
Loaded trucks	19	79	42
Jack hammer	10	52	28
Small bulldozer	1	6	3

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Groundborne Noise and Vibration Modeling

Variables	
V_{ref}	1E-06
Crest Factor (PPV/RMS)	4
Soil Type *(Choice: default, hard, or sands)*	default
n value	1.1

Notes

The reference distance is measured from the nearest anticipated point of construction equipment to the nearest structure. Last Updated: 09/29/2021

	Reference Level Inputs			
Equipment	**PPV_{ref} (in/sec)**	**Lv_{ref} (VdB)**	**RMS_{ref} (in/sec)**	**Reference Distance**
Impact Pile Driver	0.644	112	0.398	25
Sonic Pile Driver	0.17	105	0.178	25
Vibratory Roller	0.21	94	0.050	25
Hoe Ram	0.089	87	0.022	25
Large bulldozer	0.089	87	0.022	25
Caisson drilling	0.089	87	0.022	25
Loaded trucks	0.076	83	0.014	25
Jack hammer	0.035	79	0.009	25
Small bulldozer	0.003	58	0.001	25

	Vibration Level at Receiver			
Equipment	**Distance (feet)**	**PPV_x (in/sec)**	**Lv_x (VdB)**	**RMS_x (in/sec)**
Impact Pile Driver	100	0.1402	99	0.087
Sonic Pile Driver	100	0.0370	92	0.039
Vibratory Roller	100	0.0457	81	0.011
Hoe Ram	100	0.0194	74	0.005
Large bulldozer	100	0.0194	74	0.005
Caisson drilling	100	0.0194	74	0.005
Loaded trucks	100	0.0165	70	0.003
Jack hammer	100	0.0076	66	0.002
Small bulldozer	100	0.0007	45	0.000

	Vibration Contours		
	Distance to (feet)		
Equipment	**0.100 PPV**	**72.0 VdB**	**0.0080 RMS**
Impact Pile Driver	136	1645	872
Sonic Pile Driver	40	791	419
Vibratory Roller	49	250	133
Hoe Ram	22	120	64
Large bulldozer	22	120	64
Caisson drilling	22	120	64
Loaded trucks	19	79	42
Jack hammer	10	52	28
Small bulldozer	1	6	3

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Groundborne Noise and Vibration Modeling

Notes

The reference distance is measured from the nearest anticipated point of construction equipment to the nearest structure. Last Updated: 09/29/2021

Variables	
V_{ref}	1E-06
Crest Factor (PPV/RMS)	4
Soil Type *(Choice: default, hard, or sands)*	default
n value	1.1

	Reference Level Inputs			
Equipment	**PPV_{ref} (in/sec)**	**Lv_{ref} (VdB)**	**RMS_{ref} (in/sec)**	**Reference Distance**
Impact Pile Driver	0.644	112	0.398	25
Sonic Pile Driver	0.17	105	0.178	25
Vibratory Roller	0.21	94	0.050	25
Hoe Ram	0.089	87	0.022	25
Large bulldozer	0.089	87	0.022	25
Caisson drilling	0.089	87	0.022	25
Loaded trucks	0.076	83	0.014	25
Jack hammer	0.035	79	0.009	25
Small bulldozer	0.003	58	0.001	25

	Vibration Level at Receiver			
Equipment	**Distance (feet)**	**PPV_x (in/sec)**	**Lv_x (VdB)**	**RMS_x (in/sec)**
Impact Pile Driver	125	0.1097	97	0.068
Sonic Pile Driver	125	0.0289	90	0.030
Vibratory Roller	125	0.0358	79	0.009
Hoe Ram	125	0.0152	72	0.004
Large bulldozer	125	0.0152	72	0.004
Caisson drilling	125	0.0152	72	0.004
Loaded trucks	125	0.0129	68	0.002
Jack hammer	125	0.0060	64	0.002
Small bulldozer	125	0.0005	43	0.000

	Vibration Contours		
	Distance to (feet)		
Equipment	**0.100 PPV**	**72.0 VdB**	**0.0080 RMS**
Impact Pile Driver	136	1645	872
Sonic Pile Driver	40	791	419
Vibratory Roller	49	250	133
Hoe Ram	22	120	64
Large bulldozer	22	120	64
Caisson drilling	22	120	64
Loaded trucks	19	79	42
Jack hammer	10	52	28
Small bulldozer	1	6	3

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Federal Transit Administration (FTA). 2018. Transit Noise and Vibration Imapact Assessment Manual. September 2018. Available at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf