

Appendix O

Transportation

Appendix O.1

Transportation Assessment



TRANSPORTATION ASSESSMENT FOR THE RADFORD STUDIO CENTER PROJECT STUDIO CITY, CALIFORNIA

**JULY 2024
REVISED JANUARY 2025**

**PREPARED FOR
RADFORD STUDIO CENTER, LLC**



MEMORANDUM

TO: Vicente Cordero & Sheila Ahorian
Los Angeles Department of Transportation

CC: Stephanie Eyestone-Jones, Eyestone Environmental

FROM: Sarah M. Drobis, P.E., and Emily Wong, P.E.

DATE: January 7, 2025

RE: Transportation Assessment for the
Radford Studio Center Project
Studio City, California

Ref: J1982

The approved July 2024 Transportation Assessment has been revised for consistency with the Draft Environmental Impact Report and the Los Angeles Department of Transportation's Inter-Departmental Correspondence, *Transportation Assessment for the Radford Studios Development Located at 4024, 4064, and 4200 North Radford Avenue (CPC-2023-1347-GPA-VZC-SP-SN)* (August 2024).

It should be noted that the revisions provide supplemental information (e.g., clarifying text in CEQA T-1 consistency tables, consistent naming conventions, other typographical edits) and do not result in changes to the analyses assumptions, methodologies, and conclusions presented in the approved July 2024 Transportation Assessment.

Thus, the conclusions of the analysis presented in the approved July 2024 Transportation Assessment are unchanged.

**TRANSPORTATION ASSESSMENT
FOR THE
RADFORD STUDIO CENTER PROJECT
STUDIO CITY, CALIFORNIA**

July 2024
Revised January 2025

Prepared for:

RADFORD STUDIO CENTER, LLC

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Ref: J1982

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Chapter 1

Introduction

This study presents the transportation assessment for the proposed Radford Studio Center Project (Project) located at 4024, 4064, and 4200 North Radford Avenue (Project Site) in the *Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass Community Plan* (Los Angeles Department of City Planning [LADCP], Amended 2016) area of the City of Los Angeles, California (City). The methodology and base assumptions used in the analysis were established based on direction from the Los Angeles Department of Transportation (LADOT).

PROJECT DESCRIPTION

The Project Site is comprised of two addressed parcels located at 4200 North Radford Avenue (referred to herein as the North Lot) and 4024 and 4064 North Radford Avenue (referred to herein as the South Lot). The Project would establish the Radford Studio Center Specific Plan (Specific Plan) to allow for the continuation of an existing studio use and the modernization of media production facilities.

The North and South Lots are currently improved with multiple buildings totaling approximately 1,179,110 square feet (sf), including 359,730 sf of sound stages, 255,510 sf of production support, 450,060 sf of production office, and 113,810 sf of general office.

The proposed Specific Plan would allow a maximum total of up to approximately 2,200,000 sf of sound stage, production support, production office, general office, and retail uses within the Project Site upon buildout of the Project, as well as associated ingress/egress, circulation, parking, landscaping, and open space improvements. The Specific Plan would permit up to approximately 1,667,010 sf of new floor area, the retention of approximately 532,990 sf of existing uses, and the demolition of up to approximately 646,120 sf of existing uses. The Project also includes open space and landscaping improvements to enhance the public realm along the perimeter of the Project Site and improve public access to the Los Angeles River and Tujunga

Wash. Consistent with existing conditions, the Project would continue to operate 24 hours a day, seven days a week, and special events would continue to be governed by the Los Angeles Municipal Code (LAMC). Figure 1 presents the Illustrative Site Plan for the Project¹.

The Specific Plan would permit sound stage, production support, production office, general office, and retail use (consistent with the Neighborhood Retail uses permitted under LAMC Section 13.07C), which would provide and support production-related uses, including motion picture, television, and broadcast studios and related incidental uses. The Specific Plan would also permit production-related uses and facilities, such as basecamps, communication facilities, conference rooms (ancillary to general and production office uses), modular offices and trailers, studio support facilities, parking, various ancillary commercial and retail uses to serve the on-site employees and visitors, catering facilities, special events, audience and entertainment shows, live audience productions, museum exhibits and theater facilities that support production activities, childcare uses (ancillary to general and production office uses) for on-site users, fitness uses (ancillary to general and production office uses) for on-site employees and visitors, infrastructure, maintenance and storage facilities, mills/manufacturing, sleeping quarters for certain on-site personnel (sleeping quarters would not be located within the below-grade lower levels used for parking, basecamp areas, and the Mobility Hubs), recreational facilities for on-site users, restaurants and special event areas including the sale of alcoholic beverages, security facilities, signs, and storage.

Under the proposed Specific Plan, the permitted floor area of certain studio uses may be adjusted pursuant to the land use exchange provisions detailed in the proposed Specific Plan, provided the total permitted floor area on-site does not exceed 2,200,000 sf. The proposed Specific Plan would allow for limited exchanges between certain permitted studio land uses and associated floor areas. Specifically, the floor area from any permitted land use could be reduced in exchange for an equivalent increase in sound stage and/or production support floor area, as long as the limitations of the proposed Specific Plan are met. The permitted adjustments would be limited as follows:

¹ The Illustrative Site Plan shown in Figure 1 is based on the proposed development program in Table 1 and consistent with the regulations of the Specific Plan. Any future changes to the Project design would continue to comply with the Specific Plan with regard to allowed land use types, densities, access, and other regulations.

- The total sound stage floor area may be increased from 450,000 sf up to a total of 575,000 sf in exchange for equivalent decreases in the floor area of any other permitted uses.
- The total production support floor area may be increased from 300,000 sf up to a total of 575,000 sf in exchange for equivalent decreases in the floor area of any other permitted uses.
- As the exchange in floor area is only limited to the sound stage and production support uses as described above, the total permitted floor area for production office uses would not exceed 725,000 sf, the total permitted floor area for general office uses would not exceed 700,000 sf, and the total permitted floor area for retail uses would not exceed 25,000 sf.

For the purposes of this transportation assessment, the proposed Project development summary from Table 1 represents a conservative program and was used in all analyses herein.

Parking

There are currently approximately 3,095 parking spaces located in multiple above-grade parking structures and surface parking lots throughout the Project Site. With the Project, a total of approximately 6,050 parking spaces would be provided, including approximately 2,170 existing parking spaces to remain, within a combination of above-grade parking structures, subterranean structures, and/or surface parking lots. The Project would also provide bicycle parking spaces, including short-term and long-term spaces, in accordance with the LAMC. The on-site parking facilities would serve the parking needs for Project employees, staff, visitors, audiences, etc.

Access and Circulation

Existing Access. Primary vehicular access to the Project Site is currently provided via two driveways along Radford Avenue south of the Los Angeles River and one driveway along Colfax Avenue. Additional limited access is provided via three driveways along Radford Avenue north of the Los Angeles River and two production access points along the adjacent alley south of the Project Site. A bridge that crosses the Los Angeles River provides internal vehicular access between the North Lot and South Lot. These existing access points are shown in Figure 2A.

Proposed Access. As previously detailed, vehicular access to the Project Site would continue to be provided along Radford Avenue via the existing ingress/egress driveways at the southwestern portion of the South Lot, the Radford Gate, and the northwestern portion of the South Lot, which provides direct access to the existing Sater parking structure. Vehicular access from Colfax Avenue via the existing ingress/egress driveway, the Colfax Gate, would be located in the southeastern portion of the South Lot. Additional vehicular access from Ventura Boulevard, via Carpenter Avenue, would be provided via a former ingress/egress driveway at the Carpenter Gate that would be restored as part of the Project.

The Project is also proposing a new multi-modal bridge, referred to as the Radford Mobility Connector, which would extend Radford Avenue north across the Tujunga Wash to Moorpark Street (no through access for vehicles would be permitted north or south along Radford Avenue). Removable bollards, fire access gates, planters, and/or other traffic calming measures would be installed to prevent cut-through vehicular traffic by prohibiting vehicular access from Moorpark Street south to Ventura Boulevard. The Radford Mobility Connector would provide a pedestrian and bicycle connection to the Tujunga Wash and include new studio-related vehicle access, as well as ramps and/or stairs to provide direct access to the Los Angeles River trail system. Along Radford Avenue, enhanced sidewalks with landscaping elements are proposed, along with Class IV bikeways from Hoffman Street to the Radford Mobility Connector. The goal of the Project's open space plan is to enhance access to and help connect pedestrians and bicyclists with the Los Angeles River and tributaries consistent with the improvements already envisioned by the City.

Two additional existing ingress/egress driveways located in the northwestern and southwestern portion of the North Lot along Radford Avenue would be for limited access only, consistent with existing conditions. Two loading/service access areas would also be located along the southern boundary of the Project Site accessed from the adjacent public alley.

As detailed in Figure 3, pedestrian and bicycle access would be provided at the same primary access points, including at the Radford Gate, Sater parking structure, Carpenter Gate, and Colfax Gate. Additional access points along Radford Avenue and two pedestrian access points along the alley would also be available. All access points would be controlled with gates and/or staffed guard houses.

The existing bridge internally connecting the North Lot to the South Lot across the Los Angeles River would be maintained and widened. Internal circulation routes would be renovated and, where required, newly introduced throughout the Project Site to facilitate access to all buildings, parking areas, and basecamp areas. Parking for production vehicles would be provided adjacent to sound stages to accommodate loading/unloading activities and vehicle storage in or near basecamp areas.

Mobility Hub(s)

As shown in Figure 4, Mobility Hub(s) would be located on-site, currently proposed as one in the northern portion of the North Lot and one in the southern portion of the South Lot, subject to operational needs. The Mobility Hub within the North Lot would be constructed after completion of the Radford Mobility Connector. The Mobility Hub(s) would support first-mile/last-mile connections; encourage employee use of public transit, carpooling, vanpooling, and biking/scooter to work; and support other transportation demand management (TDM) strategies. The Mobility Hub(s) would provide an off-street space for Project-related passenger pick-up/drop-off and the temporary parking of buses, carpools, vanpools, shuttles, ride-share, taxi, and other commercial and non-commercial vehicles. The Mobility Hub(s) would include space to accommodate support uses, storage, maintenance, staging facilities, bike share, and ridership amenities.

Project Schedule

Project buildout could take place in one or multiple phases and is anticipated to be completed as early as Year 2028. However, the Project is seeking a Development Agreement with a term of 20 years, which could extend the full buildout year to approximately Year 2045. Under the long-term buildout scenario, no single construction period would be ongoing for that duration, nor would construction be constantly occurring on the Project Site for 20 years. The analysis in this study considers Project operations in Year 2028 as well as the Year 2045 long-term buildout scenario.

PROJECT LOCATION

The Project Site is identified by Assessor Parcel Numbers 2368-001-028 (North Lot), 2368-005-011 (South Lot), and 2368-001-029 and -030, which are unaddressed parcels located within and around the Los Angeles River and Tujunga Wash. As illustrated in Figure 5, the Project Site is generally bounded by the Los Angeles River and Tujunga Wash to the north and east, Colfax Avenue to the east, a public alley that runs parallel to Ventura Boulevard to the south, and Radford Avenue to the west. The North Lot and South Lot are bisected by the Los Angeles River. The Project Site is located less than 0.75 miles south of the Hollywood / Ventura Freeway (US 101), approximately 1.0 miles southwest of the Hollywood Freeway (SR 170), and approximately 1.25 miles southwest of the Ventura Freeway (SR 134). The Project Site is primarily served by Ventura Boulevard, Radford Avenue and Colfax Avenue.

STUDY SCOPE

The scope of analysis for this study was developed based on direction from LADOT and is consistent with the LADOT *Transportation Assessment Guidelines* (August 2022) (TAG) and in compliance with the California Environmental Quality Act (CEQA) Guidelines (California Code of Regulations, Title 14, Section 15000 et seq.).

The base assumptions and technical methodologies (i.e., vehicle miles traveled [VMT], trip generation, study locations, analysis methodology) were identified and agreed to in a Transportation Assessment Memorandum of Understanding (MOU), which was reviewed and approved by LADOT on September 19, 2023. A copy of the signed MOU is provided in Appendix A.

ORGANIZATION OF REPORT

This report is divided into six chapters, including this introduction. Chapter 2 describes the Project Context including the study area and existing and future cumulative transportation conditions. Chapter 3 describes the procedure used to forecast Project trips through the street system including the Project trip generation, trip distribution, and trip assignment. Chapter 4 details the CEQA Analysis of Transportation Impacts including TAG Thresholds T-1 through T-3. Chapter 5

discusses the Non-CEQA Transportation Analyses including the pedestrian, bicycle, and transit assessments, Project access, safety, and circulation assessments, residential street cut-through analysis, construction analysis, and parking analysis. Chapter 6 summarizes the transportation improvement program developed for the Project in coordination with LADOT. The appendices contain supporting documentation, including the MOU that outlines the study scope and assumptions, and additional details supporting the technical analyses.

LEGEND

--- PROJECT PROPERTY LINE



Source: Skidmore, Owings & Merrill, 2024.

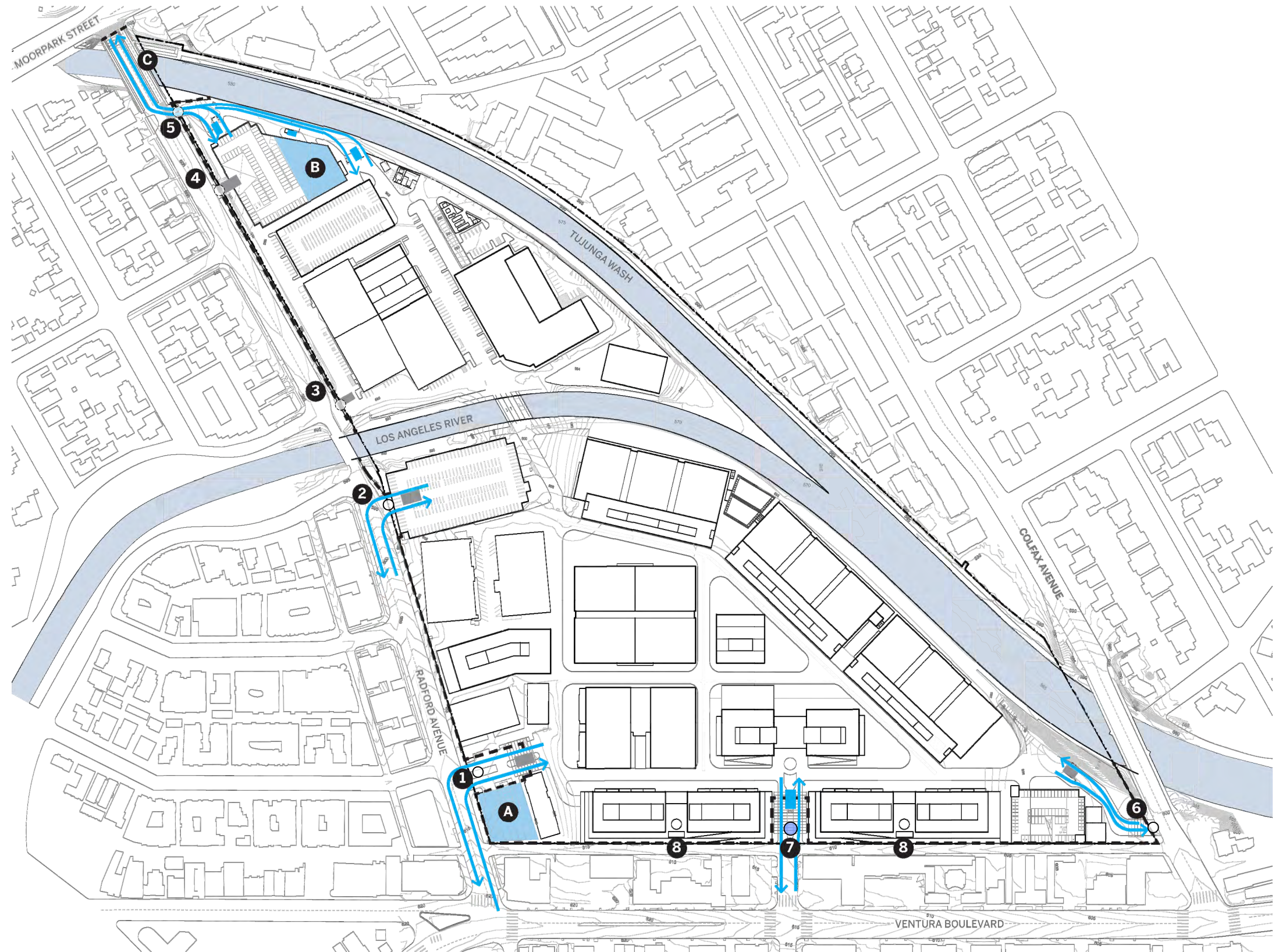
ILLUSTRATIVE SITE PLAN

FIGURE
1

LEGEND

- PROJECT PROPERTY LINE
- PRIMARY VEHICULAR INGRESS/EGRESS
- PERIMETER SECURITY
- NEW CONTROLLED ENTRY POINT
- EXISTING CONTROLLED ENTRY POINT
- NEW MOBILITY HUB
- Existing Gate
- Existing Gate (Limited Access)
- Proposed Gate

- 1 RADFORD GATE
- 2 SATER PARKING STRUCTURE
- 3 PRODUCTION ACCESS POINT (LIMITED)
- 4 PRODUCTION ACCESS POINT (LIMITED)
- 5 TUJUNGA WASH EASEMENT ACCESS
- 6 COLFAX GATE
- 7 CARPENTER GATE (RESTORED ACCESS POINT)
- 8 LOADING/SERVICE ACCESS
- A SOUTH MOBILITY HUB
- B NORTH MOBILITY HUB
- C FUTURE RADFORD MOBILITY CONNECTOR (NO THROUGH ACCESS ALONG RADFORD)



Source: Skidmore, Owings & Merrill, 2024.



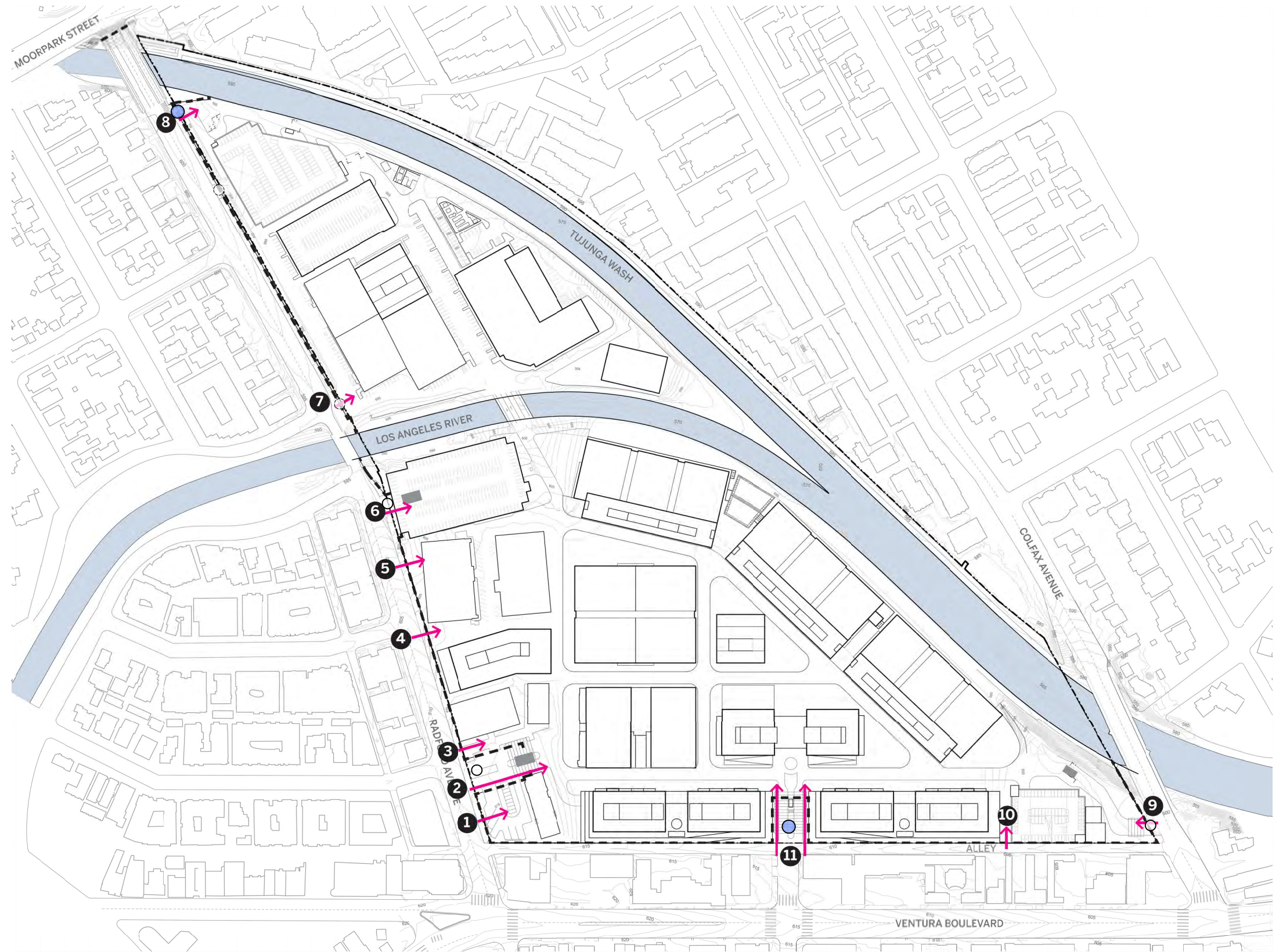
PROJECT SITE
VEHICULAR ACCESS - PROPOSED

FIGURE
2

LEGEND

- PROJECT PROPERTY LINE
- ➔ PEDESTRIAN & BICYCLE ACCESS
- PERIMETER SECURITY
- Existing Gate
- Existing Gate (Limited Access)
- Proposed Gate

- 1 RADFORD GATE
- 2 SATER PARKING STRUCTURE
- 1 MACK SENNETT GATE
- 2 RADFORD GATE
- 3 ADMINISTRATION GATE
- 4 STAGE 2 SOUTH GATE
- 5 STAGE 2 NORTH GATE
- 6 SATER PARKING STRUCTURE GATE
- 7 SOUTH RADFORD GATE
- 8 NORTH RADFORD GATE
- 9 COLFAX GATE
- 10 ALLEY GATE
- 11 CARPENTER GATE



Source: Skidmore, Owings & Merrill, 2023.

PROJECT SITE
PEDESTRIAN AND BICYCLE ACCESS - PROPOSED

FIGURE
3

LEGEND

- PROJECT PROPERTY LINE
- VEHICULAR INGRESS/EGRESS
- PERIMETER SECURITY
- NEW CONTROLLED ENTRY POINT
- EXISTING CONTROLLED ENTRY POINT
- NEW MOBILITY HUB

- A** SOUTH MOBILITY HUB
- B** NORTH MOBILITY HUB
- C** FUTURE RADFORD MOBILITY CONNECTOR (NO THROUGH ACCESS ALONG RADFORD)



Source: Skidmore, Owings & Merrill, 2024.

LOCATIONS OF MOBILITY HUBS

FIGURE
4



LEGEND

Project Site

PROJECT SITE LOCATION

FIGURE
5

TABLE 1
PROPOSED PROJECT DEVELOPMENT SUMMARY [a]

Land Use	Existing	Demolition	Existing to Remain	Proposed New Construction	Total Permitted [b]	Net New [c]
Sound Stages	359,730 sf	136,310 sf	223,420 sf	226,580 sf	450,000 sf	90,270 sf
Production Support	255,510 sf	170,370 sf	85,140 sf	214,860 sf	300,000 sf	44,490 sf
Production Office [d]	450,060 sf	297,110 sf	152,950 sf	572,050 sf	725,000 sf	274,940 sf
General Office	113,810 sf	42,330 sf	71,480 sf	628,520 sf	700,000 sf	586,190 sf
Retail [e]	-	-	-	25,000 sf	25,000 sf	25,000 sf
Total Development	1,179,110 sf	646,120 sf	532,990 sf	1,667,010 sf	2,200,000 sf	1,020,890 sf

Notes:

All land use sizes shown in square feet (sf) measured as described in the Radford Studio Center Specific Plan.

[a] Per the proposed Radford Studio Center Specific Plan, floor area shall be defined in accordance with LAMC Section 12.03, with the following exceptions: areas related to the Mobility Hubs; basecamp; outdoor eating areas (covered or uncovered); trellis and shade structures; covered walkways and storage areas; and all temporary uses (e.g., sets/façades). The approximately 2,200,000 sf of total floor area within the Project Site per the Specific Plan definition is equivalent to approximately 2,345,000 sf based on the LAMC definition.

[b] Total permitted includes existing uses to remain. The Specific Plan would allow for the exchange of certain permitted studio land uses and associated floor areas in order to respond to the future needs and demands of the entertainment industry. Specifically, floor area from any permitted land use category may be exchanged for additional sound stage and production support uses as long as the limitations of the Specific Plan are met. However, the total permitted floor area on-site would not exceed 2,200,000 sf. In addition, the total floor area of production office, general office, and retail uses permitted under the Specific Plan would not exceed 725,000 sf, 700,000 sf, and 25,000 sf, respectively.

[c] Net new = Proposed New Construction – Demolition.

[d] Includes an approximately 13,500 sf Mill building that would be relocated within the Project Site.

[e] Could include up to 25,000 sf of ancillary restaurant uses.

Chapter 2

Project Context

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

The Existing Conditions analysis includes an assessment of the existing freeway and street systems, an analysis of traffic volumes and current operating conditions, and an assessment of the existing public transit service, as well as pedestrian and bicycle circulation. An inventory of lane configurations, signal phasing, parking restrictions, etc., for the analyzed intersections was also collected. The traffic count worksheets are provided in Appendix B.

In addition, this Chapter contains a discussion of the future conditions detailing the assumptions used to develop the Future without Project Conditions in Year 2028 and Year 2045. As previously detailed, Project buildout would take place over multiple years and is anticipated to be completed as early as Year 2028. However, the Project is seeking a Development Agreement with a term of 20 years, which could extend the full buildout year to approximately Year 2045. Under the long-term buildout scenario, no single construction period would be ongoing for that duration, nor would construction be constantly occurring on the Project Site for 20 years.

STUDY AREA

The Study Area, shown in Figure 6, includes a geographic area that is generally bounded by Riverside Drive to the north, Tujunga Avenue to the east, Fryman Road to the south, and Whitsett Avenue to the west. The Study Area covers a footprint of approximately 2.20 square miles. The intersections were selected in consultation with LADOT based on the following factors identified in the TAG:

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

Based on the above factors, a total of 32 study intersections located within the City were identified for detailed analysis, including 25 signalized intersections and seven unsignalized intersections². The study intersections are listed in Table 2. The existing and proposed future lane configurations and mobility facilities at the analyzed intersections are provided in Figure 7 and 8, respectively.

EXISTING TRANSPORTATION CONDITIONS

Existing Street System

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

Street classifications are designated in *Mobility Plan 2035, An Element of the General Plan* (LADCP, September 2016) (Mobility Plan). The Mobility Plan defines specific street standards to provide an enhanced balance between traffic flow and other important street functions including transit routes and stops, pedestrian environments, bicycle routes, building design and site access, etc.

² The Project proposes the Radford Mobility Connector, a new bridge which would extend Radford Avenue north across the Tujunga Wash to Moorpark Street (no through access would be permitted north or south along Radford Avenue). As part of this improvement, the Project proposes the signalization of the intersection of Radford Avenue & Moorpark Street.

Per the Mobility Plan and the City's *Complete Streets Design Guide*, street classifications are defined as follows:

- Freeways are high-volume, high-speed roadways with limited access provided by interchanges that carry regional traffic through and do not provide local access to adjacent land uses.
- Arterial Streets are major streets that serve through traffic, as well as provide access to major commercial activity centers. Arterials are divided into two categories:
 - Boulevards represent the widest Arterial Streets that typically provide regional access to major destinations and include two categories:
 - Boulevard I provides up to four travel lanes in each direction with a target operating speed of 40 mph, and generally includes a right-of-way (ROW) width of 136 feet and pavement width of 100 feet.
 - Boulevard II provides up to three travel lanes in each direction with a target operating speed of 35 mph, and generally includes a ROW width of 110 feet, and pavement widths of 80 feet.
 - Avenues are typically narrow arterials that pass through both residential and commercial areas and include three categories:
 - Avenue I provides up to two travel lanes in each direction with a target operating speed of 35 mph, with a ROW width of 100 feet and pavement width of 70 feet.
 - Avenue II provides up to two travel lanes in each direction with a target operating speed of 30 mph, with a ROW width of 86 feet and pavement width of 56 feet.
 - Avenue III provides up to two travel lanes in each direction with a target operating speed of 25 mph, with a ROW width of 72 feet and pavement width of 46 feet.
- Collector Streets are generally located in residential neighborhoods and provide access to and from Arterial Streets for local traffic and are not intended for cut-through traffic. They provide one travel lane in each direction with an operating speed of 25 mph, with a ROW width generally at 66 feet and pavement width of 40 feet.
- Local Streets are intended to accommodate lower volumes of vehicle traffic and provide parking on both sides of the street. They provide one travel lane in each direction with a target operating speed of 15 to 20 mph. Pavement widths may vary between 30-36 feet within a ROW width of 50-60 feet. Local Streets include two categories:
 - Continuous Local Streets connect to other streets at both ends
 - Non-continuous Local Streets lead to a dead-end

Primary regional access to the Project Site is provided via US 101, SR 170, and SR 134 within the Study Area. The arterials providing regional and sub-regional access to the Project Site include Ventura Boulevard, Laurel Canyon Boulevard, and Colfax Avenue. The following is a brief description of the roadways in the Study Area, including their classifications under the Mobility Plan, as shown in Figure 9:

Freeways

- **US 101** – US 101 generally runs in the east-west direction within the Study Area. It is located approximately 0.35 miles north of the Project Site. In the vicinity of the Project Site, US 101 provides five travel lanes in each direction. Access to and from US 101 is available via interchanges at Laurel Canyon Boulevard.
- **SR 170** – SR 170 generally runs in the northwest-southeast direction and is located approximately 2.2 miles northeast of the Project Site. In the vicinity of the Project Site, SR 170 provides three travel lanes and a high occupancy vehicle (HOV) lane in each direction. Access to and from SR 170 is available via interchanges at Tujunga Avenue and Riverside Drive.
- **SR 134** – SR 134 generally runs in the east-west direction and is located approximately 0.7 miles northeast of the Project Site. Near the Project Site, SR 134 provides four travel lanes and an HOV lane in each direction. Access to and from SR 134 is available via interchanges from US 101 and at Tujunga Avenue.

Roadways

- **Whitsett Avenue** – Whitsett Avenue is a designated Avenue II located approximately 0.75 miles west of the Project Site and travels in the north-west direction. It provides four travel lanes, two lanes in each direction, with left-turn lanes at intersections. Unmetered parking with afternoon peak hour restrictions on the east side of the street is generally available within the Study Area. Travel lanes are typically 10 to 11 feet wide, and the total paved roadway width is approximately 50 feet within the Study Area.
- **Laurel Canyon Boulevard** – Laurel Canyon Boulevard is a designated Avenue I located approximately 0.25 miles west of the Project Site and travels in the north-south direction. It provides four travel lanes, two lanes in each direction, with left-turn lanes at intersections and a center turn lane. Unmetered parking is generally available on both sides of the street within the Study Area. Laurel Canyon Boulevard provides a direct connection to US 101 via interchanges northwest of the Project Site. Travel lanes are typically 10 to 11 feet-wide, and the total paved roadway width is approximately 80 feet within the Study Area.
- **Radford Avenue** – Radford Avenue is a designated Avenue II and travels in the north-south direction. Radford Avenue terminates at the south side of the Tujunga Wash and continues north of Moorpark Street. It is located on the western edge of the Project Site and provides two travel lanes, one lane in each direction. Unmetered parking is generally

provided on both sides of the street within the Study Area. The total paved roadway width is approximately 56 feet adjacent to the Project Site.

- Colfax Avenue – Colfax Avenue is a designated Avenue II located adjacent to a portion of the eastern boundary of the Project Site and travels in the north-south direction. It generally provides two to four travel lanes, one to two lanes in each direction, with left-turn lanes at intersections. Striped bicycle lanes and unmetered parking are generally provided on both sides of the street within the Study Area. Travel lanes are typically 10 to 11 feet wide, and the total paved roadway width is between approximately 46 and 66 feet near the Project Site.
- Tujunga Avenue – Tujunga Avenue is a designated Avenue II located approximately 0.6 miles east of the Project Site and travels in the north-south direction. It provides two to four travel lanes, one to two lanes in each direction, with left-turn lanes at intersections and a center turn lane south of Moorpark Street. Striped bicycle lanes are provided on both sides of the street within the Study Area. Unmetered parking is generally available on both sides of the street within the Study Area. Travel lanes are typically 10 to 11 feet wide, and the total paved roadway width is between approximately 56 and 60 feet within the Study Area.
- Riverside Drive – Riverside Drive is a designated Avenue I located approximately 0.6 miles north of the Project Site and travels in the east-west direction. It provides four travel lanes, two lanes in each direction, with left-turn lanes at intersections and a center turn lane. Unmetered parking is generally available on both sides of the street within the Study Area. Travel lanes are typically 10 to 11 feet wide, and the total paved roadway width is approximately 76 feet within the Study Area.
- Landale Street – Landale Street is a designated Collector Street between Laurel Canyon Boulevard and Colfax Avenue and a designated Local Street west of Laurel Canyon Boulevard and east of Colfax Avenue. It is located approximately 900 feet north of the northern boundary of the Project Site and travels in the east-west direction. It provides two travel lanes, one lane in each direction. Unmetered parking is generally available on both sides of the street within the Study Area. The total paved roadway width is approximately 36 feet within the Study Area.
- Sarah Street – Sarah Street is a designated Local Street located approximately 0.3 miles north of the Project Site and travels in the east-west direction. It provides two travel lanes, one lane in each direction. Unmetered parking with peak hour restrictions is generally available on both sides of the street within the Study Area. The total paved roadway width is approximately 36 feet within the Study Area.
- Moorpark Street – Moorpark Street is a designated Avenue II located north of the northern boundary of the Project Site and travels in the east-west direction. It provides four travel lanes, two lanes in each direction. Unmetered parking is generally available on both sides of the street except between Laurel Canyon Boulevard and Morella Avenue within the Study Area. Travel lanes are typically 10 to 11 feet wide, and the total paved roadway width is approximately 75 feet within the Study Area.
- Irvine Avenue – Irvine Avenue is a designated Local Street and travels in the north-south direction. It is located approximately 0.2 miles east of the Project Site and provides two

travel lanes, one lane in each direction. Unmetered parking is generally available within the Study Area. The total paved roadway width is approximately 36 feet within the Study Area.

- Woodbridge Street – Woodbridge Street is a designated Local Street and travels in the east-west direction that terminates at Radford Avenue/the western boundary of the Project Site and continues east of Colfax Avenue. It provides two travel lanes, one lane in each direction. Unmetered parking is generally available within the Study Area. The total paved roadway width is approximately 36 feet near the Project Site.
- Ventura Boulevard – Ventura Boulevard is a designated Boulevard II located south of the southern boundary of the Project Site and travels in the east-west direction. It provides four travel lanes, two lanes in each direction, with left-turn lanes at intersections and a center turn lane. Metered parking is generally available on both sides of the street within the Study Area. Travel lanes are typically 10 to 12 feet-wide, and the total paved roadway width is approximately 70 feet within the Study Area.
- Ventura Place – Ventura Place is a designated Local Street located southwest of the Project Site and travels in the northwest-southeast direction. It provides four travel lanes, two lanes in each direction, with right-turn and left-turn lanes at intersection termini at Laurel Canyon Boulevard and Ventura Boulevard. Metered parking is generally available on both sides of the street within the Study Area. Vehicle access to Ventura Place is restricted on Sundays between 6 AM and 3 PM. Travel lanes are typically 10 feet wide, and the total paved roadway width is approximately 56 feet within the Study Area.
- Carpenter Avenue – Carpenter Avenue is a designated Collector Street south of Ventura Boulevard and a designated Local Street north of Ventura Boulevard that terminates at the southern boundary of the Project Site and continues north of Moorpark Street. It travels in the north-south direction and provides two travel lanes, one lane in each direction. Unmetered parking is generally available on both sides of the street within the Study Area. The total paved roadway width is between approximately 36 and 50 feet within the Study Area.
- Berry Drive – Berry Drive is a designated Local Street located approximately 0.35 miles east of the Project Site and travels in the north-south direction. It provides two travel lanes, one lane in each direction. Unmetered parking is generally available on both sides of the street within the Study Area. The total paved roadway width is between approximately 24 and 30 feet within the Study Area.
- Maxwellton Road – Maxwellton Road is a designated Local Street located approximately 0.3 miles southwest of the Project Site and travels in the east-west direction. It provides two travel lanes, one lane in each direction. Unmetered parking is generally available on both sides of the street within the Study Area. The total paved roadway width is between approximately 30 and 34 feet within the Study Area.
- Laurel Terrace Drive/Sunshine Terrace Drive – Laurel Terrace Drive/Sunshine Terrace Drive is a designated Collector Street located approximately 0.5 miles south of the Project Site and travels generally in the east-west direction. It provides two travel lanes, one lane in each direction. Unmetered parking is generally available on both sides of the street

within the Study Area. The total paved roadway width is approximately 30 feet within the Study Area.

- Fryman Road – Fryman Road is a designated Local Street located approximately 0.75 miles south of the Project Site and travels in the north-south direction. It provides two travel lanes, one lane in each direction. Unmetered parking with permit restrictions is generally available on both sides of the street within the Study Area. The total paved roadway width is approximately 44 feet within the Study Area.
- Valleyheart Drive – Valleyheart Drive (North) is a designated Local Street that terminates at Radford Avenue/the western boundary of the Project Site. Valleyheart Drive (South) is a designated Local Street that travels between Laurel Canyon Boulevard and Radford Avenue/the western boundary of the Project Site south of the Los Angeles River. Both Valleyheart Drive (North) and Valleyheart Drive (South) travel generally in the east-west direction and have two travel lanes, one lane in each direction. Valleyheart Drive (North) generally provides unmetered street parking on the north side of the street, and Valleyheart Drive (South) generally provides unmetered parking on both sides of the street. The total paved roadway width is between approximately 28 and 32 feet within the Study Area.

Existing Pedestrian Facilities

Figure 10 identifies local-serving commercial retail, restaurant, and supermarket uses along major corridors and institutions that would be considered pedestrian destinations. Figure 11 illustrates the existing transportation facilities within 0.25 miles of the Project Site serving pedestrians, bicyclists, and transit riders to and from those pedestrian destinations.

The walkability of existing facilities is based on the availability of pedestrian routes necessary to accomplish daily tasks without the use of an automobile. These attributes are quantified by WalkScore.com and assigned a score out of 100 points. With the various commercial businesses and cultural facilities adjacent to residential neighborhoods, the walkability of the Project vicinity is approximately 81 points.³

Currently surrounding the Project Site, sidewalks along both sides of Radford Avenue, Colfax Avenue, and Ventura Boulevard provide pedestrian connections to the Project Site. Ventura Place-Radford Avenue & Ventura Boulevard (Intersection #21), Carpenter Avenue & Ventura

³ Walk Score (www.walkscore.com) rates the Project Site with a score of 81 of 100 possible points (scores accessed on October 19, 2023, for 4200 N. Radford Avenue). Walk Score calculates the walkability of specific addresses by considering the ease of living in the neighborhood with a reduced reliance on automobile travel.

Boulevard (Intersection #22), and Colfax Avenue & Ventura Boulevard (Intersection #23) provide signalized pedestrian crossings near the Project Site with marked pedestrian crossings on most legs of the intersections. These intersections provide pedestrian phasing, crosswalk striping, and Americans with Disabilities Act (ADA) accessible curb ramps. The pedestrian facilities provided at the study intersections are further detailed in Figure 8.

Vision Zero. As described in the City's *Vision Zero: Eliminating Traffic Deaths in Los Angeles by 2025* (August 2015) (Vision Zero), Vision Zero is a traffic safety policy that promotes strategies to eliminate transportation-related collisions that result in severe injury or death. Vision Zero has identified the High Injury Network (HIN), a network of streets included based on collision data from the last five years, where strategic investments will have the biggest impact in reducing death and severe injury. As shown in Figure 11, Laurel Canyon Boulevard between Ventura Place and Ventura Boulevard and Ventura Boulevard west of Carpenter Avenue are identified in the HIN. No additional streets have been identified in the HIN within 0.25 miles of the Project Site.

Existing Bicycle System

Based on *2010 Bicycle Plan, A Component of the City of Los Angeles Transportation Element* (LADCP, adopted March 1, 2011) (2010 Bicycle Plan), the existing bicycle system consists of a limited network of bicycle lanes (Class II) and bicycle routes (Class III). Class II bicycle lanes are a component of street design with dedicated striping, separating vehicular traffic from bicycle traffic. Class III bicycle routes and bicycle-friendly streets are those where motorists and cyclists share the roadway and there is no separated striping for bicycle travel. Bicycle routes and bicycle-friendly streets are preferably placed on Collector and lower volume Arterial Streets. Bicycle routes with shared lane markings, or "sharrows", remind bicyclists to ride farther from parked cars to prevent collisions, increase awareness of motorists that bicycles may be in the travel lane, and show bicyclists the correct direction of travel. There are currently Class II bicycle lanes along Riverside Drive, Colfax Avenue, and Tujunga Avenue within the Study Area.

The components of the 2010 Bicycle Plan have been incorporated into the bicycle network of the Mobility Plan. The Mobility Plan consists of a Low-Stress Bikeway System and a Bicycle Lane Network (BLN). The Low-Stress Bikeway System is comprised of the Bicycle Enhanced Network (BEN), the Neighborhood Enhanced Network (NEN), and Bike Paths. The BEN includes protected

bicycle lanes (Class IV), which provide bicycle infrastructure including cycle tracks, bicycle traffic signals, and demarcated areas to facilitate turns at intersections and along neighborhood streets. These Class IV networks typically provide mini-roundabouts, cross-street stop signs, crossing islands at major intersection crossings, improved street lighting, bicycle boxed, and bicycle-only left-turn pockets. The NEN and Bicycle Paths are relatively unchanged from the 2010 Bicycle Plan.

Existing Transit System

The Project Study Area is served by bus lines operated by the Los Angeles County Metropolitan Transportation Authority (Metro) and LADOT. Figure 12 illustrates the existing transit service and transit stops within 0.25 miles of the Project Site. Table 3 summarizes the transit lines operating within 0.25 miles of the Project Site for each of the service providers in the region, the type of service (peak vs. off-peak, express vs. local), and the frequency of service. The average frequency of transit service during the peak hours was derived from schedule information for the stop nearest the Project Site from each respective transit provider and reflects current conditions, including recent changes per Metro's NextGen Bus Plan.

Existing Traffic Volumes

Intersection turning movement counts at the study intersections were collected in March 2023 and November 2023 during the morning (7:00 AM to 10:00 AM) and afternoon (3:00 PM to 6:00 PM) peak periods. Local schools were in session and the weather conditions were typical when all traffic counts were conducted. It should also be noted that studio industry-related strikes were not occurring when traffic counts were collected. The existing intersection peak hour traffic volumes, representing Existing Conditions in Year 2023, are illustrated in Figure 13. Traffic count summaries are provided in Appendix B.

FUTURE CUMULATIVE TRANSPORTATION CONDITIONS

As previously discussed, the Project may be constructed over a 39-month period beginning in Year 2025 and ending by Year 2028. Under the Project's Development Agreement, the Project buildout

could extend through Year 2045. Thus, for the purposes of the transportation analysis, it is anticipated that by Year 2045, the Study Area would be affected by transportation infrastructure improvements and other development projects completed in the interim.

Related Projects

In accordance with the TAG requirements, this assessment also considered other developments either proposed, approved, or under construction (collectively, the Related Projects). In accordance with the procedures outlined in the TAG, Related Projects within 0.50 miles of the Project Site and within 0.25 miles of the farthest outlying study intersection were considered for analysis. The list of Related Projects is based on information provided by LADCP and LADOT in June 2023 at the time of the issuance of the Notice of Preparation, as well as recent studies of development projects in the area. The Related Projects are detailed in Table 4 and shown in Figure 14. Though the buildout years of many of the Related Projects are uncertain and may be well beyond the buildout year of the Project, notwithstanding that some may never be approved or developed, each was considered and conservatively assumed to be completed by completion of the Project in Year 2028.

Future Infrastructure Improvements

The analysis of Future Conditions accounted for roadway improvements that were funded and reasonably expected to be implemented prior to the buildout of the proposed Project. Any roadway improvement that would result in changes to the physical configuration at the study intersections were incorporated into the analysis. Other proposed traffic / trip reduction strategies such as TDM programs for individual buildings and developments were omitted from the Future Conditions analyses. The following plans were evaluated for their potential effects on the future transportation network.

Los Angeles River Greenway & Bikeway Improvements. In coordination with Metro and other agencies, the City's Bureau of Engineering has approved bikeway and greenway improvements along the Los Angeles River within the San Fernando Valley that connect critical gaps in the Valley River bikeway and also include other improvements. Within the immediate vicinity of the

Project Site, these anticipated improvements include bikeway improvements along Radford Avenue and the Tujunga Wash, a pedestrian/bicycle bridge over the Tujunga Wash, plantings, undergrounding of utilities, sidewalk paving and improvements to the existing Art Walk along Radford Avenue, fencing, solar lighting, signage, bio-swales and plantings along the Tujunga Wash, and a new pedestrian signal at Moorpark Street. The Los Angeles Bureau of Engineering anticipates completion of these improvements by approximately Years 2030/2031. The specific improvements and locations have not yet been identified, and there is no schedule for implementation; therefore, no changes to vehicular lane configurations were made because of the proposed greenway and bikeway improvements.

Mobility Plan. In the Mobility Plan, the City identifies key corridors as components of various “mobility-enhanced networks.” Each network is intended to focus on improving a particular aspect of urban mobility, including transit, neighborhood connectivity, bicycles, pedestrians, and vehicles. The specific improvements that may be implemented in those networks have not yet been identified, and there is no schedule for implementation; therefore, no changes to vehicular lane configurations were made because of the Mobility Plan. However, the following mobility-enhanced networks included corridors within the Project Site vicinity, which are depicted in Figure 15:

- **Transit Enhanced Network (TEN):** The TEN aims to improve existing and future bus services through reliable and frequent transit service in order to increase transit ridership, reduce single-occupancy vehicle trips, and integrate transit infrastructure investments within the surrounding street system. The Mobility Plan has designated Ventura Boulevard as part of the TEN.
- **NEN:** The NEN reflects the synthesis of the bicycle and pedestrian networks and serves as a system of Local Streets that are slow moving and safe enough to connect neighborhoods through active transportation. The Mobility Plan has designated Colfax Avenue north of Acama Street as part of the NEN.
- **BEN / BLN:** There are no BEN facilities proposed within the Project Site vicinity. Laurel Canyon Boulevard and Colfax Avenue are designated for Tier 2 bicycle lanes and Ventura Boulevard is designated for Tier 3 bicycle lanes as part of the BLN.

- Pedestrian Enhanced District (PED): The Mobility Plan aims to promote walking to reduce the reliance on automobile travel by providing more attractive and pedestrian-friendly sidewalks, as well as adding pedestrian signalizations, street trees, and pedestrian-oriented design features. The Mobility Plan has designated Laurel Canyon Boulevard south of Valley Spring Lane, Ventura Boulevard west of Carpenter Avenue, and Radford Avenue between Guerin Street and Ventura Boulevard as part of the PED, where pedestrian improvements could be prioritized to provide better connectivity to and from major destinations within communities.

Future Traffic Volumes

The forecast of Future without Project Conditions was prepared in accordance with procedures outlined in the TAG. Specifically, as detailed in Section 3.3.4.1 of the TAG, two requirements are provided for developing the cumulative traffic volume forecast:

“The Transportation Assessment must estimate ambient traffic conditions for the study horizon year selected during the scoping phase and recorded in the executed MOU. The study must clearly identify the horizon year and annual ambient growth rate used for the study. The horizon year should align with the development project’s expected completion year. For development projects constructed in phases over several years, the Transportation Assessment should analyze intermediary milestones before the buildout and completion of the project. The annual ambient growth rate shall be determined by LADOT staff during the scoping process and can be based on an adopted TSP, the most recent SCAG regional transportation model, the citywide transportation model, or other empirical information approved by LADOT.

“The Transportation Assessment must consider related projects. For related development projects, this should include the associated trip generation for known development projects within one-half mile (2,640 foot) radius of the project site and one-quarter mile (1,320 foot) radius of the farthest outlying study intersections. Consultation with the Department of City Planning and LADOT may be required to compile the related projects list. The City’s ZIMAS database can be used to assist in identifying development projects that have submitted applications to the City of Los Angeles. Project access and circulation constraints would be determined by adding project-generated trips to future base traffic volumes including ambient growth and related projects and conducting the operational analysis.”

The ambient growth factor discussed below includes traffic increases resulting from the Related Projects. Therefore, through some inherent double-counting of vehicles, the traffic analysis provides a highly conservative estimate of Future without Project traffic volumes.

The Future without Project traffic volumes, therefore, include ambient growth, which reflects increases in traffic due to regional growth and development outside the Study Area, as well as traffic generated by ongoing or entitled projects near or within the Study Area.

Ambient Traffic Growth. Existing traffic is expected to increase as a result of regional growth and development. Based on discussions with LADOT during the MOU process, an ambient growth factor of 1% per year compounded annually was applied to be conservative by adjusting the existing traffic volumes to reflect the effects of the regional growth and development. A total growth of 5.10% was applied to account for the five-year period corresponding to buildout in Year 2028. An ambient growth factor of 0.5% per year compounded annually was applied to the adjusted traffic volumes between Year 2028 to Year 2045 to simulate regional traffic growth corresponding to the Project's buildout under the Development Agreement. As such, a total growth of 14.95% was applied to account for the additional 17-year period. These growth factors account for increases in traffic due to potential projects plus projects not yet proposed and projects located outside the Study Area.

Related Projects. As previously detailed, in accordance with the TAG requirements, this study also considered the effects of Related Projects within 0.50 miles of the Project Site and within 0.25 miles of the farthest outlying study intersection. Additional development projects located beyond 0.50 miles of the Project Site and 0.25 miles of the farthest outlying study intersection were also considered and accounted for in the application of the ambient growth factor, as detailed above. Including this analysis step, the potential impact of the Project was evaluated within the context of past, present, and probable future developments capable of producing cumulative impacts.

The Related Projects are detailed in Table 4 and shown in Figure 14. As previously noted, each Related Project was considered and conservatively assumed to be completed by completion of the Project in Year 2028. Therefore, the traffic growth due to the development of Related Projects considered in this analysis is highly conservative and, by itself, substantially overestimates the actual traffic volume growth in the Study Area that would likely occur prior to Project buildout. With the addition of the ambient growth factor previously discussed, the Future without Project cumulative conditions are even more conservative.

- **Trip Generation.** Trip generation estimates for the Related Projects were provided by LADOT or were calculated using the trip generation rates contained in *Trip Generation*

Manual, 11th Edition (Institute of Transportation Engineers, 2021). The Related Projects trip generation estimates summarized in Table 4 are conservative in that they do not in every case account for any trips generated by the existing uses to be removed or the likely use of other travel modes (e.g., transit, bus, bicycling, walking, carpool). Further, in many cases, they do not account for the internal capture trips within a multi-use development or for the interaction of trips between multiple Related Projects, in which one Related Project serves as the origin for a trip destined for another Related Project.

- **Trip Distribution.** The geographic distribution of the traffic generated by the Related Projects is dependent on several factors. These factors include the type and density of the proposed land uses, the geographic distribution of population from which the employees/residents and potential patrons of the proposed developments are drawn, and the location of these projects in relation to the surrounding street system. These factors were considered along with logical travel routes through the street system to develop a reasonable pattern of trip distribution.
- **Traffic Assignment.** The trip generation estimates for the Related Projects were assigned to the local street system using the trip distribution pattern described above. Figure 16 shows the peak hour traffic volumes associated with these Related Projects at the study intersections.

Future without Project Conditions Traffic Volumes. The Related Projects volumes were added to the existing traffic volumes after accounting for ambient growth through the Project buildout Year 2028 and Development Agreement Year 2045. These volumes represent the Future without Project Conditions (i.e., ambient traffic growth and Related Project traffic growth added to existing traffic volumes) for Year 2028 and Year 2045 at the study intersections, as shown in Figures 17 and 18, respectively.

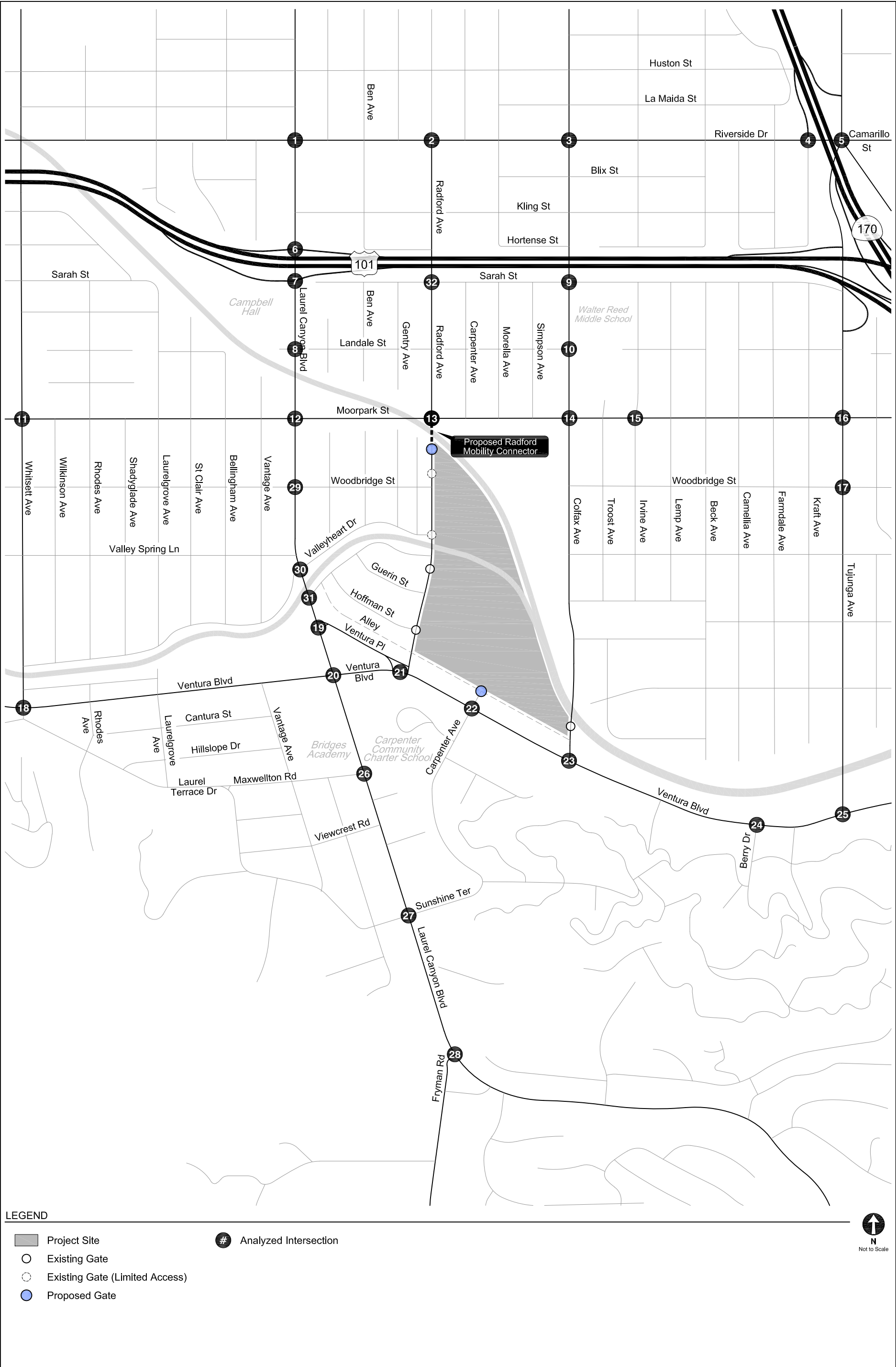
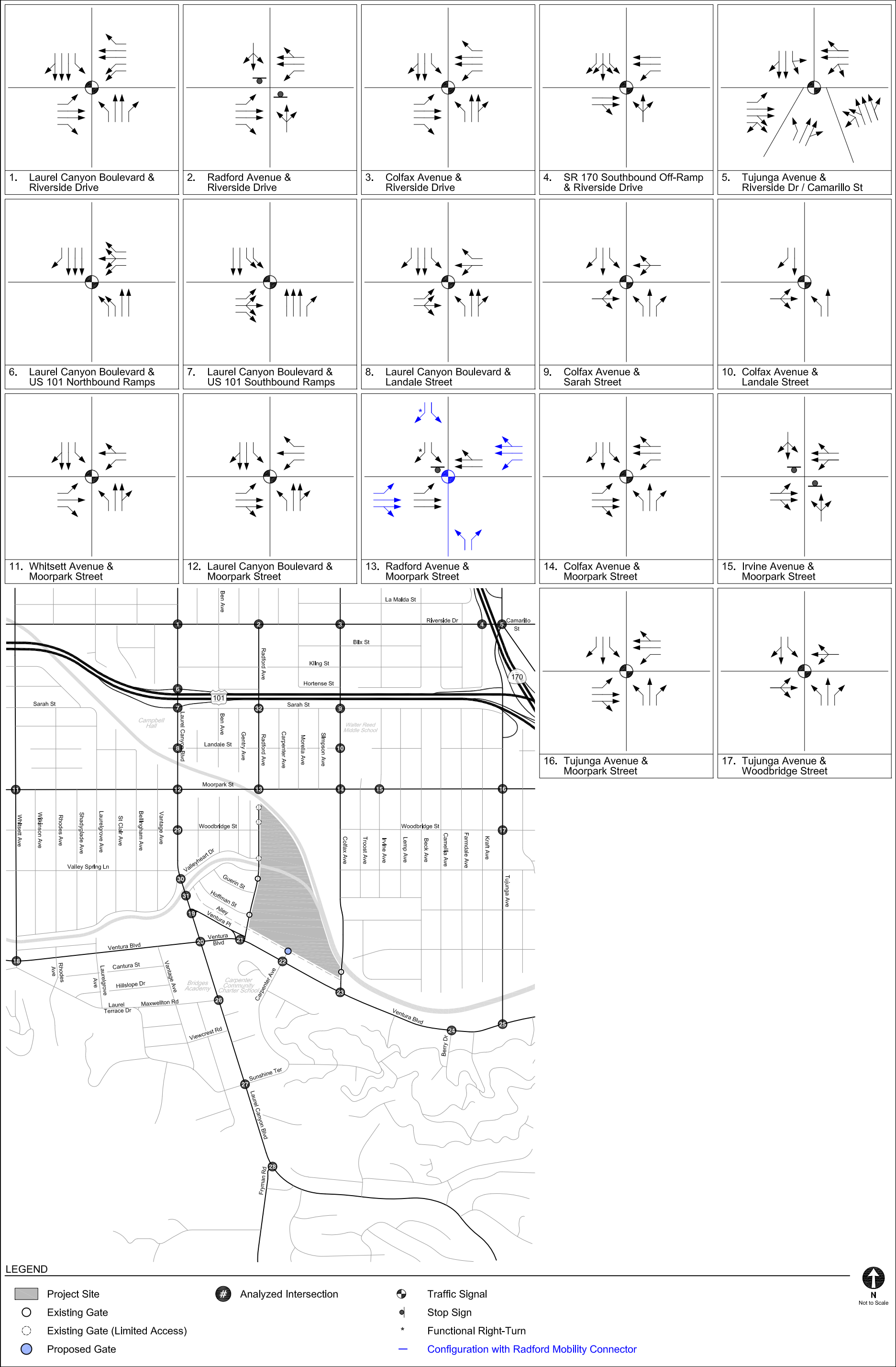
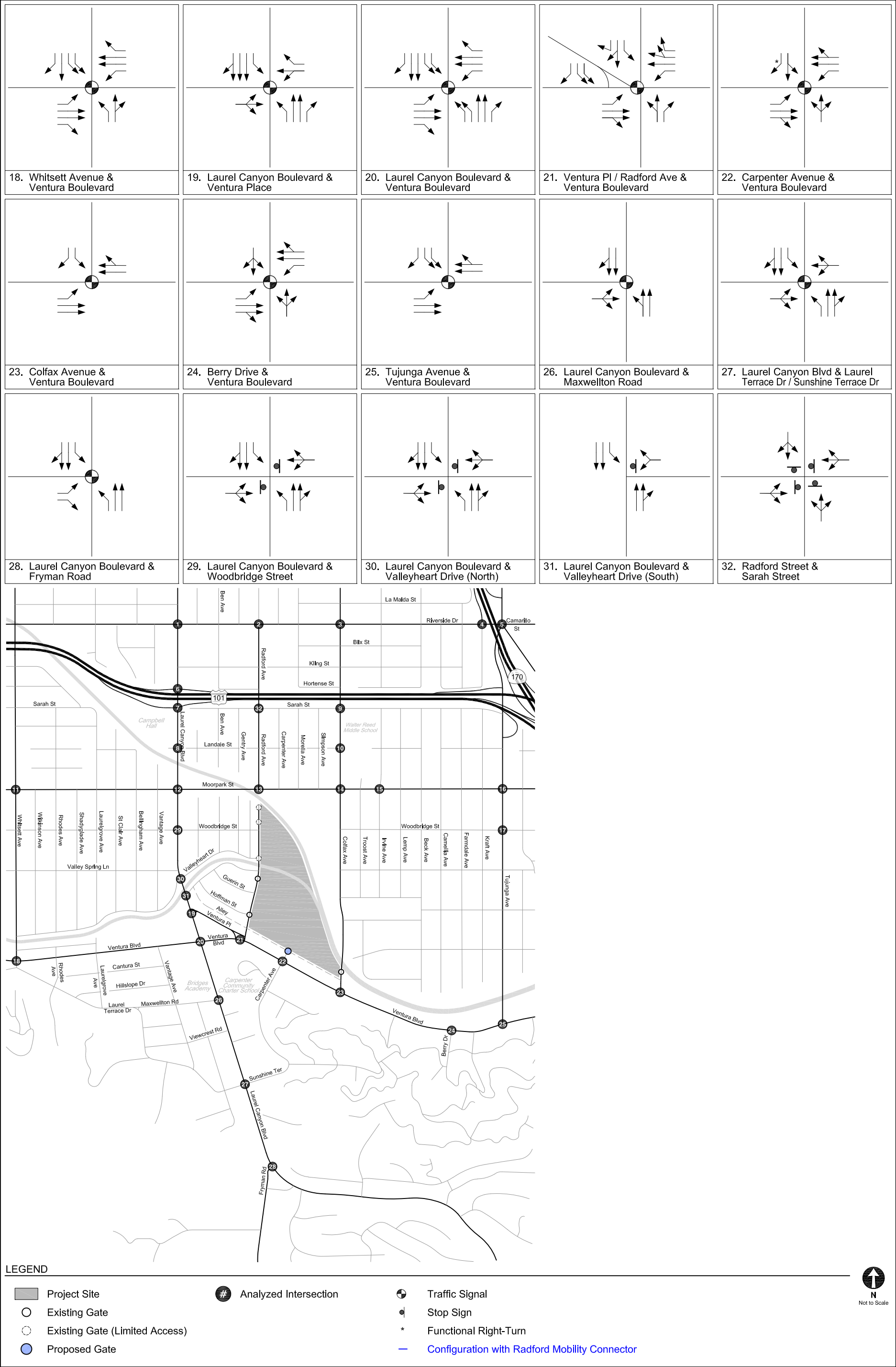


FIGURE
6



INTERSECTION LANE CONFIGURATIONS

FIGURE
7



INTERSECTION LANE CONFIGURATIONS

FIGURE
7 (CONT.)



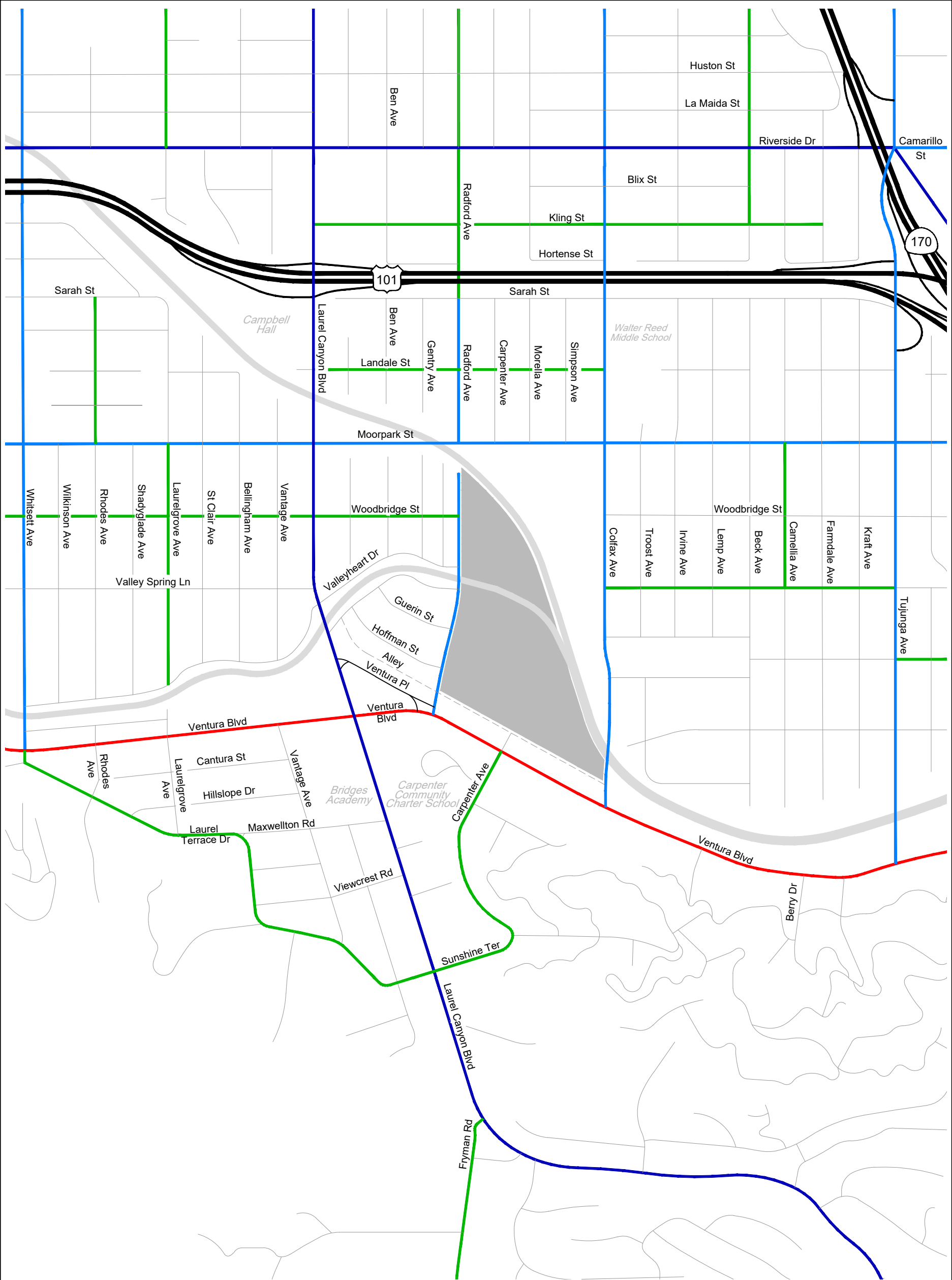
EXISTING INTERSECTION MOBILITY FACILITIES

FIGURE
8



EXISTING INTERSECTION MOBILITY FACILITIES

FIGURE
8 (CONT.)



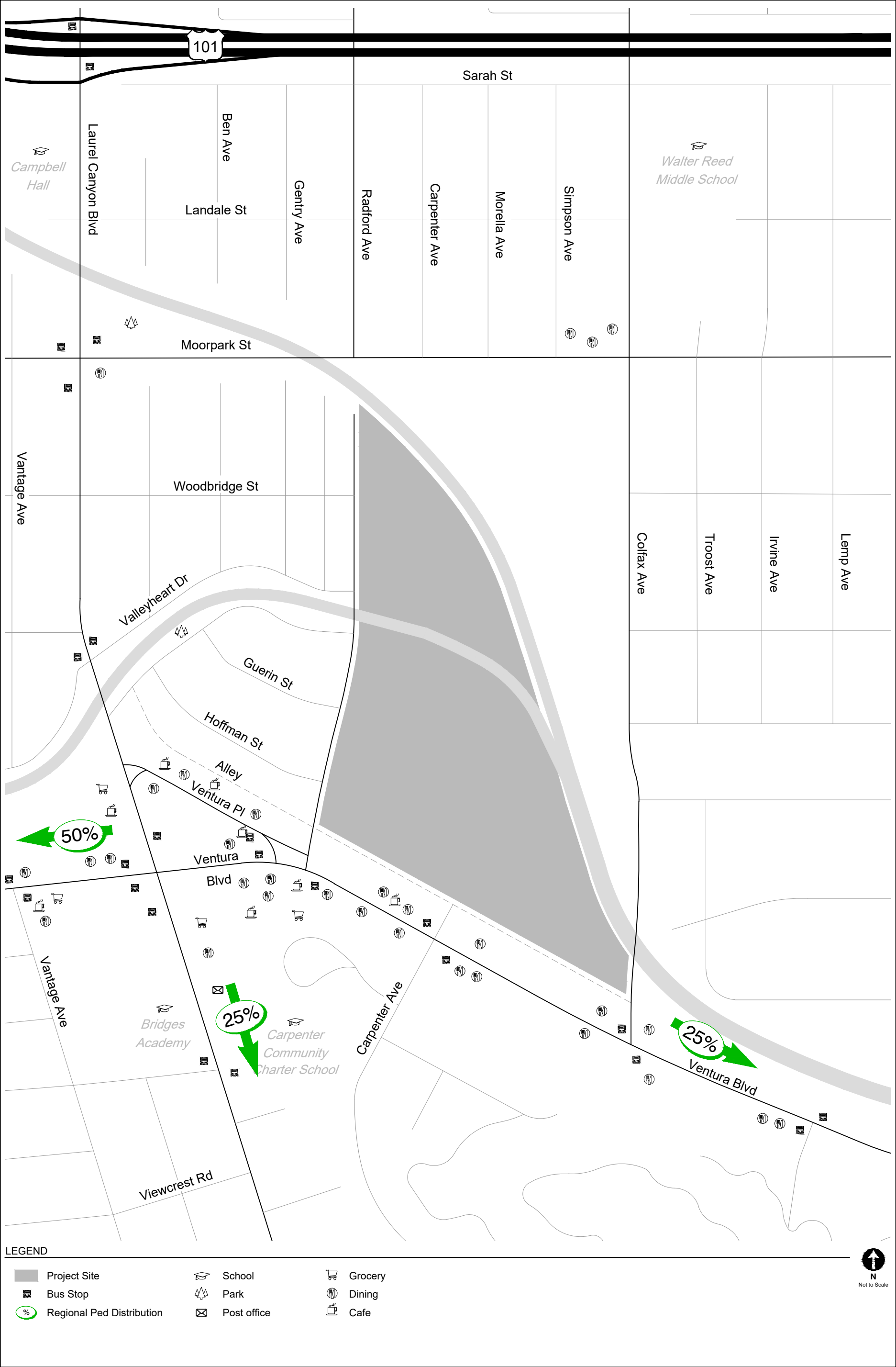
LEGEND

- | | | |
|--|--|---|
|  Project Site |  Boulevard II |  Collector |
| |  Avenue I |  Local / Other |
| |  Avenue II | |



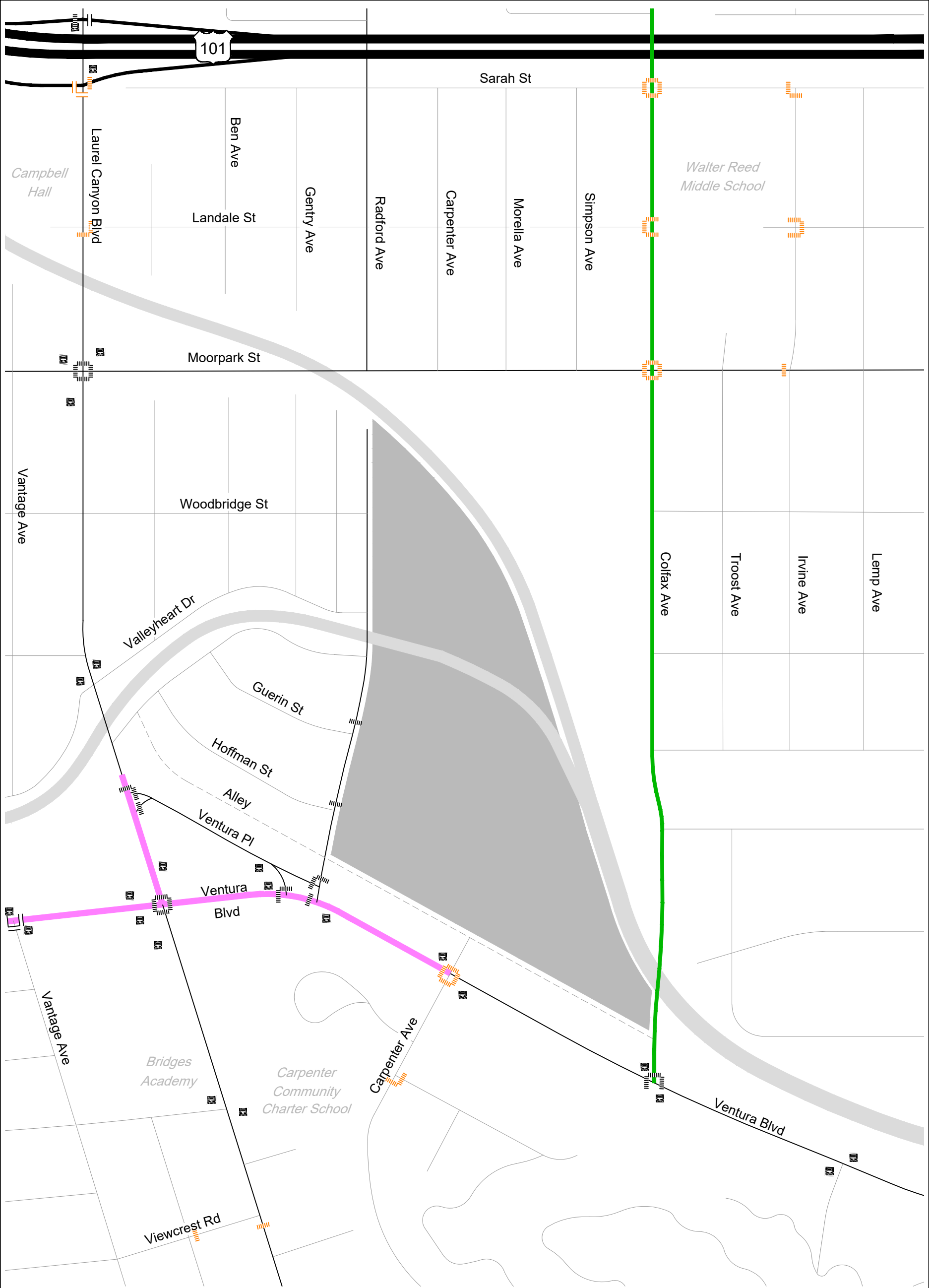
STREET DESIGNATIONS PER MOBILITY PLAN

FIGURE
9









PEDESTRIAN DESTINATIONS

FIGURE
10



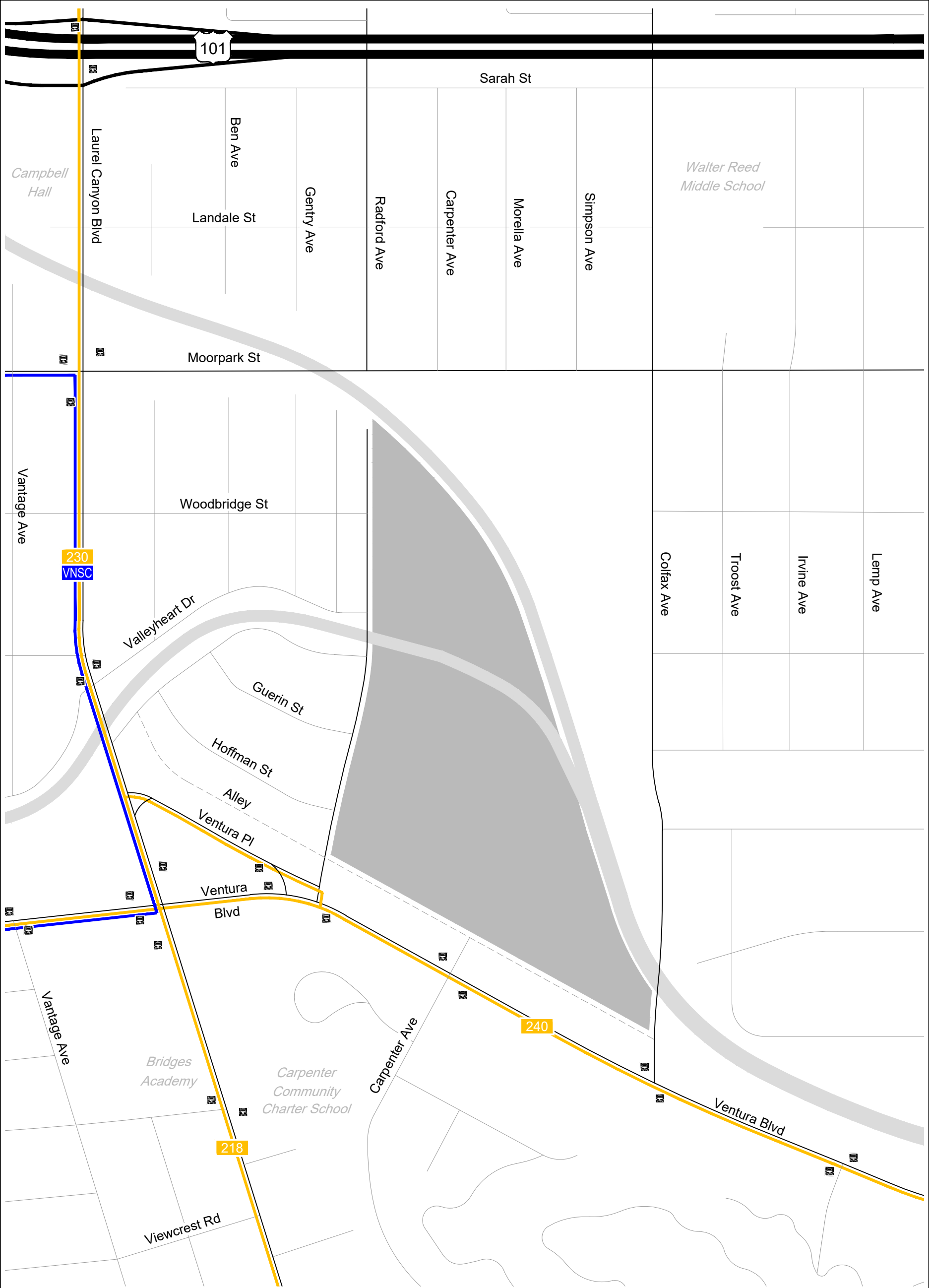
LEGEND

- | | | |
|--|---|---|
|  Project Site |  High-Injury Network |  Pedestrian Crossing |
|  Bus Stop |  Bicycle Lane |  Pedestrian Crossing near School |



EXISTING TRANSPORTATION FACILITIES

FIGURE
11



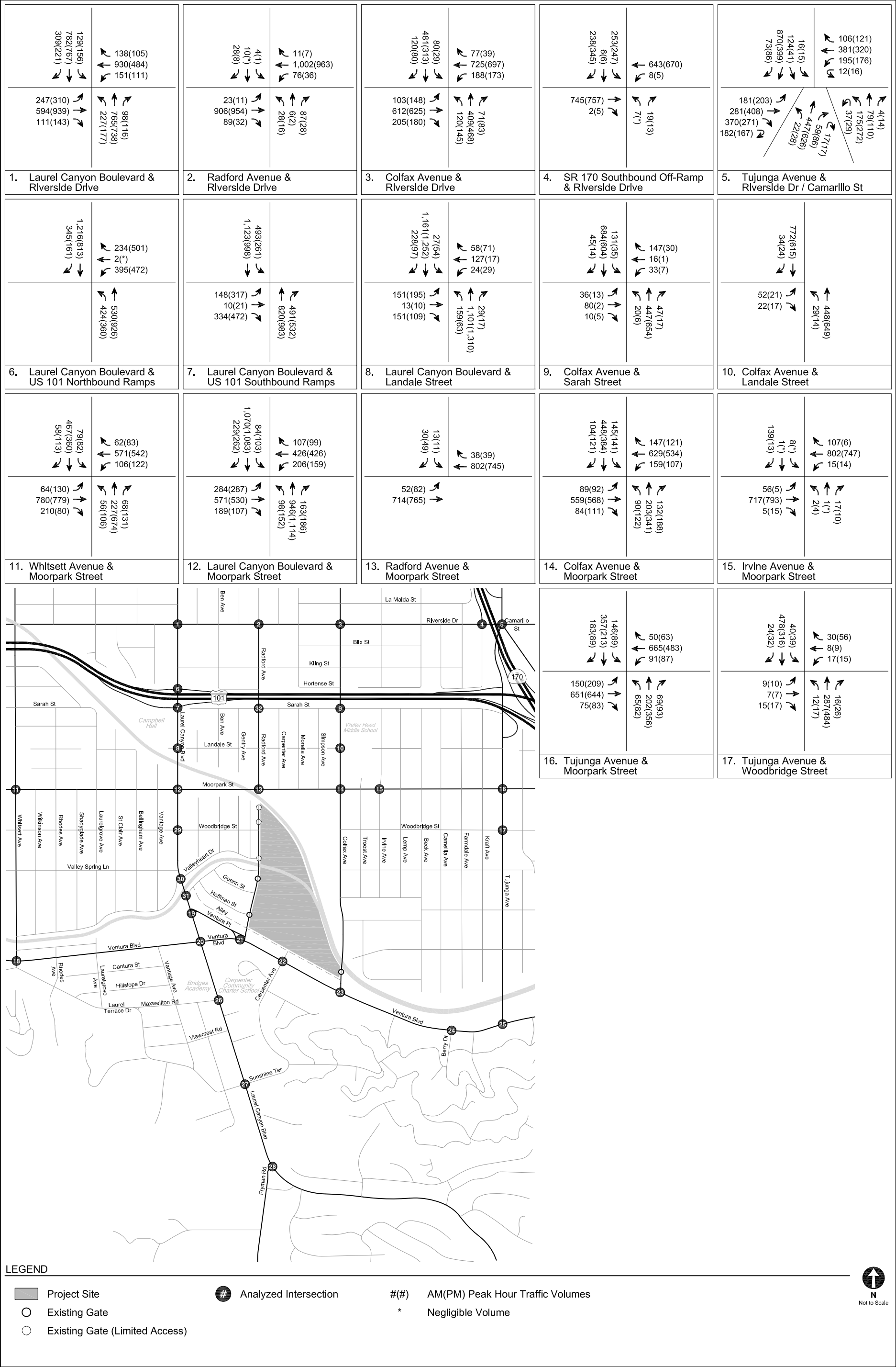
LEGEND

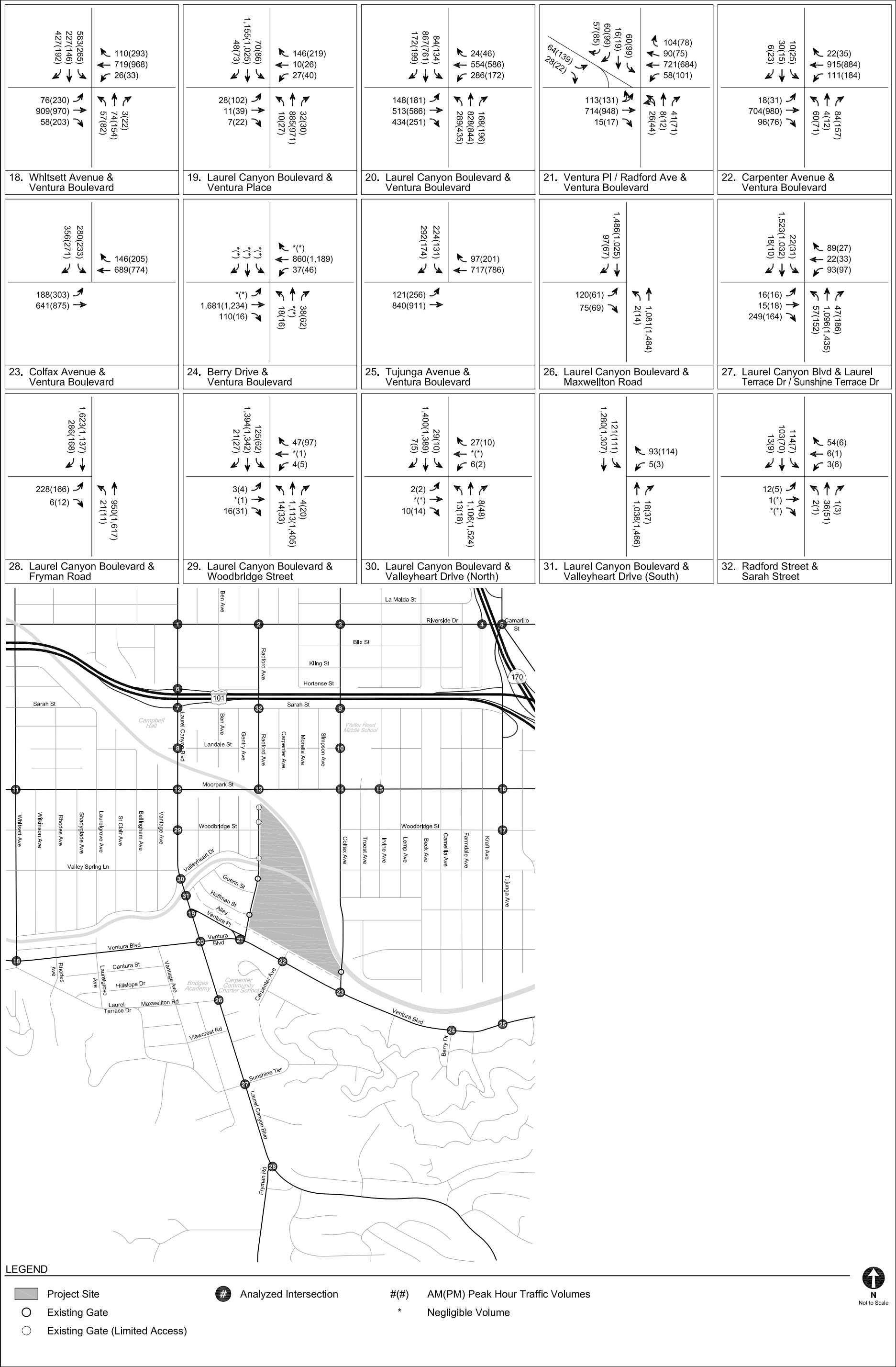
- Project Site
- Bus Stop
- Metro Bus
- LADOT DASH Bus



EXISTING TRANSIT SERVICE

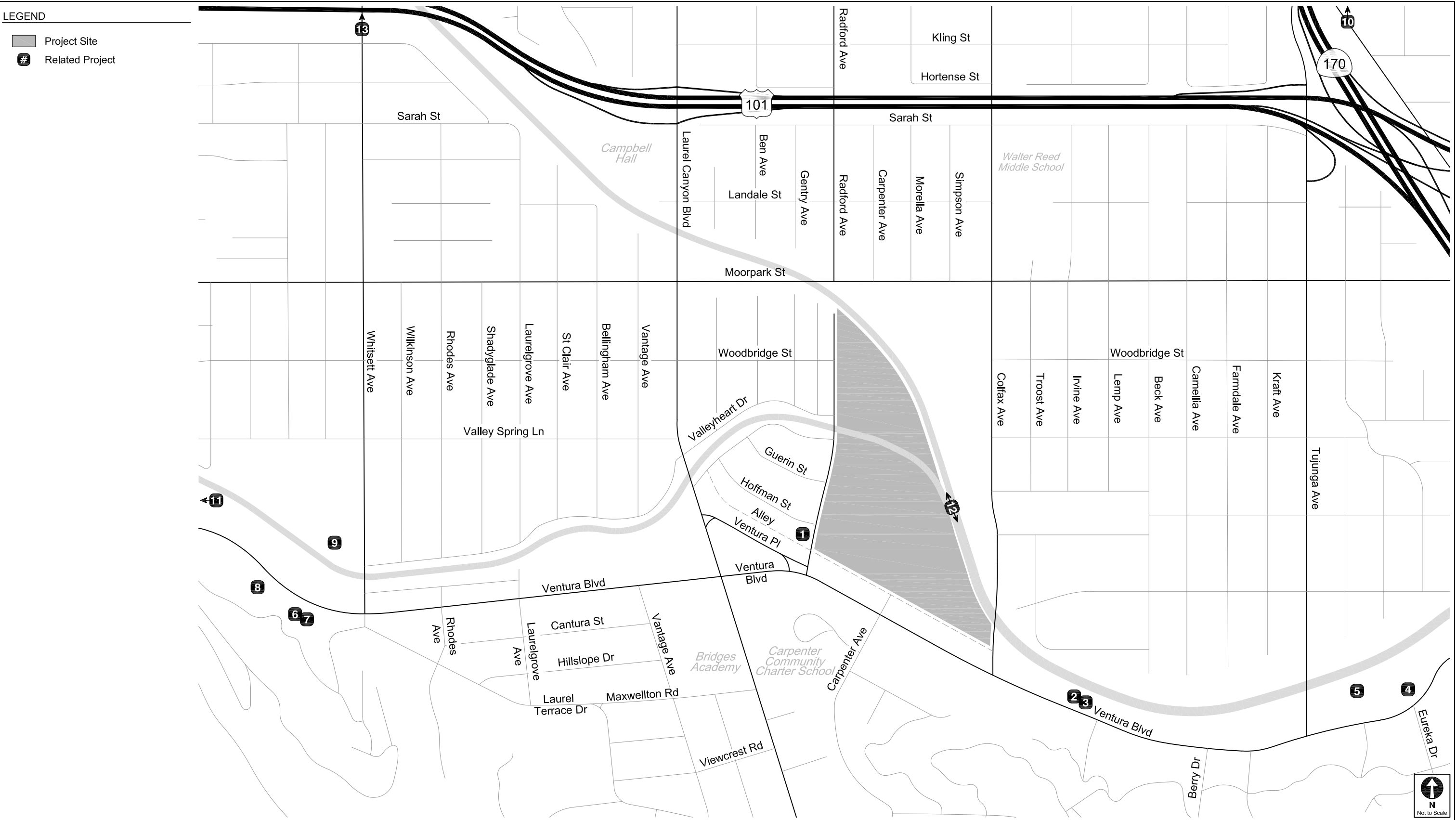
FIGURE
12





EXISTING CONDITIONS (YEAR 2023)
PEAK HOUR TRAFFIC VOLUMES

FIGURE
13 (CONT.)



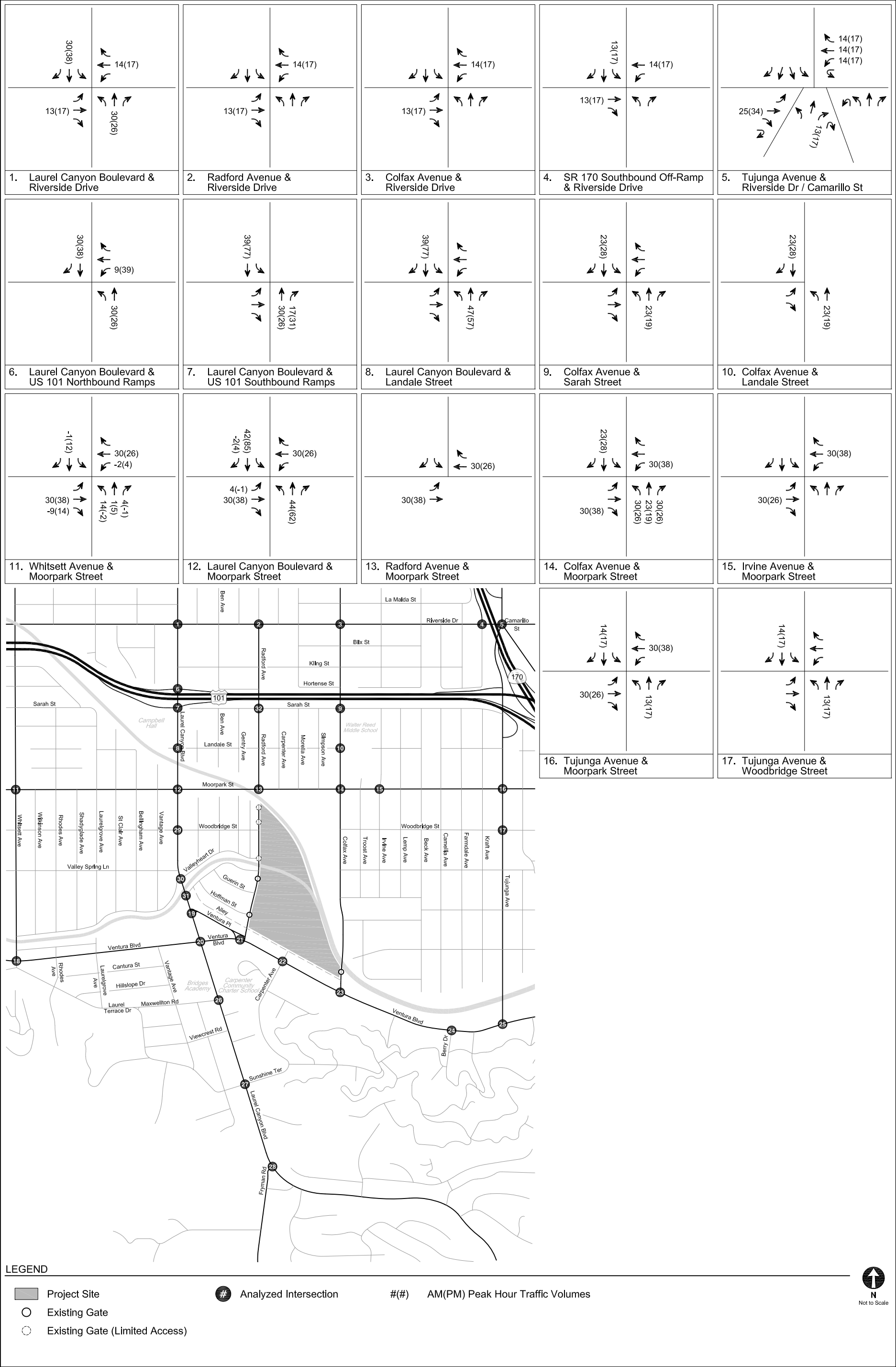
LOCATIONS OF RELATED PROJECTS

FIGURE
14



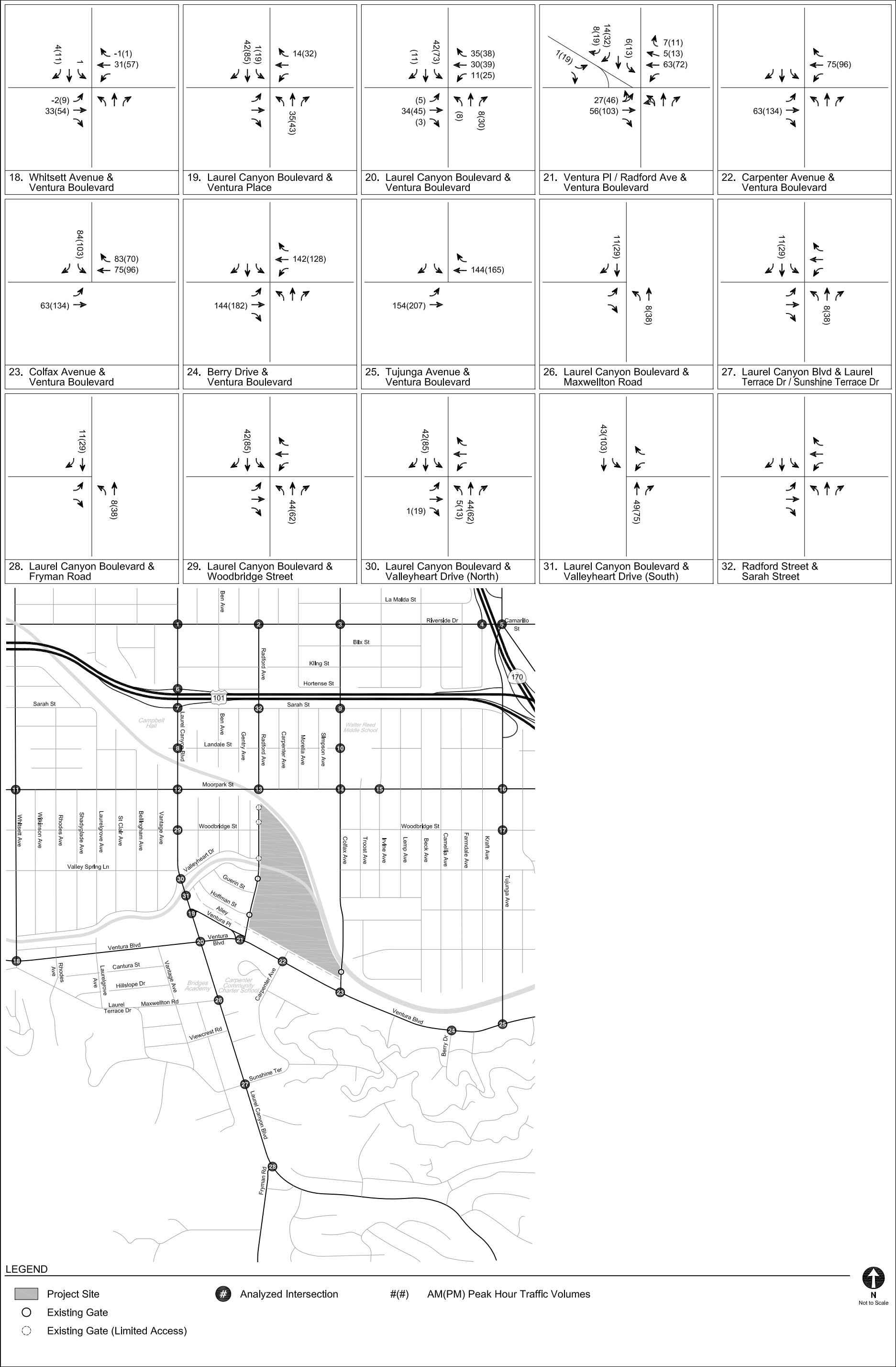
MOBILITY PLAN ROADWAY MODAL PRIORITIES

FIGURE
15



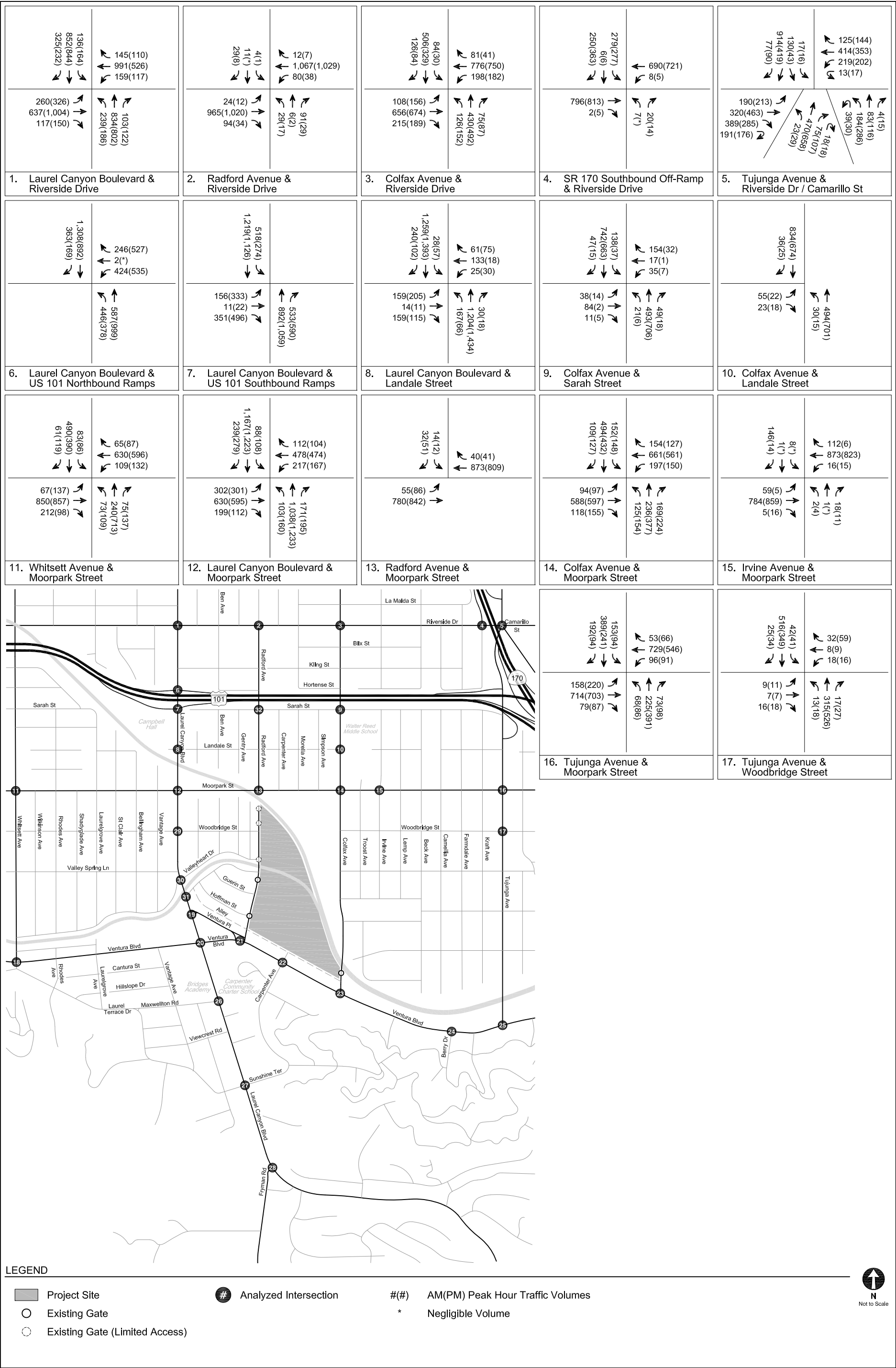
RELATED PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

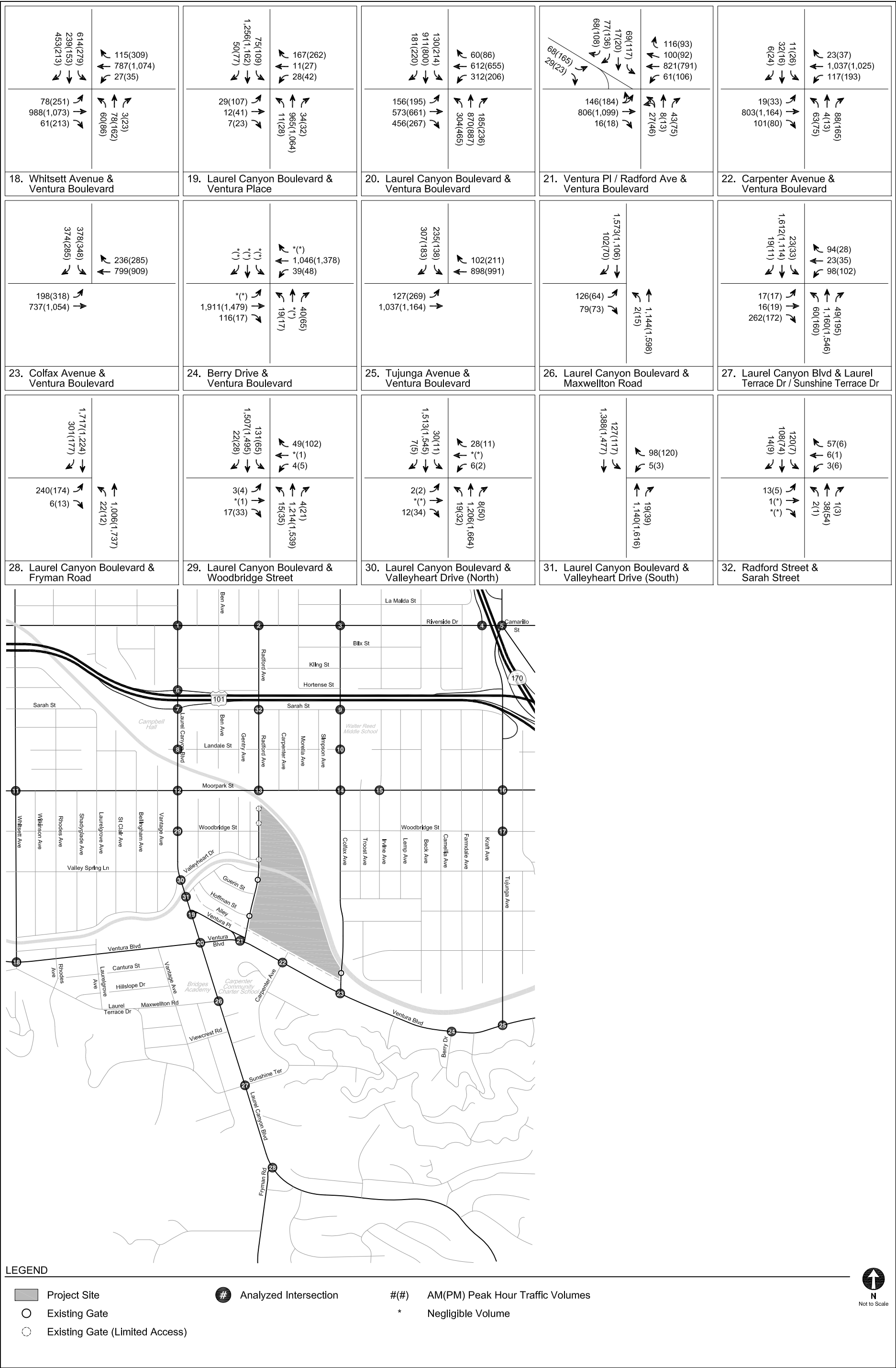
FIGURE
16



RELATED PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

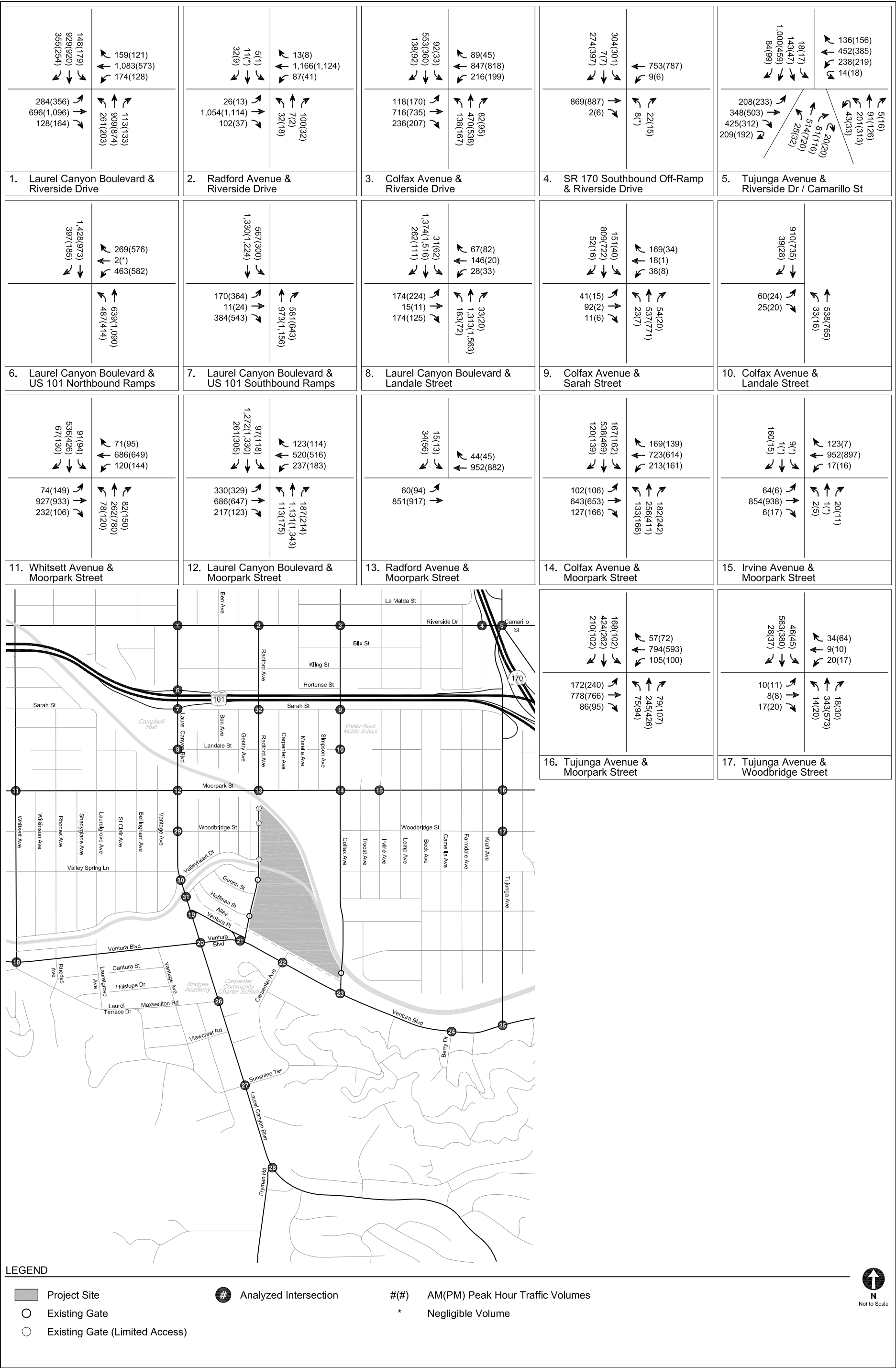
FIGURE
16 (CONT.)





FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2028)
PEAK HOUR TRAFFIC VOLUMES

FIGURE
17 (CONT.)



2. Radford Avenue & Riverside Drive

LEGEND

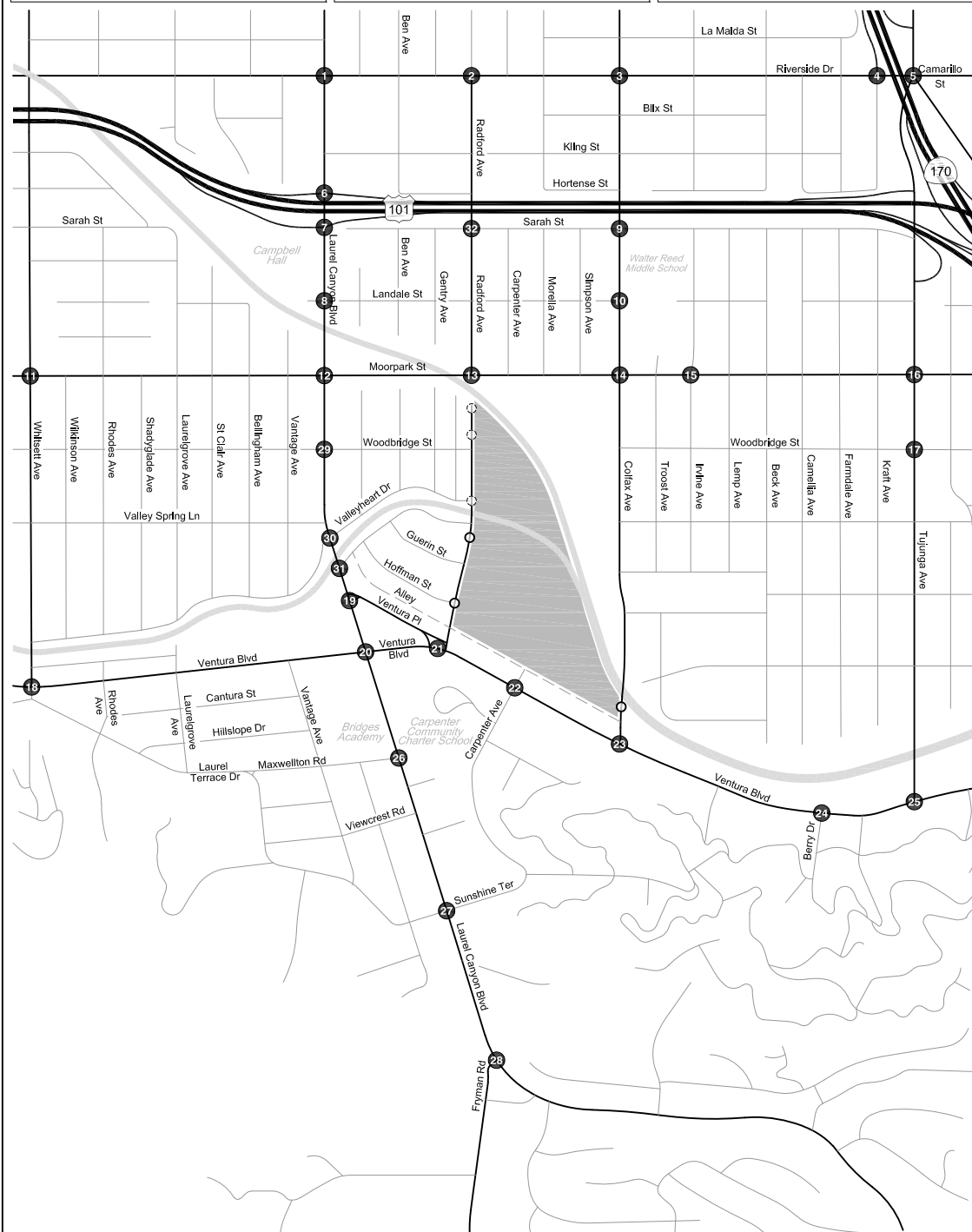
- Project Site
- Analyzed Intersection
- Existing Gate
- Existing Gate (Limited Access)
- #(#)** AM(PM) Peak Hour Traffic Volumes
- *** Negligible Volume

N
Not to Scale

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2045)
PEAK HOUR TRAFFIC VOLUMES


FIGURE
18

<div> <div> </div> <div> <p>67(1,305) 26(1,168) 495(232)</p> </div> </div> <div> <div> <p>125(338) 857(1,170) 30(38)</p> </div> <div> <p>3(25) 85(177) 66(94)</p> </div> </div> <div> <p>85(273) 1,078(1,169) 67(233)</p> </div>	18. Whitsett Avenue & Ventura Boulevard
<div> <div> </div> <div> <p>81(118) 1,370(1,263) 55(84)</p> </div> </div> <div> <div> <p>182(284) 11(30) 31(46)</p> </div> <div> <p>37(34) 1,052(1,159) 11(31)</p> </div> </div> <div> <p>32(117) 13(45) 8(25)</p> </div>	19. Laurel Canyon Boulevard & Ventura Place
<div> <div> </div> <div> <p>139(227) 997(875) 198(240)</p> </div> </div> <div> <div> <p>63(91) 667(713) 340(223)</p> </div> <div> <p>201(255) 952(970) 332(508)</p> </div> </div> <div> <p>170(213) 624(719) 499(292)</p> </div>	20. Laurel Canyon Boulevard & Ventura Boulevard
<div> <div> </div> <div> <p>75(127) 18(22) 83(146) 74(117)</p> </div> </div> <div> <div> <p>127(101) 108(99) 892(858) 67(116)</p> </div> <div> <p>47(82) 9(14) 30(51)</p> </div> </div> <div> <p>157(197) 877(1,193) 17(20)</p> </div>	21. Ventura Pl / Radford Ave & Ventura Boulevard
<div> <div> </div> <div> <p>11(29) 34(17) 7(26)</p> </div> </div> <div> <div> <p>25(40) 1,127(1,112) 128(212)</p> </div> <div> <p>97(180) 5(14) 69(82)</p> </div> </div> <div> <p>21(36) 872(1,260) 110(87)</p> </div>	22. Carpenter Avenue & Ventura Boulevard
<div> <div> </div> <div> <p>406(371) 409(312)</p> </div> </div> <div> <div> <p>251(306) 867(986)</p> </div> <div> <p>216(348) 800(1,140)</p> </div> </div> <div> <p>216(348) 800(1,140)</p> </div>	23. Colfax Avenue & Ventura Boulevard
<div> <div> </div> <div> <p>*(*) *(*) *(*)</p> </div> </div> <div> <div> <p>1,131(1,495) 43(53)</p> </div> <div> <p>44(71) 21(18)</p> </div> </div> <div> <p>2,076(1,600) 126(18)</p> </div>	24. Berry Drive & Ventura Boulevard
<div> <div> </div> <div> <p>257(151) 336(200)</p> </div> </div> <div> <div> <p>111(231) 968(1,068)</p> </div> <div> <p>139(294) 1,120(1,254)</p> </div> </div> <div> <p>139(294) 1,120(1,254)</p> </div>	25. Tujunga Avenue & Ventura Boulevard
<div> <div> </div> <div> <p>1,719(1,207) 111(77)</p> </div> </div> <div> <div> <p>1,251(1,744) 2(16)</p> </div> <div> <p>138(70) 86(79)</p> </div> </div> <div> <p>138(70) 86(79)</p> </div>	26. Laurel Canyon Boulevard & Maxwellton Road
<div> <div> </div> <div> <p>25(36) 1,762(1,215) 21(11)</p> </div> </div> <div> <div> <p>102(31) 25(38) 107(111)</p> </div> <div> <p>54(214) 1,268(1,687) 66(175)</p> </div> </div> <div> <p>18(18) 17(21) 286(189)</p> </div>	27. Laurel Canyon Blvd & Laurel Terrace Dr / Sunshine Terrace Dr
<div> <div> </div> <div> <p>1,877(1,336) 329(193)</p> </div> </div> <div> <div> <p>1,100(1,897) 24(13)</p> </div> <div> <p>262(191) 7(14)</p> </div> </div> <div> <p>262(191) 7(14)</p> </div>	28. Laurel Canyon Boulevard & Fryman Road
<div> <div> </div> <div> <p>144(71) 1,644(1,628) 24(31)</p> </div> </div> <div> <div> <p>54(111) *(1) 5(6)</p> </div> <div> <p>5(23) 1,323(1,677) 16(38)</p> </div> </div> <div> <p>3(5) 18(36)</p> </div>	29. Laurel Canyon Boulevard & Woodbridge Street
<div> <div> </div> <div> <p>33(11) 1,651(1,682) 8(6)</p> </div> </div> <div> <div> <p>31(11) *(*) 7(2)</p> </div> <div> <p>9(55) 1,315(1,814) 20(34)</p> </div> </div> <div> <p>2(2) 12(35)</p> </div>	30. Laurel Canyon Boulevard & Valleyheart Drive (North)
<div> <div> </div> <div> <p>139(128) 1,514(1,605)</p> </div> </div> <div> <div> <p>107(131) 6(3)</p> </div> <div> <p>21(43) 1,242(1,760)</p> </div> </div> <div> <p>107(131) 6(3)</p> </div>	31. Laurel Canyon Boulevard & Valleyheart Drive (South)
<div> <div> </div> <div> <p>131(8) 118(80) 15(10)</p> </div> </div> <div> <div> <p>62(7) 7(1) 3(7)</p> </div> <div> <p>1(3) 4(59) 2(1)</p> </div> </div> <div> <p>14(6) *(*) *(*)</p> </div>	32. Radford Street & Sarah Street



LEGEND

- Project Site
 Existing Gate
 Existing Gate (Limited Access)

 Analyzed Intersection

#(#) AM(PM) Peak Hour Traffic Volumes

* Negligible Volume



FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2045)
PEAK HOUR TRAFFIC VOLUMES

FIGURE
18 (CONT.)

**TABLE 2
STUDY INTERSECTIONS**

Int. No.	N/S Street	E/W Street	Jurisdiction
1	Laurel Canyon Boulevard	Riverside Drive	City of Los Angeles
2	Radford Avenue	Riverside Drive	City of Los Angeles
3	Colfax Avenue	Riverside Drive	City of Los Angeles
4	SR 170 Southbound Off-Ramp	Riverside Drive	City of Los Angeles / Caltrans
5	Tujunga Avenue	Riverside Drive-Camarillo Street	City of Los Angeles
6	Laurel Canyon Boulevard	US 101 Northbound Ramps	City of Los Angeles / Caltrans
7	Laurel Canyon Boulevard	US 101 Southbound Ramps	City of Los Angeles / Caltrans
8	Laurel Canyon Boulevard	Landale Street	City of Los Angeles
9	Colfax Avenue	Sarah Street	City of Los Angeles
10	Colfax Avenue	Landale Street	City of Los Angeles
11	Whitsett Avenue	Moorpark Street	City of Los Angeles
12	Laurel Canyon Boulevard	Moorpark Street	City of Los Angeles
13 [a]	Radford Avenue	Moorpark Street	City of Los Angeles
14	Colfax Avenue	Moorpark Street	City of Los Angeles
15	Irvine Avenue	Moorpark Street	City of Los Angeles
16	Tujunga Avenue	Moorpark Street	City of Los Angeles
17	Tujunga Avenue	Woodbridge Street	City of Los Angeles
18	Whitsett Avenue	Ventura Boulevard	City of Los Angeles
19	Laurel Canyon Boulevard	Ventura Place	City of Los Angeles
20	Laurel Canyon Boulevard	Ventura Boulevard	City of Los Angeles
21	Ventura Place-Radford Avenue	Ventura Boulevard	City of Los Angeles
22	Carpenter Avenue	Ventura Boulevard	City of Los Angeles
23	Colfax Avenue	Ventura Boulevard	City of Los Angeles
24	Berry Drive	Ventura Boulevard	City of Los Angeles
25	Tujunga Avenue	Ventura Boulevard	City of Los Angeles
26	Laurel Canyon Boulevard	Maxwellton Road	City of Los Angeles
27	Laurel Canyon Boulevard	Laurel Terrace Drive-Sunshine Terrace Drive	City of Los Angeles
28	Laurel Canyon Boulevard	Fryman Road	City of Los Angeles
29	Laurel Canyon Boulevard	Woodbridge Street	City of Los Angeles
30	Laurel Canyon Boulevard	Valleyheart Drive (North)	City of Los Angeles
31	Laurel Canyon Boulevard	Valleyheart Drive (South)	City of Los Angeles
32	Radford Avenue	Sarah Street	City of Los Angeles

Notes:

- [a] The intersection is currently unsignalized. However, the Project proposes an extension of Radford Avenue via the proposed Radford Mobility Connector, which would extend Radford Avenue to the north across the Tujunga Wash to Moorpark Street. No through access for vehicles would be provided north or south along Radford Avenue.

**TABLE 3
EXISTING TRANSIT SERVICE IN STUDY AREA**

Provider, Route, and Service Area		Service Type	Hours of Operation	Average Headway (minutes) [a]			
				Morning Peak Hour		Afternoon Peak Hour	
Metro Bus Service				NB/EB	SB/WB	NB/EB	SB/WB
218	Studio City - Cedars Sinai Medical Center via Laurel Canyon Bl - Fairfax Ave	Local	5:30 A.M. - 10:00 P.M.	60	60	60	60
230	Sylmar Station - Studio City via Laurel Canyon Bl	Local	4:50 A.M. - 10:30 P.M.	20	23	22	18
240	Northridge - Universal City Station via Reseda Bl - Ventura Bl	Local	24 HR	11	9	9	11
LADOT DASH Bus Service				CW	CCW	CW	CCW
VNSC	Van Nuys / Studio City	Local	6:00 A.M. - 6:00 P.M.	30	30	30	30

Notes:

Metro: Los Angeles County Metropolitan Transportation Authority

LADOT DASH: Los Angeles Department of Transportation Downtown Area Short Hop

CW: clockwise; CCW: counter-clockwise

[a] Average headways are based on the total number of trips during the peak period as indicated in Metro ridership data from October 12, 2023.

**TABLE 4
RELATED PROJECTS**

No.	Project	Address	Description	Trip Generation [a]						
				Daily	Morning Peak Hour			Afternoon Peak Hour		
					In	Out	Total	In	Out	Total
<u>Related projects within 0.5 miles of Project Site</u>										
1.	Mixed-Use	4021 Radford Avenue	54 residential units, including 6 affordable housing units, and 3,474 sf of commercial	380	4	18	22	18	7	25
2. [b]	Mixed-Use	11611 Ventura Boulevard	140 assisted living units and 62 senior independent housing units	565	19	18	37	22	28	50
3. [b]	Commercial	11601 Ventura Boulevard	10,568 sf commercial	575	15	10	25	35	35	70
<u>Related Projects outside 0.5 miles of Project Site</u> [c]										
4.	Studio City Crossings Market/Retail	11265 Ventura Boulevard	37,079 sf supermarket and 1,581 sf retail	1,883	29	1	30	71	77	148
5.	Condominium	11331 Ventura Boulevard	62 condominium units	189	(24)	25	1	22	(13)	9
6.	Mixed-Use	12544 Ventura Boulevard	28 residential units and 16,580 sf restaurant	1,879	93	82	175	104	62	166
7.	Mixed-Use	12548 Ventura Boulevard	62 residential units, 10,747 sf retail, and 1,925 sf of other commercial	1,000	23	41	64	46	34	80
8.	Mixed-Use	12582 Ventura Boulevard	Mixed-use	997	36	28	64	38	32	70
9.	Harvard-Westlake River Park Project	4141 Whitsett Avenue	17.2 acres recreational and sports facility	770	0	0	0	18	466	484
10.	Mixed-Use	11311 Camarillo Street	60 residential units, including six affordable housing units, and 2,826 sf retail	350	(15)	24	9	24	(4)	20
11.	Sportsmen's Lodge	12833 Ventura Boulevard	520 residential units, including 78 affordabe housing units, and 45,945 sf commercial	2,001	50	54	104	68	68	136
<u>Additional Related Project Considered</u>										
12.	BOE Bikeway and Greenway River Improvements	Pedestrian and Bicycle Improvements and BMPs along LA River/Tujunga Wash		N/A	N/A	N/A	N/A	N/A	N/A	N/A
13.	DWP Trunkline South	Pump Station and Water Pipe		N/A	N/A	N/A	N/A	N/A	N/A	N/A

Notes:

[a] Related project information and trip generation estimates for development projects are provided by Los Angeles Department of Transportation (LADOT) or accessed from <http://planning.lacity.org> based on cases filed since June 2023.

[b] Trip generation estimates were calculated based on rates from *Trip Generation Manual 11th Edition*, Institute of Transportation Engineers, 2021.

[c] Additional development projects located beyond 0.50 miles of the Project Site and 0.25 miles of the furthest outlying study intersections were also considered based on the proposed land use, density, and/or location. and were accounted for in the application of the ambient growth factor. Application of the ambient growth factor, in addition to the forecast traffic generated by the related projects, substantially overestimates the actual traffic volume growth in the Study Area that would likely occur prior to Project buildout, which allows for a conservative worst case forecast of cumulative traffic volumes.

Chapter 3

Project Vehicle Trips

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

PROJECT TRIP GENERATION

As described in Chapter 1, the Project will consist of five land uses, each with distinct trip-generating characteristics: sound stages, production support, production office, general office, and retail. While standard publications such as *Trip Generation Manual, 11th Edition* include detailed data to estimate trips for general office and commercial uses, which were utilized to estimate peak hour trips generated by the Project's proposed general office and retail land uses, they do not provide data on studio-related uses. The trip generation for sound stages, production support, and production office uses was based on empirical studies of trip generation at other studios in the City, has been used in a variety of recent transportation analyses for production studio developments in the City, and was independently verified by LADOT. The empirical trip rates were based on operational characteristics of typical studios, including production activity, set design production, active filming schedule, employee and staff arrival/departure patterns, production-related vehicles, and studio visitor and audience member trips, which are representative of the existing and proposed operations at Radford Studio Center.

Radford Studio Center is anticipated to continue to accommodate studio productions with audiences, which range in size depending on the type of taping. The schedule of tapings varies throughout the year, as every production is different and has its own unique needs. Nevertheless, tapings generally occur outside of commuter peak periods. Radford Studio Center would also continue to host production-related events that may range from small-scale events (e.g., meet-and-greets) to infrequent larger-scale events (e.g., production-related experiences).

The primary difference between production office and general office, for trip generation purposes, is that production office trips exhibit less concentrated peak hour demands, spreading across morning and evening peaks due to the nature of the work taking place and the schedules of the employees. Therefore, the trips generated by production office uses during the standard commuter peak hours are fewer than those generated by a typical office building.

As previously detailed, the number of peak hour trips expected to be generated by the general office and retail uses were estimated using morning and afternoon peak hour rates published in *Trip Generation Manual, 11th Edition*, which were determined by surveys of similar land uses at sites around the country to calculate the number of vehicle trips traveling to and from the Project Site during the morning and afternoon peak hour relative to the size of development of the specific land use.

The trip generation rates used in this analysis are summarized in Table 5. It should be noted that *Trip Generation Manual, 11th Edition* and empirical trip rates account for the total movements generated by automobiles, vans, large trucks, and small trucks.

In consultation with LADOT during the MOU process, allowable trip generation reductions of 10% were applied to the general office and retail uses to account for public transit usage/walking arrivals, as the Project Site is located within walking distance from numerous Metro and LADOT DASH bus stops. Additional trip reductions were also applied to the retail uses to account for internal capture trips (e.g., trips made by studio employees to the retail use without use of the off-site road system) and pass-by trips (i.e., vehicle trips made by drivers already passing by the Project Site on adjacent streets on their way to another destination). The empirical trip rates for the sound stage, production support, and production office uses account for trip reductions associated with transit usage/walking arrivals and internal capture between the studio-related uses. Therefore, no additional trip reductions were applied to the trip estimates for those uses.

Table 5 shows the net new Project trip generation estimates. As shown therein, the Project is anticipated to generate approximately 958 net new morning peak hour trips (758 inbound, 200 outbound) and approximately 924 net new afternoon peak hour trips (258 inbound, 666 outbound).

Trip generation estimates were also calculated for the full Project Site (net new construction as well as existing uses that would remain as part of the Project) for the purpose of estimating total trips at the Project driveways. As detailed in Table 5, the total driveway trip estimates include approximately 1,661 morning peak hour trips (1,237 inbound, 424 outbound) and approximately 1,676 afternoon peak hour trips (551 inbound, 1,125 outbound).

PROJECT TRIP DISTRIBUTION

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

As previously detailed, the Project would also include the Radford Mobility Connector, which would extend Radford Avenue north across the Tujunga Wash to Moorpark Street (no through access for vehicles would be permitted north or south along Radford Avenue; through access for bicycles and pedestrians would be permitted). Prior to the completion of the Radford Mobility Connector, the North Lot would be accessible primarily via the internal bridge connection, which would be accessed from the Project's other gates at the South Lot. Thus, the operational analysis considered the Project distribution patterns both without and with the completion of the Radford Mobility Connector. Further, two limited production only access driveways would also continue to be provided along Radford Avenue, consistent with existing conditions. However, these driveways would not be regularly utilized, particularly during the commuter peak hours. Therefore, no Project trips were assigned to these driveways.

Based on these considerations, vehicles entering and exiting the Project Site were assigned to the surrounding street system. Generally, the regional trip distribution pattern for the studio and office uses includes approximately 30% to/from the northwest area, approximately 25% to/from the northeast area, approximately 20% to/from the southeast area, and approximately 25% to/from the southwest area. The retail uses are neighborhood-serving and would generate local

trips with a general trip distribution pattern evenly distributed through the areas surrounding the Project Site.


The regional distribution patterns for the studio and office uses without completion of the Radford Mobility Connector is illustrated in Figure 19A. The intersection-level trip distribution pattern for the studio and office uses without completion of the Radford Mobility Connector is detailed in Figure 19B. The general local distribution patterns of the retail uses without completion of the Radford Mobility Connector are illustrated in Figures 20A. The intersection-level trip distribution pattern for the retail uses at the study intersections without completion of the Radford Mobility Connector are detailed in Figure 20B.

The regional distribution patterns for the studio and office uses and general local distribution patterns of the retail uses with completion of the Radford Mobility Connector are illustrated in Figures 21A and 22A, respectively. The intersection-level trip distribution patterns for the studio and office uses and retail uses with completion of the Radford Mobility Connector are illustrated in Figures 21B and 22B, respectively.

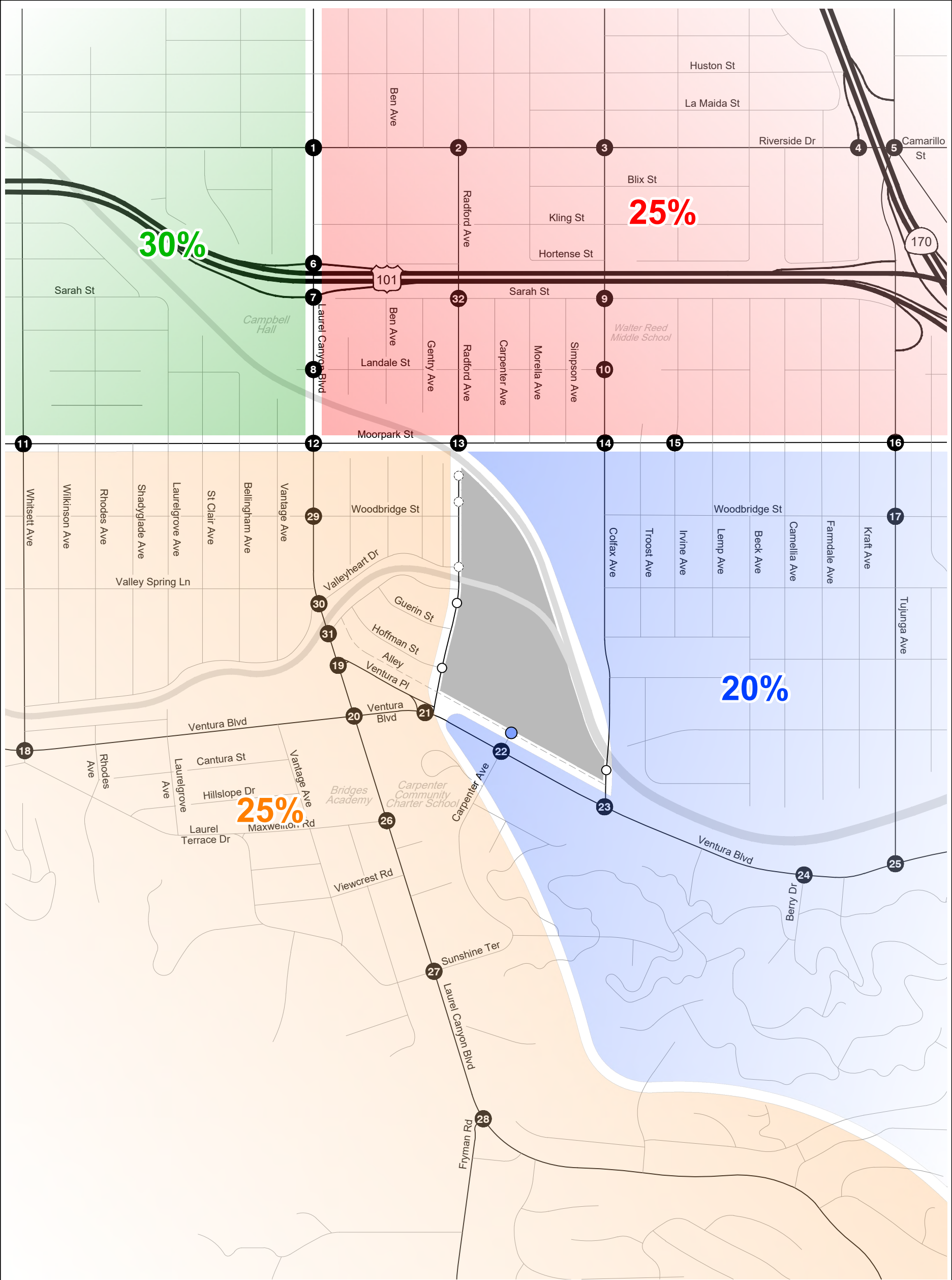
PROJECT TRIP ASSIGNMENT

The Project trip generation estimates summarized in Table 5 and the intersection-level trip distribution patterns without the Radford Mobility Connector shown in Figures 19B and 20B were used to assign the Project-generated trips through the study intersections. Figure 23 illustrates the Project-only volumes at the study intersections without the Radford Mobility Connector during typical weekday morning and afternoon peak hours. Figure 24 illustrates the total Project Site trips at each driveway without the Radford Mobility Connector during typical weekday morning and afternoon peak hours.

The Project trip generation estimates summarized in Table 5 and the intersection-level trip distribution patterns with completion of the Radford Mobility Connector shown in Figures 21B and 22B were used to assign the Project-generated trips through the study intersections. Figure 25 illustrates the Project-only volumes at the study intersections with completion of the Radford Mobility Connector during typical weekday morning and afternoon peak hours. Figure 26 illustrates the total



Project Site trips at each driveway with completion of the Radford Mobility Connector during typical weekday morning and afternoon peak hours.



LEGEND

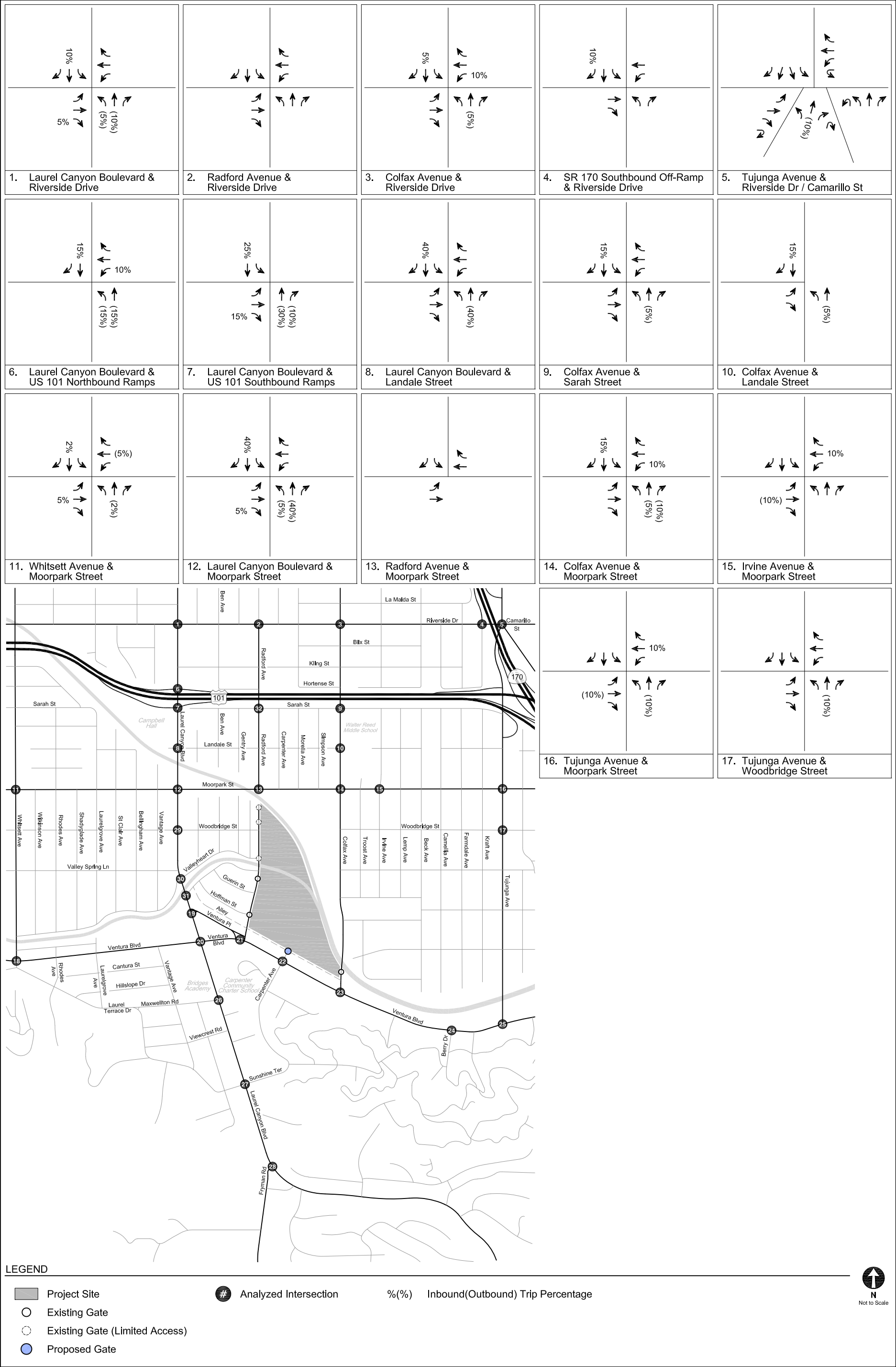
- Project Site
- Existing Gate
- Existing Gate (Limited Access)
- Proposed Gate

Analyzed Intersection



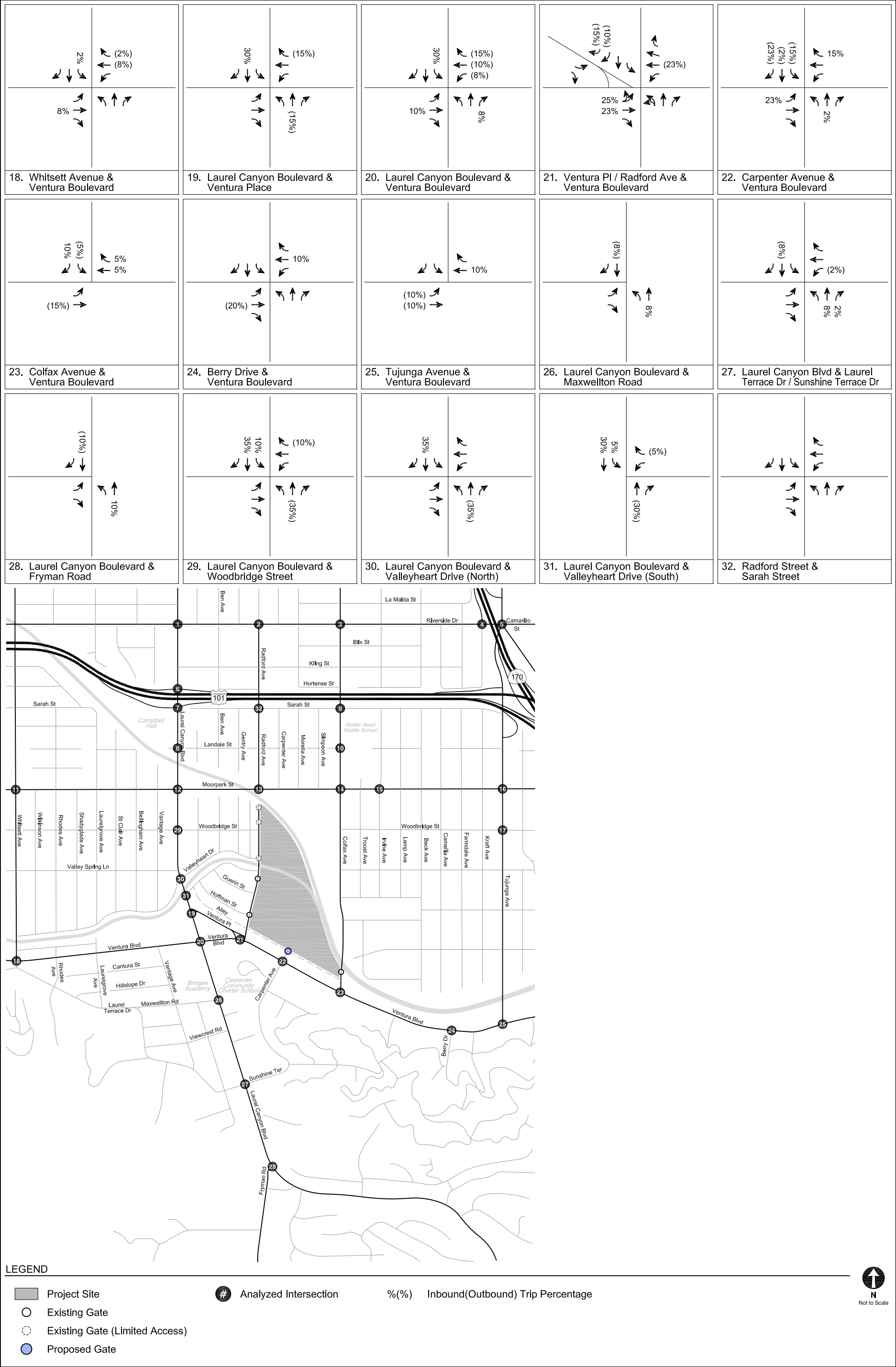
PROJECT REGIONAL TRIP DISTRIBUTION WITHOUT RADFORD MOBILITY CONNECTOR
STAGE, PRODUCTION, AND OFFICE USES

FIGURE
19A



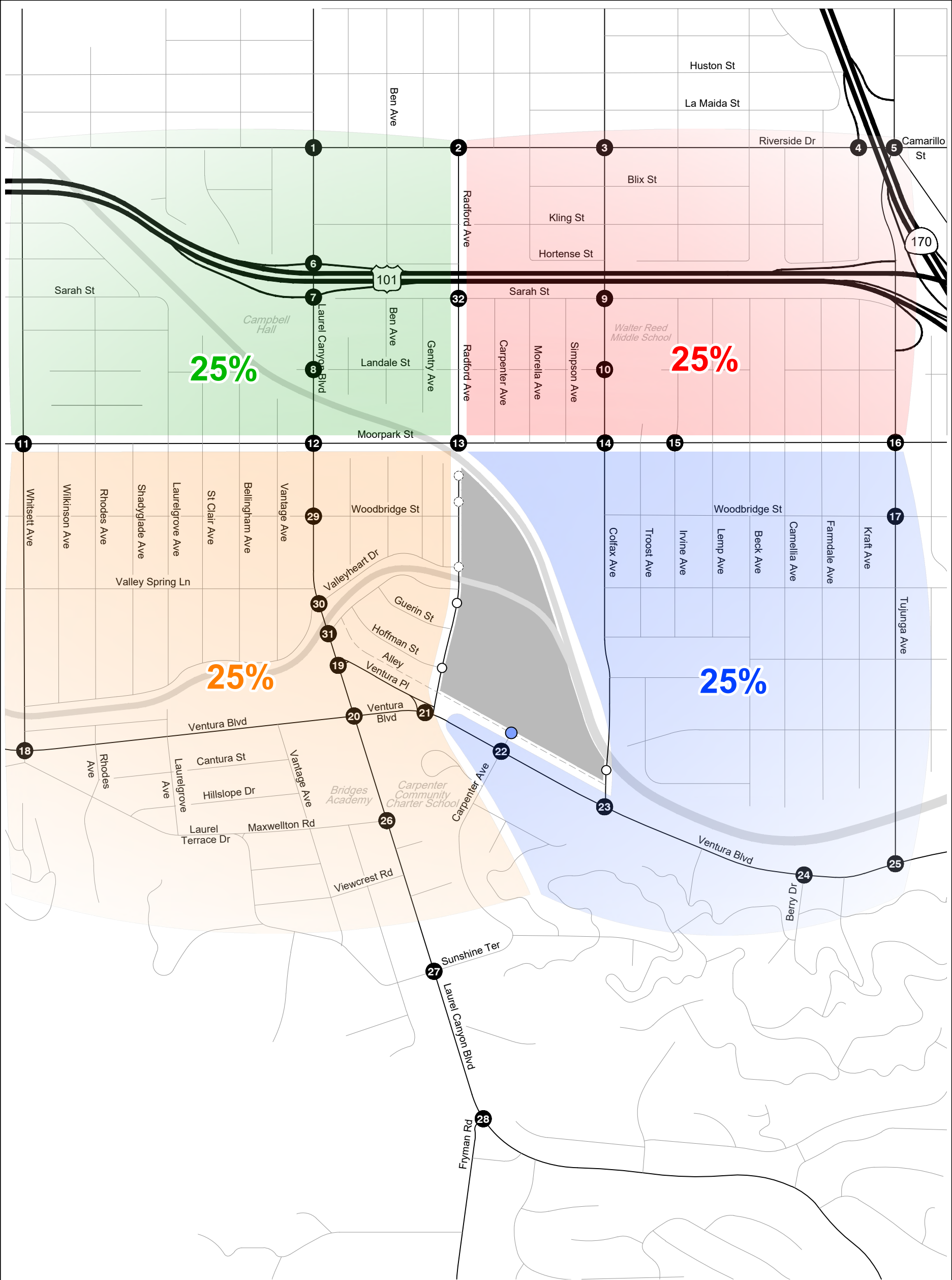
PROJECT INTERSECTION-LEVEL TRIP DISTRIBUTION WITHOUT RADFORD MOBILITY CONNECTOR
STAGE, PRODUCTION, AND OFFICE USES

FIGURE
19B



PROJECT INTERSECTION-LEVEL TRIP DISTRIBUTION WITHOUT RADFORD MOBILITY CONNECTOR
STAGE, PRODUCTION, AND OFFICE USES

FIGURE
19B (CONT.)



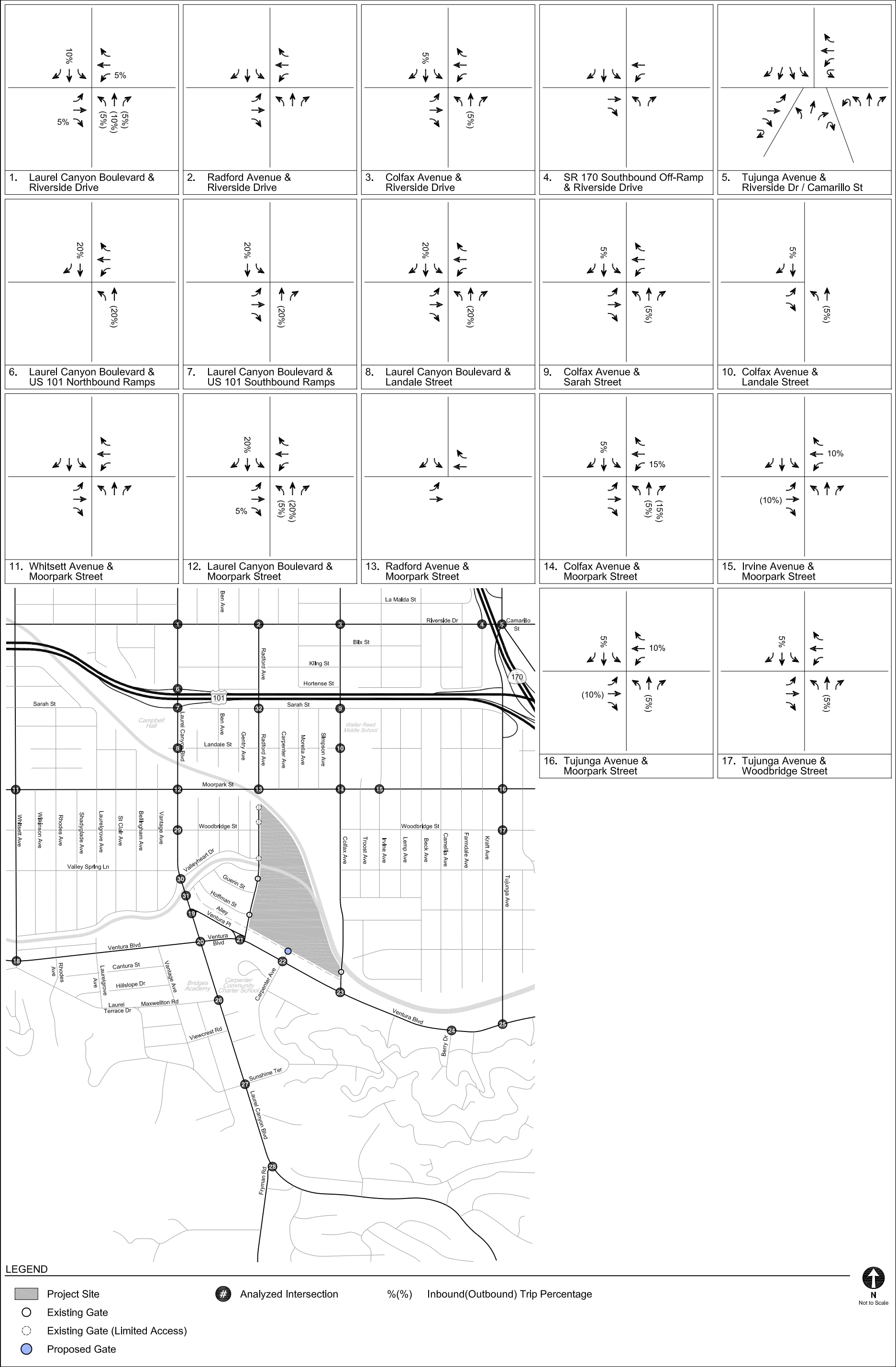
LEGEND

- Project Site
- Existing Gate
- Existing Gate (Limited Access)
- Proposed Gate
- Analyzed Intersection



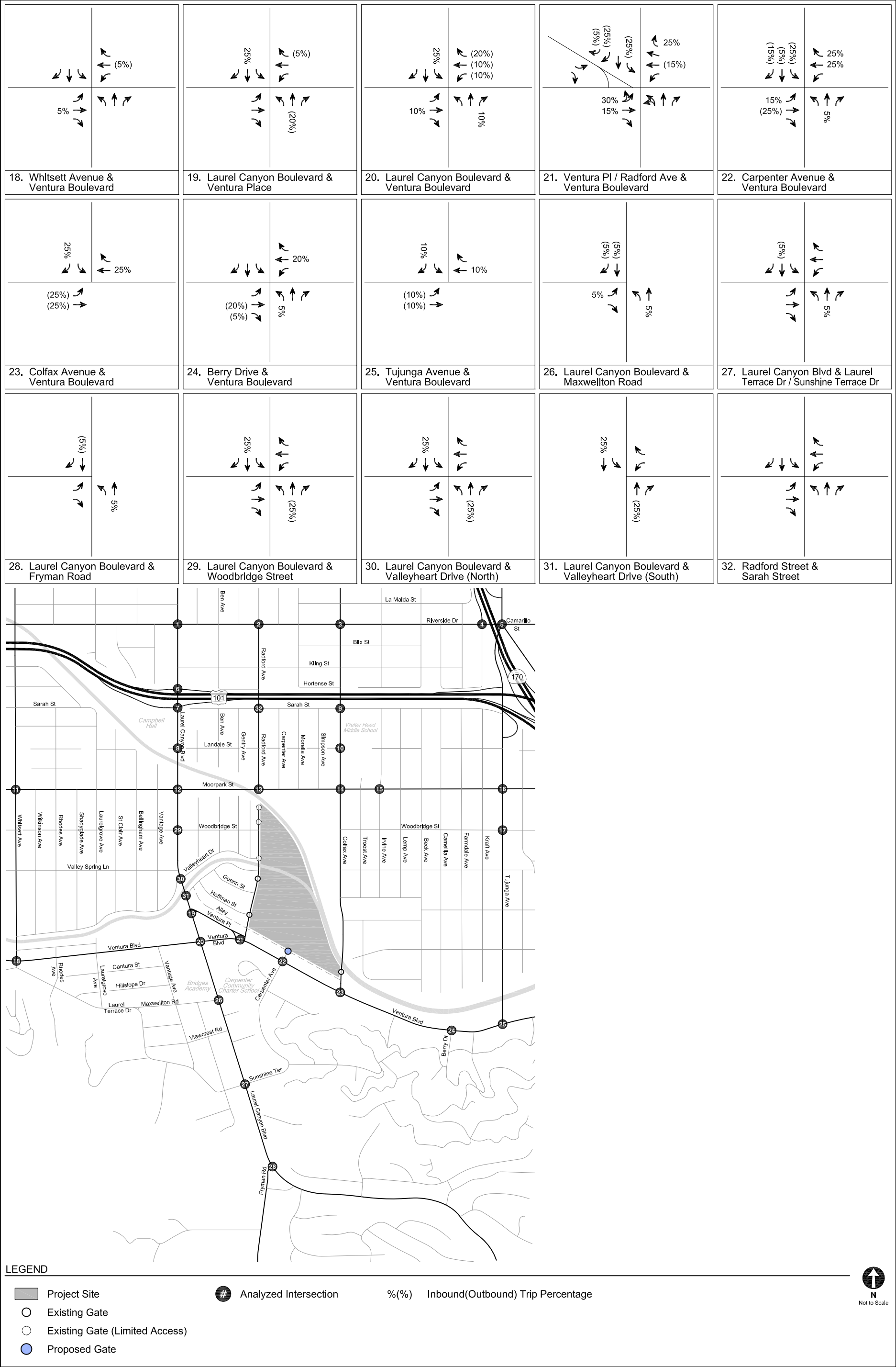
PROJECT LOCAL TRIP DISTRIBUTION WITHOUT RADFORD MOBILITY CONNECTOR
RETAIL USES

FIGURE
20A



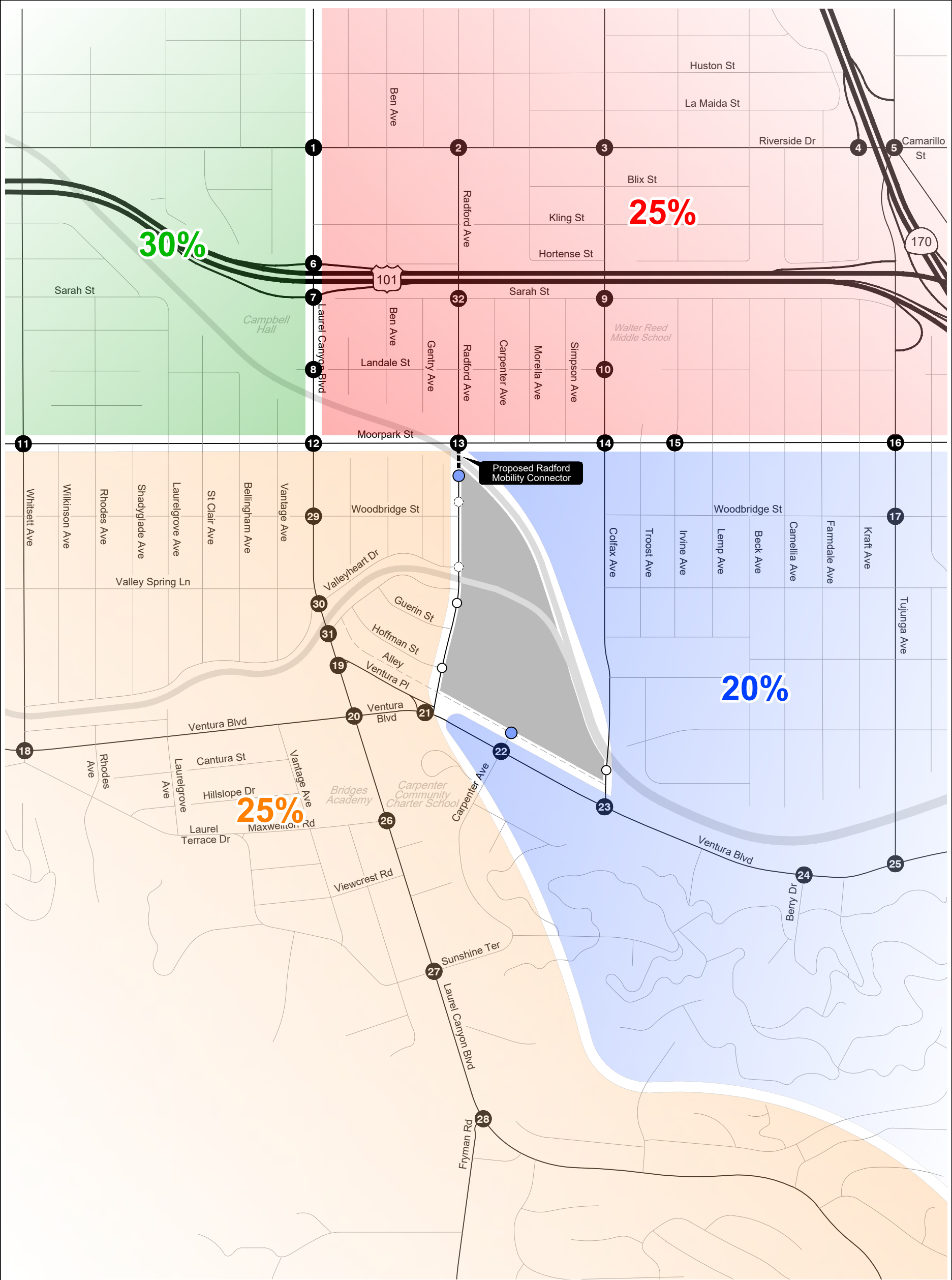
PROJECT INTERSECTION-LEVEL TRIP DISTRIBUTION WITHOUT RADFORD MOBILITY CONNECTOR
RETAIL USES

FIGURE
20B



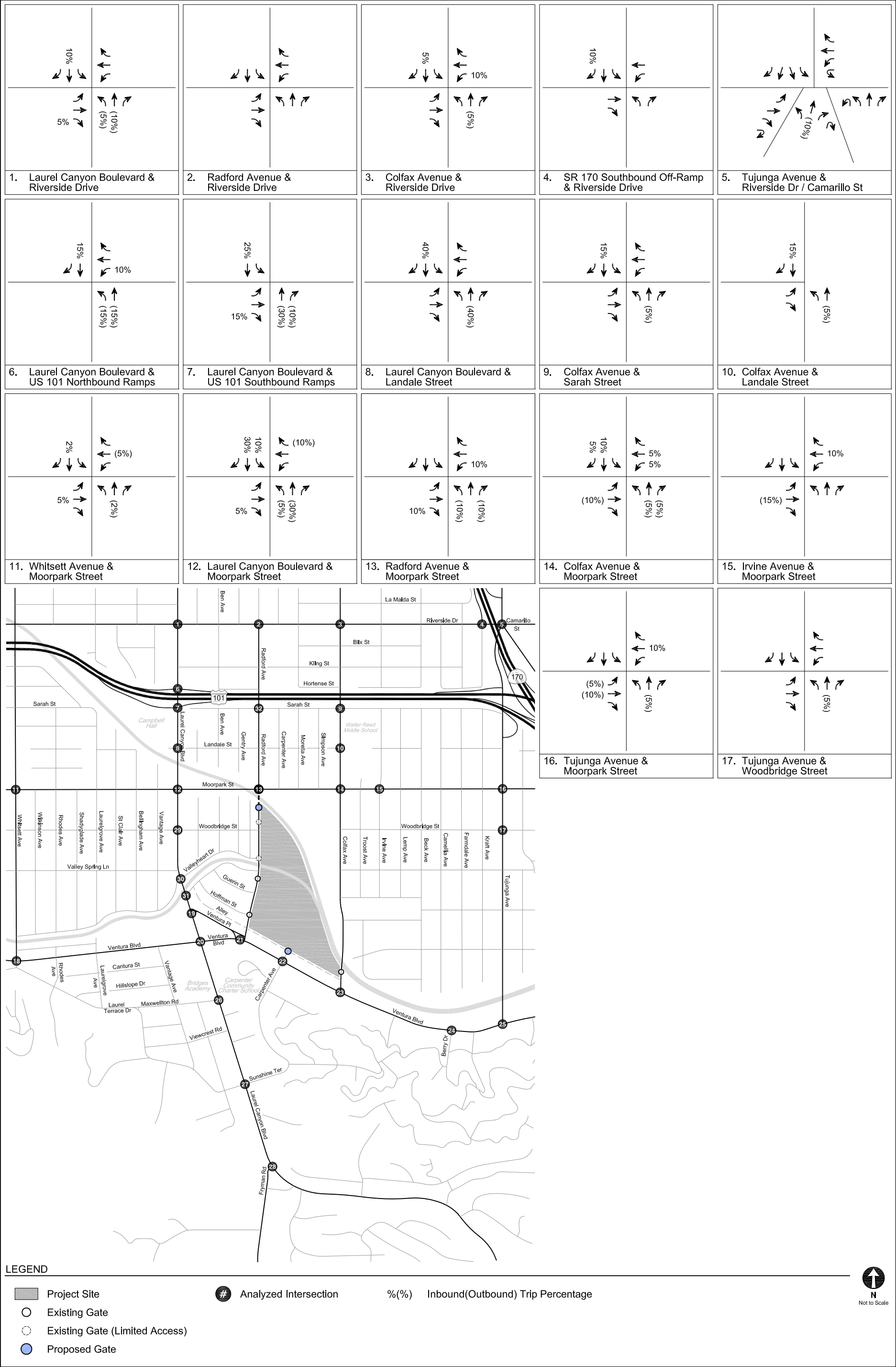
PROJECT INTERSECTION-LEVEL TRIP DISTRIBUTION WITHOUT RADFORD MOBILITY CONNECTOR
RETAIL USES

FIGURE
20B (CONT.)



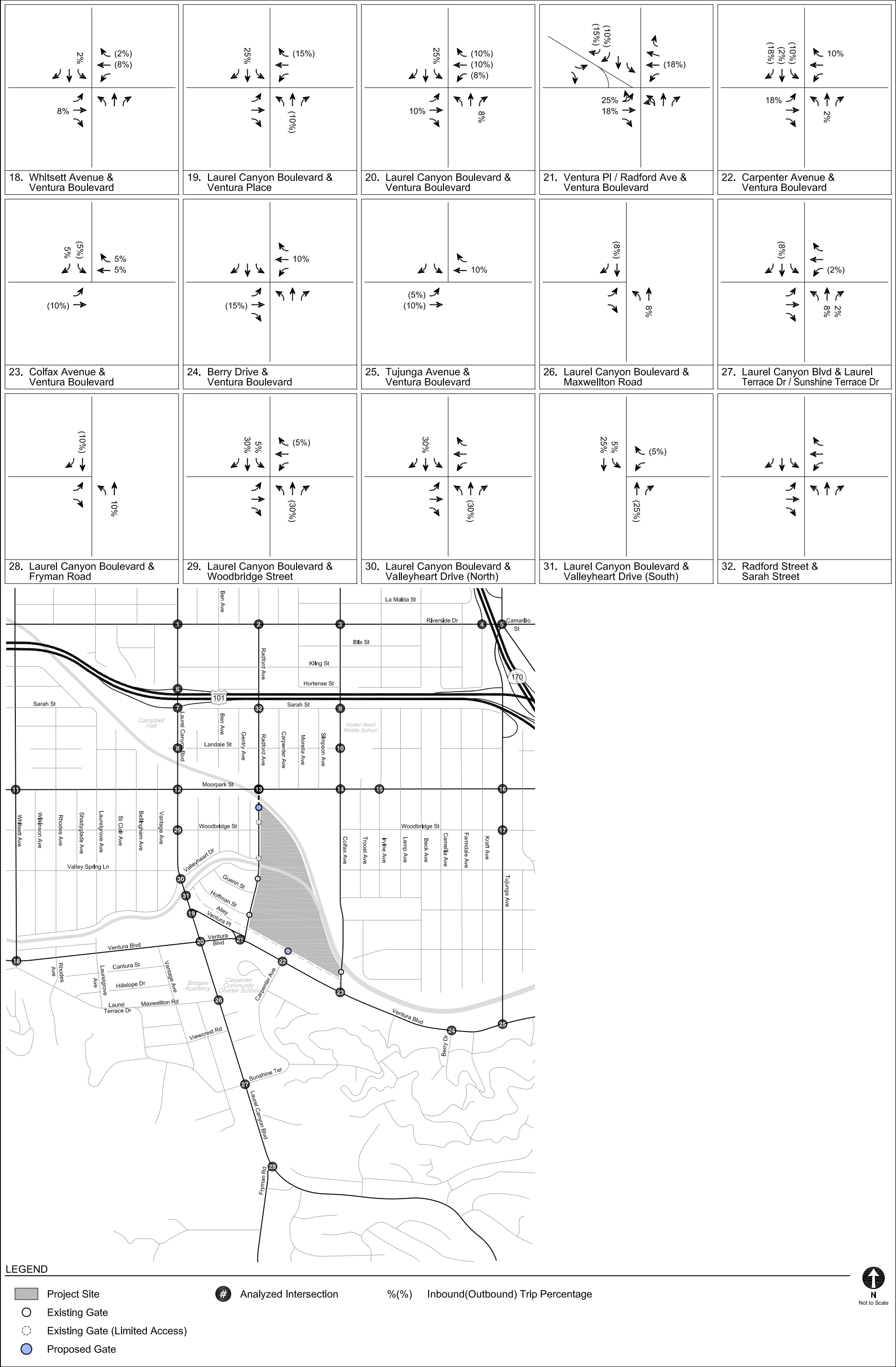
PROJECT REGIONAL TRIP DISTRIBUTION WITH RADFORD MOBILITY CONNECTOR
STAGE, PRODUCTION, AND OFFICE USES

FIGURE
21A



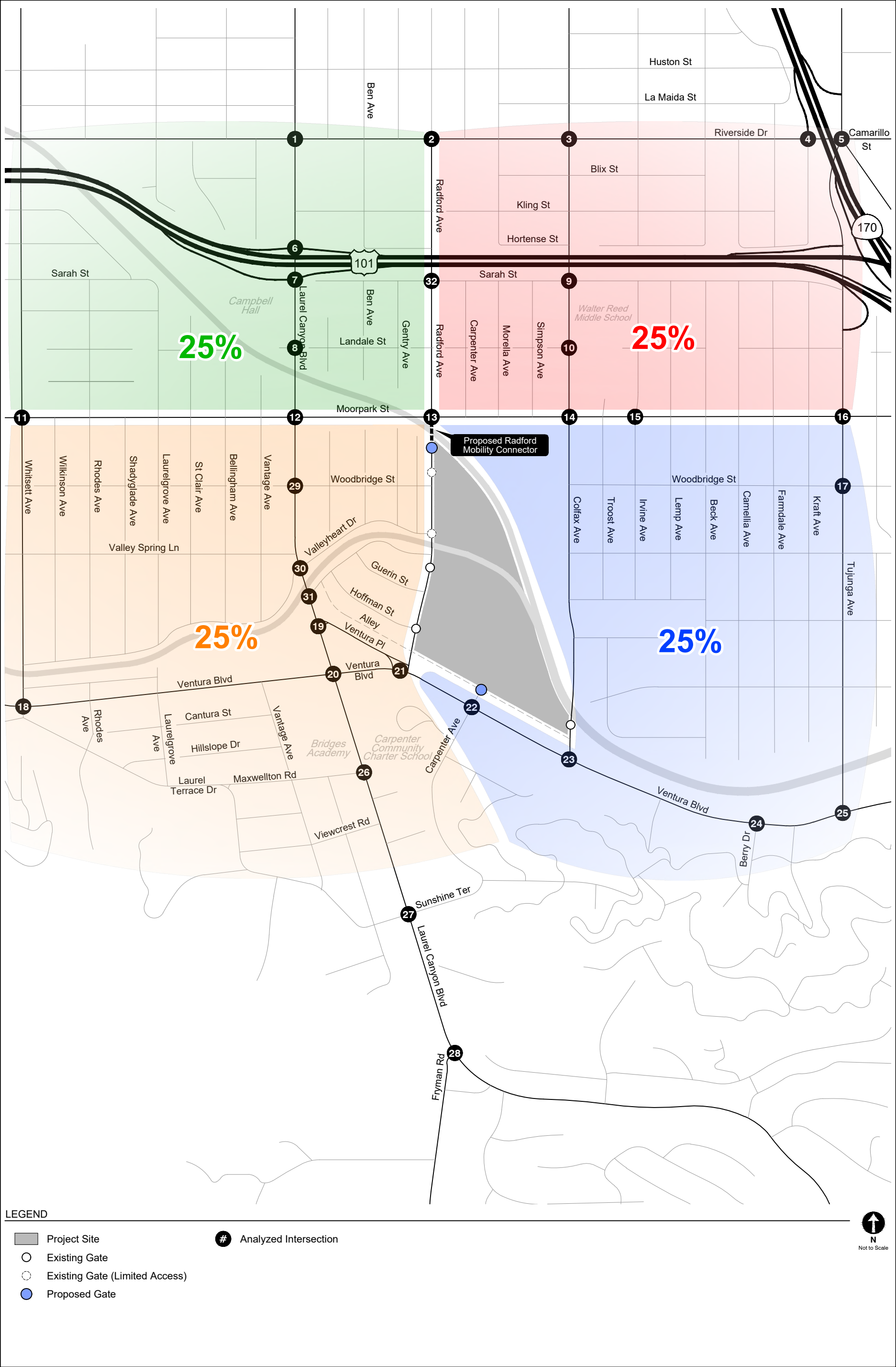
PROJECT INTERSECTION-LEVEL TRIP DISTRIBUTION WITH RADFORD MOBILITY CONNECTOR
STAGE, PRODUCTION, AND OFFICE USES

FIGURE
21B



PROJECT INTERSECTION-LEVEL TRIP DISTRIBUTION WITH RADFORD MOBILITY CONNECTOR
STAGE, PRODUCTION, AND OFFICE USES

FIGURE
21B (CONT.)



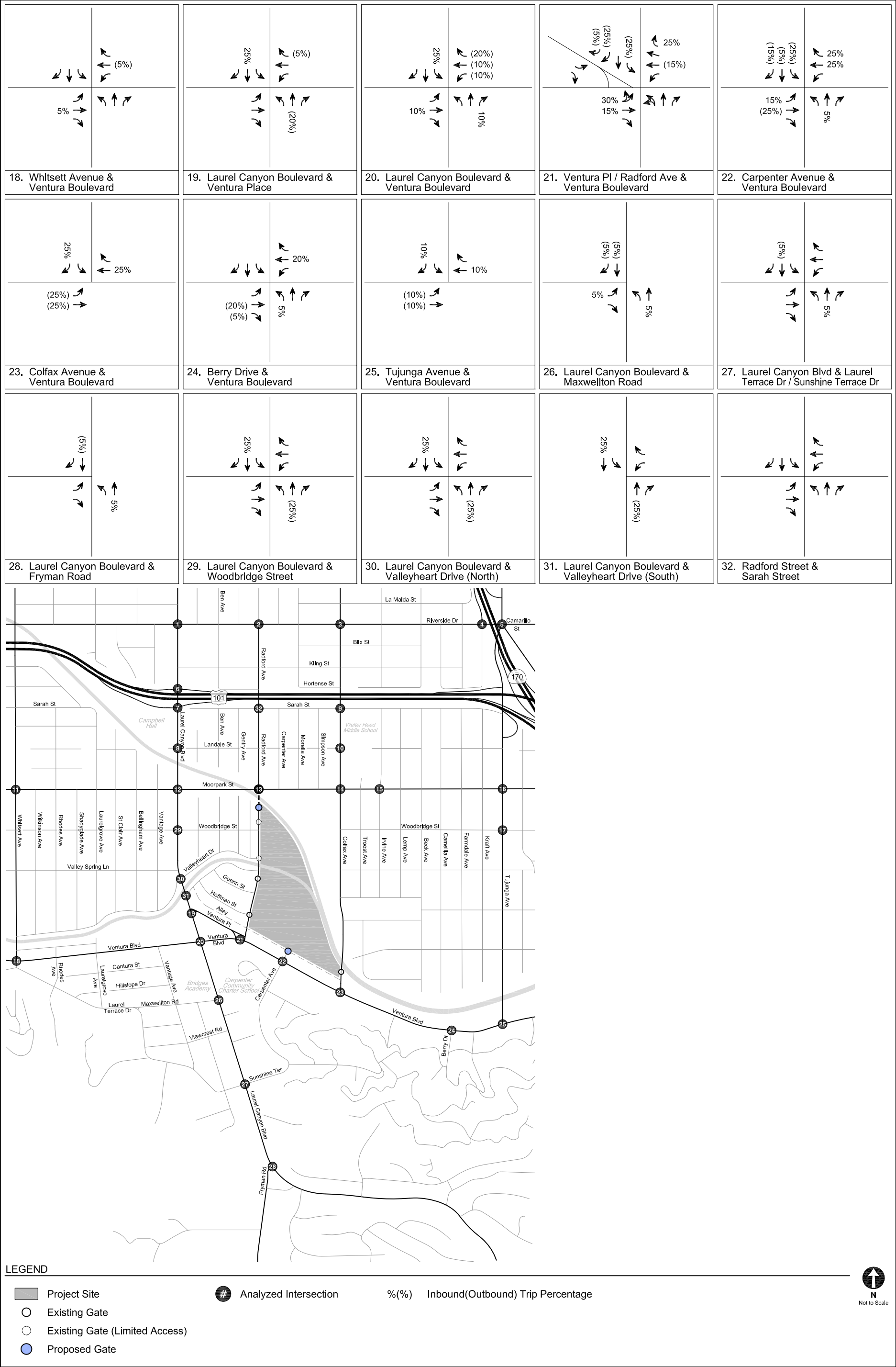
PROJECT LOCAL TRIP DISTRIBUTION WITH RADFORD MOBILITY CONNECTOR
RETAIL USES

FIGURE
22A

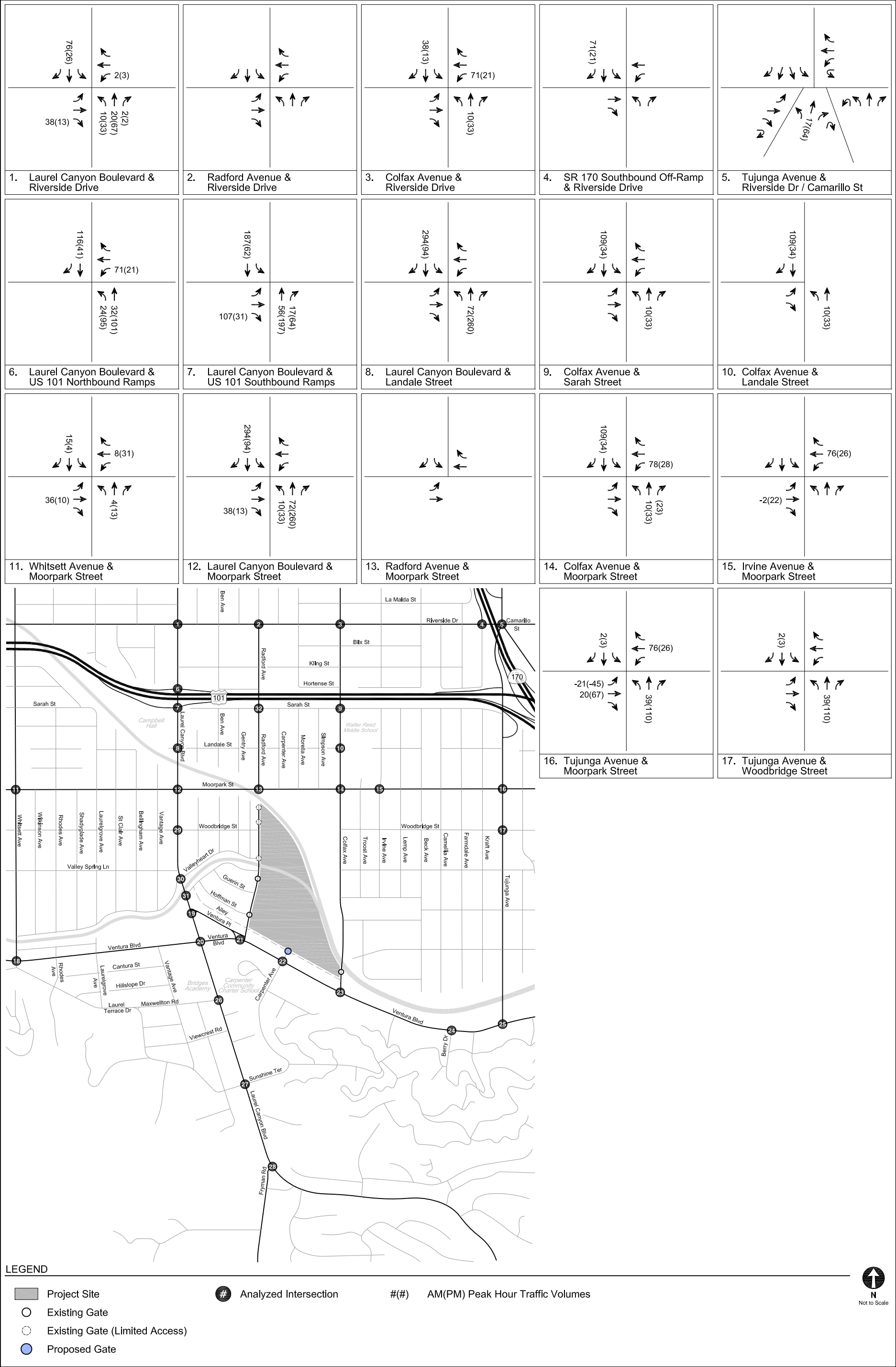


PROJECT INTERSECTION-LEVEL TRIP DISTRIBUTION WITH RADFORD MOBILITY CONNECTOR
RETAIL USES

FIGURE
22B

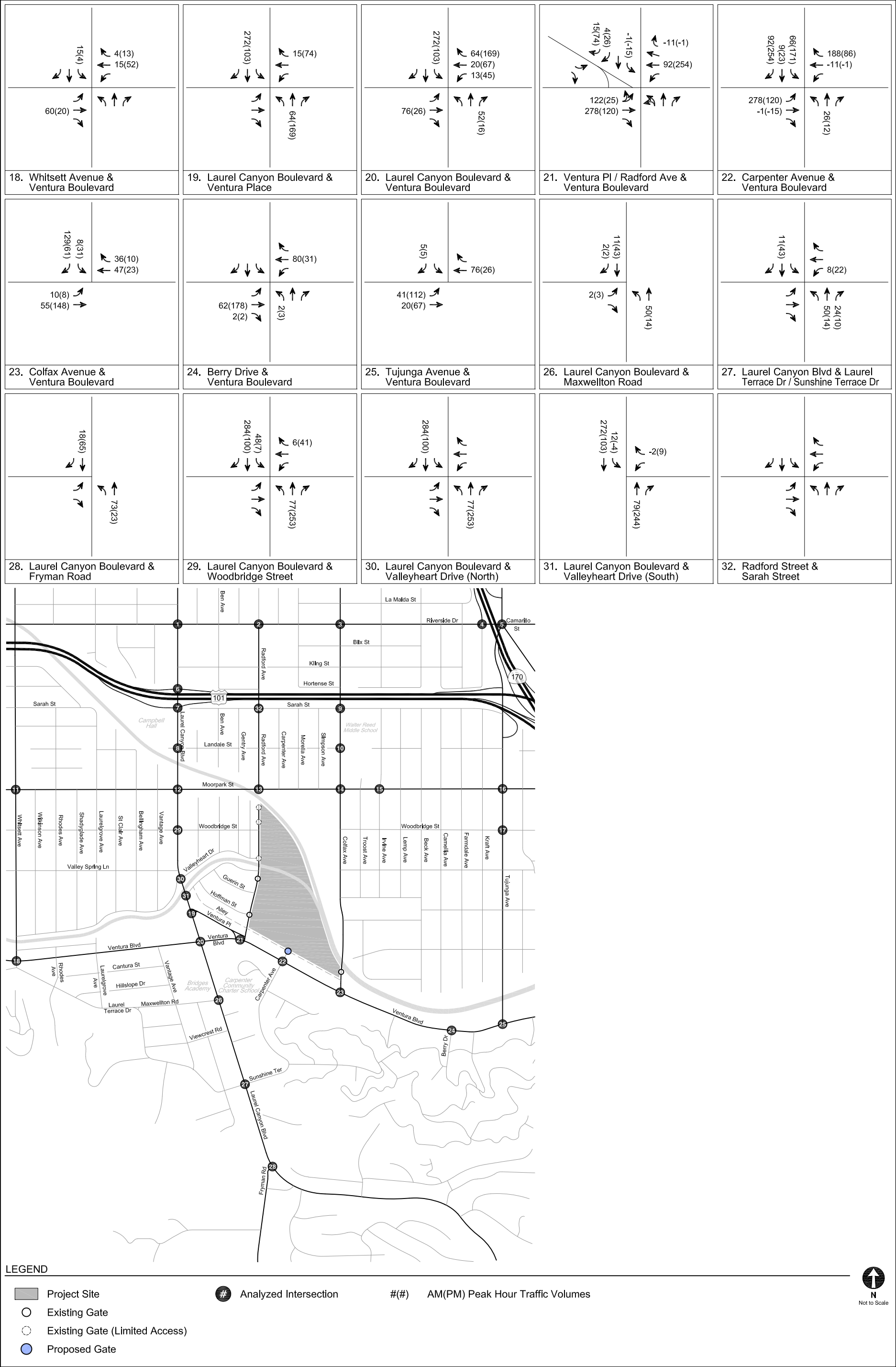


PROJECT INTERSECTION-LEVEL TRIP DISTRIBUTION WITH RADFORD MOBILITY CONNECTOR
RETAIL USES



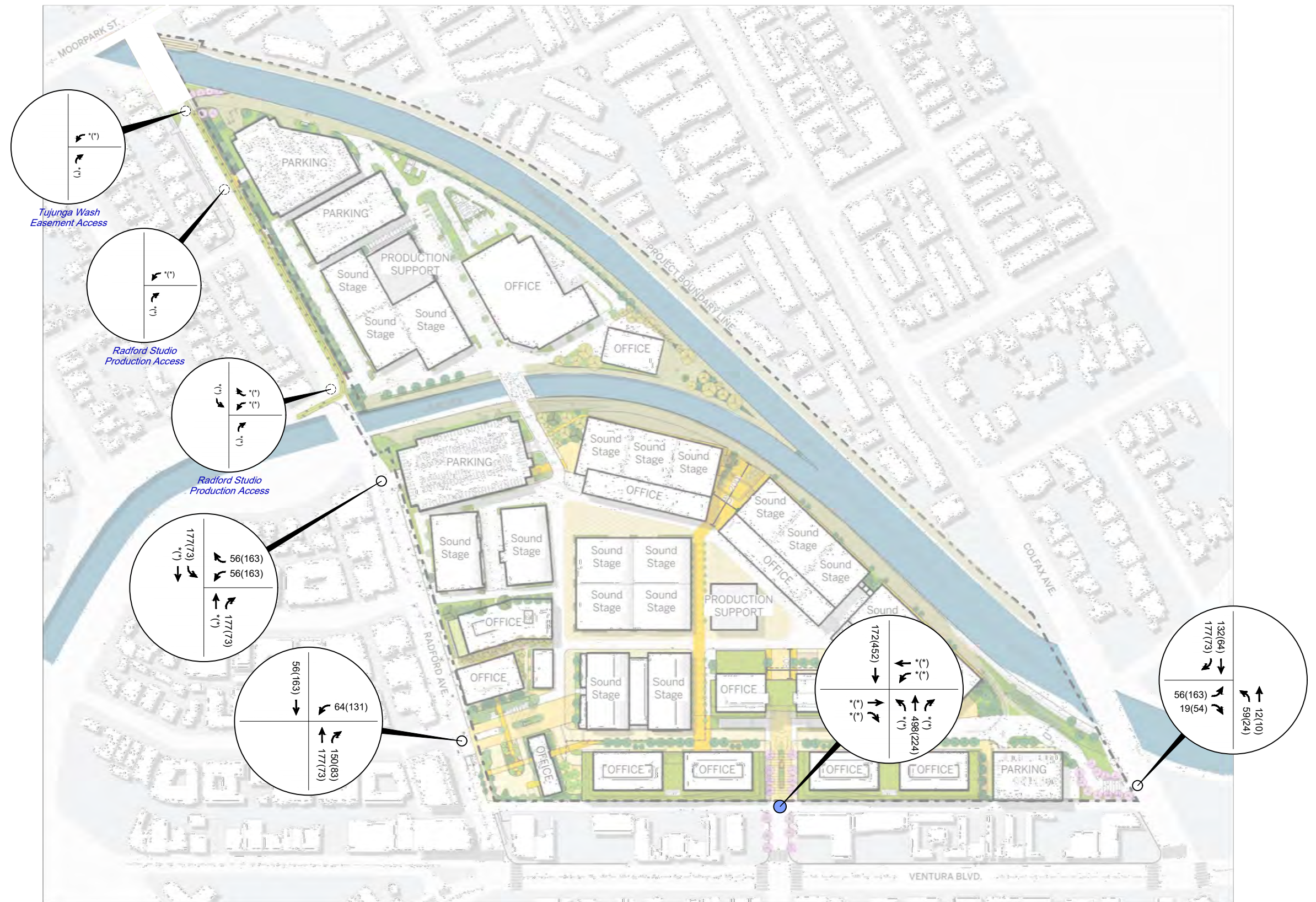
PROJECT-ONLY PEAK HOUR TRAFFIC VOLUMES
WITHOUT RADFORD MOBILITY CONNECTOR

FIGURE
23



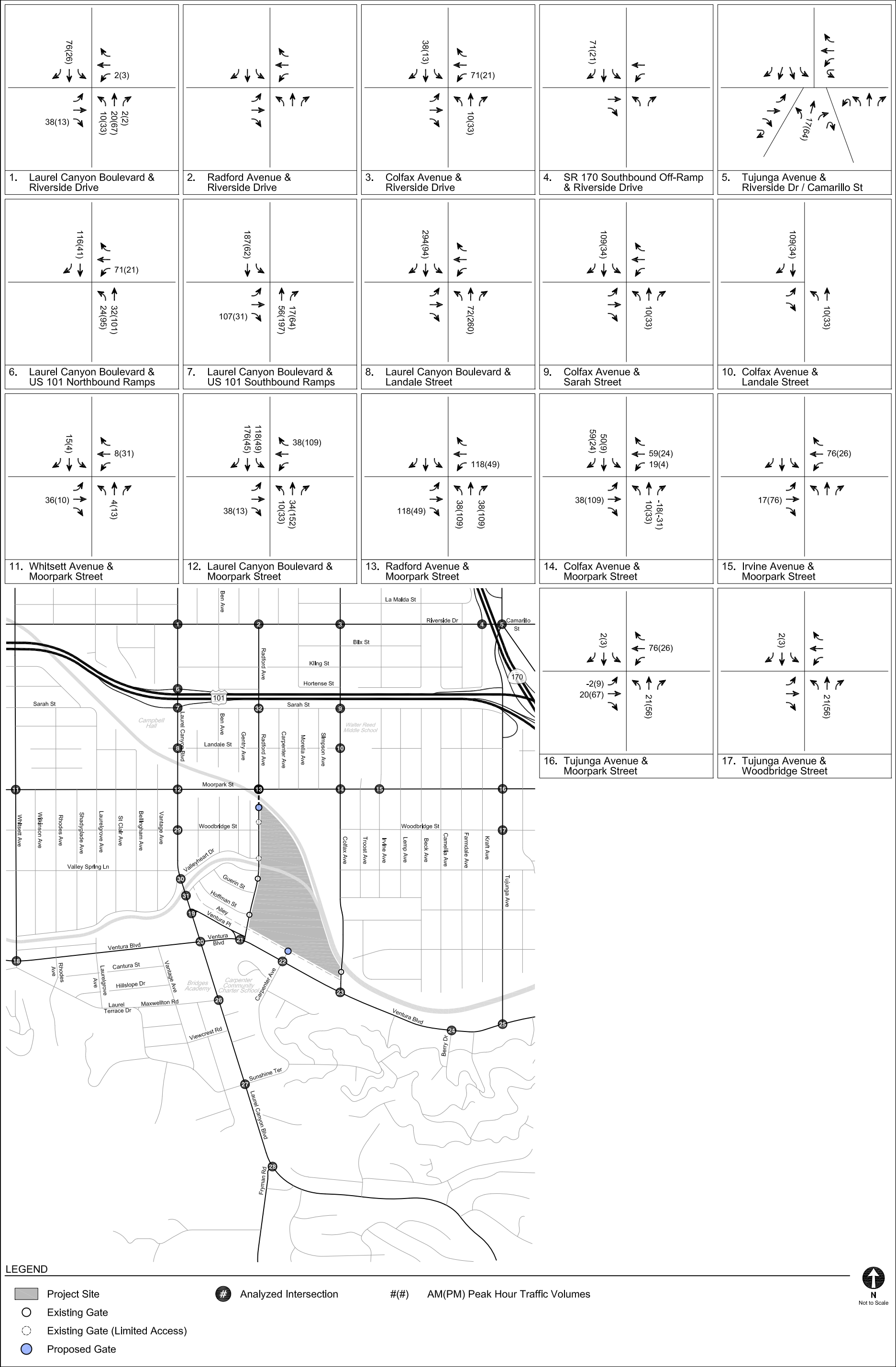
PROJECT-ONLY PEAK HOUR TRAFFIC VOLUMES
WITHOUT RADFORD MOBILITY CONNECTOR

FIGURE
23 (CONT.)



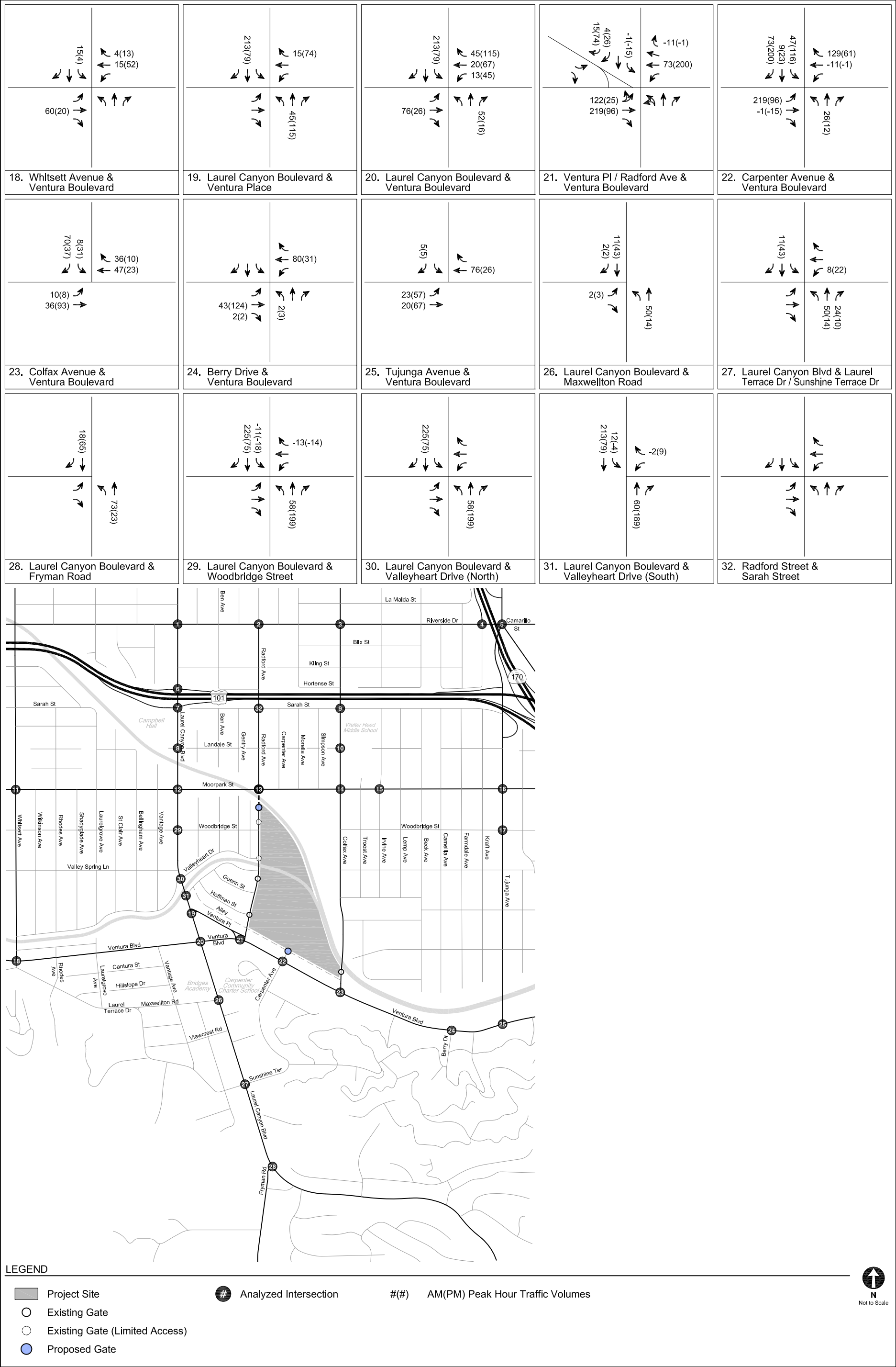
TOTAL PROJECT SITE DRIVEWAY PEAK HOUR TRAFFIC VOLUMES
WITHOUT RADFORD MOBILITY CONNECTOR

FIGURE
24



PROJECT-ONLY PEAK HOUR TRAFFIC VOLUMES
WITH RADFORD MOBILITY CONNECTOR

FIGURE
25





TOTAL PROJECT SITE DRIVEWAY PEAK HOUR TRAFFIC VOLUMES
WITH RADFORD MOBILITY CONNECTOR

FIGURE
26

**TABLE 5
TRIP GENERATION**

Land Use	ITE Land Use [a]	Rate	Morning Peak Hour			Afternoon Peak Hour		
			In	Out	Total	In	Out	Total
<u>Trip Generation Rates</u>								
Sound Stage	[b]	per ksf	63%	37%	0.20	40%	60%	0.43
Production Support	[b]	per ksf	65%	35%	0.61	45%	55%	0.57
Production Office	[b]	per ksf	62%	38%	0.66	45%	55%	0.63
General Office Building	710 [c]	per ksf	88%	12%	1.52	17%	83%	1.44
High-Turnover (Sit-Down) Restaurant	932	per ksf	55%	45%	9.57	61%	39%	9.05
<u>Proposed Project</u>								
Sound Stage	[b]	450.00 ksf	57	33	90	78	116	194
Production Support	[b]	300.00 ksf	119	64	183	77	94	171
Production Office	[b]	725.00 ksf	297	182	479	206	251	457
General Office	710	700.00 ksf	785	107	892	142	693	835
Transit/Walk-In Reduction [d] 10%			(79)	(11)	(90)	(14)	(69)	(83)
Retail [e]	932	25.00 ksf	131	108	239	138	88	226
Internal Capture Reduction [f] 50%			(66)	(54)	(120)	(69)	(44)	(113)
Transit/Walk-In Reduction [d] 10%			(7)	(5)	(12)	(7)	(4)	(11)
Pass-by Reduction [g] 20%			(12)	(10)	(22)	(12)	(8)	(20)
Total - Proposed Project		2,200.00 ksf	1,225	414	1,639	539	1,117	1,656
Total - Project Driveway Trips (no Pass-By) [h]			1,237	424	1,661	551	1,125	1,676
<u>Existing Uses</u>								
Sound Stage	[b]	359.73 ksf	45	27	72	62	93	155
Production Support	[b]	255.51 ksf	101	55	156	66	80	146
Production Office	[b]	450.06 ksf	184	113	297	128	156	284
General Office	710	113.81 ksf	152	21	173	28	136	164
Transit/Walk-In Reduction [d] 10%			(15)	(2)	(17)	(3)	(14)	(17)
Total - Existing Uses		1,179.11 ksf	467	214	681	281	451	732
Total - Net New Project			758	200	958	258	666	924

Notes:

ksf = 1,000 square feet.

[a] Source: *Trip Generation Manual, 11th Edition*, Institute of Transportation Engineers, 2021, unless as noted.

[b] Trip generation rates for sound stages, production support, and production office uses are based on empirical data from other studios in Los Angeles and have been used to estimate studio-related trips for several transportation impact studies, including *NBC Universal Evolution Plan Alternative 10 Transportation Analysis* (Gibson Transportation Consulting [GTC], 2012) and *Transportation Study for the Paramount Pictures Master Plan* (GTC, 2015).

[c] Trip generation rate for the Project based on the best-fit curve formula listed in *Trip Generation, 11th Edition* for the General Office Building land use.

$$\begin{array}{lll} \text{Morning Peak Hour -} & \text{Ln}(T) = 0.86 \text{ Ln}(X) + 1.16 & T = \text{Average Vehicle Trips} \\ \text{Afternoon Peak Hour -} & \text{Ln}(T) = 0.83 \text{ Ln}(X) + 1.29 & X = \text{Gross Floor Area (ksf)} \end{array}$$

Trip generation rate for the existing uses based on the average rate from ITE for the General Office Building land use.

[d] The Project Site is located within walking distance from numerous Metro and LADOT DASH bus stops, therefore a 10% reduction is applied to account for transit usage and walking visitor arrivals from the surrounding neighborhoods and adjacent commercial developments.

[e] The Project's retail use could include restaurant uses. As such, for the purposes of providing a more conservative trip generation analysis, the trips generated by the retail use are based on published rates for the "high-turnover restaurant" land use (ITE Land Use Code 932).

[f] The Project's retail use is anticipated to primarily support the studio and the proposed studio uses on site; however, this use would also be accessible to the general public. Therefore, an internal capture adjustment was applied to account for trips made by studio employees to the retail use without using an off-site road system.

[g] Pass-by reductions account for Project trips made as an intermediate stop on the way from an origin to a primary trip destination without route diversion.

[h] Total Project driveway trips include total proposed Project trips (new construction + existing uses to remain) without consideration of pass-by trip reductions.

Chapter 4

CEQA Analysis of Transportation Impacts

This chapter presents the results of the analysis of CEQA-related transportation impacts for the Project. The analysis identifies any potential conflicts the Project may have with adopted City plans and policies and the improvements associated with the potential conflicts as well as the results of a Project VMT analysis that satisfies State requirements under *State of California Senate Bill 743* (Steinberg, 2013) (SB 743) and an identification of any hazards which would be created due to geometric design features.

METHODOLOGY

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

The TAG defines the methodology of analyzing a project's transportation impacts in accordance with SB 743. Per the TAG, the CEQA transportation analysis contains the following thresholds for identifying significant impacts:

- Threshold T-1: Conflicting with Plans, Programs, Ordinances, or Policies
- Threshold T-2.1: Causing Substantial VMT
- Threshold T-2.2: Substantially Inducing Additional Automobile Travel
- Threshold T-3: Substantially Increasing Hazards Due to a Geometric Design Feature or Incompatible Use

The thresholds were reviewed and analyzed, as detailed in the following Sections 4A-4D.

Section 4A: Threshold T-1

Conflicting with Plans, Programs, Ordinances, or Policies Analysis

Threshold T-1 assesses whether a project would conflict with an adopted program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle, and pedestrian facilities.

PLANS, PROGRAMS, ORDINANCES, AND POLICIES

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

As stated in Section 2.1.4 of the TAG, a project that generally conforms with and does not obstruct the City's development policies and standards will generally be considered to be consistent. As detailed in Appendix C, the Project is generally consistent with the City documents listed in Table 2.1-1 of the TAG; therefore, the Project would not result in a significant impact under Threshold T-1. A detailed discussion of the plans, programs, ordinances, or policies related to the Project is provided below.

Mobility Plan

The Mobility Plan combines "complete street" principles with the following five goals that define the City's mobility priorities:

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

A detailed analysis of the Project's consistency with the specific policies of the Mobility Plan is provided in Table 6. As detailed in Chapter 2, the Mobility Plan identifies key corridors within the Study Area as components of various "mobility-enhanced networks." Though no specific improvements have been identified and there is no schedule for implementation, the mobility-enhanced networks represent a focus on improving a particular aspect of urban mobility, including transit, neighborhood connectivity, bicycles, pedestrians, and vehicles. The Project would be designed with the mobility-enhanced networks as a top priority.

The Mobility Plan also designates street and sidewalk width standards based on a street's functional classification. The Project would maintain the existing roadway widths on Radford Avenue and Colfax Avenue. In addition, the Project would provide a 17-foot wide setback area along the western edge of the North Lot, a 10-foot wide setback area along the western edge of the South Lot along Radford Avenue, and a 15-foot wide setback area along the southeastern edge of the South Lot along Colfax Avenue, a portion of which would include landscaping.

Vehicular access to the Project Site would continue to be provided along Radford Avenue and Colfax Avenue. Additional access from Ventura Boulevard via Carpenter Avenue would be

provided via a former ingress/egress driveway that would be restored as part of the Project. The driveways would be designed in accordance with the standards set forth in *Manual of Policies and Procedures* (LADOT, December 2008) and subject to the approval of LADOT and the Los Angeles Bureau of Engineering. The Project would be subject to the plan review requirements of the Los Angeles Fire and Police Departments to ensure that all proposed access roads, driveways, and parking areas would remain accessible to emergency service vehicles and to ensure pedestrian safety. Therefore, the Specific Plan would not substantially increase hazards due to design features, or incompatible uses. The Project would provide off-street parking within subterranean structures, above-grade parking structures, and surface parking lots to satisfy LAMC requirements and meet the needs of Project employees and visitors.

As previously discussed, the Project would enhance public pedestrian and bicycle access to the Los Angeles River and Tujunga Wash through the construction of the Radford Mobility Connector. The Project is also requesting to modify Radford Avenue from Avenue II to Modified Avenue II to provide a protected Class IV bikeway adjacent the Project Site. Additionally, as a result of the Project's proposed Radford Mobility Connector, vehicular circulation at the Project Site would be improved with the introduction of the new gate to the North Lot, which would alleviate Project-related vehicles at the other driveways and redistribute trips generated by the existing studio-related uses at the Project Site. Further, due to the well-connected network of vehicular, pedestrian, and bicycle facilities provided on-site connecting the North and South Lots, the Project would be consistent with the Mobility Plan's infrastructure goals.

The Project supports initiatives to create transit-oriented developments by expanding employment opportunities in a location served by transit, supporting Metro ridership goals, and enhancing transportation mobility. The Project is located in a dense, urbanized area near existing and future transit stops that would encourage the use of alternative transportation modes through the pedestrian/bicycle amenities discussed previously and the services that would be made available at the Mobility Hub(s). The Project would provide employment and commercial opportunities in proximity to alternative transportation opportunities, such as local bus stops and bicycle amenities to reduce reliance on vehicle travel.

Additionally, the Project's on-site Mobility Hub(s) would support multi-modal mobility options, first-mile/last-mile connections, and other TDM strategies, including, but not limited to bike-share services, carpool/vanpool loading areas, and informational digital bulletin boards. The Project

would also provide secured bicycle parking facilities and amenities, such as repair stands, showers, and lockers within the Project Site. These measures would promote active transportation modes, such as biking and walking. Furthermore, the Project's TDM Program would further reduce vehicle trips and would result in lower work VMT per employee compared to the average for the area, as demonstrated in Section 4B.

Thus, the Project would be consistent with the goals of the Mobility Plan.

Plan for a Healthy Los Angeles

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

A detailed analysis of the Project's consistency with the Plan for a Healthy Los Angeles is provided in Table 7. The Project prioritizes safety and access for all individuals utilizing the Project Site by complying with all ADA requirements and providing connections to pedestrian amenities. The on-site Mobility Hub(s) would support multi-modal mobility options such as bike amenities and bike-share services to improve the convenience of making trips without the use of a personal automobile. Further, the Project supports healthy lifestyles by expanding employment opportunities in proximity of residential areas, commercial destinations, and other neighborhood serving retail uses near transit, providing on-site bicycle amenities and enhancing bicycle facilities adjacent to the Project Site that would allow employees to travel via alternative transportation modes that are environmentally sustainable and physically beneficial, and enhancing the pedestrian environment with expanded pedestrian facilities and landscaping elements surrounding the Project Site for a more comfortable environment for pedestrians. The Project would also provide pedestrian and bicycle connections from the current terminus of Radford Avenue to Moorpark Street via the proposed Radford Mobility Connector and Class IV protected bicycle lanes along Radford Avenue from Hoffman Street to the Radford Mobility Connector.

Additionally, the Project would provide up to 25,000 sf of retail space that would be easily accessed by foot from surrounding residential neighborhoods. Finally, the Project is estimated to

generate lower work VMT per employee than the average for the area, as demonstrated in Section 4B. Thus, as VMT directly contributes to GHG emissions, the Project would also generate lower GHG per capita than the area average.

Thus, the Project would be consistent with the goals of the Plan for a Healthy Los Angeles.

Land Use Element of the General Plan

The City General Plan's Land Use Element contains 35 Community Plans that establish specific goals and strategies for the various neighborhoods across Los Angeles. The Project is located within the *Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass Community Plan* area, as well as the City's *River Improvement Overlay District* (Revised January 12, 2015) (RIO District) area.

A detailed analysis of the Project's consistency with *Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass Community Plan* is provided below and addressed in Table 8. The Project would implement many policies to maintain the community's distinctive character. The Project would retain and develop additional commercial land use types with the expansion of studio-related uses at the Project Site and provide up to 25,000 sf of retail space to complement existing commercial uses in the area. Furthermore, the Project would promote the use of multimodal transportation (e.g., walking, bicycling, driving, and taking public transit). The Project is not directly located within the pedestrian-oriented areas, as identified in the *Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass Community Plan*; however, the Project would enhance the public realm along all Project Site frontages. The Project would improve mobility for pedestrians and encourage use of alternative transportation modes through landscaping elements along the Project frontages, on-site bicycle amenities, and on-site Mobility Hub(s). The proposed Mobility Hub(s) would provide opportunities for first-mile/last-mile solutions to encourage Project employees and visitors to use public transit, carpool, vanpool, and bikes/scooters to get to and from the Project Site and support other TDM strategies to further reduce the number of single-occupancy vehicle trips generated by the Project, as discussed in further detail in Section 4B.

Thus, the Project would be consistent with the transportation-related goals and objectives of *Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass Community Plan*.

The purpose of the RIO District is to support the goals of the City's *Los Angeles River Revitalization Master Plan* (April 2007) and promote multi-modal connection between the Los Angeles River and its surrounding neighborhoods with a safe, accessible, and aesthetically pleasing environment. The Project would comply with the design objectives outlined in the City's *Los Angeles River Design Guidelines* (July 29, 2015) as the Project would improve the existing public access to the Los Angeles River and Tujunga Wash with the Radford Mobility Connector, provide on-site bicycle amenities near the river corridor to encourage multi-modal transportation, and locate on-site parking or loading facilities away from the river corridor as to not disrupt the visual appearance to the river. As such, the Project would be consistent with the objectives of the RIO District.

Specific Plans

The Project is not located within an area currently governed by a Specific Plan and, therefore, this does not apply to the Project.

LAMC Section 12.21.A.16 (Bicycle Parking)

LAMC Section 12.21.A.16 details the bicycle parking requirements for new developments. The Project would meet the LAMC requirements for on-site bicycle parking supply and would also provide showers, lockers, and bicycle service areas. Thus, the Project is consistent with LAMC Section 12.21.A.16.

LAMC Section 12.26J (TDM Ordinance)

LAMC Section 12.26J, the TDM Ordinance (1993), establishes trip reduction requirements for non-residential projects in excess of 25,000 sf. The Project proposes non-residential uses in excess of 25,000 sf. Key requirements of the TDM Ordinance, as applied to the Project, include providing a bulletin board or display case of transportation information, carpool/vanpool loading and designated parking areas, access from external circulation system to LAMC-required bicycle

parking areas, pathways or safe routes from development buildings to public sidewalks, and, if determined necessary by LADOT or the local transit agency, improved bus stops.

The Project would comply with the requirements of the TDM Ordinance through the Project's design and TDM Program, which is described in detail in Section 4B. Transportation information and carpool/vanpool loading areas would be provided at the on-site Mobility Hub(s). Designated carpool/vanpool parking would be provided within the Project Site. The Project's internal circulation system would provide pathways for pedestrians and bicycles to the public streets and sidewalks. The Project would coordinate with the appropriate agencies regarding any improvements to local transit services in the area, such as upgraded benches, shelters, lighting, signage, etc. Therefore, the Project would satisfy the requirements of LAMC Section 12.26J.

The TDM Ordinance is currently being updated and is expected to be completed prior to the anticipated occupancy of the Project.

Vision Zero Action Plan / Vision Zero Corridor Plans

Vision Zero implements projects that are designed to increase safety on the most vulnerable City streets. As discussed in Chapter 2, the Project is not located adjacent to any roadways that have been identified as part of the HIN. Additionally, no active Vision Zero Safety Improvements projects are planned adjacent to or within the Project Site vicinity. The Project improvements to the pedestrian environment would not preclude any future Vision Zero safety improvements by the City. Furthermore, the Project would enhance pedestrian and bicycle safety with improvements, such as pedestrian areas along the Project Site perimeter, a new Class IV bikeway along Radford Avenue, and enhanced pedestrian and bicycle access to the Los Angeles River and Tujunga Wash. Thus, the Project would not conflict with Vision Zero.

Streetscape Plans

The Project is not located within the boundaries of any streetscape plans identified by the City; however, the Project is located near the City's *Studio City/Cahuenga Pass Streetscape Plan* (2002) (Streetscape Plan) area. The Streetscape Plan provides guidelines and standards for both

public and private development projects in Studio City/Cahuenga Pass and is intended to provide direction for improvements in the public ROW that create a pedestrian-friendly environment and enhance the identity of this area. The Streetscape Plan aims to promote a long-term, coordinated program of public and private investment in the pedestrian environment to enhance the area's role as the focus of community activity. The Streetscape Plan establishes a plan for the area's public ROW, which includes sidewalks and streets. Design considerations for this space include streetscape components such as landscape, street lighting, public art, street furniture, infrastructure, and signage. Although the Project Site is not located within the Streetscape Plan area, any off-site improvements proposed by the Project that would be located within the Streetscape Plan would comply with the guidelines and standards along the public right-of-way.

Citywide Design Guidelines

As detailed on page 13 of *Citywide Design Guidelines* (LADCP Urban Design Studio, October 2019), the Pedestrian-First Design approach identifies design strategies that “create human-scale spaces in response to how people actually engage with their surroundings, by prioritizing active street frontages, clear paths of pedestrian travel, legible wayfinding, and enhanced connectivity. Pedestrian-First Design promotes healthy living, increases economic activity at the street level, enables social intersection, creates equitable and accessible public spaces, and improves public safety.”

The Pedestrian-First Design guidelines are as follows:

- *Guideline 1: Promote a safe, comfortable, and accessible pedestrian experience for all.*
- *Guideline 2: Carefully incorporate vehicular access such that it does not degrade the pedestrian experience.*
- *Guideline 3: Design projects to actively engage with streets and public space and maintain human scale.*

A detailed analysis of the Project's consistency with the guidelines of the Pedestrian-First Design approach is provided in Table 9. The Project would include pedestrian-only entrances separate from vehicular access point to minimize potential vehicle-pedestrian conflicts. Further, the Project would enhance the public realm with landscaping elements and a protected bikeway along Radford Avenue adjacent to the Project Site. Additionally, the Project design would also include

internal pedestrian pathways that would connect to off-site pedestrian facilities, as well as nearby transit stops. The vehicular driveways would be designed to maximize pedestrian refuge areas between driveways along the same block to maintain safe pedestrian flow along the sidewalks, and all proposed and modified Project driveway designs would be subject to the approval of LADOT and Bureau of Engineering. Thus, the Project design provides a more comfortable environment for pedestrians aligning with the Pedestrian-First Design approach.

YEAR 2045 PROJECT COMPLETION

As noted in Chapter 1, the Project's proposed Development Agreement would allow completion of the Project as late as Year 2045. The analysis presented above is not dependent on when the Project is completed and, therefore, the results and conclusions are equally applicable to a long-range completion date.

CUMULATIVE ANALYSIS

In addition to potential Project-specific impacts, the TAG requires that the Project be reviewed in combination with nearby Related Projects to determine if there may be a cumulatively significant impact resulting from inconsistency with a particular program, plan, policy, or ordinance. In accordance with the TAG, the cumulative analysis must include consideration of any Related Projects within 0.50 miles of the Project Site and any transportation system improvements in the vicinity. Table 4 identifies the Related Projects located within 0.50 miles of the Project Site, none of which are located along the same block as the Project. Thus, the Project and the Related Projects would not result in a cumulative impact that would preclude the City from serving the transportation needs as defined by the City's adopted programs, plans, ordinances, or policies. Each of the Related Projects considered in this cumulative analysis of consistency with programs, plans, policies, and ordinances would be separately reviewed and approved by the City, including a check for their consistency with applicable policies. Therefore, the Project, together with the Related Project identified in Table 4, would not create inconsistencies nor result in cumulative impacts with respect to the identified programs, plans, policies, and ordinances.

TABLE 6
PROJECT CONSISTENCY WITH MOBILITY PLAN 2035

Objective, Policy, Program, or Plan [a]	Analysis of Project Consistency
Chapter 1 – Safety First	
<p><u>Policy 1.1, Roadway User Vulnerability</u></p> <p>Design, plan, and operate streets to prioritize the safety of the most vulnerable roadway user.</p>	<p>Consistent. While this policy applies to the City and not development projects, the Project would not preclude the City from implementing the policy. The Project would contribute toward pedestrian and bicycle facility improvements, including ADA ramps. The Project would also improve the continental crosswalk striping at the intersection of Carpenter Avenue & Ventura Boulevard to increase pedestrian and motorists' visibility. The Project also proposes to enhance public access to the Los Angeles River (LA River) and Tujunga Wash, and construct the Radford Mobility Connector, a bridge connection from the existing northern terminus of Radford Avenue to Moorpark Street. The Project would also implement a protected bikeway along Radford Avenue adjacent to the Project Site consistent with the Los Angeles River Master Plan to provide a safer bicycle connection to the Los Angeles River and Tujunga Wash. Pedestrian access to the Project Site would be provided separate from the vehicle access points to reduce potential vehicle-pedestrian conflicts.</p>
<p><u>Policy 1.2 Complete Streets</u></p> <p>Implement a balanced transportation system on all streets, tunnels, and bridges using complete streets principles to ensure the safety and mobility of all users.</p>	<p>Consistent. While this policy applies to the City and not development projects, the Project would not preclude the City from implementing the policy. The Project would comply with all applicable design element requirements, which may affect public rights-of-way, including proper driveway alignment, sidewalk widths, improved lighting elements, and landscaping design which would improve safety, visibility, mobility, and accessibility. The Project's Radford Mobility Connector component and new landscaping elements would facilitate pedestrian and bicycle accessibility to improve the safety and mobility of all users.</p>
<p><u>Policy 1.3 Safe Routes to Schools</u></p> <p>Prioritize the safety of school children on all streets regardless of highway classifications.</p>	<p>Consistent. Carpenter Community Charter School is located approximately 800 feet south of the Project Site along Carpenter Avenue. The City's Safe Routes to School program currently does not include plans for Carpenter Community Charter School. Nonetheless, it is anticipated that striped crosswalks near the Project Site vicinity would continue to be used as crossing locations, including across Carpenter Avenue at Ventura Boulevard and Laurelwood Drive, and across Laurel Canyon Boulevard at Maxwellton Road. The Project would provide intersection upgrades at the intersection of Carpenter Avenue & Ventura Boulevard, which would include the improvement of existing continental crosswalk striping to provide safer pedestrian crossings by increasing visibility and the creation of exclusive eastbound and westbound left-turn phasing to reduce potential pedestrian-vehicle conflicts.</p>
<p><u>Policy 1.6 Multi-Modal Detour Facilities</u></p> <p>Design detour facilities to provide safe passage for all modes of travel.</p>	<p>Consistent. The Project would prepare a construction management plan (described in Section 5D of this report) that would include detour routes for any potential impediments to the public ROW that may affect pedestrian, bicyclists, motorists, and transit users.</p>

TABLE 6 (CONT'D)
PROJECT CONSISTENCY WITH MOBILITY PLAN 2035

Objective, Policy, Program, or Plan [a]	Analysis of Project Consistency
Chapter 2 – World Class Infrastructure	
<p><u>Policy 2.2 Complete Streets Design Guide</u></p> <p>Establish the Complete Streets Design Guide as the City’s document to guide the operations and design of streets and other public rights-of-way.</p>	<p>Consistent. As part of the Project’s Radford Mobility Connector and any off-site physical improvements, the Project would comply with all applicable design element requirements that may affect the public rights-of-way, including proper driveway alignment, sidewalk widths, improved lighting elements, and landscaping design, to improve safety, visibility, mobility, and accessibility at Project access points and along the Project frontages.</p>
<p><u>Policy 2.3 Pedestrian Infrastructure</u></p> <p>Recognize walking as a component of every trip, and ensure high-quality pedestrian access in all site planning and public right-of-way modifications to provide a safe and comfortable walking environment.</p>	<p>Consistent. Radford Avenue along the Project Site is part of the Pedestrian Enhanced District. The Project would pedestrian facilities along all Project Site frontages through sidewalk improvements, including the widening of sidewalks in some areas, consistent with Mobility Plan standards, installation of new street trees and landscaping, lighting, wayfinding signage, and pedestrian amenities such as benches. The Project would provide a 17-foot wide setback area along the western edge of the North Lot and a 10-foot wide setback area along the western edge of the South Lot along Radford Avenue, as well as a 15-foot wide setback area along the southeastern edge of the South Lot along Colfax Avenue, a portion of which would be comprised of landscaping. As part of the Project, public access to the LA River and Tujunga Wash would be enhanced through the provision of a new paved pedestrian/bicycle path. The Project would also upgrade the crosswalks and bus stops along the Project Site perimeter and provide designated pedestrian entrances to the Project Site. Moreover, the Project would include safe, delineated pathways for pedestrians throughout the Project Site.</p>
<p><u>Policy 2.4 Neighborhood Enhanced Network</u></p> <p>Provide a slow speed network of locally serving streets.</p>	<p>Consistent. No roadways along the Project Site are part of the Neighborhood Enhanced Network (NEN). Colfax Avenue, north of Acama Street and across the Los Angeles River and Tujunga Wash from the Project Site, is designated as part of the NEN, however, the Project does not propose any vehicular access along this segment. Nevertheless, the Project would provide improvements, such as a Class IV protected bikeway on Radford Avenue, that would provide comfortable and safe routes for localized travel of slower-moving modes, such as bicycling or other slow speed motorized means of travel. The Project’s Radford Mobility Connector would facilitate vehicular access to and from the Project Site at the northern terminus of Radford Avenue. With the exception of emergency vehicles, no through access for vehicles north or south along Radford Avenue would be permitted to use the Radford Mobility Connector ensure there would be no vehicular conflicts with other vehicles, pedestrians, or bicyclists. As such, Project vehicles would not interfere with the neighborhood character of the surrounding area.</p> <p>Additionally, a full analysis of the Project’s potential effects on neighborhood streets, along with the Project’s Neighborhood Traffic Management Plan, is provided in Section 5C. As discussed therein, the Project would contribute to and implement a Neighborhood</p>

TABLE 6 (CONT'D)
PROJECT CONSISTENCY WITH MOBILITY PLAN 2035

Objective, Policy, Program, or Plan [a]	Analysis of Project Consistency
	Traffic Management Plan for the residential neighborhoods north, west, south, and east of the Project Site to minimize potential cut-through trips on residential streets.
<p><u>Policy 2.5 Transit Network</u></p> <p>Improve the performance and reliability of existing and future bus service.</p>	<p>Consistent. No roadways along the Project Site are part of the Transit Enhanced Network (TEN). In the vicinity of the Project Site, Ventura Boulevard south of the Project Site is part of the TEN. While this policy applies to the City and not development Projects, the Project would not preclude future improvements to existing and future transit services or operations that would conflict with plans under development by Metro and/or LADOT. Additionally, the Project proposes on-site Mobility Hub(s) that would support alternative transportation modes.</p>
<p><u>Policy 2.6 Bicycle Networks</u></p> <p>Provide safe, convenient, and comfortable local and regional bicycling facilities for people of all types and abilities.</p>	<p>Consistent. Adjacent to the Project Site, Colfax Avenue is part of the Bicycle Lane Network. Bicycle lanes are provided along both sides of the street immediately north of the Project Site's existing vehicular access point on Colfax Avenue. The Project also proposes to modify the street designation of Radford Avenue from Avenue II to Modified Avenue II to facilitate a protected bikeway adjacent to the Project Site from Hoffman Street to the Radford Mobility Connector. The Project's open space plan to provide access to and connect pedestrians and bicyclists with the Los Angeles River would be consistent with the improvements already envisioned by the City. The Project would also provide on-site bicycle parking and services such as repair stands, showers, and lockers, to encourage bicycling for employees and visitors to the Project Site. The proposed Mobility Hub(s) would also provide space for bike-share facilities, bicycle rentals, and other similar services that may be available in the future.</p>
<p><u>Policy 2.9 Multiple Networks</u></p> <p>Consider the role of each mode enhanced network when designing a street that included multiple modes.</p>	<p>Consistent. As detailed in Policies 2.3 to 2.6, the Project Site vicinity includes a mix of enhanced networks identified as part of and consistent with the Mobility Plan. While this policy applies to the City and not development projects, the Project would not preclude the City from implementing this policy. The Project would improve the overall pedestrian experience surrounding the Project Site and would not conflict with the City's bicycle plans as identified in the Mobility Plan. The Project's Radford Mobility Connector would facilitate pedestrian and bicycle access to and from the Project Site at the northern terminus of Radford Avenue. With the exception of emergency vehicles, no through access for vehicles north or south along Radford Avenue would be permitted to use the Radford Mobility Connector to ensure there would be no vehicular conflicts with other vehicles, pedestrians, and bicyclists.</p>

TABLE 6 (CONT'D)
PROJECT CONSISTENCY WITH MOBILITY PLAN 2035

Objective, Policy, Program, or Plan [a]	Analysis of Project Consistency
<p><u>Policy 2.10 Loading Areas</u></p> <p>Facilitate the provision of adequate on and off-street loading areas.</p>	<p>Consistent. In addition to providing on-site parking in subterranean structures, above-grade parking structures, and surface parking lots, the Project would provide on-site loading facilities for passengers, commercial vehicles, and studio production-related trucks. The Mobility Hub(s) would be the primary locations for passenger loading. The Project would provide private service areas and roadways for all other loading services within the Project Site. Thus, no commercial loading operations would occur within the public right-of-way.</p>
<p><u>Policy 2.17 Street Widenings</u></p> <p>Carefully consider the overall implications (costs, character, safety, travel, infrastructure, environment) of widening a street before requiring the widening, even when the existing right of way does not include a curb and gutter or the resulting roadway would be less than the standard dimension.</p>	<p>Consistent. The Project does not propose the widening of any roadways adjacent to the Project Site. As such, the Project would be consistent with the intent of the Mobility Plan.</p>
<p><i>Chapter 3 – Access for All Angelenos</i></p>	
<p><u>Policy 3.1 Access for All</u></p> <p>Recognize all modes of travel, including pedestrian, bicycle, transit, and vehicular modes – including goods movement – as integral components of the City's transportation system.</p>	<p>Consistent. The Project supports initiatives to create transit-oriented developments by expanding employment opportunities well served by public transit. The Project would provide facilities for all travel modes through on-site bicycle parking areas and amenities, a new paved pedestrian/bicycle path via the Project's Radford Mobility Connector located at the northern terminus of Radford Avenue, and development of the Mobility Hub(s). The Mobility Hub(s) would provide opportunities for first-mile/last-mile connections, encourage Project employees and visitors to use public transit, carpool, vanpool, and bicycles/scooters to get to and from the Project Site, and support TDM strategies to further promote alternative transportation modes. The Project's TDM program would include an educational program/on-site coordinator, bicycle parking and amenities, pedestrian amenities, shuttle service, a ride-share matching and carpool/vanpool program, first-mile/last-mile options, and a Guaranteed Ride Home program.</p>
<p><u>Policy 3.2 People with Disabilities</u></p> <p>Accommodate the needs of people with disabilities when modifying or installing infrastructure in the public right-of-way.</p>	<p>Consistent. The Project would be designed to meet all requirements from the Americans with Disabilities Act (ADA), including providing adequate access to pedestrian amenities at adjacent and nearby intersections by meeting specific ADA curb ramp standards and providing the minimum sidewalk width along the Project Site's street frontages.</p>

TABLE 6 (CONT'D)
PROJECT CONSISTENCY WITH MOBILITY PLAN 2035

Objective, Policy, Program, or Plan [a]	Analysis of Project Consistency
<p><u>Policy 3.3 Land Use Access and Mix</u></p> <p>Promote equitable land use decisions that result in fewer vehicle trips by providing greater proximity and access to jobs, destinations, and other neighborhood services.</p>	<p>Consistent. The Project would focus growth in a high-density, jobs-rich area in close proximity to transit. The Project would support initiatives to reduce vehicle trips by expanding employment opportunities in proximity to residential areas, neighborhood services, and local-serving retail and restaurants in an urban area. The Project would also encourage ride-sharing and the use of alternative mobility modes via the Mobility Hub(s). Additionally, the Project would implement a TDM program to further reduce the number of single occupancy vehicle trips to the Project Site.</p>
<p><u>Policy 3.4 Transit Services</u></p> <p>Provide all residents, workers, and visitors with affordable, efficient, convenient, and attractive transit services.</p>	<p>Consistent. The Project Site is located near bus stops serviced by local bus lines. While this policy applies to the City and not development projects, the Project would not preclude the City from implementing this policy. The Project would include development of the Mobility Hub(s) that would act as central locations for Project employees and visitors to access convenient and multi-modal transportation services. Pedestrian and bicycle access to existing and future transit services would be enhanced with the creation of the new Radford Mobility Connector and additional landscaping, sidewalk, and crosswalk improvements along the public realm adjacent to the Project Site.</p>
<p><u>Policy 3.5 Multi-Modal Features</u></p> <p>Support “first-mile, last-mile solutions” such as multi-modal transportation services, organizations, and activities in the areas around transit stations and major bus stops (transit stops) to maximize multi-modal connectivity and access for transit riders.</p>	<p>Consistent. The Project’s Mobility Hub(s) would support multi-modal mobility options through a transportation information center and first-mile/last-mile connections for transit, passenger loading spaces for carpools and vanpools, bicycle parking , and related bicycle services such as valet service, repair stands, showers, and lockers, to maximize multi-modal connectivity and access for transit riders. In combination with the numerous transportation services to be provided at the proposed Mobility Hub(s), the Project’s location near several public transit services would encourage the use of alternative mobility modes. The TDM Program includes strategies that would further encourage the use of transit and other alternative modes of transportation and would include features such as bicycle and scooter rentals, as discussed in more detail in Section 4B of this Transportation Assessment. The TDM program would include an educational program/on-site coordinator, bicycle parking and amenities, pedestrian amenities, shuttle service, a ride-share matching and carpool/vanpool program, first-mile/last-mile options, and a Guaranteed Ride Home program.</p>
<p><u>Policy 3.7 Regional Transit Connections</u></p> <p>Improve transit access and service to major regional destinations, job centers, and inter-modal facilities.</p>	<p>Consistent. While this policy applies to the City and not development projects, the Project would not preclude the City from implementing this policy. The Project would improve access between transit and major regional destinations by creating Mobility Hub(s) that would provide space for first-mile/last-mile solutions, such as bike-share, bicycle rentals, and other similar services, and improves the efficiency and convenience to existing and future transit services.</p>

TABLE 6 (CONT'D)
PROJECT CONSISTENCY WITH MOBILITY PLAN 2035

Objective, Policy, Program, or Plan [a]	Analysis of Project Consistency
<p><u>Policy 3.8 Bicycle Parking</u></p> <p>Provide bicyclists with convenient, secure, and well-maintained bicycle parking facilities.</p>	<p>Consistent. While this policy applies to the City and not development projects, the Project would not preclude the City from implementing this policy. The Project would provide convenient and secure long-term and short-term bicycle parking to encourage bicycling for employees and visitors to the Project Site. The Mobility Hub(s) would also provide bike-share facilities or similar first-mile/last-mile transportation alternatives and bicycle amenities such as repair stands, showers, and lockers.</p>
<p><i>Chapter 4 – Collaboration, Communication, & Informed Choices</i></p>	
<p><u>Policy 4.1 New Technologies</u></p> <p>Support new technology systems and infrastructure to expand access to transportation choices.</p>	<p>Consistent. While this policy applies to the City and not development projects, the Project would not preclude the City from implementing this policy. The Project's TDM Program, described in more detail in Section 4B of this Transportation Assessment, would support the latest improvements in first-mile/last-mile transportation solutions within the Mobility Hub(s), such as bike-share, bicycle rentals, or similar programs. The Project would support new technology systems and infrastructure by incorporating pedestrian wayfinding signage and real-time transit information via digital bulletin boards so that employees and visitors can be informed of the available transportation choices.</p>
<p><u>Policy 4.2 Dynamic Transportation Information</u></p> <p>Support a comprehensive, integrated transportation database and digital platform that manages existing assets and dynamically updates users with new information.</p>	<p>Consistent. While this policy applies to the City and not development projects, the Project would not preclude the City from implementing this policy. The Mobility Hub(s) would be equipped with digital bulletin boards that display real-time information about public transit schedules and shuttle services.</p>
<p><u>Policy 4.8 Transportation Demand Management Strategies</u></p> <p>Encourage greater utilization of Transportation Demand Management (TDM) strategies to reduce dependence on single-occupancy vehicles.</p>	<p>Consistent. The Project's TDM Program, described in more detail in Section 4B of this Transportation Assessment, includes the following measures to reduce dependence on single-occupancy vehicle trips:</p> <ul style="list-style-type: none"> • Educational Programs/On-Site Coordinator • Transportation Information Center/Kiosks • Carpool/Vanpool Parking and Loading • Bicycle and Pedestrian Amenities • First-Mile/Last-Mile Options • Ride-Share Matching, Carpool/Vanpool, Guaranteed Ride Home Programs • Local Transit Infrastructure Improvements • Shuttle Service • Transportation Mobility Enhancements

TABLE 6 (CONT'D)
PROJECT CONSISTENCY WITH MOBILITY PLAN 2035

Objective, Policy, Program, or Plan [a]	Analysis of Project Consistency
<p><u>Policy 4.13 Parking and Land Use Management</u></p> <p>Balance on-street and off-street parking supply with other transportation and land use objectives.</p>	<p>Consistent. The Project includes subterranean structures, above-grade parking structures, and surface parking lots on-site to meet the needs of employees and visitors at the Project Site. The Project would not rely on any on-street parking. The Specific Plan would establish vehicular parking ratios for each of the studio-related land uses.</p>
<p><u>Policy 4.14 Wayfinding</u></p> <p>Provide widespread, user-friendly information about mobility options and local destinations, delivered through a variety of channels including traditional signage and digital platforms.</p>	<p>Consistent. The Project's TDM Program would include marketing activities, including printed/posted materials and digitally distributed information, to ensure that employees and visitors at the Project Site are aware of all mobility options available on-site and in the surrounding area. The Project would provide pedestrian wayfinding information displayed along the pedestrian paths to direct pedestrians to the Mobility Hub(s), nearby transit stops, bicycle parking and bike-share facilities.</p>
<p><i>Chapter 5 – Clean Environments & Healthy Communities</i></p>	
<p><u>Policy 5.1 Sustainable Transportation</u></p> <p>Encourage the development of a sustainable transportation system that promotes environmental and public health.</p>	<p>Consistent. The Project would encourage sustainable transportation system that promotes environmental and public health by supporting alternative modes of transportation through the services available at the Mobility Hub(s), such as displaying and distributing transit information, providing bike-share rentals, and implementing first-mile/last-mile solutions. The Project would enhance the pedestrian facilities along all Project Site frontages, enhance the public access to the LA River and Tujunga Wash, and provide new landscaping elements and a protected bikeway along Radford Avenue consistent with the <i>2010 Bicycle Plan</i>. The Project would also provide secured on-site bicycle parking facilities and amenities and dedicated pedestrian entries, all of which would promote active transportation modes such as biking and walking. Additionally, the Project is located within a 0.25-mile walking distance to bus stops serviced by local transit lines, thereby providing Project employees and visitors with public transportation alternatives. Together, these Project elements would encourage walking, biking, and other forms of exercise which would promote public health.</p>
<p><u>Policy 5.2 Vehicle Miles Traveled (VMT)</u></p> <p>Support ways to reduce vehicle miles traveled (VMT) per capita.</p>	<p>Consistent. The Project is estimated to generate lower work VMT per employee than the average for the South Valley APC area, as demonstrated in Section 4B of this Transportation Assessment. Furthermore, the Project would implement a comprehensive TDM Program to reduce single occupancy vehicle trips and promote alternative transportation modes.</p>

TABLE 6 (CONT'D)
PROJECT CONSISTENCY WITH MOBILITY PLAN 2035

Objective, Policy, Program, or Plan [a]	Analysis of Project Consistency
<p><u>Policy 5.4 Clean Fuels and Vehicles</u></p> <p>Continue to encourage the adoption of alternative fuels, new mobility technologies, and supporting infrastructure.</p>	<p>Consistent. The Project would provide electric vehicle (EV)-ready charging stations and have additional parking spaces capable of supporting future EV supply equipment to accommodate those who arrive in EVs. By providing this type of service, the Project promotes usage of clean fuels and EVs.</p>

Notes:

[a] Objectives, Policies, Programs, or Plans based on information provided in *Mobility Plan 2035: An Element of the General Plan* (Los Angeles Department of City Planning, January 2016).

TABLE 7
PROJECT CONSISTENCY WITH PLAN FOR A HEALTHY LOS ANGELES

Objective, Policy, Program, or Plan [a]	Analysis of Project Consistency
<i>Chapter 1 – Los Angeles, a Leader in Health and Equity</i>	
<p><u>Policy 1.5 Plan for Health</u></p> <p>Improve Angelenos' health and well-being by incorporating a health perspective into land use, design, policy, and zoning decisions through existing tools, practices, and programs.</p>	<p>Consistent. The Project supports initiatives to create transit-oriented developments by expanding employment opportunities and improving the jobs/housing balance in a dense urban area served by transit. The Project would provide bicycle parking and amenities to encourage bicycling for employees and visitors to the Project Site. The Project also includes open space and landscaping improvements to enhance the public areas along the perimeter of the Project Site and pedestrian and bicyclist access to the Los Angeles River and Tujunga Wash. Furthermore, the proposed Radford Mobility Connector, extending from the northern terminus of Radford Avenue north across the Tujunga Wash to Moorpark Street, would provide pedestrian and bicycle routes across the Tujunga Wash, as well as ramps and/or stairs to provide direct access to the Los Angeles River trail system. Along Radford Avenue, enhanced sidewalks and a landscaped setback are proposed, along with two Class IV bikeways. The Project would also provide multi-modal mobility options via the Mobilitys Hub(s) offering a better connection to existing and future transit options.</p>
<p><u>Policy 1.7 Displacement and Health</u></p> <p>Reduce the harmful health impacts of displacement on individuals, families and communities by pursuing strategies to create opportunities for existing residents to benefit from local revitalization efforts by: creating local employment and economic opportunities for low-income residents and local small businesses; expanding and preserving existing housing opportunities available to low-income residents; preserving cultural and social resources; and creating and implementing tools to evaluate and mitigate the potential displacement caused by large-scale investment and development.</p>	<p>Consistent. The Project would provide employment and entrepreneurial opportunities through its continuation and expansion of existing studio-related uses and public-serving retail space. The Project would not displace any existing housing as no housing currently exists on the Project Site. Furthermore, the Project would not displace any existing residents, tenants, or services from the surrounding areas as the Project would not cause the removal of any off-site uses.</p>
<i>Chapter 2 – A City Built for Health</i>	
<p><u>Policy 2.1 Access to Goods and Services</u></p> <p>Enhance opportunities for improved health and well-being for all Angelenos by increasing the availability of and access to affordable goods and services that promote health and healthy environments, with a priority on low-income neighborhoods.</p>	<p>Consistent. The Project would provide up to 25,000 sf of public-serving retail space on the ground level of the Project Site, easily accessible by foot from the surrounding residential neighborhoods.</p>

TABLE 7 (CONT'D)
PROJECT CONSISTENCY WITH PLAN FOR A HEALTHY LOS ANGELES

Objective, Policy, Program, or Plan [a]	Analysis of Project Consistency
Chapter 5 – An Environment Where Life Thrives	
<p><u>Policy 5.7 Land Use Planning for Public Health and GHG Emission Reduction</u></p> <p>Promote land use policies that reduce per capita greenhouse gas emissions, result in improved air quality and decreased air pollution, especially for children, seniors and others susceptible to respiratory diseases.</p>	<p>Consistent. The Project is estimated to generate lower work VMT per employee than the average for the South Valley APC area, as demonstrated in Section 4B of this Transportation Assessment. Further, the Project would implement a comprehensive TDM Program, also described in Section 4B. VMT directly contributes to GHG emissions, so the Project would also generate less GHG per capita than the area average.</p>

Notes:

- [a] Objectives, Policies, Programs, or Plans based on information provided in *Plan for a Healthy Los Angeles: A Health and Wellness Element of the General Plan* (Los Angeles Department of City Planning, March 2015).

TABLE 8
PROJECT CONSISTENCY WITH
SHERMAN OAKS – STUDIO CITY – TOLUCA LAKE – CAHUENGA PASS COMMUNITY PLAN

Objective, Policy, Program, or Plan [a]	Analysis of Project Consistency
<p><u>Policy 2-1.2</u></p> <p>Protect commercially planned/zoned areas outside transit and pedestrian orientated districts from encroachment by residential only development.</p>	<p>Consistent. As detailed in Policy 2-1.1, the Project is a studio project and not a residential only development.</p>
<p><u>Policy 2-2.1</u></p> <p>Prohibit the development of new automobile-related uses in pedestrian-oriented districts (POD's).</p>	<p>Consistent. The Project Site is not located within the POD's as identified in the Ventura/Cahuenga Boulevard Corridor Specific Plan.</p>
<p><u>Policy 2-3.1</u></p> <p>Existing pedestrian-oriented areas are to be preserved.</p>	<p>Consistent. The Project would improve pedestrian-oriented areas by enhancing the public areas along the Project frontages through the provisions of new landscaping and street trees, lighting, wayfinding signage, and pedestrian/transit amenities, such as benches. The Project would also improve the surrounding pedestrian environment by widening certain sidewalks and upgrading crosswalks to continental crosswalks and traffic signals with exclusive left-turn phasing to improve visibility and safety and reduce potential pedestrian-vehicle conflicts. The Project would also contribute toward pedestrian facility improvements within the Study Area.</p>
<p><u>Policy 2-3.2</u></p> <p>New development needs to add to and enhance the existing pedestrian street activity.</p>	<p>Consistent. The Project would enhance the public areas along all Project Site frontages by providing new landscaping and street trees, lighting, wayfinding signage, and pedestrian/transit amenities such as benches. The Project would improve the surrounding pedestrian street activity and environment by widening certain sidewalks and upgrading crosswalks to continental crosswalks and traffic signals with exclusive left-turn phasing to improve visibility and safety and reduce potential pedestrian-vehicle conflicts. The Project would also contribute toward pedestrian facility improvements within the Study Area,. The Project would enhance the existing pedestrian street activity by enhancing public access to the LA River and Tujunga Wash in coordination with the Project's proposed Radford Mobility Connector. A new paved pedestrian/bicycle path and landscaping improvements along Radford Avenue would also be provided as part of the Project. The improved pedestrian network would be further supported by the multi-modal mobility options to be provided at the proposed Mobility Hub(s).</p>
<p><u>Policy 2-3.4</u></p> <p>Identify pedestrian-oriented areas as preferred locations for mixed use projects.</p>	<p>Consistent. The Project is not located within a pedestrian-oriented area identified in the Ventura/Cahuenga Boulevard Corridor Specific Plan.</p>

TABLE 8 (CONT'D)
PROJECT CONSISTENCY WITH
SHERMAN OAKS – STUDIO CITY – TOLUCA LAKE – CAHUENGA PASS COMMUNITY PLAN

Objective, Policy, Program, or Plan [a]	Analysis of Project Consistency
<p><u>Policy 2-3.6</u></p> <p>Require that the first floor street frontage of structures, including mixed use projects and parking structures located in pedestrian oriented districts, incorporate commercial uses.</p>	<p>Consistent. The Project is not located within a pedestrian-oriented area identified in the Ventura/Cahuenga Boulevard Corridor Specific Plan.</p>
<p><u>Policy 2-4.4</u></p> <p>Landscaped corridors should be created and enchanted [sic] through the planting of street trees along segments with no building setbacks and through median plantings.</p>	<p>Consistent. The Project would provide approximately 109,569 square feet of open space along the Project Site boundaries. As part of the Project, the adjacent sidewalks would be lined with regularly spaced street trees and landscaping elements to provide adequate shade, create a more comfortable environment for pedestrians, and improve the overall existing streetscape. In addition, a 17- to 10-foot-wide setback area would be provided along Radford Avenue, and a 15-foot-wide setback area would be provided along Colfax Avenue. These areas would function as buffers and transitional space around the Project Site perimeter and would incorporate landscaping. In addition, the Project would include an enhanced greenway along the LA River and Tujunga Wash, which would include trees, landscaped areas and pedestrian-oriented improvements.</p>
<p><u>Policy 2-5.1</u></p> <p>Require that future development of properties located along the Los Angeles River be designed with river access features.</p>	<p>Consistent. The Project proposes to enhance public access to the LA River and Tujunga Wash for pedestrians and bicyclists through the proposed Radford Mobility Connector, a bridge connection from the existing northern terminus of Radford Avenue to Moorpark Street. The Project would provide access to and connect pedestrians and bicyclists with the LA River and Tujunga Wash.</p>
<p><u>Policy 10-1.1</u></p> <p>Continue to coordinate with the Metropolitan Transportation Authority (MTA) to improve local bus service to and within the Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass plan area.</p>	<p>Consistent. The Project would coordinate with the appropriate agencies, including Metro, regarding any improvements to local transit services in the area, such as improvements to benches, shelters, lighting, and signage at bus stops in the Project Site vicinity.</p>

TABLE 8 (CONT'D)
PROJECT CONSISTENCY WITH
SHERMAN OAKS – STUDIO CITY – TOLUCA LAKE – CAHUENGA PASS COMMUNITY PLAN

Objective, Policy, Program, or Plan [a]	Analysis of Project Consistency
<p><u>Policy 10-1.2</u></p> <p>Encourage the expansion, wherever feasible, of programs aimed at enhancing the mobility of senior citizens, disabled people, students, and low-income, transit-dependent populations.</p>	<p>Consistent. While this policy applies to the City and not development projects, the Project would not preclude the City from implementing this policy. The Project would enhance the public areas along all Project Site frontages and access to the LA River and Tujunga Wash. A protected bikeway would also be provided along Radford Avenue adjacent to the Project Site. The Project would also contribute toward pedestrian facility improvements within the Study Area. The Project design would comply with all ADA requirements.</p>
<p><u>Policy 10-1.3</u></p> <p>Encourage the provision of safe, attractive and clearly identifiable transit stops with user friendly design amenities.</p>	<p>Consistent. While this policy applies to LADOT and Metro (i.e., transit service providers in the Project area) and not development projects, the Project would incorporate landscaping improvements, lighting, and wayfinding signage. As discussed in Policy 10-1.1, the Project would coordinate with the appropriate agencies, including Metro, regarding any improvements to local transit services in the area, such as improvements to benches, shelters, lighting, and signage at bus stops in the Project Site vicinity. The Project would also include Mobility Hub(s), which would serve to connect the Project Site with surrounding public transit lines and encourage alternative means of transportation and mobility.</p>
<p><u>Policy 10-2.1</u></p> <p>Develop an intermodal mass transportation plan to implement linkages to future mass transit service.</p>	<p>Consistent. The Project would support the initiatives for an intermodal mass transportation plan by providing improvements to the connections to existing and future transit stops and on-site Mobility Hubs to support existing and future multi-modal mobility options. The Project's Mobility Hub(s) would support first-mile/last-mile solutions to encourage Project employees and visitors to use public transit, carpools, vanpools, and bicycles/scooters to get to and from the Project Site and support other TDM strategies. The Mobility Hub(s) would also support future shuttle services to provide a connection to existing and/or future transit stations (e.g. Metro B and G Lines).</p>
<p><u>Policy 11-1.1</u></p> <p>Encourage non-residential developments to provide employee incentives for using alternatives to the automobile (i.e., car pools, vanpools, buses, flex time, bicycles, and walking, etc.).</p>	<p>Consistent. The Project would implement a comprehensive TDM program to promote and provide employees and visitors with opportunities to utilize alternative transportation modes and reduce the number of single occupancy vehicle trips to the Project Site. The Project Mobility Hub(s) would provide opportunities for first-mile/last-mile solutions to encourage Project employees and visitors to use public transit, carpools, vanpools, and bicycles/scooters to get to and from the Project Site, and support TDM strategies to further promote alternative transportation modes. The Project's TDM Program would include an educational program/on-</p>

TABLE 8 (CONT'D)
PROJECT CONSISTENCY WITH
SHERMAN OAKS – STUDIO CITY – TOLUCA LAKE – CAHUENGA PASS COMMUNITY PLAN

Objective, Policy, Program, or Plan [a]	Analysis of Project Consistency
	<p>site coordinator, bicycle parking and amenities, pedestrian amenities, shuttle service, a ride-share matching and carpool/vanpool program, first-mile/last-mile options, and a Guaranteed Ride Home program. In addition, the Project's TDM Program would encourage travel via alternative transportation modes and reduce single-occupancy vehicle trips. The Project would contribute toward signal improvements at nearby intersections and the implementation of bicycle facilities within the Study Area. The on-site coordinator would reach out to employees directly to promote the benefits of the TDM Program and would provide information on public transit and any related incentives, flexible work schedules and telecommuting programs, pedestrian and bicycle amenities provided, rideshare/carpool/vanpool programs, and parking incentives.</p>
<p><u>Policy 11-1.2</u></p> <p>Encourage the use of Multiple-Occupancy Vehicle programs for shopping and other activities to reduce midday traffic.</p>	<p>Consistent. The Project would implement a comprehensive TDM program to promote and provide employees and visitors with opportunities to utilize alternative transportation modes and reduce the number of single occupancy vehicle trips to the Project Site. The TDM program would include, among other things, a ride-share matching and for carpool/vanpool programs. Additionally, the Project would include various on-site amenities and support facilities through the implementation of the Mobility Hub(s) and improved off-site pedestrian and bicycle facilities that would promote midday off-site trips made via alternative transportation modes. Furthermore, the Project Site is located in a dense, urbanized area near local-serving commercial retail, restaurant, and supermarket uses within walking distance that would promote non-automobile trips and pedestrian activity.</p>
<p><u>Policy 11-1.3</u></p> <p>Require that proposals for major non-residential development projects include submission of a TDM Plan to the City.</p>	<p>Consistent. The Project would submit its TDM Program to the City for approval.</p>
<p><u>Policy 11-1.4</u></p> <p>Support the provision of bicycle facilities in all new development.</p>	<p>Consistent. The Project would provide on-site bicycle parking and services, such as repair stands, showers, and lockers, to encourage bicycling for employees and visitors to the Project Site. The Mobility Hub(s) would also provide space for bike-share facilities, bicycle rentals, and other</p>

TABLE 8 (CONT'D)
PROJECT CONSISTENCY WITH
SHERMAN OAKS – STUDIO CITY – TOLUCA LAKE – CAHUENGA PASS COMMUNITY PLAN

Objective, Policy, Program, or Plan [a]	Analysis of Project Consistency
	similar services that may be available in the future. In addition, a class IV protected bikeway would also be provided along Radford Avenue adjacent to the Project Site consistent with the <i>2010 Bicycle Plan</i> .
<p><u>Policy 11-2.2</u></p> <p>Require sidewalks with new roadway construction and substantial reconstruction of existing roadways.</p>	<p>Consistent. Sidewalks would be included as part of the Radford Mobility Connector construction. The Project would not involve substantial reconstruction of existing roadways.</p>
<p><u>Policy 12-1.1</u></p> <p>Install Automated Traffic Surveillance and Control (ATSAC) equipment at an accelerated rate with expanded funding.</p>	<p>Consistent. The majority, if not all, of the signalized intersections within the City are currently equipped with both ATSAC equipment and Adaptive Traffic Control System (ATCS). While this policy applies to the City and not development projects, the Project would contribute toward transportation systems management (TSM) improvements and signal upgrades within the vicinity of the Project Site to improve LADOT's capability to monitor and improve traffic operations on City streets, as further discussed in Section 5B of this Transportation Assessment.</p>
<p><u>Policy 13-1.1</u></p> <p>To the extent feasible and consistent with the Mobility Plan's and the Community Plans' policies promoting multi-modal transportation (e.g., walking, bicycling, driving, and taking public transit) and safety, maintain a satisfactory LOS for streets that should not exceed LOS "D" for Boulevards, Avenues, and Collector Streets. If existing levels of service are LOS "E" or LOS "F" on a portion of an arterial or collector street, then the level of service for future growth should be maintained at LOS "E", where feasible and consistent with the Mobility Plan.</p>	<p>Consistent. Pursuant to SB 743, the CEQA transportation analysis methodology was changed from vehicular delay (LOS) to VMT. Thus, a project's CEQA transportation-related analysis and resulting impacts are assessed via VMT methodology. LOS methodology is no longer applicable for the purposes of identifying a project's CEQA transportation-related impacts. Nevertheless, Section 5B of the Transportation Assessment details the non-CEQA LOS operations at the 32 study intersections that were evaluated.</p> <p>With regard to this policy's intent to promote multi-modal transportation, the Project would provide pedestrian enhancements around the Project Site, including landscaping, sidewalk and crosswalk improvements, and bus stop improvements. Additionally, the Project's Radford Mobility Connector would enhance pedestrian and bicycle access and connections to nearby transit services. Refer to the discussion for Policy 11-1.1 regarding the proposed Mobility Hub(s) and the Project's DM strategies to encourage alternative modes of transportation.</p>

TABLE 8 (CONT'D)
PROJECT CONSISTENCY WITH
SHERMAN OAKS – STUDIO CITY – TOLUCA LAKE – CAHUENGA PASS COMMUNITY PLAN

Objective, Policy, Program, or Plan [a]	Analysis of Project Consistency
<p><u>Policy 13-1.2</u></p> <p>Street dedications shall be developed in accordance with standards and criteria contained in the Mobility Plan, an element of the General Plan and the City's Standard Street Dimensions, except where environmental issues and planning practices warrant alternate standards consistent with capacity requirements.</p>	<p>Consistent. The Project would be consistent with the intent of the Mobility Plan. The Project would maintain roadways widths in accordance with Mobility Plan standards. The Project is requesting a waiver of dedication but would provide a three-foot public sidewalk easement to widen the existing sidewalk along Radford Avenue. The request for waivers would be reviewed by City staff as part of the Project's entitlements.</p>
<p><u>Policy 13-1.3</u></p> <p>Discourage non-residential traffic flow for streets designed to serve residential areas only by the use of traffic control measures.</p>	<p>Consistent. The Project is designed to discourage non-residential traffic flow through residential streets with the installation of traffic control measures as part of the Radford Mobility Connector. A detailed neighborhood traffic analysis is provided in Section 5C. As detailed therein, the Project would contribute to and implement traffic-calming measures as part of a Neighborhood Traffic Management Plan to minimize potential cut-through trips on affected residential streets.</p>
<p><u>Policy 13-1.4</u></p> <p>New development projects should be designed to minimize disturbance to existing flow with proper ingress and egress to parking.</p>	<p>Consistent. The Project driveways would be located along Radford Avenue and Colfax Avenue, which currently provide vehicular access to the Project Site. The proposed driveway at Carpenter Avenue would be located along an alley to minimize disturbance to existing traffic flow along major arterials (i.e., Ventura Boulevard). In addition, the Radford Mobility Connector would improve access and traffic flow to the Project Site. The Project would include sufficient parking to meet the needs of employees and visitors at the Project Site, which would be accessible from all of the signalized driveways. Further, as discussed in detail in Section 5.2, the anticipated queues entering the Project driveways would not extend into the public rights-of-way and would not substantially affect through traffic along adjacent corridors. All security gates would be located to provide adequate queuing areas that would meet City requirements and Project demand, thereby ensuring that vehicles do not queue on the public streets.</p>
<p><u>Policy 13-2.1</u></p> <p>No increase in density and intensity shall be effectuated by zone change, variance, conditional use, parcel map, or subdivision unless it is determined</p>	<p>Consistent. The Project would include up to 2,200,000 sf of studio-related uses. As discussed under Policy 13-1.1, pursuant to SB 743, the CEQA transportation analysis methodology was changed from vehicular delay (LOS) to VMT. Thus, a project's CEQA transportation-related analysis and resulting impacts are assessed via</p>

TABLE 8 (CONT'D)
PROJECT CONSISTENCY WITH
SHERMAN OAKS – STUDIO CITY – TOLUCA LAKE – CAHUENGA PASS COMMUNITY PLAN

Objective, Policy, Program, or Plan [a]	Analysis of Project Consistency
that the transportation system can accommodate the increased traffic generated by the project.	the VMT methodology. This Study analyzed the Project VMT impacts in Section 4.2 and determined that the impacts would be less than significant. LOS methodology is no longer applicable for the purposes of identifying a project's CEQA transportation-related impacts. Nevertheless, Section 5B details the non-CEQA LOS operations at the 32 study intersections that were evaluated. The operational analysis of the transportation system and the traffic generated by the Project is provided in Section 5B. The Project will be fully reviewed by City departments, the City Planning Commission, and City Council prior to a decision being made.
<p><u>Policy 13-2.2</u></p> <p>Driveway access points onto arterial and collector streets should be limited in number and be located to insure the smooth and safe flow of vehicles and bicycles.</p>	<p>Consistent. The roadways surrounding the Project Site are designated Avenues II, and any existing and proposed driveways would be located along these roadways. Nonetheless, any modifications to the driveways would be designed to minimize vehicle conflicts with other vehicles, pedestrians, and bicyclists. Additionally, the Project would provide a restored driveway at Carpenter Avenue along the adjacent public alley and along Radford Avenue south of Moorpark Street via the proposed Radford Mobility Connector, thereby distributing vehicles around more evenly along the street frontages and across the Project Site. The design of all Project vehicular access points would be subject to the review and approval of LADOT and the Bureau of Engineering.</p>
<p><u>Policy 14-1.1</u></p> <p>Assure that local bicycle facilities are identified and linked with facilities of neighboring areas of the City.</p>	<p>Consistent. Bicycle lanes are provided along both sides of Colfax Avenue immediately north of the Project Site's existing vehicular access point. As part of the Project, a protected bikeway consistent with the <i>2010 Bicycle Plan</i> would also be provided along Radford Avenue adjacent to the Project Site through the proposed modification of the street classification from Avenue II to Modified Avenue II.</p>
<p><u>Policy 14-1.2</u></p> <p>Encourage the provision of showers, changing rooms and bicycle storage at new and existing non-residential developments and public places.</p>	<p>Consistent. The Project would provide on-site bicycle parking and services such as repair stands, showers, and lockers, to encourage bicycling for employees and visitors to the Project Site. The Mobility Hub(s) would also provide space for bike-share facilities, bicycle rentals, and other similar services that may be available in the future.</p>
<p><u>Policy 14-2.1</u></p> <p>Identify pedestrian oriented areas.</p>	<p>Consistent. The Project Site is not located within the pedestrian oriented areas as identified in the Ventura/Cahuenga Boulevard Corridor Specific Plan. However, the Project would improve pedestrian oriented</p>

TABLE 8 (CONT'D)
PROJECT CONSISTENCY WITH
SHERMAN OAKS – STUDIO CITY – TOLUCA LAKE – CAHUENGA PASS COMMUNITY PLAN

Objective, Policy, Program, or Plan [a]	Analysis of Project Consistency
	areas by enhancing the public areas along the Project frontages, as discussed in detail in Policy 2-3.1.
<p><u>Policy 15-1.1</u></p> <p>Consolidate parking where appropriate, to minimize the number of ingress and egress points onto arterials.</p>	<p>Consistent. The Project includes subterranean and above-grade parking structures on-site to meet the needs of employees and visitors and consolidate the primary parking garages in the North and South Lots. Furthermore, vehicles would be able to access the entire Project Site through internal roadway connections to minimize local off-site circulation. The Mobility Hub(s) would also provide consolidated locations for passenger loading areas to limit activity in the public ROW.</p>
<p><u>Policy 15-1.3</u></p> <p>New parking lots and new parking garages shall be developed in accordance with design standards.</p>	<p>Consistent. The Project would construct new parking lots and garages in accordance with applicable City design standards.</p>

Notes:

[a] Objectives, Policies, Programs, or Plans based on information provided in the *Wilshire Community Plan* (Los Angeles Department of City Planning, 2001).

TABLE 9
PROJECT CONSISTENCY WITH CITYWIDE DESIGN GUIDELINES

Objective, Policy, Program, or Plan [a]	Analysis of Project Consistency
<i>Pedestrian-First Design</i>	
<p><u>Guideline 1: Promote a safe, comfortable, and accessible pedestrian experience for all</u></p> <p>Design projects to be safe and accessible and contribute to a better public right-of-way for people of all ages, genders, and abilities, especially the most vulnerable - children, seniors, and people with disabilities.</p> <p><u>Guideline 2: Carefully incorporate vehicular access such that it does not degrade the pedestrian experience</u></p> <p>Design to avoid pedestrian and vehicular conflicts and to create an inviting and comfortable public right-of-way. A pleasant and welcoming public realm reinforces walkability and improves the quality of life for users.</p> <p><u>Guideline 3: Design projects to actively engage with streets and public space and maintain human scale</u></p> <p>New projects should be designed to contribute to a vibrant and attractive public realm that promotes a sense of civic pride. Better connections within the built environment contribute to a livable and accessible city and a healthier public realm.</p>	<p>Consistent. The Project would enhance the public areas along all Project Site frontages and improve the pedestrian experience in the vicinity. The Project would provide enhanced sidewalks and a 17-foot wide setback area along the western edge of the North Lot and a 10-foot wide frontage area along the western edge of the South Lot along Radford Avenue, as well as a 15-foot wide setback area along the southeastern edge of the South Lot along Colfax Avenue. The Project would enhance public access to the LA River and Tujunga Wash for pedestrians and bicyclists. The Radford Mobility Connector would extend from the northern terminus of Radford Avenue north across the Tujunga Wash to Moorpark Street; which would provide pedestrian and bicycle routes across the Tujunga Wash, as well as ramps and/or stairs to provide direct access to the Los Angeles River trail system. Additionally, the existing public alley adjacent to the southern portion of the South Lot would be repositioned as a “green alley”, enhancing pedestrian safety and comfort. Class IV protected bikeways would also be provided along Radford Avenue adjacent to the Project Site. The Project’s open space plan to provide access to and connect pedestrians and bicyclists with the Los Angeles River would be consistent with the improvements already envisioned by the City. Additionally, the Project would provide bicycle parking and amenities to encourage bicycling for Project employees and visitors. The Project is located near transit services and the construction of the Mobility Hub(s) would further promote the use of transit and other alternative modes of transportation. Pedestrian and bicycle access to the Project Site would be separated from vehicles to minimize potential vehicle/pedestrian/bicycle conflicts.</p>

Notes:

- [a] Objectives, Policies, Programs, or Plans based on information provided in the *Citywide Design Guidelines* (Los Angeles Department of City Planning, 2019).

Section 4B: Threshold T-2.1

Causing Substantial VMT Analysis

Threshold T-2.1 of the TAG analyzes whether a project causes substantial VMT and is generally applied to land use projects. Specifically, Threshold T-2.1 inquires whether the project would conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)(1). This subdivision states that (for land use projects) “[v]ehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact.” This subdivision also states that a lead agency has discretion to choose the most appropriate method to evaluate the project’s VMT.

As the Lead Agency for the Project, the City uses the analytical methods established by LADOT to determine impacts. Section 2.2.3 of the TAG states that a residential project would result in a significant VMT impact if the resulting household VMT per capita does not meet the minimum threshold of 15% below the existing average household VMT per capita for the Area Planning Commission (APC) area in which the project is located. Similarly, an office project would result in a significant VMT impact if the resulting work VMT per employee does not meet the minimum threshold of 15% below the existing average work VMT per employee for the APC area in which the project is located. The VMT analysis presented below was conducted for the Project in accordance with the TAG, which satisfies State requirements under SB 743.

VMT METHODOLOGY

The following details the methodology by which the vehicle trips and VMT are calculated in *City of Los Angeles VMT Calculator Version 1.4* (LADOT, June 2023) (VMT Calculator), as detailed in *City of Los Angeles VMT Calculator Documentation* (LADOT and LADCP, May 2020) (VMT Calculator Documentation). LADOT developed the VMT Calculator to estimate project-specific daily household VMT per capita and daily work VMT per employee for developments within City limits, which are based on the following types of one-way trips:

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

As detailed in the VMT Calculator Documentation, the household VMT per capita threshold applies to Home-Based Work Production and Home-Based Other Production trips, and the work VMT per employee threshold applies to Home-Based Work Attraction trips, as the location and characteristics of residences and workplaces are often the main drivers of VMT, as detailed in Appendix 1 of *Technical Advisory on Evaluating Transportation Impacts in CEQA* (OPR, December 2018).

Table 2.2-1 of the TAG details the following daily household VMT per capita and daily work VMT per employee impact criteria for the City's APC areas (which are 15% below the APC average):

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

The Project is located in the South Valley APC area.

Other types of one-way trips considered in the VMT Calculator include Non-Home-Based Other Production (trips to a non-residential destination originating from a non-residential use), Home-Based Other Attraction (trips to a non-workplace destination originating from a residential use), and Non-Home-Based Other Attraction (trips to a non-residential destination originating from a non-residential use). These trip types are not factored into the household VMT per capita and work VMT per employee thresholds as those trips are typically localized and are assumed to have

a negligible effect on the VMT impact assessment. However, those trips were factored into the calculation of total Project VMT for screening purposes when determining that VMT analysis for the Project would be required.

Travel Behavior Zone (TBZ)

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

1. Suburban (Zone 1): Very low-density primarily centered around single-family homes and minimally connected street network.
2. Suburban Center (Zone 2): Low-density developments with a mix of residential and commercial uses with larger blocks and lower intersection density.
3. Compact Infill (Zone 3): Higher density neighborhoods that include multi-story buildings and well-connected streets.
4. Urban (Zone 4): High-density neighborhoods characterized by multi-story buildings with a dense road network.

The VMT Calculator determines a project's TBZ based on the latitude and longitude of the project address. The Project is located in the Compact Infill TBZ (Zone 3).

Mixed-Use Development Methodology

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

- The project location's jobs/housing balance, which factors into how many trips are local or internal to a mixed-use project

-
- Land use density where the project is located, which factors into the likelihood of short trips, as well as walking and bicycling
 - Transportation network density, which affects the circuitry of travel (whether driving, walking, or bicycling) and, therefore, affects both trip length and the likelihood of choosing non-automobile modes of travel
 - Proximity to transit, which affects the likelihood that residents or employees will travel via transit rather than automobile
 - Proximity to retail and other destinations, affecting the likelihood that residents or employees will take short trips or non-automobile modes for routine commercial activities
 - Vehicle ownership rates, with higher levels of vehicle ownership leading to a higher rate of automobile trips
 - Household size, which affects both the number of trips made by a given residential unit (increasing or decreasing overall VMT) and the number of people when calculating the daily VMT per capita

Trip Lengths

The VMT Calculator determines a project's VMT based on trip length information from the City's Travel Demand Forecasting (TDF) Model. The TDF Model considers the traffic analysis zone within 0.125 miles of the Project to determine the trip lengths and trip types that factor into the calculation of the Project's VMT.

Population and Employment Assumptions

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

TDM Strategies

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

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

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

PROJECT VMT ANALYSIS

The VMT Calculator was used to evaluate the Project VMT for comparison to the VMT impact criteria. This section describes the land use inputs and TDM inputs used in the VMT Calculator and the results of the analysis. As detailed below, the Project would generate average work VMT that falls below the significance threshold for the South Valley APC area. Therefore, the Project would not result in a significant VMT impact, and no mitigation measures would be required.

Land Use Inputs

The VMT Calculator does not include sound stage and production-related uses as built-in land use options as the built-in land uses are not exhaustive and do not account for all possible uses. Where a use is not specifically identified, it is appropriate to select a new representative land use

type or to use empirical data. Based on a review of relevant empirical and historical data, and in consultation with LADOT, it was determined that the daily trip generation characteristics and patterns of the Project's employee-based sound stage- and production-related land uses were similar in behavior to general office land use characteristics. As such, in order to evaluate the VMT generated by the Project's non-retail employees, the VMT Calculator's custom land use feature was used to represent the 2,175,000 sf of total permitted floor area for sound stages, production support, production office, and general office uses on the Project Site. The 25,000 sf of retail space was separately input into the VMT Calculator.⁴ For the purposes of providing a more conservative analysis, and consistent with the peak hour trip generation estimates detailed in Chapter 3, the entire 25,000 sf of retail space was considered as high-turnover restaurant use in the VMT Calculator.

The VMT Calculator's custom land use feature requires inputs for total daily trip generation, total employees, and trip production and attraction characteristics. As shown in Table 10A, the daily trip generation for the sound stage, production support, production office, and general office land uses was estimated using the same data sources as the peak hour trip generation estimates from Table 5. The trip estimates exclude transit/walk-in adjustments because the VMT Calculator internally calculates those adjustments. As shown in Table 10A, the Project's uses excluding retail are estimated to generate approximately 16,981 daily trips before any transit/walk-in adjustments.

As detailed in Table 10B, there will be approximately 8,820 non-retail employees at the Project Site upon Project completion. Because these employees are expected to have daily travel characteristics similar to general office employees, the trip production and attraction characteristics were matched to the general office land use as detailed in the VMT Calculator Documentation. In this manner, the custom land use would generate VMT equivalent to an office development with approximately 8,820 employees generating approximately 16,981 trips before transit/walk-in adjustments.

⁴ The approximately 2,200,000 sf of floor area upon completion (2,175,000 sf of non-retail and 25,000 sf of retail) includes approximately 532,990 sf of existing uses to remain and approximately 1,667,010 sf of new construction.

TDM Program

The Project would implement a comprehensive TDM Program that would exceed the requirements established in the current TDM Ordinance. The TDM strategies would be implemented for the Project Site as a whole and would be available to both existing and new employees on-site. The TDM Program would be subject to review and approval by the City. This section details each TDM strategy proposed under the TDM Program..

Educational Programs/On-Site Coordinator. A key component of a successful TDM program is to make employees at the Project Site aware of the various programs offered. To this end, a coordinator would reach out to employees directly to promote the benefits of TDM. The coordinator would provide information on public transit and any related incentives, flexible work schedules and telecommuting programs, pedestrian and bicycle amenities provided, ride-share/carpool/vanpool programs, and parking incentives.

Transportation Information Center/Kiosks via Mobility Hub(s). The Project would install a transportation information center at the Mobility Hub(s). The transportation information center would provide employees and visitors with information regarding transit, commute programs, and planning travel without using an automobile..

Bicycle Amenities. In addition to the short-term and long-term bicycle parking spaces provided in accordance with the LAMC, the Project would also provide showers, lockers, and bicycle service areas and repair stands within the Project Site to facilitate bicycle use. The Project would incorporate features for bicyclists, such as exclusive access points and secured bicycle parking facilities. The Project Applicant would also contribute toward the implementation of bicycle improvements within the Study Area under the Mobility Plan.

Pedestrian Amenities. The Project would incorporate features for pedestrians, such as pedestrian-only access points and upgraded pedestrian facilities and bus stops. Additionally, the Project Site would be designed to be a friendly and convenient environment for pedestrians. The Project would provide more pedestrian-friendly sidewalks and areas along Radford Avenue, Colfax Avenue, and Moorpark Street, and maintain internal walkways throughout the Project Site. The Project Applicant would also contribute toward pedestrian facilities improvements as part of Vision Zero.

Ride-Share Matching and Carpool/Vanpool Program. The on-site TDM coordinator would provide ride-share matching services to match interested employees with similar commutes into carpools and vanpools. Carpools/vanpools provide the potential for employees to come to work relaxed and/or work during the commute and reduce the number of single-occupant vehicles and, therefore, reduce automobile trips and VMT.

Neighborhood Enhancements. The Project would enhance the transportation mobility around the perimeter of the Project Site to encourage alternative transportation modes within the development and connections to the development from off-site locations. The Project would also enhance existing crosswalks at the signalized intersections in the Project area to current LADOT standards. As part of the Radford Mobility Connector, the Project would provide public pedestrian and bicycle access from Moorpark Street to Ventura Boulevard via Radford Avenue, while prohibiting through access north and south along Radford Avenue for vehicles. Access to the Los Angeles River and Tujunga Wash would also be enhanced.

First-Mile/Last-Mile Options. In recent years, there has been a proliferation of new options for personal transportation that help to address first-mile/last-mile connectivity issues with public transit. These options include motorized scooters, skateboards, and bicycles as well as human-powered bicycles. Some of these options involve personal ownership (various types of electric skateboards, bicycles, and scooters) and some are publicly available for short-term rentals (electric scooters, Metro Bike Share pedal-powered bicycles). These services are rapidly evolving and gaining widespread acceptance, and it is anticipated that by the time the Project is completed, the landscape for these services, as well as the regulatory issues surrounding some of them, may look substantially different. The Project Applicant is committed to forward-thinking mobility solutions in the design and implementation of the Project and intends to provide support for such services at the Mobility Hub(s). These services give employees a variety of travel mode choices and, therefore, encourage the use of non-automobile modes to and from the Project Site and reduce VMT.

Carpool/Vanpool Parking and Loading via Mobility Hub. The Mobility Hub(s) would provide safe and convenient passenger loading areas for employee carpools/vanpools along with access to the Project Site's internal roadway network to get to the parking structures. Additional passenger loading areas are also proposed within the Project Site at the Mobility Hub(s).

Guaranteed Ride Home Program. A Guaranteed Ride Home program assures transportation service to individuals who commute without their personal automobiles. This program overcomes one of the primary objections of those who could choose alternative modes of transportation, which is how to get home or to a child's school in case of an emergency. In the event of personal or family emergencies, the individual would be reimbursed for a taxi ride, ride-share ride, or short-term car rental. This program would cover all employees participating in the carpool/vanpool program or using transit to and from the Project Site. A support service such as Guaranteed Ride Home is an important part of TDM implementation that assures an individual will not be dependent on a carpool or transit schedule in the event of an emergency.

Project VMT

The Project's land use type assumptions (retail and custom land use assumptions for sound stages, production support, production office, and general office) and their respective sizes were used as the primary input in the VMT Calculator. The VMT analysis was based on the gross total Project, including 2,175,000 sf of total permitted floor area for sound stages, production support, production office, and general office uses, and 25,000 sf of total permitted floor area for retail on the Project Site.⁵ As previously detailed, for conservative purposes, the 25,000 sf of retail space in its entirety was considered as high-turnover restaurant use in the VMT Calculator.

Though the Project would implement an extensive TDM Program described above, the VMT analysis provided in this study conservatively excludes most of those measures for the purpose of determining whether the Project could have a significant impact on VMT. In accordance with guidance from the City, the VMT Calculator analysis incorporates only two TDM measures: (1) bicycle parking per the LAMC and (2) promotions and marketing of site-specific transportation options and the effects of travel choices. Although the Project would voluntarily implement a comprehensive TDM Program, as detailed above, the VMT analysis conservatively considered only those TDM measures required by City ordinance and code.

⁵ The approximately 2,200,000 sf of floor area upon completion includes approximately 532,990 sf of existing uses to remain and approximately 1,667,010 sf of new construction.

The VMT analysis results are summarized in Table 11, and detailed output reports are provided in Appendix D. As shown in Table 11, the Project would generate approximately 55,610 total daily work VMT. The Project would generate an average work VMT per employee of 6.2, which falls below the significance threshold for the South Valley APC area (11.6 work VMT per employee). Therefore, the Project would not result in a significant VMT impact, and no mitigation measures would be required. The additional TDM measures not accounted for in this analysis would further reduce total VMT and VMT per employee. The Project does not have a residential component and, therefore, does not analyze household VMT per capita.

Land Use Exchange Scenarios

As previously discussed, the proposed Specific Plan would allow for limited exchanges between certain permitted studio land uses and associated floor areas and would account for the special needs of the Project Site and allow for adapting to and addressing potential future changes in technology and space requirements inherent to the rapid pace of entertainment technology's advancement. Accordingly, the Specific Plan would allow for the limited increase in sound stages and production support uses for an equivalent decrease in the floor area of other permitted uses, provided that the maximum permitted floor area of 2,200,000 sf is not exceeded. Specifically, sound stage floor area may be increased by up to 125,000 sf (from 450,000 sf to up to 575,000 sf) in exchange for equivalent decreases in the floor area of other uses, and production support floor area may be increased by up to 275,000 sf (from 300,000 sf to up to 575,000 sf) in exchange for equivalent decreases in the floor area of other uses.

The supplemental VMT analysis included in Appendix D was prepared to evaluate potential Project VMT impacts when accounting for these permitted land use exchanges for the following four potential scenarios:

- Maximum Land Use Exchange Scenario 1 – Exchange of 125,000 sf of production support for an additional 125,000 sf of sound stages. This scenario would include 575,000 sf of sound stages and 175,000 sf of production support. The floor area of the remaining land use categories would remain unchanged from the Project.

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- Maximum Land Use Exchange Scenario 2 – Exchange of 275,000 sf of sound stages for an additional 275,000 sf of production support. This scenario would include 175,000 sf of sound stages and 575,000 sf of production support. The floor area of the remaining land use categories would remain unchanged from the Project.
 - Maximum Land Use Exchange Scenario 3 – Exchange of 125,000 sf of production office for an additional 125,000 sf of sound stages. This scenario would include 575,000 sf of sound stages and 600,000 sf of production office. The floor area of the remaining land use categories would remain unchanged from the Project.
 - Maximum Land Use Exchange Scenario 4 – Exchange of 275,000 sf of production office for an additional 275,000 sf of production support. This scenario would include 575,000 sf of production support and 450,000 sf of production office. The floor area of the remaining land use categories would remain unchanged from the Project.

Although the Maximum Land Use Exchange Scenarios would be permitted under the Specific Plan, they do not represent likely development scenarios, as a balance of sound stage, production support, and office uses is necessary for a functioning studio campus. However, these scenarios were analyzed because they would result in VMT greater than or comparable to the Project. As detailed in Appendix D, consistent with the Project, the VMT impact of the four land use exchange scenarios would be less than significant, and no mitigation measures would be required.

YEAR 2045 PROJECT COMPLETION

As noted in Chapter 1, the Project's Development Agreement would allow completion of the Project as late as Year 2045. The VMT analysis presented above is not dependent on when the Project is completed and, therefore, the results and conclusions are equally applicable to a long-range completion date.

CUMULATIVE ANALYSIS

Cumulative effects of development projects are determined based on the consistency with the air quality and GHG reduction goals of *Connect SoCal – A Plan for Navigating to a Brighter Future* (Southern California Association of Governments, Adopted April 2024) (RTP/SCS) in terms of development location, density, and intensity. The RTP/SCS presents a long-term vision for the region's transportation system through Year 2050 and balances the region's future mobility and housing needs with core goals related to economy, environment, mobility, and communities.

As detailed in the TAG, for projects that do not demonstrate a project impact by applying an efficiency-based impact threshold (i.e., household VMT per capita or work VMT per employee) in the project impact analysis, a less than significant impact conclusion is sufficient in demonstrating there is no cumulative VMT impact, as those projects are already shown to align with the long-term VMT and GHG goals of the RTP/SCS.

As described above, the Project would not result in a significant VMT impact. Further, the Project would be designed to further reduce single occupancy trips to the Project Site through various TDM strategies that would be incorporated as part of the Project design, including provisions of LAMC-required bicycle parking and promotions and marketing of alternative transportation modes and choices. Therefore, the Project would result in a less-than-significant cumulative impact under Threshold T-2.1, and no further evaluation or mitigation measures would be required.

Furthermore, the Project Site is well-served by various local bus lines and would contribute to the productivity and use of the regional transportation system by providing housing near transit and encourage active transportation and active street frontages, in line with the RTP/SCS goals. Thus, the Project would encourage a variety of transportation options and would be consistent with the RTP/SCS goal of maximizing mobility and accessibility in the region.

TABLE 10A
CUSTOM LAND USE DEVELOPMENT FOR VMT ANALYSIS - DAILY TRIP ESTIMATES

Land Use	Daily Vehicle Trip Rates [a]	Existing Uses	Daily Vehicle Trips	Proposed Uses	Daily Vehicle Trips
Sound Stages	5.91	359,730 sf	2,126	450,000 sf	2,660
Production Support	4.14	255,510 sf	1,058	300,000 sf	1,242
Production Office	9.34	450,060 sf	4,204	725,000 sf	6,772
General Office [b]	10.84	113,810 sf	1,234	700,000 sf	6,307
Total		1,179,110 sf	8,622	2,175,000 sf	16,981

Notes:

The daily trip generation characteristics and patterns of studio-related uses are similar in scope and behavior to the general office land use. Thus, the VMT Calculator's custom land use feature was used to estimate VMT per employee for the Project. The custom land use inputs include total daily trips and total employees as well as trip purpose assumptions, which were matched to those of the VMT Calculator's general office land use.

[a] Trip generation rates for sound stages, production support, and production office uses are based on empirical data from other studios in Los Angeles and have been used to estimate studio-related trips for several transportation studies, including *NBC Universal Evolution Plan Alternative 10 Transportation Analysis* (Gibson Transportation Consulting, 2012) and *Transportation Study for the Paramount Pictures Master Plan* (Gibson Transportation Consulting, 2015).

[b] Trip generation rate for the Project based on the best-fit curve formula listed in *Trip Generation, 11th Edition* for the General Office Building land use.

Daily - $\ln(T) = 0.87 \ln(X) + 3.05$

T = Average Vehicle Trips

X = Gross Floor Area (ksf)

Trip generation rate for the existing uses based on the average rate from ITE for the General Office Building land use.

TABLE 10B
CUSTOM LAND USE DEVELOPMENT FOR VMT ANALYSIS - EMPLOYEE PROJECTIONS

Land Use	Employee Generation Rate (per 1,000 sf) [a]	Existing Uses		Proposed Uses	
		Floor Area	Employees	Floor Area	Employees
Sound Stages [b]	5.6	359,730 sf	2,015	450,000 sf	2,520
Production Support	2.0	255,510 sf	511	300,000 sf	600
Production Office	4.0	450,060 sf	1,800	725,000 sf	2,900
General Office	4.0	113,810 sf	455	700,000 sf	2,800
Total		1,179,110 sf	4,781	2,175,000 sf	8,820

Notes:

[a] Except for sound stages, employee generation rates from *City of Los Angeles VMT Calculator Documentation, Version 1.3* (Los Angeles Department of Transportation and Los Angeles Department of City Planning, May 2020) for general retail (production support) and general office (production and general office) land uses.

[b] Rounded rate assumes 100 employee for a typical 18,000 sf sound stage as a scalable density, as assumed in *Manhattan Beach Studios* (June 2021).

TABLE 11
VMT ANALYSIS SUMMARY

Project Information [a]	
Address Area Planning Commission Travel Behavior Zone (TBZ) [b] <i>Maximum VMT Reduction [c]</i>	4200 N. Radford Avenue South Valley Compact Infill 40%
VMT Analysis [a]	
<u>Project Land Uses</u>	
Sound Stages	450,000 sf
Production Support	300,000 sf
Production Office	725,000 sf
General Office	700,000 sf
Retail	25,000 sf
Employee Population [d]	8,920
<u>Work VMT</u>	
Total Work VMT [e]	55,610
Work VMT per Employee [f]	6.2
Impact Threshold	11.6
Significant Impact	NO

Notes:

- [a] The gross total Project Analysis is from LADOT *VMT Calculator Version 1.4* (June 2023) output reports provided in Appendix D. A custom land use was developed for the studio and office-related uses based on information in Tables 10A and 10B.
- [b] A "Compact Infill" TBZ is characterized in *City of Los Angeles VMT Calculator Documentation* as higher density neighborhoods that include multi-story buildings and well connected streets.
- [c] The maximum allowable VMT reduction is based on the Project's designated TBZ.
- [d] Total employee population estimates include studio, production, and office employment estimates detailed in Table 10B and retail employment factors detailed in *City of Los Angeles VMT Calculator Documentation* (LADOT and DCP, May 2020).
- [e] The VMT forecasts incorporate VMT reductions associated with the implementation of TDM strategies as part of the Project and includes provision of LAMC-required bicycle-parking and promotions and marketing of alternative transportation options and choices.
- [f] Work VMT per Employee is based on the "home-based work attraction" trip types.

Section 4C: Threshold T-2.2

Substantially Inducing Additional Automobile Travel Analysis

The intent of Threshold T-2.2 is to assess whether a transportation project would induce substantial VMT by increasing vehicular capacity on the roadway network, such as the addition of through traffic lanes on existing or new highways, including general purpose lanes, high-occupancy vehicle lanes, peak period lanes, auxiliary lanes, and lanes through grade-separated interchanges.

As previously detailed, the Project proposes the construction of the Radford Mobility Connector, which would extend Radford Avenue north across the Tujunga Wash to Moorpark Street. The Radford Mobility Connector would only provide vehicle access from Moorpark Street to the Project's North Lot and vehicle access north or south on Radford Avenue would be restricted with traffic control measures. However, the Radford Mobility Connector would provide pedestrian and bicycle access along Radford Avenue to Ventura Boulevard, as well as the Los Angeles River and Tujunga Wash. Therefore, the Project is not a transportation project that would induce automobile travel. Therefore, further evaluation will not be required, and the Project would not result in a significant impact under Threshold T-2.2.

Section 4D: Threshold T-3

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

Threshold T-3 requires that a project undergo further evaluation if it proposes new driveways or new vehicle access points to the property from the public ROW or modifications along the public ROW (i.e., street dedications). Project access plans were reviewed to determine if the Project would substantially increase hazards due to geometric design features, including safety, operational, or capacity impacts, with consideration of the following factors:

1. The relative amount of pedestrian activity at Project access points
2. Design features/physical configurations that affect the visibility of pedestrians and bicyclists to drivers entering and exiting the site and the visibility of cars to pedestrians and bicyclists
3. The type of bicycle facilities the Project driveway(s) crosses and the relative level of utilization
4. The physical conditions of the Project Site and surrounding area, such as curves, slopes, walks, landscaping or other barriers that could result in vehicle/pedestrian, vehicle/bicycle, or vehicle/vehicle impacts
5. The Project location, or Project-related changes to the public ROW, relative to proximity to the HIN or a Safe Routes to School program area
6. Any other conditions, including the approximate location of incompatible uses that would substantially increase a transportation hazard.

PROJECT HAZARDS ANALYSIS

As described in Chapter 1 and shown in Figure 2B, vehicular access to the Project Site is proposed to be provided at five primary access points and additional limited access points around the Project Site.

Driveway Design Features

Each driveway was closely reviewed and compared to the driveway design guidelines from Section 321 of *Manual of Policies and Procedures*. These guidelines include factors such as driveway placement, width, and type. The final design of the driveways would be reviewed by the City Department of Building and Safety, Bureau of Engineering, and LADOT during the regulatory building permit process to ensure code compliance and safe pedestrian and vehicular design. All parking control systems (i.e., security booths, gate arms) would be placed on-site and would provide adequate reservoir area and queue capacity in accordance with LADOT guidelines to avoid potential Project-related vehicle spillover onto adjacent public roadways and the public ROW (i.e., sidewalks, parking lanes). As detailed below, the Project driveways would not substantially increase vehicular conflicts with other vehicles, bicycles, and/or pedestrians along the adjacent streets and would not present any geometric design hazards related to traffic movement.

Radford Gate. The existing unsignalized driveway along Radford Avenue north of Ventura Boulevard (Radford Gate) would be maintained and would continue to provide full ingress and egress access to the Project Site. The existing driveway configuration, which is approximately 65 feet wide and accommodates two inbound and two outbound lanes, would remain unchanged. The Radford Gate would provide direct access to the proposed Mobility Hub within the South Lot.

Sater Parking Structure Gate (Radford Avenue). The existing unsignalized driveway along Radford Avenue south of the Los Angeles River (Sater Parking Structure Gate) would continue to provide full access to the Sater parking structure. The existing driveway configuration, which is approximately 50 feet wide and accommodates two inbound and two outbound lanes, would remain unchanged.

Colfax Gate. The existing unsignalized driveway along Colfax Avenue north of the public alley and Ventura Boulevard would continue to provide full access to the Project Site (Colfax Gate). The existing driveway configuration, which is approximately 40 feet wide and accommodates one inbound and one outbound lane, would remain unchanged.

Carpenter Gate. Access from Ventura Boulevard would be provided via a former full access unsignalized driveway along the adjacent public alley (Carpenter Gate) that would be restored as

part of the Project. The driveway would align with the existing Carpenter Avenue that currently terminates at the public alley and would create a stop-controlled intersection. The driveway would provide at least one inbound and one outbound lane.

Radford Mobility Connector / Moorpark Gate. Access from Moorpark Street would be provided via the existing driveway (Moorpark Gate) that would be accessed from the proposed Radford Mobility Connector, which would extend Radford Avenue north across the Tujunga Wash. Thus, access via the Moorpark Gate would only be provided with completion of the Radford Mobility Connector, and primary vehicular access to the North Lot would be limited to the Moorpark Gate. It should be noted that no through access for vehicles would be provided north or south along Radford Avenue via the Radford Mobility Connector, and traffic control measures, such as removable bollards and/or intersection treatments, would be installed to prevent cut-through vehicle traffic from Moorpark Street to Ventura Boulevard while maintaining pedestrian/bicycle and emergency vehicle access. The Moorpark Gate driveway would provide at least one inbound and one outbound lane.

Limited Access Driveways. Additional vehicular access to the Project Site would be provided at two existing limited production-only access driveways along Radford Avenue north of the Los Angeles River. The driveways would maintain the existing turn restrictions and would accommodate right-turn ingress and left-turn egress only. Additional loading/service access areas would also be proposed along the southern portion of the Project Site, which would be accessed via the adjacent public alley.

Pedestrian and Bicycle Infrastructure

The Project is designed to encourage and accommodate increased pedestrian and bicycle activity to and from the Project Site. Currently, sidewalks are provided adjacent to the Project Site along Radford Avenue and Colfax Avenue. No dedicated pedestrian sidewalk facilities are provided along the adjacent public alley. Striped bicycle lanes are currently provided along Colfax Avenue adjacent to the Project Site.

In addition, the Los Angeles River bisects the Project Site, and the Tujunga Wash is located along the northern and eastern boundary of the Project Site. In coordination with Metro and other

agencies, the City's Bureau of Engineering has proposed bikeway and greenway improvements along the Los Angeles River within the San Fernando Valley that connect critical gaps in the Valley River bikeway and also include other improvements as part of *Los Angeles River Revitalization Master Plan*. Within and in the immediate vicinity of the Project Site, these anticipated improvements include bikeway improvements along Radford Avenue and the Tujunga Wash, a pedestrian/bicycle bridge over the Tujunga Wash, plantings, undergrounding of utilities, sidewalk paving and improvements to the existing Art Walk along Radford Avenue, fencing, solar lighting, signage, bio-swales and plantings along the Tujunga Wash, and a new pedestrian signal at Moorpark Street. The Project's Radford Mobility Connector would be designed to be compatible with these future improvements to the Los Angeles River and Tujunga Wash. In addition, the Project would provide Class IV protected bicycle lanes along Radford Avenue from the Los Angeles River south to Hoffman Street and from the Los Angeles River north to the Radford Mobility Connector. The Project would enhance public pedestrian and bicycle access and connections to the Los Angeles River and its tributaries, consistent with improvements envisioned by the City.

As described in Chapter 2, adjacent to the Project Site, Colfax Avenue has been identified as part of the NEN and BLN and Radford Avenue has been identified as part of the PED. The Project would provide pedestrian enhancements around the Project Site, including landscaping, sidewalk and crosswalk improvements, and bus stop improvements. With the Project, the sidewalk on Radford Avenue north of the Los Angeles River would be widened to 15 feet. The sidewalk on Radford Avenue south of the Los Angeles River and along Colfax Avenue would remain unchanged. New landscaping would be provided between the back of the sidewalk and any security fence along each street frontage. The Project would also request the modification to the roadway classification for Radford Avenue from Avenue II to Modified Avenue II to facilitate the construction of a protected bikeway. In addition, the Project would contribute toward the implementation of bicycle improvements within the Study Area under the Mobility Plan. Additionally, the Project would contribute toward pedestrian facilities improvements as part of Vision Zero. The Project access and improvements would not preclude or interfere with the implementation of any other future roadway improvements benefiting pedestrians or bicycles.

Peak period traffic counts collected at the adjacent study intersections and driveway locations were reviewed for pedestrian and bicycle activity along the Project frontages. Most pedestrians

and bicyclists observed adjacent to the Project Site traverse the Ventura Boulevard corridor to access commercial retail and restaurant uses to the south and southwest.

The Project would encourage use of alternative transportation modes through its implementation of various TDM strategies and Project design elements and, thus, would increase pedestrian and bicycle activity. However, the Project access points would follow City standard design requirements and are not anticipated to pose a safety hazard to pedestrians or bicyclists. All Project access points would also be designed to provide adequate sight distance and pedestrian refuge areas to limit any potential vehicular-pedestrian and vehicular-bicycle conflicts.

Physical Terrain

The Project Site generally slopes gently down from south to north. The majority of the North Lot slopes from its northwest corner to its southeast corner with approximately 15 feet of elevation change. The majority of the South Lot generally slopes from its southwest corner to its northwest corner with approximately 27 feet of elevation change and from its southwest corner to its southeast corner with approximately 17 feet of elevation change. However, the minimal elevation change on Radford Avenue, the adjacent public alley, and Colfax Avenue would not affect driver sight distance. Further, the adjacent roadways generally run perpendicular to the existing and proposed Project driveways. Therefore, driveways would be designed to ensure drivers can safely identify approaching vehicles, pedestrians, and bicyclists before committing to ingress and egress maneuvers. The Project's sidewalk and crosswalk improvements would help facilitate pedestrian and bicycle accessibility and improve visibility near vehicular access points, and the Project's landscape improvements in the public ROW would be designed to not interfere with visibility.

Project Location

The Project Site is located less than 1,000 feet north of Carpenter Community Charter School and within 0.50 miles of Campbell Hall, Walter Reed Middle School, and Bridges Academy. As further detailed in Section 5B, as part of the development of the restored Carpenter Gate, the Project would provide intersection upgrades at the intersection of Carpenter Avenue & Ventura

Boulevard, which would include exclusive eastbound and westbound left-turn phasing and the improvement of existing continental crosswalk striping to provide safer pedestrian crossings.

The Project would maintain the designated driveway width requirements, consistent with the intent of the Mobility Plan standards, and would not preclude future roadway improvements proposed in the Mobility Plan.

Incompatible Uses

As discussed above, the Project involves the continuation of the existing studio use. The Project's design complements the surrounding areas and provides a more attractive, well-defined, and accessible interaction between the Project employees and visitors to the adjacent commercial, entertainment, cultural, residential, and retail land uses. None of the Project design elements or land uses are incompatible with the surrounding uses. There are no unusual or new obstacles that would be considered hazardous to motorized vehicles, non-motorized vehicles, or pedestrians.

Therefore, based on the analysis above, the Project would not result in a significant impact with regard to Threshold T-3.

YEAR 2045 PROJECT COMPLETION

As noted in Chapter 1, the Project's Development Agreement would allow completion of the Project as late as Year 2045. The analysis presented above is not dependent on when the Project is completed and, therefore, the results and conclusions are equally applicable to a long-range completion date.

CUMULATIVE ANALYSIS

In addition to potential Project-specific impacts, the TAG requires that the Project be reviewed in combination with Related Projects with access points along the same block as the Project to

determine if there may be a cumulatively significant impact. There are currently no identified Related Projects proposed with access points along the same block of the Project. Therefore, the Project would not result in cumulative impacts that would substantially increase hazards due to geometric design features, including safety, operational, or capacity impacts under Threshold T-3.

FREEWAY SAFETY ANALYSIS

Section 2.4.4 of the TAG outlines the methodology of assessing potential vehicle to vehicle impacts that may result in unsafe vehicle queues from freeway off-ramp facilities due to speed differentials between the mainline freeway lanes and the queued vehicles at the off-ramp.

Analysis Methodology

Further freeway safety analysis is required of any freeway off-ramp where a development project adds 25 or more peak hour trips. A project would result in a significant impact at such a ramp if each of the following three criteria were met:

1. Under a scenario analyzing future conditions upon project buildout, with project traffic included, the off-ramp queue would extend to the mainline freeway lanes⁶.
2. A project would contribute at least two vehicle lengths (50 feet, assuming 25 feet per vehicle) to the queue.
3. The average speed of mainline freeway traffic adjacent to the off-ramp during the analyzed peak hour(s) is greater than 30 mph.

Should a significant impact be identified, mitigation measures to be considered include TDM measures to reduce a project's trip generation, investments in active transportation or transit system infrastructure to reduce a project's trip generation, changes to the traffic signal timing or lane assignments at the ramp intersection, or physical changes to the off-ramp. Any physical

⁶ If an auxiliary lane is provided on the freeway, then half the length of the auxiliary lane is added to the ramp storage length.

change to the ramp would have to improve safety, not induce greater VMT, and not result in secondary environmental impacts.

Project Safety Analysis

As detailed in the Approved MOU, which is provided in Appendix A, the Project would add 25 or more peak hour trips to the following off-ramps during the morning and afternoon peak hours:

- US 101 Northbound Off-Ramp to Laurel Canyon Boulevard (morning peak hour)
- US 101 Southbound Off-Ramp to Laurel Canyon Boulevard (morning and afternoon peak hours)
- SR 170 Southbound Off-Ramp to Riverside Drive (morning peak hour)
- SR 134 Westbound Off-Ramp to Lankershim Boulevard (morning peak hour)

In accordance with the applicable methodology, the 95th percentile ramp queue was calculated using the *Highway Capacity Manual, 6th Edition* (Transportation Research Board, 2016) (HCM) methodology, which was implemented using Synchro software and signal timing worksheets from the City for the signalized location. The 95th percentile ramp queue measures the probability that a queue length will reach a certain length and is the maximum vehicular queue that would not be exceeded 95% of the time. Synchro queue results that are reported in vehicle-length were converted to linear feet by multiplying each vehicle by 25 feet to account for the average length of a vehicle plus distance between vehicles in the queue.

Conditions were analyzed for the anticipated Project buildout year of 2028 and the long-term buildout year of 2045, both of which are based on traffic counts provided in Appendix B and include growth and traffic from Related Projects, both with and without Project trips. The summary of queue lengths and off-ramp storage length, along with the analysis worksheets, are provided in Appendix E.

The assessment of the off-ramp facilities included a review of the resulting queue length as compared to the total available queuing capacity of the ramp to determine whether the queue would extend beyond the length of the ramp onto the freeway mainline. As detailed in Section 2.4.4 of the TAG, the ramp capacity includes the length of each approach lane to the intersection

and the remaining length of the ramp to the gore point where the ramp diverges from the freeway mainline. Tables 12 and 13 detail the ramp storage capacity for each of the off-ramps.

Tables 12 and 13 also summarize the queue results under Future Conditions in Year 2028 and 2045, respectively. As shown in Tables 12 and 13, under Future with Project Conditions (Year 2028) and Future with Project Conditions (Year 2045), none of the four analyzed off-ramps would have queues that both exceed the ramp storage length and include Project-related vehicles that would add 50 feet or more to any queue during any of the analyzed peak hours compared to Future without Project Conditions (Year 2028 and Year 2045). Therefore, the Project would not be subject to a speed differential analyses, nor cause an adverse safety condition, and no corrective measures are required. Nonetheless, as previously detailed, the Project would implement comprehensive TDM strategies to reduce single-occupancy vehicle trips and encourage the use of alternative transportation modes to and from the Project Site.

TABLE 12
FREEWAY OFF-RAMP QUEUING SAFETY ANALYSIS (YEAR 2028)

Off-ramp	Ramp Storage Length Capacity (ft) [a]	Peak Hour	95th Percentile Queue (ft)		Exceeds Ramp Storage [b]	Project Adds 50 Feet [c]	Requires Speed Analysis [d]
			Future without Project Conditions (Year 2028)	Future with Project Conditions (Year 2028)			
US 101 Northbound Off-ramp to Laurel Canyon Boulevard	935	A.M.	253	288	NO	NO	NO
US 101 Southbound Off-ramp to Laurel Canyon Boulevard	1,265	A.M.	218	270	NO	YES	NO
		P.M.	310	333	NO	NO	NO
SR 170 Southbound Off-ramp to Riverside Drive	815	A.M.	270	355	NO	YES	NO
SR 134 Westbound Off-ramp to Lankershim Boulevard	830	A.M.	298	290	NO	NO	NO

Notes:

Ramp storage length and 95th percentile queue reported in feet.

[a] Storage length capacity is the distance from the freeway mainline gore point to the terminus of the off-ramp, expressed in feet.

[b] Based on Future with Project Conditions (Year 2028) queue.

[c] The difference in queue length between Future with Project and without Project Conditions.

[d] Speed differential analysis is required if the ramp storage length is exceeded and the Project adds 50 or more feet to the queue length.

**TABLE 13
FREEWAY OFF-RAMP QUEUING SAFETY ANALYSIS (YEAR 2045)**

Off-ramp	Ramp Storage Length Capacity (ft) [a]	Peak Hour	95th Percentile Queue (ft)		Exceeds Ramp Storage [b]	Project Adds 50 Feet [c]	Requires Speed Analysis [d]
			Future without Project Conditions (Year 2045)	Future with Project Conditions (Year 2045)			
US 101 Northbound Off-ramp to Laurel Canyon Boulevard	935	A.M.	278	310	NO	NO	NO
US 101 Southbound Off-ramp to Laurel Canyon Boulevard	1,265	A.M.	235	290	NO	YES	NO
		P.M.	343	363	NO	NO	NO
SR 170 Southbound Off-ramp to Riverside Drive	815	A.M.	328	510	NO	YES	NO
SR 134 Westbound Off-ramp to Lankershim Boulevard	830	A.M.	303	320	NO	NO	NO

Notes:

Ramp storage length and 95th percentile queue reported in feet.

[a] Storage length capacity is the distance from the freeway mainline gore point to the terminus of the off-ramp, expressed in feet.

[b] Based on Future with Project Conditions (Year 2045) queue.

[c] The difference in queue length between Future with Project and without Project Conditions.

[d] Speed differential analysis is required if the ramp storage length is exceeded and the Project adds 50 or more feet to the queue length.

Chapter 5

Non-CEQA Transportation Analysis

This chapter details the non-CEQA transportation analysis of the Project. It includes an evaluation of Project vehicle trips, access and circulation, safety, and pedestrian, bicycle, and transit facilities in the vicinity of the Project. This chapter also summarizes the evaluation of the Project's operational conditions, and potential effects due to Project construction.

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

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

The four non-CEQA transportation analyses are reviewed in detail in Sections 5A-5D.

Section 5A

Pedestrian, Bicycle, and Transit Access Assessment

The Project's potential effect on surrounding pedestrian, bicycle, and transit facilities was assessed. According to the TAG, factors to consider when assessing a project's potential effect on pedestrian, bicycle, and transit facilities, include the following:

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

EXISTING INFRASTRUCTURE

Pedestrian and Bicycles

Sidewalks are provided along Radford Avenue and Colfax Avenue adjacent to the Project Site. As detailed in Figure 8, pedestrian facilities are provided at nearby signalized study intersections, including tactile warning strips for ADA accessibility, pedestrian push buttons, and crosswalks. In the vicinity of the Project Site, continental crosswalks are provided on all legs of Ventura Place/Radford Ave & Ventura Boulevard (Intersection #21), Carpenter Avenue & Ventura Boulevard (Intersection #22), and Colfax Avenue & Ventura Boulevard (Intersection # 23).

Figure 10 shows a map of a local-serving commercial retail and restaurant uses in close proximity to the Project Site that could be considered pedestrian destinations. Figure 11 shows the existing transportation facilities that would support pedestrian activity to and from these pedestrian destinations. Adjacent to the Project Site, Radford Avenue is designated as part of the PED in the Mobility Plan.

Adjacent to the Project Site, Class II striped bicycle lanes are also provided on Colfax Avenue. Additionally, Colfax Avenue is designated as part of the BLN in the Mobility Plan.

Transit

As illustrated in Figure 12 and summarized in Table 3, there are bus stops located in the vicinity of the Project Site along Laurel Canyon Boulevard, Ventura Place, and Ventura Boulevard. The bus stops serving DASH Van Nuys / Studio City (VNSC) and Metro Local Lines 230 and 240 along southbound and northbound Laurel Canyon Boulevard generally provide benches, with several bus stops providing covered shelters. The bus stops serving Metro Local Lines 218 and 230 along eastbound Ventura Place provide benches, with one bus stop providing covered shelters. The bus stops serving DASH VNSC and Metro Local Lines 218, 230, and 240 along eastbound and westbound Ventura Boulevard generally provide benches, with several bus stops providing covered shelters.

PROJECT EFFECTS ON INFRASTRUCTURE

The TAG provides a series of evaluation criteria to assess the Project's effects on infrastructure. In summary, the Project would generally improve the surrounding infrastructure for pedestrians, bicyclists, and transit users. The Project would improve the existing sidewalks along the Project Site boundary. In addition, the Project would enhance the public areas along Radford Avenue by providing a 17-foot-wide setback area along the western edge of the North Lot and a 10-foot-wide setback area along the western edge of the South Lot. As such, the Project would not remove or degrade any existing pedestrian facilities or sidewalk street buffering elements.

As described previously, the Project would enhance the public realm along Project Site setbacks and enhance access to the Los Angeles River and Tujunga Wash. The Project proposes the construction of the Radford Mobility Connector, a multi-modal bridge that would connect the northern terminus of Radford Avenue to Moorpark Street (through access for vehicles north or south along Radford Avenue would be prohibited; through access for bicycles and pedestrians would be permitted). As part of this improvement, the Project proposes a new paved pedestrian/bicycle connection, landscaping improvements, and a protected bikeway along Radford Avenue (north of the Los Angeles River to Moorpark Street), which would include ramps and/or stairs to provide direct access to the Los Angeles River trail system. Construction of the Radford Mobility Connector would also include signalization of the intersection of Radford Avenue & Moorpark Street. As such, the Project would reduce the current distances between pedestrian

crossings by providing a new signalized marked crosswalk across Moorpark Street at Radford Avenue. Along Radford Avenue, enhanced sidewalks with landscaping elements are proposed, along with Class IV bikeways from Hoffman Street to the Radford Mobility Connector. The Project's open space and landscaping plan would align with the improvements already envisioned by the City, and the improvements would not affect or degrade any existing pedestrian or bicycle facilities near the Project Site. Furthermore, bicycle parking in accordance with the LAMC, as well as showers, lockers, and bicycle service areas would also be provided on site. The Project would provide areas for multimodal services, such as bike-shares, at the Mobility Hub(s) to encourage alternative transportation modes by offering connections between origins or destinations. Additionally, as further detailed in Chapter 6, the Project would contribute toward pedestrian and bicycle facility improvements in the vicinity of the Project Site.

The Project would coordinate with the appropriate agencies regarding any improvements to local transit accessibility and safety in the area, which may include but would not be limited to benches, shelters, lighting, and signage at bus stops around the Project Site. The Project's Mobility Hub(s) would also provide future shuttle services that would connect to existing and/or future transit stations (e.g., Metro B Line, Metro G Line).

The Project would not directly affect access to any of the nearby schools. However, it is recognized that the Project would add vehicular trips to nearby corridors, which may include routes to and from nearby schools (e.g., Carpenter Avenue), as detailed in Chapter 3. As part of the restoration of the Carpenter Gate, the Project would provide upgrades to the intersection of Carpenter Avenue & Ventura Boulevard, including exclusive left-turn phasing and crosswalk striping improvements to provide better pedestrian visibility and safer pedestrian crossings.

All Project access points would be designed in accordance with City standards to minimize any potential conflicts with pedestrians and bicyclists by providing adequate sight distance and visibility. All improvements to the public ROW would be processed through the City B-permit process and would be reviewed by the responsible agencies to confirm that the Project improvements would not preclude or interfere with the implementation of any future roadway improvements benefiting transit, pedestrians, or bicycles.

PROJECT EFFECTS ON VOLUME

The Project is located in a dense, urbanized area near local-serving commercial retail and restaurant uses along major corridors that could be considered pedestrian destinations. The Project would provide dedicated pedestrian access points, on-site bicycle infrastructure, and first-mile/last-mile services at the Mobility Hub(s) to encourage non-automobile trips. The Project would generate new employees to the Project Site, and thus, increased commute trips would occur during the morning and afternoon peak periods, including those made by foot, bicycle, transit, or a combination of those non-automobile modes. As such, the Project would result in additional pedestrian, bicycle, and transit activity at and around the Project Site.

Pedestrian activity generated by the Project is anticipated to be concentrated primarily along Ventura Boulevard and Ventura Place, which connect to existing transit stops and commercial retail and restaurant destinations located within close proximity of the Project Site. Bicycle activity would similarly be most concentrated in those areas. The Project would contribute toward the implementation of pedestrian and bicycle facility improvements within the Study Area that would support the existing and projected pedestrian and bicycle activity. Within the Project Site, the Project would enhance pedestrian and bicycle pathways and connections between the North and South Lots, as well as provide direct and exclusive pedestrian and bicycle access points to the pedestrian and bicycle facilities along Radford Avenue, Colfax Avenue, and Ventura Boulevard. While the Project would increase pedestrian and bicycle traffic to and from the Project Site, pedestrian and bicycle crossings would be supported by improved and proposed continental crosswalks, curb ramps, and pedestrian phasing at signalized intersections.

The Project will cumulatively add to transit ridership. The Project Site and the Study Area are well-served by transit, as detailed in Table 3. Furthermore, Los Angeles County voters approved Measure M, a ballot measure to fund transportation projects and programs with a half-cent sales tax and the indefinite extension of the existing half-cent sales tax (i.e., Measure R) set to expire in 2039. This allowed Metro to continue to develop projects to improve the existing transportation system. *2020 Long Range Transportation Plan* (Metro, 2020) outlines a range of transit and highway projects throughout Los Angeles County that were aimed to improve mobility and address future growth. It is recognized that with these plans in place, Metro will continue to maintain and expand regional transit service in order to accommodate cumulative demand in the region.

CONCLUSION

The Project would result in an increase in pedestrian, bicycle, and transit activity. Given the Project Site's location near local bus stops and its proximity to active commercial centers, it is ideally located to encourage non-automobile trips to and from those destinations and reach additional public transit routes. The Project would also expand employment opportunities in close proximity to housing and transit options to further reduce the reliance on single occupancy vehicle travel. Additionally, the Project would improve the adjacent pedestrian facilities and promote a more comfortable and safer environment for all users through a new bridge connection, a protected bikeway along Radford Avenue and new landscaping along the Project frontages. The Project's on-site Mobility Hub(s) would also provide first-mile/last-mile connections for employees and visitors through bike-share facilities, shuttle connections, etc. The amount of additional pedestrian, bicycle, and transit activity generated by the Project would not strain the capacity of facilities and operations dedicated to those modes.

Section 5B

Project Access, Safety, and Circulation Assessment

This section summarizes the site access, safety, and circulation of the Project Site. It includes a quantitative evaluation of the Project's access and circulation operations, including the anticipated LOS at the study intersections and potential traffic queues. Negative effects of a project may consist of operational delays on surrounding streets, conflicts between vehicles and other vehicles, bicycles, or pedestrians, or geometric configurations that result in unsafe conditions. Such effects are not considered significant under CEQA but could require Project modifications or off-site improvements to ensure safe and efficient circulation around the Project Site.

OPERATIONAL EVALUATION

Intersection operation conditions were evaluated for typical weekday morning (7:00 AM to 10:00 AM) and afternoon (3:00 PM to 6:00 PM) peak periods. A total of 32 study intersections, including 25 signalized intersections and seven unsignalized intersections⁷, in the vicinity of the Project Site within the City were selected for detailed transportation analysis in consultation with LADOT.

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

- Existing with Project Conditions – This analysis condition analyzes the potential intersection operating conditions that could be expected if the Project without the Radford Mobility Connector were built under existing conditions. In this analysis, the Project-generated trips without the Radford Mobility Connector are added to the Existing Conditions traffic volumes.
- Future with Project Conditions (Year 2028) – This analysis condition analyzes the potential intersection operating conditions that could be expected if the Project, without and with the Radford Mobility Connector, is fully occupied in the projected buildout Year 2028. In

⁷ The Project proposes the extension of Radford Avenue via the proposed Radford Mobility Connector, which would extend Radford Avenue north across the Tujunga Wash to Moorpark Street (through access for vehicles north or south along Radford Avenue would be prohibited). As part of this improvement, the Project proposes the signalization of the intersection of Radford Avenue & Moorpark Street.

this analysis, the Project-generated trips are added to the respective Future without Project Conditions (Year 2028) traffic volumes.

- Future with Project Conditions (Year 2045) – This analysis condition analyzes the potential intersection operating conditions that could be expected if the Project, without and with the Radford Mobility Connector, is fully occupied by the long-term buildout scenario in Year 2045. In this analysis, the Project-generated trips are added to the respective Future without Project Conditions (Year 2045) traffic volumes.

Methodology

In accordance with the TAG, the intersection delay and queue analyses for the operational evaluation were conducted using the *Highway Capacity Manual, 6th Edition* (Transportation Research Board, 2016) (HCM) methodology, which was implemented using Synchro software and signal timing worksheets from the City to analyze intersection operating conditions. The HCM signalized methodology calculates the average delay, in seconds, for each vehicle passing through the intersections, while the HCM unsignalized two-way stop-control methodology calculates the control delay, in seconds, for individual approaches of an intersection and does not account for traffic gaps created by adjacent traffic signals.

Table 14 presents a description of the LOS categories, which range from excellent, nearly free-flow traffic at LOS A, to stop-and-go conditions at LOS F, for signalized and unsignalized intersections. The queue lengths were estimated using Synchro, which reports the 95th percentile queue length for signalized and unsignalized intersections in vehicles per lane, which can be converted into distance by multiplying the vehicle queue by 25 feet per vehicle. The reported queues are calculated using the HCM signalized and unsignalized intersection methodology.

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

Existing with Project Conditions

Traffic Volumes. The Project-only morning and afternoon peak hour trips without completion of the Radford Mobility Connector described in Chapter 3 and shown in Figure 23 were added to the Existing Conditions morning and afternoon peak hour traffic volumes shown in Figure 13. The

resulting volumes are illustrated in Figure 27 and represent Existing with Project Conditions, assuming Project operation under Existing Conditions.

Intersection LOS. Table 15 summarizes the LOS results during the weekday morning and afternoon peak hours for the 32 study intersections under Existing Conditions and Existing with Project Conditions. As summarized therein, 23 of the 32 study intersections are anticipated to operate at LOS D or better during both the morning and afternoon peak hours under Existing Conditions. The remaining nine study intersections would operate at LOS E or F during at least one of the analyzed peak hours. Under Existing with Project Conditions, 21 of the 32 study intersections are anticipated to operate at LOS D or better during both the morning and afternoon peak hours. The remaining 11 study intersections would operate at LOS E or F during at least one of the analyzed peak hours.

Future with Project Conditions (Year 2028)

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

Traffic Volumes. The Project-only morning and afternoon peak hour traffic volumes without and with completion of the Radford Mobility Connector described in Chapter 3 and shown in Figures 23 and 25, respectively, were added to the Future without Project Conditions (Year 2028) morning and afternoon peak hour traffic volumes shown in Figure 17. The resulting volumes are illustrated in Figures 28 and 29 and represent Future with Project Conditions (Year 2028) without and with the Radford Mobility Connector, respectively.

Intersection LOS. Table 16 summarizes the intersection LOS results during the weekday morning and afternoon peak hours for the 32 study intersections under the Future without and with Project Conditions (Year 2028), without and with the Radford Mobility Connector.

As summarized in Table 16, 21 of the 32 study intersections are anticipated to continue to operate at LOS D or better during both the morning and afternoon peak hours under Future without Project

Conditions (Year 2028). The remaining 11 study intersections are anticipated to operate at LOS E or F during at least one of the analyzed peak hours.

Under Future with Project Conditions without the Radford Mobility Connector (Year 2028), 17 of the 32 study intersections are anticipated to continue to operate at LOS D or better during both the morning and afternoon peak hours. The remaining 15 study intersections are anticipated to operate at LOS E or F during at least one of the analyzed peak hours.

Under Future with Project Conditions with the Radford Mobility Connector (Year 2028), 17 of the 32 study intersections are anticipated to continue to operate at LOS D or better during both the morning and afternoon peak hours. The remaining 15 study intersections are anticipated to operate at LOS E or F during at least one of the analyzed peak hours.

Future with Project Conditions (Year 2045)

Consistent with the Future with Project Conditions (Year 2028) analyses, all future adjustments, including cumulative traffic growth (i.e., ambient growth and Related Project traffic) and programmed transportation improvements described in Chapter 2 are incorporated into the Future with Project Conditions (Year 2045) analysis.

Traffic Volumes. The Project-only morning and afternoon peak hour trips without and with the Radford Mobility Connector described in Chapter 3 and shown in Figures 23 and 25 were added to the Future without Project Conditions (Year 2045) morning and afternoon peak hour traffic volumes shown in Figure 18. The resulting volumes are illustrated in Figures 30 and 31 and represent Future with Project Conditions (Year 2045), without and with the Radford Mobility Connector, respectively.

Intersection LOS. Table 17 summarizes the intersection LOS results during the weekday morning and afternoon peak hours for the 32 study intersections under the Future without and with Project Conditions (Year 2045), without and with the Radford Mobility Connector.

As summarized in Table 17, 18 of the 32 study intersections are anticipated to continue to operate at LOS D or better during both the morning and afternoon peak hours under Future without Project

Conditions (Year 2045). The remaining 14 study intersections are anticipated to operate at LOS E or F during at least one of the analyzed peak hours.

Under Future with Project Conditions without the Radford Mobility Connector (Year 2045), 14 of the 32 study intersections are anticipated to continue to operate at LOS D or better during both the morning and afternoon peak hours. The remaining 18 study intersections are anticipated to operate at LOS E or F during at least one of the analyzed peak hours.

Under Future with Project Conditions with the Radford Mobility Connector (Year 2045), 14 of the 32 study intersections are anticipated to continue to operate at LOS D or better during both the morning and afternoon peak hours. The remaining 18 study intersections are anticipated to operate at LOS E or F during at least one of the analyzed peak hours.

Intersection Queuing Analysis

In accordance with operational evaluation guidelines detailed in Section 3.3.3 of the TAG, Project vehicles were evaluated to determine whether the Project Site access would contribute to unacceptable queuing on an Avenue or Boulevard (as designated in the Mobility Plan) at Project driveways or would cause or substantially extend queuing at nearby signalized intersections. Per the TAG, unacceptable or extended queuing may be defined as follows:

- *Additional queue along through lanes and either of the following conditions are expected:*
 - *The projected peak hour intersection LOS is D and the through lane queue increases by greater than 75 feet on any approach with the directional approach LOS at E or F, or*
 - *The projected peak hour intersection LOS is E or F and the through lane queue increases by greater than 50 feet on any approach with the directional approach LOS at E or F.*
- *Spill over from turn pockets into through lanes.*
- *Block cross streets or alleys.*
- *Spill over from drive-throughs into streets.*
- *Contribute to “gridlock” congestion. For the purposes of this section, “gridlock” is defined as the condition where traffic queues between closely-spaced intersections and impedes the flow of traffic through upstream intersections.*

The queue lengths were estimated using Synchro software, which reports the 95th percentile queue length, in vehicles, for each approach lane. The queue lengths were then converted into linear distance by multiplying vehicle lengths by 25 feet. The reported queues are calculated using the HCM signalized intersection methodology. Detailed queuing analysis worksheets are provided in Appendix F.

Table 18 includes the resulting queues along through lanes at eight nearby signalized intersections that are projected to operate at LOS D or worse under Future Conditions (Year 2028). As detailed in Table 18, of the eight signalized intersections projected to operate at LOS D or worse, the following five locations are projected to potentially experience extended queuing conditions along through lanes, as previously defined by Section 3.3.3 of the TAG:

- Laurel Canyon Boulevard & Landale Street (Intersection #8). The Project would contribute to extended queuing conditions in the southbound through direction during the morning peak hour; however, the through lane queue already extends beyond the available storage capacity prior to the addition of Project trips.
- Laurel Canyon Boulevard & Moorpark Street (Intersection #12). The Project would contribute to extended queuing conditions in the southbound through direction during both the morning and afternoon peak hours; however, the through lane queues already extend beyond the available storage capacity prior to the addition of Project trips. The Project would also contribute to extended queuing conditions in the northbound through direction during the afternoon peak hour.
- Laurel Canyon Boulevard & Ventura Boulevard (Intersection #20). The Project would contribute to extended queuing conditions in the southbound through direction during both the morning and afternoon peak hours; however, the through lane queues already extend beyond the available storage capacity prior to the addition of Project trips.
- Ventura Place/Radford Avenue & Ventura Boulevard (Intersection #21). Prior to the completion of the Radford Mobility Connector, the Project would contribute to extended queuing conditions in the eastbound and westbound through directions during both the morning and afternoon peak hours and the southbound through direction during the afternoon peak hour; however, the through lane queues in all directions generally already extend beyond the available storage capacity prior to the addition of Project trips. With the completion of the Radford Mobility Connector, the extended queues in the eastbound and westbound through directions would be reduced.
- Carpenter Avenue & Ventura Boulevard (Intersection #22). The Project would contribute to extended queuing conditions in the southbound through direction during the afternoon peak hour.

Table 19 includes the resulting queue lengths at existing turn pockets at eight nearby signalized intersections where the Project would add trips and identifies queues that may exceed turn pocket lengths. As detailed therein, the Project would contribute at least 50 feet to exceeding turn pocket queues at the following locations under Future Conditions (Year 2028):

- Laurel Canyon Boulevard & Moorpark Street (Intersection #12). The northbound left-turn queue is anticipated to extend beyond the available turn pocket during the afternoon peak hour. The Project would contribute approximately 150 feet, or six vehicle lengths, to the left-turn queue.
- Colfax Avenue & Moorpark Street (Intersection #14). The westbound left- and right-turn queues and the northbound left-turn queue are anticipated to extend beyond the available turn pockets during the morning peak hour. Prior to the completion of the Radford Mobility Connector, the Project would contribute approximately 145 feet, or six vehicle lengths, to the westbound left-turn queue, approximately 65 feet, or two vehicle lengths, to the westbound right-turn queue, and approximately 55 feet, or two vehicle lengths, to the northbound left-turn queue. With the completion of the Radford Mobility Connector, the extended queues would be reduced.
- Laurel Canyon Boulevard & Ventura Place (Intersection #19). The westbound right-turn and southbound left-turn queues are anticipated to extend beyond the available turn pocket during the afternoon peak hour. The Project would contribute approximately 125 feet, or five vehicle lengths, to the westbound right-turn queue and approximately 20 feet, or one vehicle length, to the southbound left-turn queue.
- Laurel Canyon Boulevard & Ventura Boulevard (Intersection #20). The westbound left-turn and right-turn queues, northbound left-turn and right-turn queues, and southbound left-turn queue are anticipated to extend beyond the available turn pockets during at least one of the analyzed peak hours. Prior to the completion of the Radford Mobility Connector, the Project would contribute approximately 130 feet, or six vehicle lengths, during the morning peak hour and 130 feet, or six vehicle lengths, during the afternoon peak hour, to the westbound left-turn queue. The Project would contribute approximately 130 feet, or six vehicle lengths, during the afternoon peak hour to the westbound right-turn queue. The Project would contribute approximately 60 feet, or two vehicle lengths, during the morning peak hour to the northbound right-turn queue and approximately 30 feet, or one vehicle length, during the afternoon peak hour to the northbound left-turn queue. The Project would contribute approximately 230 feet, or 10 vehicle lengths, during the morning peak hour and approximately 80 feet, or four vehicle lengths, during the afternoon peak hour to the southbound left-turn queue. With the completion of the Radford Mobility Connector, the extended queues would be reduced.
- Ventura Place/Radford Avenue & Ventura Boulevard (Intersection #21). The eastbound left-turn queue during the morning peak hour and the southbound right-turn queue during the afternoon peak hour are anticipated to extend beyond the available turn pockets. The Project would contribute approximately 70 feet, or three vehicle lengths, during the morning peak hour to the eastbound left-turn queue. The Project would contribute approximately 185 feet, or seven vehicle lengths, to the southbound right-turn queue.

-
- Carpenter Avenue & Ventura Boulevard (Intersection #22). The eastbound left-turn queue during both the morning and afternoon peak hours is anticipated to extend beyond the available turn pockets. Prior to the completion of the Radford Mobility Connector, the Project would contribute approximately 217 feet, or 10 vehicle lengths, during the morning peak hour and 170 feet, or seven vehicle lengths, during the afternoon peak hour to the eastbound left-turn queue. With the completion of the Radford Mobility Connector, the extended queues would be reduced.
 - Colfax Avenue & Ventura Boulevard (Intersection #23). The southbound left-turn queue during the afternoon peak hour is anticipated to extend beyond the available turn pockets. The Project would contribute approximately 25 feet, or one vehicle length, to the southbound left-turn queue.

As detailed in Table 19, the Project would not contribute to a substantial queue that would exceed the turn pocket queues at the remaining location of Laurel Canyon Boulevard & Landale Street (Intersection #8) under Future Conditions (Year 2028).

Table 20 includes the resulting queues along through lanes at eight nearby signalized intersections that are projected to operate at LOS D or worse under Future Conditions (Year 2045). In addition to the locations and peak hours that were previously identified under Future Conditions (Year 2028), the following intersection was identified to potentially experience extended through queuing conditions as defined by the TAG under Future Conditions (Year 2045):

- Laurel Canyon Boulevard & Landale Street (Intersection #8). In addition to the extended through queuing conditions previously identified during the morning peak hour, the Project would also contribute to extended through queuing conditions in the southbound direction during the afternoon peak hour; however, the through lane queue already extends beyond the available storage capacity prior to the addition of Project trips.

Table 21 includes the resulting queue lengths at existing turn pockets under Future Conditions (Year 2045), which are consistent with the eight nearby signalized intersections identified above under Future Conditions (Year 2028). No additional locations or peak hours were identified where the Project would contribute at least 50 feet to exceeding turn pockets queues under Future Conditions (Year 2045).

Driveway Operational Analysis

An analysis of anticipated operating conditions based on the Future with Project Conditions (Year 2028) and Future with Project Conditions (Year 2045) was conducted for the Project's five vehicular driveways identified in Figure 2B.

As previously detailed, the driveway operational analysis was conservatively assessed without consideration of any trip reductions as a result of the TDM Program. Figures 32 and 33 illustrate the estimated peak hour volumes at the Project driveways under Future with Project Conditions (Year 2028) without and with the completion of the Radford Mobility Connector, respectively. The results of the driveway operational analysis under Future with Project Conditions (Year 2028) are detailed in Table 22.

Figures 34 and 35 illustrate the estimated peak hour traffic volumes at the Project driveways under Future with Project Conditions (Year 2045) without and with the completion of the Radford Mobility Connector, respectively. The results of the driveway operational analysis under Future with Project Conditions (Year 2045) are detailed in Table 23.

Detailed LOS and queuing analysis worksheets are provided in Appendix F.

As detailed in Tables 22 and 23, the anticipated queues entering the Project driveways would not extend into the public ROW and would not substantially affect through traffic along adjacent corridors. All security gates would be located to provide adequate queuing areas that would meet City requirements and Project demand and would minimize the potential for vehicle queuing into the public streets.

Signal Warrant Analysis

Signal warrant analyses were conducted at the intersection of Radford Avenue & Moorpark Street proposed for signalization to determine whether the anticipated traffic volumes are sufficient to technically justify the installation of traffic signals. The signal warrant analysis was based on the guidelines set forth in the current Caltrans *California Manual on Uniform Traffic Control Devices* by applying the thresholds from Warrant #1, Eight-Hour Vehicular Volume, and Warrant #2, Four-Hour

Vehicular Volume. The analysis used Future with Project Conditions with the Radford Mobility Connector traffic volume forecasts for Year 2028 and 2045. As detailed in the signal warrant analyses provided in Appendix G, the analyzed intersection meets the warrant thresholds for signalization under both Year 2028 and 2045. Furthermore, signalization is recommended in order to provide safe pedestrian and bicycle crossings and safe operations for vehicles accessing the Project Site via the Radford Mobility Connector. As previously detailed, no through vehicle access would be allowed north or south on Radford Avenue from the Radford Mobility Connector.

PASSENGER LOADING EVALUATION

As described in Chapter 1 and illustrated in Figure 3, the Project proposes dedicated passenger loading areas within the Mobility Hub(s). These areas would be located on-site (off-street) and would therefore occur completely outside of the public ROW. The Mobility Hub(s), shown conceptually in Figure 4, are anticipated to provide passenger vehicle loading areas that would accommodate all passenger loading activity on-site. Therefore, per the TAG, the Project would not result in operational constraints related to passenger loading.

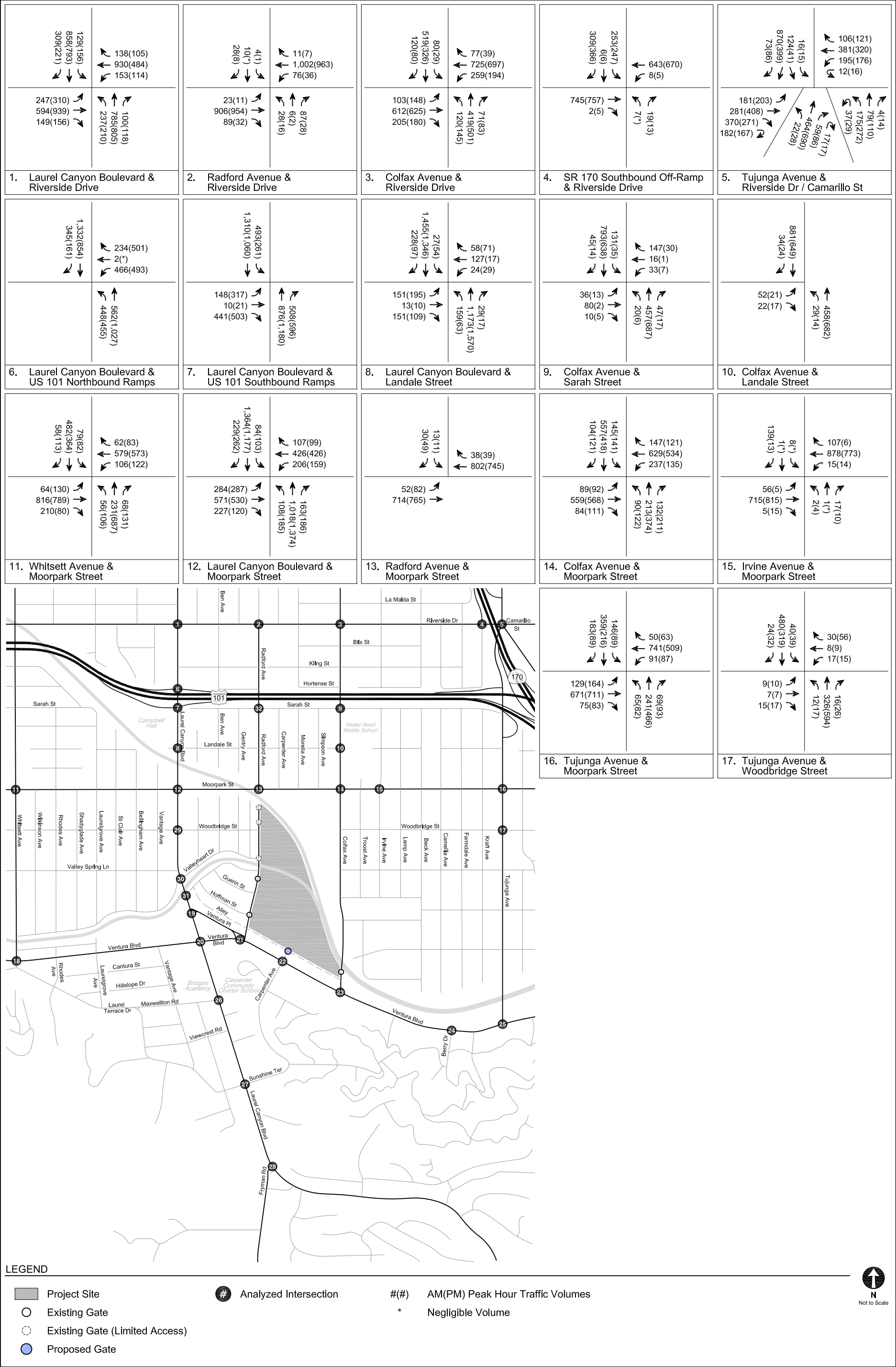
RECOMMENDED ACTIONS

The Project would add to the cumulative traffic within the Study Area as detailed above. Based on Section 3.3.5 of the TAG, proposed improvement measures or corrective actions should support improvements that increase safety and reduce GHG emissions by reducing the use of single-occupant vehicle trips, encourage developers to construct transit and pedestrian-friendly projects with safe and walkable sidewalks, and promote other modes of travel. The Project would be consistent with the City's policies and procedures as it would implement various TDM strategies as part of a comprehensive TDM Program, enhance public access to the Los Angeles River and Tujunga Wash, construct the Radford Mobility Connector, provide on-site Mobility Hub(s) to promote alternative travel modes, and improve the overall pedestrian and bicycle environment with landscape elements, improved transit facilities, and funding for pedestrian and bicycle facilities in the vicinity. The proposed TDM Program and additional improvements would reduce single occupancy vehicle trips to the Project Site and surrounding streets, improve

circulation in the vicinity, and encourage multi-modal mobility options. A full list of the TDM strategies to be implemented by the Project is detailed in Section 4B.

The Project would also comply with the current requirements of the TDM Ordinance. The TDM Ordinance is currently being updated and is expected to be completed prior to the anticipated occupancy of the Project. If adopted, the Project would be subject to the terms of the proposed TDM Ordinance and would likely be required to comply with additional trip-reduction strategies. As such, the Project's TDM Program would further reduce vehicle trips to/from the Project Site and throughout the Study Area. Beyond the identified TDM strategies, the Project would also manage Project site access and circulation operations to minimize potential queues into the adjacent public ROW. Additionally, the Project will work in conjunction with LADOT to develop a local improvement program to manage site access and circulation operations as well as provide road safety enhancements for pedestrian, bicycle, and transit users in the Project vicinity.

Additionally, the Project Applicant would implement various improvements in the vicinity of the Project Site that may include Vision Zero safety improvements, upgrades, traffic signal controller, sensor, and monitoring upgrades for the City's Automated Traffic Surveillance and Control (ATSAC) system. The ATSAC improvements allow LADOT to make real-time adjustments to signal timing plans to reflect changing traffic conditions and support the Adaptive Traffic Control System, which is a computer-based traffic signal control program that provides fully responsive traffic signal control based on real-time traffic conditions. These systems require a complex network of sensors, signal controllers, monitoring cameras, and fiber optic interconnect cables which are not fully implemented throughout the City. The Project's contributions could help complete implementation along key corridors around the Project Site, including Laurel Canyon Boulevard, Ventura Boulevard, Colfax Avenue, and Moorpark Street.



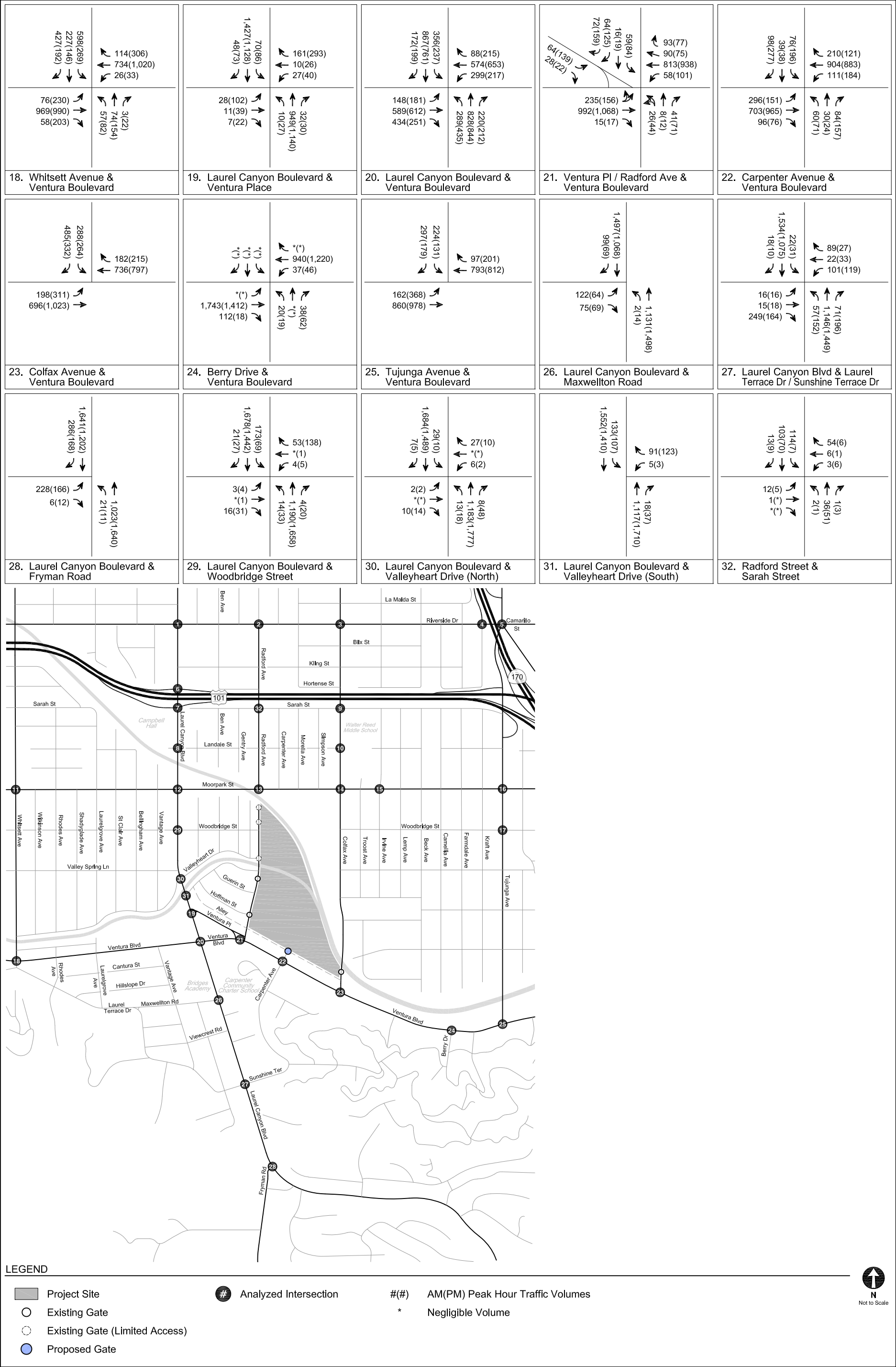
2. Radford Avenue & Riverside Drive

LEGEND

- Project Site
- Analyzed Intersection
- Existing Gate
- Existing Gate (Limited Access)
- Proposed Gate

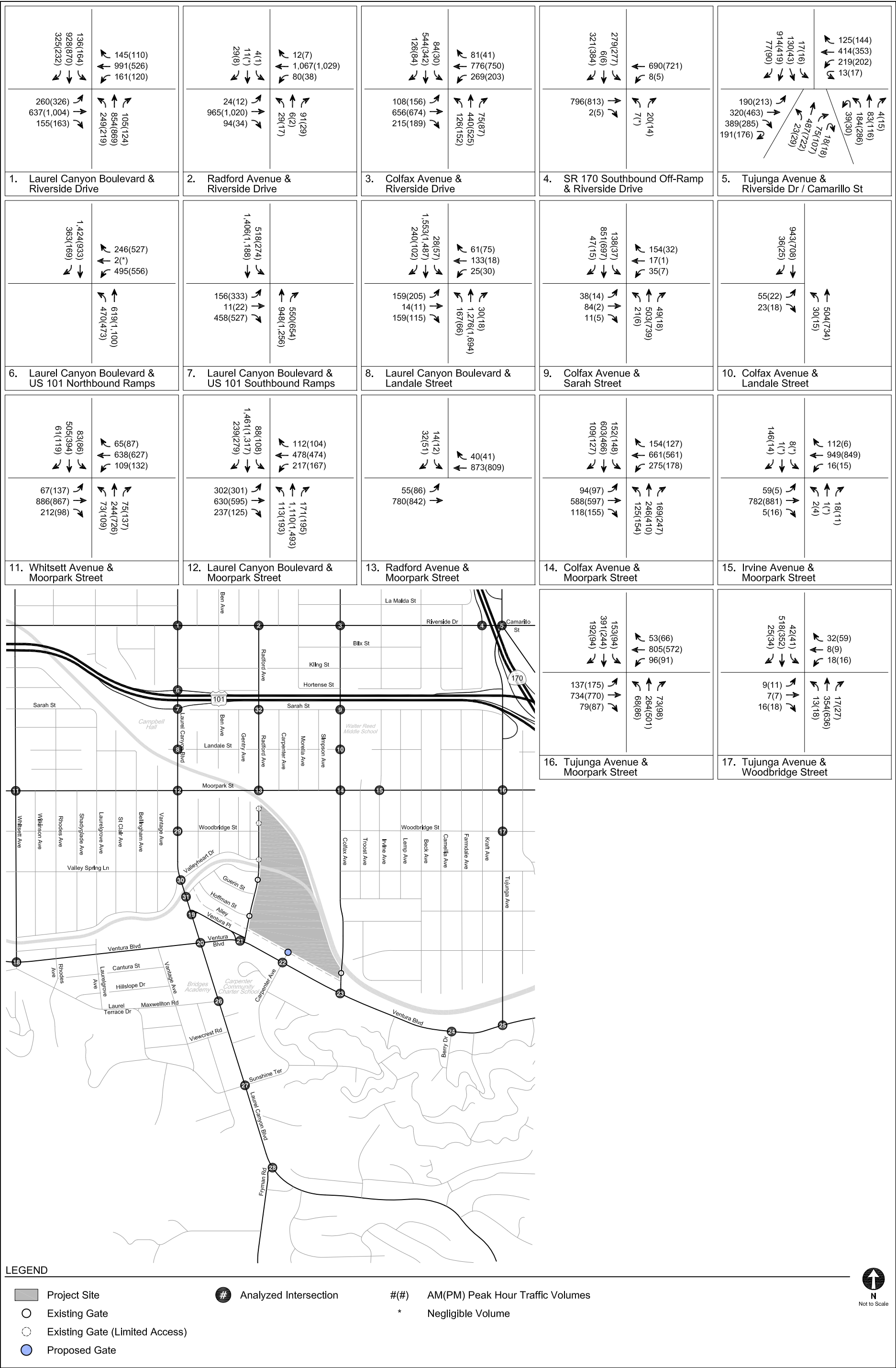
**EXISTING WITH PROJECT CONDITIONS (YEAR 2023)
PEAK HOUR TRAFFIC VOLUMES**

FIGURE 27

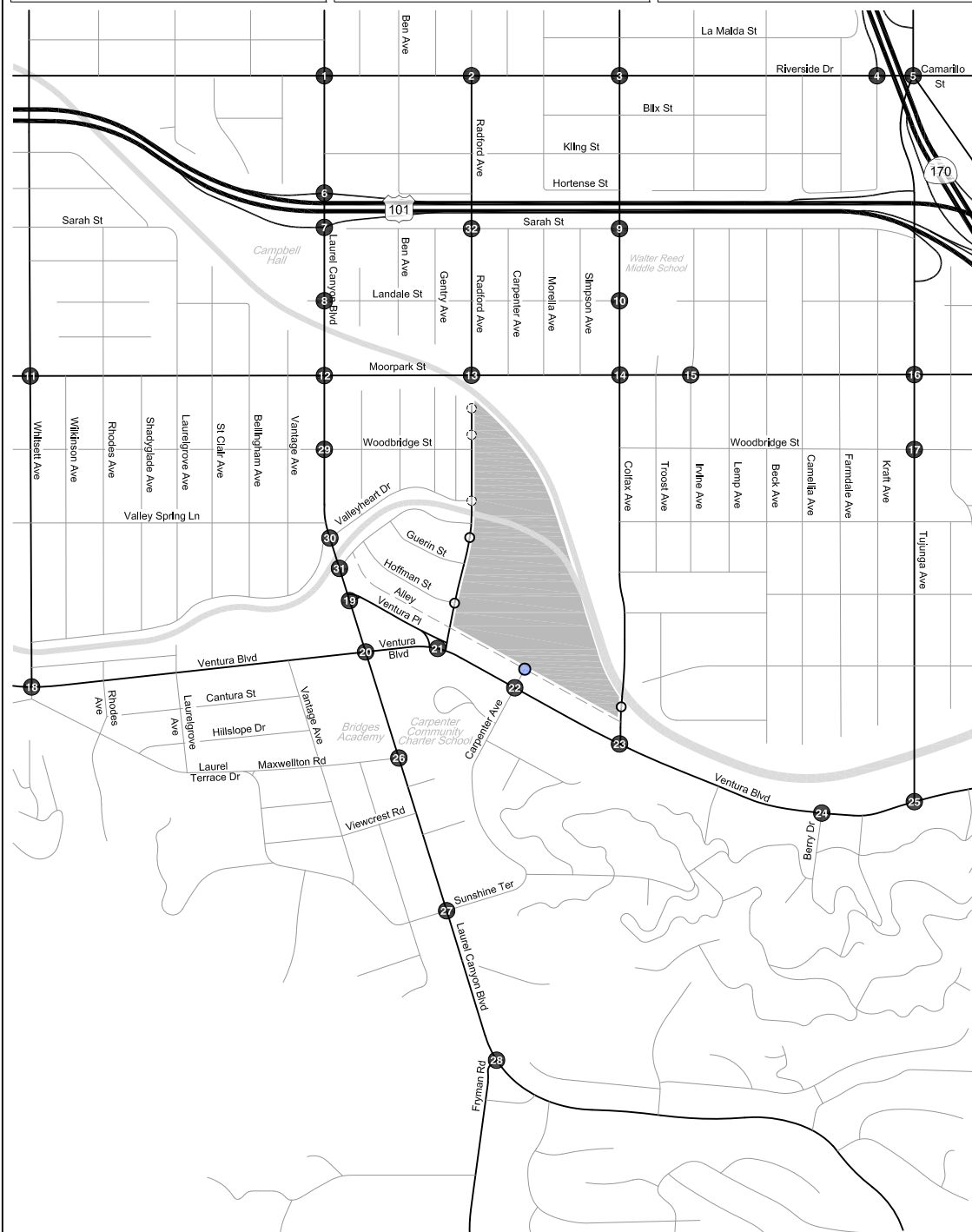


EXISTING WITH PROJECT CONDITIONS (YEAR 2023)
PEAK HOUR TRAFFIC VOLUMES




FIGURE
27 (CONT.)




	18. Whitsett Avenue & Ventura Boulevard
	19. Laurel Canyon Boulevard & Ventura Place
	20. Laurel Canyon Boulevard & Ventura Boulevard
	21. Ventura Pl / Radford Ave & Ventura Boulevard
	22. Carpenter Avenue & Ventura Boulevard
	23. Colfax Avenue & Ventura Boulevard
	24. Berry Drive & Ventura Boulevard
	25. Tujunga Avenue & Ventura Boulevard
	26. Laurel Canyon Boulevard & Maxwellton Road
	27. Laurel Canyon Blvd & Laurel Terrace Dr / Sunshine Terrace Dr
	28. Laurel Canyon Boulevard & Fryman Road
	29. Laurel Canyon Boulevard & Woodbridge Street
	30. Laurel Canyon Boulevard & Valleyheart Drive (North)
	31. Laurel Canyon Boulevard & Valleyheart Drive (South)
	32. Radford Street & Sarah Street



LEGEND

-  Project Site
 Existing Gate
 Existing Gate (Limited Access)
 Proposed Gate

 Analyzed Intersection

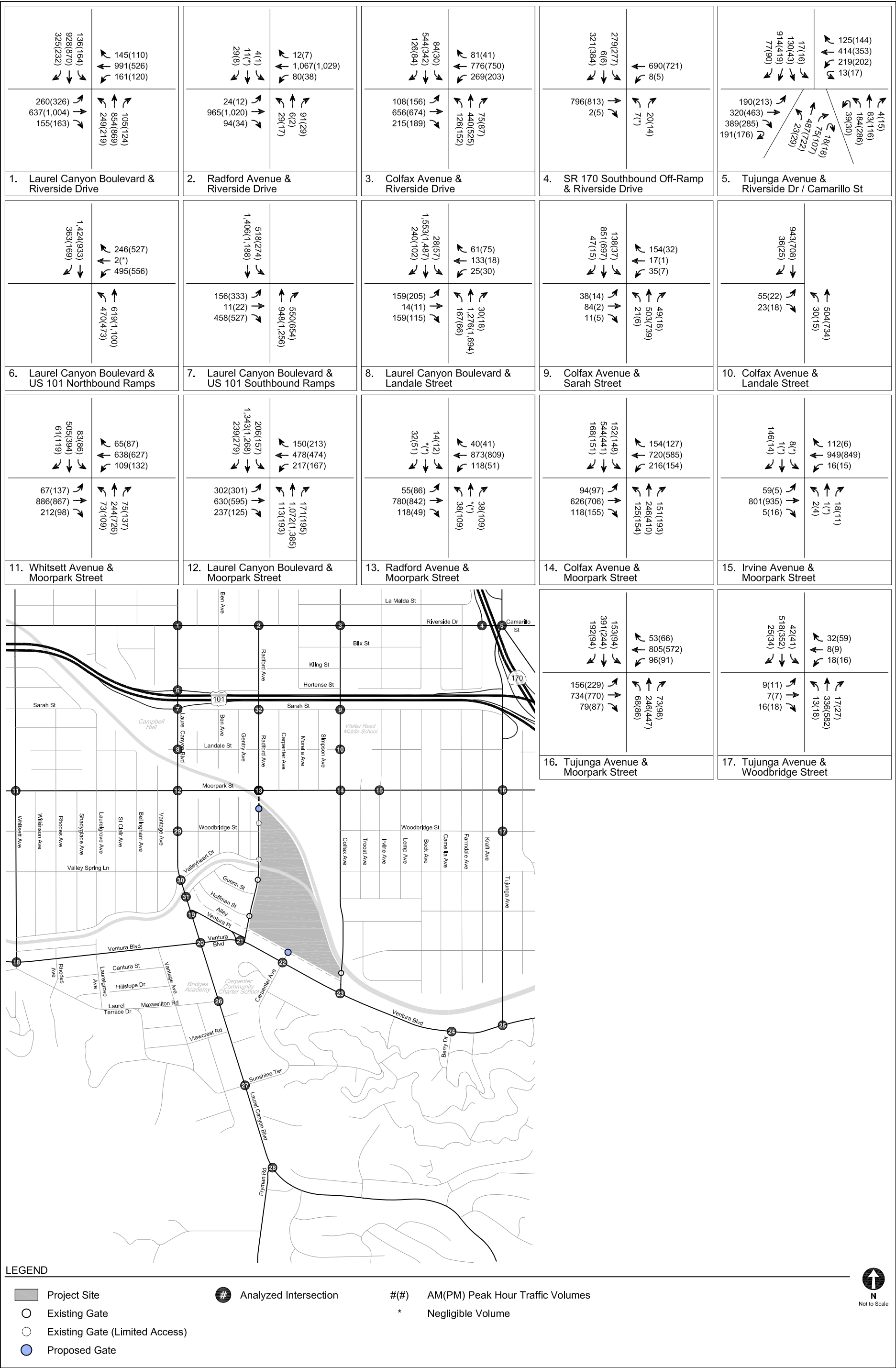
#(#) AM(PM) Peak Hour Traffic Volumes

* Negligible Volume



FUTURE WITH PROJECT CONDITIONS (YEAR 2028) PEAK HOUR TRAFFIC VOLUMES
WITHOUT RADFORD MOBILITY CONNECTOR

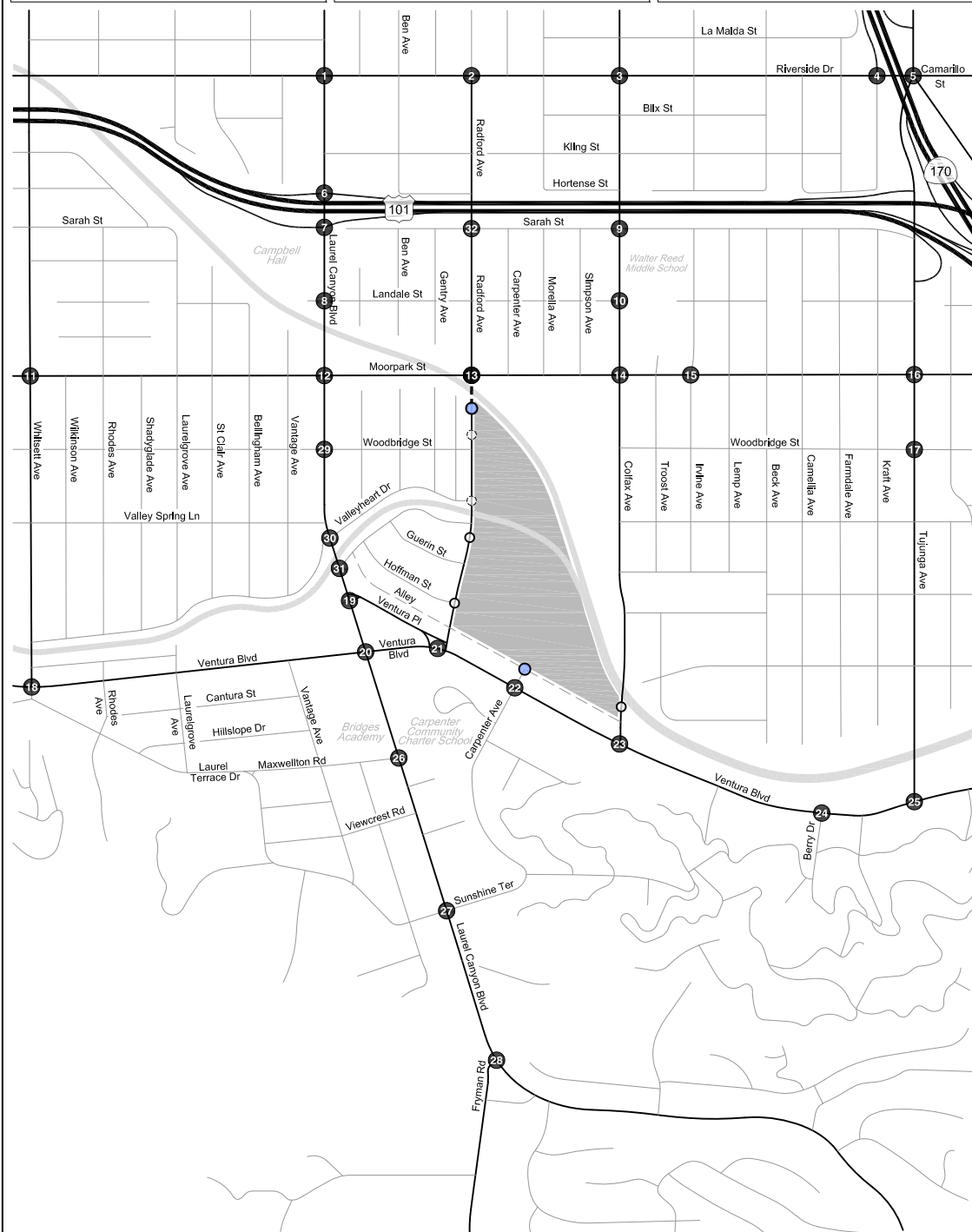
FIGURE
28 (CONT.)







FUTURE WITH PROJECT CONDITIONS (YEAR 2028) PEAK HOUR TRAFFIC VOLUMES
WITH RADFORD MOBILITY CONNECTOR


FIGURE
29

<p>629(283) 239(153) 453(213)</p> <p>119(322) 802(1,126) 27(35)</p> <p>78(251) 1,048(1,093) 61(213)</p>	<p>18. Whitsett Avenue & Ventura Boulevard</p>
<p>75(109) 1,469(1,241) 50(77)</p> <p>182(336) 11(27) 28(42)</p> <p>29(107) 12(41) 7(23)</p> <p>34(32) 1,010(1,179) 11(28)</p>	<p>19. Laurel Canyon Boulevard & Ventura Place</p>
<p>343(293) 911(800) 181(220)</p> <p>105(201) 632(722) 325(251)</p> <p>156(195) 649(687) 456(267)</p> <p>237(252) 870(887) 304(465)</p>	<p>20. Laurel Canyon Boulevard & Ventura Boulevard</p>
<p>68(102) 17(20) 81(162) 83(182)</p> <p>105(92) 100(92) 894(991) 61(106)</p> <p>268(209) 1,025(1,195) 16(18)</p> <p>43(75) 8(13) 27(46)</p>	<p>21. Ventura Pl / Radford Ave & Ventura Boulevard</p>
<p>58(142) 41(39) 79(224)</p> <p>152(98) 1,026(1,024) 117(193)</p> <p>238(129) 802(1,149) 101(80)</p> <p>88(165) 30(25) 63(75)</p>	<p>22. Carpenter Avenue & Ventura Boulevard</p>
<p>386(379) 444(322)</p> <p>272(295) 846(932)</p> <p>208(326) 773(1,147)</p>	<p>23. Colfax Avenue & Ventura Boulevard</p>
<p>*(*) *(*) *(*)</p> <p>1,126(1,409) 39(48)</p> <p>40(65) 21(20)</p> <p>1,954(1,603) 118(19)</p>	<p>24. Berry Drive & Ventura Boulevard</p>
<p>235(138) 312(188)</p> <p>102(211) 974(1,017)</p> <p>150(326) 1,057(1,231)</p>	<p>25. Tujunga Avenue & Ventura Boulevard</p>
<p>1,584(1,149) 104(72)</p> <p>128(67) 79(73)</p> <p>1,194(1,612) 2(15)</p>	<p>26. Laurel Canyon Boulevard & Maxwellton Road</p>
<p>23(33) 1,623(1,157) 19(11)</p> <p>94(28) 23(35) 106(124)</p> <p>73(205) 1,210(1,560) 60(160)</p>	<p>27. Laurel Canyon Blvd & Laurel Terrace Dr / Sunshine Terrace Dr</p>
<p>1,735(1,289) 301(177)</p> <p>240(174) 6(13)</p> <p>1,079(1,760) 22(12)</p>	<p>28. Laurel Canyon Boulevard & Fryman Road</p>
<p>120(47) 1,732(1,570) 22(28)</p> <p>36(88) 1(1) 4(5)</p> <p>4(21) 1,272(1,738) 15(35)</p> <p>3(4) *(1) 17(33)</p>	<p>29. Laurel Canyon Boulevard & Woodbridge Street</p>
<p>30(11) 1,738(1,620) 7(5)</p> <p>28(11) *(*) 6(2)</p> <p>8(50) 1,264(1,863) 19(32)</p> <p>2(2) *(*) 12(34)</p>	<p>30. Laurel Canyon Boulevard & Valleyheart Drive (North)</p>
<p>139(113) 1,601(1,556)</p> <p>96(129) 5(3)</p> <p>19(39) 1,200(1,805)</p>	<p>31. Laurel Canyon Boulevard & Valleyheart Drive (South)</p>
<p>120(7) 108(74) 14(9)</p> <p>57(6) 6(1) 3(6)</p> <p>1(3) 38(54) 2(1)</p>	<p>32. Radford Street & Sarah Street</p>



LEGEND

-  Project Site
-  Existing Gate
-  Existing Gate (Limited Access)
-  Proposed Gate

 Analyzed Intersection

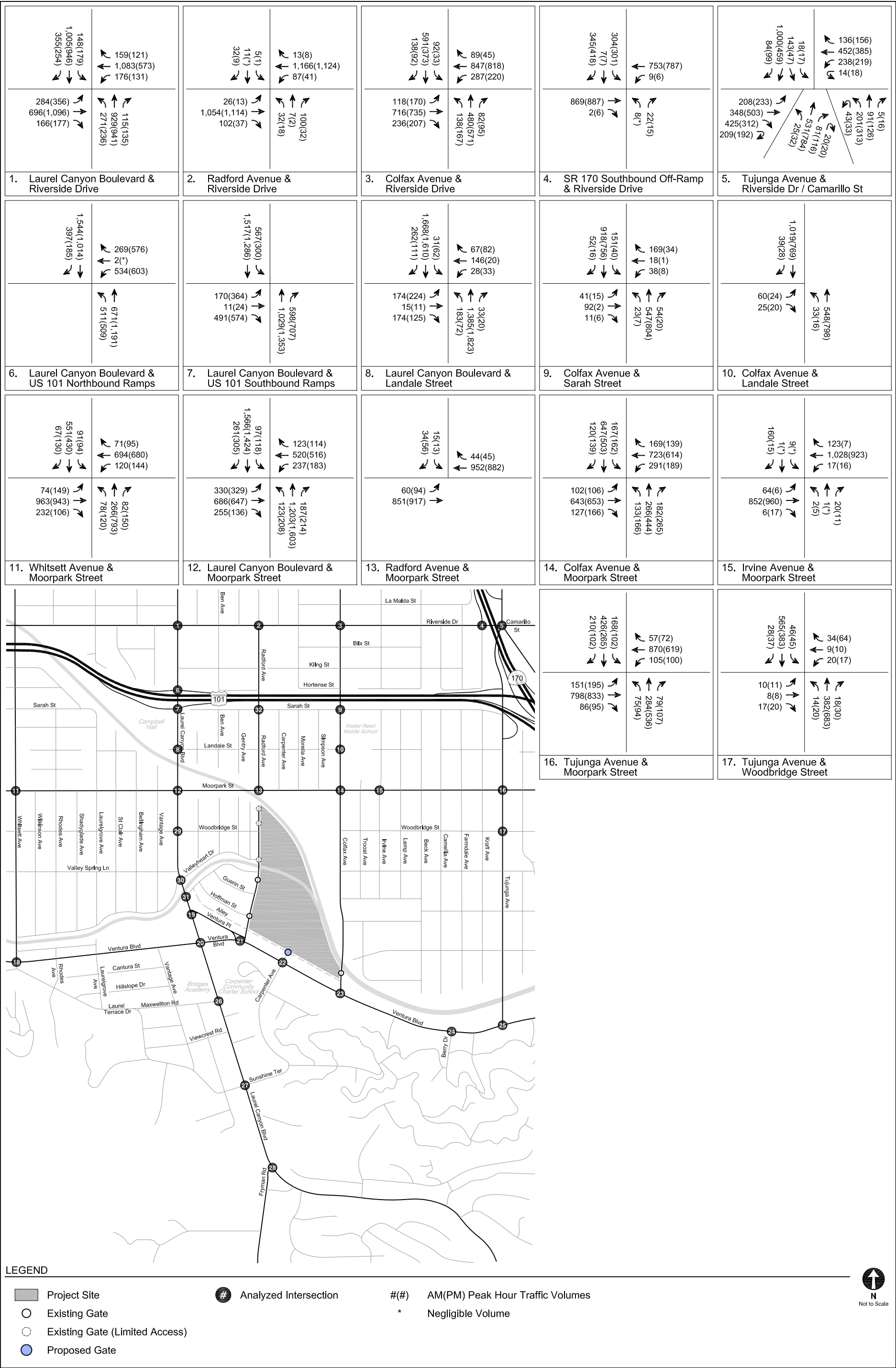
#(#) AM(PM) Peak Hour Traffic Volumes

* Negligible Volume



FUTURE WITH PROJECT CONDITIONS (YEAR 2028) PEAK HOUR TRAFFIC VOLUMES
WITH RADFORD MOBILITY CONNECTOR

FIGURE
29 (CONT.)



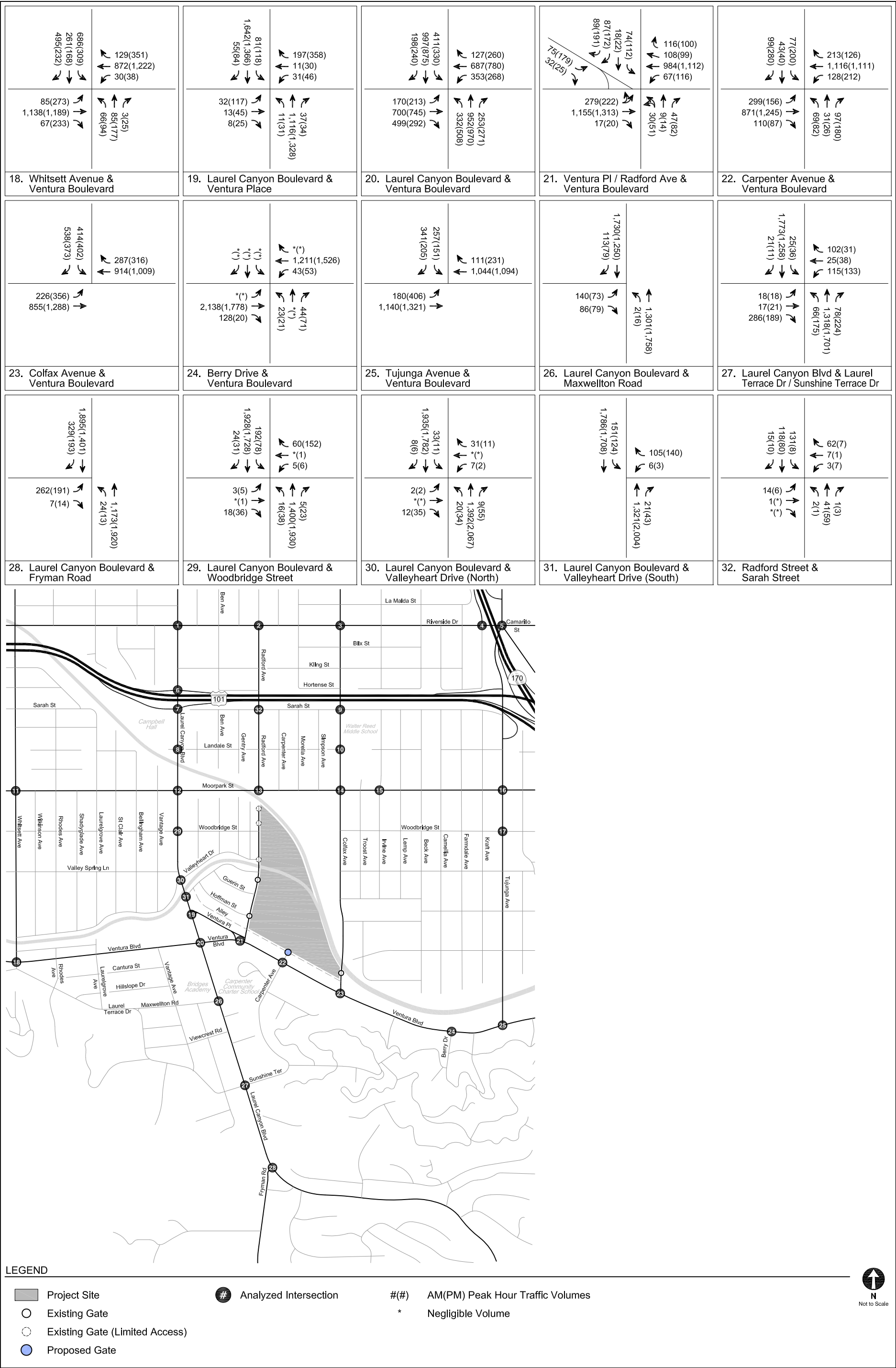
2. Radford Avenue & Riverside Drive

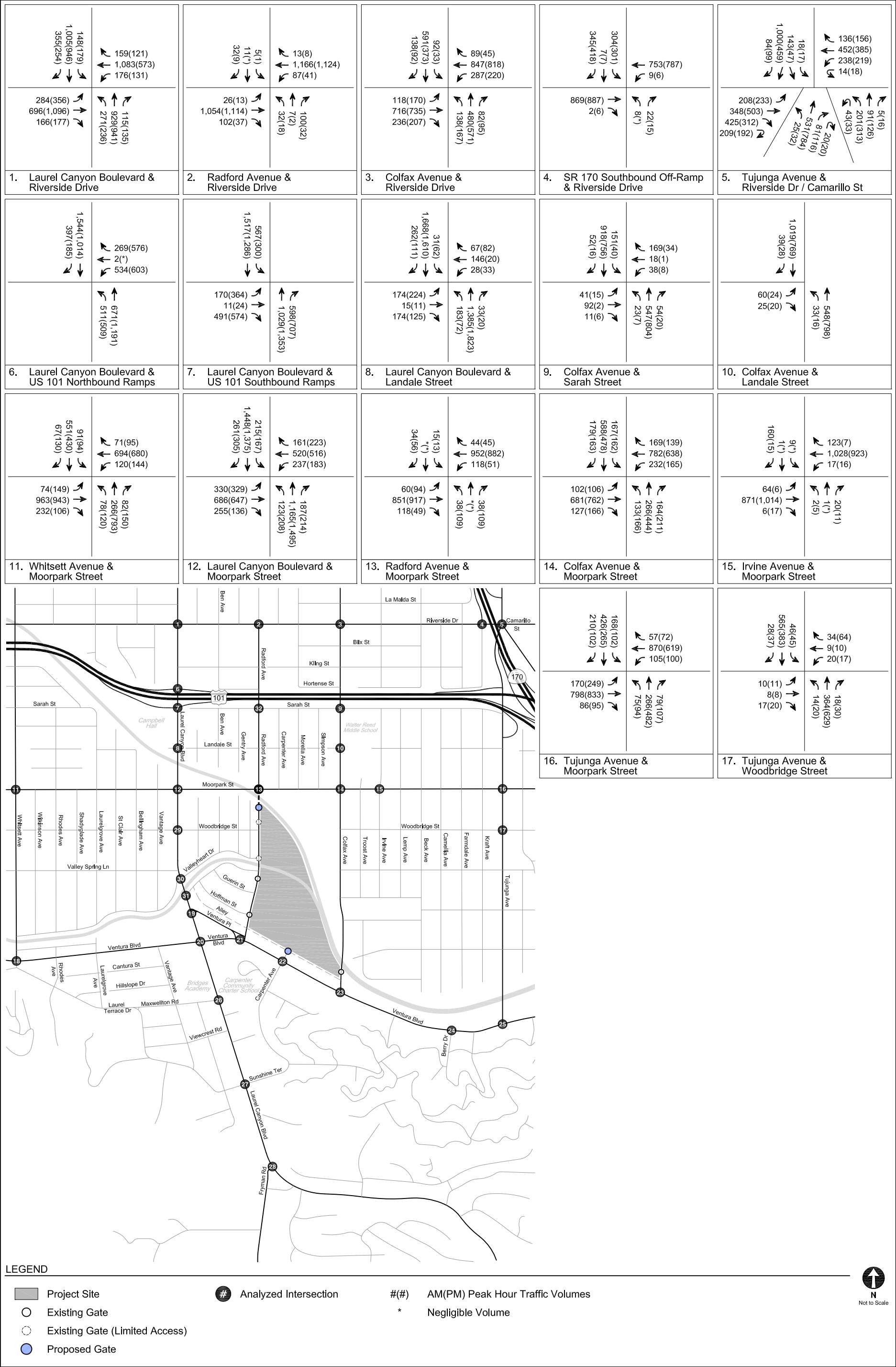
LEGEND

- Project Site
- Existing Gate
- Existing Gate (Limited Access)
- Proposed Gate
- Analyzed Intersection
- AM(PM) Peak Hour Traffic Volumes
- Negligible Volume

FUTURE WITH PROJECT CONDITIONS (YEAR 2045) PEAK HOUR TRAFFIC VOLUMES WITHOUT RADFORD MOBILITY CONNECTOR

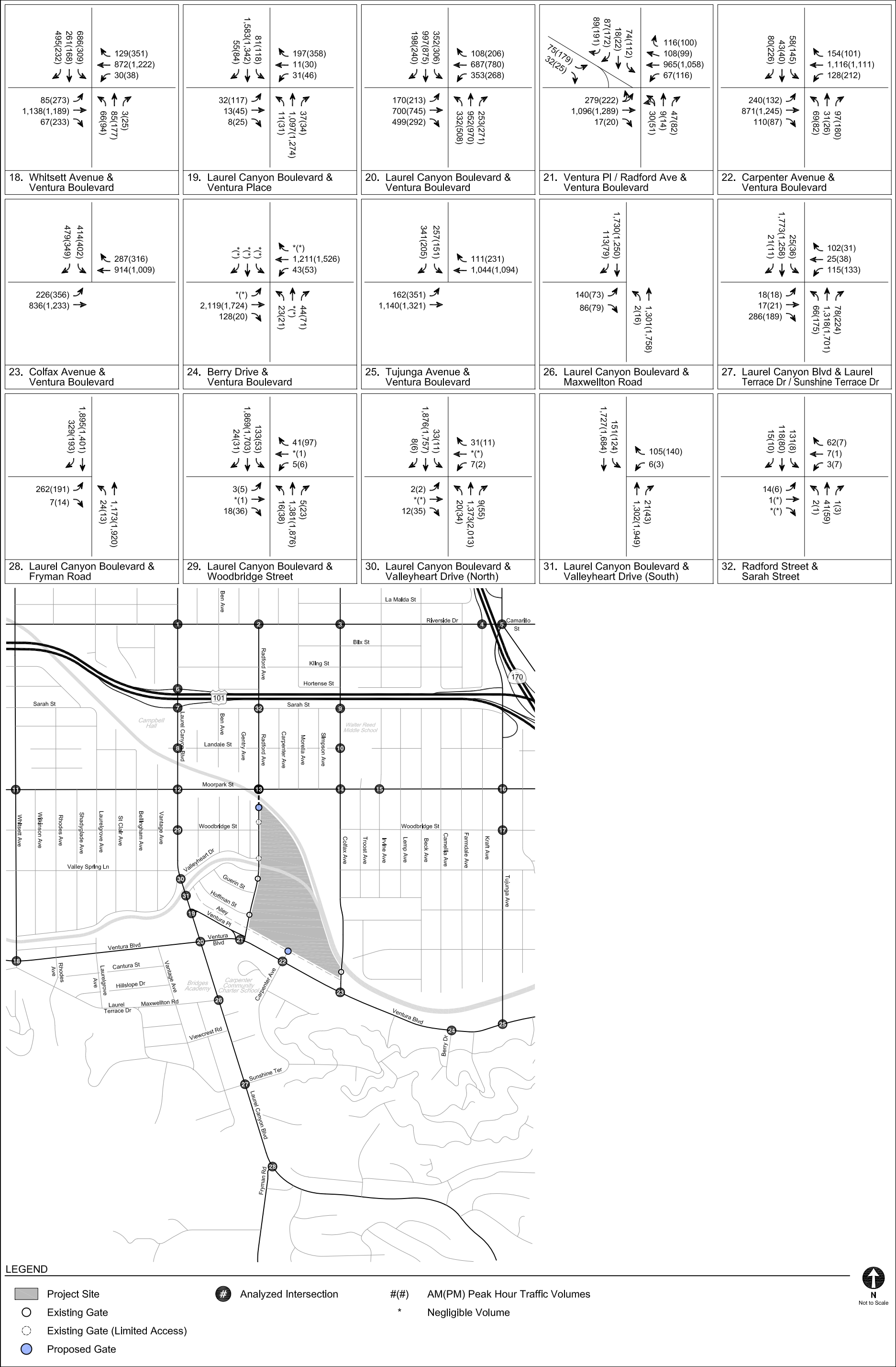
FIGURE 30





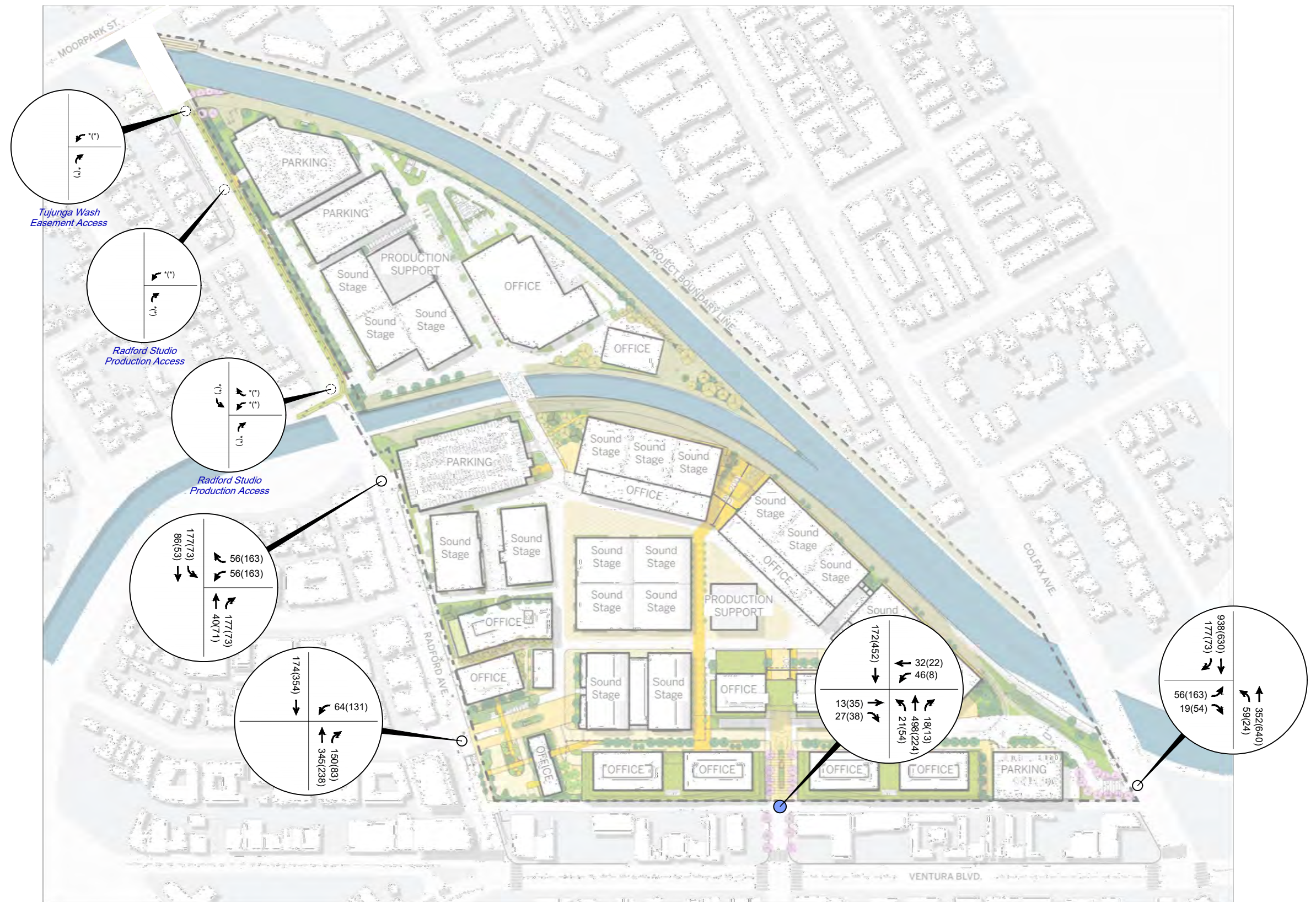
FUTURE WITH PROJECT CONDITIONS (YEAR 2045) PEAK HOUR TRAFFIC VOLUMES
WITH RADFORD MOBILITY CONNECTOR

FIGURE
31



FUTURE WITH PROJECT CONDITIONS (YEAR 2045) PEAK HOUR TRAFFIC VOLUMES
WITH RADFORD MOBILITY CONNECTOR

FIGURE
31 (CONT.)



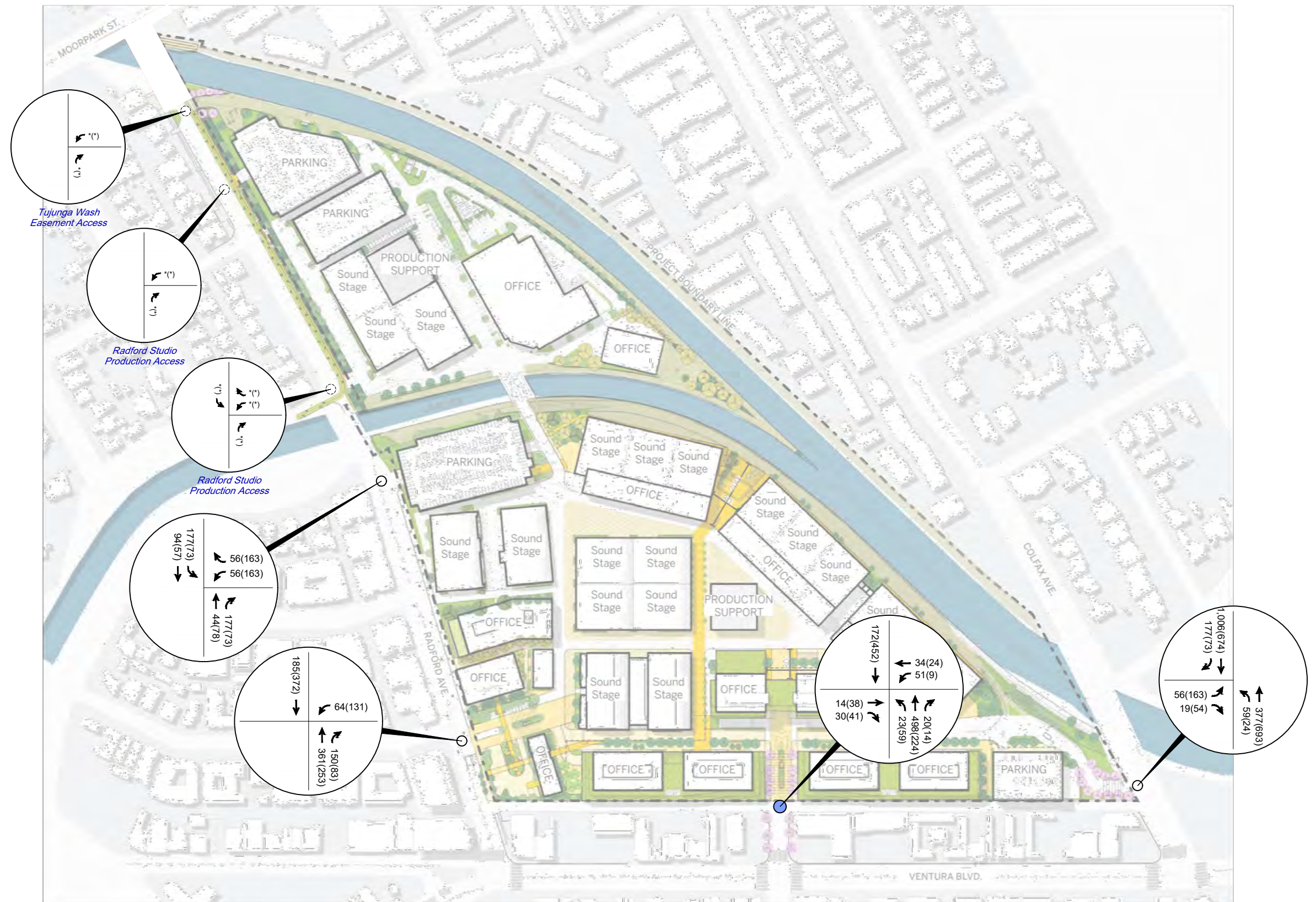
FUTURE WITH PROJECT CONDITIONS (YEAR 2028) PEAK HOUR TRAFFIC VOLUMES AT PROJECT DRIVEWAYS
WITHOUT RADFORD MOBILITY CONNECTOR

FIGURE
32



FUTURE WITH PROJECT CONDITIONS (YEAR 2028) PEAK HOUR TRAFFIC VOLUMES AT PROJECT DRIVEWAYS
WITH RADFORD MOBILITY CONNECTOR

FIGURE
33



FUTURE WITH PROJECT CONDITIONS (YEAR 2045) PEAK HOUR TRAFFIC VOLUMES AT PROJECT DRIVEWAYS
WITHOUT RADFORD MOBILITY CONNECTOR

FIGURE
34



FUTURE WITH PROJECT CONDITIONS (YEAR 2045) PEAK HOUR TRAFFIC VOLUMES AT PROJECT DRIVEWAYS
WITH RADFORD MOBILITY CONNECTOR

FIGURE
35

TABLE 14
INTERSECTION LEVEL OF SERVICE DEFINITIONS

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

Notes

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

[a] Measured in seconds.

**TABLE 15
EXISTING CONDITIONS (YEAR 2023)
INTERSECTION LEVELS OF SERVICE**

No	Intersection	Peak Hour	Existing Conditions		Existing with Project Conditions	
			Delay	LOS	Delay	LOS
1.	Laurel Canyon Boulevard	AM	67.4	E	67.6	E
	Riverside Drive	PM	74.6	E	74.2	E
2.	Radford Avenue	AM	286.4	F	286.4	F
[a]	Riverside Drive	PM	53.0	F	53.0	F
3.	Colfax Avenue	AM	16.8	B	22.5	C
	Riverside Drive	PM	16.0	B	16.6	B
4.	SR 170 Southbound Off-Ramp	AM	15.5	B	16.0	B
[b]	Riverside Drive	PM	15.2	B	15.4	B
5.	Tujunga Avenue	AM	58.5	E	59.0	E
[b]	Riverside Drive-Camarillo Street	PM	65.3	E	67.4	E
6.	Laurel Canyon Boulevard	AM	20.4	C	21.8	C
	US 101 Northbound Ramps	PM	32.0	C	33.5	C
7.	Laurel Canyon Boulevard	AM	25.7	C	27.5	C
	US 101 Southbound Ramps	PM	13.6	B	15.9	B
8.	Laurel Canyon Boulevard	AM	29.4	C	65.0	E
[b]	Landale Street	PM	22.0	C	24.9	C
9.	Colfax Avenue	AM	16.4	B	16.3	B
	Sarah Street	PM	13.7	B	14.2	B
10.	Colfax Avenue	AM	5.3	A	5.9	A
[b]	Landale Street	PM	4.8	A	5.0	A
11.	Whitsett Avenue	AM	42.5	D	46.7	D
	Moorpark Street	PM	46.8	D	49.4	D
12.	Laurel Canyon Boulevard	AM	106.6	F	176.1	F
	Moorpark Street	PM	149.0	F	209.5	F
13.	Radford Avenue	AM	19.9	C	19.9	C
[a]	Moorpark Street	PM	17.2	C	17.2	C
14.	Colfax Avenue	AM	34.8	C	39.2	D
	Moorpark Street	PM	30.9	C	32.9	C
15.	Irvine Avenue	AM	21.6	C	24.5	C
[a]	Moorpark Street	PM	19.9	C	20.8	C
16.	Tujunga Avenue	AM	21.0	C	20.4	C
	Moorpark Street	PM	19.6	B	21.2	C
17.	Tujunga Avenue	AM	4.6	A	4.5	A
	Woodbridge Street	PM	6.1	A	6.0	A
18.	Whitsett Avenue	AM	38.1	D	38.4	D
[b]	Ventura Boulevard	PM	24.3	C	25.0	C
19.	Laurel Canyon Boulevard	AM	23.1	C	23.6	C
[b]	Ventura Place	PM	30.5	C	37.8	D
20.	Laurel Canyon Boulevard	AM	43.0	D	51.3	D
	Ventura Boulevard	PM	47.0	D	47.0	D
21a.	Retail Driveway-Radford Avenue	AM	48.5	D	65.1	E
[b]	Ventura Boulevard	PM	58.9	E	127.7	F
21b.	Ventura Place	AM	29.8	C	92.7	F
[b]	Ventura Boulevard	PM	71.7	E	108.0	F
22.	Carpenter Avenue	AM	21.6	C	63.7	E
	Ventura Boulevard	PM	24.3	C	79.5	E
23.	Colfax Avenue	AM	15.5	B	17.4	B
[b]	Ventura Boulevard	PM	22.4	C	25.9	C
24.	Berry Drive	AM	5.4	A	5.5	A
[b]	Ventura Boulevard	PM	5.4	A	6.1	A
25.	Tujunga Avenue	AM	16.4	B	17.1	B
[b]	Ventura Boulevard	PM	15.3	B	21.0	C
26.	Laurel Canyon Boulevard	AM	18.2	B	18.3	B
	Maxwellton Road	PM	13.5	B	13.6	B
27.	Laurel Canyon Boulevard	AM	23.0	C	24.0	C
	Laurel Terrace Dr-Sunshine Terrace Dr	PM	31.1	C	32.5	C
28.	Laurel Canyon Boulevard	AM	15.2	B	15.4	B
[b]	Fryman Road	PM	9.6	A	9.8	A
29.	Laurel Canyon Boulevard	AM	93.7	F	[c]	F
[a]	Woodbridge Street	PM	201.8	F	[c]	F
30.	Laurel Canyon Boulevard	AM	47.8	E	89.7	F
[a]	Valleyheart Drive (North)	PM	70.1	F	148.1	F
31.	Laurel Canyon Boulevard	AM	25.0	C	35.6	E
[a]	Valleyheart Drive (South)	PM	45.4	E	112.6	F
32.	Radford Avenue	AM	8.5	A	8.5	A
	Sarah Street	PM	7.4	A	7.4	A

Notes:

Delay is measured in seconds per vehicle. LOS = Level of Service

Intersection analysis based on HCM 6th Edition Signalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection, unless otherwise stated.

[a] Intersection analysis based on the HCM 6th Edition Two-Way Stop Control Unsignalized methodology, which calculates the control delay, in seconds, for each individual approach of an intersection. The reported control delay represents the worst-case approach, and does not account for traffic gaps created by adjacent traffic signals.

[b] Intersection analysis based on HCM 2000 Signalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection.

[c] The reported control delay of the worst-case approach (i.e., minor street of the intersection) exceeds 300 seconds.

[d] Intersection analysis based on HCM 6th Edition All-Way Stop Control Unsignalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection.

TABLE 16
FUTURE CONDITIONS (YEAR 2028)
INTERSECTION LEVELS OF SERVICE

No	Intersection	Peak Hour	Future without Project Conditions		Future with Project Conditions without Radford Mobility Connector		Future with Project Conditions with Radford Mobility Connector	
			Delay	LOS	Delay	LOS	Delay	LOS
1.	Laurel Canyon Boulevard Riverside Drive	AM PM	67.7 49.6	E D	73.5 52.3	E D	73.5 52.3	E D
2. [a]	Radford Avenue Riverside Drive	AM PM	[b] 73.7	F F	[b] 73.7	F F	[b] 73.7	F F
3.	Colfax Avenue Riverside Drive	AM PM	16.8 12.0	B B	23.6 12.5	C B	23.6 12.5	C B
4. [c]	SR 170 Southbound Off-Ramp Riverside Drive	AM PM	16.9 16.2	B B	17.4 16.5	B B	17.4 16.5	B B
5. [c]	Tujunga Avenue Riverside Drive-Camarillo Street	AM PM	69.8 83.0	E F	70.4 88.4	E F	70.4 88.4	E F
6.	Laurel Canyon Boulevard US 101 Northbound Ramps	AM PM	21.4 29.1	C C	22.8 30.8	C C	22.8 30.8	C C
7.	Laurel Canyon Boulevard US 101 Southbound Ramps	AM PM	20.0 13.6	B B	21.2 22.1	C C	21.2 22.3	C C
8. [c]	Laurel Canyon Boulevard Landale Street	AM PM	37.9 25.9	D C	80.8 32.3	F C	81.0 31.6	F C
9.	Colfax Avenue Sarah Street	AM PM	16.9 14.5	B B	21.0 12.6	C B	21.0 12.8	C B
10. [c]	Colfax Avenue Landale Street	AM PM	6.5 5.2	A A	7.4 5.5	A A	7.4 5.5	A A
11.	Whitsett Avenue Moorpark Street	AM PM	53.1 61.6	D E	58.6 66.6	E E	58.6 66.6	E E
12.	Laurel Canyon Boulevard Moorpark Street	AM PM	142.2 192.2	F F	204.1 247.5	F F	179.9 219.9	F F
13. [d]	Radford Avenue Moorpark Street	AM PM	23.1 19.6	C C	23.1 19.6	C C	4.6 4.3	A A
14.	Colfax Avenue Moorpark Street	AM PM	36.2 36.2	D D	49.3 46.9	D D	41.0 43.4	D D
15. [a]	Irvine Avenue Moorpark Street	AM PM	26.5 22.1	D C	26.3 23.1	D C	31.5 24.8	D C
16.	Tujunga Avenue Moorpark Street	AM PM	23.8 18.5	C B	21.7 22.3	C C	22.2 19.6	C B
17.	Tujunga Avenue Woodbridge Street	AM PM	4.5 6.0	A A	4.5 5.9	A A	4.5 5.9	A A
18. [c]	Whitsett Avenue Ventura Boulevard	AM PM	41.3 34.0	D C	42.7 39.2	D D	42.8 39.2	D D
19.	Laurel Canyon Boulevard Ventura Place	AM PM	23.9 35.8	C D	25.6 60.8	C E	25.0 56.4	C E
20.	Laurel Canyon Boulevard Ventura Boulevard	AM PM	47.3 37.2	D D	57.2 42.2	E D	56.2 41.6	E D
21a. [c]	Retail Driveway-Radford Avenue Ventura Boulevard	AM PM	79.2 89.2	E F	96.4 170.3	F F	92.5 155.2	F F
21b. [c]	Ventura Place Ventura Boulevard	AM PM	39.9 119.3	D F	132.2 155.7	F F	115.6 149.8	F F
22.	Carpenter Avenue Ventura Boulevard	AM PM	22.7 26.2	C C	62.3 106.1	E F	44.2 106.2	D F
23. [c]	Colfax Avenue Ventura Boulevard	AM PM	20.4 78.9	C E	26.4 78.3	C E	26.0 79.5	C E
24. [c]	Berry Drive Ventura Boulevard	AM PM	6.7 5.7	A A	7.4 6.4	A A	7.1 6.0	A A
25. [c]	Tujunga Avenue Ventura Boulevard	AM PM	17.9 17.1	B B	19.2 22.9	B C	19.2 19.9	B B
26.	Laurel Canyon Boulevard Maxwellton Road	AM PM	19.0 14.5	B B	18.8 14.4	B B	18.7 14.4	B B
27.	Laurel Canyon Boulevard Laurel Terrace Dr-Sunshine Terrace Dr	AM PM	25.5 34.1	C C	26.8 35.9	C D	26.8 35.9	C D
28. [c]	Laurel Canyon Boulevard Fryman Road	AM PM	18.5 10.6	B B	19.0 10.8	B B	19.0 10.8	B B
29. [a]	Laurel Canyon Boulevard Woodbridge Street	AM PM	135.5 [b]	F F	[b] [b]	F F	270.3 [b]	F F
30. [a]	Laurel Canyon Boulevard Valleyheart Drive (North)	AM PM	68.2 137.9	F F	[b] 272.3	F F	114.7 215.1	F F
31. [a]	Laurel Canyon Boulevard Valleyheart Drive (South)	AM PM	32.7 86.9	D F	54.4 [b]	F F	47.1 231.2	E F
32. [e]	Radford Avenue Sarah Street	AM PM	8.6 7.4	A A	8.6 7.4	A A	8.6 7.4	A A

Notes:

Delay is measured in seconds per vehicle. LOS = Level of Service

Intersection analysis based on HCM 6th Edition Signalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection, unless otherwise stated.

[a] Intersection analysis based on the HCM 6th Edition Two-Way Stop Control Unsignalized methodology, which calculates the control delay, in seconds, for each individual approach of an intersection. The reported control delay represents the worst-case approach, and does not account for traffic gaps created by adjacent traffic signals.

[b] The reported control delay of the worst-case approach (i.e., minor street of the intersection) exceeds 300 seconds.

[c] Intersection analysis based on HCM 2000 Signalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection.

[d] The intersection is currently and would be unsignalized under with Project without Radford Mobility Connector scenario. Under with Project with Radford Mobility Connector Scenario, the intersection would be signalized.

[e] Intersection analysis based on HCM 6th Edition All-Way Stop Control Unsignalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection.

**TABLE 17
FUTURE CONDITIONS (YEAR 2045)
INTERSECTION LEVELS OF SERVICE**

No	Intersection	Peak Hour	Future without Project Conditions		Future with Project Conditions without Radford Mobility Connector		Future with Project Conditions with Radford Mobility Connector	
			Delay	LOS	Delay	LOS	Delay	LOS
1.	Laurel Canyon Boulevard Riverside Drive	AM PM	84.6 58.7	F E	90.5 63.8	F E	90.5 63.8	F E
2. [a]	Radford Avenue Riverside Drive	AM PM	[b] 129.8	F F	[b] 129.8	F F	[b] 129.8	F F
3.	Colfax Avenue Riverside Drive	AM PM	18.2 13.8	B B	30.4 14.5	C B	30.4 14.5	C B
4.	SR 170 Southbound Off-Ramp Riverside Drive	AM PM	17.6 17.5	B B	17.6 17.4	B B	17.6 17.4	B B
5. [c]	Tujunga Avenue Riverside Drive-Camarillo Street	AM PM	86.9 102.3	F F	88.1 106.9	F F	88.1 106.9	F F
6.	Laurel Canyon Boulevard US 101 Northbound Ramps	AM PM	22.9 31.0	C C	24.3 32.6	C C	24.3 32.6	C C
7.	Laurel Canyon Boulevard US 101 Southbound Ramps	AM PM	21.8 16.0	C B	24.1 28.9	C C	24.1 29.1	C C
8. [c]	Laurel Canyon Boulevard Landale Street	AM PM	55.0 36.4	D D	102.5 48.5	F D	102.6 47.6	F D
9.	Colfax Avenue Sarah Street	AM PM	19.9 13.1	B B	30.5 13.5	C B	30.5 13.5	C B
10. [c]	Colfax Avenue Landale Street	AM PM	7.3 6.5	A A	8.7 7.0	A A	8.7 7.0	A A
11.	Whitsett Avenue Moorpark Street	AM PM	71.3 87.3	E F	78.0 95.8	E F	78.0 95.8	E F
12.	Laurel Canyon Boulevard Moorpark Street	AM PM	187.7 237.1	F F	249.0 292.9	F F	221.8 264.6	F F
13. [d]	Radford Avenue Moorpark Street	AM PM	27.8 23.1	D C	27.8 23.1	D C	4.0 4.0	A A
14.	Colfax Avenue Moorpark Street	AM PM	43.2 47.3	D D	67.3 58.3	E E	53.5 48.3	D D
15. [a]	Irvine Avenue Moorpark Street	AM PM	40.9 28.9	E D	52.5 30.4	F D	54.6 33.0	F D
16.	Tujunga Avenue Moorpark Street	AM PM	23.0 20.0	C B	20.8 24.0	C C	22.1 21.4	C C
17.	Tujunga Avenue Woodbridge Street	AM PM	4.5 6.1	A A	4.5 6.1	A A	4.5 6.1	A A
18. [c]	Whitsett Avenue Ventura Boulevard	AM PM	51.5 57.0	D E	53.3 64.3	D E	53.6 64.3	D E
19.	Laurel Canyon Boulevard Ventura Place	AM PM	25.4 50.0	C D	26.2 75.5	C E	25.9 74.0	C E
20.	Laurel Canyon Boulevard Ventura Boulevard	AM PM	65.2 44.3	E D	79.9 53.2	E D	73.6 52.0	E D
21. [c]	Retail Driveway-Radford Avenue Ventura Boulevard	AM PM	94.4 110.5	F F	113.7 194.1	F F	110.0 179.5	F F
21. [c]	Ventura Place Ventura Boulevard	AM PM	59.6 145.4	E F	171.6 181.7	F F	153.9 175.9	F F
22.	Carpenter Avenue Ventura Boulevard	AM PM	23.8 36.5	C D	71.0 131.0	E F	48.6 130.2	D F
23. [c]	Colfax Avenue Ventura Boulevard	AM PM	30.5 96.9	C F	53.5 96.3	D F	54.0 96.5	D F
24. [c]	Berry Drive Ventura Boulevard	AM PM	8.2 6.4	A A	8.8 7.2	A A	8.6 6.6	A A
25. [c]	Tujunga Avenue Ventura Boulevard	AM PM	19.7 20.0	B B	20.9 41.0	C D	20.8 27.0	C C
26.	Laurel Canyon Boulevard Maxwellton Road	AM PM	21.8 16.0	C B	22.7 16.3	C B	22.7 16.3	C B
27.	Laurel Canyon Boulevard Laurel Terrace Dr-Sunshine Terrace Dr	AM PM	31.7 40.7	C D	33.9 42.3	C D	33.9 42.3	C D
28. [c]	Laurel Canyon Boulevard Fryman Road	AM PM	34.2 12.7	C B	35.6 13.1	D B	35.6 13.1	D B
29. [a]	Laurel Canyon Boulevard Woodbridge Street	AM PM	253.7 [b]	F F	[b] [b]	F F	[b] [b]	F F
30. [a]	Laurel Canyon Boulevard Valleyheart Drive (North)	AM PM	128.6 215.1	F F	[b] [b]	F F	259.5 [b]	F F
31. [a]	Laurel Canyon Boulevard Valleyheart Drive (South)	AM PM	59.6 224.2	F F	138.1 [b]	F F	116.2 [b]	F F
32. [e]	Radford Avenue Sarah Street	AM PM	8.8 7.4	A A	8.8 7.4	A A	8.8 7.4	A A

Notes:

Delay is measured in seconds per vehicle. LOS = Level of Service

Intersection analysis based on HCM 6th Edition Signalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection, unless otherwise stated.

[a] Intersection analysis based on the HCM 6th Edition Two-Way Stop Control Unsignalized methodology, which calculates the control delay, in seconds, for each individual approach of an intersection. The reported control delay represents the worst-case approach, and does not account for traffic gaps created by adjacent traffic signals.

[b] The reported control delay of the worst-case approach (i.e., minor street of the intersection) exceeds 300 seconds.

[c] Intersection analysis based on HCM 2000 Signalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection.

[d] The intersection is currently and would be unsignalized under with Project without Radford Mobility Connector scenario. Under with Project with Radford Mobility Connector Scenario, the intersection would be signalized.

[e] Intersection analysis based on HCM 6th Edition All-Way Stop Control Unsignalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection.

**TABLE 18
FUTURE CONDITIONS (YEAR 2028)
INTERSECTION CORRIDOR QUEUES**

Intersection	Intersection Spacing (Capacity)	Peak Hour	Approach LOS (Fut w Proj)	95th Percentile Queue (ft)			Project Contribution to Queue (ft) without Radford Mobility Connector	Project Contribution to Queue (ft) with Radford Mobility Connector
				Future without Project Conditions	Future with Project Conditions without Radford Mobility Connector	Future with Project Conditions with Radford Mobility Connector		
Intersection #8. Laurel Canyon Boulevard & Landale Street								
Westbound Through	2,525	A.M. P.M.	D [a] [b]	-- --	-- --	-- --	-- --	-- --
Northbound Through	525	A.M. P.M.	A [a] [b]	-- --	-- --	-- --	-- --	-- --
Southbound Through	595	A.M. P.M.	F [b]	596 --	810 --	810 --	214 --	214 --
Intersection #12. Laurel Canyon Boulevard & Moorpark Street								
Eastbound Through	2,525	A.M. P.M.	F F	470 328	530 338	530 338	60 10	60 10
Westbound Through	2,525	A.M. P.M.	E D [a]	578 --	543 --	620 --	-35 --	42 --
Northbound Through	1,825	A.M. P.M.	F F	1,078 1,650	1,253 2,305	1,218 2,060	175 655	140 410
Southbound Through	515	A.M. P.M.	F F	1,188 1,673	2,035 1,853	1,755 1,735	847 180	567 62
Intersection #14. Colfax Avenue & Moorpark Street								
Eastbound Through	2,525	A.M. P.M.	A [a] A [a]	-- --	-- --	-- --	-- --	-- --
Westbound Through	560	A.M. P.M.	E D [a]	-- --	-- --	-- --	-- --	-- --
Northbound Through	3,200	A.M. P.M.	E F	260 468	245 680	260 680	-15 212	0 212
Southbound Through	570	A.M. P.M.	C [a] C [a]	-- --	-- --	-- --	-- --	-- --
Intersection #19. Laurel Canyon Boulevard & Ventura Place								
Westbound Through	940	A.M. P.M.	[b] F	-- 89	-- 89	-- 89	-- 0	-- 0
Northbound Through	440	A.M. P.M.	[b] C [a]	-- --	-- --	-- --	-- --	-- --
Southbound Through	1,830	A.M. P.M.	[b] C [a]	-- --	-- --	-- --	-- --	-- --
Intersection #20. Laurel Canyon Boulevard & Ventura Boulevard								
Eastbound Through	585	A.M. P.M.	D [a] C [a]	-- --	-- --	-- --	-- --	-- --
Westbound Through	440	A.M. P.M.	D [a] D [a]	-- --	-- --	-- --	-- --	-- --
Northbound Through	880	A.M. P.M.	E D [a]	425 --	548 --	520 --	123 --	95 --
Southbound Through	440	A.M. P.M.	E E	565 470	550 488	590 488	-15 18	25 18

Notes:

All lengths shown in feet based on 25 feet per vehicle. Queues based on 95th percentile queue calculated by the HCM methodology.

[a] The directional approach is not anticipated to operate at LOS E or F. As such, no further corridor queue analysis is not required.

[b] As detailed in Table 16, the intersection is not anticipated to operate at LOS D or worse during this peak hour. As such, a detailed corridor queue analysis is not required.

TABLE 18 (CONT'D)
FUTURE CONDITIONS (YEAR 2028)
INTERSECTION CORRIDOR QUEUES

Intersection	Intersection Spacing (Capacity)	Peak Hour	Approach LOS (Fut w Proj)	95th Percentile Queue (ft)			Project Contribution to Queue (ft) without Radford Mobility Connector	Project Contribution to Queue (ft) with Radford Mobility Connector
				Future without Project Conditions	Future with Project Conditions without Radford Mobility Connector	Future with Project Conditions with Radford Mobility Connector		
Intersection #21a. Ventura Place-Radford Avenue & Ventura Boulevard								
Eastbound Through	90	A.M. P.M.	A [a] A [a]	-- --	-- --	-- --	-- --	-- --
Westbound Through	610	A.M. P.M.	F F	767 725	866 1,001	847 943	99 276	80 218
Southbound Through	315	A.M. P.M.	E F	150 343	180 406	180 406	30 63	30 63
Intersection #21b. Ventura Place & Ventura Boulevard								
Eastbound Through	420	A.M. P.M.	F F	657 916	1,094 1,036	1,030 1,047	437 120	373 131
Westbound Through	95	A.M. P.M.	B [a] C [a]	-- --	-- --	-- --	-- --	-- --
Intersection #22. Carpenter Avenue & Ventura Boulevard								
Eastbound Through	615	A.M. P.M.	D [a] D [a]	-- --	-- --	-- --	-- --	-- --
Westbound Through	935	A.M. P.M.	F F	460 383	768 463	608 443	308 80	148 60
Intersection #23. Colfax Avenue & Ventura Boulevard								
Eastbound Through	935	A.M. P.M.	B [a] B [a]	-- --	-- --	-- --	-- --	-- --
Westbound Through	2,685	A.M. P.M.	D [a] F	-- 693	-- 716	-- 716	-- 23	-- 23

Notes:

All lengths shown in feet based on 25 feet per vehicle. Queues based on 95th percentile queue calculated by the HCM methodology.

[a] The directional approach is not anticipated to operate at LOS E or F. As such, no further corridor queue analysis is not required.

[b] As detailed in Table 16, the intersection is not anticipated to operate at LOS D or worse during this peak hour. As such, a detailed corridor queue analysis is not required.

TABLE 19
FUTURE CONDITIONS (YEAR 2028)
INTERSECTION TURN POCKET QUEUES

Intersection	Turn Pocket Length (ft)	Peak Hour	95th Percentile Queue (ft)			Project Contribution to Queue (ft) without Radford Mobility Connector	Project Contribution to Queue (ft) with Radford Mobility Connector
			Future without Project Conditions	Future with Project Conditions without Radford Mobility Connector	Future with Project Conditions witht Radford Mobility Connector		
Intersection #8. Laurel Canyon Boulevard & Landale Street [a]							
Eastbound Left-Turn	50	A.M. P.M.	189 238	189 238	189 238	0 0	0 0
Northbound Left-Turn	160	A.M. P.M.	50 7	46 8	52 9	-4 1	2 2
Southbound Left-Turn	125	A.M. P.M.	23 90	20 18	20 81	-3 -72	-3 -9
Southbound Right-Turn	120	A.M. P.M.	0 0	0 0	0 0	0 0	0 0
Intersection #12. Laurel Canyon Boulevard & Moorpark Street							
Eastbound Left-Turn	120	A.M. P.M.	603 585	600 588	600 590	-3 3	-3 5
Westbound Left-Turn	490	A.M. P.M.	230 123	245 128	255 135	15 5	25 12
Westbound Right-Turn	2525	A.M. P.M.	78 48	68 73	138 135	-10 25	60 87
Northbound Left-Turn	155	A.M. P.M.	73 63	80 213	80 200	7 150	7 137
Southbound Left-Turn	155	A.M. P.M.	43 65	45 58	113 83	2 -7	70 18
Intersection #14. Colfax Avenue & Moorpark Street							
Eastbound Left-Turn	180	A.M. P.M.	55 60	60 58	58 58	5 -2	3 -2
Westbound Left-Turn	90	A.M. P.M.	258 203	493 238	303 210	235 35	45 7
Northbound Left-Turn	75	A.M. P.M.	245 220	318 270	283 248	73 50	38 28
Northbound Right-Turn	190	A.M. P.M.	195 245	175 308	160 220	-20 63	-35 -25
Southbound Left-Turn	95	A.M. P.M.	123 125	108 130	113 130	-15 5	-10 5
Southbound Right-Turn	190	A.M. P.M.	70 78	63 80	105 98	-7 2	35 20
Intersection #19. Laurel Canyon Boulevard & Ventura Place [a]							
Westbound Right-Turn	40	A.M. P.M.	62 214	68 339	68 339	6 125	6 125
Northbound Left-Turn	105	A.M. P.M.	11 21	11 22	11 22	0 1	0 1
Southbound Left-Turn	55	A.M. P.M.	88 178	94 199	92 194	6 21	4 16

TABLE 19 (CONT'D)
FUTURE CONDITIONS (YEAR 2028)
INTERSECTION TURN POCKET QUEUES

Intersection	Turn Pocket Length (ft)	Peak Hour	95th Percentile Queue (ft)			Project Contribution to Queue (ft) without Radford Mobility Connector	Project Contribution to Queue (ft) with Radford Mobility Connector
			Future without Project Conditions	Future with Project Conditions without Radford Mobility Connector	Future with Project Conditions with Radford Mobility Connector		
Intersection #20. Laurel Canyon Boulevard & Ventura Boulevard							
Eastbound Left-Turn	370	A.M. P.M.	125 168	123 168	123 168	-2 0	-2 0
Eastbound Right-Turn	45	A.M. P.M.	255 63	260 63	255 63	5 0	0 0
Westbound Left-Turn	220	A.M. P.M.	325 200	458 240	435 245	133 40	110 45
Westbound Right-Turn	20	A.M. P.M.	45 70	90 200	75 163	45 130	30 93
Northbound Left-Turn	180	A.M. P.M.	208 228	215 258	215 258	7 30	7 30
Northbound Right-Turn	215	A.M. P.M.	170 173	230 195	228 195	60 22	58 22
Southbound Left-Turn	175	A.M. P.M.	78 145	305 223	263 205	227 78	185 60
Southbound Right-Turn	140	A.M. P.M.	123 150	123 120	125 120	0 -30	2 -30
Intersection #21a. Ventura Place-Radford Avenue & Ventura Boulevard [a]							
Eastbound Left-Turn	90	A.M. P.M.	101 83	157 87	171 89	56 4	70 6
Westbound Left-Turn	95	A.M. P.M.	132 251	132 251	131 251	0 0	-1 0
Westbound Right-Turn	50	A.M. P.M.	167 138	152 136	152 136	-15 -2	-15 -2
Southbound Left-Turn	90	A.M. P.M.	114 196	117 164	117 164	3 -32	3 -32
Southeastbound Right-Turn	90	A.M. P.M.	0 253	0 438	0 438	0 185	0 185
Intersection #21b. Ventura Place & Ventura Boulevard [a]							
Southbound Left-Turn	50	A.M. P.M.	54 108	52 116	52 108	-2 8	-2 0
Southbound Right-Turn	50	A.M. P.M.	31 28	30 31	30 28	-1 3	-1 0
Intersection #22. Carpenter Avenue & Ventura Boulevard							
Eastbound Left-Turn	70	A.M. P.M.	18 30	235 198	70 163	217 168	52 133
Westbound Left-Turn	55	A.M. P.M.	140 190	143 180	145 175	3 -10	5 -15
Intersection #23. Colfax Avenue & Ventura Boulevard [a]							
Eastbound Left-Turn	160	A.M. P.M.	104 246	130 152	122 141	26 -94	18 -105
Southbound Left-Turn	150	A.M. P.M.	331 306	338 331	338 331	7 25	7 25
Southbound Right-Turn	150	A.M. P.M.	50 32	119 41	83 34	69 9	33 2

Notes:

All lengths shown in feet based on 25 feet per vehicle. Queues based on 95th percentile queue calculated by the HCM methodology.

[a] Queues based on 95th percentile queue (in feet) as calculated by Synchro software.

**TABLE 20
FUTURE CONDITIONS (YEAR 2045)
INTERSECTION CORRIDOR QUEUES**

Intersection	Intersection Spacing (Capacity)	Peak Hour	Approach LOS (Fut w Proj)	95th Percentile Queue (ft)			Project Contribution to Queue (ft) without Radford Mobility Connector	Project Contribution to Queue (ft) with Radford Mobility Connector
				Future without Project Conditions	Future with Project Conditions without Radford Mobility Connector	Future with Project Conditions with Radford Mobility Connector		
Intersection #8. Laurel Canyon Boulevard & Landale Street								
Westbound Through	2,525	A.M. P.M.	D [a] D [a]	-- --	-- --	-- --	-- --	-- --
Northbound Through	525	A.M. P.M.	B [a] C [a]	-- --	-- --	-- --	-- --	-- --
Southbound Through	595	A.M. P.M.	F E	680 765	892 833	892 833	212 68	212 68
Intersection #12. Laurel Canyon Boulevard & Moorpark Street								
Eastbound Through	2,525	A.M. P.M.	F F	590 370	658 385	658 385	68 15	68 15
Westbound Through	2,525	A.M. P.M.	F E	725 710	688 710	763 743	-37 0	38 33
Northbound Through	1,825	A.M. P.M.	F F	1,360 1,990	1,540 2,640	1,493 2,395	180 650	133 405
Southbound Through	515	A.M. P.M.	F F	1,643 1,925	2,393 2,140	2,065 2,028	750 215	422 103
Intersection #14. Colfax Avenue & Moorpark Street								
Eastbound Through	2,525	A.M. P.M.	B [a] B [a]	-- --	-- --	-- --	-- --	-- --
Westbound Through	560	A.M. P.M.	F D [a]	543 --	603 --	655 --	60 --	112 --
Northbound Through	3,200	A.M. P.M.	F F	273 685	268 840	275 765	-5 155	2 80
Southbound Through	570	A.M. P.M.	D [a] C [a]	-- --	-- --	-- --	-- --	-- --
Intersection #19. Laurel Canyon Boulevard & Ventura Place								
Westbound Through	940	A.M. P.M.	[b] F	-- 97	-- 97	-- 97	-- 0	-- 0
Northbound Through	440	A.M. P.M.	[b] C [a]	-- --	-- --	-- --	-- --	-- --
Southbound Through	1,830	A.M. P.M.	[b] D [a]	-- --	-- --	-- --	-- --	-- --
Intersection #20. Laurel Canyon Boulevard & Ventura Boulevard								
Eastbound Through	585	A.M. P.M.	C [a] E	-- 215	-- 203	-- 203	-- -12	-- -12
Westbound Through	440	A.M. P.M.	F E	298 343	298 355	303 360	0 12	5 17
Northbound Through	880	A.M. P.M.	F F	555 350	628 408	628 385	73 58	73 35
Southbound Through	440	A.M. P.M.	F F	740 593	723 605	725 605	-17 12	-15 12

Notes:

All lengths shown in feet based on 25 feet per vehicle. Queues based on 95th percentile queue calculated by the HCM methodology.

[a] The directional approach is not anticipated to operate at LOS E or F. As such, no further corridor queue analysis is not required.

[b] As detailed in Table 17, the intersection is not anticipated to operate at LOS D or worse during this peak hour. As such, a detailed corridor queue analysis is not required.

TABLE 20 (CONT'D)
FUTURE CONDITIONS (YEAR 2045)
INTERSECTION CORRIDOR QUEUES

Intersection	Intersection Spacing (Capacity)	Peak Hour	Approach LOS (Fut w Proj)	95th Percentile Queue (ft)			Project Contribution to Queue (ft) without Radford Mobility Connector	Project Contribution to Queue (ft) with Radford Mobility Connector
				Future without Project Conditions	Future with Project Conditions without Radford Mobility Connector	Future with Project Conditions with Radford Mobility Connector		
Intersection #21a. Ventura Place-Radford Avenue & Ventura Boulevard								
Eastbound Through	90	A.M. P.M.	A [a] A [a]	-- --	-- --	-- --	-- --	-- --
Westbound Through	610	A.M. P.M.	F F	853 808	953 1,083	932 1,025	100 275	79 217
Southbound Through	315	A.M. P.M.	E F	161 371	201 434	201 434	40 63	40 63
Intersection #21b. Ventura Place & Ventura Boulevard								
Eastbound Through	420	A.M. P.M.	F F	742 1,019	1,176 1,176	1,113 1,151	434 157	371 132
Westbound Through	95	A.M. P.M.	C [a] C [a]	-- --	-- --	-- --	-- --	-- --
Intersection #22. Carpenter Avenue & Ventura Boulevard								
Eastbound Through	615	A.M. P.M.	D [a] E	-- 398	-- 753	-- 703	-- 355	-- 305
Westbound Through	935	A.M. P.M.	E B [a]	473 --	800 --	590 --	327 --	117 --
Intersection #23. Colfax Avenue & Ventura Boulevard								
Eastbound Through	935	A.M. P.M.	B [a] B [a]	-- --	-- --	-- --	-- --	-- --
Westbound Through	2,685	A.M. P.M.	D [a] F	-- 770	-- 796	-- 796	-- 26	-- 26

Notes:

All lengths shown in feet based on 25 feet per vehicle. Queues based on 95th percentile queue calculated by the HCM methodology.

[a] The directional approach is not anticipated to operate at LOS E or F. As such, no further corridor queue analysis is not required.

[b] As detailed in Table 17, the intersection is not anticipated to operate at LOS D or worse during this peak hour. As such, a detailed corridor queue analysis is not required.

TABLE 21
FUTURE CONDITIONS (YEAR 2045)
INTERSECTION TURN POCKET QUEUES

Intersection	Turn Pocket Length (ft)	Peak Hour	95th Percentile Queue (ft)			Project Contribution to Queue (ft) without Radford Mobility Connector	Project Contribution to Queue (ft) with Radford Mobility Connector
			Future without Project Conditions	Future with Project Conditions without Radford Mobility Connector	Future with Project Conditions with Radford Mobility Connector		
Intersection #8. Laurel Canyon Boulevard & Landale Street [a]							
Eastbound Left-Turn	50	A.M. P.M.	211 266	211 266	211 266	0 0	0 0
Northbound Left-Turn	160	A.M. P.M.	50 8	47 6	52 9	-3 -2	2 1
Southbound Left-Turn	125	A.M. P.M.	26 86	22 79	22 79	-4 -7	-4 -7
Southbound Right-Turn	120	A.M. P.M.	206 59	202 58	202 58	-4 -1	-4 -1
Intersection #12. Laurel Canyon Boulevard & Moorpark Street							
Eastbound Left-Turn	120	A.M. P.M.	740 735	740 735	740 735	0 0	0 0
Westbound Left-Turn	490	A.M. P.M.	313 158	318 158	323 165	5 0	10 7
Westbound Right-Turn	2525	A.M. P.M.	85 80	75 80	148 208	-10 0	63 128
Northbound Left-Turn	155	A.M. P.M.	80 170	90 255	90 255	10 85	10 85
Southbound Left-Turn	155	A.M. P.M.	48 58	50 58	128 83	2 0	80 25
Intersection #14. Colfax Avenue & Moorpark Street							
Eastbound Left-Turn	180	A.M. P.M.	63 65	68 65	65 65	5 0	2 0
Westbound Left-Turn	90	A.M. P.M.	303 210	605 263	365 230	302 53	62 20
Northbound Left-Turn	75	A.M. P.M.	303 320	473 385	378 310	170 65	75 -10
Northbound Right-Turn	190	A.M. P.M.	203 300	193 353	173 235	-10 53	-30 -65
Southbound Left-Turn	95	A.M. P.M.	128 150	113 150	115 148	-15 0	-13 -2
Southbound Right-Turn	190	A.M. P.M.	75 90	70 88	103 103	-5 -2	28 13
Intersection #19. Laurel Canyon Boulevard & Ventura Place [a]							
Westbound Right-Turn	40	A.M. P.M.	76 251	91 376	91 376	15 125	15 125
Northbound Left-Turn	105	A.M. P.M.	10 21	9 24	9 23	-1 3	-1 2
Southbound Left-Turn	55	A.M. P.M.	114 207	126 183	122 224	12 -24	8 17

TABLE 21 (CONT'D)
FUTURE CONDITIONS (YEAR 2045)
INTERSECTION TURN POCKET QUEUES

Intersection	Turn Pocket Length (ft)	Peak Hour	95th Percentile Queue (ft)			Project Contribution to Queue (ft) without Radford Mobility Connector	Project Contribution to Queue (ft) with Radford Mobility Connector
			Future without Project Conditions	Future with Project Conditions without Radford Mobility Connector	Future with Project Conditions with Radford Mobility Connector		
Intersection #20. Laurel Canyon Boulevard & Ventura Boulevard							
Eastbound Left-Turn	370	A.M. P.M.	120 175	115 203	115 203	-5 28	-5 28
Eastbound Right-Turn	45	A.M. P.M.	288 70	265 65	273 65	-23 -5	-15 -5
Westbound Left-Turn	220	A.M. P.M.	543 233	688 260	643 265	145 27	100 32
Westbound Right-Turn	20	A.M. P.M.	45 73	93 203	78 165	48 130	33 92
Northbound Left-Turn	180	A.M. P.M.	280 245	273 295	273 295	-7 50	-7 50
Northbound Right-Turn	215	A.M. P.M.	178 165	230 183	230 183	52 18	52 18
Southbound Left-Turn	175	A.M. P.M.	83 155	420 255	295 235	337 100	212 80
Southbound Right-Turn	140	A.M. P.M.	138 128	140 133	138 133	2 5	0 5
Intersection #21a. Ventura Place-Radford Avenue & Ventura Boulevard [a]							
Eastbound Left-Turn	90	A.M. P.M.	90 83	137 87	146 89	47 4	56 6
Westbound Left-Turn	95	A.M. P.M.	149 277	149 277	149 277	0 0	0 0
Westbound Right-Turn	50	A.M. P.M.	180 147	167 146	167 146	-13 -1	-13 -1
Southbound Left-Turn	90	A.M. P.M.	123 220	126 181	126 181	3 -39	3 -39
Southbound Right-Turn	90	A.M. P.M.	0 277	0 459	0 459	0 182	0 182
Intersection #21b. Ventura Place & Ventura Boulevard [a]							
Southbound Left-Turn	50	A.M. P.M.	58 116	56 116	56 116	-2 0	-2 0
Southbound Right-Turn	50	A.M. P.M.	32 31	31 31	31 31	-1 0	-1 0
Intersection #22. Carpenter Avenue & Ventura Boulevard							
Eastbound Left-Turn	70	A.M. P.M.	20 38	535 195	345 168	515 157	325 130
Westbound Left-Turn	55	A.M. P.M.	140 395	120 213	123 203	-20 -182	-17 -192
Intersection #23. Colfax Avenue & Ventura Boulevard [a]							
Eastbound Left-Turn	160	A.M. P.M.	117 326	129 166	136 143	12 -160	19 -183
Southbound Left-Turn	150	A.M. P.M.	355 325	362 352	362 352	7 27	7 27
Southbound Right-Turn	150	A.M. P.M.	64 33	144 52	104 43	80 19	40 10

Notes:

All lengths shown in feet based on 25 feet per vehicle. Queues based on 95th percentile queue calculated by the HCM methodology.

[a] Queues based on 95th percentile queue (in feet) as calculated by Synchro software.

TABLE 22
PROJECT DRIVEWAY LEVEL OF SERVICE OPERATIONS (YEAR 2028)

Access Point [a]	Peak Hour	Future with Project without Radford Mobility Connector		Future with Project with Radford Mobility Connector	
		Delay	LOS	Delay	LOS
Moorpark Gate	AM	0.0	A	8.9	A
	PM	0.0	A	7.9	A
Sater Parking Structure Gate	AM	9.4	A	8.8	A
	PM	10.1	B	9.4	A
Radford Gate	AM	13.4	B	13.4	B
	PM	13.6	B	13.6	B
Carpenter Gate	AM	15.6	C	11.5	B
	PM	13.2	B	10.6	B
Colfax Gate [b]	AM	91.9	F	48.7	E
	PM	269.4	F	113.9	F

Notes:

- [a] Unless otherwise noted, operational analysis is based on *Highway Capacity Manual, 6th Edition* (Transportation Research Board, 2016) (HCM) All-Way Stop Control Unsignalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection.
- [b] Operational analysis is based on HCM 6th Edition Two-Way Stop Control methodology, which calculates the control delay, in seconds, for each individual approach of an intersection. The reported control delay represents the worst-case approach, and does not account for traffic gaps created by adjacent traffic signals.

TABLE 23
PROJECT DRIVEWAY LEVEL OF SERVICE OPERATIONS (YEAR 2045)

Access Point [a]	Peak Hour	Future with Project without Radford Mobility Connector		Future with Project with Radford Mobility Connector	
		Delay	LOS	Delay	LOS
Moorpark Gate	AM	--	N/A	8.9	A
	PM	--	N/A	7.9	A
Sater Parking Structure Gate	AM	9.5	A	8.8	A
	PM	10.2	B	9.5	A
Radford Gate	AM	14.2	B	14.2	B
	PM	14.7	B	14.7	B
Carpenter Gate	AM	16.1	C	11.7	B
	PM	13.4	B	10.7	B
Colfax Gate [b]	AM	127.1	F	60.8	F
	PM	404.0	F	168.6	F

Notes:

- [a] Unless otherwise noted, operational analysis is based on *Highway Capacity Manual, 6th Edition* (Transportation Research Board, 2016) (HCM) All-Way Stop Control Unsignalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection.
- [b] Operational analysis is based on HCM 6th Edition Two-Way Stop Control methodology, which calculates the control delay, in seconds, for each individual approach of an intersection. The reported control delay represents the worst-case approach, and does not account for traffic gaps created by adjacent traffic signals.

Section 5C

Residential Street Cut-Through Analysis

This chapter summarizes the non-CEQA residential street cut-through analysis for the Project, which was conducted in accordance with the methodology provided in TAG Section 3.5.

RESIDENTIAL STREET ANALYSIS METHODOLOGY

As described in the TAG, an increase in ADT volumes on a local residential street can adversely affect the character and function of those streets. The objective of a residential street segment analysis is to determine a project's potential to add cut-through traffic to a residential street. Cut-through trips are defined as vehicles that bypass a congested arterial or intersection and instead opt to travel along a residential street. Per Section 3.5 of the TAG, analysis is required for residential street segments if all of the following conditions are met:

- *The project is located along a currently congested Boulevard or Avenue and adds trips that may lead to trip diversion to parallel routes along residential Local Streets. The congestion level of the Boulevard or Avenue can be determined based on the estimated peak hour LOS under project conditions of the study intersection(s)... LOS E and F are considered to represent congested conditions;*
- *The project is projected to add a substantial amount of automobile traffic to the congested Boulevard(s), Avenue(s), or Collector Street(s) that could potentially cause a shift to alternative route(s); and*
- *Nearby local residential street(s) (defined as Local streets as designated in the City's General Plan passing through a residential neighborhood) provide motorists with a viable alternative route. A viable alternative route is defined as one which is parallel and reasonably adjacent to the primary route as to make it attractive as an alternative to the primary route. LADOT has discretion to define which routes are viable alternative routes, based on, but not limited to, features such as geography and presence of existing traffic control devices, etc.*

A local residential street would be considered to be potentially burdened based on an increase in the projected ADT on the street as follows:

Projected ADT with Project (Final ADT)

1 to 999
1,000 to 1,999
2,000 to 2,999
3,000 or more

Project-Related Increase in ADT

120 or more
12% or more of final ADT
10% or more of final ADT
8% or more of final ADT

Should a local residential street be identified as potentially burdened, traffic calming measures would be proposed to reduce the amount or effects of cut-through traffic. This analysis assumes potential Project-related traffic increases on each street segment based on the most stringent threshold, i.e., 120 or more Project-related ADT, despite the fact that most of the street segments likely carry more than 999 daily trips.

Arterial Corridors Meeting Project Trip Threshold

As previously detailed, vehicular access to the Project Site would be provided along the Project perimeter on Radford Avenue, Colfax Avenue, and Moorpark Street, all of which are designated Avenues or Collector Streets in the Mobility Plan. Additional access would also be provided along the adjacent public alley via Ventura Boulevard, Carpenter Avenue, and Colfax Avenue. Residential uses are located immediately north, east, and west of the Project Site. Residential uses are also located south of the Project Site and are separated by local commercial land uses located to the north and south of Ventura Boulevard. The residential streets provide connectivity to major streets in the vicinity and provide potential alternatives to Laurel Canyon Boulevard, Colfax Avenue, Ventura Boulevard, and Moorpark Street.

For the purposes of this analysis, corridors to which the Project may add 1,200 or more daily trips were examined, assuming that approximately 10% of these trips, or 120 trips, may shift to alternative routes on average across a 24-hour period (the proportion that may shift could be higher than 10% during congested peak periods of the day but much less than 10% or almost none during uncongested non-peak periods of the day). As discussed in Section 4.2, the Project is estimated to generate approximately 16,435 daily trips on a typical weekday. Based on the trip distribution percentages detailed in Figures 8 to 12, the arterial corridors within the Study Area to which the Project could add 1,200 or more trips, either with or without the Radford Mobility Connector, include the following:

- Laurel Canyon Boulevard between US 101 and Ventura Boulevard
- Colfax Avenue between Moorpark Street and Ventura Boulevard
- Moorpark Street between Laurel Canyon Boulevard and Colfax Avenue
- Ventura Boulevard between Laurel Canyon Boulevard and Tujunga Avenue

Intersections Operating at LOS E or F along Affected Corridors

For the purposes of this analysis, the intersection operational conditions under Future with Project Conditions (Year 2028) were reviewed. The following intersections along the affected corridors listed above are projected to operate at LOS E or F under Future with Project Conditions, with and without the Radford Mobility Connector, as detailed in Table 16:

8. Laurel Canyon Boulevard & Landale Street (AM peak hour)
12. Laurel Canyon Boulevard & Moorpark Street (AM and PM peak hours)
18. Whitsett Avenue & Ventura Boulevard (AM and PM peak hours)
20. Laurel Canyon Boulevard & Ventura Boulevard (AM and PM peak hours)
21. Ventura Place/Radford Avenue & Ventura Boulevard (AM and PM peak hours)
23. Colfax Avenue & Ventura Boulevard (AM and PM peak hours)
29. Laurel Canyon Boulevard & Woodbridge Street (AM and PM peak hours)
30. Laurel Canyon Boulevard & Valleyheart Drive (North) (AM and PM peak hours)
31. Laurel Canyon Boulevard & Valleyheart Drive (South) (AM and PM peak hours)

Based on the intersections identified above, Laurel Canyon Boulevard, Colfax Avenue, Moorpark Street, and Ventura Boulevard were all examined for the potential for use of alternative routes through residential neighborhoods.

Potential Neighborhood Alternative Routes

On the basis of the analysis above, the residential streets in the following four neighborhoods to the north (North Neighborhood), east (East Neighborhood), south (South Neighborhood), and west (West Neighborhood) of the Project Site were examined for the availability of parallel local streets that could be used as a cut-through route to avoid arterial congestion.

- North Neighborhood: The neighborhood to the north of the Project Site is generally bounded by US 101 to the north, Colfax Avenue to the east, Moorpark Street to the south, and Laurel Canyon Boulevard to the west.
- East Neighborhood: The neighborhood to the east of the Project Site is generally bounded by Moorpark Street to the north, Tujunga Avenue to the east, the Los Angeles River to the south, and Colfax Avenue to the west.
- South Neighborhood: The neighborhood to the south of the Project Site is generally bounded by Ventura Boulevard to the north, Carpenter Avenue to the east, Sunshine Terrace to the south, and Whitsett Avenue to the west.
- West Neighborhood: The neighborhood to the west of the Project Site is generally bounded by Moorpark Street to the north, Radford Avenue to the east, Ventura Boulevard to the south, and Laurel Canyon Boulevard to the west.

The boundaries of the four neighborhoods are shown in Figure 36.

NEIGHBORHOOD TRAFFIC MANAGEMENT PLAN (NTMP)

NTMP Process

LADOT has developed an iterative process, through which neighborhoods most directly affected by a project's potential cut-through traffic effects are included in the process to develop, evaluate, and implement traffic calming options preferred as part of a NTMP to minimize these types of issues. In some cases, the community may decide to implement traffic calming measures, and in others, the measures themselves may be considered undesirable, and no improvements are implemented.

This NTMP process includes the collection of new traffic data after the approval of a project to assess the actual effects of project trips and multiple community workshops with potentially affected residents and LADOT, during which a mutually acceptable NTMP would be formed.

Traffic calming measures that have been shown to reduce neighborhood cut-through traffic, as well as address existing neighborhood transportation and mobility concerns, may include non-restrictive traffic control measures such as traffic circles, speed humps, roadway narrowing (e.g., raised medians and traffic chokers), landscaping features, roadway striping changes (e.g., bicycle lanes or parking striping to reduce the perceived width of the roadway), stop signs, new sidewalks,

and new pedestrian amenities. Traffic calming measures may also include more restrictive physical/operational measures such as turn restrictions, cul-de-sacs, traffic diverters, and street blockers. However, those more restrictive measures themselves have the potential to divert traffic to another residential street. As measures are considered, the surrounding street network must be carefully evaluated to avoid shifting impacts from one area to another.

A toolbox of typical neighborhood measures is provided in Appendix H. The toolbox also identifies the effects of each of these measures in terms of cut-through traffic reduction, speed reduction, directional control, noise, safety emergency response time, and the relative cost of implementation of these measures. While most of the measures would also help in speed reduction, noise reduction, and increased safety, these measures may also result in an increase in emergency response time.

The traffic calming measures detailed in Appendix H have been used in various communities and have been proven to be effective at reducing neighborhood intrusion impacts by reducing or eliminating neighborhood intrusion traffic and/or improving the appearance of a neighborhood. For example, turn restrictions limit the ability of vehicles to move from the main arterial to the alternative neighborhood streets during peak hours, cul-de-sacs and street closures cut off the ability to connect to the main corridors, and speed humps and stop signs slow the travel time on neighborhood streets, which eliminates the incentive to divert from the main corridor.

However, traffic calming measures sometimes may not achieve consensus support or may be considered undesirable to a neighborhood because they may alter the neighborhood's character or frustrate residents (e.g., by having to stop at multiple intersections, reducing lanes). Whether such measures are helpful or undesirable overall depends on each community's preferences and is inherently subjective unless and until a specific neighborhood intrusion impact is observed and studied, measures are developed to address the traffic intrusion, and the community is consulted and polled to determine the community's wishes. If the community does not support certain measures, then such measures are deemed to be infeasible and will not be imposed upon a community.

Accordingly, the NTMP process typically involves numerous meetings with the neighbors to identify any current mobility or safety problems, discuss future issues that might result from increased traffic volumes, and identify potential NTMP measures to address these conditions.

The neighbors review the proposed measures and, if there appears to be support for some or all of the suggestions, the traffic calming measures are implemented incrementally. Measures are often implemented on a trial basis so that the neighbors may experience the traffic flows in the neighborhood with the new measures in place and evaluate the effectiveness of the measures in addressing the problems. If there is support for the measures after the trial period, they are implemented permanently.

Early NTMP Efforts

The neighborhood traffic analysis is not required for CEQA purposes during the EIR process, and the NTMP process typically begins after a project is approved. Nevertheless, the Project Applicant has voluntarily begun the NTMP process described above in the four neighborhoods identified in Figure 36. Individual, small group, and neighborhood-wide meetings and public workshops with each of the neighborhoods have been underway since October 2023. These early meetings and workshops were intended to identify existing mobility and safety issues in each neighborhood and identify neighborhood-recommended traffic calming and mobility measures. The meetings also served to inform the design of the Project itself so that refinements, including, but not limited to, increased queuing depth at Project driveways, could be incorporated into the site plan to minimize the potential effect of the Project on the neighborhoods. Appendix H provides a summary of neighborhood comments, input, and ideas, including in graphical form.

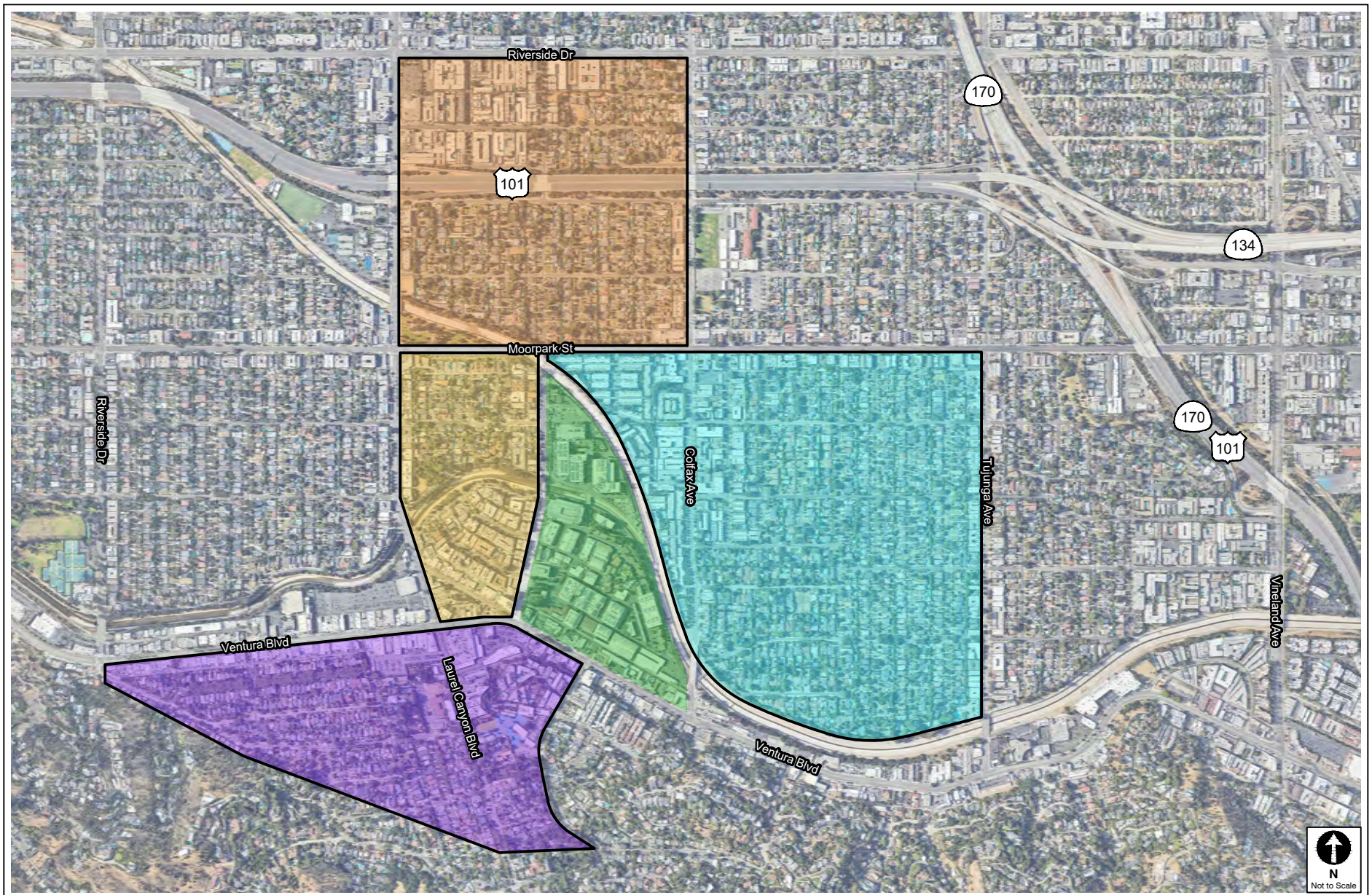
While the general concerns and issue areas are similar in the four neighborhoods, representatives from each neighborhood have identified specific topics that relate to their particular geographic area. Because the issues and concerns in each neighborhood are different, the detailed NTMP plans for each neighborhood would utilize different measures and strategies to minimize the identified issues and concerns. For this reason, it is important that the detailed NTMP plans be prepared by each individual neighborhood in consultation with LADOT.

It should be emphasized that the information provided in Appendix H does not represent recommendations by the Project Applicant or LADOT. Rather, Appendix H presents summaries of all the issues, ideas, and suggestions from the neighborhood meetings and workshops provided for informational purposes and to provide the neighborhoods with a record of the

progress thus far and a starting point for the future planning efforts to refine these ideas into a comprehensive plan for each neighborhood.

NTMP Recommendations

As detailed in Chapter 6, the Project Applicant would continue the NTMP process in each of the four study neighborhoods by funding and coordinating the implementation of the NTMP studies already begun as part of the Project planning efforts. As a component of the Project's NTMP contribution, the Applicant would contribute up to \$125,000 per neighborhood to assist with the funding of an NTMP study in each neighborhood and the implementation of the measures approved by LADOT and supported by stakeholders.



POTENTIALLY AFFECTED NEIGHBORHOODS

FIGURE
36

Section 5D

Project Construction Assessment

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

CONSTRUCTION EVALUATION CRITERIA

Section 3.4.3 of the TAG identifies the following three types of in-street construction constraints that require further analysis to assess the effects of Project construction on the existing pedestrian, bicycle, transit, or vehicle circulation:

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

The factors to be considered include the magnitude and duration of the temporary loss of access and transportation facilities, the potential inconvenience caused to users of the transportation system, and consideration for public safety. Construction activities could potentially interfere with pedestrian, bicycle, transit, or vehicle circulation and accessibility to adjoining areas. As detailed in Section 3.4.4 of the TAG, the proposed construction plans should be reviewed to determine whether construction activities would require any of the following actions:

- Street, sidewalk, or lane closures
- Block existing vehicle, bicycle, or pedestrian access along a street or to parcels fronting the street
- Modification of access to transit stations, stops, or facilities during revenue hours

- Closure or movement of an existing bus stop or rerouting of an existing bus line
- Creation of transportation hazards

PROPOSED CONSTRUCTION SCHEDULE

The Project is anticipated to be constructed in one phase, with a total construction period of approximately 39 months, with an anticipated completion in Year 2028.⁸ As previously detailed, the Project is seeking a Development Agreement with a term of 20 years, which could extend the full buildout to Year 2045. Nevertheless, the scope of the Project is the same regardless of buildout timeline. Further, while the Project could be constructed over the course of 20 years, no single construction project would be ongoing for that duration, nor would construction be constantly occurring on the Project Site for 20 years.

The construction period would include subphases of demolition, grading, foundation, building structure/exterior, and finishes. Construction vehicle, worker travel, and other associated construction information was provided by the Project team. Based on the construction data estimates, it was determined that the peak haul truck activity would occur during the overlap of the grading, foundation, building structure/exterior, and finishes subphases, and peak construction worker activity would occur during the overlap of the demolition, grading, foundation, building structure/exterior, and finishes subphases. These two periods of construction were studied in greater detail.

PEAK HAUL TRUCK ACTIVITY

The peak period of Project construction truck activity would occur during the overlap of the grading, foundation, building structure/exterior, and finishes subphases for the Project. As further detailed below, no substantial peak hour construction traffic effects are anticipated during this time with the implementation of the Construction Traffic Management Plan.

⁸ Construction of the Radford Mobility Connector may be completed after Year 2028.

Haul trucks would travel on approved truck routes designated within the City to a designated landfill site located in the City of Sylmar or the City of Castaic. Based on the proposed haul truck route plans and given the Project's proximity to US 101, approximately 0.35 miles north of the Project Site, haul and delivery trucks would travel between the Project Site and US 101 via one of the following route options:

1. Incoming Truck Route 1: Empty trucks would exit US 101 at Laurel Canyon Boulevard, head south on Laurel Canyon Boulevard, turn left on Ventura Boulevard heading east, and turn left on Colfax Avenue where trucks would enter the Project Site at the Colfax Gate.
2. Incoming Truck Route 2: Empty trucks would exit US 101 at Laurel Canyon Boulevard, head south on Laurel Canyon Boulevard, turn left on Moorpark Street heading east, turn right on Colfax Avenue heading south, and enter the Project Site at the Colfax Gate.
3. Incoming Truck Route 3: Empty trucks would exit US 101 at Laurel Canyon Boulevard, head south on Laurel Canyon Boulevard, turn left on Ventura Boulevard heading east, and turn left on Carpenter Avenue into the Carpenter Gate.⁹
4. Incoming Truck Route 4: Empty trucks would exit US 101 at Laurel Canyon Boulevard, head south on Laurel Canyon Boulevard, turn left on Moorpark Street heading east, turn right on Colfax Avenue heading south, turn right on Ventura Boulevard heading west and turn right on Carpenter Avenue into the Carpenter Gate.
5. Incoming Truck Route 5: Empty trucks would exit US 101 at Laurel Canyon Boulevard, head south on Laurel Canyon Boulevard, turn left on Ventura Boulevard heading east, turn left onto Radford Avenue and enter the Project Site at the Radford Gate.
6. Incoming Truck Route 6: Once the Radford Mobility Connector is complete, incoming trucks could exit US 101 at Laurel Canyon Boulevard, head south on Laurel Canyon Boulevard, turn left on Moorpark Street heading east, and turn right on Radford Avenue to enter the Project Site entrance within the northern portion of the Project Site.
7. Outgoing Truck Route 1: Loaded trucks would exit the Project Site at the Colfax Gate, turn right on Colfax Avenue heading south, turn right on Ventura Boulevard heading west, turn right on Laurel Canyon Boulevard heading north, and then enter US 101.
8. Outgoing Truck Route 2: Loaded trucks would exit the Project Site at the Colfax Gate, turn left on Colfax Avenue heading north, turn left on Moorpark Street

⁹ Carpenter Gate would be added after the demolition of the buildings along the alley.

heading west, turn right on Laurel Canyon Boulevard heading north, and then enter US 101.

9. Outgoing Truck Route 3: Loaded trucks would exit the Project Site at Carpenter Avenue, turn right on Ventura Boulevard heading west, turn right on Laurel Canyon Boulevard heading north, and then enter US 101.
10. Outgoing Truck Route 4: Loaded trucks would exit the Project Site at the Carpenter Gate, turn left on Ventura Boulevard heading east (or alternatively turn left on the public alley heading east), turn left on Colfax Avenue heading north, turn left on Moorpark Street heading west, turn right on Laurel Canyon Boulevard heading north, and then enter US 101.
11. Outgoing Truck Route 5: Loaded trucks would exit the Project Site at the Radford Gate heading south on Radford Avenue, turn right on Ventura Place heading west, turn right on Laurel Canyon Boulevard heading north, and then enter US 101.
12. Outgoing Truck Route 6: Once the Radford Mobility Connector is complete, loaded trucks could exit the northern portion of the Project Site at Radford Avenue, turn left on Moorpark Street, turn right on Laurel Canyon Boulevard heading north, and then enter US 101.

The internal circulation network on the Project Site would provide connections between the Project driveways and the construction areas. The proposed haul route will be reviewed and approved by the City.

Trip Generation

It is anticipated that haul truck activity would typically occur between 9:00 AM and 3:30 PM on weekdays and 8:00 AM and 4:00 PM on Saturdays. No off-site construction-related truck travel would occur on Sundays or holidays, to the extent feasible.

Based on construction projections prepared for the Project, the overlap of the subphases is estimated to require up to approximately 448 one-way haul and delivery truck trips per day. Thus, up to approximately 896 daily truck trips (448 inbound, 448 outbound) are forecasted to occur during this overlap of subphases, with approximately 150 trips per hour (75 inbound, 75 outbound) uniformly over a typical six-hour hauling period. Because construction trucks are larger and slower than the passenger vehicles that make up the majority of the vehicles on the roads, they have an effect on traffic that is greater than a passenger vehicle's effect. *Transportation Research Circular No. 212, Interim Materials on Highway Capacity* (Transportation Research Board, 1980) defines

passenger car equivalency (PCE) for a vehicle as the number of through moving passenger cars to which it is equivalent based on the vehicle's headway and delay-creating effects. Table 8 of *Transportation Research Circular No. 212* and Exhibit 22.11 of the HCM suggest a PCE of 2.0 for trucks traveling on level terrain. Assuming a PCE factor of 2.0, the approximately 896 daily truck trips would be equivalent to approximately 1,792 daily PCE trips. The approximately 170 150 truck trips would be equivalent to approximately 300 PCE trips per hour (150 inbound, 150 outbound).

In addition, during this subphase, construction workers would park on-site at the existing parking. A maximum of approximately 363 construction worker vehicles are anticipated on-site during the overlap of these subphases. On most of the workdays during this subphase, it is estimated that there would be far fewer workers than on the peak day.

An operational evaluation of this peak truck activity was conducted using the HCM methodology that conservatively assumed that construction trucks would arrive to and depart from the Project Site during commuter peak hours. It was also conservatively assumed that 50% of the construction worker vehicles would arrive to and depart from the Project Site during the same commuter peak hours. For the purposes of providing the most conservative analysis, the evaluation assumed all construction-related vehicles would arrive to and depart from the Project Site via the most congested corridors during commuter peak hours as identified in Section 5B, which would be Incoming Truck Route 5 and Outgoing Truck Route 5 (i.e., US 101, Laurel Canyon Boulevard, Ventura Boulevard, and Radford Avenue). The evaluation results are provided in Table 24.

PEAK CONSTRUCTION WORKER ACTIVITY SUBPHASE

The traffic-related effects associated with construction workers depend on the number of construction workers employed during various subphases of construction, as well as the travel mode and travel time of the workers.

According to construction projections prepared for the Project, the overlap of the demolition, grading, foundation, building structure/exterior, and finishes subphases would generate the most construction worker vehicles, with a maximum of approximately 783 construction worker vehicles per day for all components (i.e., finishing, hardscape, landscape). On most of the estimated

workdays during this subphase, it is estimated that there would be far fewer workers than on the peak day. Therefore, the estimated maximum of 783 construction worker vehicles per day used for the purposes of this analysis represents a very conservative estimate. The Construction Traffic Management Plan would identify restrictions against workers parking off-site.

In general, the hours of construction typically require workers to be on-site before the weekday morning commuter peak period and allow them to leave before or after the afternoon commuter peak period. However, to provide a conservative analysis, it was assumed that 50% of construction worker vehicles would arrive to and depart from the Project Site during the commuter peak hours. During this time, it is also anticipated that approximately 186 daily construction trucks would be generated to the Project Site. Thus, based on the assumptions detailed above, the approximately 186 daily truck trips would be equivalent to approximately 372 daily PCE trips. The approximately 31 hourly truck trips would be equivalent to approximately 62 PCE trips per hour (31 inbound, 31 outbound). The operational evaluation during peak construction worker activity is provided in Table 24. Detailed analysis worksheets are provided in Appendix I.

POTENTIAL CONSTRAINTS ON ACCESS, TRANSIT, AND PARKING

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

Access

Construction activities are expected to be primarily contained within the Project Site boundary and would generally not affect the public ROW. However, construction would affect the public ROW and may result in temporary sidewalk and lane closures during installation of the new traffic signals, mast arms, and left-turn lanes as well as improvement work on curb, gutter, etc. to

perform the B-Permit work that is required by the City. Temporary traffic controls would be provided to direct traffic around any closures and to maintain emergency access, as required in the Construction Traffic Management Plan, with two-way traffic operations maintained throughout construction. A traffic control plan for construction work in the public ROW would be required to be submitted to and approved by LADOT with advance notification provided to the public.

Although no long-term sidewalk closures are anticipated adjacent to the Project Site along Radford Avenue and Colfax Avenue, the Construction Traffic Management Plan would include measures to ensure pedestrian and bicycle safety along any affected sidewalks and temporary walkways (e.g., providing overhead protection canopy).

Transit

Two-way traffic operations and travel lanes would be maintained throughout construction and no transit rerouting is anticipated. No transit stops are provided adjacent to the Project Site. Therefore, Project construction is not anticipated to affect any transit stops.

Parking

On-street parking is allowed along Radford Avenue adjacent to the Project Site. However, construction activity would be primarily contained on-site and would not affect the public ROW. Coordination with the LADOT Parking Meters Division would be included in the Construction Traffic Management Plan if Project construction is anticipated to result in any temporary loss of on-street parking spaces near the Project Site.

Traffic Operations

Construction-related activities associated with the Project would result in varying levels of truck and worker trips to and from the Project Site on a daily basis, as detailed in Table 24. The Construction Traffic Management Plan would include measures to limit the number of construction-related trips during the peak hours to the extent feasible. Thus, the construction

activities are not expected to cause substantial traffic constraints at the surrounding street system with implementation of the Construction Traffic Management Plan.

CONSTRUCTION TRAFFIC MANAGEMENT PLAN

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

- A construction manager would be designated to serve as a liaison with the surrounding community and respond to any construction-related inquiries. Publicly visible signs would be posted at various locations with the liaison's contact information and phone number to submit inquiries and/or complaints, including dust complaints. The South Coast Air Quality Management District's phone number would also be included in ensure compliance with applicable regulations.
- Advance, bilingual notification of adjacent property owners and occupants of upcoming construction activities, including durations and daily hours of operation
- Prohibition of construction worker or equipment parking on adjacent streets or in predominantly residentially zoned areas
- Temporary pedestrian, bicycle, and vehicular traffic controls (e.g., flag people trained in pedestrian and bicycle safety at the Project Site's driveways) during all construction activities adjacent to Radford Avenue, Colfax Avenue, and the public alley, to ensure traffic safety on the public ROW
- Scheduling of construction-related activities to reduce the effect on traffic flow on surrounding major roadways
- Containment of construction activity within the Project Site boundaries
- Coordination with the LADOT Parking Meter Division to address any potential loss of metered parking spaces, if needed
- Implementing safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers as appropriate

-
- Rerouting of construction trucks to reduce travel on congested streets
 - Provision of dedicated turn lanes for movement of construction trucks and equipment on- and off-site, subject to LADOT review and approval
 - Prohibition of haul truck staging on any streets adjacent to the Project, unless specifically approved as a condition of an approved haul route
 - Spacing of trucks so as to discourage a convoy effect
 - Sufficient dampening of the construction area to control dust caused by grading and hauling and reasonable control at all times of dust caused by wind
 - Maintenance of a log, available on the job site at all times, documenting the dates of hauling and the number of trips (i.e., trucks) per day

It is likely that a Construction Traffic Management Plan would also be submitted for approval to the lead agency by the Related Projects prior to the start of construction activities. As part of the LADOT and/or Department of Building and Safety established process for reviewing construction management plans, potential overlapping construction activities and proposed haul routes would be reviewed to minimize the effects of cumulative construction activities on any particular roadway.

TABLE 24
EXISTING WITH CONSTRUCTION CONDITIONS (YEAR 2023)
INTERSECTION LEVELS OF SERVICE

No	Intersection	Peak Hour	Existing Conditions		Existing with Construction Conditions		Existing with Construction Conditions	
					Peak Truck Activity [a]		Peak Const. Worker Activity [a]	
			Delay	LOS	Delay	LOS	Delay	LOS
1.	Laurel Canyon Boulevard Riverside Drive	AM PM	67.4 74.6	E E	67.4 74.6	E E	67.4 74.6	E E
2.	Radford Avenue Riverside Drive	AM PM	286.4 53.0	F F	286.4 53.0	F F	286.4 53.0	F F
3.	Colfax Avenue Riverside Drive	AM PM	16.8 16.0	B B	16.8 16.0	B B	16.8 16.0	B B
4.	SR 170 Southbound Off-Ramp Riverside Drive	AM PM	15.5 15.2	B B	15.5 15.2	B B	15.5 15.2	B B
5.	Tujunga Avenue Riverside Drive-Camarillo Street	AM PM	58.5 65.3	E E	58.5 65.3	E E	58.5 65.3	E E
6.	Laurel Canyon Boulevard US 101 Northbound Ramps	AM PM	20.4 32.0	C C	23.0 35.5	C D	22.2 37.5	C D
7.	Laurel Canyon Boulevard US 101 Southbound Ramps	AM PM	25.7 13.6	C B	36.0 24.3	D C	55.2 19.4	E B
8.	Laurel Canyon Boulevard Lendale Street	AM PM	29.4 22.0	C C	73.5 28.1	E C	99.4 26.4	F C
9.	Colfax Avenue Sarah Street	AM PM	16.4 13.7	B B	16.4 13.7	B B	16.4 13.7	B B
10.	Colfax Avenue Lendale Street	AM PM	5.3 4.8	A A	5.3 4.8	A A	5.3 4.8	A A
11.	Whitsett Avenue Moorpark Street	AM PM	42.5 46.8	D D	42.5 46.8	D D	42.5 46.8	D D
12.	Laurel Canyon Boulevard Moorpark Street	AM PM	106.6 149.0	F F	187.6 231.3	F F	210.1 250.2	F F
13.	Radford Avenue Moorpark Street	AM PM	19.9 17.2	C C	19.9 17.2	C C	19.9 17.2	C C
14.	Colfax Avenue Moorpark Street	AM PM	34.8 30.9	C C	34.8 30.9	C C	34.8 30.9	C C
15.	Irvine Avenue Moorpark Street	AM PM	21.6 19.9	C C	21.6 19.9	C C	20.5 19.9	C C
16.	Tujunga Avenue Moorpark Street	AM PM	21.0 19.6	C B	21.0 19.6	C B	21.0 19.6	C B
17.	Tujunga Avenue Woodbridge Street	AM PM	4.6 6.1	A A	4.6 6.1	A A	4.6 6.1	A A
18.	Whitsett Avenue Ventura Boulevard	AM PM	38.1 24.3	D C	37.8 24.3	D C	37.8 24.3	D C
19.	Laurel Canyon Boulevard Ventura Place	AM PM	23.1 30.5	C C	23.8 36.4	C D	24.2 38.8	C D
20.	Laurel Canyon Boulevard Ventura Boulevard	AM PM	43.0 47.0	D D	57.3 46.8	E D	84.8 50.4	F D
21a.	Retail Driveway-Radford Avenue Ventura Boulevard	AM PM	48.5 58.9	D E	106.6 221.8	F F	95.9 336.6	F F
21b.	Ventura Place Ventura Boulevard	AM PM	29.8 71.7	C E	104.5 105.3	F F	154.4 85.9	F F
22.	Carpenter Avenue Ventura Boulevard	AM PM	21.6 24.3	C C	21.6 24.3	C C	21.6 24.3	C C
23.	Colfax Avenue Ventura Boulevard	AM PM	15.5 22.4	B C	15.5 22.4	B C	15.5 22.4	B C
24.	Berry Drive Ventura Boulevard	AM PM	5.4 5.4	A A	5.4 5.4	A A	5.4 5.4	A A
25.	Tujunga Avenue Ventura Boulevard	AM PM	16.4 15.3	B B	16.4 15.3	B B	16.4 15.3	B B
26.	Laurel Canyon Boulevard Maxwellton Road	AM PM	18.2 13.5	B B	18.3 13.5	B B	18.3 13.5	B B
27.	Laurel Canyon Boulevard Laurel Terrace Dr-Sunshine Terrace Dr	AM PM	23.0 31.1	C C	23.0 31.1	C C	23.0 31.1	C C
28.	Laurel Canyon Boulevard Fryman Road	AM PM	15.2 9.6	B A	15.2 9.6	B A	15.2 9.6	B A
29.	Laurel Canyon Boulevard Woodbridge Street	AM PM	93.7 201.8	F F	274.1 927.3	F F	391.1 1363.6	F F
30.	Laurel Canyon Boulevard Valleyheart Drive (North)	AM PM	47.8 70.1	E F	125.4 228.2	F F	153.6 205.2	F F
31.	Laurel Canyon Boulevard Valleyheart Drive (South)	AM PM	25.0 45.4	C E	42.5 168.8	E F	42.9 315.3	E F
32.	Radford Avenue Sarah Street	AM PM	8.5 7.4	A A	8.5 7.4	A A	8.5 7.4	A A

Notes:

Delay is measured in seconds per vehicle. LOS = Level of Service

Intersection analysis based on HCM 6th Edition Signalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection, unless otherwise stated.

[a] The Existing with Construction Conditions scenarios conservatively represent a worst-case condition that assumes all construction-related trips would access the Project Site via Incoming Truck Route 5 and Outgoing Truck Route, which utilize US 101, Laurel Canyon Bl, Ventura Bl, and Radford Avenue.

[b] Intersection analysis based on the HCM 6th Edition Two-Way Stop Control Unsignalized methodology, which calculates the control delay, in seconds, for each individual approach of an intersection. The reported control delay represents the worst-case approach, and does not account for traffic gaps created by adjacent traffic signals.

[c] Intersection analysis based on HCM 2000 Signalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection.

[d] The reported control delay of the worst-case approach (i.e., minor street of the intersection) exceeds 300 seconds.

[e] Intersection analysis based on HCM 6th Edition All-Way Stop Control Unsignalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection.

Chapter 6

Recommended Transportation Improvement Program

This chapter summarizes the recommended transportation improvement program proposed by the Project based on the CEQA and non-CEQA transportation analyses detailed herein. This program was developed in consultation with LADOT to address specific and general transportation needs. It includes specific improvements including Project access improvements, Project features and operational improvements, and areawide transportation improvements in the vicinity of the Project Site. The improvements and estimated costs are detailed in Table 25.

PROJECT ACCESS IMPROVEMENTS

As previously detailed, vehicular access to the Project Site would continue to be provided along Radford Avenue via the existing ingress/egress driveways at the southwestern portion of the South Lot, the Radford Gate, and the northwestern portion of the South Lot, which provides direct access to the existing Sater parking structure. Existing ingress/egress driveways would also be improved to accommodate the increase in vehicle demand at the Project gates.

Additional vehicular access from Ventura Boulevard via Carpenter Avenue would be provided via a former ingress/egress driveway at the Carpenter Gate that would be restored as part of the Project. To facilitate the additional Project access via Carpenter Avenue, the Project would improve the intersection of Carpenter Avenue & Ventura Boulevard, which would include exclusive eastbound and westbound left-turn signal phasing, upgraded crosswalks, and increased eastbound left-turn lane capacity.

The Project is also proposing the Radford Mobility Connector, which, as previously detailed, would provide a multi-modal bridge that would extend Radford Avenue north across the Tujunga Wash to Moorpark Street. Traffic calming treatments would be installed to prohibit cut-through vehicular access from Moorpark Street south to Ventura Boulevard. In addition, as detailed in Section 5B,

with the completion of the Radford Mobility Connector, a traffic signal with pedestrian crosswalks and phasing would be installed at the new intersection of Radford Avenue & Moorpark Street.

Operations at all Project driveways, existing and proposed, would be upgraded with improved gate controls (e.g., radio frequency identification) to maximize on-site ingress capacity and minimize potential queue spillover into the public ROW.

TDM

The Project includes various TDM measures that would benefit pedestrians, vehicles, and transit in the Project vicinity.

TDM Program

As previously detailed in Section 4B, the Project would implement a comprehensive TDM Program that would exceed the requirements established in the current TDM Ordinance. The TDM Program would be aimed at reducing VMT and vehicle trips to and from the Project Site and the Project area that would include, but not be limited to, educational programs, on-site coordinators, transportation information centers, bicycle and pedestrian amenities, first-mile/last-mile options, ride-share matching and carpool/vanpool services and programs, transit infrastructure improvements, van or shuttle service to and from the Metro E Line Universal/Studio City Station and/or North Hollywood Station, and neighborhood enhancements intended to promote non-automobile travel and the reduction of single occupancy vehicle trips. The combined effect of the various strategies implemented as part of the TDM Program would result in a reduction in VMT and vehicular trips by offering services, actions, specific facilities, etc., aimed at encouraging use of alternative transportation modes as compared to single occupancy vehicles (e.g., transit, bus, walking, bicycling, carpool). Thus, as an achievable but conservative estimate, an overall TDM trip reduction of 15% was assumed, as detailed in Table 26. The TDM Program would have an estimated annual operating and maintenance cost of \$2,000,000.

Mobility Hub(s)

The Project would install on-site Mobility Hub(s) that would support multi-modal mobility options, first-mile/last-mile connections, and the Project's TDM Program. The Mobility Hub(s) would provide bike-share or similar personal mobility services, carpool/vanpool and passenger vehicle loading areas, and transit information. They would also provide space for a passenger van or shuttle service between the Project Site and the Metro B Line Universal/Studio City and/or North Hollywood Station. The Project Applicant estimates that without the Radford Mobility Connector, the construction cost of one Mobility Hub on the South Lot is estimated at \$500,000. With the Radford Mobility Connector, an additional Mobility Hub would be constructed on the North Lot, and the total construction cost for both Mobility Hubs is estimated at \$4.5 million.

OFF-SITE TRANSPORTATION IMPROVEMENTS

The Project would implement a series of off-site transportation improvements that were identified in consultation with LADOT. These improvements fall into several key categories to improve pedestrian and bicycle safety, traffic signal operations and vehicular mobility, neighborhood transportation conditions, and transit stop amenities. In total, as shown in Table 25, the improvements identified below are estimated to cost approximately \$5.3 million.

Pedestrian and Bicycle Improvements

As previously detailed, the Project would install a Class IV protected bicycle lane along Radford Avenue between the Radford Mobility Connector and Hoffman Street, as programmed in the Los Angeles River Revitalization Master Plan. In addition, the Project would contribute toward implementation of bicycle and pedestrian connections to the Tujunga Wash as part of the Radford Mobility Connector or an equivalent bicycle/pedestrian connection at a similar location. In total, the Project would contribute up to \$3 million toward these improvements.

Transportation Systems Management (TSM) Improvements

The Project would contribute toward the installation of TSM improvements at locations identified by LADOT to provide system-wide benefits and to better accommodate traffic operations throughout the Project area. These features could include signal upgrades, new controllers and cabinets, closed circuit television cameras and necessary infrastructure, installation of vehicle detection loops, flashing yellow arrows, leading pedestrian intervals, and/or left-turn signal phasing at several key intersections along Laurel Canyon Boulevard, Colfax Avenue, Moorpark Street, and Ventura Boulevard. The TSM improvements would provide LADOT with the ability to better monitor traffic operations and respond instantly to incidents that delay vehicles and transit service. The Project would contribute up to \$1.55 million toward the implementation of TSM improvements.

NTMP

LADOT has developed an iterative process to develop, evaluate, and implement traffic calming options as part of a NTMP to minimize the effects of cut-through traffic. Based on the analysis detailed in Section 5C, four neighborhoods were identified as potential alternative routes that could be used as a cut-through route to avoid arterial congestion. The Project Applicant would allocate funds for a NTMP to assist with the funding of an NTMP study in each neighborhood and the implementation of the measures approved by LADOT and supported by stakeholders. In total, the Project would contribute \$500,000 (\$125,000 to each neighborhood).

Vision Zero

As previously detailed, Vision Zero is a traffic safety policy that promotes strategies to eliminate transportation-related collisions that result in severe injury or death. As part of the Vision Zero improvements, upgraded ADA ramps would be provided at key locations in the Project Site vicinity (all corner ramps at Radford Avenue & Ventura Boulevard, northwest and southwest corners at 4024 Radford Avenue, and southwest corner at 4141 Radford Avenue) and a pedestrian hybrid beacon (a type of traffic signal control for pedestrian crosswalks) at the intersection of Laurel Canyon Boulevard & Valleyheart Drive. The Project would contribute up to \$550,000 toward these Vision Zero improvements.

Transit Stop Improvements

The Project would contribute to the implementation of transit stop improvements to promote non-auto travel. Upgrading and enhancing the transit stop infrastructure around the Project Site and throughout the Study Area effectively facilitates the use of alternative modes and reduces the reliance on single occupancy vehicle travel. The transit stop improvements may include the installation of bus stop shelters, benches, signage, etc. The Project would contribute up to \$200,000 toward transit stop improvements.

SCHEDULE OF IMPLEMENTATION

Because the Project may be built in phases over a period of time, it is necessary to also phase the funding and implementation of improvements in a logical manner. The timing of many of the improvements identified above would necessarily be tied to installation of a key piece of Project infrastructure. For example, the Moorpark Gate and Radford Mobility Connector are contingent upon the Los Angeles Department of Water and Power's completion of its planned relocation of the trunk line along Moorpark Street and associated infrastructure improvements. Implementation or funding of the improvements would be tied to completion of various percentages of allowed development at the Project Site, as measured by peak hour Project trip generation based on rates from Table 6.

TABLE 25
RECOMMENDED TRANSPORTATION IMPROVEMENTS
RADFORD STUDIOS CENTER

Improvement Measures	Cost Estimates ^[a]	
	without Moorpark Gate	with Moorpark Gate
<u>Project Access Improvements</u>		
New Carpenter Avenue Gate Carpenter Avenue & Ventura Boulevard Improvements	\$1,000,000	\$1,000,000
Improved Gate Control Operations RFID	\$200,000	\$200,000
Radford Mobility Connector / New Moorpark Street Gate ^[b] Bridge Connection & Neighborhood Access Restrictions Traffic Signal Installation		\$28,000,000 \$500,000
Subtotal - Project Access Improvements	\$1,200,000	\$29,700,000
<u>Project Features</u>		
TDM Program Mobility Hub Construction Cost Annual Operations / Maintenance ^[c]	\$500,000 \$2,000,000	\$4,500,000 \$2,000,000
Subtotal - Project Features & Ongoing Operations and Maintenance	\$500,000 + \$2,000,000 Annual Operations / Maintenance Costs	\$4,500,000 + \$2,000,000 Annual Operations / Maintenance Costs
<u>Off-Site Improvements</u>		
Radford Mobility Connector - Bike & Pedestrian Improvements ^[d]	\$2,000,000	\$2,000,000
Radford Avenue - Class IV Bike Lanes from Radford Mobility Connector to Hoffman Street ^[e]	\$1,000,000	\$1,000,000
TSM Improvements (Intersection Signals and Corridor Signals) ^[f] ^[g]	\$1,550,000	\$1,550,000
Neighborhood Traffic Management Improvements	\$500,000	\$500,000
Vision Zero / Pedestrian / Mobility Improvements	\$550,000	\$550,000
Transit Stop Improvements	\$200,000	\$200,000
Subtotal - Off-Site Improvements ^[h]	\$5,800,000	\$5,800,000
Total - Project Contribution	\$7,500,000 + \$2,000,000 Annual Operations / Maintenance Costs	\$40,000,000 + \$2,000,000 Annual Operations / Maintenance Costs

Notes

[a] Cost estimates reflect one-time payments and do not include costs associated with design, engineering, utilities, on-going operations & maintenance, etc.

[b] The Radford Mobility Connector is a multi-modal bridge that would provide vehicular, pedestrian, and bicycle routes access across the Tujunga Wash, and include a new studio-related vehicle access.

[c] Represents an ongoing annual Operating and Maintenance cost to operate the TDM Program.

[d] The Project would contribute toward the LA River Master Plan improvement that would provide a pedestrian and bicycle route across the Tujunga Wash and the ramps and/or stairs that would provide direct access to the Los Angeles River trail system.

[e] Bike improvements along Radford Avenue to provide access to and connect pedestrians and bicyclists with the Los Angeles River and tributaries already envisioned by the City have been incorporated as part of the Project's off-site improvements.

[f] Traffic signal improvements could include but are not limited to signal controller upgrades, loop detectors, signal cabinets, etc.

[g] Corridor-wide improvements could include but are not limited to fiber optic cables, systemwide advance loop detectors, conduits, interconnect cables, etc.

[h] The off-site improvements are subject to refinement.

**TABLE 26
TRIP GENERATION WITH TDM PROGRAM**

Land Use	ITE Land Use [a]	Rate	Morning Peak Hour			Afternoon Peak Hour		
			In	Out	Total	In	Out	Total
<u>Trip Generation Rates</u>								
Sound Stage	[b]	per ksf	63%	37%	0.20	40%	60%	0.43
Production Support	[b]	per ksf	65%	35%	0.61	45%	55%	0.57
Production Office	[b]	per ksf	62%	38%	0.66	45%	55%	0.63
General Office Building	710 [c]	per ksf	88%	12%	1.52	17%	83%	1.44
High-Turnover (Sit-Down) Restaurant	932	per ksf	55%	45%	9.57	61%	39%	9.05
<u>Proposed Project</u> [a]								
Sound Stage	[b]	450.00 ksf	57	33	90	78	116	194
Production Support	[b]	300.00 ksf	119	64	183	77	94	171
Production Office	[b]	725.00 ksf	297	182	479	206	251	457
General Office	710	700.00 ksf	706	96	802	128	624	752
Retail [e]	932	25.00 ksf	46	39	85	50	32	82
Total - Proposed Project		2,200.00 ksf	1,225	414	1,639	539	1,117	1,656
<u>TDM Program Reduction</u> [b]								
Sound Stage	[b]	15%	(9)	(5)	(14)	(12)	(17)	(29)
Production Support	[b]	15%	(18)	(10)	(27)	(12)	(14)	(26)
Production Office	[b]	15%	(45)	(27)	(72)	(31)	(38)	(69)
General Office	710	15%	(106)	(14)	(120)	(19)	(94)	(113)
Retail	932	15%	(7)	(6)	(13)	(8)	(5)	(12)
Total - TDM Program Reduction			(185)	(62)	(246)	(82)	(168)	(249)
Total - Existing Uses [c]		1,179.11 ksf	(467)	(214)	(681)	(281)	(451)	(732)
Total - Net New Project with TDM Program Reduction			573	138	712	176	498	675

ksf: 1,000 square feet

[a] See Table 5 for calculation of Project trip generation.

[b] The Project would implement a comprehensive TDM Program that would exceed the requirements established in the current TDM Ordinance. The TDM Program would be aimed at reducing VMT and vehicle trips to and from the Project Site and the Project area that would include, but not be limited to, educational programs, on-site coordinators, transportation information centers, bicycle and pedestrian amenities, first-mile/last-mile options, ride-share matching and carpool/vanpool services and programs, transit infrastructure improvements, van or shuttle service to and from the Metro E Line Universal/ Studio City Station and/or North Hollywood Station, and neighborhood enhancements intended to promote non-automobile travel and the reduction of single occupancy vehicle trips. The combined effect of the various strategies implemented as part of the TDM Program would result in a reduction in VMT and vehicular trips by offering services, actions, specific facilities, etc., aimed at encouraging use of alternative transportation modes as compared to single occupancy vehicles (e.g., transit, bus, walking, bicycling, carpool, etc.) Thus, as an achievable but conservative estimate, an overall TDM trip reduction of 15% was assumed

[c] See Table 5 for calculation of the Existing Use trip generation.

References

2010 Bicycle Plan, A Component of the City of Los Angeles Transportation Element, Los Angeles Department of City Planning, adopted March 1, 2011.

California Environmental Quality Act Guidelines, California Code of Regulations, Title 14, Section 15000 et seq.

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

Complete Streets Design Guide, City of Los Angeles.

Connect SoCal – A Plan for Navigating to a Brighter Future, Southern California Association of Governments, Adopted April 2024.

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Los Angeles River Revitalization Master Plan, City of Los Angeles, April 2007.

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

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

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

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

River Improvement Overlay District, City of Los Angeles, Revised January 12, 2015.

Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass Community Plan, Los Angeles Department of City Planning, Amended 2016.

References, cont.

State of California Senate Bill 743, Steinberg, 2013.

Studio City/Cahuenga Pass Streetscape Plan, City of Los Angeles, 2002.

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

Transportation Assessment Guidelines, Los Angeles Department of Transportation, August 2022.

Transportation Research Circular No. 212, Interim Materials on Highway Capacity Transportation Research Board, 1980.

Trip Generation Manual, 11th Edition, Institute of Transportation Engineers, 2021.

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

Appendix A

Memorandum of Understanding

Attachment C

Transportation Assessment Memorandum of Understanding (MOU)

This MOU acknowledges that the Transportation Assessment for the following Project will be prepared in accordance with the latest version of LADOT's Transportation Assessment Guidelines:

I. PROJECT INFORMATION

Project Name: Radford Studio Center Project

Project Address: 4024, 4064 & 4200 N. Radford Avenue

Project Description: See attached Project Description.

LADOT Project Case Number: SFV23-114687 Project Site Plan attached? (Required) ☒ Yes ☐ No

II. TRANSPORTATION DEMAND MANAGEMENT (TDM) MEASURES

Select any of the following TDM measures, which may be eligible as a Project Design Feature¹, that are being considered for this project:

<input type="checkbox"/> Reduced Parking Supply ²	<input checked="" type="checkbox"/> Bicycle Parking and Amenities	<input checked="" type="checkbox"/> Parking Cash Out
--	---	--

List any other TDM measures (e.g. bike share kiosks, unbundled parking, microtransit service, etc) below that are also being considered and would require LADOT staff's determination of its eligibility as a TDM measure. LADOT staff will make the final determination of the TDM measure's eligibility for this project.

- | | |
|--|---------|
| 1 <u>Promotions & Marketing</u> | 4 _____ |
| 2 <u>Pedestrian Network Improvements</u> | 5 _____ |
| 3 _____ | 6 _____ |

III. TRIP GENERATION

Trip Generation Rate(s) Source: ITE 10th Edition / Other ITE 11th Edition & Empirical Trip Rates from Local Studios

Trip Generation Adjustment (Exact amount of credit subject to approval by LADOT)	Yes	No
Transit Usage	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Existing Active or Previous Land Use	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Internal Trip	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Pass-By Trip	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Transportation Demand Management (See above)	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

	IN	OUT	TOTAL
AM Trips	<u>758</u>	<u>200</u>	<u>958</u>
PM Trips	<u>258</u>	<u>666</u>	<u>924</u>

NET Daily Vehicle Trips (DVT)
 _____ DVT (ITE ____ ed.)
9,445 DVT (VMT Calculator ver. 1.4)

¹ At this time Project Design Features are only those measures that are also shown to be needed to comply with a local ordinance, affordable housing incentive program, or State law.

² Select if reduced parking supply is pursued as a result of a parking incentive as permitted by the City's Bicycle Parking Ordinance, State Density Bonus Law, or the City's Transit Oriented Community Guidelines.

**IV. STUDY AREA AND ASSUMPTIONS**Project Buildout Year: 2028-2045 [a] Ambient Growth Rate: 1 % Per Yr. up to year 2028 0.50 % Per Yr. up to Year 2045Related Projects List, researched by the consultant and approved by LADOT, attached? (Required) ☒ Yes ☐ No

STUDY INTERSECTIONS and/or STREET SEGMENTS:

(May be subject to LADOT revision after access, safety, and circulation evaluation.)

1 <u>See Table 1</u>	3 _____
2 _____	4 _____
5 _____	6 _____

Provide a separate list if more than six study intersections and/or street segments.

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

If a study intersection is located within a ¼-mile of an adjacent municipality's jurisdiction, signature approval from said municipality is required prior to MOU approval.

V. ACCESS ASSESSMENT

- Does the project exceed 1,000 net DVT? ☒ Yes ☐ No
- Is the project's frontage 250 linear feet or more along an Avenue or Boulevard as classified by the City's General Plan? ☒ Yes ☐ No
- Is the project's building frontage encompassing an entire block along an Avenue or Boulevard as classified by the City's General Plan? ☒ Yes ☐ No

VI. ACCESS ASSESSMENT CRITERIA

If Yes to any of the above questions a., b., or c., the Transportation Assessment must assess the project's potential effect on pedestrian, bicycle, and transit facilities in the vicinity of the proposed project. Complete **Attachment C.1: Access Assessment Criteria** and attach to the draft Transportation Assessment to support the analysis. For the full scope of analysis, see Section 3.2 of the Transportation Assessment Guidelines.

VII. SITE PLAN AND MAP OF STUDY AREA

Please note that the site plan should be submitted to the Department of City Planning for cursory review.

Does the attached site plan and/or map of study area show	Yes	No	Not Applicable
Each study intersection and/or street segment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*Project Vehicle Peak Hour trips at each study intersection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*Project Vehicle Peak Hour trips at each project access point	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
*Project trip distribution percentages at each study intersection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Project driveways designed per LADOT MPP 321 (show widths and directions or lane assignment) [b]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pedestrian access points and any pedestrian paths	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pedestrian loading zones [b]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Delivery loading zone or area	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bicycle parking onsite [b]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bicycle parking offsite (in public right-of-way)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

*For mixed-use projects, also show the project trips and project trip distribution by land use category.

[a] Buildout of the Project could occur in one phase, with a total construction period of approximately 39 months (Year 2025-2028). However, the Project is seeking a Development Agreement with a term of 20 years, which could extend full buildout to approximately Year 2045.

[b] The Illustrative Site Plan and associated circulation plans are conceptual. As such, the driveways and buildings have not been fully designed in detail. Nonetheless, the Project driveways would be designed per LADOT guidelines and all pedestrian loading and bicycle parking would be accommodated on site.

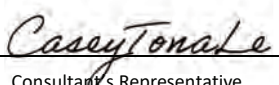

**VIII. FREEWAY SAFETY ANALYSIS SCREENING**

Will the project add 25 or more trips to any freeway off-ramp in either the AM or PM peak hour? ☒ **Yes** ☐ **No**
Provide a brief explanation or graphic identifying the number of project trips expected to be added to the nearby freeway off-ramps serving the project site. If Yes to the question above, a freeway ramp analysis is required.

See Table 4

IX. CONTACT INFORMATION

	<u>CONSULTANT</u>	<u>DEVELOPER</u>
Name:	<u>Gibson Transportation Consulting, Inc.</u>	<u>Radford Studio Center, LLC.</u>
Address:	<u>555 W. 5th Street, Suite 3375, Los Angeles, CA 90013</u>	<u>4200 Radford Avenue, Los Angeles, CA 91604</u>
Phone Number:	<u>(213) 683-0088</u>	<u>(310) 473-8900</u>
E-Mail:	<u>ewong@gibsontrans.com</u>	<u>info@radfordstudiocenter.com</u>

Approved by:	x			09/06/2023	x			9/19/2023
		Consultant's Representative		Date		LADOT Representative		**Date
Adjacent Municipality:				Approved by:				
				(if applicable)		Representative		Date

**MOUs are generally valid for two years after signing. If after two years a transportation assessment has not been submitted to LADOT, the developer's representative shall check with the appropriate LADOT office to determine if the terms of this MOU are still valid or if a new MOU is needed.

PROJECT DESCRIPTION

The Radford Studio Center Project (Project) entails the continuation of the existing approximately 1,179,110 square foot (sf) studio use and the modernization and expansion of Radford Studio Center through the proposed Radford Studio Center Specific Plan (Specific Plan). The Project includes the development of up to approximately 1,667,010 sf of new sound stage, production support, production office, creative office, and retail uses within the Project Site, as well as associated ingress/egress, circulation, parking, landscaping, and open space improvements. The proposed Specific Plan would allow a total of up to approximately 2,200,000 sf of floor area within the Project Site upon buildout of the Project (inclusive of approximately 532,990 sf of existing uses to remain). As part of the Project, approximately 646,120 sf of existing uses would be removed.



LEGEND

Project Site



Not to Scale

PROJECT SITE LOCATION

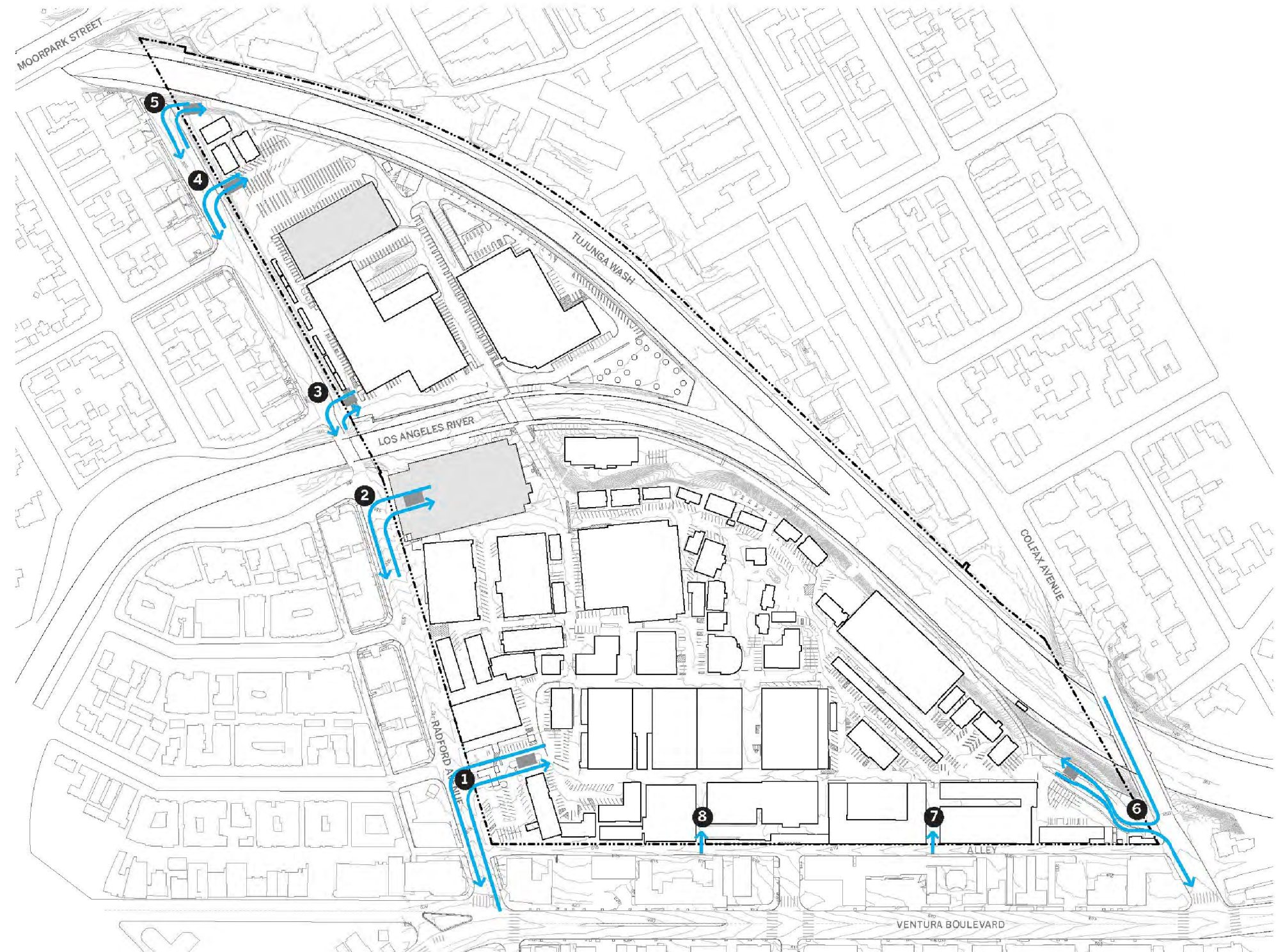
FIGURE
2



LEGEND

-  EXISTING BUILDING
-  EXISTING PARKING STRUCTURE
-  EXISTING VEHICULAR INGRESS/EGRESS
-  EXISTING CONTROLLED ENTRY POINT
-  SPECIFIC PLAN BOUNDARY
-  AREA 1 & AREA 2 LINE

- 1 RADFORD GATE
- 2 SATER PARKING STRUCTURE GATE
- 3 PRODUCTION ACCESS POINT (LIMITED)
- 4 PRODUCTION ACCESS POINT (LIMITED)
- 5 TUJUNGA WASH EASEMENT ACCESS
- 6 COLFAX GATE
- 7 PRODUCTION ACCESS POINT (LIMITED)
- 8 PRODUCTION ACCESS POINT (LIMITED)









Source: Skidmore, Owings & Merrill, 2023.



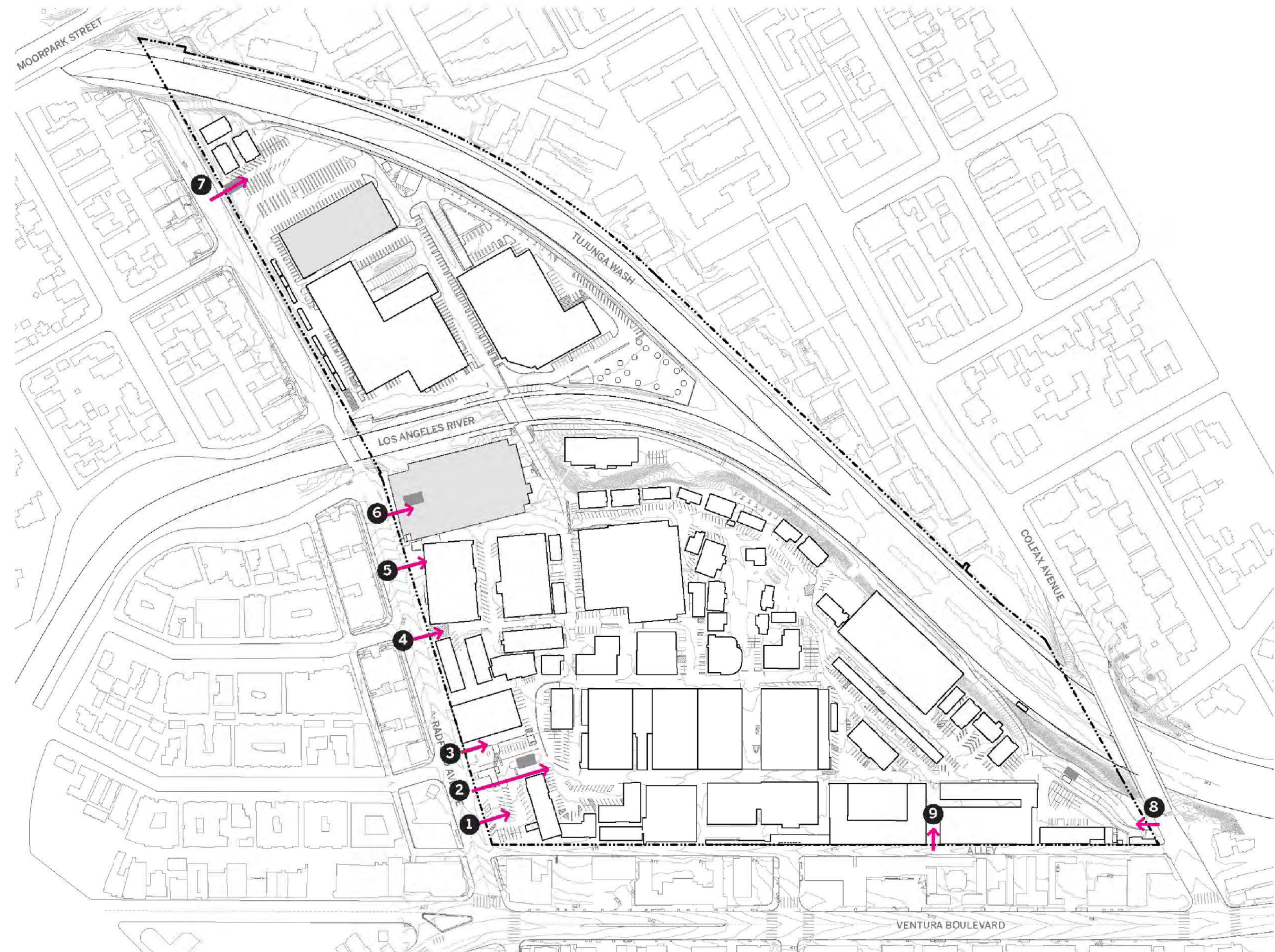
VEHICULAR SITE ACCESS

FIGURE
1B

LEGEND

-  EXISTING BUILDING
-  EXISTING PARKING STRUCTURE
-  EXISTING PEDESTRIAN INGRESS/EGRESS
-  EXISTING CONTROLLED ENTRY POINT
-  SPECIFIC PLAN BOUNDARY
-  AREA 1 & AREA 2 LINE

- 1 MACK SENNETT GATE
- 2 RADFORD GATE
- 3 ADMINISTRATION GATE
- 4 STAGE 2 SOUTH GATE
- 5 STAGE 2 NORTH GATE
- 6 SATER PARKING STRUCTURE GATE
- 7 NORTH RADFORD GATE
- 8 COLFAX GATE
- 9 ALLEY GATE



Source: Skidmore, Owings & Merrill, 2023.



PEDESTRIAN AND BICYCLE ACCESS

FIGURE
1C

**TABLE 2
RADFORD STUDIO CENTER
TRIP GENERATION**

Land Use	ITE Land Use [a]	Rate	Morning Peak Hour			Afternoon Peak Hour		
			In	Out	Total	In	Out	Total
<u>Trip Generation Rates</u>								
Sound Stage	[b]	per ksf	63%	37%	0.20	40%	60%	0.43
Production Support	[b]	per ksf	65%	35%	0.61	45%	55%	0.57
Production Office	[b]	per ksf	62%	38%	0.66	45%	55%	0.63
General Office Building	710 [c]	per ksf	88%	12%	1.52	17%	83%	1.44
High-Turnover (Sit-Down) Restaurant	932	per ksf	55%	45%	9.57	61%	39%	9.05
<u>Proposed Project</u>								
Sound Stage	[b]	450.00 ksf	57	33	90	78	116	194
Production Support	[b]	300.00 ksf	119	64	183	77	94	171
Production Office	[b]	725.00 ksf	297	182	479	206	251	457
Creative Office	710	700.00 ksf	785	107	892	142	693	835
Transit/Walk-In Reduction [d] 10%			(79)	(11)	(90)	(14)	(69)	(83)
Retail [e]	932	25.00 ksf	131	108	239	138	88	226
Internal Capture Reduction [f] 50%			(66)	(54)	(120)	(69)	(44)	(113)
Transit/Walk-In Reduction [d] 10%			(7)	(5)	(12)	(7)	(4)	(11)
Pass-by Reduction [g] 20%			(12)	(10)	(22)	(12)	(8)	(20)
Total - Proposed Project		2,200.00 ksf	1,225	414	1,639	539	1,117	1,656
<u>Existing Uses</u>								
Sound Stage	[b]	359.73 ksf	45	27	72	62	93	155
Production Support	[b]	255.51 ksf	101	55	156	66	80	146
Production Office	[b]	450.06 ksf	184	113	297	128	156	284
Creative Office	710	113.81 ksf	152	21	173	28	136	164
Transit/Walk-In Reduction [d] 10%			(15)	(2)	(17)	(3)	(14)	(17)
Total - Existing Uses		1,179.11 ksf	467	214	681	281	451	732
Total - Net New Project			758	200	958	258	666	924

Notes:

ksf = 1,000 square feet.

[a] Source: *Trip Generation Manual, 11th Edition*, Institute of Transportation Engineers, 2021, unless as noted.

[b] Trip generation rates for sound stages, production support, and production office uses are based on empirical data from other studios in Los Angeles and have been used to estimate studio-related trips for several transportation impact studies, including *NBC Universal Evolution Plan Alternative 10 Transportation Analysis* (Gibson Transportation Consulting [GTC], 2012) and *Transportation Study for the Paramount Pictures Master Plan* (GTC, 2015).

[c] Trip generation rate for the Project based on the best-fit curve formula listed in *Trip Generation, 11th Edition* for the General Office Building land use.

$$\text{Morning Peak Hour - } \ln(T) = 0.86 \ln(X) + 1.16$$

$$\text{Afternoon Peak Hour - } \ln(T) = 0.83 \ln(X) + 1.29$$

$$T = \text{Average Vehicle Trips} \quad X = \text{Gross Floor Area (ksf)}$$

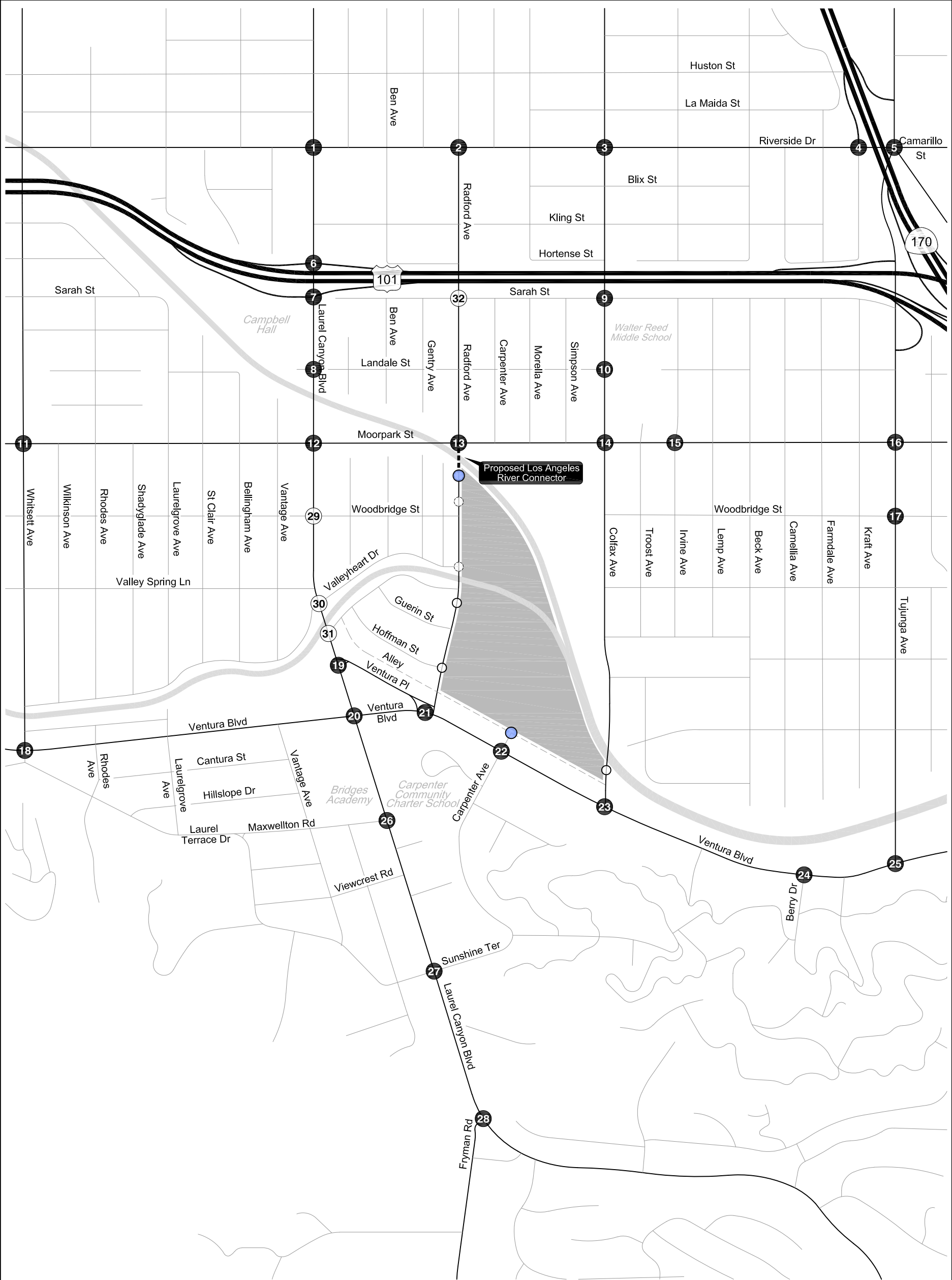
Trip generation rate for the existing uses based on the average rate from ITE for the General Office Building land use.

[d] The Project Site is located within walking distance from numerous Metro and LADOT DASH bus stops, therefore a 10% reduction is applied to account for transit usage and walking visitor arrivals from the surrounding neighborhoods and adjacent commercial developments.

[e] The Project's retail use could include restaurant uses. As such, for the purposes of providing a more conservative trip generation analysis, the trips generated by the retail use are based on published rates for the "high-turnover restaurant" land use (ITE Land Use Code 932).

[f] The Project's retail use is anticipated to primarily support the studio and the proposed studio uses on site; however, this use would also be accessible to the general public. Therefore, an internal capture adjustment was applied to account for trips made by studio employees to the retail use without using an off-site road system.

[g] Pass-by reductions account for Project trips made as an intermediate stop on the way from an origin to a primary trip destination without route diversion.



LEGEND

- Project Site
- Existing Gate
- Existing Gate (Limited Access)
- Proposed Gate
- Signalized Intersection
- Unsignalized Intersection



STUDY AREA AND ANALYZED INTERSECTIONS

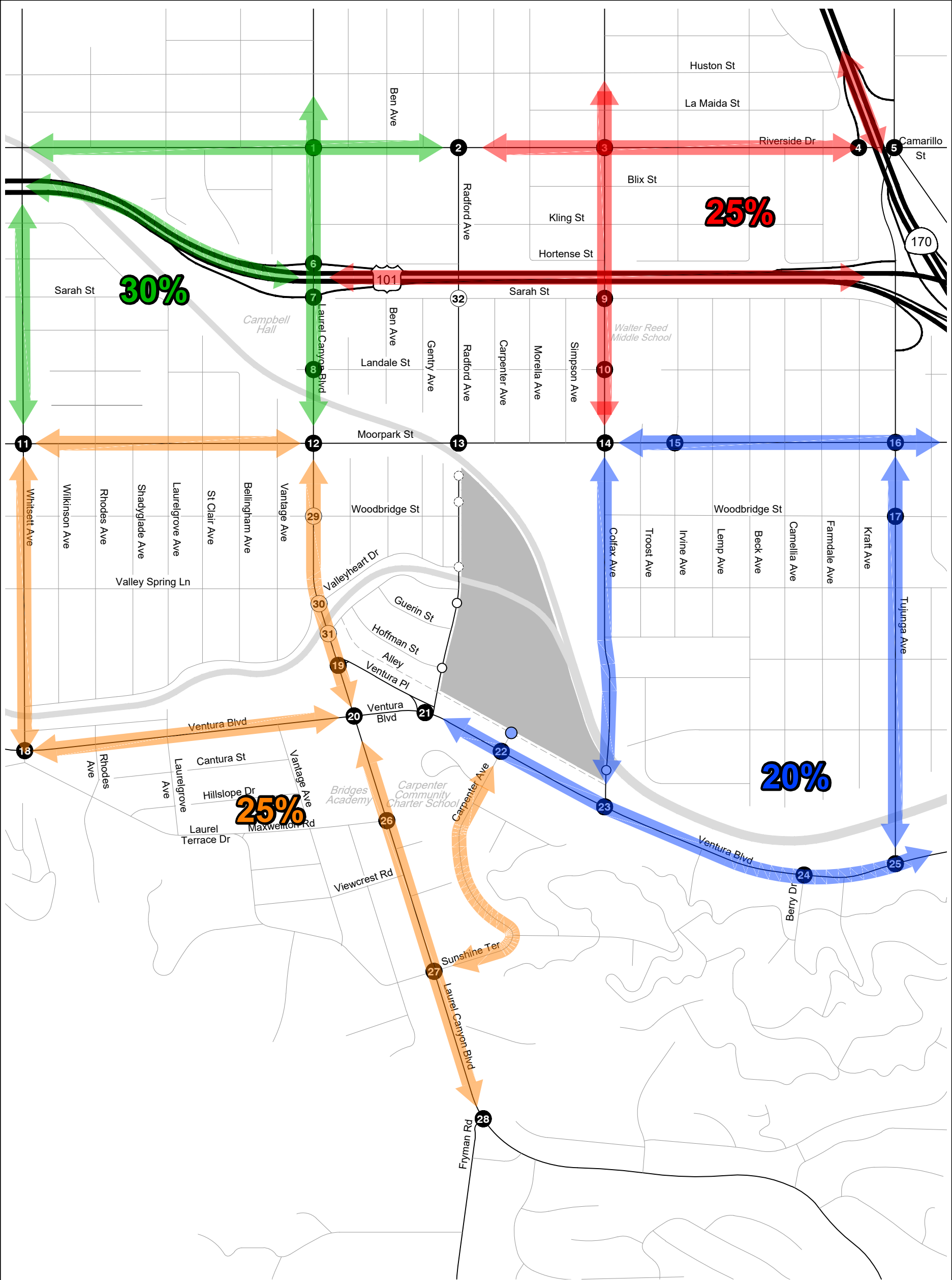
FIGURE
3

**TABLE 1
RADFORD STUDIO CENTER
STUDY INTERSECTIONS**

No.	N/S Street	E/W Street
<i>Signalized Intersections</i>		
1	Laurel Canyon Boulevard	Riverside Drive
2	Radford Avenue	Riverside Drive
3	Colfax Avenue	Riverside Drive
4	SR 170 Southbound Off-Ramp	Riverside Drive
5	Tujunga Avenue	Riverside Drive-Camarillo Street
6	Laurel Canyon Boulevard	US 101 Northbound Ramps
7	Laurel Canyon Boulevard	US 101 Southbound Ramps
8	Laurel Canyon Boulevard	Landale Street
9	Colfax Avenue	Sarah Street
10	Colfax Avenue	Landale Street
11	Whitsett Avenue	Moorpark Street
12	Laurel Canyon Boulevard	Moorpark Street
13 [a]	Radford Avenue	Moorpark Street
14	Colfax Avenue	Moorpark Street
15	Irvine Avenue	Moorpark Street
16	Tujunga Avenue	Moorpark Street
17	Tujunga Avenue	Woodbridge Street
18	Whitsett Avenue	Ventura Boulevard
19	Laurel Canyon Boulevard	Ventura Place
20	Laurel Canyon Boulevard	Ventura Boulevard
21	Ventura Place-Radford Avenue	Ventura Boulevard
22	Carpenter Avenue	Ventura Boulevard
23	Colfax Avenue	Ventura Boulevard
24	Berry Drive	Ventura Boulevard
25	Tujunga Avenue	Ventura Boulevard
26	Laurel Canyon Boulevard	Maxwellton Road
27	Laurel Canyon Boulevard	Laurel Terrace Drive/Sunshine Terrace Drive
28	Laurel Canyon Boulevard	Fryman Road
<i>Unsignalized Intersections</i>		
29	Laurel Canyon Boulevard	Woodbridge Street
30	Laurel Canyon Boulevard	Valleyheart Drive (North)
31	Laurel Canyon Boulevard	Valleyheart Drive (South)
32	Radford Avenue	Sarah Street

Notes:

[a] The intersection is currently unsignalized. However, the Project proposes an extension of Radford Avenue via the proposed Los Angeles River Connector, which would extend Radford Avenue to the north across the Tujunga Wash to Moorpark Street. No through access for vehicles would be provided along Radford Avenue. The intersection control with completion of the Los Angeles River Connector is TBD and will be further evaluated in the Transportation Assessment.



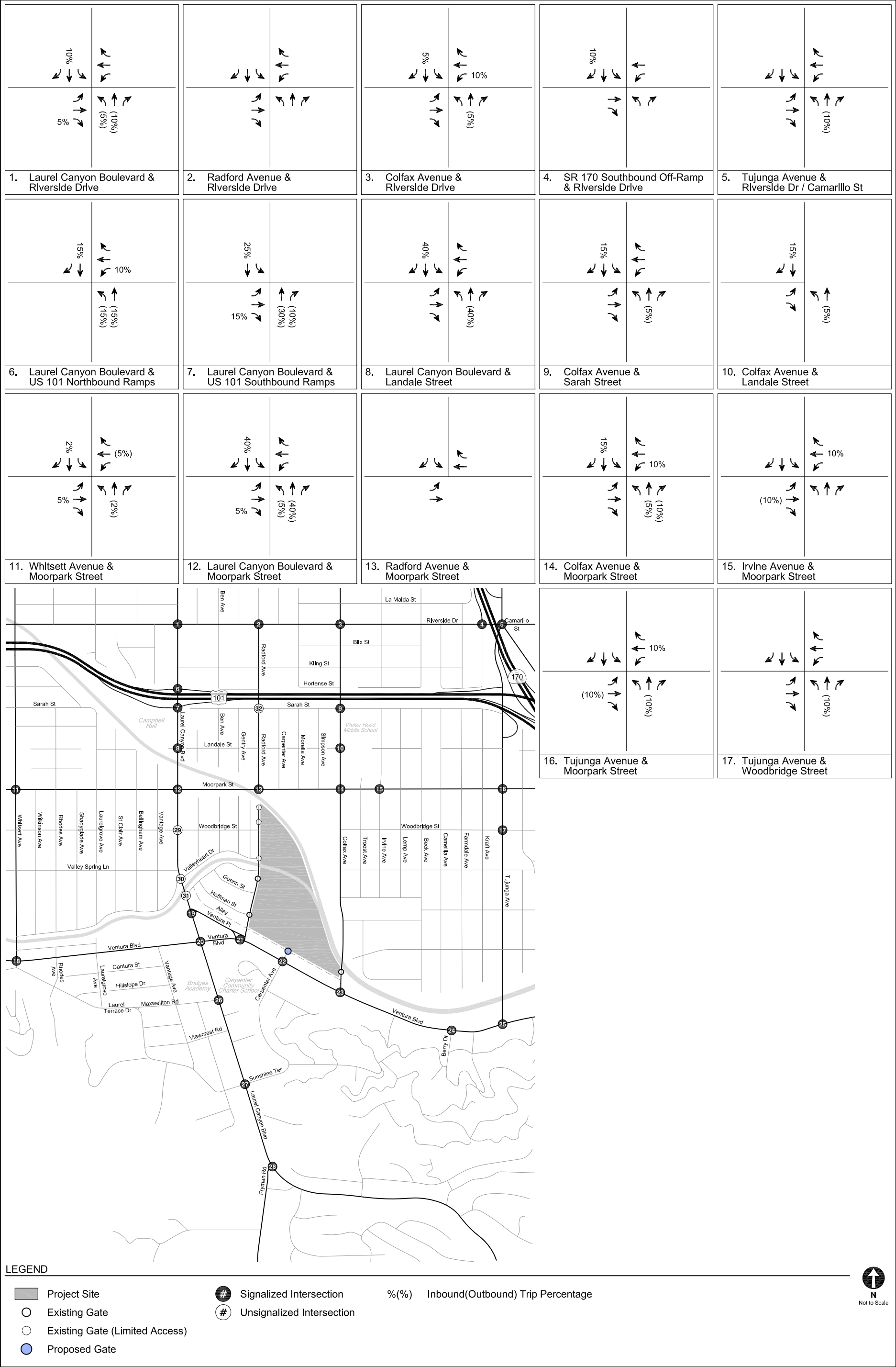
LEGEND

- | | |
|--------------------------------|---------------------------|
| Project Site | Signalized Intersection |
| Existing Gate | Unsignalized Intersection |
| Existing Gate (Limited Access) | |
| Proposed Gate | |



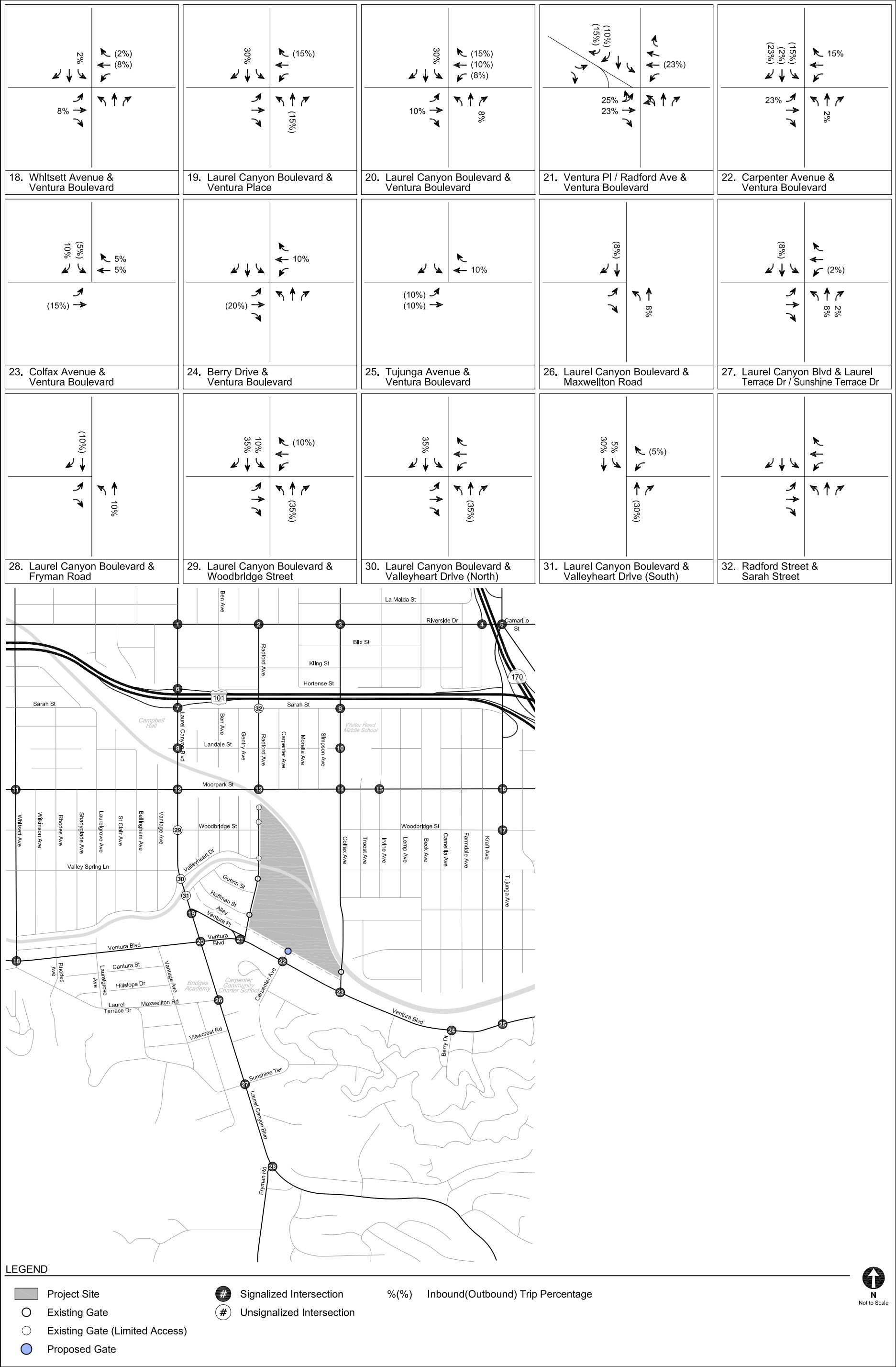
REGIONAL TRIP DISTRIBUTION (SOUND STAGE, PRODUCTION SUPPORT, PRODUCTION OFFICE, AND CREATIVE OFFICE)
WITHOUT LOS ANGELES RIVER CONNECTOR

FIGURE
4A



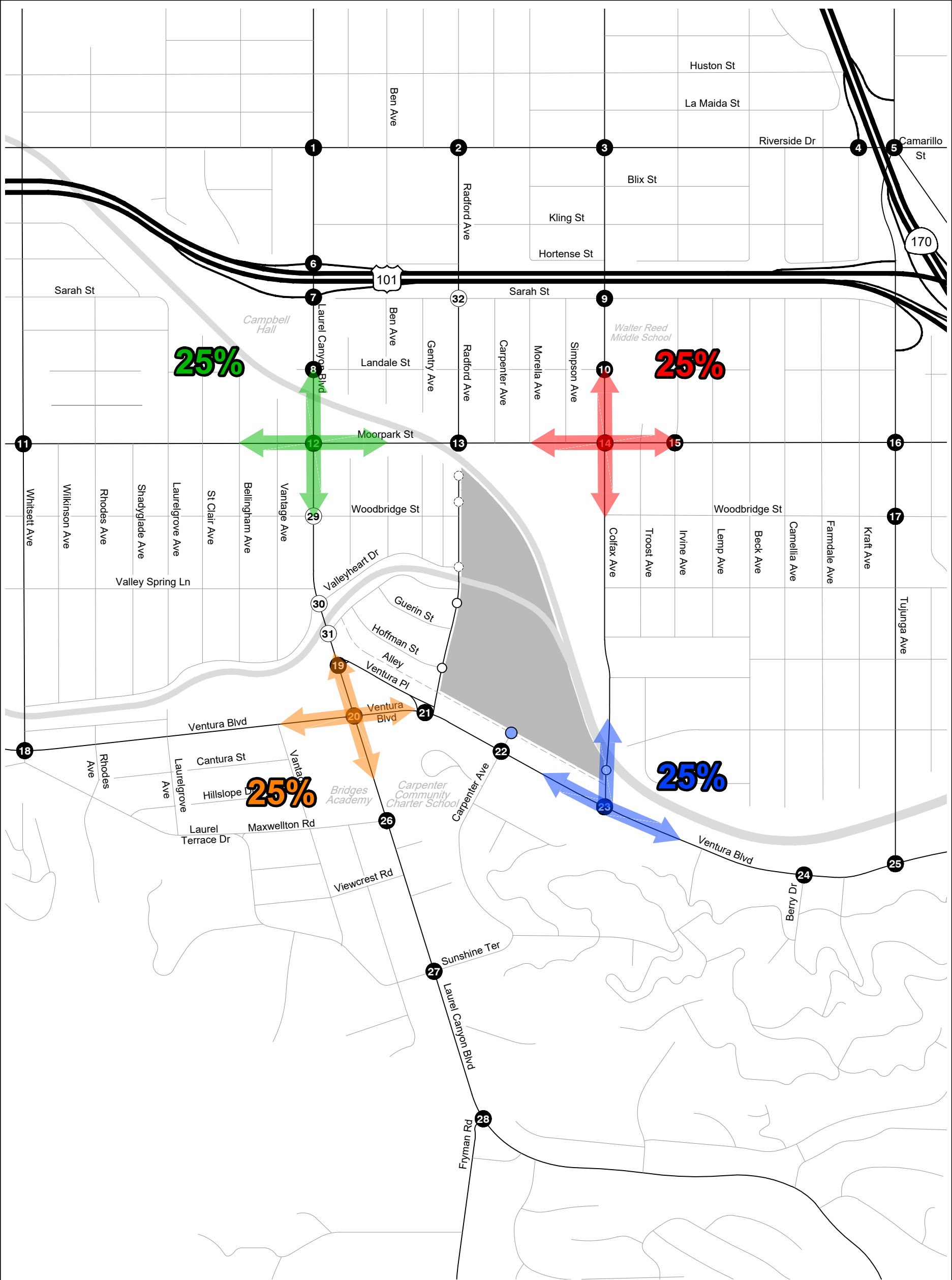
PROJECT TRIP DISTRIBUTION (SOUND STAGE, PRODUCTION SUPPORT, PRODUCTION OFFICE, AND CREATIVE OFFICE)
WITHOUT LOS ANGELES RIVER CONNECTOR

FIGURE
4B



PROJECT TRIP DISTRIBUTION (SOUND STAGE, PRODUCTION SUPPORT, PRODUCTION OFFICE, AND CREATIVE OFFICE)
WITHOUT LOS ANGELES RIVER CONNECTOR

FIGURE
4B (CONT.)



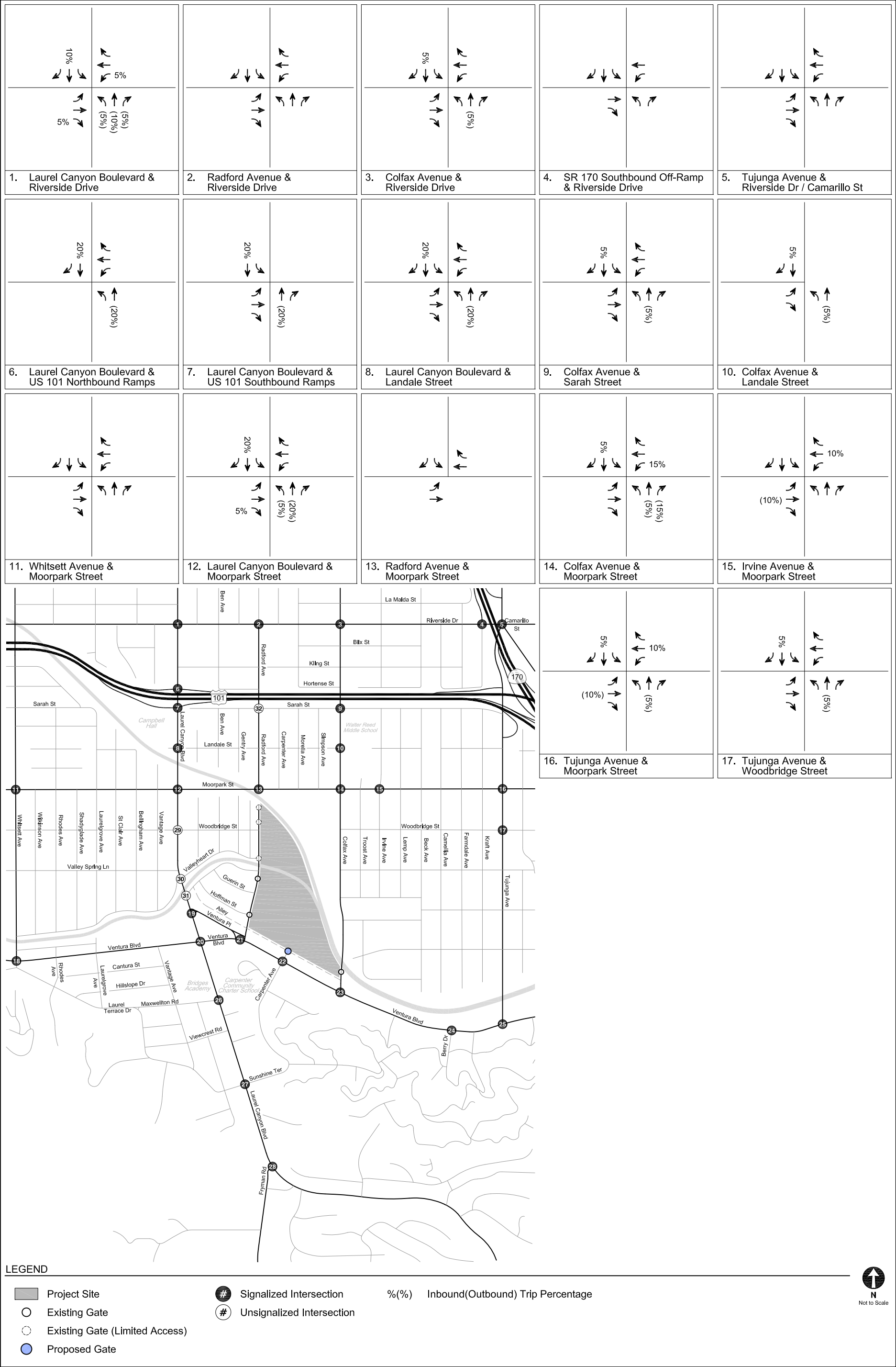
LEGEND

- | | |
|--------------------------------|---------------------------|
| Project Site | Signalized Intersection |
| Existing Gate | Unsignalized Intersection |
| Existing Gate (Limited Access) | |
| Proposed Gate | |



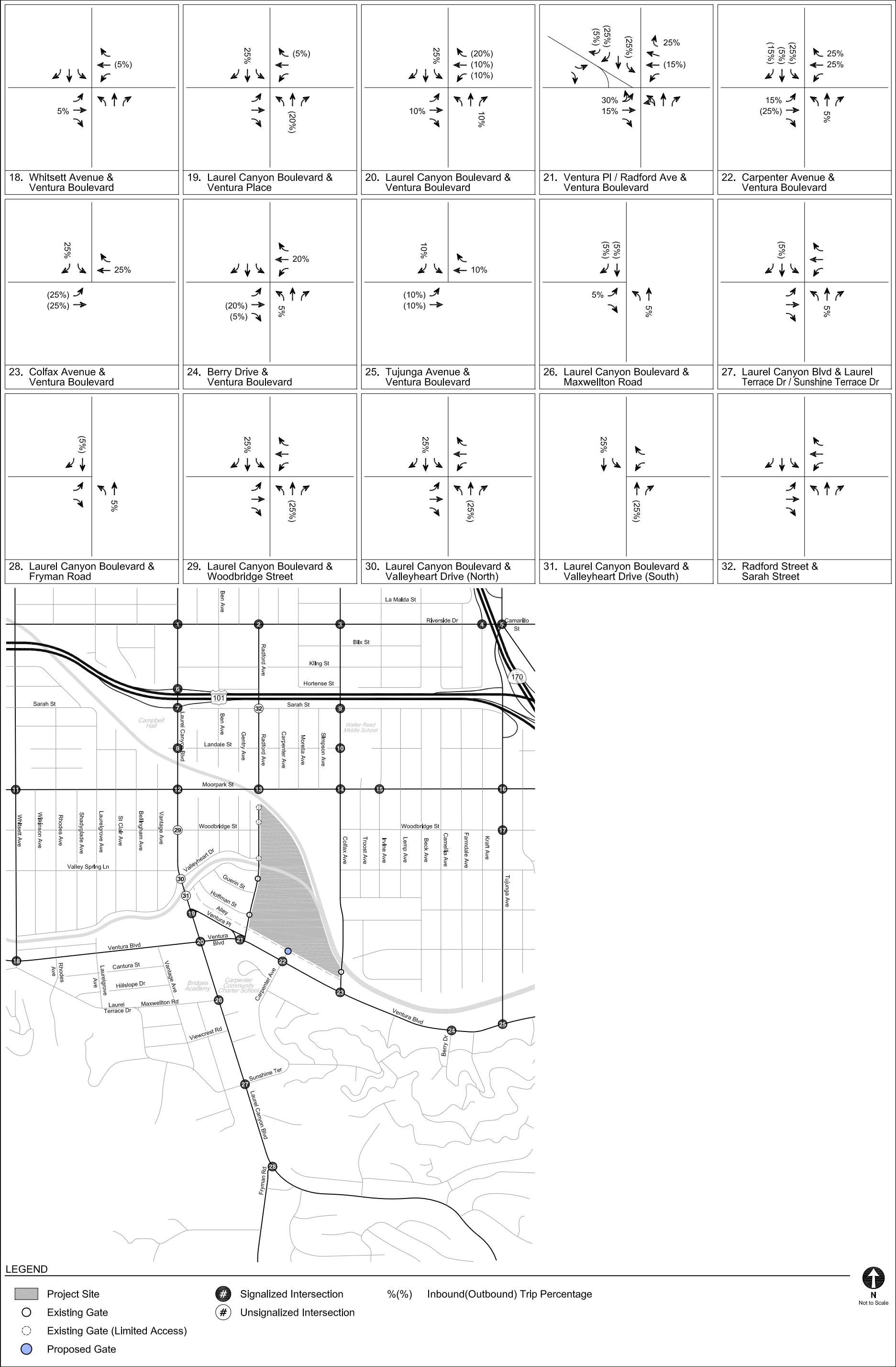
LOCAL TRIP DISTRIBUTION (RETAIL USES)
WITHOUT LOS ANGELES RIVER CONNECTOR

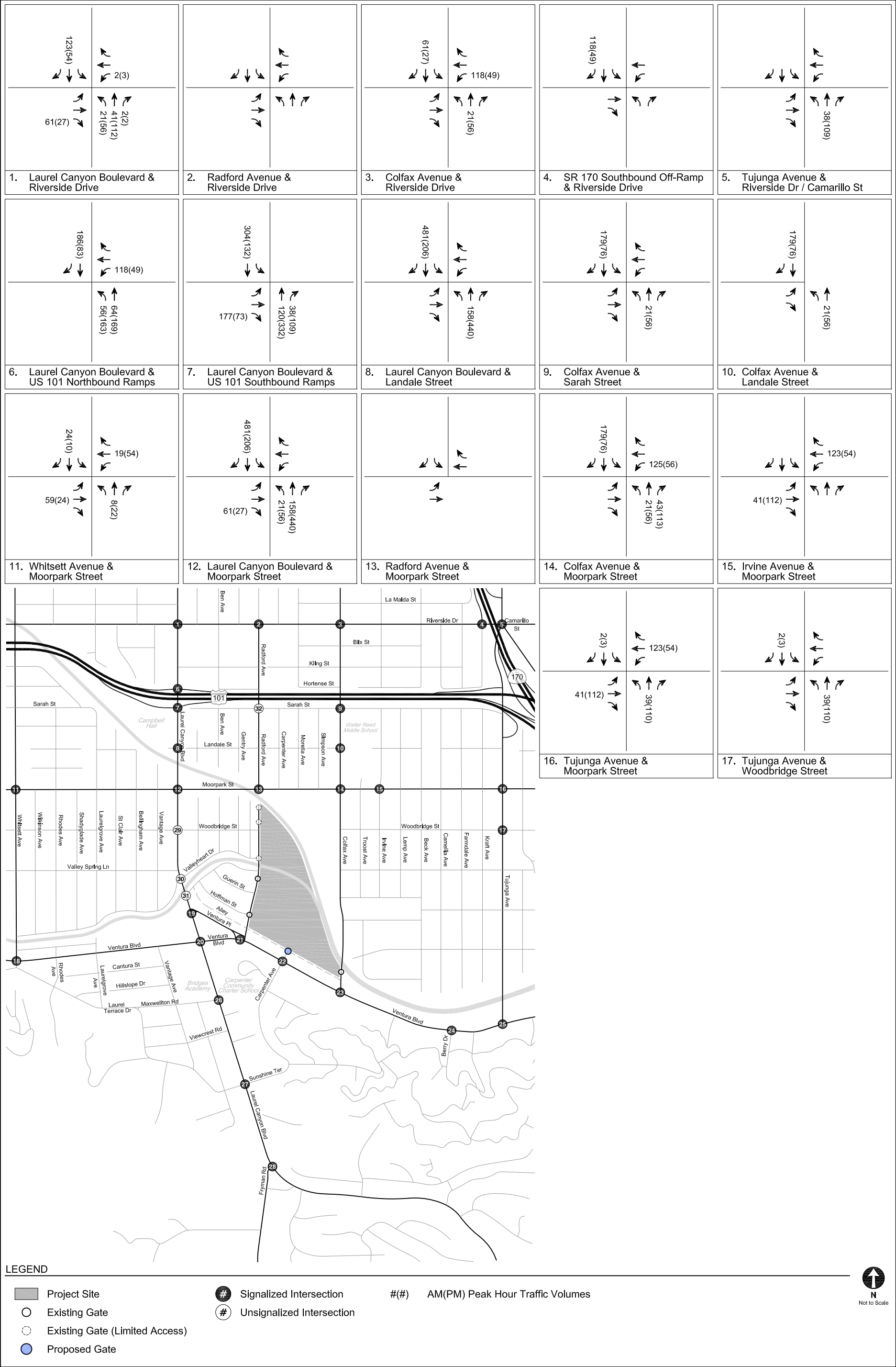
FIGURE
4C



PROJECT TRIP DISTRIBUTION (RETAIL USES)
WITHOUT LOS ANGELES RIVER CONNECTOR

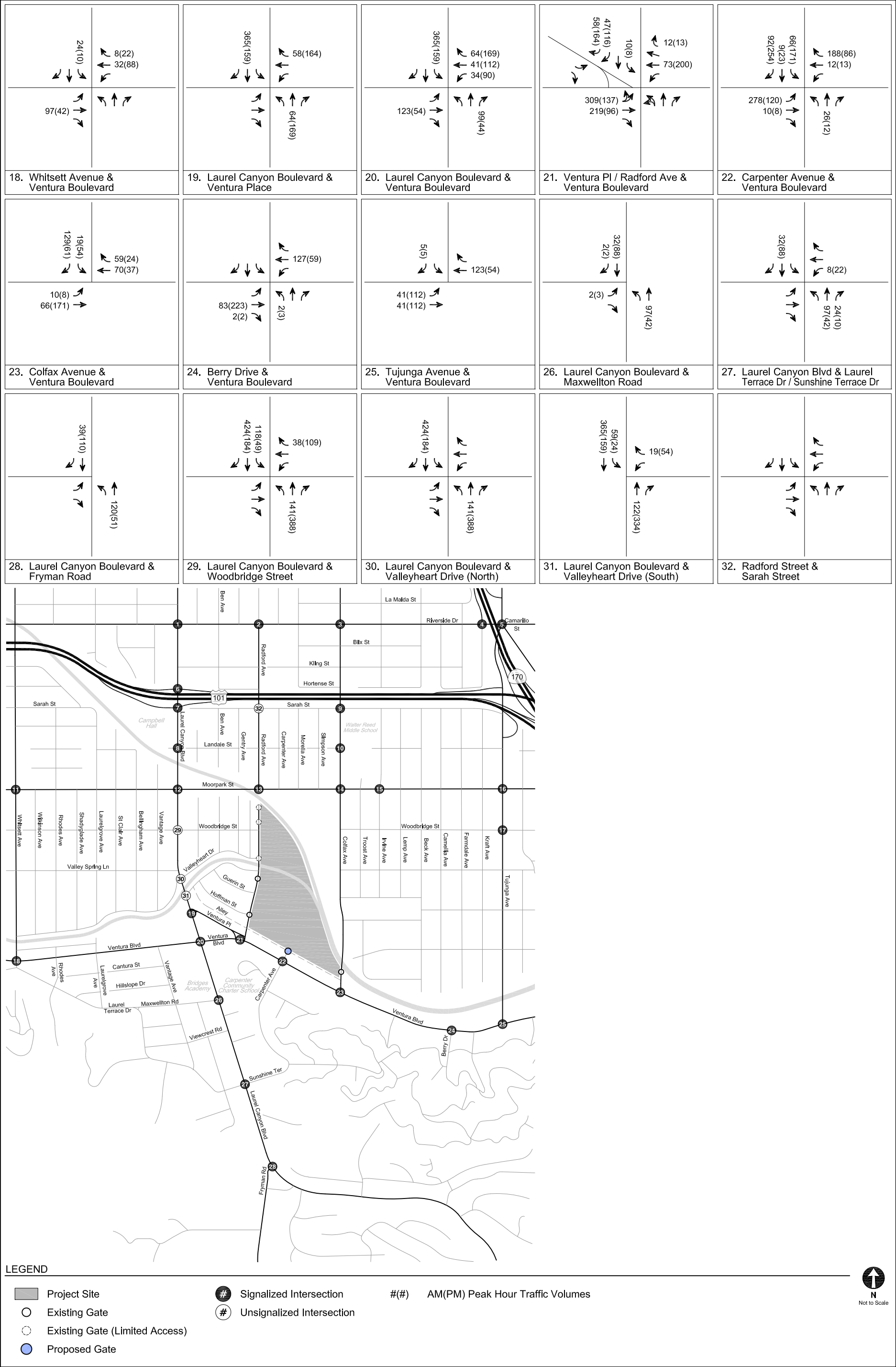
FIGURE
4D





TOTAL PROJECT-ONLY PEAK HOUR TRAFFIC VOLUMES
WITHOUT LOS ANGELES RIVER CONNECTOR

FIGURE
4E



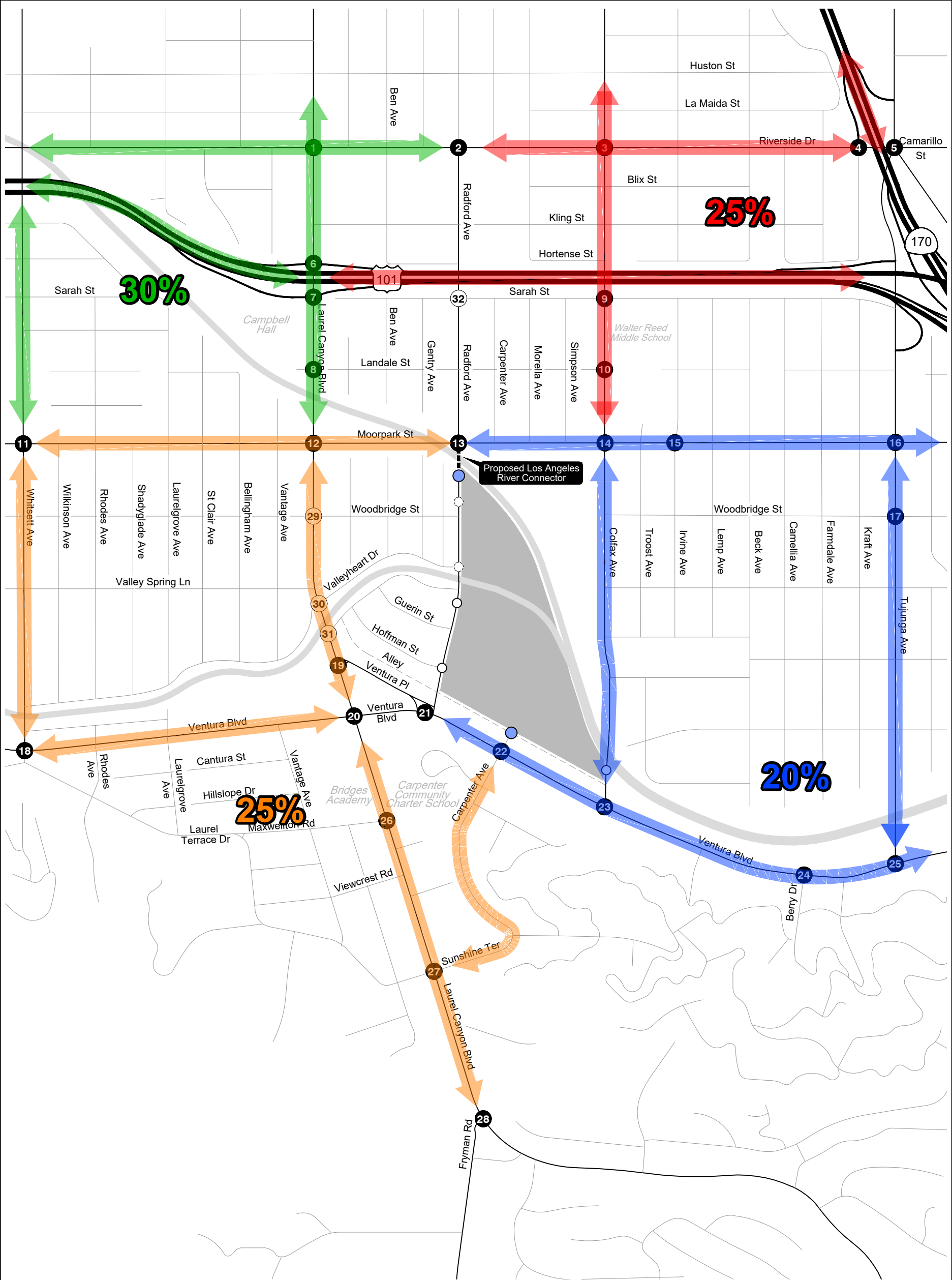
TOTAL PROJECT-ONLY PEAK HOUR TRAFFIC VOLUMES
WITHOUT LOS ANGELES RIVER CONNECTOR

FIGURE
4E (CONT.)



TOTAL PROJECT SITE DRIVEWAY PEAK HOUR TRAFFIC VOLUMES
WITHOUT LOS ANGELES RIVER CONNECTOR

FIGURE
4F



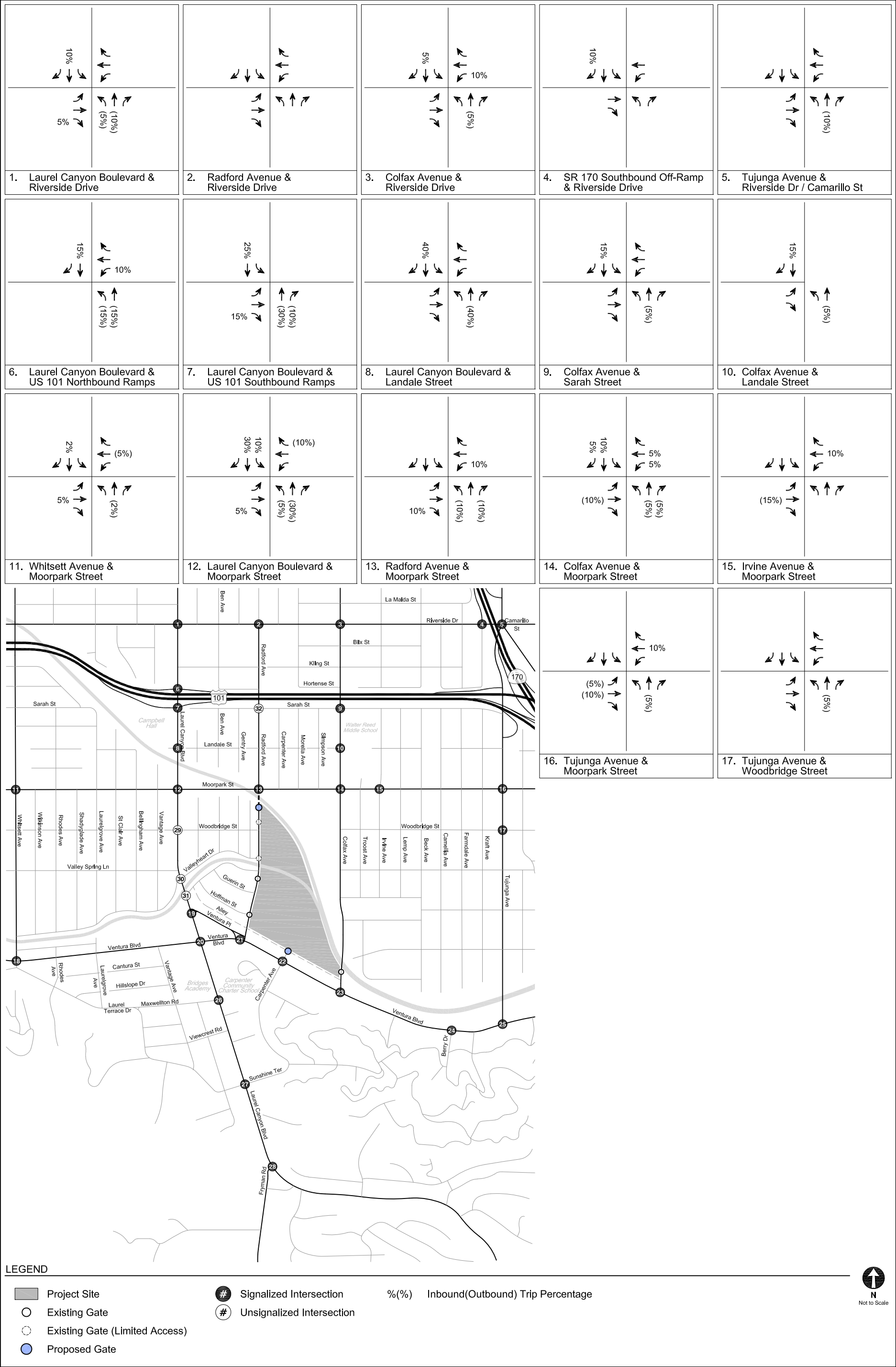
LEGEND

- Project Site
- Existing Gate
- Existing Gate (Limited Access)
- Proposed Gate
- Signalized Intersection
- Unsignalized Intersection



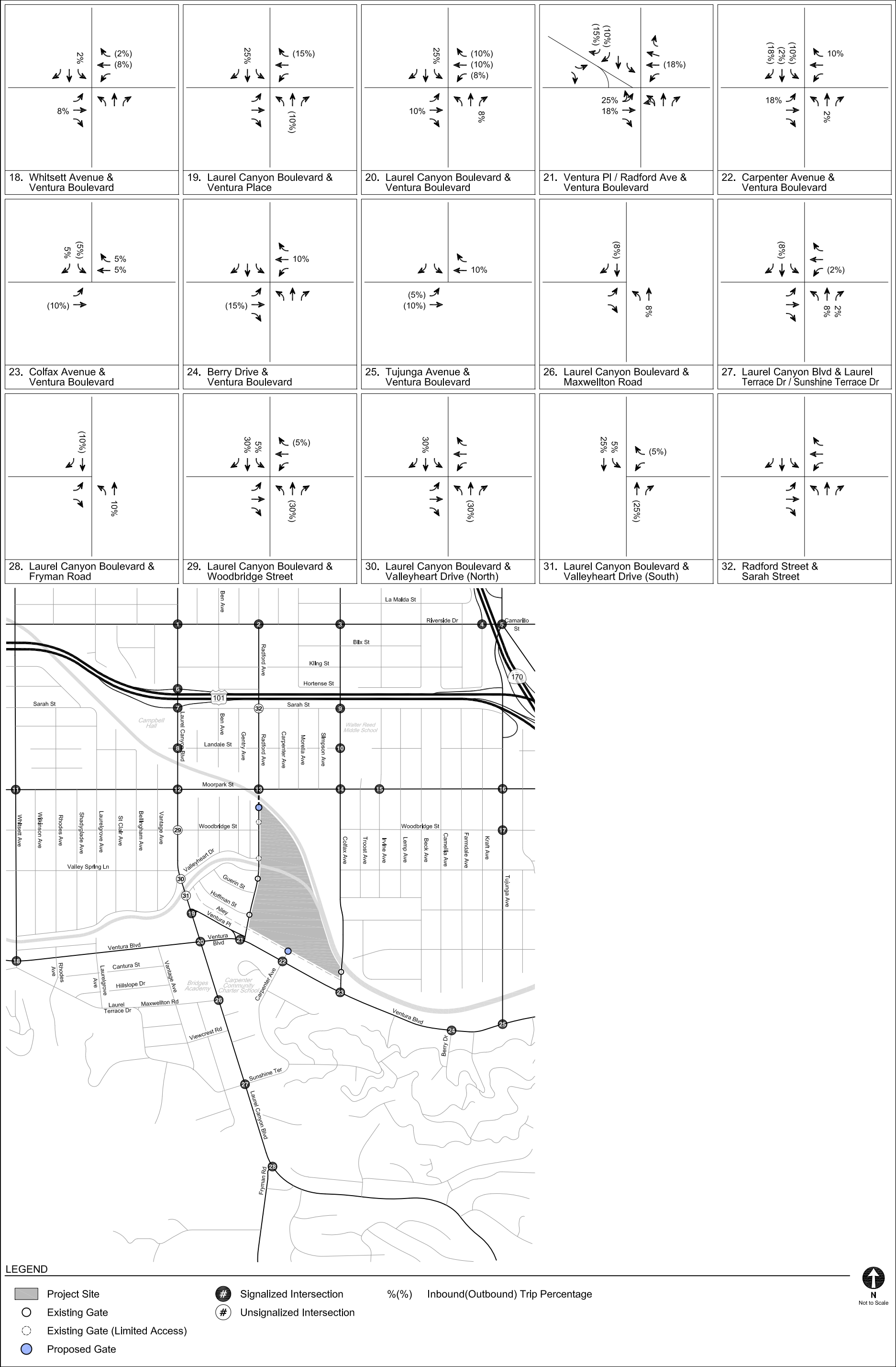
REGIONAL TRIP DISTRIBUTION (SOUND STAGE, PRODUCTION SUPPORT, PRODUCTION OFFICE, AND CREATIVE OFFICE)
WITH LOS ANGELES RIVER CONNECTOR

FIGURE
5A



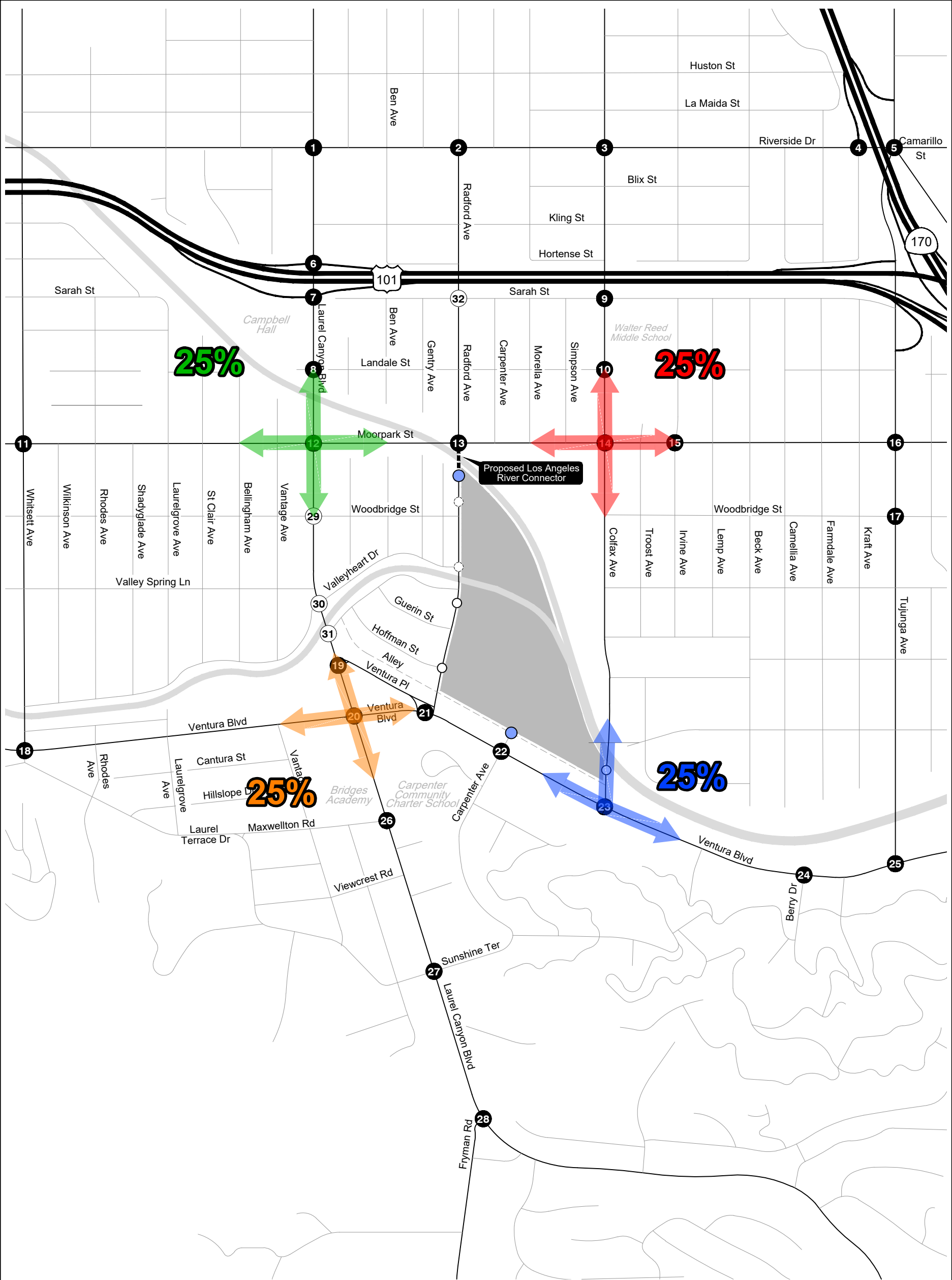
PROJECT TRIP DISTRIBUTION (SOUND STAGE, PRODUCTION SUPPORT, PRODUCTION OFFICE, AND CREATIVE OFFICE)
WITH LOS ANGELES RIVER CONNECTOR

FIGURE
5B



PROJECT TRIP DISTRIBUTION (SOUND STAGE, PRODUCTION SUPPORT, PRODUCTION OFFICE, AND CREATIVE OFFICE)
WITH LOS ANGELES RIVER CONNECTOR

FIGURE
5B (CONT.)



LEGEND

- | | |
|--------------------------------|---------------------------|
| Project Site | Signalized Intersection |
| Existing Gate | Unsignalized Intersection |
| Existing Gate (Limited Access) | |
| Proposed Gate | |



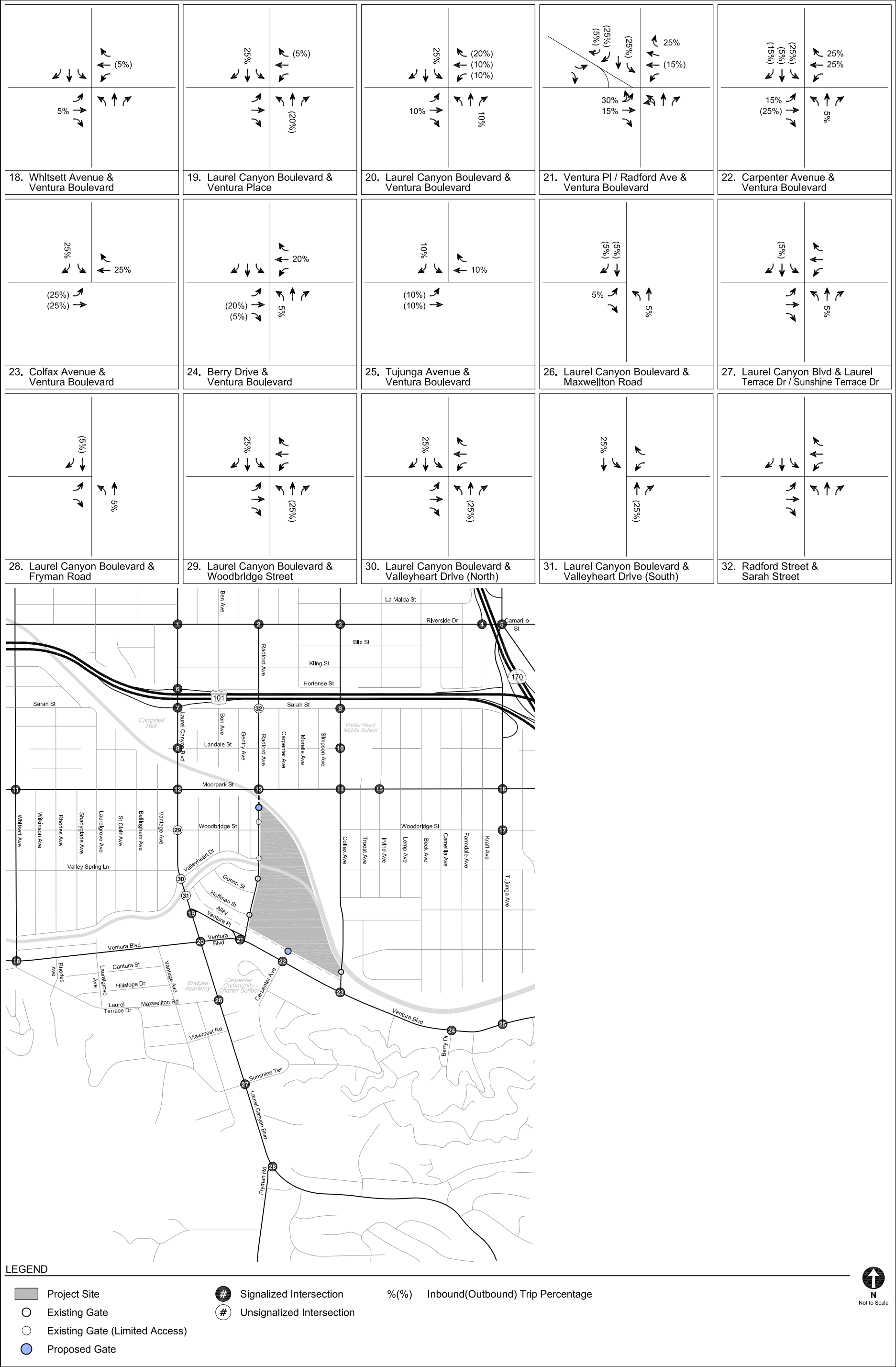
LOCAL TRIP DISTRIBUTION (RETAIL USES)
WITH LOS ANGELES RIVER CONNECTOR

FIGURE
5C

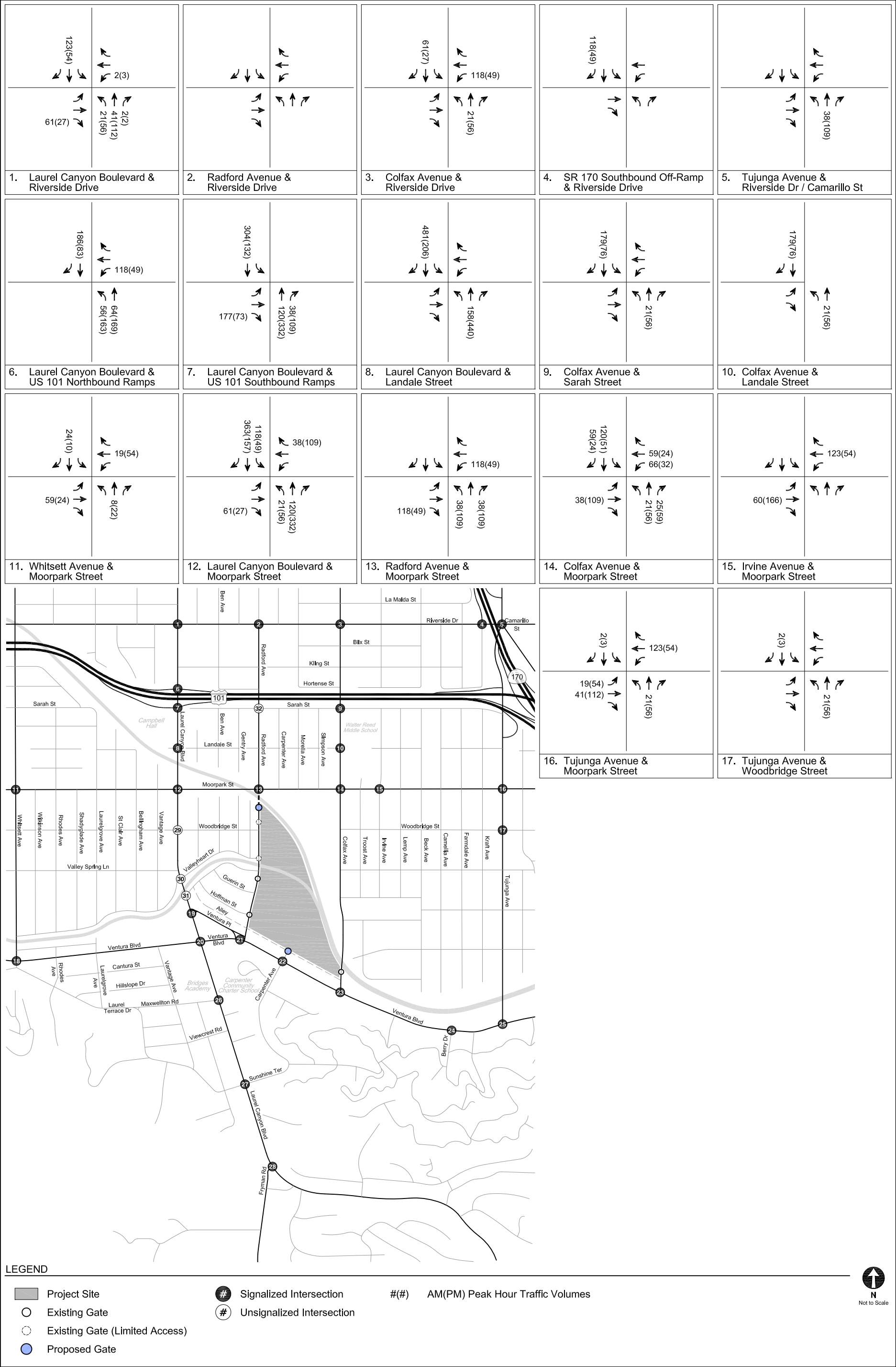


PROJECT TRIP DISTRIBUTION (RETAIL USES)
WITH LOS ANGELES RIVER CONNECTOR

FIGURE
5D

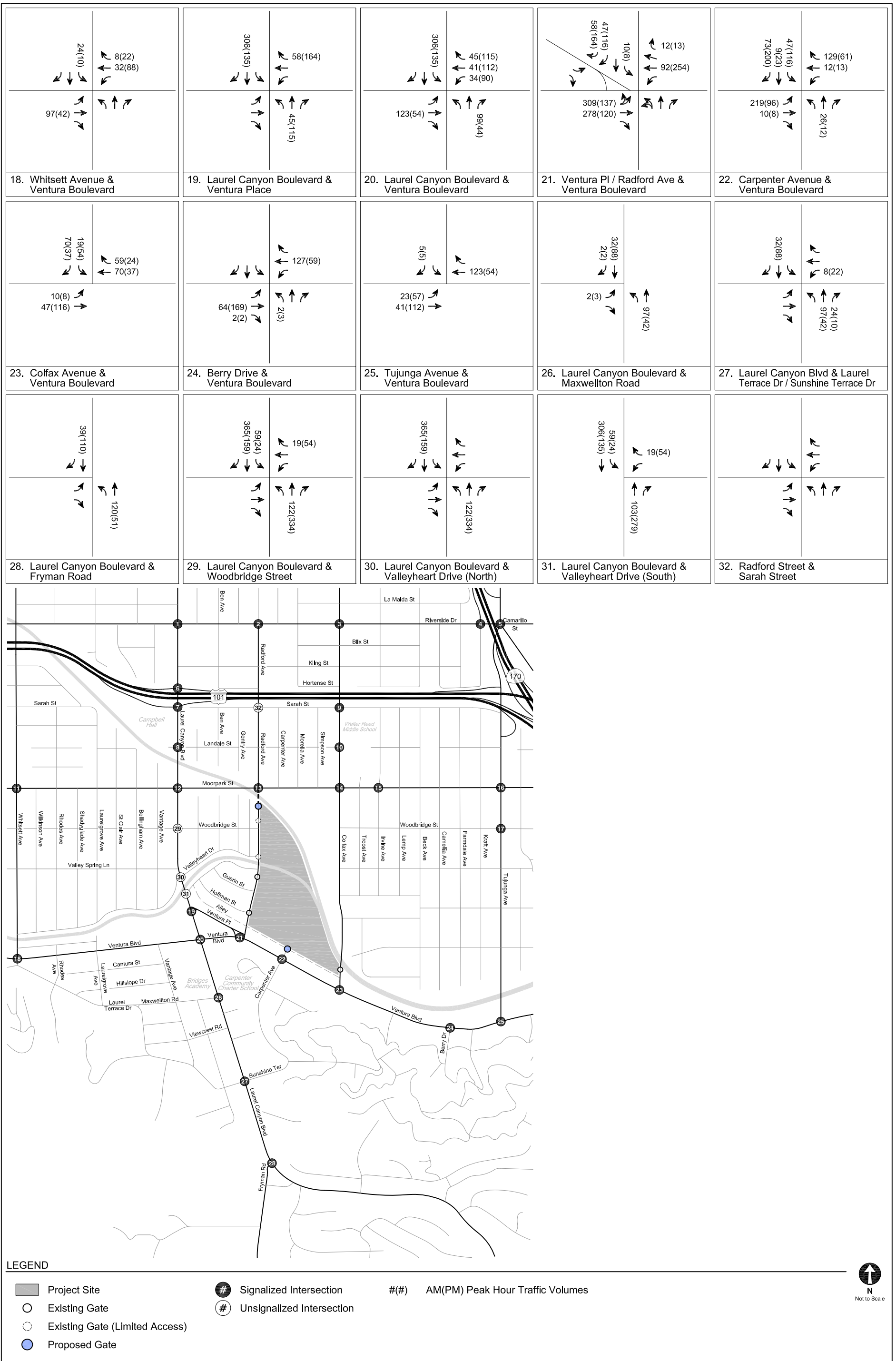


PROJECT TRIP DISTRIBUTION (RETAIL USES)
WITH LOS ANGELES RIVER CONNECTOR



TOTAL PROJECT-ONLY PEAK HOUR TRAFFIC VOLUMES
WITH LOS ANGELES RIVER CONNECTOR

FIGURE
5E



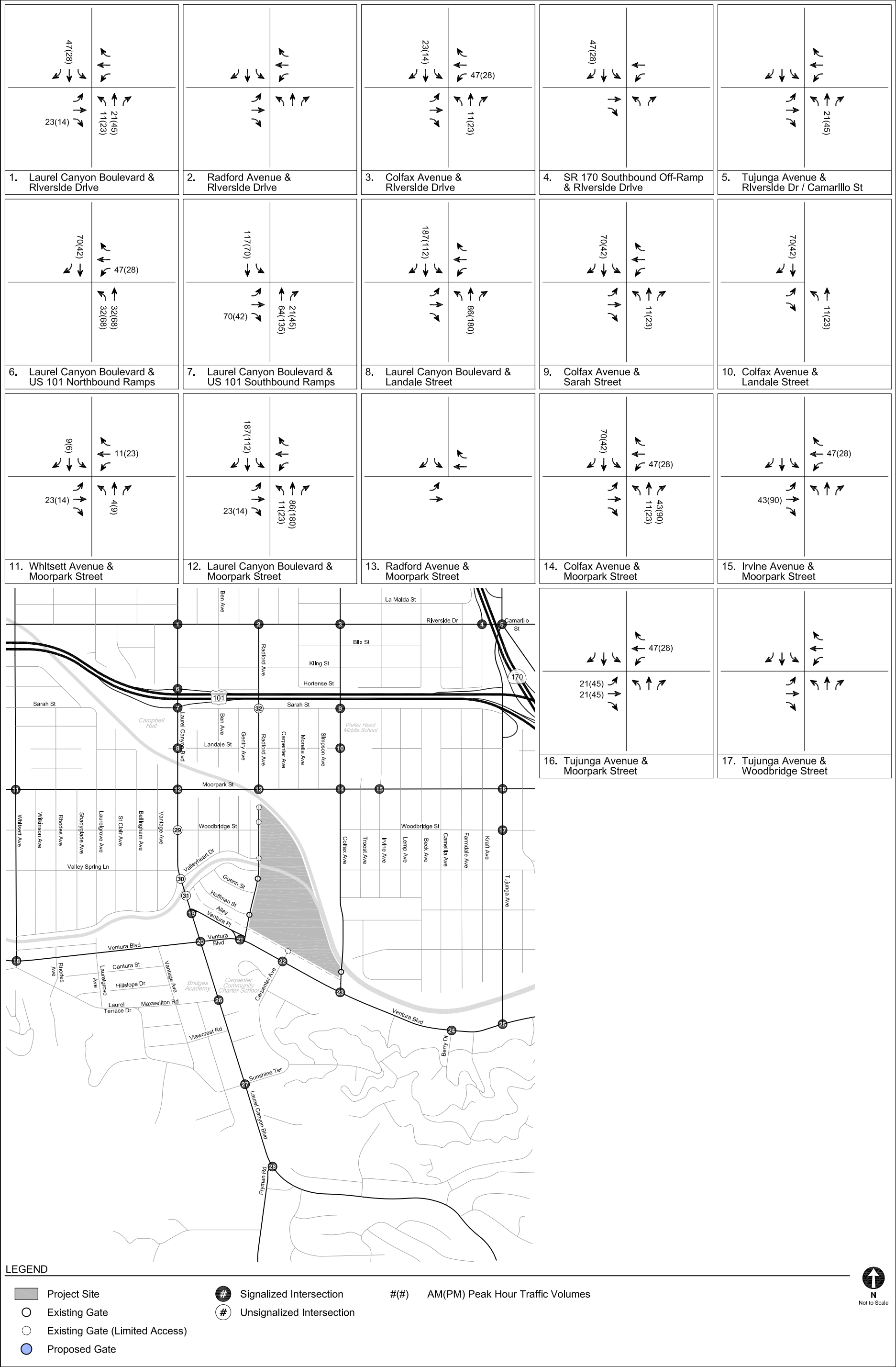
TOTAL PROJECT-ONLY PEAK HOUR TRAFFIC VOLUMES
WITH LOS ANGELES RIVER CONNECTOR

FIGURE
5E (CONT.)



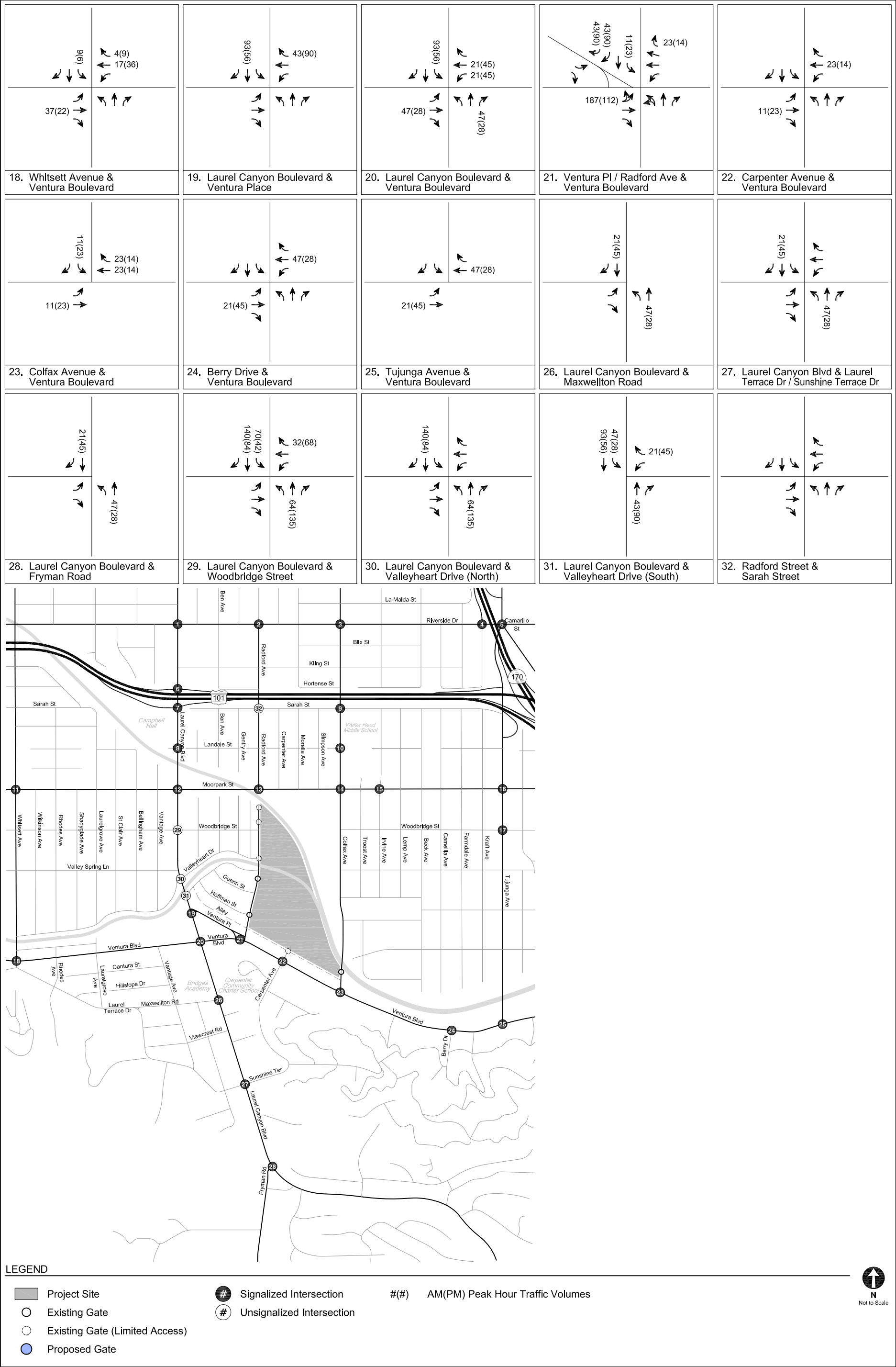
TOTAL PROJECT SITE DRIVEWAY PEAK HOUR TRAFFIC VOLUMES
WITH LOS ANGELES RIVER CONNECTOR

FIGURE
5F



EXISTING USES
PEAK HOUR TRAFFIC VOLUMES

FIGURE
6



EXISTING USES
PEAK HOUR TRAFFIC VOLUMES

FIGURE
6 (CONT.)



LOCATIONS OF RELATED PROJECTS

FIGURE
7

**TABLE 3
RADFORD STUDIO CENTER
RELATED PROJECTS**

No.	Project	Address	Description	Trip Generation [a]						
				Daily	Morning Peak Hour			Afternoon Peak Hour		
					In	Out	Total	In	Out	Total
<u>Related projects within 0.5 miles of Project Site</u>										
1.	Mixed-Use	4021 Radford Avenue	54 residential units, including 6 affordable housing units, and 3,474 sf of commercial	380	4	18	22	18	7	25
2. [b]	Mixed-Use	11611 Ventura Boulevard	140 assisted living units and 62 senior independent housing units	565	19	18	37	22	28	50
3. [b]	Commercial	11601 Ventura Boulevard	10,568 sf commercial	575	15	10	25	35	35	70
<u>Related Projects within 0.25 miles of analyzed intersections (outside 0.5 miles of Project Site)</u>										
4.	Studio City Crossings Market/Retail	11265 Ventura Boulevard	37,079 sf supermarket and 1,581 sf retail	1,883	29	1	30	71	77	148
5.	Condominium	11331 Ventura Boulevard	62 condominium units	189	(24)	25	1	22	(13)	9
6.	Mixed-Use	12544 Ventura Boulevard	28 residential units and 16,580 sf restaurant	1,879	93	82	175	104	62	166
7.	Mixed-Use	12548 Ventura Boulevard	62 residential units, 10,747 sf retail, and 1,925 sf of other commercial	1,000	23	41	64	46	34	80
8.	Mixed-Use	12582 Ventura Boulevard	Mixed-use	997	36	28	64	38	32	70
9.	Harvard-Westlake River Park Project	4141 Whitsett Avenue	17.2 acres recreational and sports facility	770	0	0	0	18	466	484
10.	Mixed-Use	11311 Camarillo Street	60 residential units, including six affordable housing units, and 2,826 sf retail	350	(15)	24	9	24	(4)	20
<u>Additional Related Projects Considered [c]</u>										
11.	Sportsmen's Lodge	12833 Ventura Boulevard	520 residential units, including 78 affordable housing units, and 45,945 sf commercial	2,001	50	54	104	68	68	136

Notes:

[a] Related project information and trip generation estimates for development projects are provided by Los Angeles Department of Transportation (LADOT) or accessed from <http://planning.lacity.org> based on cases filed since June 2023.

[b] Trip generation estimates were calculated based on rates from *Trip Generation Manual 11th Edition*, Institute of Transportation Engineers, 2021.

[c] Additional development projects located beyond 0.50 miles of the Project Site and 0.25 miles of the furthest outlying study intersections were also considered based on the proposed land use, density, and/or location.

TABLE 4
RADFORD STUDIO CENTER
FREEWAY OFF-RAMP SAFETY SCREENING ANALYSIS

Freeway Off-Ramp	Peak Hour	Net New Project Trips	Meets Screening Criteria? [a]
US 101			
Northbound Off-ramp to Laurel Canyon Boulevard	AM PM	71 21	YES NO
Southbound Off-ramp to Laurel Canyon Boulevard	AM PM	107 31	YES YES
SR 170			
Southbound Off-ramp to Riverside Drive	AM PM	71 21	YES NO
SR 134			
Westbound Off-ramp to Lankershim Boulevard	AM PM	36 10	YES NO

Notes:

- [a] A transportation assessment for a development project must include further analysis of any freeway off-ramp where a project adds 25 or more peak hour trips. As detailed, five of the eight freeway off-ramp conditions would be further analyzed in the transportation study.

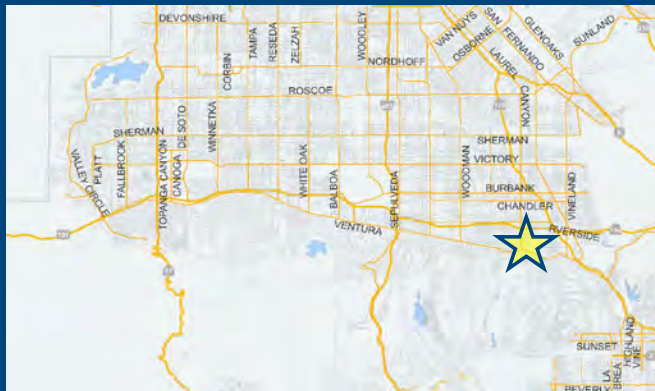
CITY OF LOS ANGELES VMT CALCULATOR Version 1.4



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

Project Information

Project: Radford Studio Center Project
 Scenario: Project - Custom Studio & Office Land Use
 Address: 4200 N RADFORD AVE, 91604



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

☒ Yes ☐ No

Existing Land Use

Land Use Type	Value	Unit
Office General Office	285	ksf
(custom) Studio, Production & Office Daily	8622	Trips
(custom) Studio, Production & Office HBW-At	52	Percent
(custom) Studio, Production & Office HBO-At	24	Percent
(custom) Studio, Production & Office NHB-At	12	Percent
(custom) Studio, Production & Office HBW-Pr	0	Percent
(custom) Studio, Production & Office HBO-Pr	0	Percent
(custom) Studio, Production & Office NHB-Pr	12	Percent
(custom) Studio, Production & Office Daily	0	Residents
(custom) Studio, Production & Office Daily	4781	Employees
(custom) Studio, Production & Office Daily	Non-Retail	Retail/Non-R

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

Proposed Project Land Use

Land Use Type	Value	Unit
Office General Office	0.001	ksf
Retail High-Turnover Sit-Down Restaurant	25	ksf
(custom) Studio, Production & Office Daily	16981	Trips
(custom) Studio, Production & Office HBW-At	52	Percent
(custom) Studio, Production & Office HBO-At	24	Percent
(custom) Studio, Production & Office NHB-At	12	Percent
(custom) Studio, Production & Office HBW-Pr	0	Percent
(custom) Studio, Production & Office HBO-Pr	0	Percent
(custom) Studio, Production & Office NHB-Pr	12	Percent
(custom) Studio, Production & Office Daily	0	Residents
(custom) Studio, Production & Office Daily	8820	Employees
(custom) Studio, Production & Office Daily	Non-Retail	Retail/Non-R
Office General Office *	0.001	ksf

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

Project Screening Summary

Existing Land Use	Proposed Project
7,783 Daily Vehicle Trips	17,228 Daily Vehicle Trips
52,567 Daily VMT	115,300 Daily VMT

Tier 1 Screening Criteria

Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station. ☐

Tier 2 Screening Criteria

The net increase in daily trips < 250 trips **9,445**
Net Daily Trips

The net increase in daily VMT ≤ 0 **62,733**
Net Daily VMT

The proposed project consists of only retail land uses ≤ 50,000 square feet total. **25,000**
ksf

The proposed project is required to perform VMT analysis.



* A standard non-retail land use (i.e. in this case, 1 sf of general office) was also included in the VMT Calculator as an arbitrary input to allow the VMT Calculator to populate the VMT screening results. The input does not change the underlying trip or VMT calculations for the Project.

TABLE A-1
CUSTOM LAND USE DEVELOPMENT - DAILY TRIP ESTIMATES
RADFORD STUDIO CENTER PROJECT

Land Use	Daily Vehicle Trip Rates [a]	Existing Uses	Daily Vehicle Trips	Proposed Uses	Daily Vehicle Trips
Sound Stages	5.91	359,730 sf	2,126	450,000 sf	2,660
Production Support	4.14	255,510 sf	1,058	300,000 sf	1,242
Production Office	9.34	450,060 sf	4,204	725,000 sf	6,772
Creative Office [b]	10.84	113,810 sf	1,234	700,000 sf	6,307
Total		1,179,110 sf	8,622	2,175,000 sf	16,981

Notes:

The daily trip generation characteristics and patterns of studio-related uses are similar in scope and behavior to the general office land use. Thus, the VMT Calculator's custom land use feature was used to estimate VMT per employee for the Project. The custom land use inputs include total daily trips and total employees as well as trip purpose assumptions, which were matched to those of the VMT Calculator's general office land use.

[a] Trip generation rates for sound stages, production support, and production office uses are based on empirical data from other studios in Los Angeles and have been used to estimate studio-related trips for several transportation studies, including *NBC Universal Evolution Plan Alternative 10 Transportation Analysis* (Gibson Transportation Consulting, 2012) and *Transportation Study for the Paramount Pictures Master Plan* (Gibson Transportation Consulting, 2015).

[b] Trip generation rate for the Project based on the best-fit curve formula listed in *Trip Generation, 11th Edition* for the General Office Building land use.

$$\text{Daily - } \ln(T) = 0.87 \ln(X) + 3.05$$

T = Average Vehicle Trips

X = Gross Floor Area (ksf)

Trip generation rate for the existing uses based on the average rate from ITE for the General Office Building land use.

TABLE A-2
CUSTOM LAND USE DEVELOPMENT - EMPLOYEE PROJECTIONS
RADFORD STUDIO CENTER PROJECT

Land Use	Employee Generation Rate (per 1,000 sf) [a]	Existing Uses		Proposed Uses	
		Floor Area	Employees	Floor Area	Employees
Sound Stages [b]	5.6	359,730 sf	2,015	450,000 sf	2,520
Production Support	2.0	255,510 sf	511	300,000 sf	600
Production Office	4.0	450,060 sf	1,800	725,000 sf	2,900
Creative Office	4.0	113,810 sf	455	700,000 sf	2,800
Total		1,179,110 sf	4,781	2,175,000 sf	8,820

Notes:

[a] Except for sound stages, employee generation rates from *City of Los Angeles VMT Calculator Documentation, Version 1.3* (Los Angeles Department of Transportation and Los Angeles Department of City Planning, May 2020) for general retail (production support) and general office (production and creative office) land uses.

[b] Rounded rate assumes 100 employee for a typical 18,000 sf sound stage as a scalable density, as assumed in *Manhattan Beach Studios* (June 2021).

Attachment C.1: Access Assessment Worksheet



Access Assessment Worksheet

This Worksheet supports the analysis needed to assess the project's potential effect on pedestrian, bicycle, and transit facilities in the vicinity of the proposed project. If the project exceeds the screening criteria in Section V of the MOU, complete and attach to the draft Transportation Assessment to support the analysis. For the full scope of analysis, see Section 3.2 of the Transportation Assessment Guidelines.:

I. PROJECT INFORMATION

Project Name: Radford Studio Center Project

Project Address: 4024, 4064 & 4200 N. Radford Avenue

Project Description: See attached Project Description.

LADOT Project Case Number: _____

II. PEDESTRIAN/ PERSON TRIP GENERATION

Source of Pedestrian/Person Trip Generation Rate(s)? ☐ ITE 10th Edition ☒ Other:

	Land Use	Size/Unit	Daily Person Trips
Proposed	To be further evaluated in the		
	Transportation Assessment.		
	Total new trips:		

Pedestrian/Person trip generation table including a description of the proposed land uses, trip credits, person trip assumptions, comparison studies used for reference, etc. attached? ☐ Yes ☒ No

III. PEDESTRIAN ATTRACTORS INVENTORY

Attach Pedestrian Map for the area (1,320 foot radius from edge of the project site) depicting:

- site pedestrian entrance(s)
- Existing or proposed passenger loading zones
- pedestrian generation/distribution values
 - Geographic Distribution: N 0 % S 25 % E 25 % W 50 %
- transit boarding and alighting of transit stops (should include Metro rail stations; Metro, DASH, and other municipal bus stops)



- Note:** Pedestrian Count Summary, Bicycle Count Summary, Manual Traffic Count Summary will need to be attached to the Transportation Assessment

Is a High Injury Network street located within 1,320 foot radius from the edge of the project site? ☒ Yes ☐ No

Ventura Blvd west of Carpenter Ave at 210 (feet)

Laurel Canyon Blvd b/n Ventura Pl & Ventura Blvd at 1,020 (feet)

_____ at _____ (feet)

_____ at _____ (feet)

- transit stops
- bike facilities
- traffic control devices for controlled crossings
- uncontrolled crosswalks
- location of any missing, damaged or substandard sidewalks

Crossing Distances



City of Los Angeles Transportation Assessment MOU

Does the project property have frontage along an arterial street (designated as either an Avenue or Boulevard?)

☒ Yes ☐ No

If yes, provide the distance between the crossing control devices (e.g. signalized crosswalk, or controlled mid-block crossing) along any arterial within 1,320 feet of the property.

_____ (feet) at See Table 5	_____ (feet) at _____
_____ (feet) at _____	_____ (feet) at _____
_____ (feet) at _____	_____ (feet) at _____
_____ (feet) at _____	_____ (feet) at _____
_____ (feet) at _____	_____ (feet) at _____
_____ (feet) at _____	_____ (feet) at _____

For each street along the property frontage, provide:

the roadway configuration: See Table 6

- | | |
|----------------------------|----------------------------|
| • 2-Lane | • 5-Lane w/ striped median |
| • 3-Lane w/ striped median | • 5-Lane w/ raised median |
| • 3-Lane w/ raised median | • 6-Lane |
| • 4-Lane | • Other: _____ |

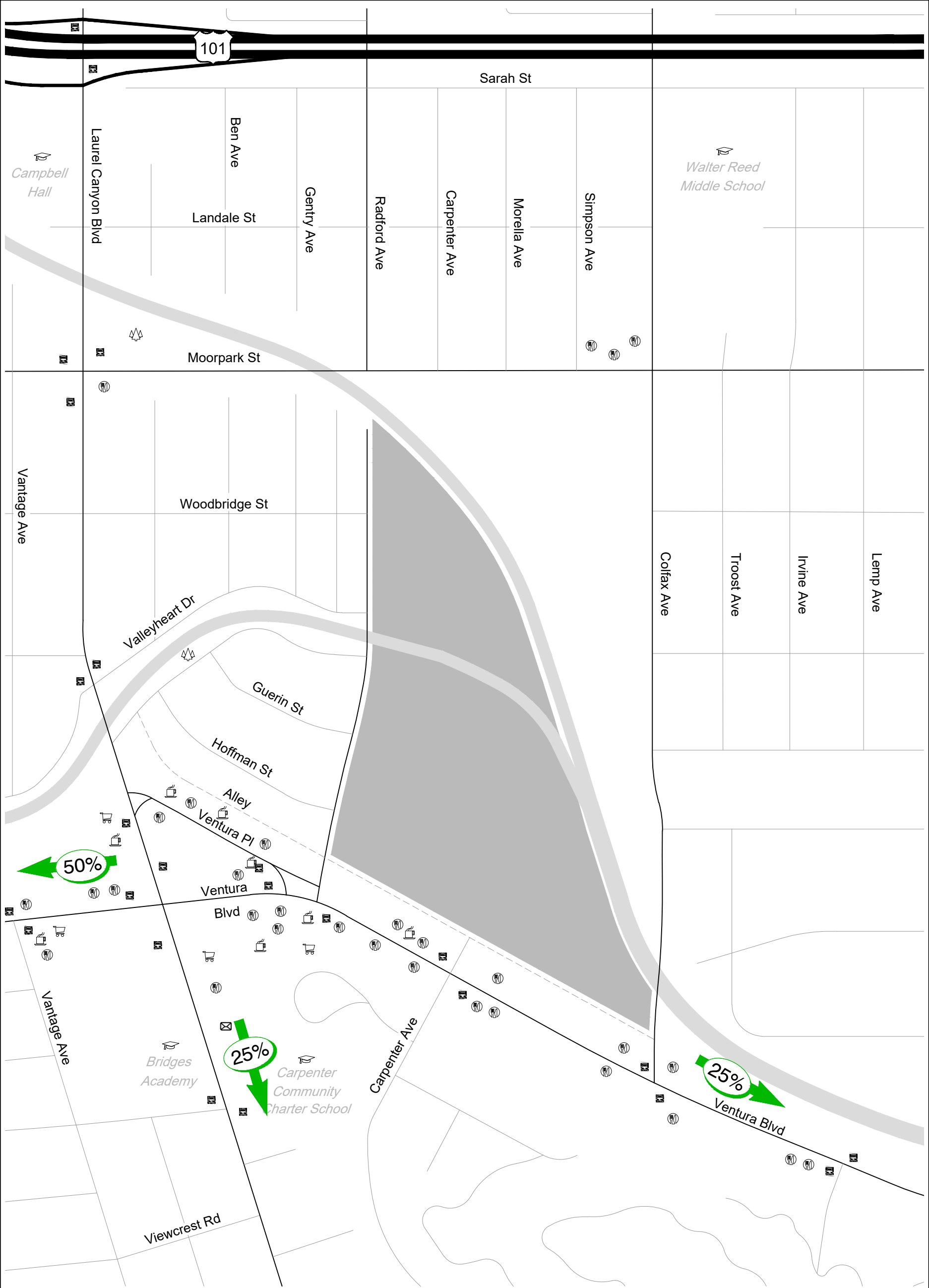
and crossing distance: _____ ft total _____ ft to median _____ ft to median

V. Project Construction

Will the project require any construction activity within the city right-of-way? ☒ Yes ☐ No

If yes, will the project require temporary closure of any of the following city facilities?

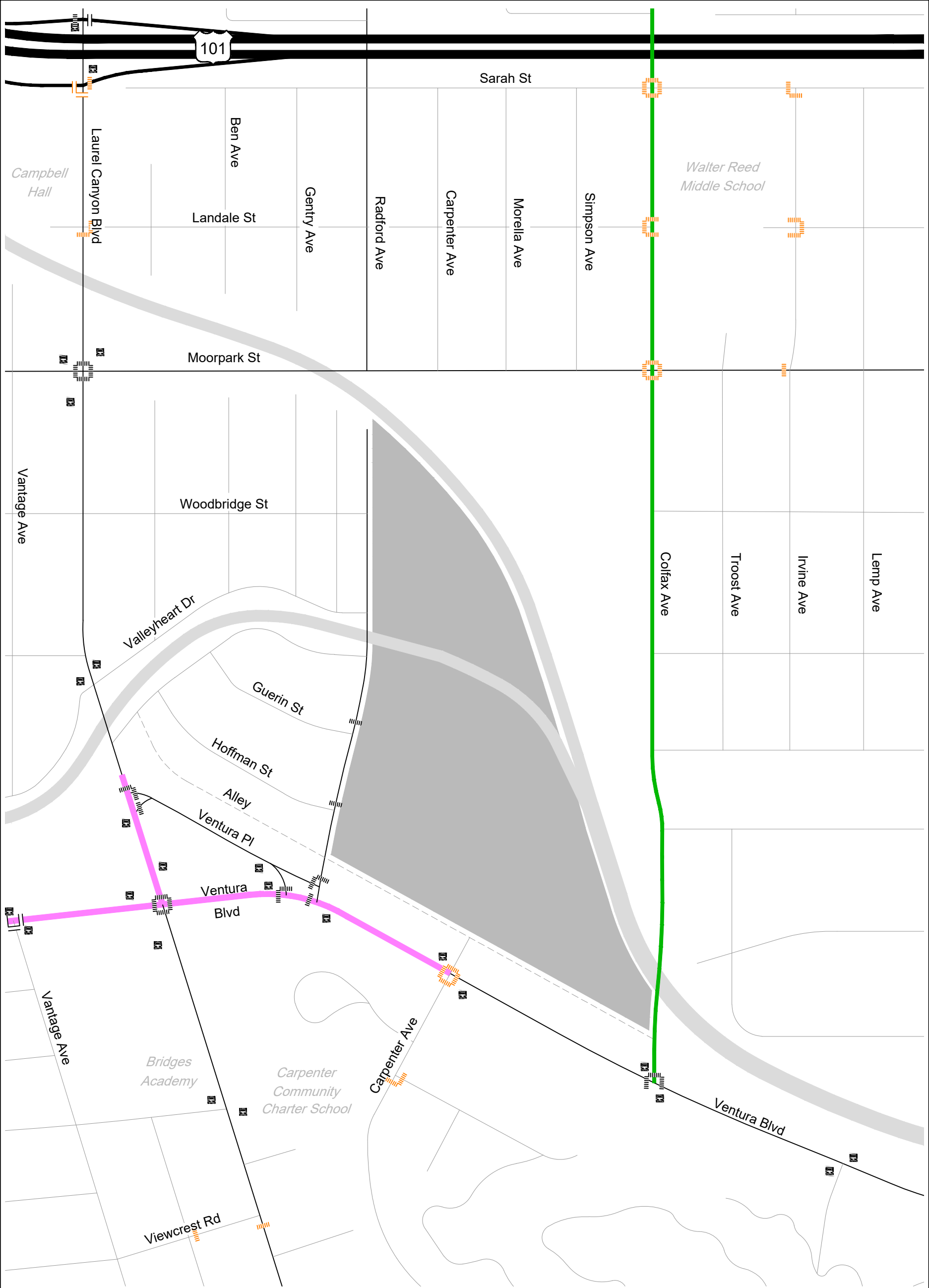
- ✓ • sidewalk
- bike lane
- ✓ • parking lane
- travel lane
- bus stop
- bicycle parking (racks or corrals)
- bike share or other micro-mobility station
- car share station
- parklet
- other: _____



LEGEND

- | | | |
|---------------------------|-------------|---------|
| Project Site | School | Grocery |
| Bus Stop | Park | Dining |
| Regional Ped Distribution | Post office | Cafe |





LEGEND

- | | | |
|--------------|---------------------|---------------------------------|
| Project Site | High-Injury Network | Pedestrian Crossing |
| Bus Stop | Bicycle Lane | Pedestrian Crossing near School |



EXISTING TRANSPORTATION FACILITIES

FIGURE
9

TABLE 5
RADFORD STUDIO CENTER
DISTANCE BETWEEN EXISTING PEDESTRIAN CROSSINGS
WITHIN VICINITY OF PROJECT SITE

Street Segment	Distance (ft)	From	To
Laurel Canyon Boulevard	550	Landale Street	Moorpark Street
	1,920	Moorpark Street	Ventura Place
	520	Ventura Place	Ventura Boulevard
	965	Ventura Boulevard	Maxwellton Road
Radford Avenue	300	Guerin Street	Hoffman Street
	360	Hoffman Street	Ventura Boulevard
Colfax Avenue	600	Landale Street	Moorpark Street
	3,215	Moorpark Street	Ventura Boulevard
Ventura Boulevard	600	Vantage Avenue	Laurel Canyon Boulevard
	450	Laurel Canyon Boulevard	Ventura Place
	255	Ventura Place	Radford Avenue
	625	Radford Avenue	Carpenter Avenue
	960	Carpenter Avenue	Colfax Avenue

TABLE 6
RADFORD STUDIO CENTER
ROADWAY CONFIGURATION AND CROSSING DISTANCE
ALONG PROJECT FRONTAGES

Street Segment	Roadway Configuration	Total Distance (ft)	Distance to Median (ft)	Distance to Median (ft)
Radford Avenue	2-Lane	56	N/A	N/A
Colfax Avenue	2-Lane w/ striped median	60	25	25

Appendix B

Traffic Volume Data

Turning Movement Count Report AM

Location ID: 1
 North/South: Laurel Canyon Bl
 East/West: Riverside Dr

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	39	41	8	10	291	8	6	67	63	14	68	10	625
7:15	55	76	13	18	312	16	12	69	60	16	92	23	762
7:30	65	128	19	26	259	42	19	136	42	18	131	44	929
7:45	74	212	29	40	245	42	34	202	59	32	171	46	1186
8:00	98	155	39	32	263	24	21	201	61	25	154	95	1168
8:15	73	191	43	37	186	26	26	219	57	17	131	46	1052
8:30	64	210	18	29	236	59	17	128	42	30	138	60	1031
8:45	76	206	18	32	196	54	22	115	47	25	108	58	957
9:00	86	160	19	24	259	49	11	110	47	28	121	36	950
9:15	86	151	16	10	244	35	12	75	37	29	133	42	870
9:30	92	126	16	14	289	26	15	84	56	33	92	25	868
9:45	59	118	17	27	239	30	9	79	43	39	110	30	800

Total Volume:	867	1774	255	299	3019	411	204	1485	614	306	1449	515	11198
Approach %	30%	61%	9%	8%	81%	11%	9%	64%	27%	13%	64%	23%	

Peak Hr Begin:	7:45												
PHV	309	768	129	138	930	151	98	750	219	104	594	247	4437
PHF	0.957			0.932			0.883			0.862			

Turning Movement Count Report PM

Location ID: 1
 North/South: Laurel Canyon Bl
 East/West: Riverside Dr

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	56	136	38	25	170	28	43	156	62	29	208	41	992
15:15	67	178	34	26	129	31	38	151	47	35	172	54	962
15:30	66	174	36	28	151	26	16	161	41	32	198	51	980
15:45	42	190	35	21	130	27	33	167	51	40	207	66	1009
16:00	50	194	33	23	120	22	26	144	48	40	216	50	966
16:15	57	185	41	18	134	28	32	146	38	27	223	54	983
16:30	55	180	34	22	106	27	39	162	56	42	226	61	1010
16:45	44	181	30	21	120	32	33	158	42	33	233	68	995
17:00	56	182	41	26	126	26	26	176	47	43	234	74	1057
17:15	63	172	41	30	110	35	24	178	39	32	255	69	1048
17:30	58	209	44	28	128	18	33	206	39	24	217	99	1103
17:45	42	166	41	27	119	25	17	170	31	30	221	89	978

Total Volume:	656	2147	448	295	1543	325	360	1975	541	407	2610	776	12083
Approach %	20%	66%	14%	14%	71%	15%	13%	69%	19%	11%	69%	20%	

Peak Hr Begin:	16:45												
PHV	221	744	156	105	484	111	116	718	167	132	939	310	4203
PHF	0.901			0.983			0.900			0.970			

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	0	0	1	0	8	0	1	0
7:15	1	0	2	0	7	0	0	0
7:30	0	0	1	0	14	0	0	0
7:45	0	0	5	0	7	0	0	0
8:00	2	0	2	0	8	1	2	0
8:15	3	0	7	0	6	0	2	0
8:30	4	0	6	0	11	0	3	0
8:45	2	0	4	0	18	2	3	0
9:00	4	0	2	0	6	0	2	0
9:15	0	0	2	1	5	0	0	0
9:30	2	0	1	0	9	0	3	0
9:45	0	0	7	0	5	0	2	0

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	1	0	3	0	13	1	4	0
15:15	0	0	4	0	8	0	5	0
15:30	1	0	3	0	9	0	7	0
15:45	0	0	4	0	16	0	1	0
16:00	5	0	2	0	11	0	2	0
16:15	2	0	9	0	6	0	3	0
16:30	0	0	3	0	11	0	1	0
16:45	1	0	4	0	8	0	2	0
17:00	2	0	6	0	7	0	3	0
17:15	1	0	5	0	9	0	5	1
17:30	0	0	3	0	5	0	3	0
17:45	0	0	2	0	2	0	0	0

Turning Movement Count Report AM

Location ID: 2
 North/South: Radford Ave
 East/West: Riverside Dr

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	5	0	0	0	107	5	6	1	1	1	59	3	188
7:15	2	1	1	0	113	5	11	0	3	5	91	1	233
7:30	3	6	0	0	190	14	9	0	6	38	155	2	423
7:45	8	5	1	3	257	18	44	2	13	51	200	7	609
8:00	8	0	0	3	324	21	18	1	7	5	210	8	605
8:15	5	5	1	4	229	20	13	2	3	13	196	3	494
8:30	7	0	2	1	192	17	12	1	5	20	300	5	562
8:45	1	0	1	2	155	8	11	0	7	13	260	2	460
9:00	5	1	1	0	153	3	6	0	4	11	222	0	406
9:15	4	0	1	0	115	4	8	0	5	6	219	2	364
9:30	5	0	0	0	117	6	10	0	3	7	168	0	316
9:45	3	0	0	2	131	7	6	0	2	7	170	0	328

Total Volume:	56	18	8	15	2083	128	154	7	59	177	2250	33	4988
Approach %	68%	22%	10%	1%	94%	6%	70%	3%	27%	7%	91%	1%	

Peak Hr Begin:	7:45												
PHV	28	10	4	11	1002	76	87	6	28	89	906	23	2270
PHF	0.750			0.782			0.513			0.783			

Turning Movement Count Report PM

Location ID: 2
 North/South: Radford Ave
 East/West: Riverside Dr

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	6	0	2	0	253	5	12	1	4	11	201	3	498
15:15	3	1	0	1	206	14	9	0	4	15	214	4	471
15:30	4	0	0	2	217	8	10	1	5	11	234	3	495
15:45	4	1	3	0	218	5	9	1	5	15	230	7	498
16:00	1	1	2	1	199	10	13	0	8	5	236	3	479
16:15	7	0	0	2	210	16	12	0	7	10	231	0	495
16:30	2	1	0	3	210	10	6	0	7	12	217	3	471
16:45	1	0	0	1	246	14	8	2	4	8	249	2	535
17:00	5	0	1	2	208	6	6	0	5	10	250	4	497
17:15	0	0	0	1	258	12	10	0	5	10	230	3	529
17:30	2	0	0	3	251	4	4	0	2	4	225	2	497
17:45	3	0	0	0	228	11	10	0	10	6	201	3	472

Total Volume:	38	4	8	16	2704	115	109	5	66	117	2718	37	5937
Approach %	76%	8%	16%	1%	95%	4%	61%	3%	37%	4%	95%	1%	

Peak Hr Begin:	16:45												
PHV	8	0	1	7	963	36	28	2	16	32	954	11	2058
PHF	0.375			0.928			0.767			0.944			

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	0	0	0	0	6	0	2	0
7:15	0	0	0	0	4	1	0	0
7:30	0	0	0	0	5	0	0	0
7:45	2	0	1	0	3	0	0	0
8:00	0	0	1	0	1	0	1	0
8:15	6	0	0	0	3	0	0	0
8:30	0	0	0	0	2	0	1	0
8:45	1	0	0	0	1	0	1	0
9:00	2	0	0	0	0	0	0	0
9:15	0	0	0	0	0	0	0	0
9:30	0	0	1	0	2	0	0	0
9:45	0	0	0	0	3	0	0	0

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	0	0	0	0	4	0	0	0
15:15	0	0	0	0	2	0	0	1
15:30	0	0	0	0	2	0	0	0
15:45	3	0	1	0	7	0	0	0
16:00	0	0	0	0	2	0	1	0
16:15	0	0	0	0	3	0	0	0
16:30	0	0	0	0	3	0	0	0
16:45	0	0	0	0	1	0	0	0
17:00	2	0	0	0	1	0	0	0
17:15	0	0	2	0	2	0	0	0
17:30	0	0	0	0	0	0	0	0
17:45	2	0	0	0	4	0	0	0

Turning Movement Count Report AM

Location ID: 3
 North/South: Colfax Ave
 East/West: Riverside Dr

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	13	91	5	1	82	49	7	25	6	11	46	10	346
7:15	22	123	8	4	80	32	9	38	6	29	62	15	428
7:30	22	132	1	9	136	40	19	117	25	48	86	14	649
7:45	27	117	10	24	179	45	33	155	48	46	143	25	852
8:00	38	113	23	30	232	51	18	95	28	39	152	22	841
8:15	31	108	25	14	195	53	9	74	22	52	132	24	739
8:30	24	136	22	9	119	25	11	77	22	68	185	32	730
8:45	27	118	15	9	127	28	12	50	28	86	177	30	707
9:00	26	79	13	7	98	15	13	58	13	45	171	11	549
9:15	21	109	17	5	71	35	9	40	10	45	149	21	532
9:30	14	115	17	11	98	21	14	52	10	33	136	18	539
9:45	23	123	11	8	92	43	19	44	20	35	117	17	552

Total Volume:	288	1364	167	131	1509	437	173	825	238	537	1556	239	7464
Approach %	16%	75%	9%	6%	73%	21%	14%	67%	19%	23%	67%	10%	

Peak Hr Begin:	7:45												
PHV	120	474	80	77	725	174	71	401	120	205	612	103	3162
PHF	0.926			0.780			0.627			0.807			

Turning Movement Count Report PM

Location ID: 3
 North/South: Colfax Ave
 East/West: Riverside Dr

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	40	83	12	14	180	37	22	84	20	43	132	20	687
15:15	32	61	18	10	156	30	21	67	29	52	149	23	648
15:30	17	67	7	16	160	38	22	101	31	50	143	31	683
15:45	23	88	11	14	157	36	26	98	35	48	165	38	739
16:00	24	62	12	10	127	35	22	103	34	39	165	37	670
16:15	24	58	18	12	160	36	25	117	32	45	164	30	721
16:30	21	67	7	14	176	31	14	121	26	42	139	36	694
16:45	20	97	3	8	178	41	16	130	30	46	154	39	762
17:00	29	82	8	12	151	38	21	118	32	45	178	38	752
17:15	13	60	10	14	179	29	19	110	45	44	138	33	694
17:30	18	63	8	5	189	42	27	100	38	45	155	38	728
17:45	27	70	3	7	138	43	19	92	35	40	135	24	633

Total Volume:	288	858	117	136	1951	436	254	1241	387	539	1817	387	8411
Approach %	23%	68%	9%	5%	77%	17%	13%	66%	21%	20%	66%	14%	

Peak Hr Begin:	16:45												
PHV	80	302	29	39	697	150	83	458	145	180	625	148	2936
PHF	0.856			0.939			0.974			0.913			

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	0	0	0	0	3	0	2	0
7:15	3	0	4	1	0	0	3	0
7:30	5	2	3	0	0	0	4	0
7:45	5	1	5	1	3	1	9	2
8:00	6	0	5	0	5	0	7	3
8:15	1	0	1	0	8	0	6	3
8:30	1	0	2	0	3	0	3	0
8:45	2	0	3	2	7	2	5	0
9:00	1	1	0	0	0	0	1	0
9:15	0	1	2	0	3	1	2	0
9:30	0	0	0	0	0	0	1	0
9:45	0	0	2	0	1	0	0	0

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

Turning Movement Count Report AM

Location ID: 4
 North/South: SR-170 SB Off-Ramp/Kraft Ave
 East/West: Riverside Dr

Date: 11/16/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	40	0	70	0	60	2	1	0	0	1	55	0	229
7:15	29	1	41	0	75	1	4	0	0	0	70	0	221
7:30	41	0	63	0	123	5	3	0	0	0	125	0	360
7:45	68	3	68	0	186	3	7	0	6	1	147	0	489
8:00	68	1	62	0	183	1	2	0	1	1	191	0	510
8:15	64	2	67	0	145	2	4	0	0	0	195	0	479
8:30	38	0	56	0	129	2	6	0	0	0	212	0	443
8:45	26	0	44	0	113	4	4	0	1	0	153	0	345
9:00	23	0	42	0	102	2	3	0	0	0	146	0	318
9:15	16	1	33	0	108	0	3	0	1	1	155	0	318
9:30	17	1	56	0	121	3	5	0	2	0	127	0	332
9:45	42	1	54	0	100	5	4	0	0	1	147	0	354

Total Volume:	472	10	656	0	1445	30	46	0	11	5	1723	0	4398
Approach %	41%	1%	58%	0%	98%	2%	81%	0%	19%	0%	100%	0%	

Peak Hr Begin:	7:45												
PHV	238	6	253	0	643	8	19	0	7	2	745	0	1921
PHF	0.894			0.861			0.500			0.881			

Turning Movement Count Report PM

Location ID: 4
 North/South: SR-170 SB Off-Ramp/Kraft Ave
 East/West: Riverside Dr

Date: 11/16/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	73	1	66	0	138	3	3	0	1	1	190	0	476
15:15	75	2	66	0	145	1	7	0	0	1	199	0	496
15:30	67	0	69	0	152	2	1	0	4	0	200	0	495
15:45	69	0	55	0	157	3	5	0	0	0	172	0	461
16:00	64	2	52	0	137	4	2	0	2	0	219	0	482
16:15	61	0	59	0	157	3	0	0	0	4	165	0	449
16:30	68	2	69	0	140	1	2	0	1	2	192	0	477
16:45	62	1	72	0	155	3	2	0	1	1	173	0	470
17:00	92	1	63	0	157	1	2	0	0	0	202	0	518
17:15	72	2	60	0	182	1	3	0	0	1	206	0	527
17:30	82	3	60	0	179	0	2	0	0	3	166	0	495
17:45	99	0	64	0	152	3	6	0	0	1	183	0	508

Total Volume:	884	14	755	0	1851	25	35	0	9	14	2267	0	5854
Approach %	53%	1%	46%	0%	99%	1%	80%	0%	20%	1%	99%	0%	

Peak Hr Begin:	17:00												
PHV	345	6	247	0	670	5	13	0	0	5	757	0	2048
PHF	0.917			0.922			0.542			0.920			

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	0	0	0	0	1	0	0	0
7:15	1	0	0	0	2	0	0	0
7:30	2	0	0	0	2	0	1	0
7:45	0	1	0	0	1	0	0	0
8:00	2	0	0	0	0	0	2	0
8:15	0	0	0	0	1	0	0	0
8:30	0	0	0	0	2	0	0	0
8:45	0	0	0	0	0	1	0	0
9:00	1	0	0	0	0	0	0	0
9:15	3	0	0	0	0	0	0	0
9:30	0	0	0	0	0	0	0	0
9:45	1	0	0	0	0	0	0	0

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	2	0	0	0	1	0	2	0
15:15	3	1	0	0	1	0	1	0
15:30	1	0	0	0	0	0	0	0
15:45	3	0	0	0	1	0	0	0
16:00	3	0	0	0	0	2	1	0
16:15	2	0	0	0	0	0	0	0
16:30	3	0	0	0	0	0	0	0
16:45	4	0	0	0	1	0	0	0
17:00	0	0	0	0	1	0	0	0
17:15	0	0	0	0	1	0	0	0
17:30	1	0	0	0	2	0	0	0
17:45	4	0	0	0	0	0	0	0

Turning Movement Count Report AM

Location ID: 5
 North/South: Tujunga Ave & Riverside Dr
 East/West: Camarillo St

Date: 11/16/23
 City: Lost Angeles, CA

	Southbound - Tujunga				Westbound - Camarillo				Northbound - Tujunga				NorthWestbound - Riverside				Eastbound - Camarillo				Totals:
	1	2	4	5	6	7	9	10	11	13	14	15	16	18	19	20	21	23	24	25	
Movements:	R	T	L- Riv	L- Cam	R	T	L- Tuj	L- Riv	R-Riv	R-Cam	T	L	R	T	L- Cam	L- Tuj	R-Tuj	R-Riv	T	L	
7:00	3	160	9	0	23	40	83	6	6	8	76	1	1	7	16	6	51	40	35	18	589
7:15	8	181	17	1	26	50	74	5	2	12	71	2	1	5	16	6	25	38	25	23	588
7:30	12	237	30	2	16	79	66	3	1	22	114	4	1	15	33	7	41	62	33	38	816
7:45	25	220	26	5	23	103	54	5	7	15	128	6	3	19	55	9	53	80	57	39	932
8:00	18	210	29	3	25	112	47	0	3	17	170	7	0	31	47	10	44	71	77	45	966
8:15	18	205	24	3	27	98	52	4	3	17	58	4	1	13	29	7	49	118	81	55	866
8:30	12	235	45	5	31	68	42	3	4	10	76	5	0	16	44	11	36	101	66	42	852
8:45	9	182	43	4	28	81	70	5	5	12	65	1	1	10	33	5	26	97	68	37	782
9:00	8	221	41	5	24	60	59	5	6	13	51	5	2	10	38	8	19	93	51	32	751
9:15	10	167	24	2	20	68	85	2	6	15	65	1	4	7	27	5	18	67	57	30	680
9:30	10	154	33	7	24	77	57	10	2	11	65	5	6	26	38	9	22	91	69	26	742
9:45	16	181	27	5	17	52	52	6	8	19	62	3	4	14	31	13	36	69	55	31	701
Total Volume:	149	2353	348	42	284	888	741	54	53	171	1001	44	24	173	407	96	420	927	674	416	9265
Approach %	5%	81%	12%	1%	14%	45%	38%	3%	4%	13%	79%	3%	3%	25%	58%	14%	17%	38%	28%	17%	
Peak Hr Begin:	7:45																				
PHV	73	870	124	16	106	381	195	12	17	59	432	22	4	79	175	37	182	370	281	181	3616

Prepared by City Count, LLC. (www.citycount.com)

Turning Movement Count Report PM

Location ID: 5
 North/South: Tujunga Ave & Riverside Dr
 East/West: Camarillo St

Date: 11/16/23
 City: Lost Angeles, CA

	Southbound - Tujunga				Westbound - Camarillo				Northbound - Tujunga				NorthWestbound - Riverside				Eastbound - Camarillo				Totals:
	1	2	4	5	6	7	9	10	11	13	14	15	16	18	19	20	21	23	24	25	
Movements:	R	T	L - Riv	L - Cam	R	T	L - Tuj	L - Riv	R-Riv	R-Cam	T	L	R	T	L - Cam	L - Tuj	R-Tuj	R-Riv	T	L	
15:00	19	156	7	7	25	69	41	6	3	11	124	7	5	31	47	14	51	53	86	49	811
15:15	17	126	9	2	36	78	53	0	11	32	167	5	6	28	46	9	51	56	133	51	916
15:30	25	105	12	3	29	70	38	1	6	23	140	6	4	24	58	13	41	59	97	49	803
15:45	23	131	17	3	34	86	47	6	2	24	140	3	3	19	54	6	36	58	117	40	849
16:00	10	91	8	4	31	54	38	4	6	23	135	11	3	23	65	7	34	61	117	56	781
16:15	16	111	14	11	36	86	42	5	5	37	144	6	6	27	52	7	33	52	92	39	821
16:30	12	75	17	9	32	63	34	4	2	24	125	0	0	32	70	10	39	63	120	57	788
16:45	18	103	10	4	27	72	38	5	5	24	180	7	5	31	62	6	40	64	76	48	825
17:00	24	106	7	4	37	92	48	3	4	20	165	7	3	24	58	6	42	78	121	52	901
17:15	16	113	15	6	19	76	47	5	5	21	120	6	4	38	82	10	39	70	99	54	845
17:30	28	77	9	1	38	80	43	3	3	21	141	8	2	17	70	7	46	59	112	49	814
17:45	19	69	7	5	24	73	40	3	8	30	122	7	6	24	55	10	30	60	103	47	742
Total Volume:	227	1263	132	59	368	899	509	45	60	290	1703	73	47	318	719	105	482	733	1273	591	9896
Approach %	14%	75%	8%	4%	20%	49%	28%	2%	3%	14%	80%	3%	4%	27%	60%	9%	16%	24%	41%	19%	
Peak Hr Begin:	16:45																				
PHV	86	399	41	15	121	320	176	16	17	86	606	28	14	110	272	29	167	271	408	203	3385

Prepared by City Count, LLC. (www.citycount.com)

Pedestrian/Bicycle Count Report

Leg:	North		East		South		SouthWest - Riv		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	2	0	1	0	0	0	1	0	2	0
7:15	6	0	5	0	0	0	0	0	2	0
7:30	4	0	0	0	0	0	1	0	3	0
7:45	2	0	4	0	0	0	2	0	2	0
8:00	0	0	4	0	0	0	1	0	0	0
8:15	0	0	1	0	1	0	0	0	1	0
8:30	0	0	3	0	2	0	1	0	0	0
8:45	0	0	0	0	1	0	0	0	0	0
9:00	2	0	1	0	0	0	0	0	1	0
9:15	1	0	3	0	0	0	4	0	0	0
9:30	0	0	1	0	0	0	0	0	1	0
9:45	1	0	1	0	0	0	0	0	1	0

Leg:	North		East		South		SouthWest - Riv		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	0	2	0	0	1	0	3	0	2	0
15:15	5	0	0	0	0	0	1	0	9	2
15:30	12	0	10	0	5	0	7	0	12	0
15:45	6	0	9	0	3	0	4	0	2	0
16:00	2	1	3	0	0	1	0	0	2	1
16:15	6	0	3	0	0	0	0	0	4	0
16:30	2	0	2	0	0	0	2	0	2	0
16:45	3	0	3	0	1	0	2	0	3	0
17:00	2	0	2	0	4	0	1	0	3	0
17:15	0	0	0	0	1	0	0	0	1	0
17:30	1	0	2	0	3	1	3	0	1	0
17:45	2	0	3	0	1	0	0	0	1	0

Turning Movement Count Report AM

Location ID: 6
 North/South: Laurel Canyon Bl
 East/West: US 101 NB-WB Ramps

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	131	286	0	26	2	56	0	77	59	0	0	0	637
7:15	146	307	0	38	1	38	0	102	75	0	0	0	707
7:30	94	286	0	41	1	52	0	151	102	0	0	0	727
7:45	90	284	0	65	0	70	0	178	73	0	0	0	760
8:00	88	319	0	73	0	89	0	181	89	0	0	0	839
8:15	66	246	0	64	0	113	0	130	78	0	0	0	697
8:30	64	284	0	77	2	74	0	134	93	0	0	0	728
8:45	77	288	0	74	1	79	0	125	111	0	0	0	755
9:00	84	302	0	50	1	85	0	138	89	0	0	0	749
9:15	90	279	0	66	0	102	0	142	111	0	0	0	790
9:30	94	326	0	44	0	115	0	102	90	0	0	0	771
9:45	96	254	0	61	4	82	0	124	93	0	0	0	714

Total Volume:	1120	3461	0	679	12	955	0	1584	1063	0	0	0	8874
Approach %	24%	76%	0%	41%	1%	58%	0%	60%	40%	0%	0%	0%	

Peak Hr Begin:	8:45												
PHV	345	1195	0	234	2	381	0	507	401	0	0	0	3065
PHF	0.917			0.918			0.897			0.000			

Turning Movement Count Report PM

Location ID: 6
 North/South: Laurel Canyon Bl
 East/West: US 101 NB-WB Ramps

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	77	225	0	73	0	84	0	210	110	0	0	0	779
15:15	61	191	0	80	0	92	0	198	91	0	0	0	713
15:30	64	221	0	86	0	104	0	209	96	0	0	0	780
15:45	57	163	0	86	1	78	0	244	112	0	0	0	741
16:00	39	197	0	79	0	95	0	217	106	0	0	0	733
16:15	46	189	0	79	2	81	0	251	113	0	0	0	761
16:30	64	176	0	81	0	98	0	260	90	0	0	0	769
16:45	36	178	0	92	0	107	0	248	91	0	0	0	752
17:00	40	216	0	123	0	95	0	239	66	0	0	0	779
17:15	34	202	1	114	0	114	0	227	92	0	0	0	784
17:30	32	182	0	152	0	116	0	207	76	0	0	0	765
17:45	55	179	0	112	0	124	0	224	97	0	0	0	791

Total Volume:	605	2319	1	1157	3	1188	0	2734	1140	0	0	0	9147
Approach %	21%	79%	0%	49%	0%	51%	0%	71%	29%	0%	0%	0%	

Peak Hr Begin:	17:00												
PHV	161	779	1	501	0	449	0	897	331	0	0	0	3119
PHF	0.919			0.886			0.956			0.000			

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	0	0	0	0	0	0	0	0
7:15	0	0	1	0	0	0	1	0
7:30	0	0	1	0	0	0	0	0
7:45	0	0	1	0	0	0	1	1
8:00	0	0	3	0	0	0	1	1
8:15	0	0	1	0	0	0	0	1
8:30	0	0	1	0	0	0	0	1
8:45	0	0	1	0	0	0	0	0
9:00	0	0	2	0	0	0	2	1
9:15	0	0	1	0	0	0	0	0
9:30	0	0	0	0	0	0	0	0
9:45	0	0	3	0	0	0	0	0

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	0	0	2	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0
15:30	0	0	3	2	0	0	0	0
15:45	0	0	2	0	0	0	1	0
16:00	0	0	6	0	0	0	0	0
16:15	2	0	6	0	0	0	2	1
16:30	0	0	1	0	0	0	1	0
16:45	0	0	4	0	0	0	1	0
17:00	0	0	2	0	0	0	2	1
17:15	0	0	0	0	0	0	1	0
17:30	0	0	0	0	0	0	0	1
17:45	0	0	0	0	0	0	1	1

Turning Movement Count Report AM

Location ID: 7
 North/South: Laurel Canyon Bl
 East/West: US 101 SB-EB Ramps

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	0	283	60	0	0	0	53	108	0	191	1	39	735
7:15	0	251	101	0	0	0	79	131	0	129	1	36	728
7:30	0	223	128	0	0	0	95	214	0	88	0	39	787
7:45	0	243	106	0	0	0	111	213	0	91	1	45	810
8:00	0	280	127	0	0	0	103	234	0	82	1	38	865
8:15	0	249	100	0	0	0	112	179	0	110	0	41	791
8:30	0	256	108	0	0	0	134	197	0	86	2	23	806
8:45	1	266	122	0	0	0	132	196	0	76	2	36	831
9:00	0	245	124	0	0	0	122	188	0	58	1	43	781
9:15	0	268	139	0	0	0	105	210	0	72	2	41	837
9:30	0	309	108	0	0	0	117	180	0	107	5	28	854
9:45	0	248	98	0	0	0	119	164	0	115	4	48	796

Total Volume:	1	3121	1321	0	0	0	1282	2214	0	1205	20	457	9621
Approach %	0%	70%	30%	0%	0%	0%	37%	63%	0%	72%	1%	27%	

Peak Hr Begin:	8:45												
PHV	1	1088	493	0	0	0	476	774	0	313	10	148	3303
PHF	0.948			0.000			0.953			0.841			

Turning Movement Count Report PM

Location ID: 7
 North/South: Laurel Canyon Bl
 East/West: US 101 SB-EB Ramps

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	0	245	61	0	0	0	120	248	0	82	8	62	826
15:15	0	231	61	0	0	0	110	234	0	82	13	61	792
15:30	0	237	78	0	0	0	102	235	1	92	6	63	814
15:45	0	196	56	0	0	0	139	285	0	95	0	69	840
16:00	0	235	51	0	0	0	110	254	0	87	3	76	816
16:15	0	210	70	0	0	0	120	268	0	93	2	92	855
16:30	0	219	55	0	0	0	129	252	0	98	2	109	864
16:45	0	231	41	0	0	0	115	238	0	91	3	88	807
17:00	0	239	83	0	0	0	126	230	0	89	1	92	860
17:15	0	240	70	0	0	0	116	231	0	119	7	74	857
17:30	0	243	62	0	0	0	136	214	1	118	8	78	860
17:45	0	219	46	0	0	0	134	249	0	112	5	73	838

Total Volume:	0	2745	734	0	0	0	1457	2938	2	1158	58	937	10029
Approach %	0%	79%	21%	0%	0%	0%	33%	67%	0%	54%	3%	44%	

Peak Hr Begin:	17:00												
PHV	0	941	261	0	0	0	512	924	1	438	21	317	3415
PHF	0.933			0.000			0.938			0.951			

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	0	0	0	0	0	0	1	0
7:15	0	0	0	0	0	0	1	0
7:30	0	0	4	0	1	0	0	0
7:45	0	0	2	0	0	0	0	1
8:00	0	0	3	0	0	0	2	0
8:15	0	0	2	0	0	0	1	1
8:30	0	0	1	0	0	0	5	0
8:45	0	0	1	0	0	0	4	1
9:00	0	0	3	0	0	0	2	1
9:15	0	0	0	0	0	0	0	0
9:30	0	0	1	0	1	0	1	0
9:45	0	0	0	0	0	0	2	0

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	0	0	1	1	0	1	1	0
15:15	0	0	0	0	0	0	0	1
15:30	0	0	5	0	0	0	2	0
15:45	0	0	0	0	2	0	4	0
16:00	0	0	5	0	0	0	3	0
16:15	0	0	2	0	0	0	4	0
16:30	0	0	1	0	0	0	2	2
16:45	0	0	5	0	0	0	3	0
17:00	0	0	0	0	0	0	3	0
17:15	0	0	1	0	1	0	4	0
17:30	0	0	0	0	1	0	2	0
17:45	0	0	1	0	0	0	3	0

Turning Movement Count Report AM

Location ID: 8
 North/South: Laurel Canyon Bl
 East/West: Landale St

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	11	447	9	5	2	1	0	165	1	2	0	1	644
7:15	21	338	9	9	3	2	1	189	6	1	0	3	582
7:30	44	258	12	18	7	2	1	287	13	7	0	11	660
7:45	64	236	20	19	8	4	1	287	26	25	1	25	716
8:00	70	263	5	21	29	9	4	274	39	23	4	19	760
8:15	67	261	6	11	43	3	4	245	53	47	0	43	783
8:30	53	265	7	16	42	3	12	263	46	46	4	44	801
8:45	38	316	9	10	13	9	9	258	21	35	5	45	768
9:00	9	289	8	13	1	4	1	270	5	20	2	21	643
9:15	10	317	6	11	0	3	5	302	4	17	2	16	693
9:30	7	374	4	15	2	3	2	273	2	6	1	1	690
9:45	15	333	10	10	1	2	2	277	11	6	1	4	672

Total Volume:	409	3697	105	158	151	45	42	3090	227	235	20	233	8412
Approach %	10%	88%	2%	45%	43%	13%	1%	92%	7%	48%	4%	48%	

Peak Hr Begin:	8:00												
PHV	228	1105	27	58	127	24	29	1040	159	151	13	151	3112
PHF	0.937			0.857			0.956			0.838			

Turning Movement Count Report PM

Location ID: 8
 North/South: Laurel Canyon Bl
 East/West: Landale St

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	21	275	8	8	14	4	5	339	17	22	2	22	737
15:15	21	291	13	14	7	4	7	308	18	31	4	31	749
15:30	40	294	16	15	4	12	6	271	17	11	2	49	737
15:45	29	261	9	32	6	11	7	314	14	50	5	63	801
16:00	16	312	17	11	5	4	2	295	17	25	2	56	762
16:15	12	295	12	13	2	2	2	352	15	23	1	27	756
16:30	17	286	10	17	3	3	2	346	4	15	0	20	723
16:45	22	290	5	7	6	4	4	317	15	6	2	22	700
17:00	36	282	6	10	4	0	2	344	17	23	1	19	744
17:15	26	321	6	11	5	3	3	325	17	10	1	16	744
17:30	35	302	12	13	6	2	2	325	23	19	1	23	763
17:45	43	304	5	7	5	6	5	342	21	14	1	25	778

Total Volume:	318	3513	119	158	67	55	47	3878	195	249	22	373	8994
Approach %	8%	89%	3%	56%	24%	20%	1%	94%	5%	39%	3%	58%	

Peak Hr Begin:	15:30												
PHV	97	1162	54	71	17	29	17	1232	63	109	10	195	3056
PHF	0.938			0.597			0.889			0.665			

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	0	0	0	0	0	0	1	0
7:15	0	0	3	0	0	0	1	0
7:30	0	0	2	0	2	0	2	0
7:45	0	0	2	0	0	0	1	0
8:00	0	0	6	0	2	0	5	0
8:15	0	0	2	0	7	0	19	0
8:30	0	0	4	0	26	0	41	0
8:45	0	0	0	0	14	0	24	0
9:00	0	0	3	0	0	0	3	0
9:15	0	0	1	0	2	0	1	0
9:30	0	0	2	0	1	0	0	0
9:45	0	0	0	0	0	0	3	0

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	0	0	2	0	2	0	4	1
15:15	0	0	1	1	0	0	0	0
15:30	0	0	10	1	35	0	80	0
15:45	0	0	5	0	40	0	57	1
16:00	0	0	4	1	3	0	20	0
16:15	0	0	0	1	1	0	7	1
16:30	0	0	1	0	3	0	10	1
16:45	0	0	2	1	0	0	7	0
17:00	0	0	1	0	1	0	2	0
17:15	0	0	1	0	1	0	1	0
17:30	0	0	1	0	0	0	0	1
17:45	0	0	1	1	2	0	4	0

Turning Movement Count Report AM

Location ID: 9
 North/South: Colfax Ave
 East/West: Sarah St

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	0	138	23	10	1	4	9	28	0	1	2	0	216
7:15	3	115	55	12	2	2	9	37	1	1	1	2	240
7:30	13	125	60	65	3	13	19	84	3	4	23	14	426
7:45	24	157	35	50	10	18	21	157	13	5	55	16	561
8:00	6	179	25	30	2	2	5	97	4	0	1	3	354
8:15	2	202	11	2	1	0	2	101	0	1	1	3	326
8:30	2	221	8	4	2	0	1	98	1	1	0	3	341
8:45	11	209	22	2	0	0	4	81	1	3	2	1	336
9:00	0	147	8	3	1	0	0	76	0	1	0	0	236
9:15	3	172	8	1	0	0	1	51	0	3	0	1	240
9:30	1	160	4	4	0	0	1	68	1	1	0	3	243
9:45	4	201	3	5	1	0	1	64	3	2	1	3	288

Total Volume:	69	2026	262	188	23	39	73	942	27	23	86	49	3807
Approach %	3%	86%	11%	75%	9%	16%	7%	90%	3%	15%	54%	31%	

Peak Hr Begin:	7:30												
PHV	45	663	131	147	16	33	47	439	20	10	80	36	1667
PHF	0.971			0.605			0.662			0.414			

Turning Movement Count Report PM

Location ID: 9
 North/South: Colfax Ave
 East/West: Sarah St

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	3	151	7	5	0	2	3	110	3	1	1	3	289
15:15	3	125	14	6	0	0	6	108	1	1	0	1	265
15:30	3	136	12	5	0	2	6	143	0	3	0	4	314
15:45	2	165	6	8	0	2	2	152	1	2	3	1	344
16:00	5	124	6	4	0	1	1	148	1	1	1	1	293
16:15	6	134	6	17	0	1	6	157	3	3	0	4	337
16:30	3	119	13	3	1	1	2	162	1	0	0	1	306
16:45	1	166	9	3	0	2	3	170	0	1	2	6	363
17:00	4	151	7	7	0	3	6	155	2	1	0	2	338
17:15	0	137	3	6	0	0	5	163	3	4	1	2	324
17:30	2	144	3	4	0	0	3	153	2	1	0	6	318
17:45	4	140	8	5	2	1	1	127	3	0	1	3	295

Total Volume:	36	1692	94	73	3	15	44	1748	20	18	9	34	3786
Approach %	2%	93%	5%	80%	3%	16%	2%	96%	1%	30%	15%	56%	

Peak Hr Begin:	16:15												
PHV	14	570	35	30	1	7	17	644	6	5	2	13	1344
PHF	0.879			0.528			0.964			0.556			

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	0	0	1	0	3	0	2	0
7:15	2	0	7	1	5	0	7	0
7:30	6	0	21	0	36	3	12	2
7:45	19	0	46	2	61	0	27	1
8:00	0	0	7	0	0	2	1	2
8:15	0	0	0	0	0	0	0	0
8:30	0	0	0	2	1	1	4	0
8:45	0	0	1	0	0	0	1	0
9:00	2	0	2	0	1	0	2	0
9:15	0	0	0	0	0	0	0	0
9:30	0	0	0	0	1	0	0	0
9:45	0	0	0	0	1	0	2	0

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	0	0	0	0	2	0	6	0
15:15	0	0	1	0	1	0	2	0
15:30	0	0	0	0	2	0	0	0
15:45	0	0	0	0	0	1	0	0
16:00	0	0	0	0	0	0	1	0
16:15	2	0	2	0	0	0	0	0
16:30	0	0	2	0	2	0	0	0
16:45	0	0	0	0	1	0	1	0
17:00	0	0	1	0	0	0	1	0
17:15	1	0	3	0	0	0	4	0
17:30	0	0	1	0	0	0	5	0
17:45	0	0	4	0	0	0	0	0

Turning Movement Count Report AM

Location ID: 10
 North/South: Colfax Ave
 East/West: Landale St

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	1	142	0	0	0	0	0	38	0	4	0	0	185
7:15	2	117	0	0	0	0	0	41	4	2	0	6	172
7:30	9	133	1	0	0	0	0	104	2	4	0	16	269
7:45	20	173	0	0	0	0	0	157	15	8	0	47	420
8:00	3	177	0	0	0	0	0	98	6	9	0	1	294
8:15	6	195	0	0	0	0	0	88	4	1	0	2	296
8:30	5	206	0	0	0	0	0	97	4	4	0	2	318
8:45	5	204	0	0	0	0	0	74	2	7	0	4	296
9:00	5	150	0	0	0	0	0	72	1	3	0	6	237
9:15	5	171	0	0	0	0	0	54	1	4	0	2	237
9:30	2	159	0	0	0	0	0	64	1	5	0	0	231
9:45	3	193	0	0	0	0	0	66	2	5	0	1	270

Total Volume:	66	2020	1	0	0	0	0	953	42	56	0	87	3225
Approach %	3%	97%	0%	0%	0%	0%	0%	96%	4%	39%	0%	61%	

Peak Hr Begin:	7:45												
PHV	34	751	0	0	0	0	0	440	29	22	0	52	1328
PHF	0.930			0.000			0.682			0.336			

Turning Movement Count Report PM

Location ID: 10
 North/South: Colfax Ave
 East/West: Landale St

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	6	148	0	0	0	0	0	108	6	2	0	7	277
15:15	5	117	0	0	0	0	0	114	5	6	0	4	251
15:30	8	131	2	0	0	0	0	139	5	5	0	4	294
15:45	5	160	0	0	0	0	0	150	6	12	0	10	343
16:00	5	120	1	0	0	0	0	134	3	9	0	8	280
16:15	5	132	2	0	0	0	0	170	2	8	0	3	322
16:30	4	113	0	0	0	0	0	153	6	5	0	2	283
16:45	8	161	2	0	0	0	0	176	3	4	0	3	357
17:00	1	148	4	0	0	0	0	155	6	4	0	4	322
17:15	6	134	0	0	0	0	0	164	3	3	0	5	315
17:30	9	138	0	0	0	0	0	144	2	6	0	9	308
17:45	1	142	0	0	0	0	0	130	6	4	0	7	290

Total Volume:	63	1644	11	0	0	0	0	1737	53	68	0	66	3642
Approach %	4%	96%	1%	0%	0%	0%	0%	97%	3%	51%	0%	49%	

Peak Hr Begin:	16:45												
PHV	24	581	6	0	0	0	0	639	14	17	0	21	1302
PHF	0.893			0.000			0.912			0.633			

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	0	0	0	0	0	0	0	0
7:15	5	0	0	0	0	0	0	0
7:30	5	0	0	0	1	0	1	0
7:45	14	0	0	0	3	0	3	1
8:00	2	0	0	0	0	0	2	0
8:15	0	0	0	0	0	0	2	0
8:30	0	0	0	0	0	0	2	0
8:45	0	0	0	0	0	0	3	0
9:00	0	0	0	0	1	0	3	0
9:15	0	0	0	0	0	0	0	0
9:30	1	0	0	0	0	0	1	0
9:45	0	0	0	0	0	0	3	0

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	0	0	0	0	1	0	2	0
15:15	9	0	0	0	0	0	3	0
15:30	3	0	0	0	0	0	6	0
15:45	3	0	0	0	0	0	0	1
16:00	1	0	0	0	0	0	1	0
16:15	0	0	0	0	0	0	0	0
16:30	4	0	0	0	0	0	0	0
16:45	2	0	0	0	0	0	3	0
17:00	1	0	0	0	0	0	2	0
17:15	0	0	0	0	0	0	5	0
17:30	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	3	0

Turning Movement Count Report AM

Location ID: 11
 North/South: Whitsett Ave
 East/West: Moorpark St

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	25	132	16	5	64	25	7	15	5	20	55	9	378
7:15	23	126	12	9	69	22	18	29	7	20	76	10	421
7:30	26	149	20	10	118	33	7	38	9	41	101	12	564
7:45	21	134	19	20	111	27	29	70	13	48	159	25	676
8:00	16	126	22	19	153	26	23	71	16	29	185	13	699
8:15	13	113	20	12	123	26	13	48	12	35	201	18	634
8:30	17	110	14	11	137	24	13	51	10	66	202	14	669
8:45	12	115	23	20	150	30	19	54	18	80	185	19	725
9:00	17	135	24	14	76	23	20	53	11	39	164	12	588
9:15	18	118	18	15	77	34	19	35	19	38	168	15	574
9:30	26	133	29	6	96	30	21	52	10	29	156	12	600
9:45	25	119	31	9	89	28	18	51	18	28	162	21	599

Total Volume:	239	1510	248	150	1263	328	207	567	148	473	1814	180	7127
Approach %	12%	76%	12%	9%	73%	19%	22%	61%	16%	19%	74%	7%	

Peak Hr Begin:	8:00												
PHV	58	464	79	62	563	106	68	224	56	210	773	64	2727
PHF	0.916			0.914			0.791			0.922			

Turning Movement Count Report PM

Location ID: 11
 North/South: Whitsett Ave
 East/West: Moorpark St

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	33	98	28	21	120	30	33	136	20	21	165	38	743
15:15	40	85	18	30	128	22	31	169	25	23	157	36	764
15:30	24	77	20	21	124	21	31	145	24	12	176	24	699
15:45	32	90	17	26	139	29	29	164	24	26	201	32	809
16:00	31	87	23	20	139	30	21	171	34	22	184	32	794
16:15	20	80	17	17	135	35	38	174	27	11	187	34	775
16:30	30	98	25	20	119	28	43	161	21	21	196	32	794
16:45	26	89	13	24	123	22	32	142	26	19	192	37	745
17:00	32	89	19	26	142	19	35	165	33	19	176	32	787
17:15	21	85	17	22	136	21	24	173	22	18	185	38	762
17:30	27	77	15	31	160	16	36	142	32	15	187	34	772
17:45	23	83	20	43	138	20	41	149	27	24	195	25	788

Total Volume:	339	1038	232	301	1603	293	394	1891	315	231	2201	394	9232
Approach %	21%	65%	14%	14%	73%	13%	15%	73%	12%	8%	78%	14%	

Peak Hr Begin:	15:45												
PHV	113	355	82	83	532	122	131	670	106	80	768	130	3172
PHF	0.899			0.950			0.949			0.944			

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	1	0	1	0	3	0	0	0
7:15	3	1	2	0	1	0	3	0
7:30	1	0	3	0	3	0	2	0
7:45	2	0	2	0	3	0	2	0
8:00	5	0	1	0	5	1	4	0
8:15	5	0	3	0	5	0	5	0
8:30	4	0	2	0	5	0	3	0
8:45	3	0	1	0	2	0	2	0
9:00	4	0	2	0	5	0	5	0
9:15	7	0	4	0	6	0	2	0
9:30	0	0	5	0	7	0	4	0
9:45	5	1	1	0	8	0	5	0

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

Turning Movement Count Report AM

Location ID: 12
 North/South: Laurel Canyon Blvd
 East/West: Moorpark St

Date: 03/07/23
 City: Studio City, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
6:00	14	131	8	4	11	9	3	56	3	6	6	7	258
6:15	9	231	10	11	17	13	6	62	2	7	10	9	387
6:30	11	343	6	10	23	20	4	83	2	11	19	26	558
6:45	17	390	13	8	55	33	12	62	2	9	37	23	661
7:00	20	391	13	20	57	47	18	100	9	14	27	27	743
7:15	31	366	21	14	64	52	22	119	8	13	69	41	820
7:30	35	278	25	30	117	30	30	175	9	21	100	52	902
7:45	56	271	27	52	109	57	38	202	20	33	138	61	1064
8:00	49	265	22	36	138	53	44	237	26	34	134	56	1094
8:15	54	235	17	21	117	55	38	188	26	46	155	65	1017
8:30	60	247	25	34	84	45	45	232	20	44	135	85	1056
8:45	66	267	20	16	87	53	36	228	18	58	147	78	1074
9:00	36	318	16	18	92	55	30	237	21	39	110	62	1034
9:15	55	286	28	17	57	35	34	215	20	24	107	78	956
9:30	46	247	23	23	63	22	34	284	24	28	95	61	950
9:45	40	279	21	21	72	33	30	228	22	19	87	61	913

Total Volume:	599	4545	295	335	1163	612	424	2708	232	406	1376	792	13487
Approach %	11%	84%	5%	16%	55%	29%	13%	80%	7%	16%	53%	31%	

Peak Hr Begin:	8:00												
PHV	229	1014	84	107	426	206	163	885	90	182	571	284	4241
PHF	0.940			0.814			0.927			0.916			

Turning Movement Count Report PM

Location ID: 12
 North/South: Laurel Canyon Blvd
 East/West: Moorpark St

Date: 03/07/23
 City: Studio City, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
14:00	53	204	20	21	78	31	37	267	26	10	123	85	955
14:15	48	194	16	30	69	29	41	283	35	22	130	79	976
14:30	52	238	31	29	64	22	31	264	22	11	141	101	1006
14:45	54	222	18	24	88	34	49	278	31	31	127	82	1038
15:00	64	272	29	35	99	37	40	276	33	23	129	49	1086
15:15	48	218	22	37	115	42	33	253	32	25	135	77	1037
15:30	62	276	31	25	87	42	44	273	26	22	140	74	1102
15:45	68	226	41	26	109	41	47	234	33	22	142	62	1051
16:00	73	248	30	33	90	54	34	281	28	25	132	69	1097
16:15	40	236	37	22	90	34	41	225	21	18	149	96	1009
16:30	48	251	25	20	77	37	34	277	35	30	135	87	1056
16:45	60	214	26	29	110	38	27	247	18	20	152	85	1026
17:00	64	277	21	23	84	31	58	282	30	25	121	75	1091
17:15	73	228	26	34	110	41	37	244	35	21	143	70	1062
17:30	53	263	27	15	113	32	52	280	42	21	104	66	1068
17:45	72	225	29	27	119	55	39	230	35	29	162	76	1098

Total Volume:	932	3792	429	430	1502	600	644	4194	482	355	2165	1233	16758
Approach %	18%	74%	8%	17%	59%	24%	12%	79%	9%	9%	58%	33%	

Peak Hr Begin:	17:00												
PHV	262	993	103	99	426	159	186	1036	142	96	530	287	4319
PHF	0.938			0.851			0.912			0.855			

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
6:00	0	0	1	0	0	0	1	0
6:15	1	0	0	0	0	0	2	0
6:30	0	0	0	0	1	1	1	0
6:45	2	0	2	0	0	0	0	0
7:00	1	0	2	0	2	0	1	0
7:15	2	0	0	0	0	1	2	0
7:30	3	0	0	0	1	0	3	0
7:45	2	0	1	0	1	1	2	0
8:00	3	0	3	0	1	0	2	0
8:15	2	0	3	0	0	1	8	0
8:30	3	0	3	0	0	0	4	0
8:45	5	0	4	0	4	0	6	0
9:00	1	0	3	0	1	1	2	1
9:15	1	0	0	0	1	0	2	0
9:30	3	0	4	0	4	0	1	0
9:45	3	0	4	0	3	0	3	0
14:00	7	0	9	0	3	0	3	0
14:15	7	0	9	0	1	0	2	0
14:30	4	0	4	0	2	0	4	0
14:45	5	0	8	0	2	2	3	0
15:00	1	0	2	1	2	1	7	1
15:15	1	0	3	0	2	0	6	0
15:30	1	0	3	0	3	0	3	1
15:45	1	0	4	0	2	0	8	1
16:00	1	0	11	0	1	0	9	0
16:15	4	0	4	0	1	2	5	0
16:30	1	0	2	0	0	0	4	0
16:45	0	0	6	1	0	0	2	0
18:00	0	1	3	0	1	0	4	0
18:15	2	0	1	0	1	0	6	0
18:30	2	1	3	0	0	0	3	0
18:45	1	0	1	0	1	0	3	0

Turning Movement Count Report AM

Location ID: 13
 North/South: Radford Ave
 East/West: Moorpark St

Date: 03/08/23
 City: Studio City, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
6:00	0	0	1	0	23	0	0	0	0	0	15	0	39
6:15	1	0	0	1	30	0	0	0	0	0	18	1	51
6:30	7	0	0	2	58	0	0	0	0	0	29	0	96
6:45	3	0	0	1	89	0	0	0	0	0	53	1	147
7:00	3	0	2	1	124	0	0	0	0	0	44	0	174
7:15	12	0	3	1	127	0	0	0	0	0	90	8	241
7:30	7	0	4	3	173	0	0	0	0	0	152	14	353
7:45	7	0	5	10	229	0	0	0	0	0	192	11	454
8:00	9	0	1	11	212	0	0	0	0	0	167	12	412
8:15	5	0	4	12	194	0	0	0	0	0	195	18	428
8:30	9	0	3	5	167	0	0	0	0	0	160	11	355
8:45	13	0	3	0	157	1	0	0	0	0	177	8	359
9:00	10	0	1	12	148	0	0	0	0	0	165	11	347
9:15	10	0	5	14	125	0	0	0	0	0	158	19	331
9:30	10	0	1	4	159	0	0	0	0	0	131	1	306
9:45	8	0	4	2	197	0	0	0	0	0	160	6	377

Total Volume:	114	0	37	79	2212	1	0	0	0	0	1906	121	4470
Approach %	75%	0%	25%	3%	97%	0%	0%	0%	0%	0%	94%	6%	

Peak Hr Begin:	7:45												
PHV	30	0	13	38	802	0	0	0	0	0	714	52	1649
PHF	0.896			0.879			0.000			0.899			

Turning Movement Count Report PM

Location ID: 13
 North/South: Radford Ave
 East/West: Moorpark St

Date: 03/08/23
 City: Studio City, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
14:00	4	0	4	3	136	0	0	0	0	0	197	6	350
14:15	8	0	1	5	135	0	0	0	0	0	169	12	330
14:30	7	0	2	2	155	0	0	0	0	0	202	12	380
14:45	15	0	4	3	144	0	0	0	0	0	218	8	392
15:00	10	0	4	8	189	1	0	0	0	0	228	16	456
15:15	9	0	2	12	233	1	0	0	0	0	170	24	451
15:30	9	0	1	11	147	0	0	0	0	0	176	20	364
15:45	21	0	4	8	176	0	0	0	0	0	191	22	422
16:00	17	0	4	3	157	0	0	0	0	0	199	20	400
16:15	12	0	3	6	161	1	0	0	0	0	165	17	365
16:30	8	0	3	5	133	0	0	0	0	0	192	7	348
16:45	15	0	9	0	164	0	0	0	0	0	197	9	394
17:00	8	0	2	3	141	0	0	0	0	0	184	10	348
17:15	2	0	2	4	159	0	0	0	0	0	175	9	351
17:30	9	0	1	5	193	0	0	0	0	0	214	8	430
17:45	9	0	3	4	187	0	0	0	0	0	219	13	435

Total Volume:	163	0	49	82	2610	3	0	0	0	0	3096	213	6216
Approach %	77%	0%	23%	3%	97%	0%	0%	0%	0%	0%	94%	6%	

Peak Hr Begin:	15:00												
PHV	49	0	11	39	745	2	0	0	0	0	765	82	1693
PHF	0.600			0.799			0.000			0.868			

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
6:00	0	0	0	0	0	0	0	0
6:15	0	0	1	0	0	0	0	0
6:30	0	0	0	0	0	0	0	0
6:45	0	0	0	0	0	0	0	0
7:00	0	1	2	0	0	0	0	0
7:15	2	0	0	0	0	0	0	0
7:30	1	0	1	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0
8:00	0	1	0	0	0	0	0	0
8:15	1	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0
9:00	0	0	1	0	0	0	0	0
9:15	0	0	0	0	0	0	0	0
9:30	0	1	0	0	0	0	0	0
9:45	0	0	0	0	0	0	0	0
14:00	0	0	2	0	0	0	0	0
14:15	0	0	0	0	0	0	0	0
14:30	1	0	0	0	0	0	0	0
14:45	1	0	0	0	0	0	0	0
15:00	0	0	0	0	0	0	0	0
15:15	3	0	1	0	0	0	0	0
15:30	3	0	0	0	0	0	0	0
15:45	1	0	1	0	0	0	1	0
16:00	0	0	0	0	0	0	0	0
16:15	1	0	0	0	0	0	0	0
16:30	3	0	0	0	0	0	0	0
16:45	1	0	2	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0
18:15	0	0	2	0	0	0	0	0
18:30	2	0	1	0	0	0	1	0
18:45	1	0	0	0	0	0	0	0

Turning Movement Count Report AM

Location ID: 14
 North/South: Colfax Ave
 East/West: Moorpark St

Date: 03/08/23
 City: Studio City, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
6:00	9	25	5	2	12	3	6	2	2	5	16	3	90
6:15	12	37	7	2	11	8	7	5	3	3	9	5	109
6:30	16	29	10	4	35	8	7	9	4	6	20	1	149
6:45	25	56	10	8	52	15	3	16	11	8	29	17	250
7:00	31	79	12	15	83	15	11	19	9	12	31	10	327
7:15	31	88	17	6	78	25	9	22	12	13	61	5	367
7:30	21	98	32	42	125	26	18	29	24	34	113	30	592
7:45	32	103	43	68	178	32	27	55	22	24	138	37	759
8:00	25	108	33	37	169	46	25	41	23	13	130	20	670
8:15	32	114	38	22	147	28	35	54	27	26	157	12	692
8:30	15	102	31	20	135	39	14	45	18	21	134	20	594
8:45	27	137	32	12	123	33	15	26	11	28	139	29	612
9:00	20	106	34	11	124	28	23	38	18	28	130	10	570
9:15	26	85	26	18	101	23	17	48	12	22	130	15	523
9:30	21	98	24	14	89	19	20	45	21	23	103	11	488
9:45	29	88	24	19	149	25	22	45	19	23	115	25	583

Total Volume:	372	1353	378	300	1611	373	259	499	236	289	1455	250	7375
Approach %	18%	64%	18%	13%	71%	16%	26%	50%	24%	14%	73%	13%	

Peak Hr Begin:	7:45												
PHV	104	427	145	147	629	145	101	195	90	84	559	89	2715
PHF	0.918			0.828			0.832			0.920			

Turning Movement Count Report PM

Location ID: 14
 North/South: Colfax Ave
 East/West: Moorpark St

Date: 03/08/23
 City: Studio City, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
14:00	16	66	16	15	94	24	37	86	36	26	133	39	588
14:15	17	62	16	17	85	18	31	98	33	17	112	34	540
14:30	32	65	19	18	84	17	44	92	39	27	144	22	603
14:45	20	66	23	23	105	15	35	83	24	27	158	27	606
15:00	26	66	40	27	138	23	35	71	29	30	173	33	691
15:15	40	91	38	36	170	31	42	82	41	26	128	20	745
15:30	26	83	30	27	102	13	38	99	18	24	123	22	605
15:45	29	110	33	31	124	17	34	79	34	31	144	17	683
16:00	18	100	31	38	114	29	29	87	32	29	142	25	674
16:15	22	87	30	26	108	20	28	94	39	26	122	36	638
16:30	19	78	24	31	94	15	21	86	27	22	131	26	574
16:45	27	74	27	27	99	23	20	82	40	25	161	34	639
17:00	25	83	21	20	91	21	23	80	32	27	128	25	576
17:15	20	86	33	23	120	36	33	86	31	36	104	23	631
17:30	20	71	25	33	131	22	33	100	42	29	141	41	688
17:45	33	77	19	23	123	25	28	80	38	22	163	24	655

Total Volume:	390	1265	425	415	1782	349	511	1385	535	424	2207	448	10136
Approach %	19%	61%	20%	16%	70%	14%	21%	57%	22%	14%	72%	15%	

Peak Hr Begin:	15:00												
PHV	121	350	141	121	534	84	149	331	122	111	568	92	2724
PHF	0.890			0.780			0.912			0.817			

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
6:00	0	0	0	0	1	0	0	0
6:15	0	0	0	0	3	0	0	0
6:30	0	0	2	0	3	0	0	0
6:45	0	0	1	0	1	0	1	0
7:00	0	0	1	0	0	0	3	0
7:15	2	0	1	0	1	0	3	1
7:30	2	0	3	0	8	0	3	0
7:45	1	1	7	0	4	1	1	1
8:00	2	1	1	0	4	1	4	2
8:15	0	0	3	0	5	0	3	0
8:30	1	0	2	0	6	1	2	1
8:45	0	0	3	0	10	0	2	1
9:00	0	0	3	0	17	0	4	2
9:15	0	0	2	0	2	0	0	0
9:30	0	0	2	0	1	0	0	0
9:45	0	1	4	0	2	0	1	1
14:00	1	0	3	0	4	0	3	0
14:15	0	0	7	0	4	0	2	0
14:30	1	0	1	0	5	0	2	0
14:45	2	0	4	0	7	0	3	0
15:00	7	0	24	0	7	0	2	0
15:15	8	0	14	1	12	0	7	1
15:30	5	0	2	1	7	0	3	0
15:45	2	1	2	0	2	1	5	1
16:00	0	0	5	2	8	1	6	0
16:15	1	0	2	0	7	0	6	0
16:30	1	0	5	0	10	0	6	0
16:45	4	0	7	0	11	0	5	0
18:00	3	0	3	0	2	0	3	0
18:15	0	0	2	0	4	0	1	1
18:30	2	0	3	1	4	0	5	1
18:45	1	0	4	1	9	0	1	0

Turning Movement Count Report AM

Location ID: 15
 North/South: Irvine Ave
 East/West: Moorpark St

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	22	0	2	7	76	0	9	0	1	3	63	13	196
7:15	20	0	5	12	109	0	7	0	0	2	77	11	243
7:30	53	0	4	50	192	2	7	0	0	2	125	34	469
7:45	50	1	3	48	202	2	4	0	0	2	170	17	499
8:00	29	0	0	6	198	7	4	1	0	0	196	4	445
8:15	7	0	1	3	196	4	2	0	2	1	195	1	412
8:30	4	0	1	3	217	6	4	0	0	3	190	0	428
8:45	3	0	4	4	144	5	7	0	2	5	184	0	358
9:00	1	0	1	1	117	0	2	0	2	4	198	0	326
9:15	0	0	1	3	105	4	5	0	0	4	197	2	321
9:30	2	0	2	0	121	2	3	0	3	1	159	1	294
9:45	2	0	5	2	118	2	4	0	0	6	180	1	320

Total Volume:	193	1	29	139	1795	34	58	1	10	33	1934	84	4311
Approach %	87%	0%	13%	7%	91%	2%	84%	1%	14%	2%	94%	4%	

Peak Hr Begin:	7:30												
PHV	139	1	8	107	788	15	17	1	2	5	686	56	1825
PHF	0.649			0.903			0.714			0.934			

Turning Movement Count Report PM

Location ID: 15
 North/South: Irvine Ave
 East/West: Moorpark St

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	4	0	2	1	168	3	5	0	0	1	181	3	368
15:15	4	0	1	0	161	4	2	0	1	3	201	0	377
15:30	11	0	1	0	144	1	2	0	0	3	182	3	347
15:45	4	0	2	3	154	6	1	0	4	2	190	2	368
16:00	7	0	2	0	139	4	3	0	0	1	182	1	339
16:15	16	0	3	0	156	6	4	0	3	2	175	1	366
16:30	4	0	1	2	133	2	5	0	2	2	212	5	368
16:45	1	0	0	1	163	1	6	0	1	2	215	0	390
17:00	4	0	0	1	190	2	3	0	0	6	189	2	397
17:15	5	0	0	1	176	8	4	0	0	3	171	2	370
17:30	1	0	0	1	165	2	1	0	4	4	209	0	387
17:45	3	0	0	3	193	2	2	0	0	2	185	1	391

Total Volume:	64	0	12	13	1942	41	38	0	15	31	2292	20	4468
Approach %	84%	0%	16%	1%	97%	2%	72%	0%	28%	1%	98%	1%	

Peak Hr Begin:	17:00												
PHV	13	0	0	6	724	14	10	0	4	15	754	5	1545
PHF	0.650			0.939			0.700			0.908			

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	3	0	0	0	1	0	1	0
7:15	2	0	0	0	1	0	1	0
7:30	1	0	0	0	9	0	23	0
7:45	0	0	0	0	1	4	11	1
8:00	3	0	0	0	3	1	1	0
8:15	4	1	0	0	3	0	2	0
8:30	2	0	0	0	4	0	1	0
8:45	6	0	0	0	1	0	0	0
9:00	1	0	0	0	3	0	0	0
9:15	2	0	0	0	2	0	1	0
9:30	1	0	0	0	4	0	0	0
9:45	1	0	0	0	6	0	2	0

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	5	0	0	0	5	0	0	0
15:15	1	0	0	0	6	0	0	0
15:30	2	0	1	0	1	0	0	0
15:45	0	0	0	0	0	0	0	0
16:00	3	0	0	0	4	2	2	0
16:15	3	0	0	0	4	0	0	0
16:30	0	0	0	0	2	2	0	0
16:45	3	0	1	0	12	0	0	0
17:00	4	0	0	0	4	0	0	0
17:15	4	0	0	0	4	0	2	0
17:30	2	0	0	0	0	0	1	0
17:45	2	0	0	0	0	0	1	0

Turning Movement Count Report AM

Location ID: 16
 North/South: Tujunga Ave
 East/West: Moorpark St

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	8	54	15	8	63	14	10	24	4	8	63	21	292
7:15	15	52	15	9	108	14	12	33	8	7	85	16	374
7:30	41	55	37	12	182	26	11	38	16	6	116	28	568
7:45	43	75	60	16	192	23	13	47	24	20	159	33	705
8:00	41	89	38	10	166	22	14	57	10	19	168	40	674
8:15	58	94	30	13	138	23	27	47	13	15	158	27	643
8:30	41	99	18	11	155	23	15	51	18	21	151	35	638
8:45	26	90	22	3	115	28	16	38	16	23	162	18	557
9:00	19	89	32	10	94	26	17	42	18	25	159	30	561
9:15	18	76	21	7	82	28	13	38	14	17	153	35	502
9:30	20	67	28	11	89	13	13	43	9	13	135	28	469
9:45	32	70	32	8	88	14	9	47	15	23	152	21	511

Total Volume:	362	910	348	118	1472	254	170	505	165	197	1661	332	6494
Approach %	22%	56%	21%	6%	80%	14%	20%	60%	20%	9%	76%	15%	

Peak Hr Begin:	7:45												
PHV	183	357	146	50	651	91	69	202	65	75	636	135	2660
PHF	0.942			0.857			0.966			0.932			

Turning Movement Count Report PM

Location ID: 16
 North/South: Tujunga Ave
 East/West: Moorpark St

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	26	57	31	18	123	24	15	82	32	22	125	40	595
15:15	27	54	18	12	120	31	10	101	25	20	148	47	613
15:30	16	40	27	14	125	20	27	81	16	19	156	33	574
15:45	24	47	16	14	122	25	29	94	19	17	151	51	609
16:00	23	56	23	16	106	21	25	92	22	22	148	48	602
16:15	25	56	24	16	123	23	18	78	17	20	162	41	603
16:30	17	54	26	17	109	18	21	92	24	24	163	49	614
16:45	27	55	19	8	121	18	22	76	26	23	150	27	572
17:00	17	53	18	11	136	24	36	110	33	19	136	45	638
17:15	33	54	16	10	153	24	21	73	13	14	126	55	592
17:30	32	51	20	7	129	20	16	76	20	22	143	39	575
17:45	32	45	14	11	168	25	13	69	18	14	123	50	582

Total Volume:	299	622	252	154	1535	273	253	1024	265	236	1731	525	7169
Approach %	25%	53%	21%	8%	78%	14%	16%	66%	17%	9%	69%	21%	

Peak Hr Begin:	15:45												
PHV	89	213	89	63	460	87	93	356	82	83	624	189	2428
PHF	0.931			0.941			0.935			0.949			

Pedestrian/Bicycle Count Report

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

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

Turning Movement Count Report AM

Location ID: 17
 North/South: Tujunga Ave
 East/West: Woodbridge St

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	3	69	3	5	0	0	4	35	0	0	0	1	120
7:15	3	66	0	5	0	1	2	49	0	0	0	1	127
7:30	4	76	2	4	0	1	2	63	2	1	0	0	155
7:45	2	104	7	6	0	2	2	82	2	5	0	2	214
8:00	10	114	6	8	0	3	8	62	2	2	1	1	217
8:15	7	110	8	8	0	6	6	77	4	6	2	5	239
8:30	6	123	13	9	3	5	4	81	2	4	1	1	252
8:45	6	118	8	6	3	6	2	64	5	0	1	3	222
9:00	5	127	11	7	2	0	4	65	1	5	3	0	230
9:15	6	102	9	5	1	4	5	63	2	2	1	1	201
9:30	7	67	11	8	4	2	3	49	1	1	0	3	156
9:45	10	86	10	5	1	2	2	65	1	0	1	5	188

Total Volume:	69	1162	88	76	14	32	44	755	22	26	10	23	2321
Approach %	5%	88%	7%	62%	11%	26%	5%	92%	3%	44%	17%	39%	

Peak Hr Begin:	8:15												
PHV	24	478	40	30	8	17	16	287	12	15	7	9	943
PHF	0.948			0.809			0.905			0.596			

Turning Movement Count Report PM

Location ID: 17
 North/South: Tujunga Ave
 East/West: Woodbridge St

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	4	86	11	25	2	11	6	101	2	6	0	5	259
15:15	7	79	17	15	4	3	4	111	8	2	0	4	254
15:30	3	65	9	13	0	3	9	114	2	3	0	1	222
15:45	6	78	9	6	2	3	5	130	5	1	0	6	251
16:00	5	77	10	12	3	4	9	119	4	6	1	2	252
16:15	5	80	14	10	2	1	12	101	6	4	0	0	235
16:30	8	73	9	14	2	5	7	118	4	5	4	6	255
16:45	7	81	7	11	2	2	4	123	3	2	0	1	243
17:00	12	82	9	21	3	7	3	142	4	6	3	3	295
17:15	4	64	8	13	3	2	1	99	6	2	1	7	210
17:30	8	80	6	6	0	2	3	90	2	1	0	5	203
17:45	11	68	7	14	5	3	2	88	1	2	0	3	204

Total Volume:	80	913	116	160	28	46	65	1336	47	40	9	43	2883
Approach %	7%	82%	10%	68%	12%	20%	4%	92%	3%	43%	10%	47%	

Peak Hr Begin:	16:15												
PHV	32	316	39	56	9	15	26	484	17	17	7	10	1028
PHF	0.939			0.645			0.884			0.567			

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	0	0	6	0	5	0	3	0
7:15	1	0	2	1	2	0	1	0
7:30	4	0	2	0	1	0	5	0
7:45	8	0	4	3	0	0	1	0
8:00	5	0	3	0	1	0	1	0
8:15	11	0	9	0	9	0	4	0
8:30	9	0	3	0	3	0	5	0
8:45	18	0	2	0	4	0	3	0
9:00	5	1	4	0	2	0	1	0
9:15	9	1	3	0	1	0	1	0
9:30	11	0	5	0	2	0	0	0
9:45	14	0	3	0	4	0	6	0

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	25	0	8	3	3	0	6	0
15:15	15	0	12	0	2	0	10	0
15:30	9	0	11	0	3	0	6	0
15:45	14	0	8	0	7	0	9	1
16:00	17	0	9	0	1	0	1	0
16:15	23	1	9	0	2	0	8	0
16:30	9	0	13	0	5	0	8	0
16:45	12	0	12	0	3	0	8	0
17:00	12	1	5	1	4	0	4	0
17:15	6	1	4	0	3	0	5	0
17:30	11	0	10	0	5	0	3	0
17:45	24	0	13	0	2	0	9	0

Turning Movement Count Report AM

Location ID: 18
 North/South: Whitsett Avenue/Laurel Terrace Drive
 East/West: Ventura Boulevard

Date: 05/01/19
 City: Los Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	107	36	103	18	105	4	0	6	6	8	185	18	596
7:15	94	49	134	24	143	6	0	6	15	16	196	12	695
7:30	84	48	136	26	196	4	0	14	9	15	212	8	752
7:45	113	51	150	33	177	9	1	8	19	12	230	25	828
8:00	103	58	125	31	161	4	1	30	12	8	210	23	766
8:15	111	61	150	16	157	8	1	19	15	21	222	17	798
8:30	96	47	134	26	132	6	2	17	14	23	232	21	750
8:45	101	43	129	35	162	6	1	17	21	17	248	32	812
9:00	72	61	139	39	141	7	1	22	20	19	227	22	770
9:15	66	46	127	28	152	13	5	18	11	22	265	18	771
9:30	72	38	74	25	164	3	1	16	20	28	274	23	738
9:45	56	46	87	33	147	2	2	20	19	27	213	24	676

Total Volume:	1075	584	1488	334	1837	72	15	193	181	216	2714	243	8952
Approach %	34%	19%	47%	15%	82%	3%	4%	50%	47%	7%	86%	8%	

Peak Hr Begin:	7:30												
PHV	411	218	561	106	691	25	3	71	55	56	874	73	3144
PHF	0.924			0.909			0.750			0.939			0.949

Turning Movement Count Report PM

Location ID: 18
 North/South: Whitsett Avenue/Laurel Terrace Drive
 East/West: Ventura Boulevard

Date: 05/01/19
 City: Los Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	38	24	61	71	239	10	3	41	29	39	225	44	824
15:15	34	43	58	77	229	13	5	36	20	51	247	54	867
15:30	47	34	66	69	235	5	9	34	16	43	227	58	843
15:45	66	39	70	65	228	4	4	37	14	62	234	65	888
16:00	55	39	50	61	220	5	5	46	33	43	174	70	801
16:15	44	47	68	65	229	5	5	35	24	38	237	73	870
16:30	37	29	54	76	218	10	9	48	32	41	218	72	844
16:45	38	24	55	77	226	8	8	36	25	32	231	63	823
17:00	50	30	58	68	224	8	1	40	26	33	185	75	798
17:15	45	38	50	74	245	8	6	38	31	29	214	75	853
17:30	51	30	59	77	222	7	4	42	29	31	255	52	859
17:45	55	30	59	78	212	10	2	31	17	40	220	57	811

Total Volume:	560	407	708	858	2727	93	61	464	296	482	2667	758	10081
Approach %	33%	24%	42%	23%	74%	3%	7%	57%	36%	12%	68%	19%	

Peak Hr Begin:	15:00												
PHV	185	140	255	282	931	32	21	148	79	195	933	221	3422
PHF	0.829			0.973			0.849			0.934			0.963

Pedestrian/Bicycle Count Report

	North		East		South		West	
Leg:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	13	0	4	1	0	0	0	0
7:15	3	1	1	0	4	0	1	0
7:30	4	0	2	0	0	0	1	0
7:45	5	0	1	0	2	0	0	0
8:00	1	0	1	0	0	1	0	0
8:15	5	0	2	0	0	1	0	0
8:30	4	0	0	0	3	0	0	0
8:45	5	0	2	0	2	1	0	0
9:00	5	0	5	0	5	0	1	0
9:15	5	0	4	0	2	0	0	0
9:30	8	0	5	0	1	0	0	0
9:45	7	0	8	0	1	0	0	0

	North		East		South		West	
Leg:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	8	1	3	0	6	0	1	0
15:15	8	0	3	0	3	0	0	0
15:30	10	0	5	0	5	0	0	0
15:45	10	2	4	3	6	1	0	0
16:00	9	1	9	0	7	0	0	0
16:15	8	2	2	0	7	0	0	0
16:30	16	0	7	1	1	1	2	0
16:45	7	1	5	0	7	1	0	0
17:00	13	0	3	0	3	0	2	0
17:15	9	1	2	0	2	0	0	0
17:30	9	0	6	0	3	0	1	0
17:45	15	0	7	0	9	1	0	0

Turning Movement Count Report AM

Location ID: 19
 North/South: Laurel Canyon Bl
 East/West: Ventura Pl

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	9	371	2	16	2	4	3	103	2	3	1	4	520
7:15	7	316	2	16	2	5	5	124	1	1	1	6	486
7:30	10	322	9	29	1	3	5	193	0	0	1	8	581
7:45	8	249	11	30	1	5	10	208	4	1	0	3	530
8:00	9	243	17	33	2	5	7	233	1	2	1	7	560
8:15	10	301	15	28	2	6	15	213	1	0	3	8	602
8:30	11	261	13	32	3	4	1	245	5	2	1	4	582
8:45	18	322	25	22	3	12	9	194	3	3	6	9	626
9:00	16	257	28	28	5	12	7	180	3	2	5	6	549
9:15	9	283	22	27	1	6	6	216	4	0	1	9	584
9:30	11	316	12	30	4	9	16	184	2	1	1	7	593
9:45	22	287	8	34	7	9	12	172	5	0	2	9	567

Total Volume:	140	3528	164	325	33	80	96	2265	31	15	23	80	6780
Approach %	4%	92%	4%	74%	8%	18%	4%	95%	1%	13%	19%	68%	

Peak Hr Begin:	8:00												
PHV	48	1127	70	115	10	27	32	885	10	7	11	28	2370
PHF	0.853			0.950			0.923			0.639			

Turning Movement Count Report PM

Location ID: 19
 North/South: Laurel Canyon Bl
 East/West: Ventura Pl

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	Totals:
15:00	13	245	21	48	8	12	17	232	10	3	9	20	638
15:15	22	246	19	57	5	7	11	208	4	2	3	19	603
15:30	17	234	27	29	3	9	12	240	4	8	9	20	612
15:45	20	246	16	26	7	11	14	214	2	4	7	17	584
16:00	18	245	20	42	11	11	5	232	4	4	9	24	625
16:15	25	261	24	46	6	13	9	245	6	5	13	27	680
16:30	9	233	21	39	4	10	6	237	10	4	11	23	607
16:45	22	234	22	53	11	7	7	232	8	8	8	32	644
17:00	17	252	19	42	5	10	8	257	3	5	7	20	645
17:15	10	252	16	45	5	5	8	231	5	4	7	25	613
17:30	17	270	17	48	7	5	10	242	8	5	6	29	664
17:45	14	269	12	39	4	5	6	246	4	6	9	28	642

Total Volume:	204	2987	234	514	76	105	113	2816	68	58	98	284	7557
Approach %	6%	87%	7%	74%	11%	15%	4%	94%	2%	13%	22%	65%	

Peak Hr Begin:	16:15												
PHV	73	980	86	180	26	40	30	971	27	22	39	102	2576
PHF	0.919			0.866			0.959			0.849			

Pedestrian/Bicycle Count Report

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

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

Turning Movement Count Report AM

Location ID: 20
 North/South: Laurel Canyon Blvd
 East/West: Ventura Blvd

Date: 03/07/23
 City: Studio City, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
6:00	10	103	3	5	28	13	5	33	7	15	12	6	240
6:15	14	152	4	5	37	26	6	32	3	33	11	9	332
6:30	28	268	2	5	42	30	11	46	16	41	20	19	528
6:45	19	327	5	1	67	46	11	50	19	33	40	13	631
7:00	35	329	4	3	79	56	8	71	25	53	44	18	725
7:15	33	347	3	4	76	66	13	80	30	67	69	24	812
7:30	46	262	12	3	110	58	35	160	52	76	77	23	914
7:45	47	224	14	4	128	71	62	207	71	89	99	23	1039
8:00	41	241	8	3	130	69	52	221	77	100	113	50	1105
8:15	33	232	12	5	137	66	36	203	62	106	103	27	1022
8:30	44	217	24	7	144	57	32	202	76	123	125	37	1088
8:45	54	177	12	9	128	79	34	202	74	105	158	34	1066
9:00	48	231	22	5	97	54	28	213	76	115	126	41	1056
9:15	41	205	12	6	107	70	39	191	69	101	165	44	1050
9:30	45	214	19	17	84	40	52	224	54	104	130	30	1013
9:45	43	171	32	10	105	47	38	196	66	90	128	42	968

Total Volume:	581	3700	188	92	1499	848	462	2331	777	1251	1420	440	13589
Approach %	13%	83%	4%	4%	61%	35%	13%	65%	22%	40%	46%	14%	

Peak Hr Begin:	8:00												
PHV	172	867	56	24	539	271	154	828	289	434	499	148	4281
PHF	0.944			0.965			0.908			0.910			

Turning Movement Count Report PM

Location ID: 20
 North/South: Laurel Canyon Blvd
 East/West: Ventura Blvd

Date: 03/07/23
 City: Studio City, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
14:00	38	147	17	14	121	70	44	191	68	65	112	68	955
14:15	48	153	25	20	145	41	48	196	83	57	137	43	996
14:30	56	165	25	17	98	45	48	187	71	59	160	49	980
14:45	38	155	24	11	127	47	60	192	85	54	139	44	976
15:00	66	194	20	15	127	47	39	220	81	60	110	43	1022
15:15	47	184	27	13	131	56	47	230	91	57	134	54	1071
15:30	74	167	34	15	135	65	46	202	71	63	146	51	1069
15:45	54	182	22	9	144	47	54	217	85	50	130	52	1046
16:00	66	191	23	8	145	45	51	215	71	48	113	57	1033
16:15	42	169	27	10	141	52	40	230	90	39	137	46	1023
16:30	46	182	28	11	132	59	53	200	81	53	120	54	1019
16:45	45	167	35	12	143	44	55	200	115	51	147	42	1056
17:00	38	170	18	11	129	36	49	192	112	66	129	40	990
17:15	53	214	15	11	163	40	38	198	108	67	155	49	1111
17:30	66	196	33	15	142	38	41	222	94	67	139	48	1101
17:45	42	181	23	9	132	38	45	232	121	51	140	44	1058

Total Volume:	819	2817	396	201	2155	770	758	3324	1427	907	2148	784	16506
Approach %	20%	70%	10%	6%	69%	25%	14%	60%	26%	24%	56%	20%	

Peak Hr Begin:	17:00												
PHV	199	761	89	46	566	152	173	844	435	251	563	181	4260
PHF	0.889			0.893			0.912			0.918			

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
6:00	3	0	1	0	1	0	0	0
6:15	2	0	0	0	0	0	0	0
6:30	4	0	3	0	2	0	2	0
6:45	2	0	1	0	0	0	1	0
7:00	4	0	2	0	6	0	6	0
7:15	11	0	6	0	5	0	6	0
7:30	1	0	4	1	3	1	2	0
7:45	18	0	27	0	14	0	7	0
8:00	7	0	6	0	4	1	6	0
8:15	7	0	3	0	4	0	5	0
8:30	6	0	6	0	7	0	12	0
8:45	11	0	4	0	3	0	5	0
9:00	11	0	2	1	6	0	8	0
9:15	10	0	6	0	9	0	3	0
9:30	7	1	5	0	7	0	2	0
9:45	4	0	3	0	10	0	9	0
14:00	16	0	7	0	21	0	10	0
14:15	7	1	7	0	15	1	24	0
14:30	20	2	17	0	28	0	12	1
14:45	8	1	11	0	22	0	10	0
15:00	9	2	13	0	17	0	11	0
15:15	10	0	14	0	20	0	14	0
15:30	15	0	12	0	12	0	10	0
15:45	13	0	6	0	9	0	10	0
16:00	17	0	14	0	26	1	16	0
16:15	17	0	9	0	20	0	16	1
16:30	11	0	20	0	14	0	17	0
16:45	16	0	10	0	19	0	21	0
18:00	13	1	6	0	21	0	7	0
18:15	12	0	7	0	19	1	7	0
18:30	10	0	8	0	17	0	9	0
18:45	7	0	11	0	13	1	10	0

Turning Movement Count Report AM

Location ID: 21
 North/South: Radford Ave
 East/West: Ventura Blvd

Date: 03/09/23
 City: Studio City, CA

	Southbound				Westbound				Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Movements:	R-Ven PL	R-Ven Blvd	T	L	R-Radford	R-Ven PL	T	L	R	T	L	R	T	L	
6:00	4	0	0	1	8	5	42	0	2	0	0	1	29	5	97
6:15	5	0	0	1	9	5	56	1	2	1	0	1	21	2	104
6:30	1	4	0	1	14	7	79	3	0	0	0	0	37	0	146
6:45	2	1	0	0	17	5	88	3	5	1	1	1	45	12	181
7:00	3	3	0	3	20	22	128	5	2	0	1	1	63	3	254
7:15	2	5	2	4	16	17	113	4	2	2	4	1	69	9	250
7:30	5	6	2	15	12	16	148	11	5	1	1	1	129	5	357
7:45	5	5	7	24	23	20	204	12	6	3	9	3	172	15	508
8:00	8	11	6	11	28	29	168	16	15	2	4	3	184	13	498
8:15	8	6	2	11	15	21	161	15	10	3	6	3	160	13	434
8:30	5	7	1	6	31	20	188	15	10	0	7	6	198	16	510
8:45	15	6	3	9	30	19	156	10	13	3	14	4	153	19	454
9:00	9	9	2	10	29	18	149	12	11	1	5	7	167	17	446
9:15	12	7	2	14	21	30	163	16	15	4	9	4	177	14	488
9:30	11	13	3	4	20	37	129	14	8	1	6	4	159	10	419
9:45	12	5	4	12	18	25	119	21	15	2	12	7	148	10	410
Total Volume:	107	88	34	126	311	296	2091	158	121	24	79	47	1911	163	5556
Approach %	30%	25%	10%	35%	11%	10%	73%	6%	54%	11%	35%	2%	90%	8%	
Peak Hr Begin:	7:45														
PHV	26	29	16	52	97	90	721	58	41	8	26	15	714	57	1950
PHF	0.750				0.932				0.893			0.893			

Prepared by City Count, LLC. (www.citycount.com)

Turning Movement Count Report PM

Location ID: 21
 North/South: Radford Ave
 East/West: Ventura Blvd

Date: 03/09/23
 City: Studio City, CA

	Southbound				Westbound				Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Movements:	R-Ven PL	R-Ven Blvd	T	L	R-Radford	R-Ven PL	T	L	R	T	L	R	T	L	Totals:
14:00	17	13	2	16	16	41	169	26	11	8	11	8	209	8	555
14:15	14	23	3	21	12	41	150	17	15	3	7	14	216	11	547
14:30	20	25	7	33	23	31	144	25	18	2	16	11	234	10	599
14:45	9	20	2	25	24	29	149	33	21	4	14	8	212	7	557
15:00	13	8	6	26	13	35	143	19	29	0	14	9	238	19	572
15:15	15	13	3	28	15	27	195	36	21	2	13	11	224	8	611
15:30	12	12	3	18	20	29	172	16	13	2	12	4	221	6	540
15:45	6	12	4	16	16	25	161	15	26	7	8	5	228	10	539
16:00	14	12	3	31	17	31	170	37	9	1	11	8	230	12	586
16:15	12	19	6	17	12	21	192	30	18	2	9	2	255	11	606
16:30	14	17	6	25	22	27	161	19	18	2	16	2	235	8	572
16:45	15	9	2	15	16	28	156	22	20	4	4	9	231	6	537
17:00	12	19	9	21	20	33	145	21	17	5	14	7	211	9	543
17:15	14	19	8	21	15	26	159	26	20	3	14	1	206	8	540
17:30	14	9	4	19	25	24	178	24	19	5	18	8	249	8	604
17:45	4	11	6	20	26	21	147	28	17	5	9	7	210	2	513

Total Volume:	205	241	74	352	292	469	2591	394	292	55	190	114	3609	143	9021
Approach %	24%	28%	8%	40%	8%	13%	69%	11%	54%	10%	35%	3%	93%	4%	

Peak Hr Begin:	14:30														
PHV	57	66	18	112	75	122	631	113	89	8	57	39	908	44	2339
PHF	0.744				0.862				0.895			0.931			

Prepared by City Count, LLC. (www.citycount.com)

Pedestrian/Bicycle Count Report

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

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
14:00	10	0	17	0	13	0	0	0
14:15	15	0	25	0	14	0	0	0
14:30	9	0	24	0	17	0	0	0
14:45	12	0	20	0	6	0	0	0
15:00	9	0	16	0	12	0	0	0
15:15	14	0	15	0	6	1	0	0
15:30	7	0	6	0	11	0	0	0
15:45	9	0	22	0	9	1	1	0
16:00	12	1	19	0	9	0	0	0
16:15	8	0	11	0	7	0	0	0
16:30	13	0	23	0	7	1	0	0
16:45	10	0	15	0	17	0	0	0
17:00	10	0	16	0	11	0	0	0
17:15	8	0	22	0	13	0	0	0
17:30	11	0	20	0	10	0	0	0
17:45	12	0	16	0	8	0	0	0

Turning Movement Count Report AM

Location ID: 22
 North/South: Carpenter Avenue
 East/West: Ventura Blvd

Date: 03/09/23
 City: Studio City, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
6:00	1	0	0	0	52	3	2	0	4	0	31	1	94
6:15	1	0	0	0	67	4	5	0	5	0	23	0	105
6:30	2	0	1	2	96	9	5	0	3	4	32	2	156
6:45	0	0	0	0	116	15	6	0	2	6	40	1	186
7:00	0	0	3	4	168	24	14	0	11	9	52	2	287
7:15	0	1	0	2	144	43	15	0	6	9	68	4	292
7:30	0	14	3	1	180	56	18	2	13	44	89	0	420
7:45	1	20	1	2	246	32	22	0	11	59	143	3	540
8:00	2	8	5	8	224	28	20	4	18	16	188	3	524
8:15	1	2	1	8	199	24	22	0	16	15	177	4	469
8:30	2	0	3	4	239	27	20	0	15	6	188	8	512
8:45	1	4	1	5	192	29	16	2	15	10	161	8	444
9:00	5	2	1	6	202	27	19	1	12	8	165	4	452
9:15	6	0	0	8	224	22	12	1	17	13	193	4	500
9:30	1	1	5	5	165	16	22	0	16	8	160	5	404
9:45	3	1	5	6	172	19	14	0	11	8	161	6	406

Total Volume:	26	53	29	61	2686	378	232	10	175	215	1871	55	5791
Approach %	24%	49%	27%	2%	86%	12%	56%	2%	42%	10%	87%	3%	

Peak Hr Begin:	7:45												
PHV	6	30	10	22	908	111	84	4	60	96	696	18	2045
PHF	0.523			0.929			0.881			0.978			

Turning Movement Count Report PM

Location ID: 22
 North/South: Carpenter Avenue
 East/West: Ventura Blvd

Date: 03/09/23
 City: Studio City, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
14:00	11	2	8	13	200	40	26	5	9	18	193	17	542
14:15	9	5	6	6	213	15	21	2	5	13	238	10	543
14:30	5	3	9	21	196	20	50	12	17	29	229	10	601
14:45	2	4	5	9	204	31	47	1	12	17	254	5	591
15:00	6	3	2	6	189	27	37	4	17	16	270	8	585
15:15	8	5	8	13	233	54	32	5	9	19	222	11	619
15:30	5	3	6	6	205	37	43	2	22	15	249	7	600
15:45	2	4	10	8	216	44	37	1	23	20	246	6	617
16:00	8	3	1	8	219	49	45	4	17	22	253	7	636
16:15	7	1	6	11	231	28	30	3	18	26	243	9	613
16:30	12	3	5	9	195	38	37	2	19	20	248	18	606
16:45	4	1	10	12	205	24	37	4	13	23	240	7	580
17:00	5	7	9	10	205	35	34	3	15	19	241	7	590
17:15	8	4	5	11	197	44	45	4	18	17	203	6	562
17:30	7	1	5	7	224	35	38	3	15	25	258	7	625
17:45	10	3	7	11	213	31	50	3	14	16	227	9	594

Total Volume:	109	52	102	161	3345	552	609	58	243	315	3814	144	9504
Approach %	41%	20%	39%	4%	82%	14%	67%	6%	27%	7%	89%	3%	

Peak Hr Begin:	15:15												
PHV	23	15	25	35	873	184	157	12	71	76	970	31	2472
PHF	0.750			0.910			0.896			0.955			

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
6:00	3	0	0	0	0	0	0	0
6:15	0	0	0	0	1	0	0	0
6:30	1	0	0	0	2	0	0	0
6:45	3	0	0	0	1	0	0	0
7:00	5	0	0	0	0	0	0	0
7:15	1	0	0	0	2	0	3	0
7:30	27	0	7	0	12	0	25	0
7:45	45	0	27	0	15	0	55	0
8:00	8	0	8	0	10	0	12	0
8:15	9	0	2	0	4	0	0	0
8:30	4	0	2	0	4	0	1	0
8:45	6	1	3	0	7	1	2	0
9:00	4	1	2	0	6	0	1	0
9:15	4	0	0	0	0	0	0	0
9:30	5	0	1	0	2	0	0	0
9:45	6	0	0	0	5	1	4	0
14:00	13	0	6	0	21	0	5	0
14:15	17	1	7	0	25	0	18	0
14:30	9	0	23	0	26	0	14	0
14:45	7	1	2	0	17	0	6	0
15:00	5	2	3	0	9	1	4	0
15:15	10	0	3	0	14	1	6	0
15:30	7	0	1	0	11	0	4	0
15:45	6	1	5	2	5	1	1	0
16:00	7	0	5	0	10	0	3	0
16:15	4	0	1	0	8	0	3	0
16:30	6	0	5	1	14	0	5	0
16:45	11	0	2	0	14	0	1	0
18:00	4	1	3	0	13	0	3	0
18:15	6	0	0	0	8	0	4	0
18:30	7	0	5	0	12	0	6	0
18:45	11	1	1	0	10	0	1	0

Turning Movement Count Report AM

Location ID: 23
 North/South: Colfax Ave
 East/West: Ventura Blvd

Date: 03/09/23
 City: Studio City, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
6:00	13	0	3	6	40	0	0	0	0	0	31	6	99
6:15	22	0	4	4	50	0	0	0	0	0	26	4	110
6:30	30	0	10	6	81	0	0	0	0	0	34	2	163
6:45	57	0	18	10	80	0	0	0	0	0	41	9	215
7:00	78	0	13	17	113	0	0	0	0	0	48	18	287
7:15	87	0	27	15	103	0	0	0	0	0	58	23	313
7:30	112	0	30	19	178	0	0	0	0	0	75	29	443
7:45	105	0	55	32	183	0	0	0	0	0	110	65	550
8:00	98	0	76	29	141	0	0	0	0	0	190	40	574
8:15	81	0	67	35	158	0	0	0	0	0	158	41	540
8:30	72	0	74	43	200	0	0	0	0	0	175	42	606
8:45	71	0	73	21	151	0	0	0	0	0	154	24	494
9:00	92	0	65	30	163	0	0	0	0	0	150	30	530
9:15	75	0	63	25	189	0	0	0	0	0	169	31	552
9:30	64	0	42	25	131	0	0	0	0	0	143	35	440
9:45	59	0	69	22	133	0	0	0	0	0	137	39	459

Total Volume:	1116	0	689	339	2094	0	0	0	0	0	1699	438	6375
Approach %	62%	0%	38%	14%	86%	0%	0%	0%	0%	0%	80%	20%	

Peak Hr Begin:	7:45												
PHV	356	0	272	139	682	0	0	0	0	0	633	188	2270
PHF	0.902			0.845			0.000			0.892			

Turning Movement Count Report PM

Location ID: 23
 North/South: Colfax Ave
 East/West: Ventura Blvd

Date: 03/09/23
 City: Studio City, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
14:00	78	0	36	47	187	0	0	0	0	0	175	65	588
14:15	52	0	37	46	175	0	0	0	0	0	199	81	590
14:30	50	0	47	35	177	0	0	0	0	0	173	93	575
14:45	60	0	34	42	168	0	0	0	0	0	189	108	601
15:00	57	0	44	47	176	0	0	0	0	0	232	87	643
15:15	98	0	59	41	202	0	0	0	0	0	182	78	660
15:30	60	0	40	68	163	0	0	0	0	0	199	89	619
15:45	77	0	56	32	202	0	0	0	0	0	213	73	653
16:00	67	0	57	47	198	0	0	0	0	0	219	90	678
16:15	61	0	56	63	201	0	0	0	0	0	217	70	668
16:30	66	0	54	52	162	0	0	0	0	0	216	70	620
16:45	62	0	52	52	191	0	0	0	0	0	206	71	634
17:00	59	0	51	54	185	0	0	0	0	0	207	79	635
17:15	63	0	46	51	205	0	0	0	0	0	172	87	624
17:30	71	0	45	61	192	0	0	0	0	0	224	65	658
17:45	70	0	41	56	171	0	0	0	0	0	210	74	622

Total Volume:	1051	0	755	794	2955	0	0	0	0	0	3233	1280	10068
Approach %	58%	0%	42%	21%	79%	0%	0%	0%	0%	0%	72%	28%	

Peak Hr Begin:	15:45												
PHV	271	0	223	194	763	0	0	0	0	0	865	303	2619
PHF	0.929			0.906			0.000			0.945			

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
6:00	1	0	0	0	0	0	0	0
6:15	0	0	0	0	0	0	0	0
6:30	3	0	0	0	0	0	0	0
6:45	4	0	0	0	0	0	0	0
7:00	2	0	1	0	0	0	0	0
7:15	1	0	1	0	0	0	0	0
7:30	8	0	0	0	0	0	0	0
7:45	5	0	5	0	0	0	6	0
8:00	1	0	1	0	0	0	0	0
8:15	3	0	1	0	0	0	0	0
8:30	7	0	2	0	0	0	0	0
8:45	4	0	1	0	0	0	0	0
9:00	4	0	0	0	0	0	0	0
9:15	1	0	0	0	0	0	0	0
9:30	4	0	2	0	0	0	2	0
9:45	3	0	5	0	0	0	0	0
14:00	5	0	2	0	0	0	2	0
14:15	4	0	3	0	0	0	1	0
14:30	5	1	7	0	0	0	6	0
14:45	3	0	4	0	0	0	6	0
15:00	2	0	3	0	0	0	4	0
15:15	5	0	4	0	0	0	1	1
15:30	5	0	8	0	0	0	4	0
15:45	4	0	4	0	0	0	3	0
16:00	5	0	7	0	0	0	2	1
16:15	5	0	4	0	0	0	1	0
16:30	4	0	2	0	0	0	3	0
16:45	4	0	8	0	0	0	6	0
18:00	3	0	5	0	0	0	1	0
18:15	3	0	8	0	0	0	2	0
18:30	4	1	4	0	0	0	2	1
18:45	3	0	7	0	0	0	6	2

Turning Movement Count Report AM

Location ID: 24
 North/South: Berry Drive
 East/West: Ventura Boulevard

Date: 05/01/19
 City: Los Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	0	0	0	0	128	11	11	0	0	7	351	0	508
7:15	0	0	0	0	152	7	9	0	1	12	310	0	491
7:30	0	0	0	0	236	11	14	0	3	20	377	0	661
7:45	0	0	0	0	222	7	15	0	6	29	359	0	638
8:00	0	0	0	0	216	13	8	0	3	22	421	0	683
8:15	0	0	0	0	203	8	7	0	3	23	403	0	647
8:30	0	0	0	0	180	8	13	0	5	30	408	0	644
8:45	0	0	0	0	228	7	9	0	6	31	384	0	665
9:00	0	0	0	0	183	8	7	0	10	16	353	0	577
9:15	0	0	0	0	204	11	13	0	2	16	313	1	560
9:30	0	0	0	0	191	10	9	0	7	14	344	1	576
9:45	0	0	0	0	205	7	13	0	8	6	287	0	526

Total Volume:	0	0	0	0	2348	108	128	0	54	226	4310	2	7176
Approach %	0%	0%	0%	0%	96%	4%	70%	0%	30%	5%	95%	0%	

Peak Hr Begin:	8:00												
PHV	0	0	0	0	827	36	37	0	17	106	1616	0	2639
PHF	0.000			0.918			0.750			0.972			0.966

Turning Movement Count Report PM

Location ID: 24
 North/South: Berry Drive
 East/West: Ventura Boulevard

Date: 05/01/19
 City: Los Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	0	0	0	0	267	10	17	0	9	5	318	1	627
15:15	0	0	0	0	234	14	21	0	8	3	306	0	586
15:30	0	0	0	0	248	7	11	0	4	4	281	0	555
15:45	0	0	0	0	262	6	12	0	4	7	295	0	586
16:00	0	0	0	0	266	10	20	0	8	9	318	0	631
16:15	0	0	0	0	275	7	19	0	8	9	309	0	627
16:30	0	0	0	0	279	9	8	0	6	5	299	0	606
16:45	0	0	0	0	268	7	16	0	5	9	280	0	585
17:00	0	0	0	0	286	11	15	0	4	4	292	0	612
17:15	0	0	0	0	276	14	20	0	3	2	297	0	612
17:30	0	0	0	0	296	11	18	0	5	4	312	0	646
17:45	0	0	0	0	285	8	7	0	3	5	286	0	594

Total Volume:	0	0	0	0	3242	114	184	0	67	66	3593	1	7267
Approach %	0%	0%	0%	0%	97%	3%	73%	0%	27%	2%	98%	0%	

Peak Hr Begin:	17:00												
PHV	0	0	0	0	1143	44	60	0	15	15	1187	0	2464
PHF	0.000			0.967			0.815			0.951			0.954

Pedestrian/Bicycle Count Report

	North		East		South		West	
Leg:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	0	0	0	0	4	1	0	0
7:15	0	0	0	0	2	0	0	0
7:30	0	0	0	0	2	0	2	0
7:45	0	0	0	0	4	0	1	0
8:00	0	0	0	0	0	0	2	0
8:15	0	0	0	0	2	0	0	0
8:30	0	0	0	0	4	1	0	0
8:45	0	0	0	0	4	0	0	0
9:00	0	0	0	0	1	1	0	0
9:15	0	0	0	0	2	0	0	0
9:30	0	0	0	0	2	2	0	0
9:45	0	0	0	0	1	0	1	0

	North		East		South		West	
Leg:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	0	0	0	0	4	2	0	0
15:15	0	0	0	0	13	1	0	0
15:30	0	0	0	0	3	1	0	0
15:45	0	0	0	0	8	0	0	0
16:00	0	0	0	0	4	1	0	0
16:15	0	0	0	0	1	0	3	0
16:30	0	0	0	0	5	0	2	0
16:45	0	0	0	0	11	0	2	0
17:00	0	0	0	0	14	0	0	0
17:15	0	0	0	0	5	0	0	0
17:30	0	0	0	0	7	0	0	0
17:45	0	0	0	0	10	0	0	0

Turning Movement Count Report AM

Location ID: 25
 North/South: Tujunga Ave
 East/West: Ventura Bl

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	44	0	15	13	122	0	0	0	0	0	77	12	283
7:15	48	0	28	13	132	0	0	0	0	0	69	18	308
7:30	67	0	41	21	170	0	0	0	0	0	100	25	424
7:45	69	0	48	30	157	0	0	0	0	0	140	24	468
8:00	75	0	39	19	161	0	0	0	0	0	157	40	491
8:15	87	0	38	28	196	0	0	0	0	0	197	37	583
8:30	76	0	55	20	165	0	0	0	0	0	196	27	539
8:45	75	0	64	23	194	0	0	0	0	0	230	30	616
9:00	54	0	67	26	148	0	0	0	0	0	202	27	524
9:15	45	0	58	23	145	0	0	0	0	0	194	30	495
9:30	49	0	44	18	131	0	0	0	0	0	177	20	439
9:45	45	0	31	28	149	0	0	0	0	0	179	37	469

Total Volume:	734	0	528	262	1870	0	0	0	0	0	1918	327	5639
Approach %	58%	0%	42%	12%	88%	0%	0%	0%	0%	0%	85%	15%	

Peak Hr Begin:	8:15												
PHV	292	0	224	97	703	0	0	0	0	0	825	121	2262
PHF	0.928			0.893			0.000			0.910			

Turning Movement Count Report PM

Location ID: 25
 North/South: Tujunga Ave
 East/West: Ventura Bl

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	43	0	36	46	177	0	0	0	0	0	256	69	627
15:15	51	0	39	53	170	0	0	0	0	0	238	59	610
15:30	34	0	19	42	171	0	0	0	0	0	190	72	528
15:45	52	0	37	42	188	0	0	0	0	0	230	76	625
16:00	41	0	30	34	164	0	0	0	0	0	220	72	561
16:15	38	0	31	48	180	0	0	0	0	0	240	60	597
16:30	46	0	23	56	182	0	0	0	0	0	239	64	610
16:45	42	0	25	44	198	0	0	0	0	0	192	55	556
17:00	48	0	52	53	203	0	0	0	0	0	220	77	653
17:15	30	0	27	49	207	0	0	0	0	0	218	49	580
17:30	41	0	44	34	168	0	0	0	0	0	206	56	549
17:45	35	0	31	44	165	0	0	0	0	0	207	47	529

Total Volume:	501	0	394	545	2173	0	0	0	0	0	2656	756	7025
Approach %	56%	0%	44%	20%	80%	0%	0%	0%	0%	0%	78%	22%	

Peak Hr Begin:	16:15												
PHV	174	0	131	201	763	0	0	0	0	0	891	256	2416
PHF	0.763			0.941			0.000			0.946			

Pedestrian/Bicycle Count Report

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

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

Turning Movement Count Report AM

Location ID: 26
 North/South: Laurel Canyon Boulevard
 East/West: Maxwellton Road

Date: 05/02/19
 City: Los Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	3	372	0	0	0	0	0	149	0	12	0	10	546
7:15	7	298	0	0	0	0	0	209	0	11	0	4	529
7:30	21	279	0	0	0	0	0	291	0	6	0	17	614
7:45	20	325	0	0	0	0	0	296	0	9	0	26	676
8:00	29	333	0	0	0	0	0	259	0	16	0	41	678
8:15	28	372	0	0	0	0	0	264	0	16	0	29	709
8:30	24	347	0	0	0	0	0	235	1	28	0	25	660
8:45	12	377	0	0	0	0	0	281	1	12	0	20	703
9:00	6	331	0	0	0	0	0	265	0	15	0	20	637
9:15	13	346	0	0	0	0	0	264	1	19	0	6	649
9:30	6	275	0	0	0	0	0	266	0	17	0	13	577
9:45	12	302	0	0	0	0	0	296	5	8	0	12	635

Total Volume:	181	3957	0	0	0	0	0	3075	8	169	0	223	7613
Approach %	4%	96%	0%	0%	0%	0%	0%	100%	0%	43%	0%	57%	

Peak Hr Begin:	8:00												
PHV	93	1429	0	0	0	0	0	1039	2	72	0	115	2750
PHF	0.951			0.000			0.923			0.820			0.970

Turning Movement Count Report PM

Location ID: 26
 North/South: Laurel Canyon Boulevard
 East/West: Maxwellton Road

Date: 05/02/19
 City: Los Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	25	252	0	0	0	0	0	296	1	11	0	33	618
15:15	14	238	0	0	0	0	0	327	1	15	0	14	609
15:30	27	238	0	0	0	0	0	336	2	14	0	15	632
15:45	25	239	0	0	0	0	0	304	1	24	0	36	629
16:00	17	252	0	0	0	0	0	340	2	19	0	29	659
16:15	10	198	0	0	0	0	0	298	2	19	0	22	549
16:30	16	237	0	0	0	0	0	374	2	21	0	7	657
16:45	16	229	0	0	0	0	0	365	3	17	0	11	641
17:00	11	229	0	0	0	0	0	341	5	4	0	19	609
17:15	21	241	0	0	0	0	0	377	3	27	0	14	683
17:30	16	287	0	0	0	0	0	344	2	18	0	15	682
17:45	17	244	0	0	0	0	0	332	2	23	0	17	635

Total Volume:	215	2884	0	0	0	0	0	4034	26	212	0	232	7603
Approach %	7%	93%	0%	0%	0%	0%	0%	99%	1%	48%	0%	52%	

Peak Hr Begin:	16:45												
PHV	64	986	0	0	0	0	0	1427	13	66	0	59	2615
PHF	0.866			0.000			0.947			0.762			0.957

Pedestrian/Bicycle Count Report

	North		East		South		West	
Leg:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	0	0	0	0	8	0	0	0
7:15	0	0	0	0	16	0	0	0
7:30	0	0	0	0	58	0	3	0
7:45	0	0	0	0	341	0	4	0
8:00	0	0	0	0	120	0	2	0
8:15	0	0	0	0	3	0	0	0
8:30	0	0	0	0	5	0	0	0
8:45	0	0	0	0	2	0	0	0
9:00	0	0	0	0	7	0	0	0
9:15	0	0	0	0	4	0	0	0
9:30	0	0	0	0	2	0	0	0
9:45	0	0	0	0	7	0	0	0

	North		East		South		West	
Leg:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	0	0	0	0	29	0	3	0
15:15	0	0	0	0	14	0	1	0
15:30	0	0	0	0	4	0	0	0
15:45	0	0	0	0	23	0	10	0
16:00	0	0	0	0	19	0	4	1
16:15	0	0	0	0	11	0	2	2
16:30	0	0	0	0	19	0	4	0
16:45	0	0	0	0	4	1	1	0
17:00	0	0	0	0	6	0	1	1
17:15	0	0	0	0	16	0	2	0
17:30	0	0	0	0	15	0	1	0
17:45	0	0	0	0	13	0	2	1

Turning Movement Count Report AM

Location ID: 27
 North/South: Laurel Canyon Boulevard
 East/West: Laurel Terrace Drive/Sunshine Terrace

Date: 05/01/19
 City: Los Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	Totals:
7:00	0	386	2	10	7	24	4	166	4	48	0	7	658
7:15	2	334	2	11	2	23	3	217	4	61	5	2	666
7:30	2	295	3	41	6	12	15	282	21	48	5	5	735
7:45	6	334	6	53	8	26	10	249	13	56	1	3	765
8:00	2	417	5	20	4	27	14	268	10	60	6	2	835
8:15	5	363	3	7	8	17	8	283	19	56	5	6	780
8:30	4	350	7	6	1	19	13	254	13	67	2	4	740
8:45	5	367	7	8	4	25	9	249	10	50	8	3	745
9:00	2	382	7	5	8	16	6	256	9	39	4	5	739
9:15	1	326	5	13	2	15	11	270	13	51	6	3	716
9:30	6	393	3	16	3	20	12	260	13	54	2	4	786
9:45	1	287	7	7	3	14	13	283	10	47	3	2	677

Total Volume:	36	4234	57	197	56	238	118	3037	139	637	47	46	8842
Approach %	1%	98%	1%	40%	11%	48%	4%	92%	4%	87%	6%	6%	

Peak Hr Begin:	7:45												
PHV	17	1464	21	86	21	89	45	1054	55	239	14	15	3120
PHF	0.886			0.563			0.931			0.918			0.934

Turning Movement Count Report PM

Location ID: 27
 North/South: Laurel Canyon Boulevard
 East/West: Laurel Terrace Drive/Sunshine Terrace

Date: 05/01/19
 City: Los Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	4	252	4	15	3	23	28	284	19	44	7	5	688
15:15	3	238	5	4	6	18	30	316	21	43	9	3	696
15:30	4	247	3	3	9	17	34	351	25	37	6	6	742
15:45	3	237	8	6	9	12	33	297	29	39	6	2	681
16:00	3	265	6	6	7	20	44	345	27	48	9	4	784
16:15	8	206	4	6	7	19	53	335	48	49	8	3	746
16:30	1	243	7	9	4	19	52	357	39	34	4	1	770
16:45	2	223	7	6	9	29	48	312	40	30	4	7	717
17:00	1	225	10	5	6	17	43	395	35	56	5	1	799
17:15	3	256	6	8	14	25	33	339	28	33	6	5	756
17:30	4	288	7	7	3	22	55	334	43	39	2	2	806
17:45	1	230	8	5	11	27	49	304	31	42	6	2	716

Total Volume:	37	2910	75	80	88	248	502	3969	385	494	72	41	8901
Approach %	1%	96%	2%	19%	21%	60%	10%	82%	8%	81%	12%	7%	

Peak Hr Begin:	16:45												
PHV	10	992	30	26	32	93	179	1380	146	158	17	15	3078
PHF	0.863			0.803			0.901			0.766			0.955

Pedestrian/Bicycle Count Report

	North		East		South		West	
Leg:	<i>Peds</i>	<i>Bicycle</i>	<i>Peds</i>	<i>Bicycle</i>	<i>Peds</i>	<i>Bicycle</i>	<i>Peds</i>	<i>Bicycle</i>
7:00	1	0	0	0	0	0	1	0
7:15	0	0	0	0	1	0	0	0
7:30	0	0	0	0	1	0	0	0
7:45	3	0	0	0	0	0	1	0
8:00	0	0	0	0	4	0	4	0
8:15	5	0	0	0	2	0	0	0
8:30	3	0	0	0	2	0	4	0
8:45	1	0	0	0	1	0	5	0
9:00	2	0	0	0	1	0	2	0
9:15	1	0	0	0	0	0	2	0
9:30	1	0	0	0	2	0	0	0
9:45	2	0	0	0	0	1	1	0

	North		East		South		West	
Leg:	<i>Peds</i>	<i>Bicycle</i>	<i>Peds</i>	<i>Bicycle</i>	<i>Peds</i>	<i>Bicycle</i>	<i>Peds</i>	<i>Bicycle</i>
15:00	2	0	1	0	5	0	2	0
15:15	0	0	0	0	0	0	0	0
15:30	3	0	0	0	1	0	3	0
15:45	1	0	0	0	0	0	1	0
16:00	1	0	0	0	1	0	5	1
16:15	2	0	0	0	0	0	0	1
16:30	2	0	0	0	1	0	0	0
16:45	3	0	0	0	2	0	2	0
17:00	0	0	0	0	1	0	2	0
17:15	2	0	0	0	0	0	4	0
17:30	1	0	0	0	2	0	2	0
17:45	0	0	0	0	3	0	1	0

Turning Movement Count Report AM

Location ID: 28
 North/South: Laurel Canyon Boulevard
 East/West: Fryman Road

Date: 05/01/19
 City: Los Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	38	381	0	0	0	0	0	146	0	0	0	31	596
7:15	39	436	0	0	0	0	0	178	5	0	0	34	692
7:30	34	335	0	0	0	0	0	266	2	3	0	48	688
7:45	45	309	0	0	0	0	0	227	4	0	0	68	653
8:00	74	385	0	0	0	0	0	222	1	3	0	53	738
8:15	73	425	0	0	0	0	0	232	3	2	0	60	795
8:30	67	352	0	0	0	0	0	232	9	1	0	65	726
8:45	61	399	0	0	0	0	0	227	7	0	0	41	735
9:00	42	382	0	0	0	0	0	222	4	4	0	46	700
9:15	49	375	0	0	0	0	0	226	11	8	0	49	718
9:30	58	363	0	0	0	0	0	255	7	4	0	55	742
9:45	37	360	0	0	0	0	0	219	9	1	0	53	679

Total Volume:	617	4502	0	0	0	0	0	2652	62	26	0	603	8462
Approach %	12%	88%	0%	0%	0%	0%	0%	98%	2%	4%	0%	96%	

Peak Hr Begin:	8:00												
PHV	275	1561	0	0	0	0	0	913	20	6	0	219	2994
PHF	0.922			0.000			0.968			0.852			0.942

Turning Movement Count Report PM

Location ID: 28
 North/South: Laurel Canyon Boulevard
 East/West: Fryman Road

Date: 05/01/19
 City: Los Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	50	239	0	0	0	0	0	284	6	8	0	39	626
15:15	40	280	0	0	0	0	0	282	4	3	0	59	668
15:30	43	245	0	0	0	0	0	309	3	2	0	69	671
15:45	38	278	0	0	0	0	0	338	5	2	0	43	704
16:00	45	252	1	0	0	0	0	373	3	1	0	47	722
16:15	45	262	0	0	0	0	0	375	6	4	0	47	739
16:30	46	239	0	0	0	0	0	381	1	5	0	50	722
16:45	46	247	0	0	0	0	0	347	4	0	0	53	697
17:00	35	249	0	0	0	0	0	388	3	4	0	47	726
17:15	41	260	0	0	0	0	0	409	6	3	0	36	755
17:30	45	280	0	0	0	0	0	385	1	3	0	38	752
17:45	41	304	0	0	0	0	0	373	1	2	0	39	760

Total Volume:	515	3135	1	0	0	0	0	4244	43	37	0	567	8542
Approach %	14%	86%	0%	0%	0%	0%	0%	99%	1%	6%	0%	94%	

Peak Hr Begin:	17:00												
PHV	162	1093	0	0	0	0	0	1555	11	12	0	160	2993
PHF	0.909			0.000			0.943			0.843			0.985

Pedestrian/Bicycle Count Report

	<i>North</i>		<i>East</i>		<i>South</i>		<i>West</i>	
<i>Leg:</i>	<i>Peds</i>	<i>Bicycle</i>	<i>Peds</i>	<i>Bicycle</i>	<i>Peds</i>	<i>Bicycle</i>	<i>Peds</i>	<i>Bicycle</i>
7:00	0	0	0	0	0	0	0	0
7:15	1	0	0	0	1	0	0	0
7:30	1	0	0	0	0	0	0	0
7:45	1	0	0	0	0	0	0	0
8:00	0	0	0	0	2	0	0	0
8:15	0	0	0	0	1	0	0	0
8:30	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0
9:00	0	0	0	0	0	0	0	0
9:15	0	0	0	0	0	0	3	0
9:30	1	0	1	0	0	0	0	0
9:45	0	0	0	0	0	0	0	0

	<i>North</i>		<i>East</i>		<i>South</i>		<i>West</i>	
<i>Leg:</i>	<i>Peds</i>	<i>Bicycle</i>	<i>Peds</i>	<i>Bicycle</i>	<i>Peds</i>	<i>Bicycle</i>	<i>Peds</i>	<i>Bicycle</i>
15:00	0	0	0	0	0	0	0	0
15:15	0	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0
15:45	1	0	0	0	0	0	0	0
16:00	0	0	0	0	0	0	1	0
16:15	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0
16:45	2	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0

Turning Movement Count Report AM

Location ID: 29
 North/South: Laurel Canyon Blvd
 East/West: Woodbridge St

Date: 03/09/23
 City: Studio City, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
6:00	0	158	9	0	0	1	0	52	0	0	0	1	221
6:15	1	241	14	3	0	1	2	60	0	2	0	1	325
6:30	0	358	12	7	0	0	0	74	0	0	0	1	452
6:45	0	406	14	5	0	1	0	83	1	2	0	1	513
7:00	0	445	16	4	0	1	1	132	0	3	0	1	603
7:15	2	386	13	10	0	0	0	146	1	2	0	0	560
7:30	1	296	18	14	1	0	2	187	4	3	1	2	529
7:45	4	336	20	15	0	1	3	268	5	10	0	0	662
8:00	9	355	10	8	0	1	4	270	8	3	0	0	668
8:15	5	310	20	13	0	0	2	241	2	3	0	1	597
8:30	4	272	21	7	0	3	1	296	2	6	0	1	613
8:45	6	347	29	6	0	0	0	230	5	4	0	2	629
9:00	5	384	24	6	0	1	2	259	4	4	0	0	689
9:15	6	349	30	5	0	0	1	282	3	2	0	0	678
9:30	2	236	11	11	1	2	1	288	0	2	0	1	555
9:45	5	307	17	6	0	1	1	248	2	4	0	1	592

Total Volume:	50	5186	278	120	2	13	20	3116	37	50	1	13	8886
Approach %	1%	94%	5%	89%	1%	10%	1%	98%	1%	78%	2%	20%	

Peak Hr Begin:	8:30												
PHV	21	1352	104	24	0	4	4	1067	14	16	0	3	2609
PHF	0.894			0.700			0.907			0.679			

Turning Movement Count Report PM

Location ID: 29
 North/South: Laurel Canyon Blvd
 East/West: Woodbridge St

Date: 03/09/23
 City: Studio City, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
14:00	1	298	7	11	0	0	3	364	6	6	0	2	698
14:15	3	324	3	26	1	1	4	270	7	7	0	2	648
14:30	8	286	9	33	0	0	2	305	8	5	0	0	656
14:45	6	301	9	31	0	2	3	281	9	10	0	2	654
15:00	9	275	8	29	1	2	7	305	8	7	0	2	653
15:15	7	300	8	23	1	0	4	252	6	8	0	1	610
15:30	9	338	8	17	0	1	5	290	5	4	0	1	678
15:45	7	336	7	27	1	0	5	231	3	10	3	2	632
16:00	12	331	9	25	0	0	3	262	6	5	1	0	654
16:15	7	283	7	25	2	0	3	276	11	2	0	0	616
16:30	5	288	12	22	1	0	5	338	6	8	0	3	688
16:45	10	300	8	12	0	0	1	295	6	9	1	0	642
17:00	10	296	5	18	1	0	7	334	9	5	0	2	687
17:15	5	344	7	21	0	3	6	300	9	10	0	1	706
17:30	7	314	7	15	0	1	2	360	9	11	1	0	727
17:45	5	320	9	14	0	1	5	352	6	5	0	1	718

Total Volume:	111	4934	123	349	8	11	65	4815	114	112	6	19	10667
Approach %	2%	95%	2%	95%	2%	3%	1%	96%	2%	82%	4%	14%	

Peak Hr Begin:	17:00												
PHV	27	1274	28	68	1	5	20	1346	33	31	1	4	2838
PHF	0.933			0.771			0.943			0.750			

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
6:00	0	0	3	0	0	0	1	0
6:15	0	0	2	0	0	0	0	0
6:30	0	0	0	0	0	0	0	0
6:45	0	0	0	0	0	0	0	0
7:00	0	0	4	0	0	0	0	0
7:15	0	0	2	0	0	0	2	0
7:30	0	0	0	0	0	0	6	0
7:45	0	0	3	0	0	0	0	0
8:00	0	0	0	0	0	0	2	0
8:15	0	0	6	0	0	0	2	1
8:30	0	0	0	0	0	0	0	0
8:45	3	0	3	0	0	0	2	0
9:00	0	0	5	1	0	0	3	0
9:15	0	0	0	0	0	0	5	0
9:30	1	0	1	0	0	0	2	0
9:45	0	0	2	0	1	0	2	0
14:00	0	0	2	0	0	0	1	0
14:15	0	0	4	0	0	0	3	0
14:30	0	0	1	0	0	0	0	0
14:45	0	0	3	0	0	0	4	0
15:00	0	0	1	0	0	0	1	0
15:15	0	0	1	0	0	0	3	0
15:30	0	0	2	0	0	0	4	0
15:45	1	0	2	0	0	0	3	3
16:00	0	0	3	0	0	0	3	0
16:15	0	0	5	0	0	0	1	1
16:30	0	0	3	5	0	0	3	0
16:45	0	0	2	3	0	0	1	0
18:00	0	0	1	2	0	0	4	1
18:15	0	0	2	1	0	0	2	0
18:30	0	0	3	0	0	0	8	0
18:45	0	0	1	0	0	0	4	0

Turning Movement Count Report AM

Location ID: 30
 North/South: Laurel Canyon Blvd
 East/West: Valleyheart Dr (North)

Date: 03/09/23
 City: Studio City, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
6:00	0	156	6	1	0	1	1	52	1	1	0	1	220
6:15	0	239	4	1	0	0	0	61	1	1	0	0	307
6:30	1	352	4	1	0	0	0	72	0	1	0	0	431
6:45	2	391	4	2	0	1	1	78	1	2	0	2	484
7:00	2	399	6	1	0	0	1	136	2	1	0	0	548
7:15	4	380	2	4	0	2	2	135	1	3	0	0	533
7:30	2	333	7	5	0	3	1	184	0	6	0	1	542
7:45	4	343	7	6	0	0	1	272	3	7	0	0	643
8:00	1	344	7	2	0	1	6	294	1	1	0	0	657
8:15	4	308	7	5	0	2	3	243	4	3	0	0	579
8:30	1	276	4	6	0	1	2	292	2	5	0	1	590
8:45	5	351	7	3	0	1	1	233	5	0	0	0	606
9:00	1	352	13	7	0	3	4	256	2	4	0	1	643
9:15	0	379	5	11	0	1	1	279	4	1	0	0	681
9:30	5	237	3	10	0	0	2	275	4	1	0	1	538
9:45	2	312	3	5	0	1	1	249	3	6	0	1	583

Total Volume:	34	5152	89	70	0	17	27	3111	34	43	0	8	8585
Approach %	1%	98%	2%	80%	0%	20%	1%	98%	1%	84%	0%	16%	

Peak Hr Begin:	8:30												
PHV	7	1358	29	27	0	6	8	1060	13	10	0	2	2520
PHF	0.908			0.688			0.913			0.500			

Turning Movement Count Report PM

Location ID: 30
 North/South: Laurel Canyon Blvd
 East/West: Valleyheart Dr (North)

Date: 03/09/23
 City: Studio City, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
14:00	2	296	6	4	0	0	4	367	5	3	0	1	688
14:15	2	328	3	8	0	2	1	315	2	3	0	1	665
14:30	1	286	3	13	0	2	4	321	4	3	0	0	637
14:45	3	285	4	9	0	1	19	298	3	1	0	0	623
15:00	1	299	3	3	0	1	10	327	3	1	0	3	651
15:15	3	305	3	3	0	2	7	280	6	2	0	1	612
15:30	3	339	1	5	0	0	16	331	2	6	0	0	703
15:45	4	335	4	0	0	0	31	271	3	1	0	0	649
16:00	4	322	5	3	0	1	16	281	6	7	0	0	645
16:15	5	299	3	6	0	0	12	305	8	4	0	0	642
16:30	3	298	4	8	0	0	7	354	7	4	0	0	685
16:45	0	306	8	2	0	2	2	330	3	3	0	2	658
17:00	3	297	3	4	0	0	9	374	5	2	0	0	697
17:15	2	367	2	3	0	0	23	333	8	4	0	1	743
17:30	0	328	3	2	0	1	11	380	1	7	0	0	733
17:45	0	329	2	1	0	1	5	378	4	1	0	1	722

Total Volume:	36	5019	57	74	0	13	177	5245	70	52	0	10	10753
Approach %	1%	98%	1%	85%	0%	15%	3%	96%	1%	84%	0%	16%	

Peak Hr Begin:	17:00												
PHV	5	1321	10	10	0	2	48	1465	18	14	0	2	2895
PHF	0.900			0.750			0.976			0.571			

Pedestrian/Bicycle Count Report

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

Turning Movement Count Report AM

Location ID: 31
 North/South: Laurel Canyon Blvd
 East/West: Valleyheart Dr (South)

Date: 03/09/23
 City: Studio City, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
6:00	0	141	13	2	0	0	3	50	0	0	0	0	209
6:15	0	238	12	6	0	1	0	53	0	0	0	0	310
6:30	0	338	16	8	0	0	2	66	0	0	0	0	430
6:45	0	380	17	8	0	1	4	74	0	0	0	0	484
7:00	0	386	19	14	0	0	4	119	0	0	0	0	542
7:15	0	354	17	16	0	0	6	127	0	0	0	0	520
7:30	0	323	28	14	0	1	4	176	0	0	0	0	546
7:45	0	322	29	15	0	0	9	260	0	0	0	0	635
8:00	0	323	26	19	0	1	6	278	0	0	0	0	653
8:15	0	290	18	15	0	0	6	239	0	0	0	0	568
8:30	0	263	23	16	0	1	2	283	0	0	0	0	588
8:45	0	311	25	14	0	1	6	223	0	0	0	0	580
9:00	0	325	31	31	0	2	7	230	0	0	0	0	626
9:15	0	353	28	17	0	1	3	271	0	0	0	0	673
9:30	0	232	13	13	0	2	9	265	0	0	0	0	534
9:45	0	283	33	9	0	0	13	247	0	0	0	0	585

Total Volume:	0	4862	348	217	0	11	84	2961	0	0	0	0	8483
Approach %	0%	93%	7%	95%	0%	5%	3%	97%	0%	0%	0%	0%	

Peak Hr Begin:	8:30												
PHV	0	1252	107	78	0	5	18	1007	0	0	0	0	2467
PHF	0.892			0.629			0.899			0.000			

Turning Movement Count Report PM

Location ID: 31
 North/South: Laurel Canyon Blvd
 East/West: Valleyheart Dr (South)

Date: 03/09/23
 City: Studio City, CA

	Southbound			Westbound			Northbound			Eastbound			Totals:
	1	2	3	4	5	6	7	8	9	10	11	12	
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
14:00	0	294	16	24	0	0	9	352	0	0	0	0	695
14:15	0	297	23	28	0	0	4	306	0	0	0	0	658
14:30	0	288	11	42	0	0	15	260	0	0	0	0	616
14:45	0	267	20	29	0	0	14	320	0	0	0	0	650
15:00	0	272	28	24	0	0	11	301	0	0	0	0	636
15:15	0	271	24	26	0	0	8	272	0	0	0	0	601
15:30	0	347	21	21	0	0	7	319	0	0	0	0	715
15:45	0	289	16	19	0	0	10	292	0	0	0	0	626
16:00	0	299	21	19	0	0	10	275	0	0	0	0	624
16:15	0	309	13	28	0	1	9	310	0	0	0	0	670
16:30	0	273	24	27	0	3	4	323	0	0	0	0	654
16:45	0	266	24	23	0	0	2	314	0	0	0	0	629
17:00	0	304	21	29	0	0	10	365	0	0	0	0	729
17:15	0	324	18	21	0	1	10	328	0	0	0	0	702
17:30	0	327	28	22	0	1	9	361	0	0	0	0	748
17:45	0	307	21	22	0	1	8	373	0	0	0	0	732

Total Volume:	0	4734	329	404	0	7	140	5071	0	0	0	0	10685
Approach %	0%	94%	6%	98%	0%	2%	3%	97%	0%	0%	0%	0%	

Peak Hr Begin:	17:00												
PHV	0	1262	88	94	0	3	37	1427	0	0	0	0	2911
PHF	0.951			0.836			0.961			0.000			

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
6:00	0	0	1	0	0	0	0	0
6:15	0	0	3	0	0	0	0	0
6:30	0	0	0	0	0	0	0	0
6:45	1	0	2	0	0	0	0	0
7:00	0	0	3	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0
7:30	0	0	1	0	0	0	0	0
7:45	0	0	7	0	0	0	0	0
8:00	0	0	9	0	0	0	0	0
8:15	0	0	4	0	0	0	0	0
8:30	1	0	4	0	1	0	0	0
8:45	0	0	3	0	0	0	0	0
9:00	0	0	6	0	0	0	0	0
9:15	2	0	3	0	0	0	0	0
9:30	1	0	4	0	0	0	0	0
9:45	0	0	2	0	0	0	0	0
14:00	0	0	8	0	0	0	0	0
14:15	0	0	6	0	0	0	0	0
14:30	0	0	3	0	0	0	0	0
14:45	0	0	6	0	0	0	0	0
15:00	0	0	4	0	0	0	0	0
15:15	0	0	2	0	0	0	0	0
15:30	0	0	2	0	0	0	0	0
15:45	0	0	5	0	0	0	0	0
16:00	0	0	8	0	0	0	0	0
16:15	0	0	7	0	0	0	0	0
16:30	0	0	3	0	0	0	0	0
16:45	0	0	7	0	0	0	0	0
18:00	0	0	3	0	0	0	0	0
18:15	0	0	2	0	0	0	0	0
18:30	0	0	5	0	0	0	0	0
18:45	0	0	3	0	0	0	0	0

Turning Movement Count Report AM

Location ID: 32
 North/South: Radford Ave
 East/West: Sarah St

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
7:00	1	10	1	1	0	0	0	0	1	0	1	0	15
7:15	1	11	4	3	0	0	0	3	0	0	0	1	23
7:30	0	22	38	7	1	0	1	3	1	0	0	2	75
7:45	3	29	69	34	4	3	0	21	1	0	1	6	171
8:00	3	20	3	10	1	0	0	5	0	0	0	3	45
8:15	7	32	4	3	0	0	0	7	0	0	0	1	54
8:30	8	32	10	6	0	1	0	12	0	0	0	1	70
8:45	2	33	3	1	1	1	0	6	0	0	0	0	47
9:00	2	11	1	0	0	0	0	5	0	0	0	2	21
9:15	1	11	1	2	0	0	0	1	1	1	0	0	18
9:30	2	15	1	2	0	0	0	4	0	0	0	0	24
9:45	1	10	3	1	1	0	1	7	0	0	0	3	27

Total Volume:	31	236	138	70	8	5	2	74	4	1	2	19	590
Approach %	8%	58%	34%	84%	10%	6%	3%	93%	5%	5%	9%	86%	

Peak Hr Begin:	7:30												
PHV	13	103	114	54	6	3	1	36	2	0	1	12	345
PHF	0.569			0.384			0.443			0.464			

Turning Movement Count Report PM

Location ID: 32
 North/South: Radford Ave
 East/West: Sarah St

Date: 11/14/23
 City: Lost Angeles, CA

	Southbound			Westbound			Northbound			Eastbound			
	1	2	3	4	5	6	7	8	9	10	11	12	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	2	12	0	1	0	0	2	12	0	1	0	1	31
15:15	2	26	4	0	0	2	1	6	1	0	0	2	44
15:30	3	15	2	0	0	1	0	16	0	0	0	2	39
15:45	2	19	1	2	1	0	0	13	0	0	0	0	38
16:00	2	10	0	4	0	3	2	16	0	0	0	1	38
16:15	0	19	10	1	1	1	0	11	0	0	0	0	43
16:30	1	15	4	0	0	0	1	9	2	0	0	2	34
16:45	0	17	2	1	0	0	0	7	2	0	3	1	33
17:00	2	9	1	1	2	0	1	16	0	0	0	1	33
17:15	0	15	6	5	0	0	1	11	0	0	0	3	41
17:30	0	8	2	4	0	0	0	9	0	0	0	0	23
17:45	3	8	3	5	0	1	0	13	0	1	0	0	34

Total Volume:	17	173	35	24	4	8	8	139	5	2	3	13	431
Approach %	8%	77%	16%	67%	11%	22%	5%	91%	3%	11%	17%	72%	

Peak Hr Begin:	15:15												
PHV	9	70	7	6	1	6	3	51	1	0	0	5	159
PHF	0.672			0.464			0.764			0.625			

Pedestrian/Bicycle Count Report

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
7:00	0	0	1	0	0	0	0	0
7:15	1	0	2	0	0	0	2	0
7:30	0	0	3	0	2	0	1	0
7:45	0	0	1	0	1	0	2	0
8:00	0	0	2	0	3	0	0	0
8:15	0	0	0	0	0	0	0	0
8:30	1	0	0	0	0	0	0	0
8:45	0	0	1	0	1	0	0	0
9:00	0	0	0	0	1	0	0	0
9:15	0	0	1	0	2	0	0	0
9:30	0	0	0	0	2	0	0	0
9:45	2	0	1	0	1	0	1	0

Leg:	North		East		South		West	
Class:	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle	Peds	Bicycle
15:00	4	0	0	0	0	0	1	0
15:15	1	0	0	0	0	0	0	0
15:30	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0
16:00	0	0	0	0	3	0	0	0
16:15	1	0	1	0	1	0	0	0
16:30	0	0	1	1	3	0	1	0
16:45	0	0	2	0	1	0	1	0
17:00	0	0	1	0	0	0	0	0
17:15	2	0	1	0	1	0	0	0
17:30	0	0	0	0	0	0	0	0
17:45	0	0	3	0	0	0	0	0

National Data & Surveying Services

Intersection Turning Movement Count

Location: Lankershim Blvd & SR-134 WB Off-ramp
City: North Hollywood
Control: Signalized

Project ID: 19-05537-037
Date: 9/12/2019

Total

NS/EW Streets:	Lankershim Blvd				Lankershim Blvd				SR-134 WB Off-ramp				SR-134 WB Off-ramp				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	2 NT	0 NR	0 NU	0 SL	2 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	1 WL	0 WT	1 WR	0 WU	
7:00 AM	0	43	0	0	0	278	0	0	0	0	0	0	75	0	41	0	437
7:15 AM	0	35	0	0	0	299	0	0	0	0	0	0	112	0	44	0	490
7:30 AM	0	43	0	0	0	280	0	0	0	0	0	0	141	0	61	0	525
7:45 AM	0	48	0	0	0	298	0	0	0	0	0	0	112	0	53	0	511
8:00 AM	0	75	0	0	0	280	0	0	0	0	0	0	120	0	58	0	533
8:15 AM	0	58	0	0	0	276	0	0	0	0	0	0	139	0	45	0	518
8:30 AM	0	61	0	0	0	209	0	0	0	0	0	0	131	0	55	0	456
8:45 AM	0	68	0	0	0	212	0	0	0	0	0	0	114	0	94	0	488
9:00 AM	0	76	0	0	0	343	0	0	0	0	0	0	77	0	75	0	571
9:15 AM	0	92	0	0	0	275	0	0	0	0	0	0	137	0	60	0	564
9:30 AM	0	92	0	0	0	269	0	0	0	0	0	0	137	0	64	0	562
9:45 AM	0	89	0	0	0	329	0	0	0	0	0	0	96	0	67	0	581
TOTAL VOLUMES :	NL 0	NT 780	NR 0	NU 0	SL 0	ST 3348	SR 0	SU 0	EL 0	ET 0	ER 0	EU 0	WL 1391	WT 0	WR 717	WU 0	TOTAL 6236
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	65.99%	0.00%	34.01%	0.00%	
PEAK HR :	09:00 AM - 10:00 AM																TOTAL
PEAK HR VOL :	0	349	0	0	0	1216	0	0	0	0	0	0	447	0	266	0	2278
PEAK HR FACTOR :	0.000	0.948	0.000	0.000	0.000	0.886	0.000	0.000	0.000	0.000	0.000	0.000	0.816	0.000	0.887	0.000	0.980
	0.948				0.886								0.887				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	2 NT	0 NR	0 NU	0 SL	2 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	1 WL	0 WT	1 WR	0 WU	
3:00 PM	0	172	0	0	0	161	0	0	0	0	0	0	92	0	71	0	496
3:15 PM	0	147	0	1	0	179	0	0	0	0	0	0	76	0	63	0	466
3:30 PM	0	172	0	0	0	176	0	0	0	0	0	0	78	0	79	0	505
3:45 PM	0	169	0	0	0	163	0	0	0	0	0	0	92	0	88	0	512
4:00 PM	0	186	0	0	0	155	0	0	0	0	0	0	75	0	72	0	488
4:15 PM	0	206	0	0	0	198	0	0	0	0	0	0	96	0	71	0	571
4:30 PM	0	183	0	0	0	163	0	0	0	0	0	0	78	0	63	0	487
4:45 PM	0	180	0	0	0	156	0	0	0	0	0	0	90	0	78	0	504
5:00 PM	0	219	0	1	0	179	0	0	0	0	0	0	103	0	78	0	580
5:15 PM	0	200	0	0	0	183	0	0	0	0	0	0	107	0	101	0	591
5:30 PM	0	180	0	0	0	155	0	0	0	0	0	0	94	0	71	0	500
5:45 PM	0	151	0	0	0	132	0	0	0	0	0	0	78	0	71	0	432
TOTAL VOLUMES :	NL 0	NT 2165	NR 0	NU 2	SL 0	ST 2000	SR 0	SU 0	EL 0	ET 0	ER 0	EU 0	WL 1059	WT 0	WR 906	WU 0	TOTAL 6132
APPROACH %'s :	0.00%	99.91%	0.00%	0.09%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	53.89%	0.00%	46.11%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	779	0	1	0	673	0	0	0	0	0	0	394	0	328	0	2175
PEAK HR FACTOR :	0.000	0.889	0.000	0.250	0.000	0.919	0.000	0.000	0.000	0.000	0.000	0.000	0.921	0.000	0.812	0.000	0.920
	0.886				0.919								0.868				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Lankershim Blvd & SR-134 WB Off-ramp
City: North Hollywood
Control: Signalized

Project ID: 19-05537-037
Date: 9/12/2019

Bikes

NS/EW Streets:	Lankershim Blvd				Lankershim Blvd				SR-134 WB Off-ramp				SR-134 WB Off-ramp				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	2 NT	0 NR	0 NU	0 SL	2 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	1 WL	0 WT	1 WR	0 WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
9:30 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
9:45 AM	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	5	0	0	0	9	0	0	0	0	0	0	0	0	0	0	14
PEAK HR :	09:00 AM - 10:00 AM																TOTAL
PEAK HR VOL :	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	6
PEAK HR FACTOR :	0.000	0.375	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500
	0.375				0.750												

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	2 NT	0 NR	0 NU	0 SL	2 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	1 WL	0 WT	1 WR	0 WU	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3:30 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
3:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
4:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3
4:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	1	0	4
5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	5	0	0	0	10	0	0	0	0	0	0	0	0	1	2	18
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	3	0	0	0	4	0	0	0	0	0	0	0	0	1	0	8
PEAK HR FACTOR :	0.00	0.750	0.000	0.000	0.000	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.500
	0.750				0.333								0.250				

National Data & Surveying Services

Project ID: 19-05537-037

Date: 9/12/2019

Pedestrians (Crosswalks)

NS/EW Streets:	Lankershim Blvd		Lankershim Blvd		SR-134 WB Off-ramp		SR-134 WB Off-ramp			
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL	
	EB	WB	EB	WB	NB	SB	NB	SB		
	7:00 AM	20	0	0	0	1	0	0		4
	7:15 AM	1	0	0	0	2	0	0		3
	7:30 AM	0	0	0	0	3	0	0		3
	7:45 AM	3	1	0	0	0	1	0		5
	8:00 AM	0	1	0	0	4	1	0		6
	8:15 AM	3	1	0	0	1	0	0		5
	8:30 AM	0	1	0	0	2	0	0		3
	8:45 AM	2	1	0	0	3	3	0		9
9:00 AM	2	2	0	0	0	1	0	0	5	
9:15 AM	7	3	0	0	0	3	0	0	13	
9:30 AM	5	2	0	0	3	7	0	0	17	
9:45 AM	2	0	0	0	0	5	0	0	7	
TOTAL VOLUMES :	EB 27	WB 12	EB 0	WB 0	NB 17	SB 24	NB 0	SB 0	TOTAL 80	
APPROACH %'s :	69.23%	30.77%			41.46%	58.54%				
PEAK HR :	09:00 AM - 10:00 AM								TOTAL	
PEAK HR VOL :	16	7	0	0	3	16	0	0	42	
PEAK HR FACTOR :	0.571	0.583			0.250	0.571			0.618	
	0.575				0.475					

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
3:00 PM	3	0	0	0	1	1	0	0	5
3:15 PM	0	1	0	0	0	4	0	0	5
3:30 PM	0	1	0	0	4	2	0	0	7
3:45 PM	1	1	0	0	3	5	0	0	10
4:00 PM	0	0	0	0	3	6	0	0	9
4:15 PM	0	0	0	0	2	5	0	0	7
4:30 PM	0	1	0	0	5	3	0	0	9
4:45 PM	0	0	0	0	2	2	0	0	4
5:00 PM	0	2	0	0	0	2	0	0	4
5:15 PM	0	1	0	0	3	2	0	0	6
5:30 PM	1	1	0	0	1	1	0	0	4
5:45 PM	1	0	0	0	1	2	0	0	4
TOTAL VOLUMES :	EB 6	WB 8	EB 0	WB 0	NB 25	SB 35	NB 0	SB 0	TOTAL 74
APPROACH %'s :	42.86%	57.14%			41.67%	58.33%			
PEAK HR :	04:45 PM - 05:45 PM								TOTAL
PEAK HR VOL :	1	4	0	0	6	7	0	0	18
PEAK HR FACTOR :	0.250	0.500			0.500	0.875			0.750
	0.625				0.650				

Appendix C

CEQA T-1 Plans, Policies, Programs Consistency Worksheet

Plans, Policies and Programs Consistency Worksheet

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

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

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

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

I. SCREENING CRITERIA FOR POLICY ANALYSIS

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

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

☐ Yes ☐ No

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

☐ Yes ☐ No

Is the project required to or proposing to make any voluntary modifications to the public right-of-way (i.e., dedications and/or improvements in the right-of-way, reconfigurations of curb line, etc.)?

☐ Yes ☐ No

II. PLAN CONSISTENCY ANALYSIS

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

These questions address potential conflict with:

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

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

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

Mobility Plan 2035 Street Designations and Standard Roadway Dimensions

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

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

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

☐ Yes ☐ No ☐ N/A

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

A.4 If the answer to **A.3. is NO**, is the project applicant asking to waive from the dedication standards? **The Project is requesting Waivers of Dedication of the additional width along Radford Avenue and Colfax Avenue.** ☐ **Yes** ☐ **No** ☐ N/A

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

Radford Avenue (Avenue II)

Frontage 1 Existing PROW'/Curb' : Existing _____ Required _____ Proposed _____

Colfax Avenue (Avenue II)

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

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

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

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

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

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

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

To see the location of the above networks, see **Transportation Assessment Support Map**.¹
[See Future Roadway and Street Improvements discussion in Transportation Assessment.](#)

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

[Metro Bike Share does not provide service in the vicinity of the Project Site.](#)

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

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

B.1 Project-Initiated Changes to the PROW Dimensions

These questions address potential conflict with:

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

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

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

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

Mobility Plan 2035 Street Designations and Standard Roadway Dimensions

¹ LADOT Transportation Assessment Support Map <https://arcg.is/fubbd>

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

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

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

The Project would improve the existing bus stop on Sunset Boulevard, adjacent to the Project Site.

☒ Yes ☐ No

B.2 Driveway Access

These questions address potential conflict with:

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

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

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

Site Planning Best Practices:

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

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

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

- the total number of new driveways exceeds 1 driveway per every 200 feet² along on the Avenue or Boulevard frontage, or
- locating new driveways on an Avenue or Boulevard within 150 feet from the intersecting street, or
- locating new driveways on a collector or local street within 75 feet from the intersecting street, or
- locating new driveways near mid-block crosswalks, requiring relocation of the mid-block crosswalk

☐ Yes ☐ No

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

Impact Analysis

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

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

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

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

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

☐ Yes ☐ No ☐ N/A

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

³ LADOT Transportation Assessment Support Map <https://arcg.is/fubbd>

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

☒ Yes ☐ No ☐ N/A

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

C. Network Access

C. 1 Alley, Street and Stairway Access

These questions address potential conflict with:

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

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

☐ Yes ☐ No

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

☐ Yes ☒ No ☐ N/A

C.2 New Cul-de-sacs

These questions address potential conflict with:

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

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

☐ Yes ☐ No

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

☐ Yes ☒ No ☐ N/A

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

D. Parking Supply and Transportation Demand Management

These questions address potential conflict with:

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

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

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

D.1 Would the project propose a supply of onsite parking that exceeds the baseline amount⁴ as required in the Los Angeles Municipal Code or a Specific plan, whichever requirement prevails?

The Specific Plan would establish new vehicular parking requirements for each of the proposed land use categories. ☐ Yes ☒ No

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

☐ Yes ☒ No ☐ N/A

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

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

☐ Yes ☒ No

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

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

☐ Yes ☐ No

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

☐ Yes ☒ No ☐ N/A

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

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

E. Consistency with Regional Plans

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

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

☐ Yes ☐ No

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

☐ Yes ☐ No ☐ N/A

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

☐ Yes ☐ No ☐ N/A

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

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

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

References

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

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

LADOT Transportation Assessment Support Map <https://arcg.is/fubbd>

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

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

ATTACHMENT D.1: CITY PLAN, POLICIES AND GUIDELINES

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

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

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

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

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

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

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

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

Appendix D

VMT Analysis Worksheets

CITY OF LOS ANGELES VMT CALCULATOR Version 1.4



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

Project Information

Project: Radford Studio Center Project
 Scenario: Project - Custom Studio & Office Land Use
 Address: 4200 N RADFORD AVE, 91604



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

☒ Yes ☐ No

Existing Land Use

Land Use Type	Value	Unit
Office General Office	285	ksf
(custom) Studio, Production & Office Daily	8622	Trips
(custom) Studio, Production & Office HBW-At	52	Percent
(custom) Studio, Production & Office HBO-At	24	Percent
(custom) Studio, Production & Office NHB-Att	12	Percent
(custom) Studio, Production & Office HBW-Pr	0	Percent
(custom) Studio, Production & Office HBO-Pr	0	Percent
(custom) Studio, Production & Office NHB-Pr	12	Percent
(custom) Studio, Production & Office Daily	0	Residents
(custom) Studio, Production & Office Daily	4781	Employees
(custom) Studio, Production & Office Daily	Non-Retail	Retail/Non-R

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

Proposed Project Land Use

Land Use Type	Value	Unit
Office General Office	0.001	ksf
Retail High-Turnover Sit-Down Restaurant	25	ksf
Office General Office	0.001	ksf
(custom) Studio, Production & Office Daily	16981	Trips
(custom) Studio, Production & Office HBW-At	52	Percent
(custom) Studio, Production & Office HBO-At	24	Percent
(custom) Studio, Production & Office NHB-Att	12	Percent
(custom) Studio, Production & Office HBW-Pr	0	Percent
(custom) Studio, Production & Office HBO-Pr	0	Percent
(custom) Studio, Production & Office NHB-Pr	12	Percent
(custom) Studio, Production & Office Daily	0	Residents
(custom) Studio, Production & Office Daily	8820	Employees
(custom) Studio, Production & Office Daily	Non-Retail	Retail/Non-R

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

Project Screening Summary

Existing Land Use	Proposed Project
7,783 Daily Vehicle Trips	17,228 Daily Vehicle Trips
52,567 Daily VMT	115,300 Daily VMT

Tier 1 Screening Criteria

Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station. ☐

Tier 2 Screening Criteria

The net increase in daily trips < 250 trips **9,445**
Net Daily Trips

The net increase in daily VMT ≤ 0 **62,733**
Net Daily VMT

The proposed project consists of only retail land uses ≤ 50,000 square feet total. **25,000**
ksf

The proposed project is required to perform VMT analysis.

CITY OF LOS ANGELES VMT CALCULATOR Version 1.4



Project Information

Project: Radford Studio Center Project
Scenario: Project - Custom Studio & Office Land Use
Address: 4200 N RADFORD AVE, 91604



Proposed Project Land Use Type	Value	Unit
Retail High-Turnover Sit-Down Restaurant	25	ksf
Office General Office	0.001	ksf
(custom) Studio, Production & Office Daily	16981	Trips
(custom) Studio, Production & Office HBW-At	52	Percent
(custom) Studio, Production & Office HBO-Att	24	Percent
(custom) Studio, Production & Office NHB-Att	12	Percent
(custom) Studio, Production & Office HBW-Pr	0	Percent
(custom) Studio, Production & Office HBO-Pr	0	Percent
(custom) Studio, Production & Office NHB-Pr	12	Percent
(custom) Studio, Production & Office Daily	0	Residents
(custom) Studio, Production & Office Daily	8820	Employees
(custom) Studio, Production & Office Daily	Non-Retail	Retail/Non-Retail

TDM Strategies

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

	Proposed Project	With Mitigation
Max Home Based TDM Achieved?	No	No
Max Work Based TDM Achieved?	No	No

A **Parking**

Reduce Parking Supply

☐ Proposed Prj ☐ Mitigation

city code parking provision for the project site

☐ Proposed Prj ☐ Mitigation

actual parking provision for the project site

Unbundle Parking

☐ Proposed Prj ☐ Mitigation

monthly parking cost (dollar) for the project site

Parking Cash-Out

☐ Proposed Prj ☐ Mitigation

percent of employees eligible

Price Workplace Parking

☐ Proposed Prj ☐ Mitigation

daily parking charge (dollar)

☐ Proposed Prj ☐ Mitigation

percent of employees subject to priced parking

Residential Area Parking Permits

☐ Proposed Prj ☐ Mitigation

cost (dollar) of annual permit

B **Transit**

C **Education & Encouragement**

D **Commute Trip Reductions**

E **Shared Mobility**

F **Bicycle Infrastructure**

G **Neighborhood Enhancement**

Analysis Results

Proposed Project	With Mitigation
16,435 Daily Vehicle Trips	16,435 Daily Vehicle Trips
109,996 Daily VMT	109,996 Daily VMT
0.0 Household VMT per Capita	0.0 Household VMT per Capita
6.2 Work VMT per Employee	6.2 Work VMT per Employee

Significant VMT Impact?	
Household: No Threshold = 9.4 15% Below APC	Household: No Threshold = 9.4 15% Below APC
Work: No Threshold = 11.6 15% Below APC	Work: No Threshold = 11.6 15% Below APC



CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: January 16, 2024

Project Name: Radford Studio Center Project

Project Scenario: Project - Custom Studio & Office Land Use

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

Project Information			
Land Use Type		Value	Units
Housing	Single Family	0	DU
	Multi Family	0	DU
	Townhouse	0	DU
	Hotel	0	Rooms
	Motel	0	Rooms
Affordable Housing	Family	0	DU
	Senior	0	DU
	Special Needs	0	DU
	Permanent Supportive	0	DU
Retail	General Retail	0.000	ksf
	Furniture Store	0.000	ksf
	Pharmacy/Drugstore	0.000	ksf
	Supermarket	0.000	ksf
	Bank	0.000	ksf
	Health Club	0.000	ksf
	High-Turnover Sit-Down Restaurant	25.000	ksf
	Fast-Food Restaurant	0.000	ksf
	Quality Restaurant	0.000	ksf
	Auto Repair	0.000	ksf
	Home Improvement	0.000	ksf
	Free-Standing Discount	0.000	ksf
	Movie Theater	0	Seats
Office	General Office	0.001	ksf
	Medical Office	0.000	ksf
Industrial	Light Industrial	0.000	ksf
	Manufacturing	0.000	ksf
	Warehousing/Self-Storage	0.000	ksf
School	University	0	Students
	High School	0	Students
	Middle School	0	Students
	Elementary	0	Students
	Private School (K-12)	0	Students
Other	Studio, Production & Office	16981	Trips

Project and Analysis Overview

1 of 2

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: January 16, 2024

Project Name: Radford Studio Center Project

Project Scenario: Project - Custom Studio & Office Land Use

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

Analysis Results			
Total Employees: 8,920			
Total Population: 0			
Proposed Project		With Mitigation	
16,435	Daily Vehicle Trips	16,435	Daily Vehicle Trips
109,996	Daily VMT	109,996	Daily VMT
0	Household VMT per Capita	0	Household VMT per Capita
6.2	Work VMT per Employee	6.2	Work VMT per Employee
Significant VMT Impact?			
APC: South Valley			
Impact Threshold: 15% Below APC Average			
Household = 9.4			
Work = 11.6			
Proposed Project		With Mitigation	
VMT Threshold	Impact	VMT Threshold	Impact
Household > 9.4	No	Household > 9.4	No
Work > 11.6	No	Work > 11.6	No

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: January 16, 2024

Project Name: Radford Studio Center Project

Project Scenario: Project - Custom Studio & Office Land U

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

TDM Strategy Inputs			
Strategy Type	Description	Proposed Project	Mitigations
Parking	City code parking provision (spaces)	0	0
	Actual parking provision (spaces)	0	0
	Unbundle parking	\$0	\$0
	Parking cash-out	0%	0%
	Daily parking charge (\$)	\$0.00	\$0.00
	Employees subject to priced parking (%)	0%	0%
	Residential area parking permits	\$0	\$0
(cont. on following page)			

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: January 16, 2024

Project Name: Radford Studio Center Project

Project Scenario: Project - Custom Studio & Office Land U

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

TDM Strategy Inputs, Cont.			
Strategy Type	Description	Proposed Project	Mitigations
Transit	Reduction in headways (increase in frequency) (%)	0%	0%
	Existing transit mode share (as a percent of total daily trips) (%)	0%	0%
	Lines within project site improved (<50%, >=50%)	0	0
	Degree of implementation (low, medium, high)	0	0
	Employees and residents eligible (%)	0%	0%
	Transit subsidies	0%	0%
Education & Encouragement	Amount of transit subsidy per passenger (daily equivalent) (\$)	\$0.00	\$0.00
	Voluntary travel behavior change program	0%	0%
	Promotions and marketing	100%	100%
(cont. on following page)			

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: January 16, 2024

Project Name: Radford Studio Center Project

Project Scenario: Project - Custom Studio & Office Land U

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: January 16, 2024

Project Name: Radford Studio Center Project

Project Scenario: Project - Custom Studio & Office Land U

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 3: TDM Outputs

Date: January 16, 2024
 Project Name: Radford Studio Center Project
 Project Scenario: Project - Custom Studio & Office Land Use
 Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

TDM Adjustments by Trip Purpose & Strategy

Place type: Compact Infill

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 3: TDM Outputs

Date: January 16, 2024
 Project Name: Radford Studio Center Project
 Project Scenario: Project - Custom Studio & Office Land Use
 Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

TDM Adjustments by Trip Purpose & Strategy, Cont.

Place type: Compact Infill

		<i>Home Based Work Production</i>		<i>Home Based Work Attraction</i>		<i>Home Based Other Production</i>		<i>Home Based Other Attraction</i>		<i>Non-Home Based Other Production</i>		<i>Non-Home Based Other Attraction</i>		<i>Source</i>
		Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	
Bicycle Infrastructure	Implement/ Improve on-street bicycle facility	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	TDM Strategy Appendix, Bicycle Infrastructure sections 1 - 3
	Include Bike parking per LAMC	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	
	Include secure bike parking and showers	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Neighborhood Enhancement	Traffic calming improvements	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	TDM Strategy Appendix, Neighborhood Enhancement sections 1 - 2
	Pedestrian network improvements	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Final Combined & Maximum TDM Effect

		<i>Home Based Work Production</i>		<i>Home Based Work Attraction</i>		<i>Home Based Other Production</i>		<i>Home Based Other Attraction</i>		<i>Non-Home Based Other Production</i>		<i>Non-Home Based Other Attraction</i>	
		Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated	Proposed	Mitigated
COMBINED TOTAL		5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	1%
MAX. TDM EFFECT		5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%

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

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

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 4: MXD Methodology

Date: January 16, 2024

Project Name: Radford Studio Center Project

Project Scenario: Project - Custom Studio & Office Land U

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

MXD Methodology - Project Without TDM

	Unadjusted Trips	MXD Adjustment	MXD Trips	Average Trip Length	Unadjusted VMT	MXD VMT
Home Based Work Production	0	0.0%	0	10.1	0	0
Home Based Other Production	0	0.0%	0	6.7	0	0
Non-Home Based Other Production	2,501	-2.2%	2,447	7.7	19,258	18,842
Home-Based Work Attraction	8,975	-11.0%	7,985	7.3	65,518	58,291
Home-Based Other Attraction	5,139	-15.4%	4,348	5.4	27,751	23,479
Non-Home Based Other Attraction	2,501	-2.1%	2,448	6.0	15,006	14,688

MXD Methodology with TDM Measures

	<i>Proposed Project</i>			<i>Project with Mitigation Measures</i>		
	TDM Adjustment	Project Trips	Project VMT	TDM Adjustment	Mitigated Trips	Mitigated VMT
Home Based Work Production	-4.6%	0	0	-4.6%	0	0
Home Based Other Production	-4.6%	0	0	-4.6%	0	0
Non-Home Based Other Production	-4.6%	2,334	17,975	-4.6%	2,334	17,975
Home-Based Work Attraction	-4.6%	7,618	55,610	-4.6%	7,618	55,610
Home-Based Other Attraction	-4.6%	4,148	22,399	-4.6%	4,148	22,399
Non-Home Based Other Attraction	-4.6%	2,335	14,012	-4.6%	2,335	14,012

MXD VMT Methodology Per Capita & Per Employee

Total Population: 0

Total Employees: 8,920

APC: South Valley

	<i>Proposed Project</i>	<i>Project with Mitigation Measures</i>
<i>Total Home Based Production VMT</i>	0	0
<i>Total Home Based Work Attraction VMT</i>	55,610	55,610
<i>Total Home Based VMT Per Capita</i>	0.0	0.0
<i>Total Work Based VMT Per Employee</i>	6.2	6.2

Land Use Exchange Scenarios

**TABLE D-1
ANALYSIS SCENARIO SUMMARY**

Land Use	Existing Uses	Conceptual Development Program	Maximum Land Use Exchange Scenario 1	Maximum Land Use Exchange Scenario 2	Maximum Land Use Exchange Scenario 3	Maximum Land Use Exchange Scenario 4
Sound Stages	359,730 sf	450,000 sf	575,000 sf	175,000 sf	575,000 sf	450,000 sf
Production Support	255,510 sf	300,000 sf	175,000 sf	575,000 sf	300,000 sf	575,000 sf
Production Office	450,060 sf	725,000 sf	725,000 sf	725,000 sf	600,000 sf	450,000 sf
Creative Office	113,810 sf	700,000 sf	700,000 sf	700,000 sf	700,000 sf	700,000 sf
Retail	-	25,000 sf	25,000 sf	25,000 sf	25,000 sf	25,000 sf
Total Development	1,179,110 sf	2,200,000 sf	2,200,000 sf	2,200,000 sf	2,200,000 sf	2,200,000 sf

Notes

All land use sizes shown in square feet (sf) measured as described in the Radford Studios Center Specific Plan.

[a] Permitted development for individual land uses varies from these values as described in Chapter 1. Overall site-wide permitted development is 2,200,000 sf.

**TABLE D-2
PROJECT VMT ANALYSIS SUMMARY**

Project Information [a]					
Address	4200 N. Radford Avenue				
Area Planning Commission	South Valley				
Travel Behavior Zone	Compact Infill				
Maximum VMT Reduction [b]	40%				
VMT Analysis [a]	Conceptual Development Program	Maximum Land Use Exchange Scenario 1	Maximum Land Use Exchange Scenario 2	Maximum Land Use Exchange Scenario 3	Maximum Land Use Exchange Scenario 4
<u>Land Uses</u>					
Sound Stages	450,000 sf	575,000 sf	175,000 sf	575,000 sf	450,000 sf
Production Support	300,000 sf	175,000 sf	575,000 sf	300,000 sf	575,000 sf
Production Office	725,000 sf	725,000 sf	725,000 sf	600,000 sf	450,000 sf
Creative Office	700,000 sf	700,000 sf	700,000 sf	700,000 sf	700,000 sf
Retail	25,000 sf	25,000 sf	25,000 sf	25,000 sf	25,000 sf
Employee Population	8,920	9,370	7,930	9,120	8,370
<u>Work VMT</u>					
Total Work VMT [c][d]	55,610	56,319	54,042	54,230	51,006
Work VMT per Employee	6.2	6.0	6.8	5.9	6.1
Impact Threshold	11.6	11.6	11.6	11.6	11.6
Significant Impact	NO	NO	NO	NO	NO

Notes:

[a] Project Analysis is from LADOT *VMT Calculator Version 1.4* (June 2023) output reports provided in Attachment.

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

[c] The Project design features considered in the analysis include:

1. Bicycle parking per LAMC requirements
2. Promotions & marketing of alternative transportation options and choices.

[d] Work VMT per Employee is based on the "home-based work attraction" trip types.

TABLE D-3
CUSTOM LAND USE DEVELOPMENT - DAILY TRIP ESTIMATES
RADFORD STUDIO CENTER PROJECT

Land Use	Daily Vehicle Trip Rates [a]	Conceptual Development Program		Maximum Land Use Exchange Scenario 1		Maximum Land Use Exchange Scenario 2		Maximum Land Use Exchange Scenario 3		Maximum Land Use Exchange Scenario 4	
		Floor Area	Daily Vehicle Trips	Floor Area	Daily Vehicle Trips	Floor Area	Daily Vehicle Trips	Floor Area	Daily Vehicle Trips	Floor Area	Daily Vehicle Trips
Sound Stages	5.91	450,000 sf	2,660	575,000 sf	3,398	175,000 sf	1,034	575,000 sf	3,398	450,000 sf	2,660
Production Support	4.14	300,000 sf	1,242	175,000 sf	725	575,000 sf	2,381	300,000 sf	1,242	575,000 sf	2,381
Production Office	9.34	725,000 sf	6,772	725,000 sf	6,772	725,000 sf	6,772	600,000 sf	5,604	450,000 sf	4,203
Creative Office [b]	10.84	700,000 sf	6,307	700,000 sf	6,307	700,000 sf	6,307	700,000 sf	6,307	700,000 sf	6,307
Total		2,175,000 sf	16,981	2,175,000 sf	17,202	2,175,000 sf	16,494	2,175,000 sf	16,551	2,175,000 sf	15,551

Notes:

The daily trip generation characteristics and patterns of studio-related uses are similar in scope and behavior to the general office land use. Thus, the VMT Calculator's custom land use feature was used to estimate VMT per employee for the Project. The custom land use inputs include total daily trips and total employees as well as trip purpose assumptions, which were matched to those of the VMT Calculator's general office land use.

[a] Trip generation rates for sound stages, production support, and production office uses are based on empirical data from other studios in Los Angeles and have been used to estimate studio-related trips for several transportation studies, including *NBC Universal Evolution Plan Alternative 10 Transportation Analysis* (Gibson Transportation Consulting, 2012) and *Transportation Study for the Paramount Pictures Master Plan* (Gibson Transportation Consulting, 2015).

[b] Trip generation rate for the Project based on the best-fit curve formula listed in *Trip Generation, 11th Edition* for the General Office Building land use.

$$\text{Daily} - \text{Ln}(T) = 0.87 \text{Ln}(X) + 3.05 \quad T = \text{Average Vehicle Trips} \quad X = \text{Gross Floor Area (ksf)}$$

Trip generation rate for the existing uses based on the average rate from ITE for the General Office Building land use.

**TABLE D-4
CUSTOM LAND USE DEVELOPMENT - EMPLOYEE PROJECTIONS
RADFORD STUDIO CENTER PROJECT**

Land Use	Employee Generation Rate (per 1,000 sf) [a]	Conceptual Development Program		Maximum Land Use Exchange Scenario 1		Maximum Land Use Exchange Scenario 2		Maximum Land Use Exchange Scenario 3		Maximum Land Use Exchange Scenario 4	
		Floor Area	Employees	Floor Area	Employees	Floor Area	Employees	Floor Area	Employees	Floor Area	Employees
Sound Stages [b]	5.6	450,000 sf	2,520	575,000 sf	3,220	175,000 sf	980	575,000 sf	3,220	450,000 sf	2,520
Production Support	2.0	300,000 sf	600	175,000 sf	350	575,000 sf	1,150	300,000 sf	600	575,000 sf	1,150
Production Office	4.0	725,000 sf	2,900	725,000 sf	2,900	725,000 sf	2,900	600,000 sf	2,400	450,000 sf	1,800
Creative Office	4.0	700,000 sf	2,800	700,000 sf	2,800	700,000 sf	2,800	700,000 sf	2,800	700,000 sf	2,800
Total		2,175,000 sf	8,820	2,175,000 sf	9,270	2,175,000 sf	7,830	2,175,000 sf	9,020	2,175,000 sf	8,270

Notes:

[a] Except for sound stages, employee generation rates from *City of Los Angeles VMT Calculator Documentation, Version 1.3* (Los Angeles Department of Transportation and Los Angeles Department of City Planning, May 2020) for general retail (production support) and general office (production and creative office) land uses.

[b] Rounded rate assumes 100 employee for a typical 18,000 sf sound stage as a scalable density, as assumed in *Manhattan Beach Studios* (June 2021).

CITY OF LOS ANGELES VMT CALCULATOR Version 1.4



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

Project Information

Project: Radford Studio Center Project
 Scenario: Max LU Exchange Secnario 1
 Address: 4200 N RADFORD AVE, 91604



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

☒ Yes ☐ No

Existing Land Use

Land Use Type	Value	Unit
Office General Office	285	ksf
(custom) Studio, Production & Office Daily	8622	Trips
(custom) Studio, Production & Office HBW-At	52	Percent
(custom) Studio, Production & Office HBO-At	24	Percent
(custom) Studio, Production & Office NHB-Att	12	Percent
(custom) Studio, Production & Office HBW-Pr	0	Percent
(custom) Studio, Production & Office HBO-Pr	0	Percent
(custom) Studio, Production & Office NHB-Pr	12	Percent
(custom) Studio, Production & Office Daily	0	Residents
(custom) Studio, Production & Office Daily	4781	Employees
(custom) Studio, Production & Office Daily	Non-Retail	Retail/Non-R

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

Proposed Project Land Use

Land Use Type	Value	Unit
Office General Office		ksf
Retail High-Turnover Sit-Down Restaurant	25	ksf
Office General Office	0.001	ksf
(custom) Studio, Production & Office Daily	17202	Trips
(custom) Studio, Production & Office HBW-At	52	Percent
(custom) Studio, Production & Office HBO-At	24	Percent
(custom) Studio, Production & Office NHB-Att	12	Percent
(custom) Studio, Production & Office HBW-Pr	0	Percent
(custom) Studio, Production & Office HBO-Pr	0	Percent
(custom) Studio, Production & Office NHB-Pr	12	Percent
(custom) Studio, Production & Office Daily	0	Residents
(custom) Studio, Production & Office Daily	9270	Employees
(custom) Studio, Production & Office Daily	Non-Retail	Retail/Non-R

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

Project Screening Summary

Existing Land Use	Proposed Project
7,783 Daily Vehicle Trips	17,425 Daily Vehicle Trips
52,567 Daily VMT	116,632 Daily VMT

Tier 1 Screening Criteria

Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station. ☐

Tier 2 Screening Criteria

The net increase in daily trips < 250 trips **9,642**
Net Daily Trips

The net increase in daily VMT ≤ 0 **64,065**
Net Daily VMT

The proposed project consists of only retail land uses ≤ 50,000 square feet total. **25,000**
ksf

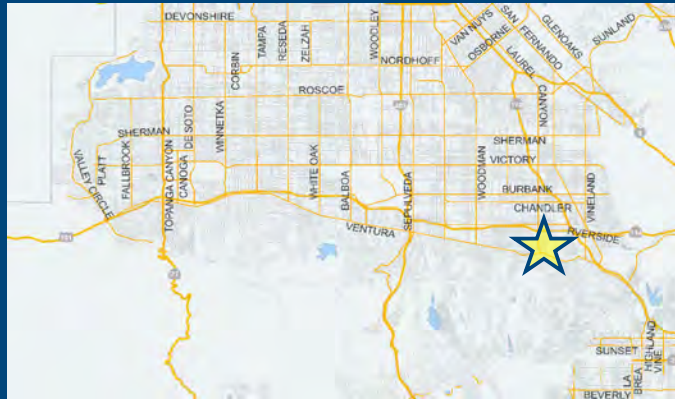
The proposed project is required to perform VMT analysis.

CITY OF LOS ANGELES VMT CALCULATOR Version 1.4



Project Information

Project: Radford Studio Center Project
Scenario: Max LU Exchange Secnario 1
Address: 4200 N RADFORD AVE, 91604



TDM Strategies

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

	Proposed Project	With Mitigation
Max Home Based TDM Achieved?	No	No
Max Work Based TDM Achieved?	No	No
A Parking		
B Transit		
C Education & Encouragement		
Voluntary Travel Behavior Change Program <input type="text" value="100"/> percent of employees and residents participating <input type="checkbox"/> Proposed Prj <input type="checkbox"/> Mitigation		
Promotions & Marketing <input type="text" value="100"/> percent of employees and residents participating <input checked="" type="checkbox"/> Proposed Prj <input type="checkbox"/> Mitigation		
D Commute Trip Reductions		
E Shared Mobility		
F Bicycle Infrastructure		
G Neighborhood Enhancement		

Analysis Results

Proposed Project	With Mitigation
16,623 Daily Vehicle Trips	16,623 Daily Vehicle Trips
111,266 Daily VMT	111,266 Daily VMT
0.0 Household VMT per Capita	0.0 Household VMT per Capita
6.0 Work VMT per Employee	6.0 Work VMT per Employee

Significant VMT Impact?

Household: No Threshold = 9.4 15% Below APC	Household: No Threshold = 9.4 15% Below APC
Work: No Threshold = 11.6 15% Below APC	Work: No Threshold = 11.6 15% Below APC

Proposed Project Land Use Type	Value	Unit
Retail High-Turnover Sit-Down Restaurant	25	ksf
Office General Office	0.001	ksf
(custom) Studio, Production & Office Daily	17202	Trips
(custom) Studio, Production & Office HBW-At	52	Percent
(custom) Studio, Production & Office HBO-Att	24	Percent
(custom) Studio, Production & Office NHB-Att	12	Percent
(custom) Studio, Production & Office HBW-Pr	0	Percent
(custom) Studio, Production & Office HBO-Pr	0	Percent
(custom) Studio, Production & Office NHB-Pr	12	Percent
(custom) Studio, Production & Office Daily	0	Residents
(custom) Studio, Production & Office Daily	9270	Employees
(custom) Studio, Production & Office Daily	Non-Retail	Retail/Non-Retail

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: February 14, 2024

Project Name: Radford Studio Center Project

Project Scenario: Max LU Exchange Secnario 1

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

Project Information			
Land Use Type		Value	Units
Housing	Single Family	0	DU
	Multi Family	0	DU
	Townhouse	0	DU
	Hotel	0	Rooms
	Motel	0	Rooms
Affordable Housing	Family	0	DU
	Senior	0	DU
	Special Needs	0	DU
	Permanent Supportive	0	DU
Retail	General Retail	0.000	ksf
	Furniture Store	0.000	ksf
	Pharmacy/Drugstore	0.000	ksf
	Supermarket	0.000	ksf
	Bank	0.000	ksf
	Health Club	0.000	ksf
	High-Turnover Sit-Down Restaurant	25.000	ksf
	Fast-Food Restaurant	0.000	ksf
	Quality Restaurant	0.000	ksf
	Auto Repair	0.000	ksf
	Home Improvement	0.000	ksf
	Free-Standing Discount	0.000	ksf
	Movie Theater	0	Seats
Office	General Office	0.001	ksf
	Medical Office	0.000	ksf
Industrial	Light Industrial	0.000	ksf
	Manufacturing	0.000	ksf
	Warehousing/Self-Storage	0.000	ksf
School	University	0	Students
	High School	0	Students
	Middle School	0	Students
	Elementary	0	Students
	Private School (K-12)	0	Students
Other	Studio, Production & Office	17202	Trips

Project and Analysis Overview

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: February 14, 2024

Project Name: Radford Studio Center Project

Project Scenario: Max LU Exchange Secnario 1

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

Analysis Results			
Total Employees: 9,370			
Total Population: 0			
Proposed Project		With Mitigation	
16,623	Daily Vehicle Trips	16,623	Daily Vehicle Trips
111,266	Daily VMT	111,266	Daily VMT
0	Household VMT per Capita	0	Household VMT per Capita
6	Work VMT per Employee	6	Work VMT per Employee
Significant VMT Impact?			
APC: South Valley			
Impact Threshold: 15% Below APC Average			
Household = 9.4			
Work = 11.6			
Proposed Project		With Mitigation	
VMT Threshold	Impact	VMT Threshold	Impact
Household > 9.4	No	Household > 9.4	No
Work > 11.6	No	Work > 11.6	No

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: February 14, 2024

Project Name: Radford Studio Center Project

Project Scenario: Max LU Exchange Secnario 1

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: February 14, 2024

Project Name: Radford Studio Center Project

Project Scenario: Max LU Exchange Secnario 1

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

TDM Strategy Inputs, Cont.				
Strategy Type		Description	Proposed Project	Mitigations
Transit	Reduce transit headways	Reduction in headways (increase in frequency) (%)	0%	0%
		Existing transit mode share (as a percent of total daily trips) (%)	0%	0%
		Lines within project site improved (<50%, >=50%)	0	0
	Implement neighborhood shuttle	Degree of implementation (low, medium, high)	0	0
		Employees and residents eligible (%)	0%	0%
	Transit subsidies	Employees and residents eligible (%)	0%	0%
		Amount of transit subsidy per passenger (daily equivalent) (\$)	\$0.00	\$0.00
Education & Encouragement	Voluntary travel behavior change program	Employees and residents participating (%)	0%	0%
	Promotions and marketing	Employees and residents participating (%)	100%	100%
(cont. on following page)				

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: February 14, 2024

Project Name: Radford Studio Center Project

Project Scenario: Max LU Exchange Secnario 1

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: February 14, 2024

Project Name: Radford Studio Center Project

Project Scenario: Max LU Exchange Secnario 1

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

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

TDM Adjustments by Trip Purpose & Strategy

Place type: Compact Infill

[illegible]

TDM Adjustments by Trip Purpose & Strategy, Cont.															
Place type: Compact Infill															
		Home Based Work				Home Based Other				Non-Home Based Other					
		Attraction				Production				Attraction					
		Proposed				Mitigated				Proposed					
		Mitigated				Proposed				Mitigated					
		Production				Attraction				Production					
		Non-Home Based Other				Home Based Other				Non-Home Based Other					
		Mitigated				Proposed				Mitigated					
		Proposed				Mitigated				Proposed					
		Mitigated				Proposed				Mitigated					
		Source				Source				Source					
		TDM Strategy Appendix, Bicycle sections 1 - 3				TDM Strategy Appendix, Bicycle sections 1 - 3				TDM Strategy Appendix, Bicycle sections 1 - 3					
		Implement/ improve on-street bicycle facility				Include Bike parking per LAMC				Include secure bike parking and showers					
		0.0%				0.6%				0.0%					
		0.0%				0.6%				0.0%					
		Bicycle Infrastructure				Bicycle Infrastructure				Bicycle Infrastructure					
		Traffic calming improvements				Traffic calming improvements				Traffic calming improvements					
		Pedestrian network improvements				Pedestrian network improvements				Pedestrian network improvements					
		Neighborhood Enhancement				Neighborhood Enhancement				Neighborhood Enhancement					

[illegible]

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

$\%X$ where

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

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 4: MXD Methodology

Date: February 14, 2024

Project Name: Radford Studio Center Project

Project Scenario: Max LU Exchange Secnario 1

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

MXD Methodology - Project Without TDM

	Unadjusted Trips	MXD Adjustment	MXD Trips	Average Trip Length	Unadjusted VMT	MXD VMT
Home Based Work Production	0	0.0%	0	10.1	0	0
Home Based Other Production	0	0.0%	0	6.7	0	0
Non-Home Based Other Production	2,527	-2.1%	2,473	7.7	19,458	19,042
Home-Based Work Attraction	9,090	-11.0%	8,087	7.3	66,357	59,035
Home-Based Other Attraction	5,192	-15.4%	4,392	5.4	28,037	23,717
Non-Home Based Other Attraction	2,527	-2.1%	2,473	6.0	15,162	14,838

MXD Methodology with TDM Measures

	Proposed Project			Project with Mitigation Measures		
	TDM Adjustment	Project Trips	Project VMT	TDM Adjustment	Mitigated Trips	Mitigated VMT
Home Based Work Production	-4.6%	0	0	-4.6%	0	0
Home Based Other Production	-4.6%	0	0	-4.6%	0	0
Non-Home Based Other Production	-4.6%	2,359	18,166	-4.6%	2,359	18,166
Home-Based Work Attraction	-4.6%	7,715	56,319	-4.6%	7,715	56,319
Home-Based Other Attraction	-4.6%	4,190	22,626	-4.6%	4,190	22,626
Non-Home Based Other Attraction	-4.6%	2,359	14,155	-4.6%	2,359	14,155

MXD VMT Methodology Per Capita & Per Employee

Total Population: 0

Total Employees: 9,370

APC: South Valley

	Proposed Project	Project with Mitigation Measures
Total Home Based Production VMT	0	0
Total Home Based Work Attraction VMT	56,319	56,319
Total Home Based VMT Per Capita	0.0	0.0
Total Work Based VMT Per Employee	6.0	6.0

CITY OF LOS ANGELES VMT CALCULATOR Version 1.4



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

Project Information

Project: Radford Studio Center Project
 Scenario: Max LU Exchange Secnario 2
 Address: 4200 N RADFORD AVE, 91604



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

☒ Yes ☐ No

Existing Land Use

Land Use Type	Value	Unit
Office General Office	285	ksf
(custom) Studio, Production & Office Daily	8622	Trips
(custom) Studio, Production & Office HBW-At	52	Percent
(custom) Studio, Production & Office HBO-At	24	Percent
(custom) Studio, Production & Office NHB-Att	12	Percent
(custom) Studio, Production & Office HBW-Pr	0	Percent
(custom) Studio, Production & Office HBO-Pr	0	Percent
(custom) Studio, Production & Office NHB-Pr	12	Percent
(custom) Studio, Production & Office Daily	0	Residents
(custom) Studio, Production & Office Daily	4781	Employees
(custom) Studio, Production & Office Daily	Non-Retai	Retail/Non-R

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

Proposed Project Land Use

Land Use Type	Value	Unit
Office General Office		ksf
Retail High-Turnover Sit-Down Restaurant	25	ksf
Office General Office	0.001	ksf
(custom) Studio, Production & Office Daily	16494	Trips
(custom) Studio, Production & Office HBW-At	52	Percent
(custom) Studio, Production & Office HBO-At	24	Percent
(custom) Studio, Production & Office NHB-Att	12	Percent
(custom) Studio, Production & Office HBW-Pr	0	Percent
(custom) Studio, Production & Office HBO-Pr	0	Percent
(custom) Studio, Production & Office NHB-Pr	12	Percent
(custom) Studio, Production & Office Daily	0	Residents
(custom) Studio, Production & Office Daily	7830	Employees
(custom) Studio, Production & Office Daily	Non-Retai	Retail/Non-R

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

Project Screening Summary

Existing Land Use	Proposed Project
7,783 Daily Vehicle Trips	16,789 Daily Vehicle Trips
52,567 Daily VMT	112,336 Daily VMT

Tier 1 Screening Criteria

Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station. ☐

Tier 2 Screening Criteria

The net increase in daily trips < 250 trips **9,006**
Net Daily Trips

The net increase in daily VMT ≤ 0 **59,769**
Net Daily VMT

The proposed project consists of only retail land uses ≤ 50,000 square feet total. **25,000**
ksf

The proposed project is required to perform VMT analysis.

CITY OF LOS ANGELES VMT CALCULATOR Version 1.4



Project Information

Project: Radford Studio Center Project
Scenario: Max LU Exchange Secnario 2
Address: 4200 N RADFORD AVE, 91604



TDM Strategies

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

	Proposed Project	With Mitigation
Max Home Based TDM Achieved?	No	No
Max Work Based TDM Achieved?	No	No
A Parking		
B Transit		
C Education & Encouragement		
Voluntary Travel Behavior Change Program <input type="text" value="100"/> percent of employees and residents participating <input type="checkbox"/> Proposed Prj <input type="checkbox"/> Mitigation		
Promotions & Marketing <input type="text" value="100"/> percent of employees and residents participating <input checked="" type="checkbox"/> Proposed Prj <input type="checkbox"/> Mitigation		
D Commute Trip Reductions		
E Shared Mobility		
F Bicycle Infrastructure		
G Neighborhood Enhancement		

Analysis Results

Proposed Project	With Mitigation
16,017 Daily Vehicle Trips	16,017 Daily Vehicle Trips
107,168 Daily VMT	107,168 Daily VMT
0.0 Household VMT per Capita	0.0 Household VMT per Capita
6.8 Work VMT per Employee	6.8 Work VMT per Employee

Significant VMT Impact?

Household: No Threshold = 9.4 15% Below APC	Household: No Threshold = 9.4 15% Below APC
Work: No Threshold = 11.6 15% Below APC	Work: No Threshold = 11.6 15% Below APC

Proposed Project Land Use Type	Value	Unit
Retail High-Turnover Sit-Down Restaurant	25	ksf
Office General Office	0.001	ksf
(custom) Studio, Production & Office Daily	16494	Trips
(custom) Studio, Production & Office HBW-At	52	Percent
(custom) Studio, Production & Office HBO-Att	24	Percent
(custom) Studio, Production & Office NHB-Att	12	Percent
(custom) Studio, Production & Office HBW-Pr	0	Percent
(custom) Studio, Production & Office HBO-Pr	0	Percent
(custom) Studio, Production & Office NHB-Pr	12	Percent
(custom) Studio, Production & Office Daily	0	Residents
(custom) Studio, Production & Office Daily	7830	Employees
(custom) Studio, Production & Office Daily	Non-Retail	Retail/Non-Retail

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: February 14, 2024

Project Name: Radford Studio Center Project

Project Scenario: Max LU Exchange Secnario 2

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

Project Information			
Land Use Type		Value	Units
Housing	Single Family	0	DU
	Multi Family	0	DU
	Townhouse	0	DU
	Hotel	0	Rooms
	Motel	0	Rooms
Affordable Housing	Family	0	DU
	Senior	0	DU
	Special Needs	0	DU
	Permanent Supportive	0	DU
Retail	General Retail	0.000	ksf
	Furniture Store	0.000	ksf
	Pharmacy/Drugstore	0.000	ksf
	Supermarket	0.000	ksf
	Bank	0.000	ksf
	Health Club	0.000	ksf
	High-Turnover Sit-Down Restaurant	25.000	ksf
	Fast-Food Restaurant	0.000	ksf
	Quality Restaurant	0.000	ksf
	Auto Repair	0.000	ksf
	Home Improvement	0.000	ksf
	Free-Standing Discount	0.000	ksf
	Movie Theater	0	Seats
Office	General Office	0.001	ksf
	Medical Office	0.000	ksf
Industrial	Light Industrial	0.000	ksf
	Manufacturing	0.000	ksf
	Warehousing/Self-Storage	0.000	ksf
School	University	0	Students
	High School	0	Students
	Middle School	0	Students
	Elementary	0	Students
	Private School (K-12)	0	Students
Other	Studio, Production & Office	16494	Trips

Project and Analysis Overview

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: February 14, 2024

Project Name: Radford Studio Center Project

Project Scenario: Max LU Exchange Secnario 2

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

Analysis Results			
Total Employees: 7,930			
Total Population: 0			
Proposed Project		With Mitigation	
16,017	Daily Vehicle Trips	16,017	Daily Vehicle Trips
107,168	Daily VMT	107,168	Daily VMT
0	Household VMT per Capita	0	Household VMT per Capita
6.8	Work VMT per Employee	6.8	Work VMT per Employee
Significant VMT Impact?			
APC: South Valley			
Impact Threshold: 15% Below APC Average			
Household = 9.4			
Work = 11.6			
Proposed Project		With Mitigation	
VMT Threshold	Impact	VMT Threshold	Impact
Household > 9.4	No	Household > 9.4	No
Work > 11.6	No	Work > 11.6	No

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: February 14, 2024

Project Name: Radford Studio Center Project

Project Scenario: Max LU Exchange Secnario 2

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: February 14, 2024

Project Name: Radford Studio Center Project

Project Scenario: Max LU Exchange Secnario 2

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

TDM Strategy Inputs, Cont.				
Strategy Type		Description	Proposed Project	Mitigations
Transit	Reduce transit headways	Reduction in headways (increase in frequency) (%)	0%	0%
		Existing transit mode share (as a percent of total daily trips) (%)	0%	0%
		Lines within project site improved (<50%, >=50%)	0	0
	Implement neighborhood shuttle	Degree of implementation (low, medium, high)	0	0
		Employees and residents eligible (%)	0%	0%
	Transit subsidies	Employees and residents eligible (%)	0%	0%
		Amount of transit subsidy per passenger (daily equivalent) (\$)	\$0.00	\$0.00
Education & Encouragement	Voluntary travel behavior change program	Employees and residents participating (%)	0%	0%
	Promotions and marketing	Employees and residents participating (%)	100%	100%
(cont. on following page)				

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: February 14, 2024

Project Name: Radford Studio Center Project

Project Scenario: Max LU Exchange Secnario 2

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: February 14, 2024

Project Name: Radford Studio Center Project

Project Scenario: Max LU Exchange Secnario 2

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 3: TDM Outputs

Date: February 14, 2024
Project Name: Radford Studio Center Project
Project Scenario: Max LU Exchange Scenario 2
Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

TDM Adjustments by Trip Purpose & Strategy

Place type: Compact Infill

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

[illegible][illegible]

$$= \text{Minimum}(X\%, 1 - [(1-A) * (1-B) \dots])$$

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

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 4: MXD Methodology

Date: February 14, 2024

Project Name: Radford Studio Center Project

Project Scenario: Max LU Exchange Secnario 2

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

MXD Methodology - Project Without TDM

	Unadjusted Trips	MXD Adjustment	MXD Trips	Average Trip Length	Unadjusted VMT	MXD VMT
Home Based Work Production	0	0.0%	0	10.1	0	0
Home Based Other Production	0	0.0%	0	6.7	0	0
Non-Home Based Other Production	2,442	-2.1%	2,390	7.7	18,803	18,403
Home-Based Work Attraction	8,722	-11.0%	7,760	7.3	63,671	56,648
Home-Based Other Attraction	5,022	-15.4%	4,249	5.4	27,119	22,945
Non-Home Based Other Attraction	2,442	-2.1%	2,390	6.0	14,652	14,340

MXD Methodology with TDM Measures

	Proposed Project			Project with Mitigation Measures		
	TDM Adjustment	Project Trips	Project VMT	TDM Adjustment	Mitigated Trips	Mitigated VMT
Home Based Work Production	-4.6%	0	0	-4.6%	0	0
Home Based Other Production	-4.6%	0	0	-4.6%	0	0
Non-Home Based Other Production	-4.6%	2,280	17,556	-4.6%	2,280	17,556
Home-Based Work Attraction	-4.6%	7,403	54,042	-4.6%	7,403	54,042
Home-Based Other Attraction	-4.6%	4,054	21,890	-4.6%	4,054	21,890
Non-Home Based Other Attraction	-4.6%	2,280	13,680	-4.6%	2,280	13,680

MXD VMT Methodology Per Capita & Per Employee

Total Population: 0

Total Employees: 7,930

APC: South Valley

	Proposed Project	Project with Mitigation Measures
Total Home Based Production VMT	0	0
Total Home Based Work Attraction VMT	54,042	54,042
Total Home Based VMT Per Capita	0.0	0.0
Total Work Based VMT Per Employee	6.8	6.8

CITY OF LOS ANGELES VMT CALCULATOR Version 1.4



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

Project Information

Project: Radford Studio Center Project
 Scenario: Max LU Exchange Secnario 3
 Address: 4200 N RADFORD AVE, 91604



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

☒ Yes ☐ No

Existing Land Use

Land Use Type	Value	Unit
Office General Office	285	ksf
(custom) Studio, Production & Office Daily	8622	Trips
(custom) Studio, Production & Office HBW-At	52	Percent
(custom) Studio, Production & Office HBO-At	24	Percent
(custom) Studio, Production & Office NHB-Att	12	Percent
(custom) Studio, Production & Office HBW-Pr	0	Percent
(custom) Studio, Production & Office HBO-Pr	0	Percent
(custom) Studio, Production & Office NHB-Pr	12	Percent
(custom) Studio, Production & Office Daily	0	Residents
(custom) Studio, Production & Office Daily	4781	Employees
(custom) Studio, Production & Office Daily	Non-Retai	Retail/Non-R

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

Proposed Project Land Use

Land Use Type	Value	Unit
Office General Office		ksf
Retail High-Turnover Sit-Down Restaurant	25	ksf
Office General Office	0.001	ksf
(custom) Studio, Production & Office Daily	16551	Trips
(custom) Studio, Production & Office HBW-At	52	Percent
(custom) Studio, Production & Office HBO-At	24	Percent
(custom) Studio, Production & Office NHB-Att	12	Percent
(custom) Studio, Production & Office HBW-Pr	0	Percent
(custom) Studio, Production & Office HBO-Pr	0	Percent
(custom) Studio, Production & Office NHB-Pr	12	Percent
(custom) Studio, Production & Office Daily	0	Residents
(custom) Studio, Production & Office Daily	9020	Employees
(custom) Studio, Production & Office Daily	Non-Retai	Retail/Non-R

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

Project Screening Summary

Existing Land Use	Proposed Project
7,783 Daily Vehicle Trips	16,841 Daily Vehicle Trips
52,567 Daily VMT	112,688 Daily VMT

Tier 1 Screening Criteria

Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station. ☐

Tier 2 Screening Criteria

The net increase in daily trips < 250 trips **9,058**
Net Daily Trips

The net increase in daily VMT ≤ 0 **60,121**
Net Daily VMT

The proposed project consists of only retail land uses ≤ 50,000 square feet total. **25,000**
ksf

The proposed project is required to perform VMT analysis.

CITY OF LOS ANGELES VMT CALCULATOR Version 1.4



Project Information

Project: Radford Studio Center Project
Scenario: Max LU Exchange Secnario 3
Address: 4200 N RADFORD AVE, 91604



TDM Strategies

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

	Proposed Project	With Mitigation
Max Home Based TDM Achieved?	No	No
Max Work Based TDM Achieved?	No	No
A Parking		
B Transit		
C Education & Encouragement		
Voluntary Travel Behavior Change Program <input type="text" value="100"/> percent of employees and residents participating <input type="checkbox"/> Proposed Prj <input type="checkbox"/> Mitigation		
Promotions & Marketing <input type="text" value="100"/> percent of employees and residents participating <input checked="" type="checkbox"/> Proposed Prj <input type="checkbox"/> Mitigation		
D Commute Trip Reductions		
E Shared Mobility		
F Bicycle Infrastructure		
G Neighborhood Enhancement		

Analysis Results

Proposed Project	With Mitigation
16,067 Daily Vehicle Trips	16,067 Daily Vehicle Trips
107,504 Daily VMT	107,504 Daily VMT
0.0 Household VMT per Capita	0.0 Household VMT per Capita
5.9 Work VMT per Employee	5.9 Work VMT per Employee

Significant VMT Impact?

Household: No Threshold = 9.4 15% Below APC	Household: No Threshold = 9.4 15% Below APC
Work: No Threshold = 11.6 15% Below APC	Work: No Threshold = 11.6 15% Below APC

Proposed Project Land Use Type	Value	Unit
Retail High-Turnover Sit-Down Restaurant	25	ksf
Office General Office	0.001	ksf
(custom) Studio, Production & Office Daily	16551	Trips
(custom) Studio, Production & Office HBW-At	52	Percent
(custom) Studio, Production & Office HBO-Att	24	Percent
(custom) Studio, Production & Office NHB-Att	12	Percent
(custom) Studio, Production & Office HBW-Pr	0	Percent
(custom) Studio, Production & Office HBO-Pr	0	Percent
(custom) Studio, Production & Office NHB-Pr	12	Percent
(custom) Studio, Production & Office Daily	0	Residents
(custom) Studio, Production & Office Daily	9020	Employees
(custom) Studio, Production & Office Daily	Non-Retail	Retail/Non-Retail

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: February 14, 2024

Project Name: Radford Studio Center Project

Project Scenario: Max LU Exchange Secnario 3

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

Project Information			
Land Use Type		Value	Units
Housing	Single Family	0	DU
	Multi Family	0	DU
	Townhouse	0	DU
	Hotel	0	Rooms
	Motel	0	Rooms
Affordable Housing	Family	0	DU
	Senior	0	DU
	Special Needs	0	DU
	Permanent Supportive	0	DU
Retail	General Retail	0.000	ksf
	Furniture Store	0.000	ksf
	Pharmacy/Drugstore	0.000	ksf
	Supermarket	0.000	ksf
	Bank	0.000	ksf
	Health Club	0.000	ksf
	High-Turnover Sit-Down Restaurant	25.000	ksf
	Fast-Food Restaurant	0.000	ksf
	Quality Restaurant	0.000	ksf
	Auto Repair	0.000	ksf
	Home Improvement	0.000	ksf
	Free-Standing Discount	0.000	ksf
	Movie Theater	0	Seats
Office	General Office	0.001	ksf
	Medical Office	0.000	ksf
Industrial	Light Industrial	0.000	ksf
	Manufacturing	0.000	ksf
	Warehousing/Self-Storage	0.000	ksf
School	University	0	Students
	High School	0	Students
	Middle School	0	Students
	Elementary	0	Students
	Private School (K-12)	0	Students
Other	Studio, Production & Office	16551	Trips

Project and Analysis Overview

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: February 14, 2024

Project Name: Radford Studio Center Project

Project Scenario: Max LU Exchange Secnario 3

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

Analysis Results			
Total Employees: 9,120			
Total Population: 0			
Proposed Project		With Mitigation	
16,067	Daily Vehicle Trips	16,067	Daily Vehicle Trips
107,504	Daily VMT	107,504	Daily VMT
0	Household VMT per Capita	0	Household VMT per Capita
5.9	Work VMT per Employee	5.9	Work VMT per Employee
Significant VMT Impact?			
APC: South Valley			
Impact Threshold: 15% Below APC Average			
Household = 9.4			
Work = 11.6			
Proposed Project		With Mitigation	
VMT Threshold	Impact	VMT Threshold	Impact
Household > 9.4	No	Household > 9.4	No
Work > 11.6	No	Work > 11.6	No

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: February 14, 2024

Project Name: Radford Studio Center Project

Project Scenario: Max LU Exchange Secnario 3

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: February 14, 2024

Project Name: Radford Studio Center Project

Project Scenario: Max LU Exchange Secnario 3

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

TDM Strategy Inputs, Cont.				
Strategy Type		Description	Proposed Project	Mitigations
Transit	Reduce transit headways	Reduction in headways (increase in frequency) (%)	0%	0%
		Existing transit mode share (as a percent of total daily trips) (%)	0%	0%
		Lines within project site improved (<50%, >=50%)	0	0
	Implement neighborhood shuttle	Degree of implementation (low, medium, high)	0	0
		Employees and residents eligible (%)	0%	0%
	Transit subsidies	Employees and residents eligible (%)	0%	0%
		Amount of transit subsidy per passenger (daily equivalent) (\$)	\$0.00	\$0.00
Education & Encouragement	Voluntary travel behavior change program	Employees and residents participating (%)	0%	0%
	Promotions and marketing	Employees and residents participating (%)	100%	100%
(cont. on following page)				

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: February 14, 2024

Project Name: Radford Studio Center Project

Project Scenario: Max LU Exchange Secnario 3

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: February 14, 2024

Project Name: Radford Studio Center Project

Project Scenario: Max LU Exchange Secnario 3

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 3: TDM Outputs

Date: February 14, 2024
 Project Name: Radford Studio Center Project
 Project Scenario: Max LU Exchange Scenario 3
 Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

TDM Adjustments by Trip Purpose & Strategy														
Place type: Compact Infill														
Parking	Reduce parking supply	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Unbundle parking	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Parking cash-out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Price workplace parking	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Transit	Residential area parking	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Reduce transit headways	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Implement neighborhood shuttle	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Transit subsidies	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Education & Encouragement	Voluntary travel behavior change program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Promotions and marketing	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	0%
Commute Trip Reductions	Required commute trip reduction program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Alternative Work Schedules and Telecommute Program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Employer sponsored vanpool or shuttle	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Ride-share program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Shared Mobility	Car-share	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Bike share	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	School carpool program	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TDM Strategy sections 1 - 5 Appendix, Parking	Reduce parking supply	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Unbundle parking	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Parking cash-out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Price workplace parking	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
TDM Strategy sections 1 - 3 Appendix, Transit	Reduce transit headways	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Implement neighborhood shuttle	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Transit subsidies	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Voluntary travel behavior change program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
TDM Strategy sections 1 - 2 Appendix, Education & Encouragement	Promotions and marketing	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	0%
	Required commute trip reduction program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
TDM Strategy sections 1 - 4 Appendix, Commute Trip Reductions	Required commute trip reduction program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Alternative Work Schedules and Telecommute Program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Employer sponsored vanpool or shuttle	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Ride-share program	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
TDM Strategy sections 1 - 3 Appendix, Shared Mobility	Car-share	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Bike share	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	School carpool program	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

TDM Adjustments by Trip Purpose & Strategy, Cont.															
Place type: Compact Infill															
		Home Based Work				Home Based Other				Home Based Other				Non-Home Based Other	
		Attraction				Production				Attraction				Production	
		Proposed				Mitigated				Proposed				Mitigated	
		0.0%				0.0%				0.0%				0.0%	
		0.6%				0.6%				0.6%				0.6%	
		0.0%				0.0%				0.0%				0.0%	
		Implement/improve on-street bicycle facility				Include Bike parking per LAMC				Include secure bike parking and showers				Traffic calming improvements	
		0.0%				0.0%				0.0%				0.0%	
		0.6%				0.6%				0.6%				0.0%	
		0.0%				0.0%				0.0%				0.0%	
		Bicycle Infrastructure				Neighborhood Enhancement				Neighborhood Enhancement				Neighborhood Enhancement	

[illegible]

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

$\text{where } X =$

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

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 4: MXD Methodology

Date: February 14, 2024

Project Name: Radford Studio Center Project

Project Scenario: Max LU Exchange Secnario 3

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

MXD Methodology - Project Without TDM

	Unadjusted Trips	MXD Adjustment	MXD Trips	Average Trip Length	Unadjusted VMT	MXD VMT
Home Based Work Production	0	0.0%	0	10.1	0	0
Home Based Other Production	0	0.0%	0	6.7	0	0
Non-Home Based Other Production	2,449	-2.1%	2,397	7.7	18,857	18,457
Home-Based Work Attraction	8,752	-11.0%	7,787	7.3	63,890	56,845
Home-Based Other Attraction	5,035	-15.4%	4,260	5.4	27,189	23,004
Non-Home Based Other Attraction	2,449	-2.1%	2,397	6.0	14,694	14,382

MXD Methodology with TDM Measures

	Proposed Project			Project with Mitigation Measures		
	TDM Adjustment	Project Trips	Project VMT	TDM Adjustment	Mitigated Trips	Mitigated VMT
Home Based Work Production	-4.6%	0	0	-4.6%	0	0
Home Based Other Production	-4.6%	0	0	-4.6%	0	0
Non-Home Based Other Production	-4.6%	2,287	17,608	-4.6%	2,287	17,608
Home-Based Work Attraction	-4.6%	7,429	54,230	-4.6%	7,429	54,230
Home-Based Other Attraction	-4.6%	4,064	21,946	-4.6%	4,064	21,946
Non-Home Based Other Attraction	-4.6%	2,287	13,720	-4.6%	2,287	13,720

MXD VMT Methodology Per Capita & Per Employee

Total Population: 0

Total Employees: 9,120

APC: South Valley

	Proposed Project	Project with Mitigation Measures
Total Home Based Production VMT	0	0
Total Home Based Work Attraction VMT	54,230	54,230
Total Home Based VMT Per Capita	0.0	0.0
Total Work Based VMT Per Employee	5.9	5.9

CITY OF LOS ANGELES VMT CALCULATOR Version 1.4



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

Project Information

Project: Radford Studio Center Project
 Scenario: Max LU Exchange Secnario 4
 Address: 4200 N RADFORD AVE, 91604



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

☒ Yes ☐ No

Existing Land Use

Land Use Type	Value	Unit
Office General Office	285	ksf
(custom) Studio, Production & Office Daily	8622	Trips
(custom) Studio, Production & Office HBW-At	52	Percent
(custom) Studio, Production & Office HBO-At	24	Percent
(custom) Studio, Production & Office NHB-At	12	Percent
(custom) Studio, Production & Office HBW-Pr	0	Percent
(custom) Studio, Production & Office HBO-Pr	0	Percent
(custom) Studio, Production & Office NHB-Pr	12	Percent
(custom) Studio, Production & Office Daily	0	Residents
(custom) Studio, Production & Office Daily	4781	Employees
(custom) Studio, Production & Office Daily	Non-Retail	Retail/Non-R

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

Proposed Project Land Use

Land Use Type	Value	Unit
Office General Office		ksf
Retail High-Turnover Sit-Down Restaurant	25	ksf
Office General Office	0.001	ksf
(custom) Studio, Production & Office Daily	15551	Trips
(custom) Studio, Production & Office HBW-At	52	Percent
(custom) Studio, Production & Office HBO-At	24	Percent
(custom) Studio, Production & Office NHB-At	12	Percent
(custom) Studio, Production & Office HBW-Pr	0	Percent
(custom) Studio, Production & Office HBO-Pr	0	Percent
(custom) Studio, Production & Office NHB-Pr	12	Percent
(custom) Studio, Production & Office Daily	0	Residents
(custom) Studio, Production & Office Daily	8270	Employees
(custom) Studio, Production & Office Daily	Non-Retail	Retail/Non-R

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

Project Screening Summary

Existing Land Use	Proposed Project
7,783 Daily Vehicle Trips	15,938 Daily Vehicle Trips
52,567 Daily VMT	106,589 Daily VMT

Tier 1 Screening Criteria

Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station. ☐

Tier 2 Screening Criteria

The net increase in daily trips < 250 trips **8,155**
Net Daily Trips

The net increase in daily VMT ≤ 0 **54,022**
Net Daily VMT

The proposed project consists of only retail land uses ≤ 50,000 square feet total. **25,000**
ksf

The proposed project is required to perform VMT analysis.

CITY OF LOS ANGELES VMT CALCULATOR Version 1.4



Project Information

Project: Radford Studio Center Project
Scenario: Max LU Exchange Secnario 4
Address: 4200 N RADFORD AVE, 91604



TDM Strategies

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

	Proposed Project	With Mitigation
Max Home Based TDM Achieved?	No	No
Max Work Based TDM Achieved?	No	No

A	Parking
B	Transit
C	Education & Encouragement
Voluntary Travel Behavior Change Program <input type="text" value="100"/> percent of employees and residents participating <input type="checkbox"/> Proposed Prj <input type="checkbox"/> Mitigation	
Promotions & Marketing <input checked="" type="checkbox"/> Proposed Prj <input type="checkbox"/> Mitigation <input type="text" value="100"/> percent of employees and residents participating	
D	Commute Trip Reductions
E	Shared Mobility
F	Bicycle Infrastructure
G	Neighborhood Enhancement

Analysis Results

Proposed Project	With Mitigation
15,205 Daily Vehicle Trips	15,205 Daily Vehicle Trips
101,687 Daily VMT	101,687 Daily VMT
0.0 Household VMT per Capita	0.0 Household VMT per Capita
6.1 Work VMT per Employee	6.1 Work VMT per Employee

Significant VMT Impact?

Household: No Threshold = 9.4 15% Below APC	Household: No Threshold = 9.4 15% Below APC
Work: No Threshold = 11.6 15% Below APC	Work: No Threshold = 11.6 15% Below APC

Proposed Project Land Use Type	Value	Unit
Retail High-Turnover Sit-Down Restaurant	25	ksf
Office General Office	0.001	ksf
(custom) Studio, Production & Office Daily	15551	Trips
(custom) Studio, Production & Office HBW-At	52	Percent
(custom) Studio, Production & Office HBO-Att	24	Percent
(custom) Studio, Production & Office NHB-Att	12	Percent
(custom) Studio, Production & Office HBW-Pr	0	Percent
(custom) Studio, Production & Office HBO-Pr	0	Percent
(custom) Studio, Production & Office NHB-Pr	12	Percent
(custom) Studio, Production & Office Daily	0	Residents
(custom) Studio, Production & Office Daily	8270	Employees
(custom) Studio, Production & Office Daily	Non-Retail	Retail/Non-Retail

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: February 14, 2024

Project Name: Radford Studio Center Project

Project Scenario: Max LU Exchange Secnario 4

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

Project Information			
Land Use Type		Value	Units
Housing	Single Family	0	DU
	Multi Family	0	DU
	Townhouse	0	DU
	Hotel	0	Rooms
	Motel	0	Rooms
Affordable Housing	Family	0	DU
	Senior	0	DU
	Special Needs	0	DU
	Permanent Supportive	0	DU
Retail	General Retail	0.000	ksf
	Furniture Store	0.000	ksf
	Pharmacy/Drugstore	0.000	ksf
	Supermarket	0.000	ksf
	Bank	0.000	ksf
	Health Club	0.000	ksf
	High-Turnover Sit-Down Restaurant	25.000	ksf
	Fast-Food Restaurant	0.000	ksf
	Quality Restaurant	0.000	ksf
	Auto Repair	0.000	ksf
	Home Improvement	0.000	ksf
	Free-Standing Discount	0.000	ksf
	Movie Theater	0	Seats
Office	General Office	0.001	ksf
	Medical Office	0.000	ksf
Industrial	Light Industrial	0.000	ksf
	Manufacturing	0.000	ksf
	Warehousing/Self-Storage	0.000	ksf
School	University	0	Students
	High School	0	Students
	Middle School	0	Students
	Elementary	0	Students
	Private School (K-12)	0	Students
Other	Studio, Production & Office	15551	Trips

Project and Analysis Overview

CITY OF LOS ANGELES VMT CALCULATOR

Report 1: Project & Analysis Overview

Date: February 14, 2024

Project Name: Radford Studio Center Project

Project Scenario: Max LU Exchange Secnario 4

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

Analysis Results			
Total Employees: 8,370			
Total Population: 0			
Proposed Project		With Mitigation	
15,205	Daily Vehicle Trips	15,205	Daily Vehicle Trips
101,687	Daily VMT	101,687	Daily VMT
0	Household VMT per Capita	0	Household VMT per Capita
6.1	Work VMT per Employee	6.1	Work VMT per Employee
Significant VMT Impact?			
APC: South Valley			
Impact Threshold: 15% Below APC Average			
Household = 9.4			
Work = 11.6			
Proposed Project		With Mitigation	
VMT Threshold	Impact	VMT Threshold	Impact
Household > 9.4	No	Household > 9.4	No
Work > 11.6	No	Work > 11.6	No

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: February 14, 2024

Project Name: Radford Studio Center Project

Project Scenario: Max LU Exchange Secnario 4

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: February 14, 2024

Project Name: Radford Studio Center Project

Project Scenario: Max LU Exchange Secnario 4

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

TDM Strategy Inputs, Cont.				
Strategy Type		Description	Proposed Project	Mitigations
Transit	Reduce transit headways	Reduction in headways (increase in frequency) (%)	0%	0%
		Existing transit mode share (as a percent of total daily trips) (%)	0%	0%
		Lines within project site improved (<50%, >=50%)	0	0
	Implement neighborhood shuttle	Degree of implementation (low, medium, high)	0	0
		Employees and residents eligible (%)	0%	0%
	Transit subsidies	Employees and residents eligible (%)	0%	0%
		Amount of transit subsidy per passenger (daily equivalent) (\$)	\$0.00	\$0.00
Education & Encouragement	Voluntary travel behavior change program	Employees and residents participating (%)	0%	0%
	Promotions and marketing	Employees and residents participating (%)	100%	100%
(cont. on following page)				

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: February 14, 2024

Project Name: Radford Studio Center Project

Project Scenario: Max LU Exchange Secnario 4

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 2: TDM Inputs

Date: February 14, 2024

Project Name: Radford Studio Center Project

Project Scenario: Max LU Exchange Secnario 4

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

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

TDM Adjustments by Trip Purpose & Strategy

Place type: Compact Infill

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

CITY OF LOS ANGELES VMT CALCULATOR

Report 4: MXD Methodology

Date: February 14, 2024

Project Name: Radford Studio Center Project

Project Scenario: Max LU Exchange Secnario 4

Project Address: 4200 N RADFORD AVE, 91604



Version 1.4

MXD Methodology - Project Without TDM

	Unadjusted Trips	MXD Adjustment	MXD Trips	Average Trip Length	Unadjusted VMT	MXD VMT
Home Based Work Production	0	0.0%	0	10.1	0	0
Home Based Other Production	0	0.0%	0	6.7	0	0
Non-Home Based Other Production	2,329	-2.1%	2,279	7.7	17,933	17,548
Home-Based Work Attraction	8,232	-11.0%	7,324	7.3	60,094	53,465
Home-Based Other Attraction	4,795	-15.4%	4,056	5.4	25,893	21,902
Non-Home Based Other Attraction	2,329	-2.1%	2,279	6.0	13,974	13,674

MXD Methodology with TDM Measures

	Proposed Project			Project with Mitigation Measures		
	TDM Adjustment	Project Trips	Project VMT	TDM Adjustment	Mitigated Trips	Mitigated VMT
Home Based Work Production	-4.6%	0	0	-4.6%	0	0
Home Based Other Production	-4.6%	0	0	-4.6%	0	0
Non-Home Based Other Production	-4.6%	2,174	16,741	-4.6%	2,174	16,741
Home-Based Work Attraction	-4.6%	6,987	51,006	-4.6%	6,987	51,006
Home-Based Other Attraction	-4.6%	3,870	20,895	-4.6%	3,870	20,895
Non-Home Based Other Attraction	-4.6%	2,174	13,045	-4.6%	2,174	13,045

MXD VMT Methodology Per Capita & Per Employee

Total Population: 0

Total Employees: 8,370

APC: South Valley

	Proposed Project	Project with Mitigation Measures
Total Home Based Production VMT	0	0
Total Home Based Work Attraction VMT	51,006	51,006
Total Home Based VMT Per Capita	0.0	0.0
Total Work Based VMT Per Employee	6.1	6.1

Appendix E

Freeway Safety Analysis Worksheets

HCM 6th Signalized Intersection Summary

6: Laurel Canyon Boulevard & US 101 Northbound Ramps

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰	↰	↰	↰			↰	↰
Traffic Volume (veh/h)	0	0	0	424	2	246	446	587	0	0	1308	363
Future Volume (veh/h)	0	0	0	424	2	246	446	587	0	0	1308	363
Initial Q (Qb), veh				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
Parking Bus, Adj				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		
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				545	0	179	485	638	0	0	1422	395
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				664	0	295	560	2493	0	0	2454	762
Arrive On Green				0.19	0.00	0.19	0.32	1.00	0.00	0.00	0.48	0.48
Sat Flow, veh/h				3563	0	1585	3456	3647	0	0	5274	1585
Grp Volume(v), veh/h				545	0	179	485	638	0	0	1422	395
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	0	1702	1585
Q Serve(g_s), s				13.2	0.0	9.3	11.9	0.0	0.0	0.0	18.0	15.5
Cycle Q Clear(g_c), s				13.2	0.0	9.3	11.9	0.0	0.0	0.0	18.0	15.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				664	0	295	560	2493	0	0	2454	762
V/C Ratio(X)				0.82	0.00	0.61	0.87	0.26	0.00	0.00	0.58	0.52
Avail Cap(c_a), veh/h				859	0	382	680	2493	0	0	2454	762
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.91	0.91	0.00	0.00	0.39	0.39
Uniform Delay (d), s/veh				35.2	0.0	33.6	29.5	0.0	0.0	0.0	16.8	16.2
Incr Delay (d2), s/veh				5.0	0.0	2.0	9.1	0.2	0.0	0.0	0.4	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
%ile BackOfQ(95%),veh/ln				9.8	0.0	6.4	8.0	0.1	0.0	0.0	9.2	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				40.2	0.0	35.6	38.6	0.2	0.0	0.0	17.2	17.2
LnGrp LOS				D	A	D	D	A	A	A	B	B
Approach Vol, veh/h					724			1123			1817	
Approach Delay, s/veh					39.0			16.8			17.2	
Approach LOS					D			B			B	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	19.9	48.1		22.1		67.9						
Change Period (Y+Rc), s	5.3	4.8		* 5.3		4.8						
Max Green Setting (Gmax), s	18	35.2		* 22		58.2						
Max Q Clear Time (g_c+M3), s	20.0			15.2		2.0						
Green Ext Time (p_c), s	0.7	9.8		1.5		4.9						

Intersection Summary

HCM 6th Ctrl Delay	21.4
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.









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

HCM 6th Signalized Intersection Summary

7: US 101 Southbound Ramps & Laurel Canyon Boulevard

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	11	351	0	0	0	0	892	533	518	1219	0
Future Volume (veh/h)	156	11	351	0	0	0	0	892	533	518	1219	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	117	0	446				0	970	579	563	1325	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	306	0	545				0	2057	638	878	2536	0
Arrive On Green	0.17	0.00	0.17				0.00	0.40	0.40	0.51	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	5274	1585	3456	3647	0
Grp Volume(v), veh/h	117	0	446				0	970	579	563	1325	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1702	1585	1728	1777	0
Q Serve(g_s), s	5.2	0.0	12.2				0.0	12.6	30.9	10.7	0.0	0.0
Cycle Q Clear(g_c), s	5.2	0.0	12.2				0.0	12.6	30.9	10.7	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	306	0	545				0	2057	638	878	2536	0
V/C Ratio(X)	0.38	0.00	0.82				0.00	0.47	0.91	0.64	0.52	0.00
Avail Cap(c_a), veh/h	416	0	740				0	2139	664	878	2536	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	1.00	0.71	0.71	0.00
Uniform Delay (d), s/veh	33.0	0.0	35.9				0.0	19.8	25.3	19.1	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	5.3				0.0	0.8	18.9	1.1	0.5	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
%ile BackOfQ(95%),veh/ln	0.0	0.0	8.5				0.0	8.5	20.3	5.9	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.8	0.0	41.2				0.0	20.6	44.2	20.3	0.5	0.0
LnGrp LOS	C	A	D				A	C	D	C	A	A
Approach Vol, veh/h	563						1549			1888		
Approach Delay, s/veh	39.7						29.4			6.4		
Approach LOS	D						C			A		
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	38.0	41.3	20.7	69.3								
Change Period (Y+Rc), s	* 5.1	* 5.1	* 5.2	* 5.1								
Max Green Setting (Gmax), s	* 16	* 38	* 21	* 59								
Max Q Clear Time (g_c+M2), s	32.9	32.9	14.2	2.0								
Green Ext Time (p_c), s	0.8	3.3	1.3	14.1								

Intersection Summary

HCM 6th Ctrl Delay	20.0
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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

Queues

4: Riverside Drive & SR 170 Southbound Off-Ramp

06/21/2024



Lane Group	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	867	9	750	30	203	194	185
v/c Ratio	0.43	0.03	0.37	0.11	0.63	0.57	0.42
Control Delay	11.6	13.2	14.3	0.8	34.7	24.7	7.3
Queue Delay	0.8	0.0	0.5	0.2	0.8	0.9	0.0
Total Delay	12.4	13.2	14.8	1.0	35.5	25.6	7.3
Queue Length 50th (ft)	81	4	162	0	83	58	0
Queue Length 95th (ft)	202	m8	214	0	146	120	48
Internal Link Dist (ft)	2214		245	105		344	
Turn Bay Length (ft)		25			140		150
Base Capacity (vph)	2033	287	2033	269	387	397	489
Starvation Cap Reductn	0	0	792	0	0	0	0
Spillback Cap Reductn	800	0	0	64	48	60	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.03	0.60	0.15	0.60	0.58	0.38




















Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: Riverside Drive & SR 170 Southbound Off-Ramp


06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	796	2	8	690	0	7	0	20	279	6	250
Future Volume (vph)	0	796	2	8	690	0	7	0	20	279	6	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Lane Util. Factor		0.95		1.00	0.95			1.00		0.95	0.91	0.95
Frt		1.00		1.00	1.00			0.90		1.00	0.93	0.85
Flt Protected		1.00		0.95	1.00			0.99		0.95	0.97	1.00
Satd. Flow (prot)		3538		1770	3539			1656		1681	1541	1504
Flt Permitted		1.00		0.27	1.00			0.84		0.95	0.97	1.00
Satd. Flow (perm)		3538		500	3539			1408		1681	1541	1504
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)	0	865	2	9	750	0	8	0	22	303	7	272
RTOR Reduction (vph)	0	0	0	0	0	0	0	29	0	0	44	150
Lane Group Flow (vph)	0	867	0	9	750	0	0	1	0	203	150	35
Turn Type		NA		Perm	NA		Perm	NA		Split	NA	Perm
Protected Phases		6			2			4		3	3	
Permitted Phases				2			4					3
Actuated Green, G (s)		36.4		36.4	36.4			3.2		13.4	13.4	13.4
Effective Green, g (s)		36.4		36.4	36.4			3.2		13.4	13.4	13.4
Actuated g/C Ratio		0.52		0.52	0.52			0.05		0.19	0.19	0.19
Clearance Time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Vehicle Extension (s)		3.8		2.4	2.4			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1839		260	1840			64		321	294	287
v/s Ratio Prot		c0.25			0.21					c0.12	0.10	
v/s Ratio Perm				0.02				c0.00				0.02
v/c Ratio		0.47		0.03	0.41			0.02		0.63	0.51	0.12
Uniform Delay, d1		10.7		8.2	10.2			31.9		26.0	25.4	23.4
Progression Factor		1.00		1.16	1.39			1.00		1.00	1.00	1.00
Incremental Delay, d2		0.9		0.2	0.6			0.1		4.0	1.5	0.2
Delay (s)		11.6		9.7	14.8			32.0		30.1	26.9	23.6
Level of Service		B		A	B			C		C	C	C
Approach Delay (s)		11.6			14.7			32.0			27.0	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			16.9			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.48									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			50.2%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

101: Lankershim Blvd & Driveway Exit/SR134 WB Off Ramp

01/15/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰		↰	↰			↱			↱	
Traffic Volume (veh/h)	0	0	0	492	0	332	0	444	0	0	1409	0
Future Volume (veh/h)	0	0	0	492	0	332	0	444	0	0	1409	0
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		0.98	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	0	1870	1870	1870	1870	1870	0	1870	0	0	1870	0
Adj Flow Rate, veh/h	0	0	0	535	0	361	0	483	0	0	1532	0
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, %	0	2	2	2	2	2	0	2	0	0	2	0
Cap, veh/h	0	606	0	698	0	503	0	1845	0	0	1845	0
Arrive On Green	0.00	0.00	0.00	0.32	0.00	0.32	0.00	0.52	0.00	0.00	0.52	0.00
Sat Flow, veh/h	0	1870	0	1781	0	1551	0	3741	0	0	3741	0
Grp Volume(v), veh/h	0	0	0	535	0	361	0	483	0	0	1532	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1781	0	1551	0	1777	0	0	1777	0
Q Serve(g_s), s	0.0	0.0	0.0	17.4	0.0	12.3	0.0	4.5	0.0	0.0	21.9	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	17.4	0.0	12.3	0.0	4.5	0.0	0.0	21.9	0.0
Prop In Lane	0.00		0.00	1.00		1.00	0.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	606	0	698	0	503	0	1845	0	0	1845	0
V/C Ratio(X)	0.00	0.00	0.00	0.77	0.00	0.72	0.00	0.26	0.00	0.00	0.83	0.00
Avail Cap(c_a), veh/h	0	608	0	699	0	504	0	1845	0	0	1845	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)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.96	0.00	0.00	0.09	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	19.6	0.0	17.9	0.0	8.0	0.0	0.0	12.2	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	5.1	0.0	4.9	0.0	0.3	0.0	0.0	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(95%),veh/ln	0.0	0.0	0.0	11.9	0.0	8.1	0.0	2.6	0.0	0.0	8.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	24.7	0.0	22.7	0.0	8.4	0.0	0.0	12.6	0.0
LnGrp LOS	A	A	A	C	A	C	A	A	A	A	B	A
Approach Vol, veh/h		0			896			483			1532	
Approach Delay, s/veh		0.0			23.9			8.4			12.6	
Approach LOS					C			A			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		24.0		36.0		24.0				
Change Period (Y+Rc), s		4.9		4.5		4.9		4.5				
Max Green Setting (Gmax), s		31.1		19.5		31.1		19.5				
Max Q Clear Time (g_c+I1), s		6.5		19.4		23.9		0.0				
Green Ext Time (p_c), s		3.2		0.0		5.4		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				15.4								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary

6: Laurel Canyon Boulevard & US 101 Northbound Ramps

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↶	↷	↶	↶	↶			↶	↶
Traffic Volume (veh/h)	0	0	0	495	2	246	470	619	0	0	1424	363
Future Volume (veh/h)	0	0	0	495	2	246	470	619	0	0	1424	363
Initial Q (Qb), veh				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
Parking Bus, Adj				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		
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				622	0	179	511	673	0	0	1548	395
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				732	0	326	583	2425	0	0	2322	721
Arrive On Green				0.21	0.00	0.21	0.34	1.00	0.00	0.00	0.45	0.45
Sat Flow, veh/h				3563	0	1585	3456	3647	0	0	5274	1585
Grp Volume(v), veh/h				622	0	179	511	673	0	0	1548	395
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	0	1702	1585
Q Serve(g_s), s				15.1	0.0	9.1	12.5	0.0	0.0	0.0	21.3	16.3
Cycle Q Clear(g_c), s				15.1	0.0	9.1	12.5	0.0	0.0	0.0	21.3	16.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				732	0	326	583	2425	0	0	2322	721
V/C Ratio(X)				0.85	0.00	0.55	0.88	0.28	0.00	0.00	0.67	0.55
Avail Cap(c_a), veh/h				859	0	382	680	2425	0	0	2322	721
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.89	0.89	0.00	0.00	0.28	0.28
Uniform Delay (d), s/veh				34.4	0.0	32.0	29.0	0.0	0.0	0.0	19.2	17.8
Incr Delay (d2), s/veh				7.1	0.0	1.4	10.1	0.3	0.0	0.0	0.4	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
%ile BackOfQ(95%),veh/ln				11.2	0.0	6.2	8.3	0.2	0.0	0.0	10.3	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				41.6	0.0	33.5	39.1	0.3	0.0	0.0	19.6	18.7
LnGrp LOS				D	A	C	D	A	A	A	B	B
Approach Vol, veh/h					801			1184			1943	
Approach Delay, s/veh					39.7			17.0			19.4	
Approach LOS					D			B			B	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	30.5	45.7		23.8		66.2						
Change Period (Y+Rc), s	5.3	4.8		* 5.3		4.8						
Max Green Setting (Gmax), s	18	35.2		* 22		58.2						
Max Q Clear Time (g_c+M), s	14.5	23.3		17.1		2.0						
Green Ext Time (p_c), s	0.6	8.6		1.4		5.2						

Intersection Summary

HCM 6th Ctrl Delay	22.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.









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

HCM 6th Signalized Intersection Summary

7: US 101 Southbound Ramps & Laurel Canyon Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	11	458	0	0	0	0	948	550	518	1406	0
Future Volume (veh/h)	156	11	458	0	0	0	0	948	550	518	1406	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	117	0	562				0	1030	598	563	1528	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	365	0	649				0	2089	648	743	2419	0
Arrive On Green	0.20	0.00	0.20				0.00	0.41	0.41	0.43	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	5274	1585	3456	3647	0
Grp Volume(v), veh/h	117	0	562				0	1030	598	563	1528	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1702	1585	1728	1777	0
Q Serve(g_s), s	5.0	0.0	15.4				0.0	13.4	32.2	12.4	0.0	0.0
Cycle Q Clear(g_c), s	5.0	0.0	15.4				0.0	13.4	32.2	12.4	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	365	0	649				0	2089	648	743	2419	0
V/C Ratio(X)	0.32	0.00	0.87				0.00	0.49	0.92	0.76	0.63	0.00
Avail Cap(c_a), veh/h	416	0	740				0	2139	664	743	2419	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.62	0.62	0.00
Uniform Delay (d), s/veh	30.5	0.0	34.6				0.0	19.7	25.2	23.7	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	9.6				0.0	0.8	20.7	2.8	0.8	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
%ile BackOfQ(95%),veh/ln	8.8	0.0	10.6				0.0	8.9	21.3	6.7	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.0	0.0	44.2				0.0	20.5	45.9	26.5	0.8	0.0
LnGrp LOS	C	A	D				A	C	D	C	A	A
Approach Vol, veh/h	679						1628			2091		
Approach Delay, s/veh	41.9						29.8			7.7		
Approach LOS	D						C			A		
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	34.5	41.9	23.6	66.4								
Change Period (Y+Rc), s	5.1	* 5.1	* 5.2	* 5.1								
Max Green Setting (Gmax), s	16	* 38	* 21	* 59								
Max Q Clear Time (g_c+M), s	14.5	34.2	17.4	2.0								
Green Ext Time (p_c), s	0.4	2.6	1.0	18.3								

Intersection Summary

HCM 6th Ctrl Delay	21.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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

Queues

4: Riverside Drive & SR 170 Southbound Off-Ramp

06/21/2024



Lane Group	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	867	9	750	30	230	220	209
v/c Ratio	0.44	0.03	0.38	0.11	0.66	0.54	0.44
Control Delay	12.3	13.5	14.6	0.9	34.5	16.5	6.8
Queue Delay	1.0	0.0	0.5	0.2	0.6	0.7	0.0
Total Delay	13.4	13.5	15.1	1.0	35.1	17.2	6.8
Queue Length 50th (ft)	89	3	177	0	92	39	0
Queue Length 95th (ft)	208	m8	215	0	162	104	50
Internal Link Dist (ft)	2214		245	105		344	
Turn Bay Length (ft)		25			140		150
Base Capacity (vph)	1966	272	1966	267	408	456	523
Starvation Cap Reductn	0	0	735	0	0	0	0
Spillback Cap Reductn	785	0	0	62	37	68	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.03	0.61	0.15	0.62	0.57	0.40


Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: Riverside Drive & SR 170 Southbound Off-Ramp

06/21/2024








												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑	↑↑			↑↓		↑	↑↓	↑
Traffic Volume (vph)	0	796	2	8	690	0	7	0	20	279	6	321
Future Volume (vph)	0	796	2	8	690	0	7	0	20	279	6	321
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Lane Util. Factor		0.95		1.00	0.95			1.00		0.95	0.91	0.95
Frt		1.00		1.00	1.00			0.90		1.00	0.90	0.85
Flt Protected		1.00		0.95	1.00			0.99		0.95	0.98	1.00
Satd. Flow (prot)		3538		1770	3539			1656		1681	1508	1504
Flt Permitted		1.00		0.26	1.00			0.83		0.95	0.98	1.00
Satd. Flow (perm)		3538		489	3539			1392		1681	1508	1504
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)	0	865	2	9	750	0	8	0	22	303	7	349
RTOR Reduction (vph)	0	0	0	0	0	0	0	29	0	0	94	165
Lane Group Flow (vph)	0	867	0	9	750	0	0	1	0	230	126	44
Turn Type		NA		Perm	NA		Perm	NA		Split	NA	Perm
Protected Phases		6			2			4		3	3	
Permitted Phases				2			4					3
Actuated Green, G (s)		35.2		35.2	35.2			3.2		14.6	14.6	14.6
Effective Green, g (s)		35.2		35.2	35.2			3.2		14.6	14.6	14.6
Actuated g/C Ratio		0.50		0.50	0.50			0.05		0.21	0.21	0.21
Clearance Time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Vehicle Extension (s)		3.8		2.4	2.4			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1779		245	1779			63		350	314	313
v/s Ratio Prot		c0.25			0.21					c0.14	0.08	
v/s Ratio Perm				0.02				c0.00				0.03
v/c Ratio		0.49		0.04	0.42			0.02		0.66	0.40	0.14
Uniform Delay, d1		11.5		8.8	11.0			31.9		25.4	23.9	22.6
Progression Factor		1.00		1.13	1.33			1.00		1.00	1.00	1.00
Incremental Delay, d2		1.0		0.2	0.6			0.1		4.4	0.8	0.2
Delay (s)		12.4		10.2	15.2			32.0		29.8	24.8	22.8
Level of Service		B		B	B			C		C	C	C
Approach Delay (s)		12.4			15.1			32.0			25.9	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			17.4			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.51									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			53.2%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

7: US 101 Southbound Ramps & Laurel Canyon Boulevard

12/22/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	333	22	527	0	0	0	1	1256	654	274	1188	0
Future Volume (veh/h)	333	22	527	0	0	0	1	1256	654	274	1188	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	249	0	710				1	1365	711	298	1291	0
Peak Hour Factor	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	0
Cap, veh/h	445	0	793				40	2361	754	365	2258	0
Arrive On Green	0.25	0.00	0.25				0.48	0.48	0.48	0.21	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	4966	1585	3456	3647	0
Grp Volume(v), veh/h	249	0	710				514	852	711	298	1291	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				1869	1549	1585	1728	1777	0
Q Serve(g_s), s	11.0	0.0	19.5				0.0	17.9	38.4	7.4	0.0	0.0
Cycle Q Clear(g_c), s	11.0	0.0	19.5				17.9	17.9	38.4	7.4	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	445	0	793				929	1473	754	365	2258	0
V/C Ratio(X)	0.56	0.00	0.90				0.55	0.58	0.94	0.82	0.57	0.00
Avail Cap(c_a), veh/h	471	0	838				929	1473	754	395	2258	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				1.00	1.00	1.00	0.68	0.68	0.00
Uniform Delay (d), s/veh	29.4	0.0	32.6				17.1	17.1	22.4	34.7	0.0	0.0
Incr Delay (d2), s/veh	1.3	0.0	11.8				2.4	1.7	21.6	8.3	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
%ile BackOfQ(95%),veh/ln	8.3	0.0	13.3				12.5	10.5	24.6	5.6	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.7	0.0	44.4				19.4	18.7	44.0	43.0	0.7	0.0
LnGrp LOS	C	A	D				B	B	D	D	A	A
Approach Vol, veh/h	959						2077			1589		
Approach Delay, s/veh	40.9						27.6			8.7		
Approach LOS	D						C			A		
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	44.4	47.9	27.7	62.3								
Change Period (Y+Rc), s	4.9	* 5.1	* 5.2	* 5.1								
Max Green Setting (Gmax), s	40	* 41	* 24	* 56								
Max Q Clear Time (g_c+I19, s)	40.4	40.4	21.5	2.0								
Green Ext Time (p_c), s	0.1	0.3	1.0	14.2								

Intersection Summary

HCM 6th Ctrl Delay	23.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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

HCM 6th Signalized Intersection Summary

6: Laurel Canyon Boulevard & US 101 Northbound Ramps

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰	↰	↰	↰			↰	↰
Traffic Volume (veh/h)	0	0	0	463	2	269	487	639	0	0	1428	397
Future Volume (veh/h)	0	0	0	463	2	269	487	639	0	0	1428	397
Initial Q (Qb), veh				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
Parking Bus, Adj				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		
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				595	0	195	529	695	0	0	1552	432
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				703	0	313	598	2454	0	0	2342	727
Arrive On Green				0.20	0.00	0.20	0.35	1.00	0.00	0.00	0.46	0.46
Sat Flow, veh/h				3563	0	1585	3456	3647	0	0	5274	1585
Grp Volume(v), veh/h				595	0	195	529	695	0	0	1552	432
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	0	1702	1585
Q Serve(g_s), s				14.5	0.0	10.1	13.0	0.0	0.0	0.0	21.3	18.3
Cycle Q Clear(g_c), s				14.5	0.0	10.1	13.0	0.0	0.0	0.0	21.3	18.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				703	0	313	598	2454	0	0	2342	727
V/C Ratio(X)				0.85	0.00	0.62	0.88	0.28	0.00	0.00	0.66	0.59
Avail Cap(c_a), veh/h				819	0	365	680	2454	0	0	2342	727
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.88	0.88	0.00	0.00	0.28	0.28
Uniform Delay (d), s/veh				34.8	0.0	33.1	28.6	0.0	0.0	0.0	19.0	18.1
Incr Delay (d2), s/veh				7.3	0.0	2.5	10.9	0.3	0.0	0.0	0.4	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
%ile BackOfQ(95%),veh/ln				10.8	0.0	7.0	8.6	0.2	0.0	0.0	10.3	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				42.1	0.0	35.6	39.5	0.3	0.0	0.0	19.4	19.1
LnGrp LOS				D	A	D	D	A	A	A	B	B
Approach Vol, veh/h						790		1224			1984	
Approach Delay, s/veh						40.5		17.2			19.3	
Approach LOS						D		B			B	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	30.9	46.1		23.0		67.0						
Change Period (Y+Rc), s	5.3	4.8		* 5.3		4.8						
Max Green Setting (Gmax), s	18	36.2		* 21		59.2						
Max Q Clear Time (g_c+M3), s	11.8	23.3		16.5		2.0						
Green Ext Time (p_c), s	0.6	9.3		1.3		5.4						

Intersection Summary

HCM 6th Ctrl Delay	22.9
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.












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

HCM 6th Signalized Intersection Summary

7: US 101 Southbound Ramps & Laurel Canyon Boulevard

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  		 	 	
Traffic Volume (veh/h)	170	11	384	0	0	0	0	973	581	567	1330	0
Future Volume (veh/h)	170	11	384	0	0	0	0	973	581	567	1330	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	127	0	487				0	1058	632	616	1446	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	328	0	584				0	2129	661	787	2492	0
Arrive On Green	0.18	0.00	0.18				0.00	0.42	0.42	0.46	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	5274	1585	3456	3647	0
Grp Volume(v), veh/h	127	0	487				0	1058	632	616	1446	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1702	1585	1728	1777	0
Q Serve(g_s), s	5.6	0.0	13.3				0.0	13.7	34.8	13.6	0.0	0.0
Cycle Q Clear(g_c), s	5.6	0.0	13.3				0.0	13.7	34.8	13.6	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	328	0	584				0	2129	661	787	2492	0
V/C Ratio(X)	0.39	0.00	0.83				0.00	0.50	0.96	0.78	0.58	0.00
Avail Cap(c_a), veh/h	416	0	740				0	2139	664	787	2492	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.62	0.62	0.00
Uniform Delay (d), s/veh	32.3	0.0	35.4				0.0	19.3	25.4	22.6	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	6.6				0.0	0.8	25.7	3.3	0.6	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
%ile BackOfQ(95%),veh/ln	4.3	0.0	9.2				0.0	9.0	23.5	7.1	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.0	0.0	42.0				0.0	20.1	51.2	25.9	0.6	0.0
LnGrp LOS	C	A	D				A	C	D	C	A	A
Approach Vol, veh/h		614						1690			2062	
Approach Delay, s/veh		40.1						31.7			8.2	
Approach LOS		D						C			A	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	35.6	42.6		21.8		68.2						
Change Period (Y+Rc), s	5.1	* 5.1		* 5.2		* 5.1						
Max Green Setting (Gmax), s	16	* 38		* 21		* 59						
Max Q Clear Time (g_c+M), s	11.6	36.8		15.3		2.0						
Green Ext Time (p_c), s	0.1	0.7		1.2		16.5						

Intersection Summary

HCM 6th Ctrl Delay	21.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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

Queues

4: Riverside Drive & SR 170 Southbound Off-Ramp

06/21/2024



Lane Group	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	947	10	818	33	221	215	200
v/c Ratio	0.48	0.04	0.41	0.12	0.64	0.60	0.43
Control Delay	12.7	14.1	15.2	0.9	33.9	24.9	6.9
Queue Delay	1.9	0.0	0.6	0.3	1.0	1.1	0.0
Total Delay	14.6	14.1	15.8	1.2	34.9	26.0	6.9
Queue Length 50th (ft)	98	3	226	0	89	64	0
Queue Length 95th (ft)	233	m9	m245	0	155	131	48
Internal Link Dist (ft)	2214		245	105		344	
Turn Bay Length (ft)		25			140		150
Base Capacity (vph)	1976	240	1976	267	408	417	516
Starvation Cap Reductn	0	0	723	0	0	0	0
Spillback Cap Reductn	826	0	0	77	58	70	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.04	0.65	0.17	0.63	0.62	0.39


Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: Riverside Drive & SR 170 Southbound Off-Ramp


06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑	↑↑			↑↓		↑	↑↓	↑
Traffic Volume (vph)	0	869	2	9	753	0	8	0	22	304	7	274
Future Volume (vph)	0	869	2	9	753	0	8	0	22	304	7	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Lane Util. Factor		0.95		1.00	0.95			1.00		0.95	0.91	0.95
Frt		1.00		1.00	1.00			0.90		1.00	0.93	0.85
Flt Protected		1.00		0.95	1.00			0.99		0.95	0.98	1.00
Satd. Flow (prot)		3538		1770	3539			1657		1681	1540	1504
Flt Permitted		1.00		0.23	1.00			0.83		0.95	0.98	1.00
Satd. Flow (perm)		3538		430	3539			1391		1681	1540	1504
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)	0	945	2	10	818	0	9	0	24	330	8	298
RTOR Reduction (vph)	0	0	0	0	0	0	0	31	0	0	45	159
Lane Group Flow (vph)	0	947	0	10	818	0	0	2	0	221	170	41
Turn Type		NA		Perm	NA		Perm	NA		Split	NA	Perm
Protected Phases		6			2			4		3	3	
Permitted Phases				2			4					3
Actuated Green, G (s)		35.4		35.4	35.4			3.2		14.4	14.4	14.4
Effective Green, g (s)		35.4		35.4	35.4			3.2		14.4	14.4	14.4
Actuated g/C Ratio		0.51		0.51	0.51			0.05		0.21	0.21	0.21
Clearance Time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Vehicle Extension (s)		3.8		2.4	2.4			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1789		217	1789			63		345	316	309
v/s Ratio Prot		c0.27			0.23					c0.13	0.11	
v/s Ratio Perm				0.02				c0.00				0.03
v/c Ratio		0.53		0.05	0.46			0.02		0.64	0.54	0.13
Uniform Delay, d1		11.7		8.8	11.1			31.9		25.4	24.8	22.7
Progression Factor		1.00		1.17	1.36			1.00		1.00	1.00	1.00
Incremental Delay, d2		1.1		0.3	0.7			0.2		4.0	1.8	0.2
Delay (s)		12.8		10.6	15.8			32.1		29.5	26.6	22.9
Level of Service		B		B	B			C		C	C	C
Approach Delay (s)		12.8			15.7			32.1			26.4	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			17.6			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.53									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			53.0%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

101: Lankershim Blvd & Driveway Exit/SR134 WB Off Ramp

01/10/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰		↰	↰			↱↱			↱↱	
Traffic Volume (veh/h)	0	0	0	532	0	367	0	495	0	0	1566	0
Future Volume (veh/h)	0	0	0	532	0	367	0	495	0	0	1566	0
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		0.98	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	0	1870	1870	1870	1870	1870	0	1870	0	0	1870	0
Adj Flow Rate, veh/h	0	0	0	578	0	399	0	538	0	0	1702	0
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, %	0	2	2	2	2	2	0	2	0	0	2	0
Cap, veh/h	0	670	0	758	0	557	0	1723	0	0	1723	0
Arrive On Green	0.00	0.00	0.00	0.36	0.00	0.36	0.00	0.48	0.00	0.00	0.48	0.00
Sat Flow, veh/h	0	1870	0	1781	0	1555	0	3741	0	0	3741	0
Grp Volume(v), veh/h	0	0	0	578	0	399	0	538	0	0	1702	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1781	0	1555	0	1777	0	0	1777	0
Q Serve(g_s), s	0.0	0.0	0.0	18.5	0.0	13.3	0.0	5.5	0.0	0.0	28.4	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	18.5	0.0	13.3	0.0	5.5	0.0	0.0	28.4	0.0
Prop In Lane	0.00		0.00	1.00		1.00	0.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	670	0	758	0	557	0	1723	0	0	1723	0
V/C Ratio(X)	0.00	0.00	0.00	0.76	0.00	0.72	0.00	0.31	0.00	0.00	0.99	0.00
Avail Cap(c_a), veh/h	0	701	0	788	0	583	0	1723	0	0	1723	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)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.96	0.00	0.00	0.09	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	18.3	0.0	16.6	0.0	9.4	0.0	0.0	15.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	4.3	0.0	4.0	0.0	0.5	0.0	0.0	4.3	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(95%),veh/ln	0.0	0.0	0.0	12.1	0.0	8.4	0.0	3.3	0.0	0.0	11.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	22.5	0.0	20.6	0.0	9.8	0.0	0.0	19.5	0.0
LnGrp LOS	A	A	A	C	A	C	A	A	A	A	B	A
Approach Vol, veh/h		0			977			538			1702	
Approach Delay, s/veh		0.0			21.7			9.8			19.5	
Approach LOS					C			A			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		34.0		26.0		34.0		26.0				
Change Period (Y+Rc), s		4.9		4.5		4.9		4.5				
Max Green Setting (Gmax), s		28.1		22.5		28.1		22.5				
Max Q Clear Time (g_c+I1), s		7.5		20.5		30.4		0.0				
Green Ext Time (p_c), s		3.4		1.0		0.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				18.6								
HCM 6th LOS				B								

HCM 6th Signalized Intersection Summary

6: Laurel Canyon Boulevard & US 101 Northbound Ramps

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰	↰	↰	↰			↰	↰
Traffic Volume (veh/h)	0	0	0	534	2	269	511	671	0	0	1544	397
Future Volume (veh/h)	0	0	0	534	2	269	511	671	0	0	1544	397
Initial Q (Qb), veh				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
Parking Bus, Adj				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	0	0	1870	1870
Adj Flow Rate, veh/h				672	0	195	555	729	0	0	1678	432
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				774	0	344	621	2383	0	0	2206	685
Arrive On Green				0.22	0.00	0.22	0.36	1.00	0.00	0.00	0.43	0.43
Sat Flow, veh/h				3563	0	1585	3456	3647	0	0	5274	1585
Grp Volume(v), veh/h				672	0	195	555	729	0	0	1678	432
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	0	1702	1585
Q Serve(g_s), s				16.4	0.0	9.9	13.6	0.0	0.0	0.0	25.0	19.2
Cycle Q Clear(g_c), s				16.4	0.0	9.9	13.6	0.0	0.0	0.0	25.0	19.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				774	0	344	621	2383	0	0	2206	685
V/C Ratio(X)				0.87	0.00	0.57	0.89	0.31	0.00	0.00	0.76	0.63
Avail Cap(c_a), veh/h				859	0	382	687	2383	0	0	2206	685
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.86	0.86	0.00	0.00	0.18	0.18
Uniform Delay (d), s/veh				34.0	0.0	31.4	28.0	0.0	0.0	0.0	21.6	20.0
Incr Delay (d2), s/veh				8.8	0.0	1.6	11.7	0.3	0.0	0.0	0.5	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
%ile BackOfQ(95%),veh/ln				12.1	0.0	6.7	8.8	0.2	0.0	0.0	11.5	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				42.8	0.0	33.0	39.7	0.3	0.0	0.0	22.1	20.8
LnGrp LOS				D	A	C	D	A	A	A	C	C
Approach Vol, veh/h					867			1284			2110	
Approach Delay, s/veh					40.6			17.3			21.8	
Approach LOS					D			B			C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	31.5	43.7		24.8		65.2						
Change Period (Y+Rc), s	5.3	4.8		* 5.3		4.8						
Max Green Setting (Gmax), s	35.0			* 22		58.2						
Max Q Clear Time (g_c+M), s	27.0			18.4		2.0						
Green Ext Time (p_c), s	0.5	6.5		1.2		5.8						

Intersection Summary

HCM 6th Ctrl Delay	24.3
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.












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

HCM 6th Signalized Intersection Summary

7: US 101 Southbound Ramps & Laurel Canyon Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  		 	 	
Traffic Volume (veh/h)	170	11	491	0	0	0	0	1029	598	567	1517	0
Future Volume (veh/h)	170	11	491	0	0	0	0	1029	598	567	1517	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	127	0	604				0	1118	650	616	1649	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	384	0	683				0	2139	664	672	2381	0
Arrive On Green	0.22	0.00	0.22				0.00	0.42	0.42	0.39	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	5274	1585	3456	3647	0
Grp Volume(v), veh/h	127	0	604				0	1118	650	616	1649	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1702	1585	1728	1777	0
Q Serve(g_s), s	5.4	0.0	16.6				0.0	14.7	36.4	15.2	0.0	0.0
Cycle Q Clear(g_c), s	5.4	0.0	16.6				0.0	14.7	36.4	15.2	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	384	0	683				0	2139	664	672	2381	0
V/C Ratio(X)	0.33	0.00	0.88				0.00	0.52	0.98	0.92	0.69	0.00
Avail Cap(c_a), veh/h	416	0	740				0	2139	664	672	2381	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	1.00	0.50	0.50	0.00
Uniform Delay (d), s/veh	29.8	0.0	34.2				0.0	19.5	25.8	26.8	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	11.7				0.0	0.9	30.2	10.1	0.8	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
%ile BackOfQ(95%),veh/ln	0.0	0.0	11.5				0.0	9.5	25.1	8.3	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.3	0.0	45.9				0.0	20.4	55.9	36.9	0.8	0.0
LnGrp LOS	C	A	D				A	C	E	D	A	A
Approach Vol, veh/h	731						1768			2265		
Approach Delay, s/veh	43.2						33.4			10.7		
Approach LOS	D						C			B		
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	32.6	42.8	24.6	65.4								
Change Period (Y+Rc), s	* 5.1	* 5.1	* 5.2	* 5.1								
Max Green Setting (Gmax), s	16	* 38	* 21	* 59								
Max Q Clear Time (g_c+M), s	38.4	38.4	18.6	2.0								
Green Ext Time (p_c), s	0.0	0.0	0.8	21.1								

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 computational engine requires equal clearance times for the phases crossing the barrier.

Queues

4: Riverside Drive & SR 170 Southbound Off-Ramp

06/21/2024



Lane Group	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	947	10	818	33	247	237	229
v/c Ratio	0.49	0.04	0.42	0.12	0.67	0.57	0.45
Control Delay	13.4	13.6	14.1	1.0	34.2	18.1	6.5
Queue Delay	2.3	0.0	0.6	0.4	1.2	1.1	0.0
Total Delay	15.8	13.6	14.6	1.3	35.4	19.1	6.5
Queue Length 50th (ft)	103	3	196	0	100	49	0
Queue Length 95th (ft)	239	m9	m233	0	170	117	51
Internal Link Dist (ft)	2214		245	105		344	
Turn Bay Length (ft)		25			140		150
Base Capacity (vph)	1929	229	1929	266	432	471	556
Starvation Cap Reductn	0	0	671	0	0	0	0
Spillback Cap Reductn	812	0	0	82	62	86	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.04	0.65	0.18	0.67	0.62	0.41




















Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: Riverside Drive & SR 170 Southbound Off-Ramp


















06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	869	2	9	753	0	8	0	22	304	7	345
Future Volume (vph)	0	869	2	9	753	0	8	0	22	304	7	345
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Lane Util. Factor		0.95		1.00	0.95			1.00		0.95	0.91	0.95
Frt		1.00		1.00	1.00			0.90		1.00	0.91	0.85
Flt Protected		1.00		0.95	1.00			0.99		0.95	0.98	1.00
Satd. Flow (prot)		3538		1770	3539			1657		1681	1512	1504
Flt Permitted		1.00		0.23	1.00			0.82		0.95	0.98	1.00
Satd. Flow (perm)		3538		421	3539			1377		1681	1512	1504
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)	0	945	2	10	818	0	9	0	24	330	8	375
RTOR Reduction (vph)	0	0	0	0	0	0	0	31	0	0	87	179
Lane Group Flow (vph)	0	947	0	10	818	0	0	2	0	247	150	50
Turn Type		NA		Perm	NA		Perm	NA		Split	NA	Perm
Protected Phases		6			2			4		3	3	
Permitted Phases				2			4					3
Actuated Green, G (s)		34.5		34.5	34.5			3.2		15.3	15.3	15.3
Effective Green, g (s)		34.5		34.5	34.5			3.2		15.3	15.3	15.3
Actuated g/C Ratio		0.49		0.49	0.49			0.05		0.22	0.22	0.22
Clearance Time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Vehicle Extension (s)		3.8		2.4	2.4			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1743		207	1744			62		367	330	328
v/s Ratio Prot		c0.27			0.23					c0.15	0.10	
v/s Ratio Perm				0.02				c0.00				0.03
v/c Ratio		0.54		0.05	0.47			0.02		0.67	0.46	0.15
Uniform Delay, d1		12.3		9.2	11.7			31.9		25.1	23.7	22.1
Progression Factor		1.00		1.07	1.18			1.00		1.00	1.00	1.00
Incremental Delay, d2		1.2		0.4	0.8			0.2		4.8	1.0	0.2
Delay (s)		13.5		10.2	14.6			32.1		29.9	24.7	22.3
Level of Service		B		B	B			C		C	C	C
Approach Delay (s)		13.5			14.6			32.1			25.7	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			17.6			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.55									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			55.9%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

101: Lankershim Blvd & Driveway Exit/SR134 WB Off Ramp

01/16/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	568	0	367	0	495	0	0	1566	0
Future Volume (veh/h)	0	0	0	568	0	367	0	495	0	0	1566	0
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		0.98	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	0	1870	1870	1870	1870	1870	0	1870	0	0	1870	0
Adj Flow Rate, veh/h	0	0	0	617	0	399	0	538	0	0	1702	0
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, %	0	2	2	2	2	2	0	2	0	0	2	0
Cap, veh/h	0	707	0	793	0	588	0	1653	0	0	1653	0
Arrive On Green	0.00	0.00	0.00	0.38	0.00	0.38	0.00	0.47	0.00	0.00	0.47	0.00
Sat Flow, veh/h	0	1870	0	1781	0	1556	0	3741	0	0	3741	0
Grp Volume(v), veh/h	0	0	0	617	0	399	0	538	0	0	1702	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1781	0	1556	0	1777	0	0	1777	0
Q Serve(g_s), s	0.0	0.0	0.0	19.8	0.0	12.9	0.0	5.7	0.0	0.0	27.9	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	19.8	0.0	12.9	0.0	5.7	0.0	0.0	27.9	0.0
Prop In Lane	0.00		0.00	1.00		1.00	0.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	707	0	793	0	588	0	1653	0	0	1653	0
V/C Ratio(X)	0.00	0.00	0.00	0.78	0.00	0.68	0.00	0.33	0.00	0.00	1.03	0.00
Avail Cap(c_a), veh/h	0	733	0	818	0	609	0	1653	0	0	1653	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(l)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.96	0.00	0.00	0.09	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	17.8	0.0	15.6	0.0	10.1	0.0	0.0	16.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	4.7	0.0	2.9	0.0	0.5	0.0	0.0	16.1	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(95%),veh/ln	0.0	0.0	0.0	12.8	0.0	8.0	0.0	3.5	0.0	0.0	14.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	22.4	0.0	18.5	0.0	10.6	0.0	0.0	32.1	0.0
LnGrp LOS	A	A	A	C	A	B	A	B	A	A	F	A
Approach Vol, veh/h		0			1016			538			1702	
Approach Delay, s/veh		0.0			20.9			10.6			32.1	
Approach LOS					C			B			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		32.8		27.2		32.8		27.2				
Change Period (Y+Rc), s		4.9		4.5		4.9		4.5				
Max Green Setting (Gmax), s		27.1		23.5		27.1		23.5				
Max Q Clear Time (g_c+I1), s		7.7		21.8		29.9		0.0				
Green Ext Time (p_c), s		3.4		0.9		0.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				25.1								
HCM 6th LOS				C								

Appendix F

























Operational Evaluation Analysis Worksheets

Existing Conditions (Year 2023)

HCM 6th Signalized Intersection Summary

1: Riverside Drive & Laurel Canyon Boulevard








06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	247	594	111	151	930	138	227	765	98	129	782	309
Future Volume (veh/h)	247	594	111	151	930	138	227	765	98	129	782	309
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	268	646	121	164	1011	150	247	832	107	140	850	336
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	180	1029	459	258	927	413	300	1349	720	291	1264	497
Arrive On Green	0.10	0.29	0.29	0.02	0.09	0.09	0.09	0.38	0.38	0.07	0.35	0.35
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	3554	1585	1781	3602	1417
Grp Volume(v), veh/h	268	646	121	164	1011	150	247	832	107	140	803	383
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1777	1585	1781	1702	1615
Q Serve(g_s), s	12.1	18.9	7.0	5.6	31.3	10.7	10.7	22.8	4.7	6.0	24.1	24.2
Cycle Q Clear(g_c), s	12.1	18.9	7.0	5.6	31.3	10.7	10.7	22.8	4.7	6.0	24.1	24.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.88
Lane Grp Cap(c), veh/h	180	1029	459	258	927	413	300	1349	720	291	1194	567
V/C Ratio(X)	1.49	0.63	0.26	0.64	1.09	0.36	0.82	0.62	0.15	0.48	0.67	0.68
Avail Cap(c_a), veh/h	180	1029	459	357	927	413	300	1349	720	328	1194	567
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	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	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.0	37.0	32.8	56.9	54.8	45.4	26.2	30.2	19.2	24.2	33.1	33.1
Incr Delay (d2), s/veh	248.5	2.9	1.4	2.6	57.4	2.5	16.4	2.1	0.4	1.2	3.0	6.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	28.1	13.2	0.3	4.7	31.6	8.3	9.6	15.0	3.2	4.6	15.3	15.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	302.5	39.9	34.2	59.5	112.3	47.9	42.6	32.2	19.6	25.4	36.1	39.5
LnGrp LOS	F	D	C	E	F	D	D	C	B	C	D	D
Approach Vol, veh/h		1035			1325			1186			1326	
Approach Delay, s/veh		107.2			98.4			33.3			36.0	
Approach LOS		F			F			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	48.0	18.0	37.0	13.6	51.4	14.6	40.4				
Change Period (Y+Rc), s	5.6	5.9	5.9	* 5.7	5.6	5.9	5.6	* 5.7				
Max Green Setting (Gmax), s	11.4	42.1	12.1	* 31	10.4	43.1	12.4	* 31				
Max Q Clear Time (g_c+I1), s	12.7	26.2	14.1	33.3	8.0	24.8	7.6	20.9				
Green Ext Time (p_c), s	0.0	7.0	0.0	0.0	0.1	5.8	0.2	3.3				
Intersection Summary												
HCM 6th Ctrl Delay			67.4									
HCM 6th LOS			E									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
User approved changes to right turn type.												

HCM 6th TWSC

2: Riverside Drive & Radford Avenue

06/21/2024

Intersection												
Int Delay, s/veh	17.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	906	89	76	1002	11	28	6	87	4	10	28
Future Vol, veh/h	23	906	89	76	1002	11	28	6	87	4	10	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	105	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	985	97	83	1089	12	30	7	95	4	11	30

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1101	0	0	1082	0	0	1751	2302	493	1807	2393	551
Stage 1	-	-	-	-	-	-	1035	1035	-	1261	1261	-
Stage 2	-	-	-	-	-	-	716	1267	-	546	1132	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	630	-	-	640	-	-	55	38	522	50	33	478
Stage 1	-	-	-	-	-	-	248	307	-	180	240	-
Stage 2	-	-	-	-	-	-	387	238	-	490	276	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	630	-	-	640	-	-	32	32	522	30	28	478
Mov Cap-2 Maneuver	-	-	-	-	-	-	32	32	-	30	28	-
Stage 1	-	-	-	-	-	-	238	295	-	173	209	-
Stage 2	-	-	-	-	-	-	299	207	-	377	265	-

























Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.8			286.4			107		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	98	630	-	-	640	-	-	76
HCM Lane V/C Ratio	1.342	0.04	-	-	0.129	-	-	0.601
HCM Control Delay (s)	286.4	10.9	-	-	11.5	-	-	107
HCM Lane LOS	F	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	9.4	0.1	-	-	0.4	-	-	2.7

HCM 6th Signalized Intersection Summary

3: Colfax Avenue & Riverside Drive

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	612	205	188	725	77	120	409	71	80	481	120
Future Volume (veh/h)	103	612	205	188	725	77	120	409	71	80	481	120
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	112	665	223	204	788	84	130	445	77	87	523	130
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	251	1356	605	259	1356	605	295	826	700	462	826	700
Arrive On Green	0.26	0.26	0.26	0.38	0.38	0.38	0.88	0.88	0.88	0.44	0.44	0.44
Sat Flow, veh/h	635	3554	1585	626	3554	1585	779	1870	1585	880	1870	1585
Grp Volume(v), veh/h	112	665	223	204	788	84	130	445	77	87	523	130
Grp Sat Flow(s),veh/h/ln	635	1777	1585	626	1777	1585	779	1870	1585	880	1870	1585
Q Serve(g_s), s	10.3	9.6	6.9	13.3	10.6	2.1	8.3	3.2	0.4	4.0	13.0	3.0
Cycle Q Clear(g_c), s	20.9	9.6	6.9	22.9	10.6	2.1	21.3	3.2	0.4	7.2	13.0	3.0
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	251	1356	605	259	1356	605	295	826	700	462	826	700
V/C Ratio(X)	0.45	0.49	0.37	0.79	0.58	0.14	0.44	0.54	0.11	0.19	0.63	0.19
Avail Cap(c_a), veh/h	251	1356	605	259	1356	605	295	826	700	462	826	700
HCM Platoon Ratio	0.67	0.67	0.67	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	0.94	0.94	0.94	0.83	0.83	0.83	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	17.4	16.4	25.4	14.7	12.1	8.6	2.1	2.0	12.4	13.0	10.2
Incr Delay (d2), s/veh	5.7	1.3	1.7	20.0	1.7	0.5	3.9	2.1	0.3	0.9	3.7	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(95%),veh/ln	3.5	6.9	4.6	7.4	6.9	1.2	1.6	2.0	0.3	1.4	9.1	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.4	18.6	18.1	45.4	16.5	12.6	12.5	4.2	2.2	13.3	16.7	10.8
LnGrp LOS	C	B	B	D	B	B	B	A	A	B	B	B
Approach Vol, veh/h	1000			1076			652			740		
Approach Delay, s/veh	20.1			21.6			5.6			15.2		
Approach LOS	C			C			A			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	28.0			32.0			28.0			32.0		
Change Period (Y+Rc), s	* 5.1			* 5.5			* 5.1			* 5.5		
Max Green Setting (Gmax), s	* 23			* 27			* 23			* 27		
Max Q Clear Time (g_c+I1), s	22.9			23.3			24.9			15.0		
Green Ext Time (p_c), s	0.0			1.2			0.0			3.3		
Intersection Summary												
HCM 6th Ctrl Delay	16.8											
HCM 6th LOS	B											
Notes												

Queues

4: Riverside Drive & SR 170 Southbound Off-Ramp

06/21/2024



Lane Group	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	812	9	699	29	187	183	171
v/c Ratio	0.40	0.03	0.35	0.11	0.57	0.52	0.40
Control Delay	11.9	13.0	11.6	0.8	31.5	20.5	6.8
Queue Delay	0.3	0.0	0.4	0.1	0.1	0.2	0.0
Total Delay	12.2	13.0	12.0	0.9	31.6	20.7	6.8
Queue Length 50th (ft)	72	3	122	0	76	48	0
Queue Length 95th (ft)	203	m9	193	0	126	101	44
Internal Link Dist (ft)	2214		245	105		344	
Turn Bay Length (ft)		25			140		150
Base Capacity (vph)	2010	307	2010	286	456	464	532
Starvation Cap Reductn	0	0	777	0	0	0	0
Spillback Cap Reductn	583	0	0	57	26	38	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.03	0.57	0.13	0.43	0.43	0.32

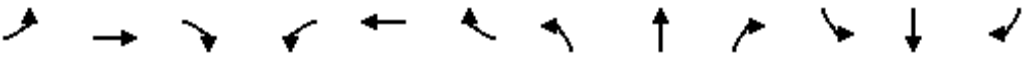
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: Riverside Drive & SR 170 Southbound Off-Ramp













06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑	↑↑			↑↓		↑	↑↓	↑
Traffic Volume (vph)	0	745	2	8	643	0	7	0	19	253	6	238
Future Volume (vph)	0	745	2	8	643	0	7	0	19	253	6	238
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Lane Util. Factor		0.95		1.00	0.95			1.00		0.95	0.91	0.95
Frt		1.00		1.00	1.00			0.90		1.00	0.93	0.85
Flt Protected		1.00		0.95	1.00			0.99		0.95	0.98	1.00
Satd. Flow (prot)		3538		1770	3539			1658		1681	1536	1504
Flt Permitted		1.00		0.29	1.00			0.84		0.95	0.98	1.00
Satd. Flow (perm)		3538		542	3539			1409		1681	1536	1504
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)	0	810	2	9	699	0	8	0	21	275	7	259
RTOR Reduction (vph)	0	0	0	0	0	0	0	28	0	0	52	138
Lane Group Flow (vph)	0	812	0	9	699	0	0	1	0	187	131	33
Turn Type		NA		Perm	NA		Perm	NA		Split	NA	Perm
Protected Phases		6			2			4		3	3	
Permitted Phases				2			4					3
Actuated Green, G (s)		36.1		36.1	36.1			3.2		13.7	13.7	13.7
Effective Green, g (s)		36.1		36.1	36.1			3.2		13.7	13.7	13.7
Actuated g/C Ratio		0.52		0.52	0.52			0.05		0.20	0.20	0.20
Clearance Time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Vehicle Extension (s)		3.8		2.4	2.4			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1824		279	1825			64		328	300	294
v/s Ratio Prot		c0.23			0.20					c0.11	0.09	
v/s Ratio Perm				0.02				c0.00				0.02
v/c Ratio		0.45		0.03	0.38			0.02		0.57	0.44	0.11
Uniform Delay, d1		10.7		8.3	10.2			31.9		25.5	24.8	23.2
Progression Factor		1.00		1.05	1.08			1.00		1.00	1.00	1.00
Incremental Delay, d2		0.8		0.2	0.5			0.1		2.4	1.0	0.2
Delay (s)		11.4		9.0	11.6			32.0		27.9	25.8	23.3
Level of Service		B		A	B			C		C	C	C
Approach Delay (s)		11.4			11.5			32.0			25.7	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			15.5			HCM 2000 Level of Service			B			
HCM 2000 Volume to Capacity ratio			0.45									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			48.4%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/21/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	NWL	NWR
Lane Group Flow (vph)	197	607	298	225	414	115	24	568	152	1025	239	81
v/c Ratio	0.62	0.93dr	0.96	0.97	0.49	0.30	0.29	0.84	0.63	0.77	0.58	0.47
Control Delay	41.9	69.3	93.8	90.4	48.8	47.5	58.8	66.0	69.2	42.5	63.8	65.9
Queue Delay	0.0	48.1	42.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.9	117.4	135.8	90.4	48.8	47.5	58.8	66.0	69.2	42.5	63.8	65.9
Queue Length 50th (ft)	141	290	285	~181	176	88	18	258	132	410	108	76
Queue Length 95th (ft)	167	#417	#516	#355	232	148	51	#370	211	524	147	132
Internal Link Dist (ft)		245			745			2580		383	758	
Turn Bay Length (ft)	140		230	85		110	270		290		215	
Base Capacity (vph)	320	678	311	233	851	380	84	680	242	1334	695	292
Starvation Cap Reductn	0	138	49	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	1.12	1.14	0.97	0.49	0.30	0.29	0.84	0.63	0.77	0.34	0.28

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.





















Queue shown is maximum after two cycles.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

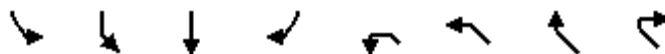
06/21/2024

												
Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	181	281	370	182	12	195	381	106	22	447	59	17
Future Volume (vph)	181	281	370	182	12	195	381	106	22	447	59	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Lane Util. Factor	1.00	0.91	0.91			1.00	0.95	1.00	1.00	0.95		
Frt	1.00	0.93	0.85			1.00	1.00	0.85	1.00	0.98		
Flt Protected	0.95	1.00	1.00			0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1770	3137	1441			1770	3539	1583	1770	3463		
Flt Permitted	0.43	1.00	1.00			0.15	1.00	1.00	0.23	1.00		
Satd. Flow (perm)	804	3137	1441			277	3539	1583	430	3463		
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)	197	305	402	198	13	212	414	115	24	486	64	18
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	197	607	298	0	0	225	414	115	24	568	0	0
Turn Type	pm+pt	NA	Perm		pm+pt	pm+pt	NA	Perm	Perm	NA		
Protected Phases	1	6			5	5	2			8		
Permitted Phases	6		6		2	2		2	8			
Actuated Green, G (s)	41.5	30.4	30.4			47.0	33.7	33.7	27.4	27.4		
Effective Green, g (s)	41.5	30.4	30.4			47.0	33.7	33.7	27.4	27.4		
Actuated g/C Ratio	0.30	0.22	0.22			0.34	0.24	0.24	0.20	0.20		
Clearance Time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Vehicle Extension (s)	3.0	3.9	3.9			3.0	4.6	4.6	4.7	4.7		
Lane Grp Cap (vph)	314	681	312			234	851	381	84	677		
v/s Ratio Prot	0.05	0.19				c0.09	0.12			0.16		
v/s Ratio Perm	0.14		0.21			c0.23		0.07	0.06			
v/c Ratio	0.63	0.93dr	0.96			0.96	0.49	0.30	0.29	0.84		
Uniform Delay, d1	39.6	53.2	54.1			38.1	45.7	43.5	48.0	54.2		
Progression Factor	0.96	1.00	1.00			1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2	3.6	15.4	39.1			47.8	2.0	2.0	3.5	9.8		
Delay (s)	41.7	68.6	93.2			85.9	47.7	45.5	51.5	64.0		
Level of Service	D	E	F			F	D	D	D	E		
Approach Delay (s)		70.4					58.8			63.5		
Approach LOS		E					E			E		
Intersection Summary												
HCM 2000 Control Delay			58.5			HCM 2000 Level of Service			E			
HCM 2000 Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			33.0			
Intersection Capacity Utilization			96.9%			ICU Level of Service			F			
Analysis Period (min)			15									
dr Defacto Right Lane. Recode with 1 though lane as a right lane.												
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/21/2024



Movement	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	16	124	870	73	37	175	79	4
Future Volume (vph)	16	124	870	73	37	175	79	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.3			6.6	6.6	
Lane Util. Factor		1.00	0.95			0.97	0.91	
Frt		1.00	0.99			0.99	0.85	
Flt Protected		0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	3498			3428	1441	
Flt Permitted		0.95	1.00			0.95	1.00	
Satd. Flow (perm)		1770	3498			3428	1441	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	135	946	79	40	190	86	4
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	152	1025	0	0	239	81	0
Turn Type	Prot	Prot	NA		Prot	Prot	Perm	
Protected Phases	7	7	4		3	3		
Permitted Phases							3	
Actuated Green, G (s)		19.2	53.4			16.7	16.7	
Effective Green, g (s)		19.2	53.4			16.7	16.7	
Actuated g/C Ratio		0.14	0.38			0.12	0.12	
Clearance Time (s)		6.8	6.3			6.6	6.6	
Vehicle Extension (s)		3.0	4.9			4.6	4.6	
Lane Grp Cap (vph)		242	1334			408	171	
v/s Ratio Prot		0.09	c0.29			c0.07		
v/s Ratio Perm							0.06	
v/c Ratio		0.63	0.77			0.59	0.47	
Uniform Delay, d1		57.0	37.9			58.4	57.5	
Progression Factor		1.00	1.00			1.00	1.00	
Incremental Delay, d2		5.0	3.2			3.0	3.7	
Delay (s)		62.1	41.1			61.4	61.2	
Level of Service		E	D			E	E	
Approach Delay (s)			43.8			61.3		
Approach LOS			D			E		
Intersection Summary								

HCM 6th Signalized Intersection Summary

6: Laurel Canyon Boulevard & US 101 Northbound Ramps

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↷	↷	↰	↷			↷	↷
Traffic Volume (veh/h)	0	0	0	395	2	234	424	530	0	0	1216	345
Future Volume (veh/h)	0	0	0	395	2	234	424	530	0	0	1216	345
Initial Q (Qb), veh				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
Parking Bus, Adj				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		
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				509	0	170	461	576	0	0	1322	375
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				625	0	278	555	2532	0	0	2518	782
Arrive On Green				0.18	0.00	0.18	0.32	1.00	0.00	0.00	0.49	0.49
Sat Flow, veh/h				3563	0	1585	3456	3647	0	0	5274	1585
Grp Volume(v), veh/h				509	0	170	461	576	0	0	1322	375
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	0	1702	1585
Q Serve(g_s), s				12.4	0.0	8.9	11.1	0.0	0.0	0.0	15.9	14.1
Cycle Q Clear(g_c), s				12.4	0.0	8.9	11.1	0.0	0.0	0.0	15.9	14.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				625	0	278	555	2532	0	0	2518	782
V/C Ratio(X)				0.81	0.00	0.61	0.83	0.23	0.00	0.00	0.53	0.48
Avail Cap(c_a), veh/h				819	0	365	948	2532	0	0	2518	782
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.91	0.91	0.00	0.00	0.75	0.75
Uniform Delay (d), s/veh				35.7	0.0	34.3	29.4	0.0	0.0	0.0	15.6	15.1
Incr Delay (d2), s/veh				4.9	0.0	2.2	3.0	0.2	0.0	0.0	0.6	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
%ile BackOfQ(95%),veh/ln				9.3	0.0	6.1	7.1	0.1	0.0	0.0	9.3	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				40.6	0.0	36.5	32.5	0.2	0.0	0.0	16.2	16.7
LnGrp LOS				D	A	D	C	A	A	A	B	B
Approach Vol, veh/h					679			1037			1697	
Approach Delay, s/veh					39.5			14.5			16.3	
Approach LOS					D			B			B	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	19.7	49.2		21.1		68.9						
Change Period (Y+Rc), s	5.3	4.8		* 5.3		4.8						
Max Green Setting (Gmax), s	25	29.2		* 21		59.2						
Max Q Clear Time (g_c+M3), s	17.9			14.4		2.0						
Green Ext Time (p_c), s	1.3	7.4		1.4		4.3						

Intersection Summary

HCM 6th Ctrl Delay	20.4
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.












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

HCM 6th Signalized Intersection Summary

7: US 101 Southbound Ramps & Laurel Canyon Boulevard

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  		 	 	
Traffic Volume (veh/h)	148	10	334	0	0	0	0	820	491	493	1123	0
Future Volume (veh/h)	148	10	334	0	0	0	0	820	491	493	1123	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	111	0	424				0	891	534	536	1221	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	295	0	526				0	1640	509	1181	2557	0
Arrive On Green	0.17	0.00	0.17				0.00	0.32	0.32	0.68	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	5274	1585	3456	3647	0
Grp Volume(v), veh/h	111	0	424				0	891	534	536	1221	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1702	1585	1728	1777	0
Q Serve(g_s), s	5.0	0.0	11.6				0.0	12.9	28.9	6.4	0.0	0.0
Cycle Q Clear(g_c), s	5.0	0.0	11.6				0.0	12.9	28.9	6.4	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	295	0	526				0	1640	509	1181	2557	0
V/C Ratio(X)	0.38	0.00	0.81				0.00	0.54	1.05	0.45	0.48	0.00
Avail Cap(c_a), veh/h	431	0	768				0	1640	509	1181	2557	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.76	0.76	0.00
Uniform Delay (d), s/veh	33.4	0.0	36.1				0.0	25.1	30.5	10.4	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	4.1				0.0	1.3	53.4	0.2	0.5	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
%ile BackOfQ(95%),veh/ln	8.8	0.0	8.0				0.0	8.9	25.7	3.4	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.2	0.0	40.2				0.0	26.4	83.9	10.6	0.5	0.0
LnGrp LOS	C	A	D				A	C	F	B	A	A
Approach Vol, veh/h	535						1425			1757		
Approach Delay, s/veh	38.9						48.0			3.6		
Approach LOS	D						D			A		
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	35.9	34.0	20.1	69.9								
Change Period (Y+Rc), s	5.1	* 5.1	* 5.2	* 5.1								
Max Green Setting (Gmax), s	24	* 29	* 22	* 58								
Max Q Clear Time (g_c+I), s	19.4	30.9	13.6	2.0								
Green Ext Time (p_c), s	1.8	0.0	1.3	12.3								

Intersection Summary

HCM 6th Ctrl Delay	25.7
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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

Queues

8: Laurel Canyon Boulevard & Landale Street

06/21/2024



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	148	194	164	63	173	1229	29	1262	248
v/c Ratio	0.70	0.61	0.75	0.17	0.64	0.65	0.20	0.97	0.54
Control Delay	56.9	18.3	58.7	1.0	33.2	8.7	23.2	45.1	26.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.9	18.3	58.7	1.0	33.2	8.7	23.2	45.1	26.6
Queue Length 50th (ft)	86	16	90	0	66	111	10	~315	111
Queue Length 95th (ft)	#177	87	#177	0	m54	m94	m27	#533	215
Internal Link Dist (ft)		140	232			591		375	
Turn Bay Length (ft)	85			40	155		125		115
Base Capacity (vph)	212	317	237	380	290	1886	143	1306	458
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.61	0.69	0.17	0.60	0.65	0.20	0.97	0.54

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

8: Laurel Canyon Boulevard & Landale Street

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	151	13	151	24	127	58	159	1101	29	27	1161	228
Future Volume (vph)	151	13	151	24	127	58	159	1101	29	27	1161	228
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.89			1.00	1.00	1.00	1.00		1.00	1.00	0.78
Flpb, ped/bikes	1.00	1.00			0.99	1.00	1.00	1.00		0.99	1.00	1.00
Frt	1.00	0.87			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1374			1823	1583	1770	3520		1759	3539	1241
Flt Permitted	0.95	1.00			0.90	1.00	0.10	1.00		0.21	1.00	1.00
Satd. Flow (perm)	1681	1374			1655	1583	193	3520		388	3539	1241
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)	164	14	164	26	138	63	173	1197	32	29	1262	248
RTOR Reduction (vph)	0	143	0	0	0	55	0	2	0	0	0	0
Lane Group Flow (vph)	148	51	0	0	164	8	173	1227	0	29	1262	248
Confl. Peds. (#/hr)			49	49			89		12	12		89
Turn Type	Split	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	3	3			4		1	6			2	
Permitted Phases				4		4	6			2		2
Actuated Green, G (s)	11.3	11.3			12.0	12.0	48.2	48.2		33.2	33.2	33.2
Effective Green, g (s)	11.3	11.3			12.0	12.0	48.2	48.2		33.2	33.2	33.2
Actuated g/C Ratio	0.13	0.13			0.13	0.13	0.54	0.54		0.37	0.37	0.37
Clearance Time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	5.2		4.5	4.5	4.5
Lane Grp Cap (vph)	211	172			220	211	271	1885		143	1305	457
v/s Ratio Prot	c0.09	0.04					0.07	c0.35			c0.36	
v/s Ratio Perm					c0.10	0.01	0.27			0.07		0.20
v/c Ratio	0.70	0.29			0.75	0.04	0.64	0.65		0.20	0.97	0.54
Uniform Delay, d1	37.7	35.7			37.5	34.0	17.7	14.9		19.4	27.9	22.4
Progression Factor	1.00	1.00			1.00	1.00	2.19	0.55		0.92	0.95	0.94
Incremental Delay, d2	10.1	1.0			12.8	0.1	0.5	0.2		2.8	16.7	4.0
Delay (s)	47.8	36.7			50.4	34.1	39.2	8.4		20.7	43.2	25.1
Level of Service	D	D			D	C	D	A		C	D	C
Approach Delay (s)		41.5			45.8			12.2			39.8	
Approach LOS		D			D			B			D	
Intersection Summary												
HCM 2000 Control Delay			29.4									
HCM 2000 Volume to Capacity ratio			0.86									
Actuated Cycle Length (s)			90.0									
Intersection Capacity Utilization			79.9%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

9: Colfax Avenue & Sarah Street

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↑	↕
Traffic Volume (veh/h)	36	80	10	33	16	147	20	447	47	131	684	45
Future Volume (veh/h)	36	80	10	33	16	147	20	447	47	131	684	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.89		0.81	0.85		0.81	1.00		0.93	0.98		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	39	87	11	36	17	160	22	486	51	142	743	49
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	156	303	33	102	50	248	230	964	758	453	964	758
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.69	0.69	0.69	0.35	0.35	0.35
Sat Flow, veh/h	315	1215	134	129	200	992	685	1870	1471	853	1870	1471
Grp Volume(v), veh/h	137	0	0	213	0	0	22	486	51	142	743	49
Grp Sat Flow(s), veh/h/ln	1664	0	0	1320	0	0	685	1870	1471	853	1870	1471
Q Serve(g_s), s	0.0	0.0	0.0	2.4	0.0	0.0	1.6	7.5	0.7	8.3	21.3	1.3
Cycle Q Clear(g_c), s	3.7	0.0	0.0	8.4	0.0	0.0	22.8	7.5	0.7	15.8	21.3	1.3
Prop In Lane	0.28		0.08	0.17		0.75	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	492	0	0	400	0	0	230	964	758	453	964	758
V/C Ratio(X)	0.28	0.00	0.00	0.53	0.00	0.00	0.10	0.50	0.07	0.31	0.77	0.06
Avail Cap(c_a), veh/h	635	0	0	521	0	0	230	964	758	453	964	758
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	0.67	0.67	0.67
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.95	0.95	0.95	0.76	0.76	0.76
Uniform Delay (d), s/veh	18.3	0.0	0.0	20.0	0.0	0.0	16.9	5.8	4.7	17.8	16.5	10.0
Incr Delay (d2), s/veh	0.3	0.0	0.0	1.1	0.0	0.0	0.8	1.8	0.2	1.4	4.6	0.1
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(95%),veh/ln	2.7	0.0	0.0	4.7	0.0	0.0	0.5	4.3	0.4	3.2	14.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.6	0.0	0.0	21.1	0.0	0.0	17.7	7.5	4.8	19.2	21.1	10.1
LnGrp LOS	B	A	A	C	A	A	B	A	A	B	C	B
Approach Vol, veh/h	137			213			559			934		
Approach Delay, s/veh	18.6			21.1			7.7			20.2		
Approach LOS	B			C			A			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	35.7			24.3			35.7			24.3		
Change Period (Y+Rc), s	4.8			* 9.3			4.8			* 9.3		
Max Green Setting (Gmax), s	25.2			* 21			25.2			* 21		
Max Q Clear Time (g_c+I1), s	24.8			5.7			23.3			10.4		
Green Ext Time (p_c), s	0.1			0.6			1.1			1.1		

Intersection Summary

HCM 6th Ctrl Delay	16.4
HCM 6th LOS	B

Notes

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

Queues

10: Landale Street & Colfax Avenue

06/21/2024



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	81	32	487	839	37
v/c Ratio	0.30	0.09	0.34	0.59	0.03
Control Delay	20.4	5.6	5.5	2.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.4	5.6	5.5	2.9	0.1
Queue Length 50th (ft)	19	4	73	29	0
Queue Length 95th (ft)	51	15	140	36	m0
Internal Link Dist (ft)	262		575	593	
Turn Bay Length (ft)		40			80
Base Capacity (vph)	534	354	1434	1434	1223
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.15	0.09	0.34	0.59	0.03

Intersection Summary






m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

10: Landale Street & Colfax Avenue

06/21/2024












Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	52	22	29	448	772	34
Future Volume (vph)	52	22	29	448	772	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	9.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.96		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1727		1770	1863	1863	1583
Flt Permitted	0.97		0.25	1.00	1.00	1.00
Satd. Flow (perm)	1727		461	1863	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	57	24	32	487	839	37
RTOR Reduction (vph)	22	0	0	0	0	7
Lane Group Flow (vph)	59	0	32	487	839	30
Turn Type	Perm		Perm	NA	NA	Perm
Protected Phases				6	2	
Permitted Phases	8		6			2
Actuated Green, G (s)	5.4		40.6	40.6	40.6	40.6
Effective Green, g (s)	5.4		40.6	40.6	40.6	40.6
Actuated g/C Ratio	0.09		0.68	0.68	0.68	0.68
Clearance Time (s)	9.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		4.9	4.9	5.3	5.3
Lane Grp Cap (vph)	155		311	1260	1260	1071
v/s Ratio Prot				0.26	c0.45	
v/s Ratio Perm	c0.03		0.07			0.02
v/c Ratio	0.38		0.10	0.39	0.67	0.03
Uniform Delay, d1	25.7		3.4	4.2	5.7	3.2
Progression Factor	1.00		1.00	1.00	0.27	0.02
Incremental Delay, d2	1.6		0.7	0.9	1.9	0.0
Delay (s)	27.3		4.0	5.1	3.5	0.1
Level of Service	C		A	A	A	A
Approach Delay (s)	27.3			5.1	3.4	
Approach LOS	C			A	A	
Intersection Summary						
HCM 2000 Control Delay			5.3	HCM 2000 Level of Service		A
HCM 2000 Volume to Capacity ratio			0.63			
Actuated Cycle Length (s)			60.0	Sum of lost time (s)		14.0
Intersection Capacity Utilization			59.0%	ICU Level of Service		B
Analysis Period (min)			15			
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

11: Whitsett Avenue & Moorpark Street

06/21/2024












Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	780	210	106	571	62	56	227	68	79	467	58
Future Volume (veh/h)	64	780	210	106	571	62	56	227	68	79	467	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	70	848	228	115	621	67	61	247	74	86	508	63
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	177	850	720	81	754	81	350	1166	341	473	1369	169
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	755	1870	1585	524	1659	179	841	2711	794	1059	3183	393
Grp Volume(v), veh/h	70	848	228	115	0	688	61	160	161	86	283	288
Grp Sat Flow(s),veh/h/ln	755	1870	1585	524	0	1838	841	1777	1727	1059	1777	1800
Q Serve(g_s), s	8.0	40.7	8.2	0.2	0.0	29.4	4.8	5.1	5.3	5.0	9.7	9.8
Cycle Q Clear(g_c), s	37.4	40.7	8.2	40.9	0.0	29.4	14.6	5.1	5.3	10.3	9.7	9.8
Prop In Lane	1.00		1.00	1.00		0.10	1.00		0.46	1.00		0.22
Lane Grp Cap(c), veh/h	177	850	720	81	0	835	350	764	743	473	764	774
V/C Ratio(X)	0.40	1.00	0.32	1.42	0.00	0.82	0.17	0.21	0.22	0.18	0.37	0.37
Avail Cap(c_a), veh/h	177	850	720	81	0	835	350	764	743	473	764	774
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	37.7	24.5	15.6	45.0	0.0	21.4	22.4	16.1	16.1	19.4	17.4	17.4
Incr Delay (d2), s/veh	6.5	30.3	1.2	246.4	0.0	9.0	1.1	0.6	0.7	0.8	1.4	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(95%),veh/ln	8.2	31.4	5.5	13.2	0.0	19.7	1.8	3.8	3.8	2.3	7.3	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.2	54.8	16.8	291.4	0.0	30.4	23.4	16.7	16.8	20.2	18.8	18.8
LnGrp LOS	D	D	B	F	A	C	C	B	B	C	B	B
Approach Vol, veh/h	1146					803		382		657		
Approach Delay, s/veh	46.6					67.8		17.8		19.0		
Approach LOS	D					E		B		B		
Timer - Assigned Phs	2		4			6		8				
Phs Duration (G+Y+Rc), s	46.0		44.0			46.0		44.0				
Change Period (Y+Rc), s	5.1		5.3			5.1		5.3				
Max Green Setting (Gmax), s	40.9		38.7			40.9		38.7				
Max Q Clear Time (g_c+I1), s	42.9		12.3			42.7		16.6				
Green Ext Time (p_c), s	0.0		3.9			0.0		2.2				
Intersection Summary												
HCM 6th Ctrl Delay	42.5											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary

12: Laurel Canyon Boulevard & Moorpark Street

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	284	571	189	206	426	107	98	946	163	84	1070	229
Future Volume (veh/h)	284	571	189	206	426	107	98	946	163	84	1070	229
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	309	621	205	224	463	116	107	1028	177	91	1163	249
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	294	704	232	295	502	552	227	896	154	222	856	182
Arrive On Green	0.11	0.27	0.27	0.14	0.36	0.36	0.08	0.30	0.30	0.16	0.59	0.59
Sat Flow, veh/h	1781	2626	866	1781	1870	1585	1781	3032	521	1781	2916	620
Grp Volume(v), veh/h	309	420	406	224	463	116	107	602	603	91	705	707
Grp Sat Flow(s),veh/h/ln	1781	1777	1715	1781	1870	1585	1781	1777	1777	1781	1777	1759
Q Serve(g_s), s	9.5	20.4	20.4	8.2	21.4	4.2	3.6	26.6	26.6	2.9	26.4	26.4
Cycle Q Clear(g_c), s	9.5	20.4	20.4	8.2	21.4	4.2	3.6	26.6	26.6	2.9	26.4	26.4
Prop In Lane	1.00		0.50	1.00		1.00	1.00		0.29	1.00		0.35
Lane Grp Cap(c), veh/h	294	477	460	295	502	552	227	525	525	222	521	516
V/C Ratio(X)	1.05	0.88	0.88	0.76	0.92	0.21	0.47	1.15	1.15	0.41	1.35	1.37
Avail Cap(c_a), veh/h	294	507	490	295	534	579	252	525	525	250	521	516
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.17	0.17	0.17
Uniform Delay (d), s/veh	26.4	31.6	31.6	22.3	28.1	18.0	22.5	31.7	31.7	20.5	18.6	18.6
Incr Delay (d2), s/veh	66.8	15.8	16.5	10.8	21.1	0.2	1.5	86.4	87.6	0.2	160.8	168.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	15.3	15.7	15.4	7.1	16.7	2.6	2.7	34.0	34.3	1.8	38.8	40.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	93.2	47.4	48.1	33.1	49.2	18.2	24.0	118.1	119.3	20.7	179.4	186.8
LnGrp LOS	F	D	D	C	D	B	C	F	F	C	F	F
Approach Vol, veh/h	1135			803			1312			1503		
Approach Delay, s/veh	60.1			40.2			111.0			173.3		
Approach LOS	E			D			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.7	31.8	15.0	30.4	12.6	32.0	15.0	30.4				
Change Period (Y+Rc), s	5.3	* 5.4	* 5.5	6.3	* 5.4	* 5.4	* 5.5	6.3				
Max Green Setting (Gmax), s	18.8	* 24	* 9.5	25.7	* 8.6	* 24	* 9.5	25.7				
Max Q Clear Time (g_c+1), s	17.6	28.4	11.5	23.4	4.9	28.6	10.2	22.4				
Green Ext Time (p_c), s	0.1	0.0	0.0	0.8	0.1	0.0	0.0	1.6				

Intersection Summary

HCM 6th Ctrl Delay 106.6

HCM 6th LOS F

Notes

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






HCM 6th TWSC

13: Moorpark Street & Radford Avenue

06/21/2024

Intersection

Int Delay, s/veh 0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	52	714	802	38	13	30
Future Vol, veh/h	52	714	802	38	13	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	50
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	57	776	872	41	14	33

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	913	0	0 1395 457
Stage 1	-	-	- 893 -
Stage 2	-	-	- 502 -
Critical Hdwy	4.14	-	- 6.84 6.94
Critical Hdwy Stg 1	-	-	- 5.84 -
Critical Hdwy Stg 2	-	-	- 5.84 -
Follow-up Hdwy	2.22	-	- 3.52 3.32
Pot Cap-1 Maneuver	742	-	- 132 551
Stage 1	-	-	- 360 -
Stage 2	-	-	- 573 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	742	-	- 122 551
Mov Cap-2 Maneuver	-	-	- 122 -
Stage 1	-	-	- 332 -
Stage 2	-	-	- 573 -























Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	19.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	742	-	-	-	122	551
HCM Lane V/C Ratio	0.076	-	-	-	0.116	0.059
HCM Control Delay (s)	10.3	-	-	-	38.3	11.9
HCM Lane LOS	B	-	-	-	E	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.4	0.2

HCM 6th Signalized Intersection Summary

14: Colfax Avenue & Moorpark Street

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	559	84	159	629	147	90	203	132	145	448	104
Future Volume (veh/h)	89	559	84	159	629	147	90	203	132	145	448	104
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		0.96	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	97	608	91	173	684	160	98	221	143	158	487	113
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	1222	182	274	747	175	229	460	384	382	740	733
Arrive On Green	0.14	0.79	0.79	0.09	0.09	0.09	0.25	0.25	0.25	0.09	0.40	0.40
Sat Flow, veh/h	1781	3089	461	737	2836	663	815	1870	1560	1781	1870	1569
Grp Volume(v), veh/h	97	349	350	173	428	416	98	221	143	158	487	113
Grp Sat Flow(s),veh/h/ln	1781	1777	1774	737	1777	1722	815	1870	1560	1781	1870	1569
Q Serve(g_s), s	3.3	6.1	6.1	20.9	21.5	21.6	10.1	9.1	6.8	5.6	19.2	3.7
Cycle Q Clear(g_c), s	3.3	6.1	6.1	20.9	21.5	21.6	15.8	9.1	6.8	5.6	19.2	3.7
Prop In Lane	1.00		0.26	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	222	703	702	274	468	454	229	460	384	382	740	733
V/C Ratio(X)	0.44	0.50	0.50	0.63	0.91	0.92	0.43	0.48	0.37	0.41	0.66	0.15
Avail Cap(c_a), veh/h	264	703	702	274	468	454	229	460	384	393	740	733
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	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	0.78	0.78	0.78
Uniform Delay (d), s/veh	21.4	6.3	6.3	39.8	40.1	40.1	34.2	29.0	28.2	21.3	22.2	13.8
Incr Delay (d2), s/veh	1.4	2.5	2.5	10.6	25.0	25.7	5.8	3.6	2.8	0.6	3.6	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(95%),veh/ln	2.3	3.7	3.7	8.5	19.4	19.0	4.1	7.8	5.0	4.2	12.9	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.7	8.8	8.8	50.4	65.1	65.8	39.9	32.6	30.9	21.9	25.8	14.2
LnGrp LOS	C	A	A	D	E	E	D	C	C	C	C	B
Approach Vol, veh/h		796			1017			462			758	
Approach Delay, s/veh		10.5			62.9			33.6			23.2	
Approach LOS		B			E			C			C	
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	11.9	33.1		45.0		45.0	13.4	31.6				
Change Period (Y+Rc), s	* 5.5	* 9.4		* 9.4		* 9.4	5.6	* 9.4				
Max Green Setting (Gmax), s	* 8.5	* 22		* 36		* 36	8.4	* 22				
Max Q Clear Time (g_c+I1), s	5.3	23.6		21.2		8.1	7.6	17.8				
Green Ext Time (p_c), s	0.1	0.0		2.9		4.5	0.0	0.9				

Intersection Summary

HCM 6th Ctrl Delay	34.8
HCM 6th LOS	C

Notes

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

HCM 6th TWSC
15: Irvine Avenue & Moorpark Street























06/21/2024

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕↕				↕↕			↕			↕	
Traffic Vol, veh/h	56	717	5	15	802	107	2	1	17	8	1	139
Future Vol, veh/h	56	717	5	15	802	107	2	1	17	8	1	139
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	61	779	5	16	872	116	2	1	18	9	1	151
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	988	0	0	784	0	0	1373	1924	392	1474	1868	494
Stage 1	-	-	-	-	-	-	904	904	-	962	962	-
Stage 2	-	-	-	-	-	-	469	1020	-	512	906	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	695	-	-	830	-	-	105	66	607	88	72	521
Stage 1	-	-	-	-	-	-	298	354	-	275	332	-
Stage 2	-	-	-	-	-	-	544	312	-	513	353	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	695	-	-	830	-	-	63	53	607	72	58	521
Mov Cap-2 Maneuver	-	-	-	-	-	-	63	53	-	72	58	-
Stage 1	-	-	-	-	-	-	252	299	-	232	317	-
Stage 2	-	-	-	-	-	-	368	298	-	418	298	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.4			0.3			20.5			21.6		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	254	695	-	-	830	-	-	375				
HCM Lane V/C Ratio	0.086	0.088	-	-	0.02	-	-	0.429				
HCM Control Delay (s)	20.5	10.7	0.7	-	9.4	0.2	-	21.6				
HCM Lane LOS	C	B	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.3	0.3	-	-	0.1	-	-	2.1				

HCM 6th Signalized Intersection Summary

16: Tujunga Avenue & Moorpark Street

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	651	75	91	665	50	65	202	69	146	357	183
Future Volume (veh/h)	150	651	75	91	665	50	65	202	69	146	357	183
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	163	708	82	99	723	54	71	220	75	159	388	199
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	344	1648	191	338	1722	129	213	685	581	298	452	383
Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.51	0.13	0.73	0.73	0.24	0.24	0.24
Sat Flow, veh/h	694	3209	371	686	3352	250	1781	1870	1585	1084	1870	1585
Grp Volume(v), veh/h	163	392	398	99	383	394	71	220	75	159	388	199
Grp Sat Flow(s),veh/h/ln	694	1777	1804	686	1777	1825	1781	1870	1585	1084	1870	1585
Q Serve(g_s), s	17.1	12.4	12.4	9.5	12.0	12.0	0.0	3.7	1.3	12.4	17.9	9.8
Cycle Q Clear(g_c), s	29.2	12.4	12.4	21.9	12.0	12.0	0.0	3.7	1.3	16.1	17.9	9.8
Prop In Lane	1.00		0.21	1.00		0.14	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	344	913	926	338	913	937	213	685	581	298	452	383
V/C Ratio(X)	0.47	0.43	0.43	0.29	0.42	0.42	0.33	0.32	0.13	0.53	0.86	0.52
Avail Cap(c_a), veh/h	344	913	926	338	913	937	270	698	592	344	532	451
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	0.99	0.99	0.99	0.49	0.49	0.49
Uniform Delay (d), s/veh	22.6	13.7	13.7	20.5	13.6	13.6	36.4	8.1	7.8	33.7	32.6	29.6
Incr Delay (d2), s/veh	4.6	1.5	1.5	2.2	1.4	1.4	0.9	0.3	0.1	0.7	6.2	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(95%),veh/ln	5.6	8.6	8.7	3.0	8.4	8.5	2.5	2.3	0.8	5.3	11.9	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.3	15.1	15.1	22.7	15.0	15.0	37.3	8.4	7.9	34.4	38.8	30.1
LnGrp LOS	C	B	B	C	B	B	D	A	A	C	D	C
Approach Vol, veh/h	953			876			366			746		
Approach Delay, s/veh	17.2			15.8			13.9			35.6		
Approach LOS	B			B			B			D		
Timer - Assigned Phs	2		3	4		6		8				
Phs Duration (G+Y+Rc), s	51.6		11.2	27.2		51.6		38.4				
Change Period (Y+Rc), s	* 5.4		* 5.4	* 5.4		* 5.4		* 5.4				
Max Green Setting (Gmax), s	* 40		* 8.7	* 26		* 40		* 34				
Max Q Clear Time (g_c+I1), s	23.9		2.0	19.9		31.2		5.7				
Green Ext Time (p_c), s	7.0		0.1	1.9		5.1		1.5				
Intersection Summary												
HCM 6th Ctrl Delay			21.0									
HCM 6th LOS			C									
Notes												

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

HCM 6th Signalized Intersection Summary

17: Woodbridge Street & Tujunga Avenue

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↕	
Traffic Volume (veh/h)	9	7	15	17	8	30	12	287	16	40	478	24
Future Volume (veh/h)	9	7	15	17	8	30	12	287	16	40	478	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	10	8	16	18	9	33	13	312	17	43	520	26
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	73	48	62	78	32	71	780	1520	1289	895	1436	72
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.81	0.81	0.81	1.00	1.00	1.00
Sat Flow, veh/h	267	599	769	318	402	881	861	1870	1585	1051	1766	88
Grp Volume(v), veh/h	34	0	0	60	0	0	13	312	17	43	0	546
Grp Sat Flow(s),veh/h/ln	1635	0	0	1601	0	0	861	1870	1585	1051	0	1854
Q Serve(g_s), s	0.0	0.0	0.0	0.8	0.0	0.0	0.3	3.4	0.2	0.2	0.0	0.0
Cycle Q Clear(g_c), s	1.7	0.0	0.0	3.1	0.0	0.0	0.3	3.4	0.2	3.5	0.0	0.0
Prop In Lane	0.29		0.47	0.30		0.55	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	183	0	0	181	0	0	780	1520	1289	895	0	1508
V/C Ratio(X)	0.19	0.00	0.00	0.33	0.00	0.00	0.02	0.21	0.01	0.05	0.00	0.36
Avail Cap(c_a), veh/h	508	0	0	503	0	0	780	1520	1289	895	0	1508
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.97	0.97	0.97	0.62	0.00	0.62
Uniform Delay (d), s/veh	38.8	0.0	0.0	39.5	0.0	0.0	1.6	1.9	1.6	0.1	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	1.1	0.0	0.0	0.0	0.3	0.0	0.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.3	0.0	0.0	2.4	0.0	0.0	0.1	1.3	0.1	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.3	0.0	0.0	40.5	0.0	0.0	1.6	2.2	1.6	0.1	0.0	0.4
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	34			60			342			589		
Approach Delay, s/veh	39.3			40.5			2.1			0.4		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	77.7			12.3			77.7			12.3		
Change Period (Y+Rc), s	* 4.5			* 5.1			* 4.5			* 5.1		
Max Green Setting (Gmax), s	* 55			* 26			* 55			* 26		
Max Q Clear Time (g_c+I1), s	5.5			3.7			5.4			5.1		
Green Ext Time (p_c), s	9.5			0.1			5.0			0.2		

Intersection Summary

HCM 6th Ctrl Delay	4.6
HCM 6th LOS	A

Notes

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

Queues

18: Whitsett Avenue & Ventura Boulevard

06/21/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	83	988	63	28	782	120	62	83	634	247	464
v/c Ratio	0.34	0.64	0.09	0.20	0.73	0.21	0.48	0.25	0.87	0.73	0.49
Control Delay	20.3	23.9	16.3	41.4	48.0	12.1	48.0	34.4	54.5	50.9	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.3	23.9	16.3	41.4	48.0	12.1	48.0	34.4	54.5	50.9	12.9
Queue Length 50th (ft)	30	245	22	14	285	17	36	44	206	149	152
Queue Length 95th (ft)	59	312	47	m23	348	m38	75	82	#374	220	218
Internal Link Dist (ft)	1440				2938				648		1328
Turn Bay Length (ft)	95			135	145			60	60		
Base Capacity (vph)	275	1592	712	142	1077	588	168	440	727	441	987
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.62	0.09	0.20	0.73	0.20	0.37	0.19	0.87	0.56	0.47

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.




























Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

18: Whitsett Avenue & Ventura Boulevard

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 		 		
Traffic Volume (vph)	76	909	58	26	719	110	57	74	3	583	227	427
Future Volume (vph)	76	909	58	26	719	110	57	74	3	583	227	427
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	5.4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1853		3433	1863	1583
Flt Permitted	0.14	1.00	1.00	0.25	1.00	1.00	0.38	1.00		0.95	1.00	1.00
Satd. Flow (perm)	268	3539	1583	469	3539	1583	712	1853		3433	1863	1583
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)	83	988	63	28	782	120	62	80	3	634	247	464
RTOR Reduction (vph)	0	0	0	0	0	84	0	2	0	0	0	13
Lane Group Flow (vph)	83	988	63	28	782	36	62	81	0	634	247	451
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Prot	NA	custom
Protected Phases	1	6			2			4		3	8	1 3
Permitted Phases	6		6	2		2	4					8
Actuated Green, G (s)	43.9	43.9	43.9	30.1	30.1	30.1	18.2	18.2		21.2	18.2	53.2
Effective Green, g (s)	43.9	43.9	43.9	30.1	30.1	30.1	18.2	18.2		21.2	18.2	53.2
Actuated g/C Ratio	0.44	0.44	0.44	0.30	0.30	0.30	0.18	0.18		0.21	0.18	0.53
Clearance Time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	
Vehicle Extension (s)	3.0	4.9	4.9	4.7	4.7	4.7	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	243	1553	694	141	1065	476	129	337		727	339	842
v/s Ratio Prot	0.03	c0.28			c0.22			0.04		c0.18	c0.13	0.19
v/s Ratio Perm	0.12		0.04	0.06		0.02	0.09					0.10
v/c Ratio	0.34	0.64	0.09	0.20	0.73	0.08	0.48	0.24		0.87	0.73	0.54
Uniform Delay, d1	19.1	21.8	16.4	26.0	31.4	25.0	36.7	35.0		38.1	38.6	15.3
Progression Factor	1.00	1.00	1.00	1.42	1.40	5.16	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.8	2.0	0.3	2.5	3.6	0.2	2.8	0.4		11.2	7.6	0.7
Delay (s)	19.9	23.8	16.6	39.3	47.5	129.2	39.5	35.4		49.3	46.2	16.0
Level of Service	B	C	B	D	D	F	D	D		D	D	B
Approach Delay (s)		23.1			57.8			37.1			37.2	
Approach LOS		C			E			D			D	
Intersection Summary												
HCM 2000 Control Delay			38.1									HCM 2000 Level of Service D
HCM 2000 Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			100.0									Sum of lost time (s) 22.1
Intersection Capacity Utilization			74.0%									ICU Level of Service D
Analysis Period (min)			15									
c Critical Lane Group												

Queues

19: Laurel Canyon Boulevard & Ventura Place

06/21/2024



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	50	40	159	11	962	35	76	1307
v/c Ratio	0.38	0.26	0.54	0.06	0.44	0.03	0.25	0.44
Control Delay	45.9	46.5	11.6	30.9	29.7	1.2	17.7	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.9	46.5	11.6	30.9	29.7	1.2	17.7	14.2
Queue Length 50th (ft)	26	24	0	6	345	0	21	153
Queue Length 95th (ft)	63	56	44	m11	372	m0	77	291
Internal Link Dist (ft)	123	395			458			232
Turn Bay Length (ft)			380	105		85	55	
Base Capacity (vph)	135	222	345	177	2186	1005	300	2974
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.18	0.46	0.06	0.44	0.03	0.25	0.44

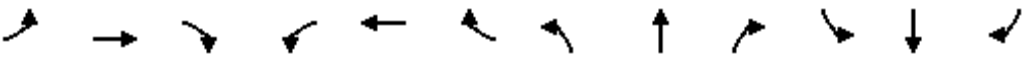
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

19: Laurel Canyon Boulevard & Ventura Place

06/21/2024













												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	28	11	7	27	10	146	10	885	32	70	1155	48
Future Volume (vph)	28	11	7	27	10	146	10	885	32	70	1155	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		9.4			9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.91	
Frpb, ped/bikes		1.00			1.00	0.93	1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes		0.96			1.00	1.00	1.00	1.00	1.00	0.99	1.00	
Frt		0.98			1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.97			0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1703			1798	1479	1770	3539	1518	1757	5055	
Flt Permitted		0.79			0.97	1.00	0.95	1.00	1.00	0.28	1.00	
Satd. Flow (perm)		1391			1798	1479	1770	3539	1518	513	5055	
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)	30	12	8	29	11	159	11	962	35	76	1255	52
RTOR Reduction (vph)	0	7	0	0	0	145	0	0	14	0	3	0
Lane Group Flow (vph)	0	43	0	0	40	14	11	962	21	76	1304	0
Confl. Peds. (#/hr)	16					16			16	16		
Turn Type	Perm	NA		Split	NA	Perm	Prot	NA	Perm	Perm	NA	
Protected Phases		3		4	4		1	6			2	
Permitted Phases	3					4			6	2		
Actuated Green, G (s)		7.3			8.7	8.7	2.0	59.9	59.9	52.9	52.9	
Effective Green, g (s)		7.3			8.7	8.7	2.0	59.9	59.9	52.9	52.9	
Actuated g/C Ratio		0.07			0.09	0.09	0.02	0.60	0.60	0.53	0.53	
Clearance Time (s)		9.4			9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	4.8	4.8	3.1	3.1	
Lane Grp Cap (vph)		101			156	128	35	2119	909	271	2674	
v/s Ratio Prot					c0.02		0.01	c0.27			c0.26	
v/s Ratio Perm		c0.03				0.01			0.01	0.15		
v/c Ratio		0.42			0.26	0.11	0.31	0.45	0.02	0.28	0.49	
Uniform Delay, d1		44.3			42.6	42.1	48.3	11.0	8.2	13.0	14.9	
Progression Factor		1.00			1.00	1.00	0.74	2.57	1.00	1.00	1.00	
Incremental Delay, d2		2.8			0.9	0.4	3.8	0.5	0.0	2.6	0.6	
Delay (s)		47.2			43.5	42.4	39.6	28.9	8.2	15.6	15.6	
Level of Service		D			D	D	D	C	A	B	B	
Approach Delay (s)		47.2			42.7			28.3			15.6	
Approach LOS		D			D			C			B	
Intersection Summary												
HCM 2000 Control Delay			23.1									HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio			0.47									
Actuated Cycle Length (s)			100.0							29.1		
Intersection Capacity Utilization			61.8%									ICU Level of Service B
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

20: Laurel Canyon Boulevard & Ventura Boulevard

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	513	434	286	554	24	289	828	168	84	867	172
Future Volume (veh/h)	148	513	434	286	554	24	289	828	168	84	867	172
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	0.99		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	161	558	472	311	602	26	314	900	183	91	942	187
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	325	1031	610	284	1003	564	359	1145	497	286	1069	593
Arrive On Green	0.03	0.10	0.10	0.08	0.28	0.28	0.10	0.32	0.32	0.03	0.10	0.10
Sat Flow, veh/h	1781	3554	1534	1781	3554	1533	3456	3554	1544	3456	3554	1541
Grp Volume(v), veh/h	161	558	472	311	602	26	314	900	183	91	942	187
Grp Sat Flow(s),veh/h/ln	1781	1777	1534	1781	1777	1533	1728	1777	1544	1728	1777	1541
Q Serve(g_s), s	6.3	15.0	13.8	7.6	14.6	1.1	9.0	23.0	9.1	2.6	26.2	5.6
Cycle Q Clear(g_c), s	6.3	15.0	13.8	7.6	14.6	1.1	9.0	23.0	9.1	2.6	26.2	5.6
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	325	1031	610	284	1003	564	359	1145	497	286	1069	593
V/C Ratio(X)	0.50	0.54	0.77	1.10	0.60	0.05	0.87	0.79	0.37	0.32	0.88	0.32
Avail Cap(c_a), veh/h	329	1031	610	284	1003	564	359	1145	497	359	1080	598
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	0.61	0.61	0.61	0.93	0.93	0.93	0.77	0.77	0.77	0.90	0.90	0.90
Uniform Delay (d), s/veh	25.0	38.9	18.7	32.8	31.0	20.5	44.2	30.8	26.1	45.9	43.3	10.9
Incr Delay (d2), s/veh	0.7	1.2	5.8	79.6	2.5	0.1	16.6	3.2	0.7	0.6	9.1	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(95%),veh/ln	9	10.7	9.6	14.9	10.5	0.7	7.7	14.5	6.0	2.0	19.5	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.7	40.1	24.5	112.5	33.5	20.7	60.7	34.0	26.8	46.4	52.3	11.9
LnGrp LOS	C	D	C	F	C	C	E	C	C	D	D	B
Approach Vol, veh/h	1191			939			1397			1220		
Approach Delay, s/veh	32.0			59.3			39.1			45.7		
Approach LOS	C			E			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.0	35.3	16.0	35.7	13.8	34.5	13.9	37.8				
Change Period (Y+Rc), s	5.4	6.3	5.6	5.6	5.6	6.3	5.6	5.6				
Max Green Setting (Gmax), s	28.7	28.7	10.4	30.4	8.4	27.7	10.4	30.4				
Max Q Clear Time (g_c+I), s	17.0	17.0	11.0	28.2	8.3	16.6	4.6	25.0				
Green Ext Time (p_c), s	0.0	7.8	0.0	1.9	0.0	3.5	0.1	4.0				

Intersection Summary

HCM 6th Ctrl Delay 43.0

HCM 6th LOS D

Notes

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

Queues

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/21/2024



Lane Group	EBL	EBT	WBL	WBT	WBR2	NBT	NBR	SBL	SBT	SBR2
Lane Group Flow (vph)	123	792	63	882	113	37	45	65	82	62
v/c Ratio	0.23	0.44	0.53	1.01	0.32	0.13	0.11	0.38	0.58	0.20
Control Delay	12.2	0.6	78.8	83.7	46.4	51.3	0.5	64.5	75.9	1.5
Queue Delay	16.5	0.7	0.0	21.5	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.7	1.2	78.8	105.2	46.4	51.3	0.5	64.5	75.9	1.5
Queue Length 50th (ft)	82	0	56	424	84	29	0	57	73	0
Queue Length 95th (ft)	m87	0	#114	#637	150	64	0	102	126	0
Internal Link Dist (ft)		48		634		86			226	
Turn Bay Length (ft)	90		95		55		30	90		90
Base Capacity (vph)	580	1914	122	875	358	309	420	192	158	317
Starvation Cap Reductn	435	711	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	52	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.66	0.52	1.07	0.32	0.12	0.11	0.34	0.52	0.20

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	113	714	15	58	721	90	104	26	8	41	60	16
Future Volume (vph)	113	714	15	58	721	90	104	26	8	41	60	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.7		4.9	6.1		6.1		6.9	6.9	7.0	7.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		0.89		1.00	0.91	1.00	0.88
Flpb, ped/bikes	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	0.98		0.85		1.00	0.85	1.00	0.88
Flt Protected	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (prot)	1770	3524		1770	3438		1408		1795	1440	1770	1452
Flt Permitted	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (perm)	1770	3524		1770	3438		1408		1795	1440	1770	1452
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)	123	776	16	63	784	98	113	28	9	45	65	17
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	38	0	0
Lane Group Flow (vph)	123	791	0	63	882	0	113	0	37	7	65	82
Confl. Peds. (#/hr)	29		16	16		29	29	44		44	44	
Turn Type	Prot	NA		Prot	NA		Perm	Split	NA	Perm	Split	NA
Protected Phases	1 3	3 6		5	2			7	7		8	8
Permitted Phases							2			7		
Actuated Green, G (s)	42.9	70.8		8.1	34.8		34.8		23.0	23.0	13.6	13.6
Effective Green, g (s)	42.9	64.7		8.1	34.8		34.8		23.0	23.0	13.6	13.6
Actuated g/C Ratio	0.31	0.46		0.06	0.25		0.25		0.16	0.16	0.10	0.10
Clearance Time (s)				4.9	6.1		6.1		6.9	6.9	7.0	7.0
Vehicle Extension (s)				3.0	4.8		4.8		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	542	1628		102	854		349		294	236	171	141
v/s Ratio Prot	0.07	c0.22		0.04	c0.26				c0.02		0.04	c0.06
v/s Ratio Perm							0.08			0.01		
v/c Ratio	0.23	0.49		0.62	1.03		0.32		0.13	0.03	0.38	0.58
Uniform Delay, d1	36.2	26.1		64.4	52.6		43.0		49.9	49.1	59.2	60.5
Progression Factor	0.31	0.00		1.00	1.00		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.2		10.6	39.5		2.4		0.2	0.1	1.4	6.0
Delay (s)	11.2	0.2		75.1	92.1		45.4		50.1	49.2	60.7	66.5
Level of Service	B	A		E	F		D		D	D	E	E
Approach Delay (s)		1.7			86.1				49.6			62.0
Approach LOS		A			F				D			E
Intersection Summary												
HCM 2000 Control Delay			48.5			HCM 2000 Level of Service			D			
HCM 2000 Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			31.8			
Intersection Capacity Utilization			75.9%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/21/2024



Movement	SBR	SBR2
Lane Configurations		
Traffic Volume (vph)	60	57
Future Volume (vph)	60	57
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		7.0
Lane Util. Factor		1.00
Frpb, ped/bikes		0.76
Flpb, ped/bikes		1.00
Frt		0.85
Flt Protected		1.00
Satd. Flow (prot)		1200
Flt Permitted		1.00
Satd. Flow (perm)		1200
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	65	62
RTOR Reduction (vph)	0	56
Lane Group Flow (vph)	0	6
Confl. Peds. (#/hr)	44	44
Turn Type		Perm
Protected Phases		
Permitted Phases		8
Actuated Green, G (s)		13.6
Effective Green, g (s)		13.6
Actuated g/C Ratio		0.10
Clearance Time (s)		7.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)		116
v/s Ratio Prot		
v/s Ratio Perm		0.01
v/c Ratio		0.05
Uniform Delay, d1		57.3
Progression Factor		1.00
Incremental Delay, d2		0.2
Delay (s)		57.5
Level of Service		E
Approach Delay (s)		
Approach LOS		
Intersection Summary		

HCM 6th Signalized Intersection Summary

22: Carpenter Avenue & Ventura Boulevard

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	704	96	111	915	22	60	4	84	10	30	6
Future Volume (veh/h)	18	704	96	111	915	22	60	4	84	10	30	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	0.91		0.90	0.93		0.90
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	20	765	104	121	995	24	65	4	91	11	33	7
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	276	1918	261	383	2178	53	143	26	156	104	284	281
Arrive On Green	0.62	0.62	0.62	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	553	3119	424	634	3541	85	468	129	787	300	1435	1422
Grp Volume(v), veh/h	20	436	433	121	499	520	160	0	0	44	0	7
Grp Sat Flow(s),veh/h/ln	553	1777	1766	634	1777	1849	1384	0	0	1735	0	1422
Q Serve(g_s), s	2.4	12.5	12.5	17.1	24.7	24.7	7.3	0.0	0.0	0.0	0.0	0.4
Cycle Q Clear(g_c), s	27.1	12.5	12.5	29.6	24.7	24.7	10.2	0.0	0.0	1.9	0.0	0.4
Prop In Lane	1.00		0.24	1.00		0.05	0.41		0.57	0.25		1.00
Lane Grp Cap(c), veh/h	276	1093	1086	383	1093	1137	325	0	0	388	0	281
V/C Ratio(X)	0.07	0.40	0.40	0.32	0.46	0.46	0.49	0.00	0.00	0.11	0.00	0.02
Avail Cap(c_a), veh/h	276	1093	1086	383	1093	1137	469	0	0	565	0	434
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	0.84	0.84	0.84	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.7	9.8	9.8	32.7	25.2	25.2	36.1	0.0	0.0	32.9	0.0	32.3
Incr Delay (d2), s/veh	0.5	1.0	1.0	1.8	1.2	1.1	1.2	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	8.1	8.0	5.5	17.2	17.7	6.6	0.0	0.0	1.6	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.2	10.8	10.8	34.5	26.3	26.3	37.3	0.0	0.0	33.1	0.0	32.4
LnGrp LOS	C	B	B	C	C	C	D	A	A	C	A	C
Approach Vol, veh/h	889			1140			160			51		
Approach Delay, s/veh	11.0			27.2			37.3			33.0		
Approach LOS	B			C			D			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	70.7			29.3			70.7			29.3		
Change Period (Y+Rc), s	* 9.2			9.5			* 9.2			9.5		
Max Green Setting (Gmax), s	* 51			30.5			* 51			30.5		
Max Q Clear Time (g_c+I1), s	29.1			3.9			31.6			12.2		
Green Ext Time (p_c), s	11.8			0.2			13.5			0.9		

Intersection Summary

HCM 6th Ctrl Delay	21.6
HCM 6th LOS	C

Notes

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

Queues

23: Ventura Boulevard & Colfax Avenue

06/21/2024






















Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	204	697	908	304	387
v/c Ratio	0.47	0.29	0.55	0.78	0.45
Control Delay	7.0	4.8	14.2	49.8	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	7.0	4.8	14.2	49.8	3.7
Queue Length 50th (ft)	8	13	132	183	7
Queue Length 95th (ft)	25	36	147	254	50
Internal Link Dist (ft)		981	464		
Turn Bay Length (ft)	160			360	360
Base Capacity (vph)	435	2371	1659	494	863
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.47	0.29	0.55	0.62	0.45
Intersection Summary					

HCM Signalized Intersection Capacity Analysis

23: Ventura Boulevard & Colfax Avenue

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					 							
Traffic Volume (vph)	188	641	0	0	689	146	0	0	0	280	0	356
Future Volume (vph)	188	641	0	0	689	146	0	0	0	280	0	356
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.4			5.4					5.4		5.7
Lane Util. Factor	1.00	0.95			0.95					1.00		1.00
Frt	1.00	1.00			0.97					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1770	3539			3446					1770		1583
Flt Permitted	0.20	1.00			1.00					0.95		1.00
Satd. Flow (perm)	378	3539			3446					1770		1583
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)	204	697	0	0	749	159	0	0	0	304	0	387
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	238
Lane Group Flow (vph)	204	697	0	0	908	0	0	0	0	304	0	149
Turn Type	pm+pt	NA			NA					pm+pt		pm+ov
Protected Phases	5	2			6			3		4		5
Permitted Phases	2						3			7		4
Actuated Green, G (s)	67.0	67.0			48.1					22.2		35.4
Effective Green, g (s)	67.0	67.0			48.1					22.2		35.4
Actuated g/C Ratio	0.67	0.67			0.48					0.22		0.35
Clearance Time (s)	5.7	5.4			5.4					5.4		5.7
Vehicle Extension (s)	3.0	4.3			4.5					3.0		3.0
Lane Grp Cap (vph)	437	2371			1657					392		560
v/s Ratio Prot	c0.06	0.20			c0.26					c0.17		0.04
v/s Ratio Perm	0.25											0.06
v/c Ratio	0.47	0.29			0.55					0.78		0.27
Uniform Delay, d1	8.9	6.8			18.3					36.6		23.0
Progression Factor	0.49	0.60			0.64					1.00		1.00
Incremental Delay, d2	0.7	0.3			1.3					9.3		0.3
Delay (s)	5.2	4.3			13.0					45.8		23.3
Level of Service	A	A			B					D		C
Approach Delay (s)		4.5			13.0			0.0			33.2	
Approach LOS		A			B			A			C	
Intersection Summary												
HCM 2000 Control Delay	15.5				HCM 2000 Level of Service				B			
HCM 2000 Volume to Capacity ratio	0.65											
Actuated Cycle Length (s)	100.0				Sum of lost time (s)				22.8			
Intersection Capacity Utilization	62.2%				ICU Level of Service				B			
Analysis Period (min)	15											
c Critical Lane Group												

Queues

24: Berry Drive & Ventura Boulevard

06/21/2024



Lane Group	EBT	WBL	WBT	NBT
Lane Group Flow (vph)	1947	40	935	61
v/c Ratio	0.67	0.33	0.32	0.26
Control Delay	4.3	14.4	4.7	2.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.3	14.4	4.7	2.8
Queue Length 50th (ft)	130	13	158	0
Queue Length 95th (ft)	175	m20	17	1
Internal Link Dist (ft)	342		273	287
Turn Bay Length (ft)		65		
Base Capacity (vph)	2908	123	2933	394
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.67	0.33	0.32	0.15



















Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

24: Berry Drive & Ventura Boulevard

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1681	110	37	860	0	18	0	38	0	0	0
Future Volume (vph)	0	1681	110	37	860	0	18	0	38	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0			9.4				
Lane Util. Factor		0.95		1.00	0.95			1.00				
Frt		0.99		1.00	1.00			0.91				
Flt Protected		1.00		0.95	1.00			0.98				
Satd. Flow (prot)		3506		1770	3539			1666				
Flt Permitted		1.00		0.08	1.00			0.98				
Satd. Flow (perm)		3506		150	3539			1666				
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)	0	1827	120	40	935	0	20	0	41	0	0	0
RTOR Reduction (vph)	0	2	0	0	0	0	0	58	0	0	0	0
Lane Group Flow (vph)	0	1945	0	40	935	0	0	3	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		6			2		3	3			4	
Permitted Phases	6			2						4		
Actuated Green, G (s)		80.0		80.0	80.0			5.6				
Effective Green, g (s)		80.0		80.0	80.0			5.6				
Actuated g/C Ratio		0.80		0.80	0.80			0.06				
Clearance Time (s)		5.0		5.0	5.0			9.4				
Vehicle Extension (s)		4.9		4.0	4.0			3.0				
Lane Grp Cap (vph)		2804		120	2831			93				
v/s Ratio Prot		c0.55			0.26			c0.00				
v/s Ratio Perm				0.27								
v/c Ratio		0.69		0.33	0.33			0.04				
Uniform Delay, d1		4.5		2.7	2.7			44.6				
Progression Factor		0.67		1.90	1.64			1.00				
Incremental Delay, d2		1.4		6.5	0.3			0.2				
Delay (s)		4.4		11.7	4.7			44.8				
Level of Service		A		B	A			D				
Approach Delay (s)		4.4			5.0			44.8			0.0	
Approach LOS		A			A			D			A	
Intersection Summary												
HCM 2000 Control Delay			5.4			HCM 2000 Level of Service			A			
HCM 2000 Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			23.7			
Intersection Capacity Utilization			67.8%			ICU Level of Service			C			
Analysis Period (min)			15									

c Critical Lane Group

Queues

25: Ventura Boulevard & Tujunga Avenue

06/21/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	132	913	884	243	317
v/c Ratio	0.30	0.37	0.46	0.39	0.54
Control Delay	9.1	9.4	15.3	36.4	23.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	9.1	9.4	15.3	36.4	23.3
Queue Length 50th (ft)	30	154	162	71	128
Queue Length 95th (ft)	m64	236	263	95	181
Internal Link Dist (ft)		426	233	3083	
Turn Bay Length (ft)	180			100	60
Base Capacity (vph)	450	2499	1915	1218	588
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.29	0.37	0.46	0.20	0.54

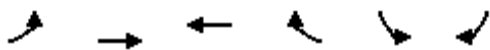
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

25: Ventura Boulevard & Tujunga Avenue

06/21/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	121	840	717	97	224	292
Future Volume (vph)	121	840	717	97	224	292
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.5	5.5		5.5	5.6
Lane Util. Factor	1.00	0.95	0.95		0.97	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3476		3433	1583
Flt Permitted	0.24	1.00	1.00		0.95	1.00
Satd. Flow (perm)	442	3539	3476		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	132	913	779	105	243	317
RTOR Reduction (vph)	0	0	8	0	0	49
Lane Group Flow (vph)	132	913	876	0	243	268
Turn Type	pm+pt	NA	NA		Prot	pt+ov
Protected Phases	1	6	2		4	1 7
Permitted Phases	6					4
Actuated Green, G (s)	70.6	70.6	54.8		18.4	34.1
Effective Green, g (s)	70.6	70.6	54.8		18.4	28.6
Actuated g/C Ratio	0.71	0.71	0.55		0.18	0.29
Clearance Time (s)	5.6	5.5	5.5		5.5	
Vehicle Extension (s)	3.0	4.4	4.9		3.0	
Lane Grp Cap (vph)	447	2498	1904		631	452
v/s Ratio Prot	0.03	0.26	c0.25		0.07	c0.17
v/s Ratio Perm	0.18					
v/c Ratio	0.30	0.37	0.46		0.39	0.59
Uniform Delay, d1	6.3	5.8	13.7		35.8	30.7
Progression Factor	1.36	1.38	1.00		1.00	1.00
Incremental Delay, d2	0.3	0.3	0.8		0.4	2.1
Delay (s)	8.8	8.3	14.5		36.2	32.8
Level of Service	A	A	B		D	C
Approach Delay (s)		8.4	14.5		34.3	
Approach LOS		A	B		C	
Intersection Summary						
HCM 2000 Control Delay			16.4		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.54			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	22.1
Intersection Capacity Utilization			53.4%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

26: Laurel Canyon Boulevard & Maxwellton Road

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Volume (veh/h)	120	0	75	0	0	0	2	1081	0	0	1486	97
Future Volume (veh/h)	120	0	75	0	0	0	2	1081	0	0	1486	97
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.83				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
Work Zone On Approach	No						No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h	130	0	82				2	1175	0	0	1615	105
Peak Hour Factor	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	0	0	2	2
Cap, veh/h	218	0	138				41	1987	0	0	1934	125
Arrive On Green	0.23	0.00	0.23				0.57	0.57	0.00	0.00	0.57	0.57
Sat Flow, veh/h	960	0	605				1	3567	0	0	3482	219
Grp Volume(v), veh/h	212	0	0				631	546	0	0	842	878
Grp Sat Flow(s),veh/h/ln	1565	0	0				1866	1617	0	0	1777	1831
Q Serve(g_s), s	10.9	0.0	0.0				0.0	19.7	0.0	0.0	34.8	35.6
Cycle Q Clear(g_c), s	10.9	0.0	0.0				19.7	19.7	0.0	0.0	34.8	35.6
Prop In Lane	0.61		0.39				0.00		0.00	0.00		0.12
Lane Grp Cap(c), veh/h	356	0	0				1105	923	0	0	1014	1045
V/C Ratio(X)	0.60	0.00	0.00				0.57	0.59	0.00	0.00	0.83	0.84
Avail Cap(c_a), veh/h	431	0	0				1105	923	0	0	1014	1045
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.83	0.83	0.00	0.00	0.36	0.36
Uniform Delay (d), s/veh	31.1	0.0	0.0				12.5	12.5	0.0	0.0	15.8	15.9
Incr Delay (d2), s/veh	1.6	0.0	0.0				1.8	2.3	0.0	0.0	3.0	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.6	0.0	0.0				12.0	10.8	0.0	0.0	16.6	17.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.7	0.0	0.0				14.3	14.9	0.0	0.0	18.8	19.1
LnGrp LOS	C	A	A				B	B	A	A	B	B
Approach Vol, veh/h	212						1177			1720		
Approach Delay, s/veh	32.7						14.6			18.9		
Approach LOS	C						B			B		
Timer - Assigned Phs	2			4			6					
Phs Duration (G+Y+Rc), s	60.4			29.6			60.4					
Change Period (Y+Rc), s	9.0			9.2			9.0					
Max Green Setting (Gmax), s	47.0			24.8			47.0					
Max Q Clear Time (g_c+I1), s	37.6			12.9			21.7					
Green Ext Time (p_c), s	8.8			1.0			16.3					

Intersection Summary







HCM 6th Ctrl Delay	18.2
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary

27: Laurel Canyon Boulevard & Laurel Terrace Drive/Sunshine Terrace Drive

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	15	249	93	22	89	57	1096	47	22	1523	18
Future Volume (veh/h)	16	15	249	93	22	89	57	1096	47	22	1523	18
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	17	16	271	101	24	97	62	1191	51	24	1655	20
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	43	30	340	126	38	93	80	2407	103	299	2195	26
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.04	0.69	0.69	0.61	0.61	0.61
Sat Flow, veh/h	52	132	1512	364	168	413	1781	3472	149	448	3596	43
Grp Volume(v), veh/h	304	0	0	222	0	0	62	609	633	24	817	858
Grp Sat Flow(s),veh/h/ln	1696	0	0	945	0	0	1781	1777	1844	448	1777	1863
Q Serve(g_s), s	0.0	0.0	0.0	6.3	0.0	0.0	4.1	19.2	19.2	3.2	39.8	40.0
Cycle Q Clear(g_c), s	20.7	0.0	0.0	27.0	0.0	0.0	4.1	19.2	19.2	12.4	39.8	40.0
Prop In Lane	0.06		0.89	0.45		0.44	1.00		0.08	1.00		0.02
Lane Grp Cap(c), veh/h	413	0	0	256	0	0	80	1232	1278	299	1084	1137
V/C Ratio(X)	0.74	0.00	0.00	0.87	0.00	0.00	0.78	0.49	0.50	0.08	0.75	0.75
Avail Cap(c_a), veh/h	413	0	0	256	0	0	110	1232	1278	299	1084	1137
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.44	0.44	0.44
Uniform Delay (d), s/veh	44.3	0.0	0.0	47.5	0.0	0.0	56.7	8.6	8.6	13.8	16.9	16.9
Incr Delay (d2), s/veh	6.7	0.0	0.0	25.3	0.0	0.0	20.8	1.4	1.4	0.2	2.2	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(95%),veh/ln	14.4	0.0	0.0	13.3	0.0	0.0	4.2	11.5	11.8	0.6	19.9	20.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.0	0.0	0.0	72.8	0.0	0.0	77.5	10.0	10.0	14.1	19.1	19.0
LnGrp LOS	D	A	A	E	A	A	E	B	A	B	B	B
Approach Vol, veh/h	304		222				1304			1699		
Approach Delay, s/veh	51.0		72.8				13.2			19.0		
Approach LOS	D		E				B			B		
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	10.0	78.0	32.0		88.0		32.0					
Change Period (Y+Rc), s	4.6	4.8	* 5		4.8		* 5					
Max Green Setting (Gmax), s	71.2		* 27		83.2		* 27					
Max Q Clear Time (g_c+I1), s	42.0		22.7		21.2		29.0					
Green Ext Time (p_c), s	0.0	15.8	0.8		11.3		0.0					

Intersection Summary

HCM 6th Ctrl Delay 23.0

HCM 6th LOS C

Notes

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

Queues

28: Laurel Canyon Boulevard & Fryman Road

06/21/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	248	7	23	1033	2075
v/c Ratio	0.71	0.02	0.28	0.43	0.88
Control Delay	44.2	26.0	18.6	7.7	18.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.2	26.0	18.6	7.7	18.0
Queue Length 50th (ft)	132	3	5	121	420
Queue Length 95th (ft)	195	14	29	200	#771
Internal Link Dist (ft)				236	183
Turn Bay Length (ft)			145		
Base Capacity (vph)	542	485	82	2412	2370
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.46	0.01	0.28	0.43	0.88

Intersection Summary






















95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

28: Laurel Canyon Boulevard & Fryman Road

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								 			 	
Traffic Volume (vph)	228	0	6	0	0	0	21	950	0	0	1623	286
Future Volume (vph)	228	0	6	0	0	0	21	950	0	0	1623	286
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4		5.4				5.4	5.4			5.4	
Lane Util. Factor	1.00		1.00				1.00	0.95			0.95	
Frt	1.00		0.85				1.00	1.00			0.98	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	3539			3460	
Flt Permitted	0.95		1.00				0.07	1.00			1.00	
Satd. Flow (perm)	1770		1583				122	3539			3460	
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)	248	0	7	0	0	0	23	1033	0	0	1764	311
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	12	0
Lane Group Flow (vph)	248	0	7	0	0	0	23	1033	0	0	2063	0
Turn Type	Perm		Perm				Perm	NA		Perm	NA	
Protected Phases								2				6
Permitted Phases	8		8				2			6		
Actuated Green, G (s)	17.9		17.9				61.3	61.3			61.3	
Effective Green, g (s)	17.9		17.9				61.3	61.3			61.3	
Actuated g/C Ratio	0.20		0.20				0.68	0.68			0.68	
Clearance Time (s)	5.4		5.4				5.4	5.4			5.4	
Vehicle Extension (s)	3.0		3.0				4.8	4.8			5.1	
Lane Grp Cap (vph)	352		314				83	2410			2356	
v/s Ratio Prot								0.29			c0.60	
v/s Ratio Perm	c0.14		0.00				0.19					
v/c Ratio	0.70		0.02				0.28	0.43			0.88	
Uniform Delay, d1	33.6		29.0				5.6	6.5			11.3	
Progression Factor	1.00		1.00				1.00	1.00			1.00	
Incremental Delay, d2	6.3		0.0				8.1	0.6			4.9	
Delay (s)	39.9		29.0				13.8	7.0			16.3	
Level of Service	D		C				B	A			B	
Approach Delay (s)		39.6			0.0			7.2			16.3	
Approach LOS		D			A			A			B	
Intersection Summary												
HCM 2000 Control Delay			15.2				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			10.8		
Intersection Capacity Utilization			74.4%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th TWSC
29: Laurel Canyon Boulevard & Woodbridge Street

06/21/2024

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↵ ↕			↵ ↕		
Traffic Vol, veh/h	3	0	16	4	0	47	14	1113	4	125	1394	21
Future Vol, veh/h	3	0	16	4	0	47	14	1113	4	125	1394	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	65	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	17	4	0	51	15	1210	4	136	1515	23
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2434	3043	769	2272	3052	607	1538	0	0	1214	0	0
Stage 1	1799	1799	-	1242	1242	-	-	-	-	-	-	-
Stage 2	635	1244	-	1030	1810	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	16	13	344	22	12	439	428	-	-	570	-	-
Stage 1	83	130	-	185	245	-	-	-	-	-	-	-
Stage 2	433	244	-	250	129	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	11	10	344	17	9	439	428	-	-	570	-	-
Mov Cap-2 Maneuver	11	10	-	17	9	-	-	-	-	-	-	-
Stage 1	80	99	-	179	236	-	-	-	-	-	-	-
Stage 2	369	235	-	181	98	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	93.7		42.8		0.2		1.1					
HCM LOS	F		E									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	428	-	-	60	149	570	-	-				
HCM Lane V/C Ratio	0.036	-	-	0.344	0.372	0.238	-	-				
HCM Control Delay (s)	13.7	-	-	93.7	42.8	13.3	-	-				
HCM Lane LOS	B	-	-	F	E	B	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	1.3	1.6	0.9	-	-				

HCM 6th TWSC
30: Valleyheart Drive (North) & Laurel Canyon Boulevard

06/21/2024

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	2	0	10	6	0	27	13	1106	8	29	1400	7
Future Vol, veh/h	2	0	10	6	0	27	13	1106	8	29	1400	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	40	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	11	7	0	29	14	1202	9	32	1522	8





Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2219	2829	765	2060	2829	606	1530	0	0	1211	0	0
Stage 1	1590	1590	-	1235	1235	-	-	-	-	-	-	-
Stage 2	629	1239	-	825	1594	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	24	17	346	32	17	440	431	-	-	572	-	-
Stage 1	112	166	-	187	247	-	-	-	-	-	-	-
Stage 2	437	246	-	333	165	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	21	16	346	29	16	440	431	-	-	572	-	-
Mov Cap-2 Maneuver	21	16	-	29	16	-	-	-	-	-	-	-
Stage 1	108	157	-	181	239	-	-	-	-	-	-	-
Stage 2	395	238	-	304	156	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	47.8		45.9		0.2		0.2	
HCM LOS	E		E					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	431	-	-	97	123	572	-
HCM Lane V/C Ratio	0.033	-	-	0.134	0.292	0.055	-
HCM Control Delay (s)	13.6	-	-	47.8	45.9	11.7	-
HCM Lane LOS	B	-	-	E	E	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	1.1	0.2	-

Intersection

Int Delay, s/veh 1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	93	1038	18	121	1280
Future Vol, veh/h	5	93	1038	18	121	1280
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	35	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	101	1128	20	132	1391

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	2098	574	0
Stage 1	1138	-	-
Stage 2	960	-	-
Critical Hdwy	6.84	6.94	-
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	-
Pot Cap-1 Maneuver	45	462	-
Stage 1	268	-	-
Stage 2	332	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	35	462	-
Mov Cap-2 Maneuver	35	-	-
Stage 1	268	-	-
Stage 2	259	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25	0	1.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	285	604
HCM Lane V/C Ratio	-	-	0.374	0.218
HCM Control Delay (s)	-	-	25	12.6
HCM Lane LOS	-	-	D	B
HCM 95th %tile Q(veh)	-	-	1.7	0.8

HCM 6th AWSC
32: Radford Avenue & Sarah Street

06/21/2024

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	12	1	0	3	6	54	2	36	1	114	103	13
Future Vol, veh/h	12	1	0	3	6	54	2	36	1	114	103	13
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	1	0	3	7	59	2	39	1	124	112	14
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0




Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8	7.4	7.6	9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	92%	5%	50%
Vol Thru, %	92%	8%	10%	45%
Vol Right, %	3%	0%	86%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	39	13	63	230
LT Vol	2	12	3	114
Through Vol	36	1	6	103
RT Vol	1	0	54	13
Lane Flow Rate	42	14	68	250
Geometry Grp	1	1	1	1
Degree of Util (X)	0.051	0.019	0.078	0.29
Departure Headway (Hd)	4.372	4.851	4.101	4.177
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	824	742	879	855
Service Time	2.372	2.856	2.103	2.233
HCM Lane V/C Ratio	0.051	0.019	0.077	0.292
HCM Control Delay	7.6	8	7.4	9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.1	0.3	1.2

Intersection

Intersection Delay, s/veh 0

Intersection LOS -

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	0	0	0
HCM LOS	-	-	-

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0
LT Vol	0	0	0
Through Vol	0	0	0
RT Vol	0	0	0
Lane Flow Rate	0	0	0
Geometry Grp	1	1	1
Degree of Util (X)	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0
HCM Control Delay	6.9	6.9	6.9
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

HCM 6th AWSC
54: Radford Avenue & Radford Gate

06/21/2024

Intersection

Intersection Delay, s/veh 0

Intersection LOS -

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

Intersection

Intersection Delay, s/veh 0

Intersection LOS -




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

HCM 6th TWSC
56: Colfax Avenue & Colfax Gate

06/21/2024

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1	1	0
Stage 1	1	-	-
Stage 2	0	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	1022	1084	0
Stage 1	1022	-	0
Stage 2	-	-	0
Platoon blocked, %			-
Mov Cap-1 Maneuver	1022	1084	-
Mov Cap-2 Maneuver	1022	-	-
Stage 1	1022	-	-
Stage 2	-	-	-

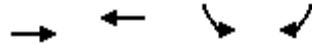
Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

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

Queues

121: Ventura Boulevard & Ventura Pl

06/21/2024



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	846	877	70	30
v/c Ratio	0.79	0.40	0.12	0.11
Control Delay	51.8	6.3	50.6	17.0
Queue Delay	14.9	34.8	0.0	0.0
Total Delay	66.7	41.0	50.6	17.0
Queue Length 50th (ft)	383	30	28	0
Queue Length 95th (ft)	#523	m49	52	30
Internal Link Dist (ft)	509	48	136	
Turn Bay Length (ft)				40
Base Capacity (vph)	1077	2143	669	332
Starvation Cap Reductn	0	1314	0	0
Spillback Cap Reductn	230	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.00	1.06	0.10	0.09

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

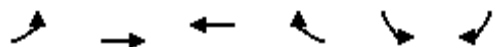
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

121: Ventura Boulevard & Ventura PI

06/21/2024



























Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	↑
Traffic Volume (vph)	0	778	807	0	64	28
Future Volume (vph)	0	778	807	0	64	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.1	6.1		5.7	5.7
Lane Util. Factor		0.95	0.95		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3433	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	846	877	0	70	30
RTOR Reduction (vph)	0	0	0	0	0	25
Lane Group Flow (vph)	0	846	877	0	70	5
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2 4		3	
Permitted Phases						3
Actuated Green, G (s)		41.7	85.3		23.0	23.0
Effective Green, g (s)		41.7	85.3		23.0	23.0
Actuated g/C Ratio		0.30	0.61		0.16	0.16
Clearance Time (s)		6.1			5.7	5.7
Vehicle Extension (s)		4.6			3.0	3.0
Lane Grp Cap (vph)		1054	2156		563	260
v/s Ratio Prot		c0.24	c0.25		c0.02	
v/s Ratio Perm						0.00
v/c Ratio		0.80	0.41		0.12	0.02
Uniform Delay, d1		45.4	14.2		49.9	49.0
Progression Factor		1.00	0.44		1.00	1.00
Incremental Delay, d2		6.5	0.0		0.1	0.0
Delay (s)		51.8	6.3		50.0	49.1
Level of Service		D	A		D	D
Approach Delay (s)		51.8	6.3		49.7	
Approach LOS		D	A		D	
Intersection Summary						
HCM 2000 Control Delay		29.8		HCM 2000 Level of Service		C
HCM 2000 Volume to Capacity ratio		0.56				
Actuated Cycle Length (s)		140.0		Sum of lost time (s)		31.8
Intersection Capacity Utilization		38.8%		ICU Level of Service		A
Analysis Period (min)		15				
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

1: Riverside Drive & Laurel Canyon Boulevard








06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	310	939	143	111	484	105	177	738	116	156	767	221
Future Volume (veh/h)	310	939	143	111	484	105	177	738	116	156	767	221
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	337	1021	155	121	526	114	192	802	126	170	834	240
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	180	1032	460	255	927	413	309	1314	703	308	1427	408
Arrive On Green	0.10	0.29	0.29	0.02	0.09	0.09	0.08	0.37	0.37	0.08	0.36	0.36
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	3554	1585	1781	3944	1128
Grp Volume(v), veh/h	337	1021	155	121	526	114	192	802	126	170	719	355
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1777	1585	1781	1702	1667
Q Serve(g_s), s	12.1	34.3	9.2	4.1	17.1	8.1	8.0	22.0	5.8	7.1	20.5	20.7
Cycle Q Clear(g_c), s	12.1	34.3	9.2	4.1	17.1	8.1	8.0	22.0	5.8	7.1	20.5	20.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.68
Lane Grp Cap(c), veh/h	180	1032	460	255	927	413	309	1314	703	308	1231	603
V/C Ratio(X)	1.88	0.99	0.34	0.48	0.57	0.28	0.62	0.61	0.18	0.55	0.58	0.59
Avail Cap(c_a), veh/h	180	1032	460	357	927	413	329	1314	703	326	1231	603
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	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	54.0	42.4	33.5	56.3	48.3	44.2	23.5	30.8	20.2	23.5	31.0	31.0
Incr Delay (d2), s/veh	414.7	25.5	2.0	1.4	2.5	1.6	2.8	1.8	0.5	1.8	2.0	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(95%),veh/ln	41.2	25.2	6.7	3.4	13.2	6.3	6.4	14.3	3.9	5.5	13.3	13.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	468.7	67.9	35.4	57.6	50.8	45.9	26.2	32.6	20.7	25.3	33.0	35.2
LnGrp LOS	F	E	D	E	D	D	C	C	C	C	C	D
Approach Vol, veh/h	1513				761				1120			
Approach Delay, s/veh	153.8				51.2				30.2			
Approach LOS	F				D				C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.7	49.3	18.0	37.0	14.7	50.3	14.4	40.6				
Change Period (Y+Rc), s	5.6	5.9	5.9	* 5.7	5.6	5.9	5.6	* 5.7				
Max Green Setting (Gmax), s	11.4	42.1	12.1	* 31	10.4	43.1	12.4	* 31				
Max Q Clear Time (g_c+I1), s	10.0	22.7	14.1	19.1	9.1	24.0	6.1	36.3				
Green Ext Time (p_c), s	0.1	6.8	0.0	2.9	0.1	5.7	0.2	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	74.6											
HCM 6th LOS	E											
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
User approved changes to right turn type.												

HCM 6th TWSC

2: Riverside Drive & Radford Avenue

06/24/2024

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	954	32	36	963	7	16	2	28	1	0	8
Future Vol, veh/h	11	954	32	36	963	7	16	2	28	1	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	105	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	1037	35	39	1047	8	17	2	30	1	0	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1055	0	0	1072	0	0	1663	2194	519	1673	2225	528
Stage 1	-	-	-	-	-	-	1061	1061	-	1129	1129	-
Stage 2	-	-	-	-	-	-	602	1133	-	544	1096	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	656	-	-	646	-	-	64	45	502	62	43	495
Stage 1	-	-	-	-	-	-	239	299	-	217	277	-
Stage 2	-	-	-	-	-	-	453	276	-	491	287	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	656	-	-	646	-	-	59	42	502	53	40	495
Mov Cap-2 Maneuver	-	-	-	-	-	-	59	42	-	53	40	-
Stage 1	-	-	-	-	-	-	235	294	-	213	260	-
Stage 2	-	-	-	-	-	-	418	259	-	449	282	-

























Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.4			53			19.6		
HCM LOS							F			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	123	656	-	-	646	-	-	257
HCM Lane V/C Ratio	0.407	0.018	-	-	0.061	-	-	0.038
HCM Control Delay (s)	53	10.6	-	-	10.9	-	-	19.6
HCM Lane LOS	F	B	-	-	B	-	-	C
HCM 95th %tile Q(veh)	1.7	0.1	-	-	0.2	-	-	0.1

HCM 6th Signalized Intersection Summary

3: Colfax Avenue & Riverside Drive

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	625	180	173	697	39	145	468	83	29	313	80
Future Volume (veh/h)	148	625	180	173	697	39	145	468	83	29	313	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	161	679	196	188	758	42	158	509	90	32	340	87
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	265	1356	605	258	1356	605	425	826	700	425	826	700
Arrive On Green	0.26	0.26	0.26	0.38	0.38	0.38	0.88	0.88	0.88	0.44	0.44	0.44
Sat Flow, veh/h	680	3554	1585	634	3554	1585	961	1870	1585	820	1870	1585
Grp Volume(v), veh/h	161	679	196	188	758	42	158	509	90	32	340	87
Grp Sat Flow(s),veh/h/ln	680	1777	1585	634	1777	1585	961	1870	1585	820	1870	1585
Q Serve(g_s), s	12.8	9.8	6.0	13.1	10.1	1.0	5.4	4.2	0.4	1.5	7.4	1.9
Cycle Q Clear(g_c), s	22.9	9.8	6.0	22.9	10.1	1.0	12.8	4.2	0.4	5.7	7.4	1.9
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	265	1356	605	258	1356	605	425	826	700	425	826	700
V/C Ratio(X)	0.61	0.50	0.32	0.73	0.56	0.07	0.37	0.62	0.13	0.08	0.41	0.12
Avail Cap(c_a), veh/h	265	1356	605	258	1356	605	425	826	700	425	826	700
HCM Platoon Ratio	0.67	0.67	0.67	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	0.94	0.94	0.94	0.69	0.69	0.69	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.0	17.4	16.0	25.2	14.6	11.8	4.7	2.2	2.0	12.3	11.4	9.9
Incr Delay (d2), s/veh	9.9	1.3	1.4	15.5	1.6	0.2	1.7	2.4	0.3	0.3	1.5	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(95%),veh/ln	5.5	7.1	3.9	6.5	6.6	0.6	0.9	2.2	0.3	0.5	5.2	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.9	18.8	17.5	40.7	16.1	12.0	6.4	4.6	2.2	12.7	12.9	10.3
LnGrp LOS	D	B	B	D	B	B	A	A	A	B	B	B
Approach Vol, veh/h	1036			988			757			459		
Approach Delay, s/veh	21.5			20.6			4.7			12.4		
Approach LOS	C			C			A			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	28.0			32.0			28.0			32.0		
Change Period (Y+Rc), s	* 5.1			* 5.5			* 5.1			* 5.5		
Max Green Setting (Gmax), s	* 23			* 27			* 23			* 27		
Max Q Clear Time (g_c+I1), s	24.9			14.8			24.9			9.4		
Green Ext Time (p_c), s	0.0			3.4			0.0			2.2		
Intersection Summary												
HCM 6th Ctrl Delay	16.0											
HCM 6th LOS	B											
Notes												

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

Queues

4: Riverside Drive & SR 170 Southbound Off-Ramp

06/24/2024



Lane Group	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	828	5	728	14	225	215	210
v/c Ratio	0.40	0.02	0.35	0.04	0.61	0.47	0.43
Control Delay	10.6	9.4	9.6	0.2	31.4	10.2	6.3
Queue Delay	0.5	0.0	0.3	0.1	0.3	0.4	0.0
Total Delay	11.0	9.4	9.9	0.3	31.7	10.6	6.3
Queue Length 50th (ft)	83	1	73	0	90	18	0
Queue Length 95th (ft)	207	m5	210	0	151	72	48
Internal Link Dist (ft)	2214		245	105		344	
Turn Bay Length (ft)		25			140		150
Base Capacity (vph)	2070	309	2071	343	457	524	562
Starvation Cap Reductn	0	0	688	0	0	0	0
Spillback Cap Reductn	715	0	0	74	32	71	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.02	0.53	0.05	0.53	0.47	0.37




















Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: Riverside Drive & SR 170 Southbound Off-Ramp













06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	757	5	5	670	0	0	0	13	247	6	345
Future Volume (vph)	0	757	5	5	670	0	0	0	13	247	6	345
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Lane Util. Factor		0.95		1.00	0.95			1.00		0.95	0.91	0.95
Frt		1.00		1.00	1.00			0.86		1.00	0.88	0.85
Flt Protected		1.00		0.95	1.00			1.00		0.95	0.99	1.00
Satd. Flow (prot)		3536		1770	3539			1611		1681	1485	1504
Flt Permitted		1.00		0.28	1.00			1.00		0.95	0.99	1.00
Satd. Flow (perm)		3536		529	3539			1611		1681	1485	1504
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)	0	823	5	5	728	0	0	0	14	268	7	375
RTOR Reduction (vph)	0	0	0	0	0	0	0	14	0	0	129	164
Lane Group Flow (vph)	0	828	0	5	728	0	0	0	0	225	86	46
Turn Type		NA		Perm	NA			NA		Split	NA	Perm
Protected Phases		6			2			4		3	3	
Permitted Phases				2			4					3
Actuated Green, G (s)		36.1		36.1	36.1			1.6		15.3	15.3	15.3
Effective Green, g (s)		36.1		36.1	36.1			1.6		15.3	15.3	15.3
Actuated g/C Ratio		0.52		0.52	0.52			0.02		0.22	0.22	0.22
Clearance Time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Vehicle Extension (s)		3.8		2.4	2.4			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1823		272	1825			36		367	324	328
v/s Ratio Prot		c0.23			0.21			c0.00		c0.13	0.06	
v/s Ratio Perm				0.01								0.03
v/c Ratio		0.45		0.02	0.40			0.01		0.61	0.27	0.14
Uniform Delay, d1		10.7		8.3	10.3			33.4		24.7	22.7	22.0
Progression Factor		1.00		0.86	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2		0.8		0.1	0.6			0.1		3.0	0.4	0.2
Delay (s)		11.5		7.3	11.0			33.5		27.7	23.1	22.2
Level of Service		B		A	B			C		C	C	C
Approach Delay (s)		11.5			10.9			33.5			24.4	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			15.2			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.49									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			53.6%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	NWL	NWR
Lane Group Flow (vph)	221	635	285	208	348	132	30	791	61	527	340	123
v/c Ratio	0.69	0.91	0.92	1.11	0.44	0.38	0.13	0.87	0.39	0.41	0.66	0.57
Control Delay	48.4	71.8	87.4	135.6	49.0	49.8	47.4	61.1	68.1	34.5	62.0	64.9
Queue Delay	0.0	47.8	48.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.4	119.6	135.4	135.6	49.0	49.8	47.4	61.1	68.1	34.5	62.0	64.9
Queue Length 50th (ft)	160	308	276	~161	144	103	22	375	54	185	153	116
Queue Length 95th (ft)	185	#436	#483	#328	195	168	56	#601	101	255	195	183
Internal Link Dist (ft)		245			745			2580		383	758	
Turn Bay Length (ft)	140		230	85		110	270		290		215	
Base Capacity (vph)	321	700	311	187	791	353	223	912	157	1285	695	292
Starvation Cap Reductn	0	171	55	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	1.20	1.11	1.11	0.44	0.37	0.13	0.87	0.39	0.41	0.49	0.42

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.





















95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024

												
Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	203	408	271	167	16	176	320	121	28	626	86	17
Future Volume (vph)	203	408	271	167	16	176	320	121	28	626	86	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Lane Util. Factor	1.00	0.91	0.91			1.00	0.95	1.00	1.00	0.95		
Frt	1.00	0.95	0.85			1.00	1.00	0.85	1.00	0.98		
Flt Protected	0.95	1.00	1.00			0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1770	3236	1441			1770	3539	1583	1770	3465		
Flt Permitted	0.45	1.00	1.00			0.13	1.00	1.00	0.46	1.00		
Satd. Flow (perm)	843	3236	1441			251	3539	1583	850	3465		
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)	221	443	295	182	17	191	348	132	30	680	93	18
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	221	635	285	0	0	208	348	132	30	791	0	0
Turn Type	pm+pt	NA	Perm		pm+pt	pm+pt	NA	Perm	Perm	NA		
Protected Phases	1	6			5	5	2			8		
Permitted Phases	6		6		2	2		2	8			
Actuated Green, G (s)	39.2	28.7	28.7			40.1	29.7	29.7	36.9	36.9		
Effective Green, g (s)	39.2	28.7	28.7			40.1	29.7	29.7	36.9	36.9		
Actuated g/C Ratio	0.28	0.20	0.20			0.29	0.21	0.21	0.26	0.26		
Clearance Time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Vehicle Extension (s)	3.0	3.9	3.9			3.0	4.6	4.6	4.7	4.7		
Lane Grp Cap (vph)	305	663	295			184	750	335	224	913		
v/s Ratio Prot	0.05	0.20				c0.08	0.10			c0.23		
v/s Ratio Perm	0.15		0.20			c0.24		0.08	0.04			
v/c Ratio	0.72	0.96	0.97			1.13	0.46	0.39	0.13	0.87		
Uniform Delay, d1	43.1	55.1	55.2			43.8	48.2	47.4	39.4	49.2		
Progression Factor	1.00	1.01	1.01			1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2	7.7	24.9	42.7			105.8	2.1	3.5	0.5	9.3		
Delay (s)	50.9	80.6	98.5			149.6	50.3	50.9	39.9	58.5		
Level of Service	D	F	F			F	D	D	D	E		
Approach Delay (s)		79.3					80.4			57.8		
Approach LOS		E					F			E		
Intersection Summary												
HCM 2000 Control Delay			65.3			HCM 2000 Level of Service				E		
HCM 2000 Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			33.0			
Intersection Capacity Utilization			94.3%			ICU Level of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024



Movement	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	15	41	399	86	29	272	110	14
Future Volume (vph)	15	41	399	86	29	272	110	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.3			6.6	6.6	
Lane Util. Factor		1.00	0.95			0.97	0.91	
Frt		1.00	0.97			0.99	0.85	
Flt Protected		0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	3446			3429	1441	
Flt Permitted		0.95	1.00			0.95	1.00	
Satd. Flow (perm)		1770	3446			3429	1441	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	45	434	93	32	296	120	15
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	61	527	0	0	340	123	0
Turn Type	Prot	Prot	NA		Prot	Prot	Perm	
Protected Phases	7	7	4		3	3		
Permitted Phases							3	
Actuated Green, G (s)		9.9	53.6			21.1	21.1	
Effective Green, g (s)		9.9	53.6			21.1	21.1	
Actuated g/C Ratio		0.07	0.38			0.15	0.15	
Clearance Time (s)		6.8	6.3			6.6	6.6	
Vehicle Extension (s)		3.0	4.9			4.6	4.6	
Lane Grp Cap (vph)		125	1319			516	217	
v/s Ratio Prot		0.03	c0.15			c0.10		
v/s Ratio Perm							0.09	
v/c Ratio		0.49	0.40			0.66	0.57	
Uniform Delay, d1		62.6	31.5			56.1	55.2	
Progression Factor		1.00	1.00			1.00	1.00	
Incremental Delay, d2		3.0	0.4			3.8	4.9	
Delay (s)		65.6	31.9			59.8	60.1	
Level of Service		E	C			E	E	
Approach Delay (s)			35.4			59.9		
Approach LOS			D			E		
Intersection Summary								

HCM 6th Signalized Intersection Summary

6: Laurel Canyon Boulevard & US 101 Northbound Ramps

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↶	↷	↶	↶	↶			↶	↶
Traffic Volume (veh/h)	0	0	0	472	0	501	360	926	0	1	813	161
Future Volume (veh/h)	0	0	0	472	0	501	360	926	0	1	813	161
Initial Q (Qb), veh				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
Parking Bus, Adj				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		
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	1870	1870	1870
Adj Flow Rate, veh/h				688	0	358	391	1007	0	1	884	175
Peak Hour Factor				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	0	2	2	2
Cap, veh/h				819	0	365	511	2338	0	40	2240	715
Arrive On Green				0.23	0.00	0.23	0.05	0.22	0.00	0.45	0.45	0.45
Sat Flow, veh/h				3563	0	1585	3456	3647	0	1	4966	1585
Grp Volume(v), veh/h				688	0	358	391	1007	0	333	552	175
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	1869	1549	1585
Q Serve(g_s), s				16.6	0.0	20.2	10.1	22.0	0.0	0.0	10.7	6.1
Cycle Q Clear(g_c), s				16.6	0.0	20.2	10.1	22.0	0.0	10.7	10.7	6.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				819	0	365	511	2338	0	883	1397	715
V/C Ratio(X)				0.84	0.00	0.98	0.77	0.43	0.00	0.38	0.40	0.24
Avail Cap(c_a), veh/h				819	0	365	1102	2338	0	883	1397	715
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.91	0.91	0.00	0.82	0.82	0.82
Uniform Delay (d), s/veh				33.1	0.0	34.5	41.3	20.7	0.0	16.5	16.5	15.2
Incr Delay (d2), s/veh				7.8	0.0	42.2	2.2	0.5	0.0	1.0	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
%ile BackOfQ(95%),veh/ln				12.1	0.0	17.1	8.1	15.5	0.0	7.7	6.6	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				40.8	0.0	76.6	43.5	21.2	0.0	17.5	17.2	15.9
LnGrp LOS				D	A	E	D	C	A	B	B	B
Approach Vol, veh/h					1046			1398			1060	
Approach Delay, s/veh					53.1			27.4			17.1	
Approach LOS					D			C			B	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	18.6	45.4		26.0		64.0						
Change Period (Y+Rc), s	5.3	4.8		* 5.3		4.8						
Max Green Setting (Gmax), s	25.2			* 21		59.2						
Max Q Clear Time (g_c+M2), s	12.7			22.2		24.0						
Green Ext Time (p_c), s	1.2	5.0		0.0		8.5						

Intersection Summary

HCM 6th Ctrl Delay	32.0
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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

HCM 6th Signalized Intersection Summary

7: US 101 Southbound Ramps & Laurel Canyon Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	317	21	472	0	0	0	0	984	532	261	998	0
Future Volume (veh/h)	317	21	472	0	0	0	0	984	532	261	998	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	238	0	643				0	1070	578	284	1085	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	406	0	723				0	3357	1042	494	2337	0
Arrive On Green	0.23	0.00	0.23				0.00	0.66	0.66	1.00	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	5274	1585	589	3647	0
Grp Volume(v), veh/h	238	0	643				0	1070	578	284	1085	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1702	1585	294	1777	0
Q Serve(g_s), s	10.7	0.0	17.7				0.0	8.2	17.7	22.5	0.0	0.0
Cycle Q Clear(g_c), s	10.7	0.0	17.7				0.0	8.2	17.7	30.7	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	406	0	723				0	3357	1042	494	2337	0
V/C Ratio(X)	0.59	0.00	0.89				0.00	0.32	0.55	0.58	0.46	0.00
Avail Cap(c_a), veh/h	431	0	768				0	3357	1042	494	2337	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.79	0.79	0.00
Uniform Delay (d), s/veh	31.0	0.0	33.6				0.0	6.7	8.3	2.1	0.0	0.0
Incr Delay (d2), s/veh	1.8	0.0	12.0				0.0	0.3	2.1	3.8	0.5	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
%ile BackOfQ(95%),veh/ln	8.0	0.0	12.1				0.0	4.6	9.5	0.5	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.8	0.0	45.7				0.0	6.9	10.4	5.9	0.5	0.0
LnGrp LOS	C	A	D				A	A	B	A	A	A
Approach Vol, veh/h	881						1648			1369		
Approach Delay, s/veh	42.2						8.2			1.7		
Approach LOS	D						A			A		
Timer - Assigned Phs	2			4			6					
Phs Duration (G+Y+Rc), s	64.3			25.7			64.3					
Change Period (Y+Rc), s	* 5.1			* 5.2			* 5.1					
Max Green Setting (Gmax), s	* 34			* 22			* 58					
Max Q Clear Time (g_c+I1), s	19.7			19.7			32.7					
Green Ext Time (p_c), s	8.1			0.8			16.2					

Intersection Summary

HCM 6th Ctrl Delay 13.6
 HCM 6th LOS B

Notes

User approved volume balancing among the lanes for turning movement.

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

Queues

8: Laurel Canyon Boulevard & Landale Street

06/24/2024



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	178	163	50	77	68	1442	59	1361	105
v/c Ratio	0.84	0.60	0.37	0.23	0.28	0.69	0.50	0.82	0.23
Control Delay	72.5	22.7	44.5	1.6	19.3	9.6	35.0	27.3	14.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.5	22.7	44.5	1.6	19.3	9.6	35.0	27.3	14.5
Queue Length 50th (ft)	105	25	27	0	9	112	28	426	45
Queue Length 95th (ft)	#224	91	61	0	m8	m86	m#87	#606	m49
Internal Link Dist (ft)		140	232			591		375	
Turn Bay Length (ft)	85			40	155		125		115
Base Capacity (vph)	212	272	172	380	286	2081	119	1656	458
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.60	0.29	0.20	0.24	0.69	0.50	0.82	0.23

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

8: Laurel Canyon Boulevard & Landale Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	10	109	29	17	71	63	1310	17	54	1252	97
Future Volume (vph)	195	10	109	29	17	71	63	1310	17	54	1252	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.86			1.00	1.00	1.00	1.00		1.00	1.00	0.62
Flpb, ped/bikes	1.00	1.00			0.87	1.00	1.00	1.00		0.99	1.00	1.00
Frt	1.00	0.89			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.99			0.97	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1339			1568	1583	1770	3529		1761	3539	979
Flt Permitted	0.95	0.99			0.71	1.00	0.09	1.00		0.14	1.00	1.00
Satd. Flow (perm)	1681	1339			1144	1583	164	3529		256	3539	979
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)	212	11	118	32	18	77	68	1424	18	59	1361	105
RTOR Reduction (vph)	0	103	0	0	0	70	0	1	0	0	0	0
Lane Group Flow (vph)	178	60	0	0	50	7	68	1441	0	59	1361	105
Confl. Peds. (#/hr)			79	79			164		19	19		164
Turn Type	Split	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	3	3			4		1	6			2	
Permitted Phases				4		4	6			2		2
Actuated Green, G (s)	11.3	11.3			8.3	8.3	51.9	51.9		39.9	39.9	39.9
Effective Green, g (s)	11.3	11.3			8.3	8.3	51.9	51.9		39.9	39.9	39.9
Actuated g/C Ratio	0.13	0.13			0.09	0.09	0.58	0.58		0.44	0.44	0.44
Clearance Time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	5.2		4.5	4.5	4.5
Lane Grp Cap (vph)	211	168			105	145	212	2035		113	1568	434
v/s Ratio Prot	c0.11	0.04					0.02	c0.41			c0.38	
v/s Ratio Perm					c0.04	0.00	0.16			0.23		0.11
v/c Ratio	0.84	0.36			0.48	0.05	0.32	0.71		0.52	0.87	0.24
Uniform Delay, d1	38.5	36.0			38.8	37.3	15.1	13.6		18.1	22.7	15.6
Progression Factor	1.00	1.00			1.00	1.00	1.97	0.65		0.79	0.92	0.72
Incremental Delay, d2	25.2	1.3			3.4	0.1	0.1	0.2		14.2	6.0	1.2
Delay (s)	63.7	37.3			42.2	37.4	29.8	9.1		28.6	26.9	12.3
Level of Service	E	D			D	D	C	A		C	C	B
Approach Delay (s)		51.1			39.3			10.0			25.9	
Approach LOS		D			D			B			C	
Intersection Summary												
HCM 2000 Control Delay			22.0									
HCM 2000 Volume to Capacity ratio			0.83									
Actuated Cycle Length (s)			90.0									
Intersection Capacity Utilization			77.8%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

9: Colfax Avenue & Sarah Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↑	↔	↔	↑	↔
Traffic Volume (veh/h)	13	2	5	7	1	30	6	654	17	35	604	14
Future Volume (veh/h)	13	2	5	7	1	30	6	654	17	35	604	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.99	0.98		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	14	2	5	8	1	33	7	711	18	38	657	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	153	25	24	85	8	79	469	1310	1106	386	1310	1106
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.06	0.23	0.23	0.23	0.47	0.47	0.47
Sat Flow, veh/h	817	381	374	213	121	1222	766	1870	1579	726	1870	1579
Grp Volume(v), veh/h	21	0	0	42	0	0	7	711	18	38	657	15
Grp Sat Flow(s),veh/h/ln	1573	0	0	1556	0	0	766	1870	1579	726	1870	1579
Q Serve(g_s), s	0.0	0.0	0.0	0.5	0.0	0.0	0.5	20.1	0.5	2.5	14.6	0.3
Cycle Q Clear(g_c), s	0.7	0.0	0.0	1.5	0.0	0.0	15.1	20.1	0.5	22.5	14.6	0.3
Prop In Lane	0.67		0.24	0.19		0.79	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	202	0	0	172	0	0	469	1310	1106	386	1310	1106
V/C Ratio(X)	0.10	0.00	0.00	0.24	0.00	0.00	0.01	0.54	0.02	0.10	0.50	0.01
Avail Cap(c_a), veh/h	604	0	0	601	0	0	469	1310	1106	386	1310	1106
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	0.67	0.67	0.67
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.91	0.91	0.91	0.87	0.87	0.87
Uniform Delay (d), s/veh	26.5	0.0	0.0	26.9	0.0	0.0	19.0	14.6	7.1	18.6	8.7	4.9
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.7	0.0	0.0	0.1	1.5	0.0	0.4	1.2	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(95%),veh/ln	0.5	0.0	0.0	1.1	0.0	0.0	0.2	15.1	0.2	0.8	10.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.8	0.0	0.0	27.7	0.0	0.0	19.0	16.1	7.1	19.0	9.9	4.9
LnGrp LOS	C	A	A	C	A	A	B	B	A	B	A	A
Approach Vol, veh/h	21			42			736			710		
Approach Delay, s/veh	26.8			27.7			15.9			10.2		
Approach LOS	C			C			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	46.8			13.2			46.8			13.2		
Change Period (Y+Rc), s	4.8			* 9.3			4.8			* 9.3		
Max Green Setting (Gmax), s	25.2			* 21			25.2			* 21		
Max Q Clear Time (g_c+I1), s	22.1			2.7			24.5			3.5		
Green Ext Time (p_c), s	1.4			0.0			0.3			0.1		

Intersection Summary

HCM 6th Ctrl Delay 13.7

HCM 6th LOS B

Notes

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

Queues

10: Landale Street & Colfax Avenue

06/24/2024



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	41	15	705	668	26
v/c Ratio	0.17	0.03	0.44	0.42	0.02
Control Delay	17.7	3.9	4.9	2.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.7	3.9	4.9	2.1	0.1
Queue Length 50th (ft)	7	0	0	0	0
Queue Length 95th (ft)	31	7	216	5	m0
Internal Link Dist (ft)	262		575	593	
Turn Bay Length (ft)		40			80
Base Capacity (vph)	524	572	1587	1587	1351
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.08	0.03	0.44	0.42	0.02

Intersection Summary






m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

10: Landale Street & Colfax Avenue

06/24/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	21	17	14	649	615	24
Future Volume (vph)	21	17	14	649	615	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	9.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1705		1770	1863	1863	1583
Flt Permitted	0.97		0.36	1.00	1.00	1.00
Satd. Flow (perm)	1705		672	1863	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	23	18	15	705	668	26
RTOR Reduction (vph)	17	0	0	0	0	5
Lane Group Flow (vph)	24	0	15	705	668	21
Turn Type	Perm		Perm	NA	NA	Perm
Protected Phases				6	2	
Permitted Phases	8		6			2
Actuated Green, G (s)	3.3		42.7	42.7	42.7	42.7
Effective Green, g (s)	3.3		42.7	42.7	42.7	42.7
Actuated g/C Ratio	0.05		0.71	0.71	0.71	0.71
Clearance Time (s)	9.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		4.9	4.9	5.3	5.3
Lane Grp Cap (vph)	93		478	1325	1325	1126
v/s Ratio Prot				c0.38	0.36	
v/s Ratio Perm	c0.01		0.02			0.01
v/c Ratio	0.26		0.03	0.53	0.50	0.02
Uniform Delay, d1	27.2		2.6	4.0	3.9	2.5
Progression Factor	1.00		1.00	1.00	0.40	0.05
Incremental Delay, d2	1.5		0.1	1.5	1.1	0.0
Delay (s)	28.7		2.7	5.5	2.7	0.2
Level of Service	C		A	A	A	A
Approach Delay (s)	28.7			5.5	2.6	
Approach LOS	C			A	A	
Intersection Summary						
HCM 2000 Control Delay			4.8	HCM 2000 Level of Service		A
HCM 2000 Volume to Capacity ratio			0.51			
Actuated Cycle Length (s)			60.0	Sum of lost time (s)		14.0
Intersection Capacity Utilization			52.5%	ICU Level of Service		A
Analysis Period (min)			15			
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

11: Whitsett Avenue & Moorpark Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	779	80	122	542	83	106	674	131	82	360	113
Future Volume (veh/h)	130	779	80	122	542	83	106	674	131	82	360	113
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	141	847	87	133	589	90	115	733	142	89	391	123
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	180	850	720	82	720	110	373	1277	247	234	1147	357
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	761	1870	1585	599	1585	242	887	2969	575	634	2668	829
Grp Volume(v), veh/h	141	847	87	133	0	679	115	439	436	89	259	255
Grp Sat Flow(s),veh/h/ln	761	1870	1585	599	0	1827	887	1777	1767	634	1777	1721
Q Serve(g_s), s	11.9	40.6	2.9	0.3	0.0	29.0	9.0	16.8	16.8	11.1	8.7	8.9
Cycle Q Clear(g_c), s	40.9	40.6	2.9	40.9	0.0	29.0	17.9	16.8	16.8	28.0	8.7	8.9
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.33	1.00		0.48
Lane Grp Cap(c), veh/h	180	850	720	82	0	830	373	764	760	234	764	740
V/C Ratio(X)	0.78	1.00	0.12	1.63	0.00	0.82	0.31	0.57	0.57	0.38	0.34	0.34
Avail Cap(c_a), veh/h	180	850	720	82	0	830	373	764	760	234	764	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(l)	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	40.8	24.5	14.2	45.0	0.0	21.3	23.2	19.4	19.4	30.0	17.1	17.2
Incr Delay (d2), s/veh	27.9	30.0	0.3	330.9	0.0	8.8	2.1	3.1	3.1	4.6	1.2	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.0	31.3	1.9	16.7	0.0	19.4	3.6	11.5	11.5	3.5	6.5	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.7	54.5	14.5	375.9	0.0	30.1	25.3	22.5	22.6	34.6	18.3	18.4
LnGrp LOS	E	D	B	F	A	C	C	C	C	C	B	B
Approach Vol, veh/h	1075			812			990			603		
Approach Delay, s/veh	53.1			86.7			22.9			20.8		
Approach LOS	D			F			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	46.0			44.0			46.0			44.0		
Change Period (Y+Rc), s	5.1			5.3			5.1			5.3		
Max Green Setting (Gmax), s	40.9			38.7			40.9			38.7		
Max Q Clear Time (g_c+I1), s	42.9			30.0			42.9			19.9		
Green Ext Time (p_c), s	0.0			2.5			0.0			6.0		

Intersection Summary










HCM 6th Ctrl Delay	46.8
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary

12: Laurel Canyon Boulevard & Moorpark Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	287	530	107	159	426	99	152	1114	186	103	1083	262
Future Volume (veh/h)	287	530	107	159	426	99	152	1114	186	103	1083	262
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	312	576	116	173	463	108	165	1211	202	112	1177	285
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	293	841	169	325	505	560	236	884	147	229	816	196
Arrive On Green	0.11	0.29	0.29	0.09	0.27	0.27	0.09	0.29	0.29	0.11	0.38	0.38
Sat Flow, veh/h	1781	2949	592	1781	1870	1585	1781	3050	506	1781	2843	681
Grp Volume(v), veh/h	312	346	346	173	463	108	165	702	711	112	731	731
Grp Sat Flow(s),veh/h/ln	1781	1777	1764	1781	1870	1585	1781	1777	1779	1781	1777	1748
Q Serve(g_s), s	9.5	15.6	15.7	6.2	21.6	4.3	5.7	26.1	26.1	3.8	25.8	25.8
Cycle Q Clear(g_c), s	9.5	15.6	15.7	6.2	21.6	4.3	5.7	26.1	26.1	3.8	25.8	25.8
Prop In Lane	1.00		0.34	1.00		1.00	1.00		0.28	1.00		0.39
Lane Grp Cap(c), veh/h	293	507	503	325	505	560	236	515	516	229	510	502
V/C Ratio(X)	1.06	0.68	0.69	0.53	0.92	0.19	0.70	1.36	1.38	0.49	1.43	1.46
Avail Cap(c_a), veh/h	293	507	504	351	534	585	252	515	516	250	510	502
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.46	0.46	0.46
Uniform Delay (d), s/veh	26.3	28.6	28.6	21.9	31.9	20.2	23.1	32.0	32.0	22.0	27.8	27.8
Incr Delay (d2), s/veh	70.6	3.8	3.9	1.4	20.2	0.2	7.7	176.1	181.9	0.7	200.3	211.1
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(95%),veh/ln	15.7	11.2	11.2	4.6	17.9	2.8	5.0	53.9	55.4	2.7	54.3	55.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	96.8	32.3	32.5	23.2	52.0	20.3	30.8	208.0	213.9	22.8	228.2	238.9
LnGrp LOS	F	C	C	C	D	C	C	F	F	C	F	F
Approach Vol, veh/h	1004			744			1578			1574		
Approach Delay, s/veh	52.4			40.7			192.1			218.5		
Approach LOS	D			D			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.2	31.2	15.0	30.6	12.9	31.5	13.6	32.0				
Change Period (Y+Rc), s	5.3	* 5.4	* 5.5	6.3	* 5.4	* 5.4	* 5.5	6.3				
Max Green Setting (Gmax), s	30.7	* 24	* 9.5	25.7	* 8.6	* 24	* 9.5	25.7				
Max Q Clear Time (g_c+I1), s	27.8	27.8	11.5	23.6	5.8	28.1	8.2	17.7				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.1	0.0	0.1	2.6				

Intersection Summary

HCM 6th Ctrl Delay 149.0

HCM 6th LOS F

Notes

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






HCM 6th TWSC

13: Moorpark Street & Radford Avenue

06/24/2024

Intersection

Int Delay, s/veh 1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	82	765	745	39	11	49
Future Vol, veh/h	82	765	745	39	11	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	50
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	89	832	810	42	12	53

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	852	0	0 1425 426
Stage 1	-	-	- 831 -
Stage 2	-	-	- 594 -
Critical Hdwy	4.14	-	- 6.84 6.94
Critical Hdwy Stg 1	-	-	- 5.84 -
Critical Hdwy Stg 2	-	-	- 5.84 -
Follow-up Hdwy	2.22	-	- 3.52 3.32
Pot Cap-1 Maneuver	783	-	- 126 577
Stage 1	-	-	- 388 -
Stage 2	-	-	- 514 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	783	-	- 112 577
Mov Cap-2 Maneuver	-	-	- 112 -
Stage 1	-	-	- 344 -
Stage 2	-	-	- 514 -























Approach	EB	WB	SB
HCM Control Delay, s	1	0	17.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	783	-	-	-	112	577
HCM Lane V/C Ratio	0.114	-	-	-	0.107	0.092
HCM Control Delay (s)	10.2	-	-	-	40.9	11.9
HCM Lane LOS	B	-	-	-	E	B
HCM 95th %tile Q(veh)	0.4	-	-	-	0.3	0.3

HCM 6th Signalized Intersection Summary

14: Colfax Avenue & Moorpark Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	568	111	107	534	121	122	341	188	141	384	121
Future Volume (veh/h)	92	568	111	107	534	121	122	341	188	141	384	121
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	0.98		0.95	0.98		0.95	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	100	617	121	116	580	132	133	371	204	153	417	132
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	253	1164	228	266	748	170	267	461	371	285	740	720
Arrive On Green	0.14	0.79	0.79	0.09	0.09	0.09	0.25	0.25	0.25	0.09	0.40	0.40
Sat Flow, veh/h	1781	2943	576	706	2844	645	840	1870	1504	1781	1870	1535
Grp Volume(v), veh/h	100	372	366	116	362	350	133	371	204	153	417	132
Grp Sat Flow(s),veh/h/ln	1781	1777	1742	706	1777	1712	840	1870	1504	1781	1870	1535
Q Serve(g_s), s	3.4	6.8	6.8	14.3	17.9	18.0	13.2	16.8	10.6	5.4	15.6	4.5
Cycle Q Clear(g_c), s	3.4	6.8	6.8	14.3	17.9	18.0	15.4	16.8	10.6	5.4	15.6	4.5
Prop In Lane	1.00		0.33	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	253	703	689	266	467	450	267	461	371	285	740	720
V/C Ratio(X)	0.39	0.53	0.53	0.44	0.77	0.78	0.50	0.81	0.55	0.54	0.56	0.18
Avail Cap(c_a), veh/h	294	703	689	266	467	450	267	461	371	296	740	720
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	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	0.91	0.91	0.91
Uniform Delay (d), s/veh	20.6	6.4	6.4	36.8	38.5	38.5	32.4	31.9	29.6	22.8	21.2	14.0
Incr Delay (d2), s/veh	1.0	2.8	2.9	5.1	11.8	12.5	6.5	13.9	5.8	1.6	2.8	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(95%),veh/ln	2.4	4.0	3.9	5.5	15.2	14.9	5.5	14.0	7.7	4.1	11.1	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.5	9.2	9.3	41.9	50.3	51.0	38.9	45.8	35.4	24.4	24.0	14.5
LnGrp LOS	C	A	A	D	D	D	D	D	D	C	C	B
Approach Vol, veh/h		838			828			708			702	
Approach Delay, s/veh		10.7			49.4			41.5			22.3	
Approach LOS		B			D			D			C	
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	11.9	33.1		45.0		45.0	13.4	31.6				
Change Period (Y+Rc), s	* 5.5	* 9.4		* 9.4		* 9.4	5.6	* 9.4				
Max Green Setting (Gmax), s	* 8.5	* 22		* 36		* 36	8.4	* 22				
Max Q Clear Time (g_c+I1), s	5.4	20.0		17.6		8.8	7.4	18.8				
Green Ext Time (p_c), s	0.1	0.8		2.8		4.9	0.0	1.1				

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.

HCM 6th TWSC
15: Irvine Avenue & Moorpark Street























06/24/2024

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	793	15	14	747	6	4	0	10	0	0	13
Future Vol, veh/h	5	793	15	14	747	6	4	0	10	0	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	862	16	15	812	7	4	0	11	0	0	14
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	819	0	0	878	0	0	1316	1729	439	1287	1734	410
Stage 1	-	-	-	-	-	-	880	880	-	846	846	-
Stage 2	-	-	-	-	-	-	436	849	-	441	888	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	805	-	-	765	-	-	115	87	566	121	87	591
Stage 1	-	-	-	-	-	-	308	363	-	323	377	-
Stage 2	-	-	-	-	-	-	569	375	-	565	360	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	805	-	-	765	-	-	108	83	566	114	83	591
Mov Cap-2 Maneuver	-	-	-	-	-	-	108	83	-	114	83	-
Stage 1	-	-	-	-	-	-	304	359	-	319	363	-
Stage 2	-	-	-	-	-	-	535	362	-	547	356	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.4			19.9			11.2		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	256	805	-	-	765	-	-	591				
HCM Lane V/C Ratio	0.059	0.007	-	-	0.02	-	-	0.024				
HCM Control Delay (s)	19.9	9.5	0.1	-	9.8	0.2	-	11.2				
HCM Lane LOS	C	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.1				

HCM 6th Signalized Intersection Summary

16: Tujunga Avenue & Moorpark Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	209	644	83	87	483	63	82	356	93	89	213	89
Future Volume (veh/h)	209	644	83	87	483	63	82	356	93	89	213	89
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	227	700	90	95	525	68	89	387	101	97	232	97
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	470	1776	228	379	1775	229	284	597	506	209	357	303
Arrive On Green	0.56	0.56	0.56	0.56	0.56	0.56	0.07	0.32	0.32	0.19	0.19	0.19
Sat Flow, veh/h	824	3167	407	686	3165	409	1781	1870	1585	908	1870	1585
Grp Volume(v), veh/h	227	392	398	95	294	299	89	387	101	97	232	97
Grp Sat Flow(s),veh/h/ln	824	1777	1797	686	1777	1797	1781	1870	1585	908	1870	1585
Q Serve(g_s), s	18.0	11.2	11.2	8.2	7.8	7.9	3.4	16.0	4.2	9.2	10.3	4.7
Cycle Q Clear(g_c), s	25.9	11.2	11.2	19.4	7.8	7.9	3.4	16.0	4.2	13.7	10.3	4.7
Prop In Lane	1.00		0.23	1.00		0.23	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	470	996	1008	379	996	1007	284	597	506	209	357	303
V/C Ratio(X)	0.48	0.39	0.39	0.25	0.30	0.30	0.31	0.65	0.20	0.46	0.65	0.32
Avail Cap(c_a), veh/h	470	996	1008	379	996	1007	333	698	592	294	532	451
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	0.95	0.95	0.95	0.76	0.76	0.76
Uniform Delay (d), s/veh	17.3	11.1	11.2	16.6	10.4	10.4	25.3	26.3	22.3	37.1	33.6	31.4
Incr Delay (d2), s/veh	3.5	1.2	1.2	1.6	0.8	0.8	0.6	1.6	0.2	1.2	1.5	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(95%),veh/ln	6.5	7.7	7.8	2.5	5.4	5.5	2.6	11.3	2.7	3.7	7.8	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.8	12.3	12.3	18.2	11.2	11.2	25.9	27.9	22.4	38.3	35.1	31.8
LnGrp LOS	C	B	B	B	B	B	C	C	C	D	D	C
Approach Vol, veh/h	1017				688			577			426	
Approach Delay, s/veh	14.2				12.1			26.6			35.1	
Approach LOS	B				B			C			D	
Timer - Assigned Phs	2		3	4		6		8				
Phs Duration (G+Y+Rc), s	55.9		11.5	22.6		55.9		34.1				
Change Period (Y+Rc), s	* 5.4		* 5.3	* 5.4		* 5.4		* 5.4				
Max Green Setting (Gmax), s	* 40		* 8.7	* 26		* 40		* 34				
Max Q Clear Time (g_c+I1), s	21.4		5.4	15.7		27.9		18.0				
Green Ext Time (p_c), s	5.9		0.0	1.5		6.8		2.3				
Intersection Summary												
HCM 6th Ctrl Delay	19.6											
HCM 6th LOS	B											
Notes												

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

HCM 6th Signalized Intersection Summary

17: Woodbridge Street & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↕	
Traffic Volume (veh/h)	10	7	17	15	9	56	17	484	26	39	316	32
Future Volume (veh/h)	10	7	17	15	9	56	17	484	26	39	316	32
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	11	8	18	16	10	61	18	526	28	42	343	35
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	76	49	69	63	25	95	892	1512	1281	707	1350	138
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.81	0.81	0.81	1.00	1.00	1.00
Sat Flow, veh/h	283	578	815	186	293	1124	1005	1870	1585	854	1669	170
Grp Volume(v), veh/h	37	0	0	87	0	0	18	526	28	42	0	378
Grp Sat Flow(s),veh/h/ln	1676	0	0	1603	0	0	1005	1870	1585	854	0	1840
Q Serve(g_s), s	0.0	0.0	0.0	2.0	0.0	0.0	0.3	6.7	0.3	0.4	0.0	0.0
Cycle Q Clear(g_c), s	1.8	0.0	0.0	4.7	0.0	0.0	0.3	6.7	0.3	7.2	0.0	0.0
Prop In Lane	0.30		0.49	0.18		0.70	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	194	0	0	183	0	0	892	1512	1281	707	0	1487
V/C Ratio(X)	0.19	0.00	0.00	0.47	0.00	0.00	0.02	0.35	0.02	0.06	0.00	0.25
Avail Cap(c_a), veh/h	508	0	0	502	0	0	892	1512	1281	707	0	1487
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.84	0.84	0.84	0.84	0.00	0.84
Uniform Delay (d), s/veh	38.5	0.0	0.0	39.8	0.0	0.0	1.7	2.3	1.7	0.3	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	1.9	0.0	0.0	0.0	0.5	0.0	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	0.0	0.0	3.5	0.0	0.0	0.1	2.6	0.1	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.0	0.0	0.0	41.7	0.0	0.0	1.7	2.8	1.7	0.5	0.0	0.3
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	37			87			572			420		
Approach Delay, s/veh	39.0			41.7			2.7			0.4		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	77.3			12.7			77.3			12.7		
Change Period (Y+Rc), s	* 4.5			* 5.1			* 4.5			* 5.1		
Max Green Setting (Gmax), s	* 55			* 26			* 55			* 26		
Max Q Clear Time (g_c+I1), s	9.2			3.8			8.7			6.7		
Green Ext Time (p_c), s	6.1			0.1			9.4			0.4		

Intersection Summary

HCM 6th Ctrl Delay	6.1
HCM 6th LOS	A

Notes

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

Queues

18: Whitsett Avenue & Ventura Boulevard

06/24/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	250	1054	221	36	1052	318	89	191	288	159	209
v/c Ratio	0.76	0.55	0.24	0.21	0.86	0.49	0.55	0.67	0.62	0.56	0.24
Control Delay	38.6	17.5	5.0	19.7	28.5	8.6	50.6	49.4	46.4	45.9	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.6	17.5	5.0	19.7	28.5	8.6	50.6	49.4	46.4	45.9	10.1
Queue Length 50th (ft)	100	217	15	14	240	65	53	112	90	95	53
Queue Length 95th (ft)	#279	340	62	m21	m#422	m87	98	173	127	150	84
Internal Link Dist (ft)	1429			2938			634			1297	
Turn Bay Length (ft)	95		135	145		60	60		220		65
Base Capacity (vph)	329	1923	936	175	1221	646	253	438	523	441	857
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.55	0.24	0.21	0.86	0.49	0.35	0.44	0.55	0.36	0.24

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

























Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

18: Whitsett Avenue & Ventura Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	970	203	33	968	293	82	154	22	265	146	192
Future Volume (vph)	230	970	203	33	968	293	82	154	22	265	146	192
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	5.4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1828		3433	1863	1583
Flt Permitted	0.10	1.00	1.00	0.27	1.00	1.00	0.57	1.00		0.95	1.00	1.00
Satd. Flow (perm)	187	3539	1583	506	3539	1583	1070	1828		3433	1863	1583
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)	250	1054	221	36	1052	318	89	167	24	288	159	209
RTOR Reduction (vph)	0	0	76	0	0	101	0	6	0	0	0	11
Lane Group Flow (vph)	250	1054	145	36	1052	217	89	185	0	288	159	198
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Prot	NA	custom
Protected Phases	1	6			2			4		3	8	13
Permitted Phases	6		6	2		2	4					8
Actuated Green, G (s)	54.4	54.4	54.4	34.5	34.5	34.5	15.3	15.3		13.6	15.3	48.8
Effective Green, g (s)	54.4	54.4	54.4	34.5	34.5	34.5	15.3	15.3		13.6	15.3	48.8
Actuated g/C Ratio	0.54	0.54	0.54	0.34	0.34	0.34	0.15	0.15		0.14	0.15	0.49
Clearance Time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	
Vehicle Extension (s)	3.0	4.9	4.9	4.7	4.7	4.7	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	331	1925	861	174	1220	546	163	279		466	285	772
v/s Ratio Prot	c0.11	0.30			c0.30			c0.10		c0.08	0.09	0.09
v/s Ratio Perm	0.30		0.09	0.07		0.14	0.08					0.04
v/c Ratio	0.76	0.55	0.17	0.21	0.86	0.40	0.55	0.66		0.62	0.56	0.26
Uniform Delay, d1	24.0	14.8	11.4	23.1	30.5	24.9	39.1	39.9		40.7	39.2	15.0
Progression Factor	1.00	1.00	1.00	0.65	0.64	0.47	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.4	1.1	0.4	1.8	5.7	1.5	3.7	5.8		2.4	2.4	0.2
Delay (s)	33.4	15.9	11.9	16.8	25.4	13.1	42.8	45.7		43.2	41.6	15.2
Level of Service	C	B	B	B	C	B	D	D		D	D	B
Approach Delay (s)		18.2			22.4			44.8			33.9	
Approach LOS		B			C			D			C	
Intersection Summary												
HCM 2000 Control Delay			24.3									
HCM 2000 Volume to Capacity ratio			0.76									
Actuated Cycle Length (s)			100.0									
Intersection Capacity Utilization			74.9%									
Analysis Period (min)			15									
c Critical Lane Group												

Queues

19: Laurel Canyon Boulevard & Ventura Place

06/24/2024



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	177	71	238	29	1055	33	93	1193
v/c Ratio	0.76	0.37	0.77	0.16	0.63	0.04	0.61	0.62
Control Delay	64.7	46.3	29.3	26.5	24.4	0.5	44.6	26.4
Queue Delay	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0
Total Delay	64.7	46.3	29.3	26.5	24.9	0.5	44.6	26.4
Queue Length 50th (ft)	107	43	34	0	353	0	50	234
Queue Length 95th (ft)	#294	85	#138	m20	414	m0	#119	259
Internal Link Dist (ft)	123	395			458			232
Turn Bay Length (ft)			380	105		85	55	
Base Capacity (vph)	232	232	335	177	1942	930	161	2035
Starvation Cap Reductn	0	0	0	0	441	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.31	0.71	0.16	0.70	0.04	0.58	0.59

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

19: Laurel Canyon Boulevard & Ventura Place

06/24/2024













												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	102	39	22	40	26	219	27	971	30	86	1025	73
Future Volume (vph)	102	39	22	40	26	219	27	971	30	86	1025	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		9.4			9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.91	
Frpb, ped/bikes		1.00			1.00	0.85	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes		0.95			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.98			1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.97			0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1690			1808	1351	1770	3539	1550	1767	5035	
Flt Permitted		0.77			0.97	1.00	0.95	1.00	1.00	0.22	1.00	
Satd. Flow (perm)		1338			1808	1351	1770	3539	1550	402	5035	
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)	111	42	24	43	28	238	29	1055	33	93	1114	79
RTOR Reduction (vph)	0	5	0	0	0	163	0	0	17	0	8	0
Lane Group Flow (vph)	0	172	0	0	71	75	29	1055	16	93	1185	0
Confl. Peds. (#/hr)	49					49			5	5		
Turn Type	Perm	NA		Split	NA	Perm	Prot	NA	Perm	Perm	NA	
Protected Phases		3		4	4		1	6			2	
Permitted Phases	3					4			6	2		
Actuated Green, G (s)		17.9			10.7	10.7	6.0	47.3	47.3	36.3	36.3	
Effective Green, g (s)		17.9			10.7	10.7	6.0	47.3	47.3	36.3	36.3	
Actuated g/C Ratio		0.18			0.11	0.11	0.06	0.47	0.47	0.36	0.36	
Clearance Time (s)		9.4			9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	4.8	4.8	3.1	3.1	
Lane Grp Cap (vph)		239			193	144	106	1673	733	145	1827	
v/s Ratio Prot					0.04		0.02	c0.30			0.24	
v/s Ratio Perm		c0.13				c0.06			0.01	0.23		
v/c Ratio		0.72			0.37	0.52	0.27	0.63	0.02	0.64	0.65	
Uniform Delay, d1		38.7			41.5	42.2	44.9	19.8	14.0	26.4	26.5	
Progression Factor		1.00			1.00	1.00	0.60	1.20	1.00	1.00	1.00	
Incremental Delay, d2		9.9			1.2	3.4	0.9	1.2	0.0	19.8	1.8	
Delay (s)		48.6			42.7	45.7	28.1	24.9	14.1	46.2	28.3	
Level of Service		D			D	D	C	C	B	D	C	
Approach Delay (s)		48.6			45.0			24.7			29.6	
Approach LOS		D			D			C			C	
Intersection Summary												
HCM 2000 Control Delay		30.5										
HCM 2000 Volume to Capacity ratio		0.68										
Actuated Cycle Length (s)		100.0							29.1			
Intersection Capacity Utilization		73.4%										
Analysis Period (min)		15										
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

20: Laurel Canyon Boulevard & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	181	586	251	172	586	46	435	844	196	134	761	199
Future Volume (veh/h)	181	586	251	172	586	46	435	844	196	134	761	199
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.93	0.98		0.93	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	197	637	273	187	637	50	473	917	213	146	827	216
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	321	1062	605	320	1027	565	359	1093	472	306	1038	581
Arrive On Green	0.17	0.60	0.60	0.08	0.29	0.29	0.10	0.31	0.31	0.03	0.10	0.10
Sat Flow, veh/h	1781	3554	1474	1781	3554	1470	3456	3554	1534	3456	3554	1531
Grp Volume(v), veh/h	197	637	273	187	637	50	473	917	213	146	827	216
Grp Sat Flow(s),veh/h/ln	1781	1777	1474	1781	1777	1470	1728	1777	1534	1728	1777	1531
Q Serve(g_s), s	8.1	11.2	2.2	7.4	15.5	2.2	10.4	24.1	11.2	4.2	22.8	6.6
Cycle Q Clear(g_c), s	8.1	11.2	2.2	7.4	15.5	2.2	10.4	24.1	11.2	4.2	22.8	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	321	1062	605	320	1027	565	359	1093	472	306	1038	581
V/C Ratio(X)	0.61	0.60	0.45	0.58	0.62	0.09	1.32	0.84	0.45	0.48	0.80	0.37
Avail Cap(c_a), veh/h	321	1062	605	320	1027	565	359	1093	472	359	1080	599
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	0.80	0.80	0.80	0.92	0.92	0.92	0.44	0.44	0.44	0.75	0.75	0.75
Uniform Delay (d), s/veh	21.6	16.4	4.4	23.3	30.8	20.1	44.8	32.3	27.8	46.3	42.3	11.4
Incr Delay (d2), s/veh	2.8	2.0	1.9	2.5	2.6	0.3	150.9	2.9	0.6	0.9	4.4	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(95%),veh/ln	5.6	6.4	2.6	5.9	11.0	1.4	17.4	13.9	6.3	3.3	16.2	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.4	18.4	6.4	25.8	33.4	20.4	195.7	35.2	28.4	47.1	46.6	12.5
LnGrp LOS	C	B	A	C	C	C	F	D	C	D	D	B
Approach Vol, veh/h	1107			874			1603			1189		
Approach Delay, s/veh	16.5			31.0			81.7			40.5		
Approach LOS	B			C			F			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.0	36.2	16.0	34.8	14.0	35.2	14.4	36.4				
Change Period (Y+Rc), s	5.4	6.3	5.6	5.6	5.6	6.3	5.6	5.6				
Max Green Setting (Gmax), s	28.7	28.7	10.4	30.4	8.4	27.7	10.4	30.4				
Max Q Clear Time (g_c+I), s	13.2	13.2	12.4	24.8	10.1	17.5	6.2	26.1				
Green Ext Time (p_c), s	0.0	9.0	0.0	4.4	0.0	3.6	0.1	3.3				

Intersection Summary

HCM 6th Ctrl Delay 47.0

HCM 6th LOS D

Notes

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

Queues

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Lane Group	EBL	EBT	WBL	WBT	WBR2	NBT	NBR	SBL	SBT	SBR2
Lane Group Flow (vph)	142	1048	110	825	85	61	77	108	129	92
v/c Ratio	0.26	0.63	1.05	1.12	0.29	0.21	0.19	0.47	0.75	0.73
Control Delay	8.0	1.5	162.6	119.4	49.5	52.8	1.1	64.1	85.1	89.3
Queue Delay	51.6	4.2	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.6	5.7	162.6	119.9	49.5	52.8	1.1	64.1	85.1	89.3
Queue Length 50th (ft)	68	5	~111	~455	66	49	0	92	114	81
Queue Length 95th (ft)	m64	m1	#238	#588	118	93	0	161	#248	#194
Internal Link Dist (ft)		48		634		66			226	
Turn Bay Length (ft)	90		95		55		30	90		90
Base Capacity (vph)	580	1744	105	739	289	308	405	231	171	126
Starvation Cap Reductn	443	602	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	54	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.04	0.92	1.05	1.20	0.29	0.20	0.19	0.47	0.75	0.73

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	131	948	17	101	684	75	78	44	12	71	99	19
Future Volume (vph)	131	948	17	101	684	75	78	44	12	71	99	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.7		4.9	6.1		6.1		6.9	6.9	7.0	7.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.98		0.85		1.00	0.85	1.00	0.85
Flpb, ped/bikes	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	0.99		0.85		1.00	0.85	1.00	0.87
Flt Protected	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (prot)	1770	3523		1770	3434		1344		1792	1352	1770	1382
Flt Permitted	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (perm)	1770	3523		1770	3434		1344		1792	1352	1770	1382
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)	142	1030	18	110	743	82	85	48	13	77	108	21
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	64	0	0
Lane Group Flow (vph)	142	1047	0	110	825	0	85	0	61	13	108	129
Confl. Peds. (#/hr)	42		32	32		42	42	75		75	75	
Turn Type	Prot	NA		Prot	NA		Perm	Split	NA	Perm	Split	NA
Protected Phases	1 3	3 6		5	2			7	7		8	8
Permitted Phases							2			7		
Actuated Green, G (s)	42.9	65.9		8.3	30.1		30.1		23.0	23.0	18.3	18.3
Effective Green, g (s)	42.9	59.8		8.3	30.1		30.1		23.0	23.0	18.3	18.3
Actuated g/C Ratio	0.31	0.43		0.06	0.22		0.22		0.16	0.16	0.13	0.13
Clearance Time (s)				4.9	6.1		6.1		6.9	6.9	7.0	7.0
Vehicle Extension (s)				3.0	4.8		4.8		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	542	1504		104	738		288		294	222	231	180
v/s Ratio Prot	0.08	c0.30		0.06	c0.24				c0.03		0.06	c0.09
v/s Ratio Perm							0.06			0.01		
v/c Ratio	0.26	0.70		1.06	1.12		0.30		0.21	0.06	0.47	0.72
Uniform Delay, d1	36.6	32.7		65.8	54.9		46.1		50.6	49.4	56.3	58.4
Progression Factor	0.21	0.05		1.00	1.00		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0	0.1		104.7	70.5		2.6		0.4	0.1	1.5	12.7
Delay (s)	7.8	1.7		170.5	125.4		48.7		51.0	49.5	57.8	71.1
Level of Service	A	A		F	F		D		D	D	E	E
Approach Delay (s)		2.4			123.9				50.1			65.5
Approach LOS		A			F				D			E
Intersection Summary												
HCM 2000 Control Delay			58.9			HCM 2000 Level of Service			E			
HCM 2000 Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			31.8			
Intersection Capacity Utilization			79.3%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Movement	SBR	SBR2
Lane Configurations		
Traffic Volume (vph)	99	85
Future Volume (vph)	99	85
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		7.0
Lane Util. Factor		1.00
Frpb, ped/bikes		0.70
Flpb, ped/bikes		1.00
Frt		0.85
Flt Protected		1.00
Satd. Flow (prot)		1107
Flt Permitted		1.00
Satd. Flow (perm)		1107
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	108	92
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	92
Confl. Peds. (#/hr)	75	75
Turn Type	Perm	
Protected Phases		
Permitted Phases	8	
Actuated Green, G (s)	18.3	
Effective Green, g (s)	18.3	
Actuated g/C Ratio	0.13	
Clearance Time (s)	7.0	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	144	
v/s Ratio Prot		
v/s Ratio Perm	0.08	
v/c Ratio	0.64	
Uniform Delay, d1	57.7	
Progression Factor	1.00	
Incremental Delay, d2	9.0	
Delay (s)	66.7	
Level of Service	E	
Approach Delay (s)		
Approach LOS		
Intersection Summary		

HCM 6th Signalized Intersection Summary

22: Carpenter Avenue & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	980	76	184	884	35	71	12	157	25	15	23
Future Volume (veh/h)	31	980	76	184	884	35	71	12	157	25	15	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.98		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	34	1065	83	200	961	38	77	13	171	27	16	25
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	278	2026	158	280	2116	84	123	31	204	182	95	318
Arrive On Green	0.61	0.61	0.61	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	564	3331	259	490	3479	138	374	150	995	601	464	1553
Grp Volume(v), veh/h	34	568	580	200	491	508	261	0	0	43	0	25
Grp Sat Flow(s),veh/h/ln	564	1777	1813	490	1777	1840	1519	0	0	1066	0	1553
Q Serve(g_s), s	4.1	18.4	18.4	40.6	24.3	24.3	13.3	0.0	0.0	0.0	0.0	1.3
Cycle Q Clear(g_c), s	28.4	18.4	18.4	59.0	24.3	24.3	16.4	0.0	0.0	2.6	0.0	1.3
Prop In Lane	1.00		0.14	1.00		0.07	0.30		0.66	0.63		1.00
Lane Grp Cap(c), veh/h	278	1081	1103	280	1081	1119	358	0	0	277	0	318
V/C Ratio(X)	0.12	0.53	0.53	0.72	0.45	0.45	0.73	0.00	0.00	0.16	0.00	0.08
Avail Cap(c_a), veh/h	278	1081	1103	280	1081	1119	508	0	0	415	0	474
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.78	0.55	0.55	0.55	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.4	11.3	11.3	48.4	25.4	25.4	38.0	0.0	0.0	32.5	0.0	32.1
Incr Delay (d2), s/veh	0.7	1.4	1.4	8.4	0.8	0.7	3.2	0.0	0.0	0.3	0.0	0.1
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(95%),veh/ln	0	10.7	10.9	8.9	15.8	16.3	10.6	0.0	0.0	1.6	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.1	12.7	12.7	56.8	26.1	26.1	41.2	0.0	0.0	32.7	0.0	32.2
LnGrp LOS	C	B	B	E	C	C	D	A	A	C	A	C
Approach Vol, veh/h	1182			1199			261			68		
Approach Delay, s/veh	13.0			31.2			41.2			32.5		
Approach LOS	B			C			D			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	70.0			30.0			70.0			30.0		
Change Period (Y+Rc), s	* 9.2			9.5			* 9.2			9.5		
Max Green Setting (Gmax), s	* 51			30.5			* 51			30.5		
Max Q Clear Time (g_c+I1), s	30.4			4.6			61.0			18.4		
Green Ext Time (p_c), s	14.6			0.3			0.0			1.3		

Intersection Summary

HCM 6th Ctrl Delay	24.3
HCM 6th LOS	C

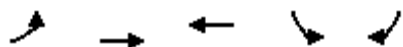
Notes

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

Queues

23: Ventura Boulevard & Colfax Avenue

06/24/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	329	951	1064	253	295
v/c Ratio	0.55	0.39	0.90	0.74	0.30
Control Delay	13.0	9.3	36.3	50.3	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.0	9.3	36.3	50.3	2.1
Queue Length 50th (ft)	128	204	363	153	0
Queue Length 95th (ft)	224	297	#498	220	34
Internal Link Dist (ft)		981	464		
Turn Bay Length (ft)	160			360	360
Base Capacity (vph)	599	2468	1178	488	997
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.55	0.39	0.90	0.52	0.30

Intersection Summary



















95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

23: Ventura Boulevard & Colfax Avenue

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	303	875	0	0	774	205	0	0	0	233	0	271
Future Volume (vph)	303	875	0	0	774	205	0	0	0	233	0	271
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.4			5.4					5.4		5.7
Lane Util. Factor	1.00	0.95			0.95					1.00		1.00
Frt	1.00	1.00			0.97					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1770	3539			3428					1770		1583
Flt Permitted	0.10	1.00			1.00					0.95		1.00
Satd. Flow (perm)	186	3539			3428					1770		1583
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)	329	951	0	0	841	223	0	0	0	253	0	295
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	150
Lane Group Flow (vph)	329	951	0	0	1064	0	0	0	0	253	0	145
Turn Type	pm+pt	NA			NA					pm+pt		pm+ov
Protected Phases	5	2			6			3		4		5
Permitted Phases	2						3			7		4
Actuated Green, G (s)	69.8	69.8			34.4					19.4		49.1
Effective Green, g (s)	69.8	69.8			34.4					19.4		49.1
Actuated g/C Ratio	0.70	0.70			0.34					0.19		0.49
Clearance Time (s)	5.7	5.4			5.4					5.4		5.7
Vehicle Extension (s)	3.0	4.3			4.5					3.0		3.0
Lane Grp Cap (vph)	600	2470			1179					343		777
v/s Ratio Prot	c0.16	0.27			c0.31					c0.14		0.06
v/s Ratio Perm	0.22											0.04
v/c Ratio	0.55	0.39			0.90					0.74		0.19
Uniform Delay, d1	19.3	6.2			31.2					37.9		14.3
Progression Factor	0.55	1.28			0.78					1.00		1.00
Incremental Delay, d2	0.9	0.4			10.4					8.0		0.1
Delay (s)	11.5	8.4			34.9					45.9		14.4
Level of Service	B	A			C					D		B
Approach Delay (s)		9.2			34.9			0.0			29.0	
Approach LOS		A			C			A			C	
Intersection Summary												
HCM 2000 Control Delay		22.4			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		0.80										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)			22.8				
Intersection Capacity Utilization		70.2%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

Queues

24: Berry Drive & Ventura Boulevard

06/24/2024



Lane Group	EBT	WBL	WBT	NBT
Lane Group Flow (vph)	1358	50	1292	84
v/c Ratio	0.46	0.18	0.44	0.37
Control Delay	5.5	3.7	2.8	7.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.5	3.7	2.8	7.6
Queue Length 50th (ft)	335	6	88	0
Queue Length 95th (ft)	68	m9	97	21
Internal Link Dist (ft)	342		273	287
Turn Bay Length (ft)		65		
Base Capacity (vph)	2924	277	2930	390
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.46	0.18	0.44	0.22



















Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

24: Berry Drive & Ventura Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1234	16	46	1189	0	16	0	62	0	0	0
Future Volume (vph)	0	1234	16	46	1189	0	16	0	62	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0			9.4				
Lane Util. Factor		0.95		1.00	0.95			1.00				
Frt		1.00		1.00	1.00			0.89				
Flt Protected		1.00		0.95	1.00			0.99				
Satd. Flow (prot)		3533		1770	3539			1646				
Flt Permitted		1.00		0.18	1.00			0.99				
Satd. Flow (perm)		3533		334	3539			1646				
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)	0	1341	17	50	1292	0	17	0	67	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	79	0	0	0	0
Lane Group Flow (vph)	0	1358	0	50	1292	0	0	5	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		6			2		3	3			4	
Permitted Phases	6			2						4		
Actuated Green, G (s)		79.9		79.9	79.9			5.7				
Effective Green, g (s)		79.9		79.9	79.9			5.7				
Actuated g/C Ratio		0.80		0.80	0.80			0.06				
Clearance Time (s)		5.0		5.0	5.0			9.4				
Vehicle Extension (s)		4.9		4.0	4.0			3.0				
Lane Grp Cap (vph)		2822		266	2827			93				
v/s Ratio Prot		c0.38			0.37			c0.00				
v/s Ratio Perm				0.15								
v/c Ratio		0.48		0.19	0.46			0.05				
Uniform Delay, d1		3.3		2.4	3.2			44.6				
Progression Factor		1.51		0.78	0.74			1.00				
Incremental Delay, d2		0.6		1.4	0.5			0.2				
Delay (s)		5.5		3.3	2.9			44.8				
Level of Service		A		A	A			D				
Approach Delay (s)		5.5			2.9			44.8			0.0	
Approach LOS		A			A			D			A	
Intersection Summary												
HCM 2000 Control Delay			5.4			HCM 2000 Level of Service			A			
HCM 2000 Volume to Capacity ratio			0.51									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			23.7			
Intersection Capacity Utilization			56.1%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

25: Ventura Boulevard & Tujunga Avenue

06/24/2024

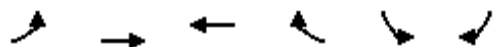


Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	278	990	1072	142	189
v/c Ratio	0.53	0.36	0.61	0.34	0.30
Control Delay	25.1	2.0	19.1	42.0	16.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.1	2.0	19.1	42.0	16.4
Queue Length 50th (ft)	65	24	228	43	60
Queue Length 95th (ft)	159	66	337	70	103
Internal Link Dist (ft)		426	233	3083	
Turn Bay Length (ft)	180			100	60
Base Capacity (vph)	528	2719	1762	1218	633
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.53	0.36	0.61	0.12	0.30
Intersection Summary					

HCM Signalized Intersection Capacity Analysis

25: Ventura Boulevard & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	256	911	786	201	131	174
Future Volume (vph)	256	911	786	201	131	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.5	5.5		5.5	5.6
Lane Util. Factor	1.00	0.95	0.95		0.97	1.00
Frt	1.00	1.00	0.97		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3431		3433	1583
Flt Permitted	0.16	1.00	1.00		0.95	1.00
Satd. Flow (perm)	299	3539	3431		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	278	990	854	218	142	189
RTOR Reduction (vph)	0	0	18	0	0	34
Lane Group Flow (vph)	278	990	1054	0	142	155
Turn Type	pm+pt	NA	NA		Prot	pt+ov
Protected Phases	1	6	2		4	1 7
Permitted Phases	6					4
Actuated Green, G (s)	76.9	76.9	50.9		12.1	38.0
Effective Green, g (s)	76.9	76.9	50.9		12.1	32.5
Actuated g/C Ratio	0.77	0.77	0.51		0.12	0.32
Clearance Time (s)	5.6	5.5	5.5		5.5	
Vehicle Extension (s)	3.0	4.4	4.9		3.0	
Lane Grp Cap (vph)	530	2721	1746		415	514
v/s Ratio Prot	c0.11	0.28	c0.31		c0.04	0.10
v/s Ratio Perm	0.30					
v/c Ratio	0.52	0.36	0.60		0.34	0.30
Uniform Delay, d1	8.9	3.7	17.4		40.3	25.2
Progression Factor	3.19	0.41	1.00		1.00	1.00
Incremental Delay, d2	0.9	0.3	1.6		0.5	0.3
Delay (s)	29.3	1.9	19.0		40.8	25.6
Level of Service	C	A	B		D	C
Approach Delay (s)		7.9	19.0		32.1	
Approach LOS		A	B		C	
Intersection Summary						
HCM 2000 Control Delay			15.3		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.59			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	22.1
Intersection Capacity Utilization			64.5%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

26: Laurel Canyon Boulevard & Maxwellton Road

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕↕			↕↕	
Traffic Volume (veh/h)	61	0	69	0	0	0	14	1484	0	0	1025	67
Future Volume (veh/h)	61	0	69	0	0	0	14	1484	0	0	1025	67
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92				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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h	66	0	75				15	1613	0	0	1114	73
Peak Hour Factor	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	0	0	2	2
Cap, veh/h	122	0	139				48	2183	0	0	2148	141
Arrive On Green	0.16	0.00	0.16				0.63	0.63	0.00	0.00	0.63	0.63
Sat Flow, veh/h	748	0	850				12	3525	0	0	3478	222
Grp Volume(v), veh/h	141	0	0				869	759	0	0	585	602
Grp Sat Flow(s),veh/h/ln	1598	0	0				1835	1617	0	0	1777	1829
Q Serve(g_s), s	7.3	0.0	0.0				0.0	29.1	0.0	0.0	16.1	16.2
Cycle Q Clear(g_c), s	7.3	0.0	0.0				28.6	29.1	0.0	0.0	16.1	16.2
Prop In Lane	0.47		0.53				0.02		0.00	0.00		0.12
Lane Grp Cap(c), veh/h	261	0	0				1205	1026	0	0	1127	1161
V/C Ratio(X)	0.54	0.00	0.00				0.72	0.74	0.00	0.00	0.52	0.52
Avail Cap(c_a), veh/h	440	0	0				1205	1026	0	0	1127	1161
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.64	0.64	0.00	0.00	0.67	0.67
Uniform Delay (d), s/veh	34.6	0.0	0.0				11.2	11.3	0.0	0.0	9.0	9.0
Incr Delay (d2), s/veh	1.7	0.0	0.0				2.4	3.1	0.0	0.0	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
%ile BackOfQ(95%),veh/ln	5.3	0.0	0.0				14.9	13.5	0.0	0.0	8.8	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.3	0.0	0.0				13.7	14.4	0.0	0.0	10.1	10.1
LnGrp LOS	D	A	A				B	B	A	A	B	B
Approach Vol, veh/h	141								1628		1187	
Approach Delay, s/veh	36.3								14.0		10.1	
Approach LOS	D								B		B	
Timer - Assigned Phs	2		4		6							
Phs Duration (G+Y+Rc), s	66.1		23.9		66.1							
Change Period (Y+Rc), s	9.0		9.2		9.0							
Max Green Setting (Gmax), s	47.0		24.8		47.0							
Max Q Clear Time (g_c+I1), s	18.2		9.3		31.1							
Green Ext Time (p_c), s	18.0		0.7		14.2							
Intersection Summary												
HCM 6th Ctrl Delay			13.5									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary

27: Laurel Canyon Boulevard & Laurel Terrace Drive/Sunshine Terrace Drive

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↙ ↕			↙ ↕		
Traffic Volume (veh/h)	16	18	164	97	33	27	152	1435	186	31	1032	10
Future Volume (veh/h)	16	18	164	97	33	27	152	1435	186	31	1032	10
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	17	20	178	105	36	29	165	1560	202	34	1122	11
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	46	40	261	156	52	33	110	2322	296	186	2280	22
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.06	0.73	0.73	0.63	0.63	0.63
Sat Flow, veh/h	75	217	1406	578	282	177	1781	3170	405	272	3605	35
Grp Volume(v), veh/h	215	0	0	170	0	0	165	864	898	34	553	580
Grp Sat Flow(s),veh/h/ln	1698	0	0	1037	0	0	1781	1777	1798	272	1777	1864
Q Serve(g_s), s	0.0	0.0	0.0	5.6	0.0	0.0	7.4	30.4	32.0	9.2	19.9	19.9
Cycle Q Clear(g_c), s	14.4	0.0	0.0	20.0	0.0	0.0	7.4	30.4	32.0	29.2	19.9	19.9
Prop In Lane	0.08		0.83	0.62		0.17	1.00		0.23	1.00		0.02
Lane Grp Cap(c), veh/h	348	0	0	241	0	0	110	1302	1317	186	1124	1179
V/C Ratio(X)	0.62	0.00	0.00	0.70	0.00	0.00	1.50	0.66	0.68	0.18	0.49	0.49
Avail Cap(c_a), veh/h	410	0	0	294	0	0	110	1302	1317	186	1124	1179
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.79	0.79	0.79
Uniform Delay (d), s/veh	45.8	0.0	0.0	48.4	0.0	0.0	56.3	8.4	8.6	19.6	11.8	11.8
Incr Delay (d2), s/veh	2.1	0.0	0.0	5.8	0.0	0.0	267.4	2.7	2.9	1.7	1.2	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(95%),veh/ln	0.3	0.0	0.0	9.2	0.0	0.0	19.0	16.2	17.1	1.2	11.8	12.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.9	0.0	0.0	54.2	0.0	0.0	323.7	11.1	11.4	21.3	13.0	12.9
LnGrp LOS	D	A	A	D	A	A	F	B	B	C	B	B
Approach Vol, veh/h	215		170				1927			1167		
Approach Delay, s/veh	47.9		54.2				38.0			13.2		
Approach LOS	D		D				D			B		
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	20.0	80.7	27.3		92.7		27.3					
Change Period (Y+Rc), s	4.6	4.8	* 5		4.8		* 5					
Max Green Setting (Gmax), s	71.2	71.2	* 27		83.2		* 27					
Max Q Clear Time (g_c+I), s	19.4	31.2	16.4		34.0		22.0					
Green Ext Time (p_c), s	0.0	10.6	0.9		21.6		0.4					

Intersection Summary

HCM 6th Ctrl Delay 31.1

HCM 6th LOS C

Notes

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

Queues

28: Laurel Canyon Boulevard & Fryman Road

06/24/2024























Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	180	13	12	1758	1419
v/c Ratio	0.63	0.05	0.06	0.69	0.57
Control Delay	44.7	29.8	5.8	9.6	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.7	29.8	5.8	9.6	7.5
Queue Length 50th (ft)	97	6	2	246	165
Queue Length 95th (ft)	153	21	9	405	272
Internal Link Dist (ft)				236	183
Turn Bay Length (ft)			145		
Base Capacity (vph)	542	485	203	2544	2504
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.33	0.03	0.06	0.69	0.57
Intersection Summary					

HCM Signalized Intersection Capacity Analysis

28: Laurel Canyon Boulevard & Fryman Road

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								 			 	
Traffic Volume (vph)	166	0	12	0	0	0	11	1617	0	0	1137	168
Future Volume (vph)	166	0	12	0	0	0	11	1617	0	0	1137	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4		5.4				5.4	5.4			5.4	
Lane Util. Factor	1.00		1.00				1.00	0.95			0.95	
Frt	1.00		0.85				1.00	1.00			0.98	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	3539			3471	
Flt Permitted	0.95		1.00				0.15	1.00			1.00	
Satd. Flow (perm)	1770		1583				283	3539			3471	
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)	180	0	13	0	0	0	12	1758	0	0	1236	183
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	8	0
Lane Group Flow (vph)	180	0	13	0	0	0	12	1758	0	0	1411	0
Turn Type	Perm		Perm				Perm	NA		Perm	NA	
Protected Phases								2			6	
Permitted Phases	8		8				2			6		
Actuated Green, G (s)	14.5		14.5				64.7	64.7			64.7	
Effective Green, g (s)	14.5		14.5				64.7	64.7			64.7	
Actuated g/C Ratio	0.16		0.16				0.72	0.72			0.72	
Clearance Time (s)	5.4		5.4				5.4	5.4			5.4	
Vehicle Extension (s)	3.0		3.0				4.8	4.8			5.1	
Lane Grp Cap (vph)	285		255				203	2544			2495	
v/s Ratio Prot								c0.50			0.41	
v/s Ratio Perm	c0.10		0.01				0.04					
v/c Ratio	0.63		0.05				0.06	0.69			0.57	
Uniform Delay, d1	35.3		31.9				3.7	7.1			6.0	
Progression Factor	1.00		1.00				1.00	1.00			1.00	
Incremental Delay, d2	4.5		0.1				0.6	1.6			0.9	
Delay (s)	39.8		32.0				4.3	8.6			6.9	
Level of Service	D		C				A	A			A	
Approach Delay (s)		39.2			0.0			8.6			6.9	
Approach LOS		D			A			A			A	
Intersection Summary												
HCM 2000 Control Delay			9.6				HCM 2000 Level of Service				A	
HCM 2000 Volume to Capacity ratio			0.68									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			10.8		
Intersection Capacity Utilization			61.7%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th TWSC
29: Laurel Canyon Boulevard & Woodbridge Street

06/24/2024

Intersection												
Int Delay, s/veh	8.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↙	↕		↙	↕	
Traffic Vol, veh/h	4	1	31	5	1	97	33	1405	20	62	1342	27
Future Vol, veh/h	4	1	31	5	1	97	33	1405	20	62	1342	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	65	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	1	34	5	1	105	36	1527	22	67	1459	29

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2444	3229	744	2474	3232	775	1488	0	0	1549	0	0
Stage 1	1608	1608	-	1610	1610	-	-	-	-	-	-	-
Stage 2	836	1621	-	864	1622	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	16	9	357	15	9	341	448	-	-	424	-	-
Stage 1	109	162	-	109	162	-	-	-	-	-	-	-
Stage 2	328	160	-	315	160	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	8	7	357	10	7	341	448	-	-	424	-	-
Mov Cap-2 Maneuver	8	7	-	10	7	-	-	-	-	-	-	-
Stage 1	100	136	-	100	149	-	-	-	-	-	-	-
Stage 2	207	147	-	238	135	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	201.8		160.7		0.3		0.7	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	448	-	-	49 111	424	-	-
HCM Lane V/C Ratio	0.08	-	-	0.799 1.009	0.159	-	-
HCM Control Delay (s)	13.7	-	-	201.8 160.7	15.1	-	-
HCM Lane LOS	B	-	-	F F	C	-	-
HCM 95th %tile Q(veh)	0.3	-	-	3.3 6.5	0.6	-	-

HCM 6th TWSC
30: Valleyheart Drive (North) & Laurel Canyon Boulevard

06/24/2024

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	2	0	14	2	0	10	18	1524	48	10	1389	5
Future Vol, veh/h	2	0	14	2	0	10	18	1524	48	10	1389	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	40	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	15	2	0	11	20	1657	52	11	1510	5

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2404	3284	758	2500	3260	855	1515	0	0	1709	0	0
Stage 1	1535	1535	-	1723	1723	-	-	-	-	-	-	-
Stage 2	869	1749	-	777	1537	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	17	9	350	15	9	302	437	-	-	368	-	-
Stage 1	122	176	-	92	142	-	-	-	-	-	-	-
Stage 2	313	138	-	356	176	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	15	8	350	14	8	302	437	-	-	368	-	-
Mov Cap-2 Maneuver	15	8	-	14	8	-	-	-	-	-	-	-
Stage 1	116	171	-	88	135	-	-	-	-	-	-	-
Stage 2	288	132	-	330	171	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	53	70.1	0.2	0.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	437	-	-	92	68	368	-
HCM Lane V/C Ratio	0.045	-	-	0.189	0.192	0.03	-
HCM Control Delay (s)	13.6	-	-	53	70.1	15.1	-
HCM Lane LOS	B	-	-	F	F	C	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7	0.7	0.1	-





HCM 6th TWSC

31: Laurel Canyon Boulevard & Valleyheart Drive (South)

06/24/2024

Intersection

Int Delay, s/veh 2.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	114	1466	37	111	1307
Future Vol, veh/h	3	114	1466	37	111	1307
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	35	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	124	1593	40	121	1421

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	2566	817	0
Stage 1	1613	-	-
Stage 2	953	-	-
Critical Hdwy	6.84	6.94	-
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	-
Pot Cap-1 Maneuver	21	320	-
Stage 1	149	-	-
Stage 2	335	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	15	320	-
Mov Cap-2 Maneuver	15	-	-
Stage 1	149	-	-
Stage 2	232	-	-

Approach	WB	NB	SB
HCM Control Delay, s	45.4	0	1.4
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	210	393
HCM Lane V/C Ratio	-	-	0.606	0.307
HCM Control Delay (s)	-	-	45.4	18.2
HCM Lane LOS	-	-	E	C
HCM 95th %tile Q(veh)	-	-	3.5	1.3

HCM 6th AWSC
32: Radford Avenue & Sarah Street

06/24/2024

Intersection

Intersection Delay, s/veh 7.4
Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	0	6	1	6	1	51	3	7	70	9
Future Vol, veh/h	5	0	0	6	1	6	1	51	3	7	70	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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	0	7	1	7	1	55	3	8	76	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0




Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.5	7.2	7.3	7.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	100%	46%	8%
Vol Thru, %	93%	0%	8%	81%
Vol Right, %	5%	0%	46%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	55	5	13	86
LT Vol	1	5	6	7
Through Vol	51	0	1	70
RT Vol	3	0	6	9
Lane Flow Rate	60	5	14	93
Geometry Grp	1	1	1	1
Degree of Util (X)	0.067	0.007	0.016	0.103
Departure Headway (Hd)	4.01	4.41	4.017	3.967
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	893	804	882	904
Service Time	2.037	2.478	2.084	1.989
HCM Lane V/C Ratio	0.067	0.006	0.016	0.103
HCM Control Delay	7.3	7.5	7.2	7.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0	0	0.3

Intersection

Intersection Delay, s/veh 0

Intersection LOS -

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	0	0	0
HCM LOS	-	-	-

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0
LT Vol	0	0	0
Through Vol	0	0	0
RT Vol	0	0	0
Lane Flow Rate	0	0	0
Geometry Grp	1	1	1
Degree of Util (X)	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0
HCM Control Delay	6.9	6.9	6.9
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

HCM 6th AWSC
54: Radford Avenue & Radford Gate

06/24/2024

Intersection

Intersection Delay, s/veh 0

Intersection LOS -

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

Intersection

Intersection Delay, s/veh 0

Intersection LOS -




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

HCM 6th TWSC
56: Colfax Avenue & Colfax Gate

06/24/2024

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1	1	0
Stage 1	1	-	-
Stage 2	0	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	1022	1084	0
Stage 1	1022	-	0
Stage 2	-	-	0
Platoon blocked, %			-
Mov Cap-1 Maneuver	1022	1084	-
Mov Cap-2 Maneuver	1022	-	-
Stage 1	1022	-	-
Stage 2	-	-	-

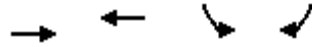
Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

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

Queues

121: Ventura Boulevard & Ventura PI

06/24/2024



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1040	899	151	24
v/c Ratio	1.15	0.42	0.26	0.08
Control Delay	125.1	7.5	51.4	17.1
Queue Delay	1.5	43.8	0.0	0.0
Total Delay	126.6	51.4	51.4	17.1
Queue Length 50th (ft)	~583	40	62	0
Queue Length 95th (ft)	#720	m37	93	27
Internal Link Dist (ft)	509	48	136	
Turn Bay Length (ft)				40
Base Capacity (vph)	907	2157	669	328
Starvation Cap Reductn	0	1326	0	0
Spillback Cap Reductn	203	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.48	1.08	0.23	0.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

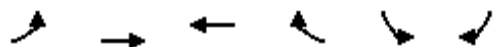
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

121: Ventura Boulevard & Ventura PI

06/24/2024



























Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	↑
Traffic Volume (vph)	0	957	827	0	139	22
Future Volume (vph)	0	957	827	0	139	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.1	6.1		5.7	5.7
Lane Util. Factor		0.95	0.95		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3433	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1040	899	0	151	24
RTOR Reduction (vph)	0	0	0	0	0	20
Lane Group Flow (vph)	0	1040	899	0	151	4
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2 4		3	
Permitted Phases						3
Actuated Green, G (s)		35.9	85.3		23.9	23.9
Effective Green, g (s)		35.9	85.3		23.9	23.9
Actuated g/C Ratio		0.26	0.61		0.17	0.17
Clearance Time (s)		6.1			5.7	5.7
Vehicle Extension (s)		4.6			3.0	3.0
Lane Grp Cap (vph)		907	2156		586	270
v/s Ratio Prot		c0.29	c0.25		c0.04	
v/s Ratio Perm						0.00
v/c Ratio		1.15	0.42		0.26	0.02
Uniform Delay, d1		52.0	14.3		50.4	48.3
Progression Factor		1.00	0.51		1.00	1.00
Incremental Delay, d2		79.0	0.0		0.2	0.0
Delay (s)		131.0	7.4		50.6	48.3
Level of Service		F	A		D	D
Approach Delay (s)		131.0	7.4		50.3	
Approach LOS		F	A		D	
Intersection Summary						
HCM 2000 Control Delay			71.7		HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio			0.69			
Actuated Cycle Length (s)			140.0		Sum of lost time (s)	31.8
Intersection Capacity Utilization			43.0%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

Existing with Project Conditions (Year 2023)

HCM 6th Signalized Intersection Summary

1: Riverside Drive & Laurel Canyon Boulevard








06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	247	594	149	153	930	138	237	785	100	129	858	309
Future Volume (veh/h)	247	594	149	153	930	138	237	785	100	129	858	309
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	268	646	162	166	1011	150	258	853	109	140	933	336
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	180	1029	459	258	927	413	287	1349	720	285	1299	467
Arrive On Green	0.10	0.29	0.29	0.02	0.09	0.09	0.09	0.38	0.38	0.07	0.35	0.35
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	3554	1585	1781	3704	1331
Grp Volume(v), veh/h	268	646	162	166	1011	150	258	853	109	140	857	412
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1777	1585	1781	1702	1631
Q Serve(g_s), s	12.1	18.9	9.7	5.7	31.3	10.7	11.3	23.5	4.8	6.0	26.2	26.3
Cycle Q Clear(g_c), s	12.1	18.9	9.7	5.7	31.3	10.7	11.3	23.5	4.8	6.0	26.2	26.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.82
Lane Grp Cap(c), veh/h	180	1029	459	258	927	413	287	1349	720	285	1194	572
V/C Ratio(X)	1.49	0.63	0.35	0.64	1.09	0.36	0.90	0.63	0.15	0.49	0.72	0.72
Avail Cap(c_a), veh/h	180	1029	459	357	927	413	287	1349	720	322	1194	572
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.0	37.0	33.7	56.9	54.8	45.4	27.2	30.4	19.2	24.3	33.8	33.8
Incr Delay (d2), s/veh	248.5	2.9	2.1	2.7	57.4	2.5	28.1	2.2	0.4	1.3	3.7	7.6
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(95%),veh/ln	28.1	13.2	7.1	4.7	31.6	8.3	11.1	15.4	3.3	4.6	16.5	16.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	302.5	39.9	35.9	59.6	112.3	47.9	55.3	32.6	19.6	25.6	37.5	41.4
LnGrp LOS	F	D	D	E	F	D	E	C	B	C	D	D
Approach Vol, veh/h		1076			1327			1220			1409	
Approach Delay, s/veh		104.7			98.4			36.2			37.5	
Approach LOS		F			F			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	48.0	18.0	37.0	13.6	51.4	14.6	40.4				
Change Period (Y+Rc), s	5.6	5.9	5.9	* 5.7	5.6	5.9	5.6	* 5.7				
Max Green Setting (Gmax), s	11.4	42.1	12.1	* 31	10.4	43.1	12.4	* 31				
Max Q Clear Time (g_c+I1), s	13.3	28.3	14.1	33.3	8.0	25.5	7.7	20.9				
Green Ext Time (p_c), s	0.0	6.9	0.0	0.0	0.1	5.9	0.2	3.4				
Intersection Summary												
HCM 6th Ctrl Delay			67.6									
HCM 6th LOS			E									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
User approved changes to right turn type.												

HCM 6th TWSC

2: Riverside Drive & Radford Avenue

























06/21/2024

Intersection												
Int Delay, s/veh	17.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	906	89	76	1002	11	28	6	87	4	10	28
Future Vol, veh/h	23	906	89	76	1002	11	28	6	87	4	10	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	105	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	985	97	83	1089	12	30	7	95	4	11	30
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1101	0	0	1082	0	0	1751	2302	493	1807	2393	551
Stage 1	-	-	-	-	-	-	1035	1035	-	1261	1261	-
Stage 2	-	-	-	-	-	-	716	1267	-	546	1132	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	630	-	-	640	-	-	55	38	522	50	33	478
Stage 1	-	-	-	-	-	-	248	307	-	180	240	-
Stage 2	-	-	-	-	-	-	387	238	-	490	276	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	630	-	-	640	-	-	32	32	522	30	28	478
Mov Cap-2 Maneuver	-	-	-	-	-	-	32	32	-	30	28	-
Stage 1	-	-	-	-	-	-	238	295	-	173	209	-
Stage 2	-	-	-	-	-	-	299	207	-	377	265	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.8			286.4			107		
HCM LOS							F			F		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	98	630	-	-	640	-	-	76				
HCM Lane V/C Ratio	1.342	0.04	-	-	0.129	-	-	0.601				
HCM Control Delay (s)	286.4	10.9	-	-	11.5	-	-	107				
HCM Lane LOS	F	B	-	-	B	-	-	F				
HCM 95th %tile Q(veh)	9.4	0.1	-	-	0.4	-	-	2.7				

HCM 6th Signalized Intersection Summary

3: Colfax Avenue & Riverside Drive

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	612	205	259	725	77	120	419	71	80	519	120
Future Volume (veh/h)	103	612	205	259	725	77	120	419	71	80	519	120
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	112	665	223	282	788	84	130	455	77	87	564	130
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	251	1356	605	259	1356	605	271	826	700	457	826	700
Arrive On Green	0.26	0.26	0.26	0.38	0.38	0.38	0.88	0.88	0.88	0.44	0.44	0.44
Sat Flow, veh/h	635	3554	1585	626	3554	1585	750	1870	1585	872	1870	1585
Grp Volume(v), veh/h	112	665	223	282	788	84	130	455	77	87	564	130
Grp Sat Flow(s),veh/h/ln	635	1777	1585	626	1777	1585	750	1870	1585	872	1870	1585
Q Serve(g_s), s	10.3	9.6	6.9	13.3	10.6	2.1	9.5	3.3	0.4	4.1	14.5	3.0
Cycle Q Clear(g_c), s	20.9	9.6	6.9	22.9	10.6	2.1	24.0	3.3	0.4	7.4	14.5	3.0
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	251	1356	605	259	1356	605	271	826	700	457	826	700
V/C Ratio(X)	0.45	0.49	0.37	1.09	0.58	0.14	0.48	0.55	0.11	0.19	0.68	0.19
Avail Cap(c_a), veh/h	251	1356	605	259	1356	605	271	826	700	457	826	700
HCM Platoon Ratio	0.67	0.67	0.67	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	0.94	0.94	0.94	0.82	0.82	0.82	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	17.4	16.4	26.4	14.7	12.1	10.0	2.1	2.0	12.5	13.4	10.2
Incr Delay (d2), s/veh	5.7	1.3	1.7	79.7	1.7	0.5	4.9	2.2	0.3	0.9	4.5	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(95%),veh/ln	3.5	6.9	4.6	14.7	6.9	1.2	2.0	2.0	0.3	1.5	10.1	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.4	18.6	18.1	106.1	16.5	12.6	14.9	4.3	2.2	13.5	17.9	10.8
LnGrp LOS	C	B	B	F	B	B	B	A	A	B	B	B
Approach Vol, veh/h	1000				1154				662			
Approach Delay, s/veh	20.1				38.1				6.2			
Approach LOS	C				D				A			
Timer - Assigned Phs	2				4				6			
Phs Duration (G+Y+Rc), s	28.0				32.0				28.0			
Change Period (Y+Rc), s	* 5.1				* 5.5				* 5.1			
Max Green Setting (Gmax), s	* 23				* 27				* 23			
Max Q Clear Time (g_c+I1), s	22.9				26.0				24.9			
Green Ext Time (p_c), s	0.0				0.2				0.0			
Intersection Summary												
HCM 6th Ctrl Delay	22.5											
HCM 6th LOS	C											
Notes												

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

Queues

4: Riverside Drive & SR 170 Southbound Off-Ramp

06/21/2024



Lane Group	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	812	9	699	29	214	206	198
v/c Ratio	0.42	0.03	0.36	0.11	0.59	0.48	0.42
Control Delay	12.7	13.4	12.1	0.8	31.1	12.2	6.4
Queue Delay	0.4	0.0	0.5	0.1	0.2	0.2	0.0
Total Delay	13.1	13.4	12.5	0.9	31.2	12.5	6.4
Queue Length 50th (ft)	79	3	113	0	86	26	0
Queue Length 95th (ft)	203	m9	193	0	144	80	46
Internal Link Dist (ft)	2214		245	105		344	
Turn Bay Length (ft)		25			140		150
Base Capacity (vph)	1944	291	1944	284	456	508	552
Starvation Cap Reductn	0	0	734	0	0	0	0
Spillback Cap Reductn	601	0	0	56	22	52	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.03	0.58	0.13	0.49	0.45	0.36


Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: Riverside Drive & SR 170 Southbound Off-Ramp













06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑	↑↑			↑		↑	↑	↑
Traffic Volume (vph)	0	745	2	8	643	0	7	0	19	253	6	309
Future Volume (vph)	0	745	2	8	643	0	7	0	19	253	6	309
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Lane Util. Factor		0.95		1.00	0.95			1.00		0.95	0.91	0.95
Frt		1.00		1.00	1.00			0.90		1.00	0.90	0.85
Flt Protected		1.00		0.95	1.00			0.99		0.95	0.99	1.00
Satd. Flow (prot)		3538		1770	3539			1658		1681	1503	1504
Flt Permitted		1.00		0.29	1.00			0.83		0.95	0.99	1.00
Satd. Flow (perm)		3538		531	3539			1394		1681	1503	1504
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)	0	810	2	9	699	0	8	0	21	275	7	336
RTOR Reduction (vph)	0	0	0	0	0	0	0	28	0	0	108	156
Lane Group Flow (vph)	0	812	0	9	699	0	0	1	0	214	98	42
Turn Type		NA		Perm	NA		Perm	NA		Split	NA	Perm
Protected Phases		6			2			4		3	3	
Permitted Phases				2			4					3
Actuated Green, G (s)		34.8		34.8	34.8			3.2		15.0	15.0	15.0
Effective Green, g (s)		34.8		34.8	34.8			3.2		15.0	15.0	15.0
Actuated g/C Ratio		0.50		0.50	0.50			0.05		0.21	0.21	0.21
Clearance Time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Vehicle Extension (s)		3.8		2.4	2.4			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1758		263	1759			63		360	322	322
v/s Ratio Prot		c0.23			0.20					c0.13	0.06	
v/s Ratio Perm				0.02				c0.00				0.03
v/c Ratio		0.46		0.03	0.40			0.02		0.59	0.30	0.13
Uniform Delay, d1		11.5		9.0	11.0			31.9		24.8	23.1	22.2
Progression Factor		1.00		1.04	1.05			1.00		1.00	1.00	1.00
Incremental Delay, d2		0.9		0.2	0.6			0.1		2.6	0.5	0.2
Delay (s)		12.4		9.5	12.2			32.0		27.4	23.6	22.4
Level of Service		B		A	B			C		C	C	C
Approach Delay (s)		12.4			12.2			32.0			24.5	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			16.0			HCM 2000 Level of Service			B			
HCM 2000 Volume to Capacity ratio			0.47									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			51.4%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/21/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	NWL	NWR
Lane Group Flow (vph)	197	607	298	225	414	115	24	586	152	1025	239	81
v/c Ratio	0.62	0.93dr	0.96	0.99	0.49	0.31	0.28	0.85	0.63	0.76	0.58	0.47
Control Delay	41.9	68.7	93.1	97.3	49.0	47.6	58.0	66.6	69.2	42.0	63.8	65.9
Queue Delay	0.0	48.3	42.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.9	117.0	135.3	97.3	49.0	47.6	58.0	66.6	69.2	42.0	63.8	65.9
Queue Length 50th (ft)	141	292	287	~182	176	88	18	268	132	410	108	76
Queue Length 95th (ft)	167	#418	#516	#356	232	148	51	#388	211	524	147	132
Internal Link Dist (ft)		245			745			2580		383	758	
Turn Bay Length (ft)	140		230	85		110	270		290		215	
Base Capacity (vph)	316	678	311	227	845	377	86	690	242	1345	695	292
Starvation Cap Reductn	0	150	52	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	1.15	1.15	0.99	0.49	0.31	0.28	0.85	0.63	0.76	0.34	0.28

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.





















Queue shown is maximum after two cycles.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/21/2024

												
Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	181	281	370	182	12	195	381	106	22	464	59	17
Future Volume (vph)	181	281	370	182	12	195	381	106	22	464	59	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Lane Util. Factor	1.00	0.91	0.91			1.00	0.95	1.00	1.00	0.95		
Frt	1.00	0.93	0.85			1.00	1.00	0.85	1.00	0.98		
Flt Protected	0.95	1.00	1.00			0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1770	3137	1441			1770	3539	1583	1770	3465		
Flt Permitted	0.43	1.00	1.00			0.15	1.00	1.00	0.23	1.00		
Satd. Flow (perm)	796	3137	1441			276	3539	1583	436	3465		
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)	197	305	402	198	13	212	414	115	24	504	64	18
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	197	607	298	0	0	225	414	115	24	586	0	0
Turn Type	pm+pt	NA	Perm		pm+pt	pm+pt	NA	Perm	Perm	NA		
Protected Phases	1	6			5	5	2			8		
Permitted Phases	6		6		2	2		2	8			
Actuated Green, G (s)	41.2	30.3	30.3			46.3	33.4	33.4	27.9	27.9		
Effective Green, g (s)	41.2	30.3	30.3			46.3	33.4	33.4	27.9	27.9		
Actuated g/C Ratio	0.29	0.22	0.22			0.33	0.24	0.24	0.20	0.20		
Clearance Time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Vehicle Extension (s)	3.0	3.9	3.9			3.0	4.6	4.6	4.7	4.7		
Lane Grp Cap (vph)	310	678	311			228	844	377	86	690		
v/s Ratio Prot	0.05	0.19				c0.09	0.12			c0.17		
v/s Ratio Perm	0.14		0.21			c0.23		0.07	0.06			
v/c Ratio	0.64	0.93dr	0.96			0.99	0.49	0.31	0.28	0.85		
Uniform Delay, d1	39.9	53.3	54.2			39.4	46.0	43.8	47.5	54.0		
Progression Factor	0.95	0.99	0.99			1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2	3.9	15.7	39.5			55.4	2.0	2.1	3.3	10.4		
Delay (s)	41.8	68.6	93.3			94.7	48.0	45.9	50.8	64.4		
Level of Service	D	E	F			F	D	D	D	E		
Approach Delay (s)		70.5					61.6			63.9		
Approach LOS		E					E			E		
Intersection Summary												
HCM 2000 Control Delay			59.0			HCM 2000 Level of Service				E		
HCM 2000 Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			33.0			
Intersection Capacity Utilization			96.9%			ICU Level of Service			F			
Analysis Period (min)			15									
dr Defacto Right Lane. Recode with 1 though lane as a right lane.												
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/21/2024



Movement	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	16	124	870	73	37	175	79	4
Future Volume (vph)	16	124	870	73	37	175	79	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.3			6.6	6.6	
Lane Util. Factor		1.00	0.95			0.97	0.91	
Frt		1.00	0.99			0.99	0.85	
Flt Protected		0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	3498			3428	1441	
Flt Permitted		0.95	1.00			0.95	1.00	
Satd. Flow (perm)		1770	3498			3428	1441	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	135	946	79	40	190	86	4
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	152	1025	0	0	239	81	0
Turn Type	Prot	Prot	NA		Prot	Prot	Perm	
Protected Phases	7	7	4		3	3		
Permitted Phases							3	
Actuated Green, G (s)		19.2	53.9			16.7	16.7	
Effective Green, g (s)		19.2	53.9			16.7	16.7	
Actuated g/C Ratio		0.14	0.38			0.12	0.12	
Clearance Time (s)		6.8	6.3			6.6	6.6	
Vehicle Extension (s)		3.0	4.9			4.6	4.6	
Lane Grp Cap (vph)		242	1346			408	171	
v/s Ratio Prot		0.09	c0.29			c0.07		
v/s Ratio Perm							0.06	
v/c Ratio		0.63	0.76			0.59	0.47	
Uniform Delay, d1		57.0	37.5			58.4	57.5	
Progression Factor		1.00	1.00			1.00	1.00	
Incremental Delay, d2		5.0	3.0			3.0	3.7	
Delay (s)		62.1	40.5			61.4	61.2	
Level of Service		E	D			E	E	
Approach Delay (s)			43.3			61.3		
Approach LOS			D			E		
Intersection Summary								

HCM 6th Signalized Intersection Summary

6: Laurel Canyon Boulevard & US 101 Northbound Ramps

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰	↰	↰	↰			↰	↰
Traffic Volume (veh/h)	0	0	0	466	2	234	448	562	0	0	1332	345
Future Volume (veh/h)	0	0	0	466	2	234	448	562	0	0	1332	345
Initial Q (Qb), veh				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
Parking Bus, Adj				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		
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				587	0	170	487	611	0	0	1448	375
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				694	0	309	580	2462	0	0	2380	739
Arrive On Green				0.19	0.00	0.19	0.34	1.00	0.00	0.00	0.47	0.47
Sat Flow, veh/h				3563	0	1585	3456	3647	0	0	5274	1585
Grp Volume(v), veh/h				587	0	170	487	611	0	0	1448	375
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	0	1702	1585
Q Serve(g_s), s				14.3	0.0	8.7	11.7	0.0	0.0	0.0	19.0	14.9
Cycle Q Clear(g_c), s				14.3	0.0	8.7	11.7	0.0	0.0	0.0	19.0	14.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				694	0	309	580	2462	0	0	2380	739
V/C Ratio(X)				0.85	0.00	0.55	0.84	0.25	0.00	0.00	0.61	0.51
Avail Cap(c_a), veh/h				819	0	365	948	2462	0	0	2380	739
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.88	0.88	0.00	0.00	0.70	0.70
Uniform Delay (d), s/veh				34.9	0.0	32.7	28.8	0.0	0.0	0.0	17.9	16.8
Incr Delay (d2), s/veh				7.1	0.0	1.5	3.2	0.2	0.0	0.0	0.8	1.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				10.7	0.0	5.9	7.3	0.1	0.0	0.0	10.7	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				42.1	0.0	34.2	32.0	0.2	0.0	0.0	18.7	18.5
LnGrp LOS				D	A	C	C	A	A	A	B	B
Approach Vol, veh/h					757			1098			1823	
Approach Delay, s/veh					40.3			14.3			18.7	
Approach LOS					D			B			B	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	30.4	46.7		22.8		67.2						
Change Period (Y+Rc), s	5.3	4.8		* 5.3		4.8						
Max Green Setting (Gmax), s	25	29.2		* 21		59.2						
Max Q Clear Time (g_c+M3), s	25	21.0		16.3		2.0						
Green Ext Time (p_c), s	1.4	6.1		1.2		4.6						

Intersection Summary

HCM 6th Ctrl Delay	21.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.









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

HCM 6th Signalized Intersection Summary

7: US 101 Southbound Ramps & Laurel Canyon Boulevard

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	10	441	0	0	0	0	876	508	493	1310	0
Future Volume (veh/h)	148	10	441	0	0	0	0	876	508	493	1310	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	111	0	540				0	952	552	536	1424	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	357	0	635				0	1640	509	1063	2436	0
Arrive On Green	0.20	0.00	0.20				0.00	0.32	0.32	0.62	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	5274	1585	3456	3647	0
Grp Volume(v), veh/h	111	0	540				0	952	552	536	1424	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1702	1585	1728	1777	0
Q Serve(g_s), s	4.8	0.0	14.8				0.0	14.0	28.9	7.8	0.0	0.0
Cycle Q Clear(g_c), s	4.8	0.0	14.8				0.0	14.0	28.9	7.8	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	357	0	635				0	1640	509	1063	2436	0
V/C Ratio(X)	0.31	0.00	0.85				0.00	0.58	1.08	0.50	0.58	0.00
Avail Cap(c_a), veh/h	431	0	768				0	1640	509	1063	2436	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	1.00	0.66	0.66	0.00
Uniform Delay (d), s/veh	30.7	0.0	34.7				0.0	25.5	30.5	13.5	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	7.8				0.0	1.5	64.7	0.3	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
%ile BackOfQ(95%),veh/ln	8.6	0.0	10.1				0.0	9.5	28.2	4.2	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.2	0.0	42.4				0.0	27.0	95.3	13.7	0.7	0.0
LnGrp LOS	C	A	D				A	C	F	B	A	A
Approach Vol, veh/h	651						1504			1960		
Approach Delay, s/veh	40.5						52.1			4.3		
Approach LOS	D						D			A		
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	32.8	34.0	23.2	66.8								
Change Period (Y+Rc), s	5.1	* 5.1	* 5.2	* 5.1								
Max Green Setting (Gmax), s	24	* 29	* 22	* 58								
Max Q Clear Time (g_c+I), s	19.8	30.9	16.8	2.0								
Green Ext Time (p_c), s	1.7	0.0	1.2	16.0								

Intersection Summary

HCM 6th Ctrl Delay 27.5
 HCM 6th LOS C

Notes

User approved volume balancing among the lanes for turning movement.

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

Queues

8: Laurel Canyon Boulevard & Landale Street

06/21/2024



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	148	194	164	63	173	1307	29	1582	248
v/c Ratio	0.70	0.61	0.75	0.17	0.64	0.69	0.24	1.21	0.54
Control Delay	56.9	18.3	58.7	1.0	33.7	8.8	27.4	129.0	27.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.9	18.3	58.7	1.0	33.7	8.8	27.4	129.0	27.8
Queue Length 50th (ft)	86	16	90	0	66	111	11	~587	120
Queue Length 95th (ft)	#177	87	#177	0	m50	m90	m21	#747	m206
Internal Link Dist (ft)		140	232			591		375	
Turn Bay Length (ft)	85			40	155		125		115
Base Capacity (vph)	212	317	237	380	290	1886	122	1306	458
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.61	0.69	0.17	0.60	0.69	0.24	1.21	0.54

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

8: Laurel Canyon Boulevard & Landale Street

06/21/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	151	13	151	24	127	58	159	1173	29	27	1455	228
Future Volume (vph)	151	13	151	24	127	58	159	1173	29	27	1455	228
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.89			1.00	1.00	1.00	1.00		1.00	1.00	0.78
Flpb, ped/bikes	1.00	1.00			0.99	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.87			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1374			1823	1583	1770	3521		1761	3539	1241
Flt Permitted	0.95	1.00			0.90	1.00	0.10	1.00		0.18	1.00	1.00
Satd. Flow (perm)	1681	1374			1655	1583	193	3521		331	3539	1241
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)	164	14	164	26	138	63	173	1275	32	29	1582	248
RTOR Reduction (vph)	0	143	0	0	0	55	0	2	0	0	0	0
Lane Group Flow (vph)	148	51	0	0	164	8	173	1305	0	29	1582	248
Confl. Peds. (#/hr)			49	49			89		12	12		89
Turn Type	Split	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	3	3			4		1	6			2	
Permitted Phases				4		4	6			2		2
Actuated Green, G (s)	11.3	11.3			12.0	12.0	48.2	48.2		33.2	33.2	33.2
Effective Green, g (s)	11.3	11.3			12.0	12.0	48.2	48.2		33.2	33.2	33.2
Actuated g/C Ratio	0.13	0.13			0.13	0.13	0.54	0.54		0.37	0.37	0.37
Clearance Time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	5.2		4.5	4.5	4.5
Lane Grp Cap (vph)	211	172			220	211	271	1885		122	1305	457
v/s Ratio Prot	c0.09	0.04					0.07	c0.37			c0.45	
v/s Ratio Perm					c0.10	0.01	0.27			0.09		0.20
v/c Ratio	0.70	0.29			0.75	0.04	0.64	0.69		0.24	1.21	0.54
Uniform Delay, d1	37.7	35.7			37.5	34.0	18.1	15.4		19.6	28.4	22.4
Progression Factor	1.00	1.00			1.00	1.00	2.22	0.54		1.05	0.98	1.01
Incremental Delay, d2	10.1	1.0			12.8	0.1	0.5	0.2		3.6	101.3	3.6
Delay (s)	47.8	36.7			50.4	34.1	40.6	8.5		24.2	129.1	26.2
Level of Service	D	D			D	C	D	A		C	F	C
Approach Delay (s)		41.5			45.8			12.2			113.7	
Approach LOS		D			D			B			F	
Intersection Summary												
HCM 2000 Control Delay			65.0									
HCM 2000 Volume to Capacity ratio			0.99									
Actuated Cycle Length (s)			90.0									
Intersection Capacity Utilization			88.0%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

9: Colfax Avenue & Sarah Street

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↑	↕
Traffic Volume (veh/h)	36	80	10	33	16	147	20	457	47	131	793	45
Future Volume (veh/h)	36	80	10	33	16	147	20	457	47	131	793	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.89		0.81	0.85		0.81	1.00		0.93	0.98		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	39	87	11	36	17	160	22	497	51	142	862	49
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	156	303	33	102	50	248	182	964	758	446	964	758
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.69	0.69	0.69	0.52	0.52	0.52
Sat Flow, veh/h	315	1215	134	129	200	992	613	1870	1471	845	1870	1471
Grp Volume(v), veh/h	137	0	0	213	0	0	22	497	51	142	862	49
Grp Sat Flow(s),veh/h/ln	1664	0	0	1320	0	0	613	1870	1471	845	1870	1471
Q Serve(g_s), s	0.0	0.0	0.0	2.4	0.0	0.0	2.0	7.8	0.7	7.4	24.9	1.0
Cycle Q Clear(g_c), s	3.7	0.0	0.0	8.4	0.0	0.0	26.8	7.8	0.7	15.2	24.9	1.0
Prop In Lane	0.28		0.08	0.17		0.75	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	492	0	0	400	0	0	182	964	758	446	964	758
V/C Ratio(X)	0.28	0.00	0.00	0.53	0.00	0.00	0.12	0.52	0.07	0.32	0.89	0.06
Avail Cap(c_a), veh/h	635	0	0	521	0	0	182	964	758	446	964	758
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.95	0.95	0.95	0.59	0.59	0.59
Uniform Delay (d), s/veh	18.3	0.0	0.0	20.0	0.0	0.0	20.1	5.8	4.7	13.6	13.1	7.3
Incr Delay (d2), s/veh	0.3	0.0	0.0	1.1	0.0	0.0	1.3	1.9	0.2	1.1	8.0	0.1
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(95%),veh/ln	2.7	0.0	0.0	4.7	0.0	0.0	0.5	4.4	0.4	2.4	14.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.6	0.0	0.0	21.1	0.0	0.0	21.4	7.7	4.8	14.7	21.1	7.4
LnGrp LOS	B	A	A	C	A	A	C	A	A	B	C	A
Approach Vol, veh/h	137			213			570			1053		
Approach Delay, s/veh	18.6			21.1			7.9			19.6		
Approach LOS	B			C			A			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	35.7			24.3			35.7			24.3		
Change Period (Y+Rc), s	4.8			* 9.3			4.8			* 9.3		
Max Green Setting (Gmax), s	25.2			* 21			25.2			* 21		
Max Q Clear Time (g_c+I1), s	28.8			5.7			26.9			10.4		
Green Ext Time (p_c), s	0.0			0.6			0.0			1.1		

Intersection Summary

HCM 6th Ctrl Delay	16.3
HCM 6th LOS	B

Notes

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

Queues

10: Landale Street & Colfax Avenue

06/21/2024



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	81	32	498	958	37
v/c Ratio	0.30	0.12	0.35	0.67	0.03
Control Delay	20.4	6.4	5.6	4.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.4	6.4	5.6	4.7	0.1
Queue Length 50th (ft)	19	4	76	29	0
Queue Length 95th (ft)	51	17	145	m49	m0
Internal Link Dist (ft)	262		575	593	
Turn Bay Length (ft)		40			80
Base Capacity (vph)	534	261	1434	1434	1223
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.15	0.12	0.35	0.67	0.03

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

10: Landale Street & Colfax Avenue

06/21/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	52	22	29	458	881	34
Future Volume (vph)	52	22	29	458	881	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	9.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.96		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1727		1770	1863	1863	1583
Flt Permitted	0.97		0.18	1.00	1.00	1.00
Satd. Flow (perm)	1727		338	1863	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	57	24	32	498	958	37
RTOR Reduction (vph)	22	0	0	0	0	6
Lane Group Flow (vph)	59	0	32	498	958	31
Turn Type	Perm		Perm	NA	NA	Perm
Protected Phases				6	2	
Permitted Phases	8		6			2
Actuated Green, G (s)	5.4		40.6	40.6	40.6	40.6
Effective Green, g (s)	5.4		40.6	40.6	40.6	40.6
Actuated g/C Ratio	0.09		0.68	0.68	0.68	0.68
Clearance Time (s)	9.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		4.9	4.9	5.3	5.3
Lane Grp Cap (vph)	155		228	1260	1260	1071
v/s Ratio Prot				0.27	c0.51	
v/s Ratio Perm	c0.03		0.09			0.02
v/c Ratio	0.38		0.14	0.40	0.76	0.03
Uniform Delay, d1	25.7		3.5	4.3	6.5	3.2
Progression Factor	1.00		1.00	1.00	0.38	0.02
Incremental Delay, d2	1.6		1.3	0.9	2.3	0.0
Delay (s)	27.3		4.8	5.2	4.8	0.1
Level of Service	C		A	A	A	A
Approach Delay (s)	27.3			5.2	4.6	
Approach LOS	C			A	A	

Intersection Summary

HCM 2000 Control Delay	5.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	64.7%	ICU Level of Service	C
Analysis Period (min)	15		










c Critical Lane Group

HCM 6th Signalized Intersection Summary

11: Whitsett Avenue & Moorpark Street

06/21/2024












Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	816	210	106	579	62	56	231	68	79	482	58
Future Volume (veh/h)	64	816	210	106	579	62	56	231	68	79	482	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	70	887	228	115	629	67	61	251	74	86	524	63
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	171	850	720	80	755	80	343	1170	337	471	1374	165
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	749	1870	1585	505	1662	177	829	2721	785	1055	3195	383
Grp Volume(v), veh/h	70	887	228	115	0	696	61	162	163	86	291	296
Grp Sat Flow(s),veh/h/ln	749	1870	1585	505	0	1839	829	1777	1729	1055	1777	1801
Q Serve(g_s), s	8.1	40.9	8.2	0.0	0.0	29.9	4.9	5.1	5.3	5.0	10.0	10.1
Cycle Q Clear(g_c), s	38.1	40.9	8.2	40.9	0.0	29.9	15.0	5.1	5.3	10.4	10.0	10.1
Prop In Lane	1.00		1.00	1.00		0.10	1.00		0.45	1.00		0.21
Lane Grp Cap(c), veh/h	171	850	720	80	0	835	343	764	744	471	764	775
V/C Ratio(X)	0.41	1.04	0.32	1.44	0.00	0.83	0.18	0.21	0.22	0.18	0.38	0.38
Avail Cap(c_a), veh/h	171	850	720	80	0	835	343	764	744	471	764	775
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(l)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.3	24.5	15.6	45.0	0.0	21.6	22.6	16.1	16.1	19.4	17.5	17.5
Incr Delay (d2), s/veh	7.1	42.8	1.2	254.1	0.0	9.5	1.1	0.6	0.7	0.9	1.4	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(95%),veh/ln	8.2	36.1	5.5	13.3	0.0	20.1	1.8	3.8	3.9	2.3	7.5	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.3	67.4	16.8	299.1	0.0	31.1	23.7	16.7	16.8	20.3	18.9	18.9
LnGrp LOS	D	F	B	F	A	C	C	B	B	C	B	B
Approach Vol, veh/h	1185					811		386		673		
Approach Delay, s/veh	56.3					69.1		17.9		19.1		
Approach LOS	E					E		B		B		
Timer - Assigned Phs	2		4			6		8				
Phs Duration (G+Y+Rc), s	46.0		44.0			46.0		44.0				
Change Period (Y+Rc), s	5.1		5.3			5.1		5.3				
Max Green Setting (Gmax), s	40.9		38.7			40.9		38.7				
Max Q Clear Time (g_c+I1), s	42.9		12.4			42.9		17.0				
Green Ext Time (p_c), s	0.0		4.0			0.0		2.2				
Intersection Summary												
HCM 6th Ctrl Delay			46.7									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary

12: Laurel Canyon Boulevard & Moorpark Street

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	284	571	227	206	426	107	108	1018	163	84	1364	229
Future Volume (veh/h)	284	571	227	206	426	107	108	1018	163	84	1364	229
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	309	621	247	224	463	116	117	1107	177	91	1483	249
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	303	684	272	290	515	563	230	884	141	222	869	143
Arrive On Green	0.11	0.28	0.28	0.14	0.37	0.37	0.08	0.29	0.29	0.11	0.38	0.38
Sat Flow, veh/h	1781	2483	987	1781	1870	1585	1781	3070	489	1781	3053	504
Grp Volume(v), veh/h	309	444	424	224	463	116	117	639	645	91	852	880
Grp Sat Flow(s),veh/h/ln	1781	1777	1693	1781	1870	1585	1781	1777	1782	1781	1777	1780
Q Serve(g_s), s	9.5	21.7	21.8	8.1	21.0	4.1	4.0	25.9	25.9	3.0	25.6	25.6
Cycle Q Clear(g_c), s	9.5	21.7	21.8	8.1	21.0	4.1	4.0	25.9	25.9	3.0	25.6	25.6
Prop In Lane	1.00		0.58	1.00		1.00	1.00		0.27	1.00		0.28
Lane Grp Cap(c), veh/h	303	490	466	290	515	563	230	512	513	222	506	507
V/C Ratio(X)	1.02	0.91	0.91	0.77	0.90	0.21	0.51	1.25	1.26	0.41	1.68	1.74
Avail Cap(c_a), veh/h	303	507	483	290	534	579	252	512	513	250	506	507
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	26.4	31.5	31.5	22.1	27.3	17.5	22.8	32.0	32.0	22.1	28.0	28.0
Incr Delay (d2), s/veh	57.0	19.7	20.6	12.2	17.6	0.2	1.7	127.8	130.2	0.1	308.8	331.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.4	17.1	16.6	7.2	15.9	2.6	3.0	42.6	43.2	1.7	73.8	79.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.4	51.2	52.1	34.4	44.9	17.7	24.6	159.8	162.3	22.2	336.8	359.8
LnGrp LOS	F	D	D	C	D	B	C	F	F	C	F	F
Approach Vol, veh/h	1177			803			1401			1823		
Approach Delay, s/veh	60.0			38.1			149.6			332.2		
Approach LOS	E			D			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	32.9	31.0	15.0	31.1	12.6	31.3	15.0	31.1				
Change Period (Y+Rc), s	5.3	* 5.4	* 5.5	6.3	* 5.4	* 5.4	* 5.5	6.3				
Max Green Setting (Gmax), s	30.7	* 24	* 9.5	25.7	* 8.6	* 24	* 9.5	25.7				
Max Q Clear Time (g_c+10), s	10.0	27.6	11.5	23.0	5.0	27.9	10.1	23.8				
Green Ext Time (p_c), s	0.1	0.0	0.0	0.9	0.1	0.0	0.0	1.0				

Intersection Summary

HCM 6th Ctrl Delay 176.1

HCM 6th LOS F

Notes

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






HCM 6th TWSC

13: Moorpark Street & Radford Avenue

06/21/2024

Intersection

Int Delay, s/veh 0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	52	714	802	38	13	30
Future Vol, veh/h	52	714	802	38	13	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	50
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	57	776	872	41	14	33

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	913	0	0 1395 457
Stage 1	-	-	- 893 -
Stage 2	-	-	- 502 -
Critical Hdwy	4.14	-	- 6.84 6.94
Critical Hdwy Stg 1	-	-	- 5.84 -
Critical Hdwy Stg 2	-	-	- 5.84 -
Follow-up Hdwy	2.22	-	- 3.52 3.32
Pot Cap-1 Maneuver	742	-	- 132 551
Stage 1	-	-	- 360 -
Stage 2	-	-	- 573 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	742	-	- 122 551
Mov Cap-2 Maneuver	-	-	- 122 -
Stage 1	-	-	- 332 -
Stage 2	-	-	- 573 -























Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	19.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	742	-	-	-	122	551
HCM Lane V/C Ratio	0.076	-	-	-	0.116	0.059
HCM Control Delay (s)	10.3	-	-	-	38.3	11.9
HCM Lane LOS	B	-	-	-	E	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.4	0.2

HCM 6th Signalized Intersection Summary

14: Colfax Avenue & Moorpark Street

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	559	84	237	629	147	90	213	132	145	557	104
Future Volume (veh/h)	89	559	84	237	629	147	90	213	132	145	557	104
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		0.96	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	97	608	91	258	684	160	98	232	143	158	605	113
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	1222	182	274	747	175	158	460	384	375	740	733
Arrive On Green	0.14	0.79	0.79	0.09	0.09	0.09	0.25	0.25	0.25	0.09	0.40	0.40
Sat Flow, veh/h	1781	3089	461	737	2836	663	732	1870	1560	1781	1870	1569
Grp Volume(v), veh/h	97	349	350	258	428	416	98	232	143	158	605	113
Grp Sat Flow(s),veh/h/ln	1781	1777	1774	737	1777	1722	732	1870	1560	1781	1870	1569
Q Serve(g_s), s	3.3	6.1	6.1	23.7	21.5	21.6	9.6	9.6	6.8	5.6	26.0	3.7
Cycle Q Clear(g_c), s	3.3	6.1	6.1	23.7	21.5	21.6	22.2	9.6	6.8	5.6	26.0	3.7
Prop In Lane	1.00		0.26	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	222	703	702	274	468	454	158	460	384	375	740	733
V/C Ratio(X)	0.44	0.50	0.50	0.94	0.91	0.92	0.62	0.50	0.37	0.42	0.82	0.15
Avail Cap(c_a), veh/h	264	703	702	274	468	454	158	460	384	386	740	733
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	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	0.69	0.69	0.69
Uniform Delay (d), s/veh	21.4	6.3	6.3	44.0	40.1	40.1	41.2	29.2	28.2	21.4	24.3	13.8
Incr Delay (d2), s/veh	1.4	2.5	2.5	41.1	25.0	25.7	16.9	3.9	2.8	0.5	6.9	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(95%),veh/ln	2.3	3.7	3.7	14.3	19.4	19.0	5.2	8.2	5.0	4.1	16.9	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.7	8.8	8.8	85.1	65.1	65.8	58.1	33.1	30.9	21.9	31.2	14.1
LnGrp LOS	C	A	A	F	E	E	E	C	C	C	C	B
Approach Vol, veh/h		796			1102			473			876	
Approach Delay, s/veh		10.5			70.1			37.6			27.4	
Approach LOS		B			E			D			C	
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	11.9	33.1		45.0		45.0	13.4	31.6				
Change Period (Y+Rc), s	* 5.5	* 9.4		* 9.4		* 9.4	5.6	* 9.4				
Max Green Setting (Gmax), s	* 8.5	* 22		* 36		* 36	8.4	* 22				
Max Q Clear Time (g_c+I1), s	5.3	25.7		28.0		8.1	7.6	24.2				
Green Ext Time (p_c), s	0.1	0.0		2.6		4.5	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 39.2

HCM 6th LOS D

Notes

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

HCM 6th TWSC
15: Irvine Avenue & Moorpark Street

06/21/2024

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔			↔	
Traffic Vol, veh/h	56	715	5	15	878	107	2	1	17	8	1	139
Future Vol, veh/h	56	715	5	15	878	107	2	1	17	8	1	139
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	61	777	5	16	954	116	2	1	18	9	1	151

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1070	0	0	782	0	0	1412	2004	391	1555	1948	535
Stage 1	-	-	-	-	-	-	902	902	-	1044	1044	-
Stage 2	-	-	-	-	-	-	510	1102	-	511	904	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	647	-	-	832	-	-	98	59	608	77	64	490
Stage 1	-	-	-	-	-	-	299	355	-	245	304	-
Stage 2	-	-	-	-	-	-	514	286	-	514	354	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	647	-	-	832	-	-	56	47	608	62	51	490
Mov Cap-2 Maneuver	-	-	-	-	-	-	56	47	-	62	51	-
Stage 1	-	-	-	-	-	-	249	296	-	204	289	-
Stage 2	-	-	-	-	-	-	337	272	-	414	295	-























Approach	EB	WB	NB	SB
HCM Control Delay, s	1.5	0.3	21.9	24.5
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	235	647	-	-	832	-	-	342
HCM Lane V/C Ratio	0.093	0.094	-	-	0.02	-	-	0.47
HCM Control Delay (s)	21.9	11.1	0.8	-	9.4	0.2	-	24.5
HCM Lane LOS	C	B	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.3	0.3	-	-	0.1	-	-	2.4

HCM 6th Signalized Intersection Summary

16: Tujunga Avenue & Moorpark Street

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	671	75	91	741	50	65	241	69	146	359	183
Future Volume (veh/h)	129	671	75	91	741	50	65	241	69	146	359	183
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	140	729	82	99	805	54	71	262	75	159	390	199
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	313	1654	186	330	1736	116	231	685	581	333	454	385
Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.51	0.13	0.73	0.73	0.24	0.24	0.24
Sat Flow, veh/h	643	3220	362	673	3380	227	1781	1870	1585	1043	1870	1585
Grp Volume(v), veh/h	140	402	409	99	423	436	71	262	75	159	390	199
Grp Sat Flow(s),veh/h/ln	643	1777	1805	673	1777	1830	1781	1870	1585	1043	1870	1585
Q Serve(g_s), s	16.0	12.8	12.8	9.8	13.7	13.7	2.4	4.7	1.3	12.3	18.0	9.8
Cycle Q Clear(g_c), s	29.7	12.8	12.8	22.6	13.7	13.7	2.4	4.7	1.3	12.3	18.0	9.8
Prop In Lane	1.00		0.20	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	313	913	927	330	913	940	231	685	581	333	454	385
V/C Ratio(X)	0.45	0.44	0.44	0.30	0.46	0.46	0.31	0.38	0.13	0.48	0.86	0.52
Avail Cap(c_a), veh/h	313	913	927	330	913	940	288	698	592	377	532	451
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	0.98	0.98	0.98	0.49	0.49	0.49
Uniform Delay (d), s/veh	23.4	13.8	13.8	20.9	14.0	14.0	21.8	8.3	7.8	30.4	32.6	29.5
Incr Delay (d2), s/veh	4.6	1.5	1.5	2.3	1.7	1.6	0.7	0.3	0.1	0.5	6.2	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(95%),veh/ln	4.9	8.8	8.9	3.0	9.3	9.5	1.8	2.8	0.8	5.0	12.0	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.0	15.3	15.3	23.2	15.7	15.6	22.6	8.6	7.9	31.0	38.8	30.0
LnGrp LOS	C	B	B	C	B	B	C	A	A	C	D	C
Approach Vol, veh/h	951			958			408			748		
Approach Delay, s/veh	17.2			16.4			10.9			34.8		
Approach LOS	B			B			B			C		
Timer - Assigned Phs	2		3	4		6		8				
Phs Duration (G+Y+Rc), s	51.6		11.1	27.3		51.6		38.4				
Change Period (Y+Rc), s	* 5.4		* 5.3	* 5.4		* 5.4		* 5.4				
Max Green Setting (Gmax), s	* 40		* 8.7	* 26		* 40		* 34				
Max Q Clear Time (g_c+I1), s	24.6		4.4	20.0		31.7		6.7				
Green Ext Time (p_c), s	7.5		0.0	1.9		4.9		1.7				
Intersection Summary												
HCM 6th Ctrl Delay	20.4											
HCM 6th LOS	C											
Notes												

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

HCM 6th Signalized Intersection Summary

17: Woodbridge Street & Tujunga Avenue

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↕	
Traffic Volume (veh/h)	9	7	15	17	8	30	12	326	16	40	480	24
Future Volume (veh/h)	9	7	15	17	8	30	12	326	16	40	480	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	10	8	16	18	9	33	13	354	17	43	522	26
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	73	48	62	78	32	71	778	1520	1289	858	1436	72
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.81	0.81	0.81	1.00	1.00	1.00
Sat Flow, veh/h	267	599	769	318	402	881	859	1870	1585	1011	1767	88
Grp Volume(v), veh/h	34	0	0	60	0	0	13	354	17	43	0	548
Grp Sat Flow(s),veh/h/ln	1635	0	0	1601	0	0	859	1870	1585	1011	0	1855
Q Serve(g_s), s	0.0	0.0	0.0	0.8	0.0	0.0	0.3	3.9	0.2	0.2	0.0	0.0
Cycle Q Clear(g_c), s	1.7	0.0	0.0	3.1	0.0	0.0	0.3	3.9	0.2	4.1	0.0	0.0
Prop In Lane	0.29		0.47	0.30		0.55	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	183	0	0	181	0	0	778	1520	1289	858	0	1508
V/C Ratio(X)	0.19	0.00	0.00	0.33	0.00	0.00	0.02	0.23	0.01	0.05	0.00	0.36
Avail Cap(c_a), veh/h	508	0	0	503	0	0	778	1520	1289	858	0	1508
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.91	0.91	0.91	0.61	0.00	0.61
Uniform Delay (d), s/veh	38.8	0.0	0.0	39.5	0.0	0.0	1.6	1.9	1.6	0.1	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	1.1	0.0	0.0	0.0	0.3	0.0	0.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.3	0.0	0.0	2.4	0.0	0.0	0.1	1.5	0.1	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.3	0.0	0.0	40.5	0.0	0.0	1.6	2.3	1.6	0.2	0.0	0.4
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	34			60			384			591		
Approach Delay, s/veh	39.3			40.5			2.2			0.4		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	77.7			12.3			77.7			12.3		
Change Period (Y+Rc), s	* 4.5			* 5.1			* 4.5			* 5.1		
Max Green Setting (Gmax), s	* 55			* 26			* 55			* 26		
Max Q Clear Time (g_c+I1), s	6.1			3.7			5.9			5.1		
Green Ext Time (p_c), s	9.6			0.1			5.7			0.2		

Intersection Summary

HCM 6th Ctrl Delay	4.5
HCM 6th LOS	A

Notes

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

Queues

18: Whitsett Avenue & Ventura Boulevard

06/21/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	83	1053	63	28	798	124	62	83	650	247	464
v/c Ratio	0.35	0.67	0.09	0.23	0.74	0.21	0.48	0.25	0.90	0.73	0.49
Control Delay	20.4	24.7	16.3	42.5	47.8	12.3	48.0	34.4	58.0	50.9	13.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.4	24.7	16.3	42.5	47.8	12.3	48.0	34.4	58.0	50.9	13.1
Queue Length 50th (ft)	30	268	22	14	291	18	36	44	212	149	152
Queue Length 95th (ft)	59	340	47	m22	354	m39	75	82	#386	220	218
Internal Link Dist (ft)	1440			2938			648			1328	
Turn Bay Length (ft)	95		135	145		60	60		220		65
Base Capacity (vph)	273	1592	712	122	1077	588	168	440	719	441	982
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.66	0.09	0.23	0.74	0.21	0.37	0.19	0.90	0.56	0.47

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
























Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

18: Whitsett Avenue & Ventura Boulevard

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	969	58	26	734	114	57	74	3	598	227	427
Future Volume (vph)	76	969	58	26	734	114	57	74	3	598	227	427
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	5.4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1853		3433	1863	1583
Flt Permitted	0.14	1.00	1.00	0.22	1.00	1.00	0.38	1.00		0.95	1.00	1.00
Satd. Flow (perm)	257	3539	1583	405	3539	1583	712	1853		3433	1863	1583
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)	83	1053	63	28	798	124	62	80	3	650	247	464
RTOR Reduction (vph)	0	0	0	0	0	86	0	2	0	0	0	12
Lane Group Flow (vph)	83	1053	63	28	798	38	62	81	0	650	247	452
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Prot	NA	custom
Protected Phases	1	6			2			4		3	8	1 3
Permitted Phases	6		6	2		2	4					8
Actuated Green, G (s)	44.1	44.1	44.1	30.3	30.3	30.3	18.2	18.2		21.0	18.2	53.0
Effective Green, g (s)	44.1	44.1	44.1	30.3	30.3	30.3	18.2	18.2		21.0	18.2	53.0
Actuated g/C Ratio	0.44	0.44	0.44	0.30	0.30	0.30	0.18	0.18		0.21	0.18	0.53
Clearance Time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	
Vehicle Extension (s)	3.0	4.9	4.9	4.7	4.7	4.7	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	240	1560	698	122	1072	479	129	337		720	339	838
v/s Ratio Prot	0.03	c0.30			c0.23			0.04		c0.19	c0.13	0.19
v/s Ratio Perm	0.12		0.04	0.07		0.02	0.09					0.10
v/c Ratio	0.35	0.68	0.09	0.23	0.74	0.08	0.48	0.24		0.90	0.73	0.54
Uniform Delay, d1	19.1	22.2	16.3	26.1	31.4	24.9	36.7	35.0		38.5	38.6	15.5
Progression Factor	1.00	1.00	1.00	1.39	1.39	4.56	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.9	2.4	0.3	3.4	3.7	0.2	2.8	0.4		14.6	7.6	0.7
Delay (s)	19.9	24.6	16.5	39.8	47.2	113.8	39.5	35.4		53.1	46.2	16.1
Level of Service	B	C	B	D	D	F	D	D		D	D	B
Approach Delay (s)		23.9			55.7			37.1			39.3	
Approach LOS		C			E			D			D	
Intersection Summary												
HCM 2000 Control Delay			38.4									HCM 2000 Level of Service D
HCM 2000 Volume to Capacity ratio			0.80									
Actuated Cycle Length (s)			100.0									Sum of lost time (s) 22.1
Intersection Capacity Utilization			76.1%									ICU Level of Service D
Analysis Period (min)			15									
c Critical Lane Group												

Queues

19: Laurel Canyon Boulevard & Ventura Place

06/21/2024



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	50	40	175	11	1032	35	76	1603
v/c Ratio	0.39	0.25	0.58	0.06	0.47	0.03	0.28	0.54
Control Delay	47.1	45.6	14.2	32.9	30.2	0.9	18.8	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0
Total Delay	47.1	45.6	14.2	32.9	30.6	0.9	18.8	15.6
Queue Length 50th (ft)	26	24	0	7	333	0	22	205
Queue Length 95th (ft)	64	55	56	m10	397	m0	80	382
Internal Link Dist (ft)	123	395			458			232
Turn Bay Length (ft)			380	105		85	55	
Base Capacity (vph)	131	222	345	177	2186	1005	271	2976
Starvation Cap Reductn	0	0	0	0	625	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.18	0.51	0.06	0.66	0.03	0.28	0.54






















Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

19: Laurel Canyon Boulevard & Ventura Place

06/21/2024













												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	11	7	27	10	161	10	949	32	70	1427	48
Future Volume (vph)	28	11	7	27	10	161	10	949	32	70	1427	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		9.4			9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.91	
Frpb, ped/bikes		1.00			1.00	0.94	1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes		0.96			1.00	1.00	1.00	1.00	1.00	0.99	1.00	
Frt		0.98			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.97			0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1701			1798	1482	1770	3539	1518	1759	5061	
Flt Permitted		0.79			0.97	1.00	0.95	1.00	1.00	0.25	1.00	
Satd. Flow (perm)		1389			1798	1482	1770	3539	1518	463	5061	
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)	30	12	8	29	11	175	11	1032	35	76	1551	52
RTOR Reduction (vph)	0	7	0	0	0	159	0	0	14	0	3	0
Lane Group Flow (vph)	0	43	0	0	40	16	11	1032	21	76	1600	0
Confl. Peds. (#/hr)	16					16			16	16		
Turn Type	Perm	NA		Split	NA	Perm	Prot	NA	Perm	Perm	NA	
Protected Phases		3		4	4		1	6			2	
Permitted Phases	3					4			6	2		
Actuated Green, G (s)		7.0			9.0	9.0	2.0	59.9	59.9	52.9	52.9	
Effective Green, g (s)		7.0			9.0	9.0	2.0	59.9	59.9	52.9	52.9	
Actuated g/C Ratio		0.07			0.09	0.09	0.02	0.60	0.60	0.53	0.53	
Clearance Time (s)		9.4			9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	4.8	4.8	3.1	3.1	
Lane Grp Cap (vph)		97			161	133	35	2119	909	244	2677	
v/s Ratio Prot					c0.02		0.01	c0.29			c0.32	
v/s Ratio Perm		c0.03				0.01			0.01	0.16		
v/c Ratio		0.44			0.25	0.12	0.31	0.49	0.02	0.31	0.60	
Uniform Delay, d1		44.6			42.4	41.9	48.3	11.4	8.2	13.3	16.2	
Progression Factor		1.00			1.00	1.00	0.79	2.54	1.00	1.00	1.00	
Incremental Delay, d2		3.2			0.8	0.4	3.3	0.5	0.0	3.3	1.0	
Delay (s)		47.8			43.2	42.3	41.5	29.4	8.2	16.6	17.2	
Level of Service		D			D	D	D	C	A	B	B	
Approach Delay (s)		47.8			42.4			28.8			17.2	
Approach LOS		D			D			C			B	
Intersection Summary												
HCM 2000 Control Delay		23.6										
HCM 2000 Volume to Capacity ratio		0.55										
Actuated Cycle Length (s)		100.0							29.1			
Intersection Capacity Utilization		64.5%										
Analysis Period (min)		15										
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

20: Laurel Canyon Boulevard & Ventura Boulevard

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	589	434	299	574	88	289	828	220	356	867	172
Future Volume (veh/h)	148	589	434	299	574	88	289	828	220	356	867	172
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	161	640	472	325	624	96	314	900	239	387	942	187
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	312	1031	610	266	1003	597	359	1069	464	359	1069	593
Arrive On Green	0.03	0.10	0.10	0.08	0.28	0.28	0.10	0.30	0.30	0.03	0.10	0.10
Sat Flow, veh/h	1781	3554	1534	1781	3554	1533	3456	3554	1541	3456	3554	1541
Grp Volume(v), veh/h	161	640	472	325	624	96	314	900	239	387	942	187
Grp Sat Flow(s),veh/h/ln	1781	1777	1534	1781	1777	1533	1728	1777	1541	1728	1777	1541
Q Serve(g_s), s	6.3	17.3	13.8	7.6	15.3	4.1	9.0	23.7	12.8	10.4	26.2	5.6
Cycle Q Clear(g_c), s	6.3	17.3	13.8	7.6	15.3	4.1	9.0	23.7	12.8	10.4	26.2	5.6
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	312	1031	610	266	1003	597	359	1069	464	359	1069	593
V/C Ratio(X)	0.52	0.62	0.77	1.22	0.62	0.16	0.87	0.84	0.52	1.08	0.88	0.32
Avail Cap(c_a), veh/h	316	1031	610	266	1003	597	359	1080	468	359	1080	598
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	0.56	0.56	0.56	0.89	0.89	0.89	0.74	0.74	0.74	0.83	0.83	0.83
Uniform Delay (d), s/veh	25.2	39.9	18.7	32.4	31.2	20.1	44.2	32.7	28.9	48.3	43.3	10.9
Incr Delay (d2), s/veh	0.8	1.6	5.4	125.4	2.6	0.5	16.0	5.0	1.3	65.4	8.4	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(95%),veh/ln	4.9	12.0	9.3	18.7	10.7	2.7	7.6	15.2	7.9	12.6	19.2	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.0	41.5	24.0	157.8	33.8	20.6	60.2	37.7	30.2	113.7	51.7	11.8
LnGrp LOS	C	D	C	F	C	C	E	D	C	F	D	B
Approach Vol, veh/h	1273			1045			1453			1516		
Approach Delay, s/veh	33.1			71.2			41.3			62.6		
Approach LOS	C			E			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.0	35.3	16.0	35.7	13.8	34.5	16.0	35.7				
Change Period (Y+Rc), s	5.4	6.3	5.6	5.6	5.6	6.3	5.6	5.6				
Max Green Setting (Gmax), s	28.7	28.7	10.4	30.4	8.4	27.7	10.4	30.4				
Max Q Clear Time (g_c+19.6)	19.3	19.3	11.0	28.2	8.3	17.3	12.4	25.7				
Green Ext Time (p_c), s	0.0	6.9	0.0	1.9	0.0	3.7	0.0	3.6				

Intersection Summary

HCM 6th Ctrl Delay	51.3
HCM 6th LOS	D

Notes

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

Queues

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/21/2024



Lane Group	EBL	EBT	WBL	WBT	WBR2	NBT	NBR	SBL	SBT	SBR2
Lane Group Flow (vph)	255	1094	63	982	101	37	45	64	87	78
v/c Ratio	0.47	0.59	0.58	1.15	0.29	0.13	0.11	0.38	0.64	0.26
Control Delay	15.6	2.9	84.3	127.9	46.9	51.3	0.5	65.6	81.4	2.1
Queue Delay	69.4	11.9	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.9	14.8	84.3	128.4	46.9	51.3	0.5	65.6	81.4	2.1
Queue Length 50th (ft)	210	24	56	~540	74	29	0	56	77	0
Queue Length 95th (ft)	m154	m0	#122	#746	137	64	0	104	137	0
Internal Link Dist (ft)		48		634		86			226	
Turn Bay Length (ft)	90		95		55		30	90		90
Base Capacity (vph)	580	1912	112	853	348	309	420	185	151	313
Starvation Cap Reductn	428	805	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	82	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.68	0.99	0.56	1.27	0.29	0.12	0.11	0.35	0.58	0.25

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	235	992	15	58	813	90	93	26	8	41	59	16
Future Volume (vph)	235	992	15	58	813	90	93	26	8	41	59	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.7		4.9	6.1		6.1		6.9	6.9	7.0	7.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		0.89		1.00	0.91	1.00	0.88
Flpb, ped/bikes	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	0.99		0.85		1.00	0.85	1.00	0.88
Flt Protected	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (prot)	1770	3528		1770	3448		1408		1795	1440	1770	1443
Flt Permitted	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (perm)	1770	3528		1770	3448		1408		1795	1440	1770	1443
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)	255	1078	16	63	884	98	101	28	9	45	64	17
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	38	0	0
Lane Group Flow (vph)	255	1093	0	63	982	0	101	0	37	7	64	87
Confl. Peds. (#/hr)	29		16	16		29	29	44		44	44	
Turn Type	Prot	NA		Prot	NA		Perm	Split	NA	Perm	Split	NA
Protected Phases	1 3	3 6		5	2			7	7		8	8
Permitted Phases							2			7		
Actuated Green, G (s)	44.4	71.9		7.3	33.6		33.6		23.0	23.0	13.3	13.3
Effective Green, g (s)	44.4	65.8		7.3	33.6		33.6		23.0	23.0	13.3	13.3
Actuated g/C Ratio	0.32	0.47		0.05	0.24		0.24		0.16	0.16	0.10	0.10
Clearance Time (s)				4.9	6.1		6.1		6.9	6.9	7.0	7.0
Vehicle Extension (s)				3.0	4.8		4.8		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	561	1658		92	827		337		294	236	168	137
v/s Ratio Prot	0.14	c0.31		0.04	c0.28				c0.02		0.04	c0.06
v/s Ratio Perm							0.07			0.01		
v/c Ratio	0.45	0.66		0.68	1.19		0.30		0.13	0.03	0.38	0.64
Uniform Delay, d1	38.1	28.5		65.2	53.2		43.6		49.9	49.1	59.5	61.0
Progression Factor	0.39	0.11		1.00	1.00		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1		19.0	96.4		2.3		0.2	0.1	1.4	9.3
Delay (s)	14.8	3.3		84.3	149.6		45.8		50.1	49.2	60.9	70.3
Level of Service	B	A		F	F		D		D	D	E	E
Approach Delay (s)		5.5			136.9				49.6			63.5
Approach LOS		A			F				D			E
Intersection Summary												
HCM 2000 Control Delay			65.1			HCM 2000 Level of Service			E			
HCM 2000 Volume to Capacity ratio			0.72									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			31.8			
Intersection Capacity Utilization			85.2%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/21/2024



Movement	SBR	SBR2
Lane Configurations		
Traffic Volume (vph)	64	72
Future Volume (vph)	64	72
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		7.0
Lane Util. Factor		1.00
Frpb, ped/bikes		0.75
Flpb, ped/bikes		1.00
Frt		0.85
Flt Protected		1.00
Satd. Flow (prot)		1192
Flt Permitted		1.00
Satd. Flow (perm)		1192
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	70	78
RTOR Reduction (vph)	0	71
Lane Group Flow (vph)	0	7
Confl. Peds. (#/hr)	44	44
Turn Type		Perm
Protected Phases		
Permitted Phases		8
Actuated Green, G (s)		13.3
Effective Green, g (s)		13.3
Actuated g/C Ratio		0.10
Clearance Time (s)		7.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)		113
v/s Ratio Prot		
v/s Ratio Perm		0.01
v/c Ratio		0.07
Uniform Delay, d1		57.7
Progression Factor		1.00
Incremental Delay, d2		0.2
Delay (s)		57.9
Level of Service		E
Approach Delay (s)		
Approach LOS		
Intersection Summary		

HCM 6th Signalized Intersection Summary

22: Carpenter Avenue & Ventura Boulevard

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	296	703	96	111	904	210	60	30	84	76	39	98
Future Volume (veh/h)	296	703	96	111	904	210	60	30	84	76	39	98
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	0.95		0.91	0.96		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	322	764	104	121	983	228	65	33	91	83	42	107
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	192	1802	245	352	1636	378	106	62	111	202	91	340
Arrive On Green	0.58	0.58	0.58	0.19	0.19	0.19	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	461	3117	424	635	2829	654	246	262	472	605	387	1447
Grp Volume(v), veh/h	322	435	433	121	616	595	189	0	0	125	0	107
Grp Sat Flow(s), veh/h/ln	461	1777	1764	635	1777	1706	980	0	0	992	0	1447
Q Serve(g_s), s	25.9	13.7	13.7	17.4	31.7	31.9	8.7	0.0	0.0	0.0	0.0	6.1
Cycle Q Clear(g_c), s	57.8	13.7	13.7	31.1	31.7	31.9	20.1	0.0	0.0	11.4	0.0	6.1
Prop In Lane	1.00		0.24	1.00		0.38	0.34		0.48	0.66		1.00
Lane Grp Cap(c), veh/h	192	1027	1020	352	1027	986	279	0	0	293	0	340
V/C Ratio(X)	1.68	0.42	0.42	0.34	0.60	0.60	0.68	0.00	0.00	0.43	0.00	0.31
Avail Cap(c_a), veh/h	192	1027	1020	352	1027	986	376	0	0	389	0	441
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.80	0.80	0.80	0.75	0.75	0.75	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.9	11.8	11.8	35.9	29.9	30.0	37.9	0.0	0.0	33.2	0.0	31.6
Incr Delay (d2), s/veh	323.6	1.0	1.0	2.0	1.9	2.1	2.9	0.0	0.0	1.0	0.0	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(95%),veh/ln	38.0	8.6	8.6	5.6	21.1	20.5	8.3	0.0	0.0	4.9	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	365.5	12.8	12.8	37.9	31.8	32.0	40.8	0.0	0.0	34.2	0.0	32.1
LnGrp LOS	F	B	B	D	C	C	D	A	A	C	A	C
Approach Vol, veh/h	1190			1332			189			232		
Approach Delay, s/veh	108.2			32.5			40.8			33.2		
Approach LOS	F			C			D			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	67.0			33.0			67.0			33.0		
Change Period (Y+Rc), s	* 9.2			9.5			* 9.2			9.5		
Max Green Setting (Gmax), s	* 51			30.5			* 51			30.5		
Max Q Clear Time (g_c+I1), s	59.8			13.4			33.9			22.1		
Green Ext Time (p_c), s	0.0			1.0			13.7			0.7		

Intersection Summary

HCM 6th Ctrl Delay 63.7

HCM 6th LOS E

Notes

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

Queues

23: Ventura Boulevard & Colfax Avenue

06/21/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	215	757	998	313	527
v/c Ratio	0.51	0.32	0.64	0.78	0.59
Control Delay	9.4	5.9	17.6	49.6	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	9.4	5.9	17.6	49.6	8.2
Queue Length 50th (ft)	27	50	126	188	66
Queue Length 95th (ft)	48	115	#179	261	124
Internal Link Dist (ft)		981	464		
Turn Bay Length (ft)	160			360	360
Base Capacity (vph)	419	2354	1569	495	889
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.51	0.32	0.64	0.63	0.59



















Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

23: Ventura Boulevard & Colfax Avenue

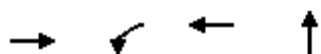
06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	198	696	0	0	736	182	0	0	0	288	0	485
Future Volume (vph)	198	696	0	0	736	182	0	0	0	288	0	485
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.4			5.4					5.4		5.7
Lane Util. Factor	1.00	0.95			0.95					1.00		1.00
Frt	1.00	1.00			0.97					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1770	3539			3434					1770		1583
Flt Permitted	0.16	1.00			1.00					0.95		1.00
Satd. Flow (perm)	299	3539			3434					1770		1583
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)	215	757	0	0	800	198	0	0	0	313	0	527
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	226
Lane Group Flow (vph)	215	757	0	0	998	0	0	0	0	313	0	301
Turn Type	pm+pt	NA			NA					pm+pt		pm+ov
Protected Phases	5	2			6			3		4		5
Permitted Phases	2						3			7		4
Actuated Green, G (s)	66.5	66.5			45.7					22.7		37.8
Effective Green, g (s)	66.5	66.5			45.7					22.7		37.8
Actuated g/C Ratio	0.66	0.66			0.46					0.23		0.38
Clearance Time (s)	5.7	5.4			5.4					5.4		5.7
Vehicle Extension (s)	3.0	4.3			4.5					3.0		3.0
Lane Grp Cap (vph)	420	2353			1569					401		598
v/s Ratio Prot	c0.08	0.21			c0.29					c0.18		0.08
v/s Ratio Perm	0.26											0.11
v/c Ratio	0.51	0.32			0.64					0.78		0.50
Uniform Delay, d1	10.7	7.1			20.8					36.3		23.9
Progression Factor	0.63	0.71			0.67					1.00		1.00
Incremental Delay, d2	1.0	0.3			1.9					9.5		0.7
Delay (s)	7.7	5.4			15.8					45.8		24.6
Level of Service	A	A			B					D		C
Approach Delay (s)		5.9			15.8			0.0			32.5	
Approach LOS		A			B			A			C	
Intersection Summary												
HCM 2000 Control Delay		17.4			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.71										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)			22.8				
Intersection Capacity Utilization		65.7%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

Queues

24: Berry Drive & Ventura Boulevard

06/21/2024



Lane Group	EBT	WBL	WBT	NBT
Lane Group Flow (vph)	2017	40	1022	63
v/c Ratio	0.69	0.36	0.35	0.27
Control Delay	4.5	15.9	4.4	3.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.5	15.9	4.4	3.0
Queue Length 50th (ft)	153	15	203	0
Queue Length 95th (ft)	174	m13	17	2
Internal Link Dist (ft)	342		273	287
Turn Bay Length (ft)		65		
Base Capacity (vph)	2908	111	2933	395
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.69	0.36	0.35	0.16



















Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

24: Berry Drive & Ventura Boulevard

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1743	112	37	940	0	20	0	38	0	0	0
Future Volume (vph)	0	1743	112	37	940	0	20	0	38	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0			9.4				
Lane Util. Factor		0.95		1.00	0.95			1.00				
Frt		0.99		1.00	1.00			0.91				
Flt Protected		1.00		0.95	1.00			0.98				
Satd. Flow (prot)		3507		1770	3539			1670				
Flt Permitted		1.00		0.07	1.00			0.98				
Satd. Flow (perm)		3507		134	3539			1670				
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)	0	1895	122	40	1022	0	22	0	41	0	0	0
RTOR Reduction (vph)	0	2	0	0	0	0	0	59	0	0	0	0
Lane Group Flow (vph)	0	2015	0	40	1022	0	0	4	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		6			2		3	3			4	
Permitted Phases	6			2						4		
Actuated Green, G (s)		80.0		80.0	80.0			5.6				
Effective Green, g (s)		80.0		80.0	80.0			5.6				
Actuated g/C Ratio		0.80		0.80	0.80			0.06				
Clearance Time (s)		5.0		5.0	5.0			9.4				
Vehicle Extension (s)		4.9		4.0	4.0			3.0				
Lane Grp Cap (vph)		2805		107	2831			93				
v/s Ratio Prot		c0.57			0.29			c0.00				
v/s Ratio Perm				0.30								
v/c Ratio		0.72		0.37	0.36			0.04				
Uniform Delay, d1		4.7		2.9	2.8			44.7				
Progression Factor		0.65		1.64	1.47			1.00				
Incremental Delay, d2		1.6		8.4	0.3			0.2				
Delay (s)		4.6		13.1	4.4			44.8				
Level of Service		A		B	A			D				
Approach Delay (s)		4.6			4.8			44.8			0.0	
Approach LOS		A			A			D			A	
Intersection Summary												
HCM 2000 Control Delay			5.5			HCM 2000 Level of Service			A			
HCM 2000 Volume to Capacity ratio			0.76									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			23.7			
Intersection Capacity Utilization			69.6%			ICU Level of Service			C			
Analysis Period (min)			15									

c Critical Lane Group

Queues

25: Ventura Boulevard & Tujunga Avenue

06/21/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	176	935	967	243	323
v/c Ratio	0.42	0.38	0.52	0.37	0.54
Control Delay	11.0	10.2	17.5	35.5	23.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	11.0	10.2	17.5	35.5	23.7
Queue Length 50th (ft)	52	173	191	70	139
Queue Length 95th (ft)	m81	222	316	96	182
Internal Link Dist (ft)		426	233	3083	
Turn Bay Length (ft)	180			100	60
Base Capacity (vph)	419	2466	1855	1218	603
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.42	0.38	0.52	0.20	0.54

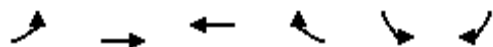
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

25: Ventura Boulevard & Tujunga Avenue

06/21/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	162	860	793	97	224	297
Future Volume (vph)	162	860	793	97	224	297
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.5	5.5		5.5	5.6
Lane Util. Factor	1.00	0.95	0.95		0.97	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3482		3433	1583
Flt Permitted	0.20	1.00	1.00		0.95	1.00
Satd. Flow (perm)	377	3539	3482		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	176	935	862	105	243	323
RTOR Reduction (vph)	0	0	7	0	0	35
Lane Group Flow (vph)	176	935	960	0	243	288
Turn Type	pm+pt	NA	NA		Prot	pt+ov
Protected Phases	1	6	2		4	1 7
Permitted Phases	6					4
Actuated Green, G (s)	69.7	69.7	53.1		19.3	35.8
Effective Green, g (s)	69.7	69.7	53.1		19.3	30.3
Actuated g/C Ratio	0.70	0.70	0.53		0.19	0.30
Clearance Time (s)	5.6	5.5	5.5		5.5	
Vehicle Extension (s)	3.0	4.4	4.9		3.0	
Lane Grp Cap (vph)	415	2466	1848		662	479
v/s Ratio Prot	0.05	0.26	c0.28		0.07	c0.18
v/s Ratio Perm	0.25					
v/c Ratio	0.42	0.38	0.52		0.37	0.60
Uniform Delay, d1	7.6	6.2	15.2		35.0	29.7
Progression Factor	1.42	1.42	1.00		1.00	1.00
Incremental Delay, d2	0.5	0.3	1.0		0.3	2.1
Delay (s)	11.4	9.2	16.2		35.4	31.8
Level of Service	B	A	B		D	C
Approach Delay (s)		9.5	16.2		33.4	
Approach LOS		A	B		C	

Intersection Summary

HCM 2000 Control Delay	17.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	22.1
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary

26: Laurel Canyon Boulevard & Maxwellton Road

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Volume (veh/h)	122	0	75	0	0	0	2	1131	0	0	1497	99
Future Volume (veh/h)	122	0	75	0	0	0	2	1131	0	0	1497	99
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.83				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
Work Zone On Approach	No						No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h	133	0	82				2	1229	0	0	1627	108
Peak Hour Factor	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	0	0	2	2
Cap, veh/h	221	0	136				41	1986	0	0	1930	127
Arrive On Green	0.23	0.00	0.23				0.57	0.57	0.00	0.00	0.57	0.57
Sat Flow, veh/h	970	0	598				1	3567	0	0	3477	223
Grp Volume(v), veh/h	215	0	0				660	571	0	0	849	886
Grp Sat Flow(s),veh/h/ln	1568	0	0				1866	1617	0	0	1777	1830
Q Serve(g_s), s	11.0	0.0	0.0				0.0	21.1	0.0	0.0	35.4	36.3
Cycle Q Clear(g_c), s	11.0	0.0	0.0				21.1	21.1	0.0	0.0	35.4	36.3
Prop In Lane	0.62		0.38				0.00		0.00	0.00		0.12
Lane Grp Cap(c), veh/h	357	0	0				1104	922	0	0	1013	1043
V/C Ratio(X)	0.60	0.00	0.00				0.60	0.62	0.00	0.00	0.84	0.85
Avail Cap(c_a), veh/h	432	0	0				1104	922	0	0	1013	1043
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.80	0.80	0.00	0.00	0.30	0.30
Uniform Delay (d), s/veh	31.1	0.0	0.0				12.8	12.9	0.0	0.0	15.9	16.1
Incr Delay (d2), s/veh	1.6	0.0	0.0				1.9	2.5	0.0	0.0	2.7	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
%ile BackOfQ(95%),veh/ln	7.7	0.0	0.0				12.6	11.4	0.0	0.0	16.4	17.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.8	0.0	0.0				14.8	15.4	0.0	0.0	18.6	18.9
LnGrp LOS	C	A	A				B	B	A	A	B	B
Approach Vol, veh/h	215						1231			1735		
Approach Delay, s/veh	32.8						15.0			18.7		
Approach LOS	C						B			B		
Timer - Assigned Phs	2			4			6					
Phs Duration (G+Y+Rc), s	60.3			29.7			60.3					
Change Period (Y+Rc), s	9.0			9.2			9.0					
Max Green Setting (Gmax), s	47.0			24.8			47.0					
Max Q Clear Time (g_c+I1), s	38.3			13.0			23.1					
Green Ext Time (p_c), s	8.2			1.0			16.3					

Intersection Summary

HCM 6th Ctrl Delay	18.3
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary

27: Laurel Canyon Boulevard & Laurel Terrace Drive/Sunshine Terrace Drive

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↙	↕		↙	↕	
Traffic Volume (veh/h)	16	15	249	101	22	89	57	1146	71	22	1534	18
Future Volume (veh/h)	16	15	249	101	22	89	57	1146	71	22	1534	18
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	17	16	271	110	24	97	62	1246	77	24	1667	20
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	43	30	341	129	34	86	80	2357	145	274	2195	26
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.04	0.69	0.69	0.61	0.61	0.61
Sat Flow, veh/h	52	132	1514	375	151	381	1781	3400	210	415	3596	43
Grp Volume(v), veh/h	304	0	0	231	0	0	62	650	673	24	823	864
Grp Sat Flow(s), veh/h/ln	1699	0	0	907	0	0	1781	1777	1833	415	1777	1863
Q Serve(g_s), s	0.0	0.0	0.0	6.4	0.0	0.0	4.1	21.2	21.3	3.6	40.3	40.5
Cycle Q Clear(g_c), s	20.6	0.0	0.0	27.0	0.0	0.0	4.1	21.2	21.3	14.9	40.3	40.5
Prop In Lane	0.06		0.89	0.48		0.42	1.00		0.11	1.00		0.02
Lane Grp Cap(c), veh/h	414	0	0	248	0	0	80	1232	1271	274	1084	1137
V/C Ratio(X)	0.73	0.00	0.00	0.93	0.00	0.00	0.78	0.53	0.53	0.09	0.76	0.76
Avail Cap(c_a), veh/h	414	0	0	248	0	0	110	1232	1271	274	1084	1137
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.43	0.43	0.43
Uniform Delay (d), s/veh	44.3	0.0	0.0	48.7	0.0	0.0	56.7	8.9	8.9	14.9	17.0	17.0
Incr Delay (d2), s/veh	6.6	0.0	0.0	38.5	0.0	0.0	20.8	1.6	1.6	0.3	2.2	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(95%), veh/ln	4.4	0.0	0.0	14.8	0.0	0.0	4.2	12.5	12.8	0.6	20.1	21.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	50.9	0.0	0.0	87.2	0.0	0.0	77.5	10.5	10.5	15.2	19.2	19.1
LnGrp LOS	D	A	A	F	A	A	E	B	B	B	B	B
Approach Vol, veh/h		304			231			1385			1711	
Approach Delay, s/veh		50.9			87.2			13.5			19.1	
Approach LOS		D			F			B			B	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	30.0	78.0		32.0		88.0		32.0				
Change Period (Y+Rc), s	4.6	4.8		* 5		4.8		* 5				
Max Green Setting (Gmax), s	71.2			* 27		83.2		* 27				
Max Q Clear Time (g_c+I), s	42.5			22.6		23.3		29.0				
Green Ext Time (p_c), s	0.0	15.8		0.8		12.7		0.0				

Intersection Summary

HCM 6th Ctrl Delay	24.0
HCM 6th LOS	C

Notes

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

Queues

28: Laurel Canyon Boulevard & Fryman Road

06/21/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	248	7	23	1112	2095
v/c Ratio	0.71	0.02	0.28	0.46	0.88
Control Delay	44.2	26.0	18.6	8.1	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.2	26.0	18.6	8.1	18.6
Queue Length 50th (ft)	132	3	5	134	431
Queue Length 95th (ft)	195	14	29	221	#783
Internal Link Dist (ft)				236	183
Turn Bay Length (ft)			145		
Base Capacity (vph)	542	485	82	2412	2370
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.46	0.01	0.28	0.46	0.88








Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

28: Laurel Canyon Boulevard & Fryman Road

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	228	0	6	0	0	0	21	1023	0	0	1641	286
Future Volume (vph)	228	0	6	0	0	0	21	1023	0	0	1641	286
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4		5.4				5.4	5.4			5.4	
Lane Util. Factor	1.00		1.00				1.00	0.95			0.95	
Frt	1.00		0.85				1.00	1.00			0.98	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	3539			3460	
Flt Permitted	0.95		1.00				0.07	1.00			1.00	
Satd. Flow (perm)	1770		1583				122	3539			3460	
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)	248	0	7	0	0	0	23	1112	0	0	1784	311
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	12	0
Lane Group Flow (vph)	248	0	7	0	0	0	23	1112	0	0	2083	0
Turn Type	Perm		Perm				Perm	NA		Perm	NA	
Protected Phases								2			6	
Permitted Phases	8		8				2			6		
Actuated Green, G (s)	17.9		17.9				61.3	61.3			61.3	
Effective Green, g (s)	17.9		17.9				61.3	61.3			61.3	
Actuated g/C Ratio	0.20		0.20				0.68	0.68			0.68	
Clearance Time (s)	5.4		5.4				5.4	5.4			5.4	
Vehicle Extension (s)	3.0		3.0				4.8	4.8			5.1	
Lane Grp Cap (vph)	352		314				83	2410			2356	
v/s Ratio Prot								0.31			c0.60	
v/s Ratio Perm	c0.14		0.00				0.19					
v/c Ratio	0.70		0.02				0.28	0.46			0.88	
Uniform Delay, d1	33.6		29.0				5.6	6.7			11.5	
Progression Factor	1.00		1.00				1.00	1.00			1.00	
Incremental Delay, d2	6.3		0.0				8.1	0.6			5.3	
Delay (s)	39.9		29.0				13.8	7.3			16.8	
Level of Service	D		C				B	A			B	
Approach Delay (s)		39.6			0.0			7.4			16.8	
Approach LOS		D			A			A			B	
Intersection Summary												
HCM 2000 Control Delay			15.4				HCM 2000 Level of Service				B	
HCM 2000 Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			10.8		
Intersection Capacity Utilization			74.9%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th TWSC
29: Laurel Canyon Boulevard & Woodbridge Street

06/21/2024

Intersection												
Int Delay, s/veh	5.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↵	↕↵		↵	↕↵	
Traffic Vol, veh/h	3	0	16	4	0	53	14	1190	4	173	1678	21
Future Vol, veh/h	3	0	16	4	0	53	14	1190	4	173	1678	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	65	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	17	4	0	58	15	1293	4	188	1824	23
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2889	3539	924	2613	3548	649	1847	0	0	1297	0	0
Stage 1	2212	2212	-	1325	1325	-	-	-	-	-	-	-
Stage 2	677	1327	-	1288	2223	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	7	6	271	12	6	412	325	-	-	530	-	-
Stage 1	45	80	-	164	223	-	-	-	-	-	-	-
Stage 2	409	223	-	173	79	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	4	4	271	8	4	412	325	-	-	530	-	-
Mov Cap-2 Maneuver	4	4	-	8	4	-	-	-	-	-	-	-
Stage 1	43	52	-	156	213	-	-	-	-	-	-	-
Stage 2	336	213	-	104	51	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s\$	391.1		104.2		0.2		1.4					
HCM LOS	F		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	325	-	-	23	91	530	-	-				
HCM Lane V/C Ratio	0.047	-	-	0.898	0.681	0.355	-	-				
HCM Control Delay (s)	16.6	-	-	\$ 391.1	104.2	15.5	-	-				
HCM Lane LOS	C	-	-	F	F	C	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	2.6	3.3	1.6	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

HCM 6th TWSC
30: Valleyheart Drive (North) & Laurel Canyon Boulevard

06/21/2024

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	2	0	10	6	0	27	13	1183	8	29	1684	7
Future Vol, veh/h	2	0	10	6	0	27	13	1183	8	29	1684	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	40	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	11	7	0	29	14	1286	9	32	1830	8





Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2569	3221	919	2298	3221	648	1838	0	0	1295	0	0
Stage 1	1898	1898	-	1319	1319	-	-	-	-	-	-	-
Stage 2	671	1323	-	979	1902	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	13	10	273	21	10	413	327	-	-	531	-	-
Stage 1	72	116	-	166	225	-	-	-	-	-	-	-
Stage 2	412	224	-	268	116	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	11	9	273	19	9	413	327	-	-	531	-	-
Mov Cap-2 Maneuver	11	9	-	19	9	-	-	-	-	-	-	-
Stage 1	69	109	-	159	215	-	-	-	-	-	-	-
Stage 2	366	214	-	242	109	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	89.7		72.8		0.2		0.2	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	327	-	-	55	87	531	-
HCM Lane V/C Ratio	0.043	-	-	0.237	0.412	0.059	-
HCM Control Delay (s)	16.5	-	-	89.7	72.8	12.2	-
HCM Lane LOS	C	-	-	F	F	B	-
HCM 95th %tile Q(veh)	0.1	-	-	0.8	1.7	0.2	-

Intersection

Int Delay, s/veh 1.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	91	1117	18	133	1552
Future Vol, veh/h	5	91	1117	18	133	1552
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	35	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	99	1214	20	145	1687

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	2358	617	0
Stage 1	1224	-	-
Stage 2	1134	-	-
Critical Hdwy	6.84	6.94	-
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	-
Pot Cap-1 Maneuver	30	433	-
Stage 1	241	-	-
Stage 2	269	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	22	433	-
Mov Cap-2 Maneuver	22	-	-
Stage 1	241	-	-
Stage 2	199	-	-

Approach	WB	NB	SB
HCM Control Delay, s	35.6	0	1.1
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	219	560
HCM Lane V/C Ratio	-	-	0.476	0.258
HCM Control Delay (s)	-	-	35.6	13.7
HCM Lane LOS	-	-	E	B
HCM 95th %tile Q(veh)	-	-	2.3	1

HCM 6th AWSC
32: Radford Avenue & Sarah Street

06/21/2024

Intersection

Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	12	1	0	3	6	54	2	36	1	114	103	13
Future Vol, veh/h	12	1	0	3	6	54	2	36	1	114	103	13
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	1	0	3	7	59	2	39	1	124	112	14
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0




Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8	7.4	7.6	9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	92%	5%	50%
Vol Thru, %	92%	8%	10%	45%
Vol Right, %	3%	0%	86%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	39	13	63	230
LT Vol	2	12	3	114
Through Vol	36	1	6	103
RT Vol	1	0	54	13
Lane Flow Rate	42	14	68	250
Geometry Grp	1	1	1	1
Degree of Util (X)	0.051	0.019	0.078	0.29
Departure Headway (Hd)	4.372	4.851	4.101	4.177
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	824	742	879	855
Service Time	2.372	2.856	2.103	2.233
HCM Lane V/C Ratio	0.051	0.019	0.077	0.292
HCM Control Delay	7.6	8	7.4	9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.1	0.3	1.2

Intersection

Intersection Delay, s/veh 0

Intersection LOS -

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	0	0	0
HCM LOS	-	-	-

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0
LT Vol	0	0	0
Through Vol	0	0	0
RT Vol	0	0	0
Lane Flow Rate	0	0	0
Geometry Grp	1	1	1
Degree of Util (X)	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0
HCM Control Delay	6.9	6.9	6.9
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

HCM 6th AWSC
54: Radford Avenue & Radford Gate

06/21/2024

Intersection

Intersection Delay, s/veh 0

Intersection LOS -

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

HCM 6th AWSC
55: Alley & Carpenter Gate

06/21/2024

Intersection

Intersection Delay, s/veh 0

Intersection LOS -

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-




Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

HCM 6th TWSC
56: Colfax Avenue & Colfax Gate

06/21/2024

Intersection

Int Delay, s/veh 0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1	1	- 0 - 0
Stage 1	1	-	- - -
Stage 2	0	-	- - -
Critical Hdwy	6.42	6.22	- - -
Critical Hdwy Stg 1	5.42	-	- - -
Critical Hdwy Stg 2	5.42	-	- - -
Follow-up Hdwy	3.518	3.318	- - -
Pot Cap-1 Maneuver	1022	1084	0 - - 0
Stage 1	1022	-	0 - - 0
Stage 2	-	-	0 - - 0
Platoon blocked, %			- -
Mov Cap-1 Maneuver	1022	1084	- - -
Mov Cap-2 Maneuver	1022	-	- - -
Stage 1	1022	-	- - -
Stage 2	-	-	- - -

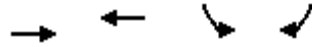
Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

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

Queues

121: Ventura Boulevard & Ventura PI

06/21/2024



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1280	982	70	30
v/c Ratio	1.19	0.46	0.12	0.10
Control Delay	138.5	11.2	48.7	15.9
Queue Delay	1.5	51.1	0.0	0.0
Total Delay	139.9	62.3	48.7	15.9
Queue Length 50th (ft)	~781	36	28	0
Queue Length 95th (ft)	#961	m58	50	29
Internal Link Dist (ft)	509	48	136	
Turn Bay Length (ft)				40
Base Capacity (vph)	1072	2102	669	332
Starvation Cap Reductn	0	1276	0	0
Spillback Cap Reductn	265	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.59	1.19	0.10	0.09

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

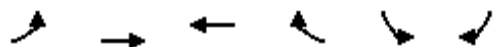
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

121: Ventura Boulevard & Ventura PI

06/21/2024



























Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	↑
Traffic Volume (vph)	0	1178	903	0	64	28
Future Volume (vph)	0	1178	903	0	64	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.1	6.1		5.7	5.7
Lane Util. Factor		0.95	0.95		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3433	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1280	982	0	70	30
RTOR Reduction (vph)	0	0	0	0	0	25
Lane Group Flow (vph)	0	1280	982	0	70	5
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2 4		3	
Permitted Phases						3
Actuated Green, G (s)		41.4	83.8		24.4	24.4
Effective Green, g (s)		41.4	83.8		24.4	24.4
Actuated g/C Ratio		0.30	0.60		0.17	0.17
Clearance Time (s)		6.1			5.7	5.7
Vehicle Extension (s)		4.6			3.0	3.0
Lane Grp Cap (vph)		1046	2118		598	275
v/s Ratio Prot		c0.36	c0.28		c0.02	
v/s Ratio Perm						0.00
v/c Ratio		1.22	0.46		0.12	0.02
Uniform Delay, d1		49.3	15.6		48.7	47.9
Progression Factor		1.00	0.72		1.00	1.00
Incremental Delay, d2		109.3	0.0		0.1	0.0
Delay (s)		158.6	11.3		48.8	47.9
Level of Service		F	B		D	D
Approach Delay (s)		158.6	11.3		48.5	
Approach LOS		F	B		D	
Intersection Summary						
HCM 2000 Control Delay			92.7		HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio			0.75			
Actuated Cycle Length (s)			140.0		Sum of lost time (s)	31.8
Intersection Capacity Utilization			49.1%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

1: Riverside Drive & Laurel Canyon Boulevard








06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	310	939	156	114	484	105	210	805	118	156	793	221
Future Volume (veh/h)	310	939	156	114	484	105	210	805	118	156	793	221
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	337	1021	170	124	526	114	228	875	128	170	862	240
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	180	1032	460	255	927	413	316	1310	701	289	1395	386
Arrive On Green	0.10	0.29	0.29	0.02	0.09	0.09	0.09	0.37	0.37	0.08	0.35	0.35
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	3554	1585	1781	3975	1101
Grp Volume(v), veh/h	337	1021	170	124	526	114	228	875	128	170	737	365
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1777	1585	1781	1702	1672
Q Serve(g_s), s	12.1	34.3	10.2	4.3	17.1	8.1	9.8	24.7	5.9	7.2	21.5	21.7
Cycle Q Clear(g_c), s	12.1	34.3	10.2	4.3	17.1	8.1	9.8	24.7	5.9	7.2	21.5	21.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.66
Lane Grp Cap(c), veh/h	180	1032	460	255	927	413	316	1310	701	289	1194	587
V/C Ratio(X)	1.88	0.99	0.37	0.49	0.57	0.28	0.72	0.67	0.18	0.59	0.62	0.62
Avail Cap(c_a), veh/h	180	1032	460	357	927	413	316	1310	701	306	1194	587
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	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	0.81	0.81	0.81	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.0	42.4	33.8	56.3	48.3	44.2	24.7	31.7	20.3	24.8	32.3	32.3
Incr Delay (d2), s/veh	414.7	25.6	2.3	1.4	2.5	1.6	6.4	2.2	0.5	2.7	2.4	4.9
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(95%),veh/ln	41.2	25.2	7.5	3.5	13.2	6.3	7.7	15.7	4.0	5.7	13.9	14.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	468.7	68.0	36.1	57.7	50.8	45.9	31.1	33.9	20.8	27.4	34.7	37.2
LnGrp LOS	F	E	D	E	D	D	C	C	C	C	C	D
Approach Vol, veh/h	1528				764				1231			
Approach Delay, s/veh	152.8				51.2				32.0			
Approach LOS	F				D				C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	48.0	18.0	37.0	14.9	50.1	14.5	40.5				
Change Period (Y+Rc), s	5.6	5.9	5.9	* 5.7	5.6	5.9	5.6	* 5.7				
Max Green Setting (Gmax), s	11.4	42.1	12.1	* 31	10.4	43.1	12.4	* 31				
Max Q Clear Time (g_c+I1), s	11.8	23.7	14.1	19.1	9.2	26.7	6.3	36.3				
Green Ext Time (p_c), s	0.0	6.9	0.0	2.9	0.0	5.9	0.2	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	74.2											
HCM 6th LOS	E											
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
User approved changes to right turn type.												

HCM 6th TWSC

2: Riverside Drive & Radford Avenue

06/24/2024

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	954	32	36	963	7	16	2	28	1	0	8
Future Vol, veh/h	11	954	32	36	963	7	16	2	28	1	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	105	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	1037	35	39	1047	8	17	2	30	1	0	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1055	0	0	1072	0	0	1663	2194	519	1673	2225	528
Stage 1	-	-	-	-	-	-	1061	1061	-	1129	1129	-
Stage 2	-	-	-	-	-	-	602	1133	-	544	1096	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	656	-	-	646	-	-	64	45	502	62	43	495
Stage 1	-	-	-	-	-	-	239	299	-	217	277	-
Stage 2	-	-	-	-	-	-	453	276	-	491	287	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	656	-	-	646	-	-	59	42	502	53	40	495
Mov Cap-2 Maneuver	-	-	-	-	-	-	59	42	-	53	40	-
Stage 1	-	-	-	-	-	-	235	294	-	213	260	-
Stage 2	-	-	-	-	-	-	418	259	-	449	282	-

























Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.4			53			19.6		
HCM LOS							F			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	123	656	-	-	646	-	-	257
HCM Lane V/C Ratio	0.407	0.018	-	-	0.061	-	-	0.038
HCM Control Delay (s)	53	10.6	-	-	10.9	-	-	19.6
HCM Lane LOS	F	B	-	-	B	-	-	C
HCM 95th %tile Q(veh)	1.7	0.1	-	-	0.2	-	-	0.1

HCM 6th Signalized Intersection Summary

3: Colfax Avenue & Riverside Drive

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	625	180	194	697	39	145	501	83	29	326	80
Future Volume (veh/h)	148	625	180	194	697	39	145	501	83	29	326	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	161	679	196	211	758	42	158	545	90	32	354	87
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	265	1356	605	258	1356	605	415	826	700	405	826	700
Arrive On Green	0.26	0.26	0.26	0.38	0.38	0.38	0.88	0.88	0.88	0.44	0.44	0.44
Sat Flow, veh/h	680	3554	1585	634	3554	1585	948	1870	1585	793	1870	1585
Grp Volume(v), veh/h	161	679	196	211	758	42	158	545	90	32	354	87
Grp Sat Flow(s),veh/h/ln	680	1777	1585	634	1777	1585	948	1870	1585	793	1870	1585
Q Serve(g_s), s	12.8	9.8	6.0	13.1	10.1	1.0	5.7	4.9	0.4	1.6	7.8	1.9
Cycle Q Clear(g_c), s	22.9	9.8	6.0	22.9	10.1	1.0	13.5	4.9	0.4	6.5	7.8	1.9
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	265	1356	605	258	1356	605	415	826	700	405	826	700
V/C Ratio(X)	0.61	0.50	0.32	0.82	0.56	0.07	0.38	0.66	0.13	0.08	0.43	0.12
Avail Cap(c_a), veh/h	265	1356	605	258	1356	605	415	826	700	405	826	700
HCM Platoon Ratio	0.67	0.67	0.67	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	0.94	0.94	0.94	0.65	0.65	0.65	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.0	17.4	16.0	25.7	14.6	11.8	5.0	2.2	2.0	12.8	11.5	9.9
Incr Delay (d2), s/veh	9.9	1.3	1.4	22.8	1.6	0.2	1.7	2.7	0.2	0.4	1.6	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(95%),veh/ln	5.5	7.1	3.9	7.8	6.6	0.6	0.9	2.5	0.3	0.5	5.5	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.9	18.8	17.5	48.5	16.1	12.0	6.7	4.9	2.2	13.2	13.2	10.3
LnGrp LOS	D	B	B	D	B	B	A	A	A	B	B	B
Approach Vol, veh/h	1036			1011			793			473		
Approach Delay, s/veh	21.5			22.7			5.0			12.6		
Approach LOS	C			C			A			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	28.0			32.0			28.0			32.0		
Change Period (Y+Rc), s	* 5.1			* 5.5			* 5.1			* 5.5		
Max Green Setting (Gmax), s	* 23			* 27			* 23			* 27		
Max Q Clear Time (g_c+I1), s	24.9			15.5			24.9			9.8		
Green Ext Time (p_c), s	0.0			3.5			0.0			2.3		
Intersection Summary												
HCM 6th Ctrl Delay	16.6											
HCM 6th LOS	B											
Notes												

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

Queues

4: Riverside Drive & SR 170 Southbound Off-Ramp

06/24/2024



Lane Group	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	828	5	728	14	233	221	219
v/c Ratio	0.40	0.02	0.36	0.04	0.62	0.47	0.43
Control Delay	10.8	9.4	9.8	0.2	31.1	9.3	6.2
Queue Delay	0.5	0.0	0.3	0.1	0.3	0.4	0.0
Total Delay	11.3	9.4	10.1	0.3	31.4	9.7	6.2
Queue Length 50th (ft)	84	1	70	0	93	15	0
Queue Length 95th (ft)	207	m5	210	0	156	69	49
Internal Link Dist (ft)	2214		245	105		344	
Turn Bay Length (ft)		25			140		150
Base Capacity (vph)	2048	304	2049	343	464	537	573
Starvation Cap Reductn	0	0	681	0	0	0	0
Spillback Cap Reductn	731	0	0	75	31	74	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.02	0.53	0.05	0.54	0.48	0.38

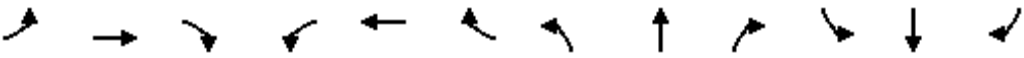
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: Riverside Drive & SR 170 Southbound Off-Ramp













06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑	↑↑			↑↓		↑	↑↓	↑
Traffic Volume (vph)	0	757	5	5	670	0	0	0	13	247	6	366
Future Volume (vph)	0	757	5	5	670	0	0	0	13	247	6	366
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Lane Util. Factor		0.95		1.00	0.95			1.00		0.95	0.91	0.95
Frt		1.00		1.00	1.00			0.86		1.00	0.88	0.85
Flt Protected		1.00		0.95	1.00			1.00		0.95	0.99	1.00
Satd. Flow (prot)		3536		1770	3539			1611		1681	1477	1504
Flt Permitted		1.00		0.28	1.00			1.00		0.95	0.99	1.00
Satd. Flow (perm)		3536		526	3539			1611		1681	1477	1504
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)	0	823	5	5	728	0	0	0	14	268	7	398
RTOR Reduction (vph)	0	0	0	0	0	0	0	14	0	0	139	170
Lane Group Flow (vph)	0	828	0	5	728	0	0	0	0	233	82	49
Turn Type		NA		Perm	NA			NA		Split	NA	Perm
Protected Phases		6			2			4		3	3	
Permitted Phases				2			4					3
Actuated Green, G (s)		35.7		35.7	35.7			1.6		15.7	15.7	15.7
Effective Green, g (s)		35.7		35.7	35.7			1.6		15.7	15.7	15.7
Actuated g/C Ratio		0.51		0.51	0.51			0.02		0.22	0.22	0.22
Clearance Time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Vehicle Extension (s)		3.8		2.4	2.4			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1803		268	1804			36		377	331	337
v/s Ratio Prot		c0.23			0.21			c0.00		c0.14	0.06	
v/s Ratio Perm				0.01								0.03
v/c Ratio		0.46		0.02	0.40			0.01		0.62	0.25	0.15
Uniform Delay, d1		11.0		8.5	10.6			33.4		24.4	22.3	21.8
Progression Factor		1.00		0.86	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2		0.8		0.1	0.6			0.1		3.0	0.4	0.2
Delay (s)		11.8		7.4	11.2			33.5		27.5	22.7	22.0
Level of Service		B		A	B			C		C	C	C
Approach Delay (s)		11.8			11.1			33.5			24.1	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			15.4			HCM 2000 Level of Service			B			
HCM 2000 Volume to Capacity ratio			0.49									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			54.5%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	NWL	NWR
Lane Group Flow (vph)	221	635	285	208	348	132	30	861	61	527	340	123
v/c Ratio	0.69	0.91	0.92	1.11	0.44	0.38	0.13	0.94	0.39	0.41	0.66	0.57
Control Delay	48.3	71.7	87.2	135.6	49.0	49.8	47.4	69.4	68.1	34.5	62.0	64.9
Queue Delay	0.0	47.8	48.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.3	119.5	135.2	135.6	49.0	49.8	47.4	69.4	68.1	34.5	62.0	64.9
Queue Length 50th (ft)	160	310	279	~161	144	103	22	~440	54	185	153	116
Queue Length 95th (ft)	185	#435	#483	#328	195	168	56	#672	101	255	195	183
Internal Link Dist (ft)		245			745			2580		383	758	
Turn Bay Length (ft)	140		230	85		110	270		290		215	
Base Capacity (vph)	321	700	311	187	791	353	223	914	157	1285	695	292
Starvation Cap Reductn	0	174	57	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	1.21	1.12	1.11	0.44	0.37	0.13	0.94	0.39	0.41	0.49	0.42

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.





















95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

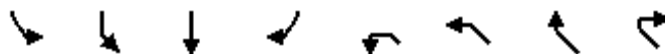
06/24/2024

												
Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	203	408	271	167	16	176	320	121	28	690	86	17
Future Volume (vph)	203	408	271	167	16	176	320	121	28	690	86	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Lane Util. Factor	1.00	0.91	0.91			1.00	0.95	1.00	1.00	0.95		
Frt	1.00	0.95	0.85			1.00	1.00	0.85	1.00	0.98		
Flt Protected	0.95	1.00	1.00			0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1770	3236	1441			1770	3539	1583	1770	3471		
Flt Permitted	0.45	1.00	1.00			0.13	1.00	1.00	0.46	1.00		
Satd. Flow (perm)	843	3236	1441			251	3539	1583	850	3471		
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)	221	443	295	182	17	191	348	132	30	750	93	18
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	221	635	285	0	0	208	348	132	30	861	0	0
Turn Type	pm+pt	NA	Perm		pm+pt	pm+pt	NA	Perm	Perm	NA		
Protected Phases	1	6			5	5	2			8		
Permitted Phases	6		6		2	2		2	8			
Actuated Green, G (s)	39.2	28.7	28.7			40.1	29.7	29.7	36.9	36.9		
Effective Green, g (s)	39.2	28.7	28.7			40.1	29.7	29.7	36.9	36.9		
Actuated g/C Ratio	0.28	0.20	0.20			0.29	0.21	0.21	0.26	0.26		
Clearance Time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Vehicle Extension (s)	3.0	3.9	3.9			3.0	4.6	4.6	4.7	4.7		
Lane Grp Cap (vph)	305	663	295			184	750	335	224	914		
v/s Ratio Prot	0.05	0.20				c0.08	0.10			c0.25		
v/s Ratio Perm	0.15		0.20			c0.24		0.08	0.04			
v/c Ratio	0.72	0.96	0.97			1.13	0.46	0.39	0.13	0.94		
Uniform Delay, d1	43.1	55.1	55.2			43.8	48.2	47.4	39.4	50.5		
Progression Factor	1.00	1.01	1.01			1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2	7.7	24.8	42.6			105.8	2.1	3.5	0.5	17.8		
Delay (s)	50.7	80.4	98.2			149.6	50.3	50.9	39.9	68.3		
Level of Service	D	F	F			F	D	D	D	E		
Approach Delay (s)		79.1					80.4			67.3		
Approach LOS		E					F			E		
Intersection Summary												
HCM 2000 Control Delay			67.4			HCM 2000 Level of Service				E		
HCM 2000 Volume to Capacity ratio			0.93									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			33.0			
Intersection Capacity Utilization			96.1%			ICU Level of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024



Movement	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	15	41	399	86	29	272	110	14
Future Volume (vph)	15	41	399	86	29	272	110	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.3			6.6	6.6	
Lane Util. Factor		1.00	0.95			0.97	0.91	
Frt		1.00	0.97			0.99	0.85	
Flt Protected		0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	3446			3429	1441	
Flt Permitted		0.95	1.00			0.95	1.00	
Satd. Flow (perm)		1770	3446			3429	1441	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	45	434	93	32	296	120	15
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	61	527	0	0	340	123	0
Turn Type	Prot	Prot	NA		Prot	Prot	Perm	
Protected Phases	7	7	4		3	3		
Permitted Phases							3	
Actuated Green, G (s)		9.9	53.6			21.1	21.1	
Effective Green, g (s)		9.9	53.6			21.1	21.1	
Actuated g/C Ratio		0.07	0.38			0.15	0.15	
Clearance Time (s)		6.8	6.3			6.6	6.6	
Vehicle Extension (s)		3.0	4.9			4.6	4.6	
Lane Grp Cap (vph)		125	1319			516	217	
v/s Ratio Prot		0.03	c0.15			c0.10		
v/s Ratio Perm							0.09	
v/c Ratio		0.49	0.40			0.66	0.57	
Uniform Delay, d1		62.6	31.5			56.1	55.2	
Progression Factor		1.00	1.00			1.00	1.00	
Incremental Delay, d2		3.0	0.4			3.8	4.9	
Delay (s)		65.6	31.9			59.8	60.1	
Level of Service		E	C			E	E	
Approach Delay (s)			35.4			59.9		
Approach LOS			D			E		
Intersection Summary								

HCM 6th Signalized Intersection Summary

6: Laurel Canyon Boulevard & US 101 Northbound Ramps

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰	↰	↰	↰			↰	↰
Traffic Volume (veh/h)	0	0	0	493	0	501	455	1027	0	1	854	161
Future Volume (veh/h)	0	0	0	493	0	501	455	1027	0	1	854	161
Initial Q (Qb), veh				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
Parking Bus, Adj				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	0	1870	1870	1870
Adj Flow Rate, veh/h				707	0	362	495	1116	0	1	928	175
Peak Hour Factor				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	0	2	2	2
Cap, veh/h				819	0	365	625	2338	0	40	2076	663
Arrive On Green				0.23	0.00	0.23	0.06	0.22	0.00	0.42	0.42	0.42
Sat Flow, veh/h				3563	0	1585	3456	3647	0	1	4966	1585
Grp Volume(v), veh/h				707	0	362	495	1116	0	350	579	175
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	1869	1549	1585
Q Serve(g_s), s				17.2	0.0	20.5	12.7	24.7	0.0	0.0	12.1	6.5
Cycle Q Clear(g_c), s				17.2	0.0	20.5	12.7	24.7	0.0	12.0	12.1	6.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				819	0	365	625	2338	0	821	1295	663
V/C Ratio(X)				0.86	0.00	0.99	0.79	0.48	0.00	0.43	0.45	0.26
Avail Cap(c_a), veh/h				819	0	365	1102	2338	0	821	1295	663
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.88	0.88	0.00	0.80	0.80	0.80
Uniform Delay (d), s/veh				33.3	0.0	34.6	40.6	21.7	0.0	18.7	18.7	17.1
Incr Delay (d2), s/veh				9.4	0.0	45.2	2.0	0.6	0.0	1.3	0.9	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
%ile BackOfQ(95%),veh/ln				12.6	0.0	17.6	9.8	17.0	0.0	8.6	7.3	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				42.7	0.0	79.7	42.7	22.3	0.0	20.0	19.6	17.9
LnGrp LOS				D	A	E	D	C	A	C	B	B
Approach Vol, veh/h					1069			1611			1104	
Approach Delay, s/veh					55.2			28.6			19.5	
Approach LOS					E			C			B	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	31.6	42.4		26.0		64.0						
Change Period (Y+Rc), s	5.3	4.8		* 5.3		4.8						
Max Green Setting (Gmax), s	25.2			* 21		59.2						
Max Q Clear Time (g_c+M), s	14.1			22.5		26.7						
Green Ext Time (p_c), s	1.6	4.9		0.0		9.6						

Intersection Summary

HCM 6th Ctrl Delay 33.5

HCM 6th LOS C

Notes

User approved volume balancing among the lanes for turning movement.

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

HCM 6th Signalized Intersection Summary

7: US 101 Southbound Ramps & Laurel Canyon Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	317	21	503	0	0	0	0	1181	596	261	1060	0
Future Volume (veh/h)	317	21	503	0	0	0	0	1181	596	261	1060	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	238	0	677				0	1284	648	284	1152	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	419	0	746				0	3320	1031	398	2311	0
Arrive On Green	0.24	0.00	0.24				0.00	0.65	0.65	0.86	0.86	0.00
Sat Flow, veh/h	1781	0	3170				0	5274	1585	446	3647	0
Grp Volume(v), veh/h	238	0	677				0	1284	648	284	1152	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1702	1585	223	1777	0
Q Serve(g_s), s	10.6	0.0	18.7				0.0	10.6	21.8	47.9	6.9	0.0
Cycle Q Clear(g_c), s	10.6	0.0	18.7				0.0	10.6	21.8	58.5	6.9	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	419	0	746				0	3320	1031	398	2311	0
V/C Ratio(X)	0.57	0.00	0.91				0.00	0.39	0.63	0.71	0.50	0.00
Avail Cap(c_a), veh/h	431	0	768				0	3320	1031	398	2311	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.33	1.33	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.74	0.74	0.00
Uniform Delay (d), s/veh	30.4	0.0	33.5				0.0	7.4	9.3	15.3	2.6	0.0
Incr Delay (d2), s/veh	1.7	0.0	14.3				0.0	0.3	2.9	7.9	0.6	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
%ile BackOfQ(95%),veh/ln	7.9	0.0	12.9				0.0	6.0	11.3	5.9	2.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.0	0.0	47.8				0.0	7.7	12.2	23.1	3.2	0.0
LnGrp LOS	C	A	D				A	A	B	C	A	A
Approach Vol, veh/h	915						1932			1436		
Approach Delay, s/veh	43.7						9.2			7.1		
Approach LOS	D						A			A		
Timer - Assigned Phs	2			4			6					
Phs Duration (G+Y+Rc), s	63.6			26.4			63.6					
Change Period (Y+Rc), s	* 5.1			* 5.2			* 5.1					
Max Green Setting (Gmax), s	* 34			* 22			* 58					
Max Q Clear Time (g_c+I1), s	23.8			20.7			60.5					
Green Ext Time (p_c), s	7.3			0.5			0.0					

Intersection Summary

HCM 6th Ctrl Delay 15.9
 HCM 6th LOS B

Notes

User approved volume balancing among the lanes for turning movement.

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

Queues

8: Laurel Canyon Boulevard & Landale Street

06/24/2024



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	178	163	50	77	68	1725	59	1463	105
v/c Ratio	0.84	0.60	0.37	0.23	0.28	0.83	0.69	0.88	0.23
Control Delay	72.5	22.7	44.5	1.6	20.1	15.9	57.2	28.0	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0
Total Delay	72.5	22.7	44.5	1.6	20.1	16.5	57.2	28.0	11.6
Queue Length 50th (ft)	105	25	27	0	7	350	34	477	39
Queue Length 95th (ft)	#224	91	61	0	m6	m76	m#54	#657	m46
Internal Link Dist (ft)		140	232			591		375	
Turn Bay Length (ft)	85			40	155		125		115
Base Capacity (vph)	212	272	172	380	286	2081	86	1656	458
Starvation Cap Reductn	0	0	0	0	0	102	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.60	0.29	0.20	0.24	0.87	0.69	0.88	0.23

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

8: Laurel Canyon Boulevard & Landale Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	10	109	29	17	71	63	1570	17	54	1346	97
Future Volume (vph)	195	10	109	29	17	71	63	1570	17	54	1346	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.86			1.00	1.00	1.00	1.00		1.00	1.00	0.62
Flpb, ped/bikes	1.00	1.00			0.87	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.89			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.99			0.97	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1339			1568	1583	1770	3531		1770	3539	979
Flt Permitted	0.95	0.99			0.71	1.00	0.09	1.00		0.10	1.00	1.00
Satd. Flow (perm)	1681	1339			1144	1583	164	3531		187	3539	979
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)	212	11	118	32	18	77	68	1707	18	59	1463	105
RTOR Reduction (vph)	0	103	0	0	0	70	0	1	0	0	0	0
Lane Group Flow (vph)	178	60	0	0	50	7	68	1724	0	59	1463	105
Confl. Peds. (#/hr)			79	79			164		19	19		164
Turn Type	Split	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	3	3			4		1	6			2	
Permitted Phases				4		4	6			2		2
Actuated Green, G (s)	11.3	11.3			8.3	8.3	51.9	51.9		39.9	39.9	39.9
Effective Green, g (s)	11.3	11.3			8.3	8.3	51.9	51.9		39.9	39.9	39.9
Actuated g/C Ratio	0.13	0.13			0.09	0.09	0.58	0.58		0.44	0.44	0.44
Clearance Time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	5.2		4.5	4.5	4.5
Lane Grp Cap (vph)	211	168			105	145	212	2036		82	1568	434
v/s Ratio Prot	c0.11	0.04					0.02	c0.49			c0.41	
v/s Ratio Perm					c0.04	0.00	0.16			0.32		0.11
v/c Ratio	0.84	0.36			0.48	0.05	0.32	0.85		0.72	0.93	0.24
Uniform Delay, d1	38.5	36.0			38.8	37.3	16.6	15.8		20.5	23.8	15.6
Progression Factor	1.00	1.00			1.00	1.00	2.05	0.90		0.68	0.80	0.57
Incremental Delay, d2	25.2	1.3			3.4	0.1	0.1	0.4		36.7	10.1	1.1
Delay (s)	63.7	37.3			42.2	37.4	34.2	14.6		50.7	29.0	10.0
Level of Service	E	D			D	D	C	B		D	C	A
Approach Delay (s)		51.1			39.3			15.4			28.6	
Approach LOS		D			D			B			C	
Intersection Summary												
HCM 2000 Control Delay			24.8									
HCM 2000 Volume to Capacity ratio			0.89									
Actuated Cycle Length (s)			90.0									
Intersection Capacity Utilization			80.2%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

9: Colfax Avenue & Sarah Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↑	↔	↔	↑	↔
Traffic Volume (veh/h)	13	2	5	7	1	30	6	687	17	35	638	14
Future Volume (veh/h)	13	2	5	7	1	30	6	687	17	35	638	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.99	0.98		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	14	2	5	8	1	33	7	747	18	38	693	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	153	25	24	85	8	79	445	1310	1106	363	1310	1106
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.06	0.23	0.23	0.23	0.47	0.47	0.47
Sat Flow, veh/h	817	381	374	213	121	1222	741	1870	1579	702	1870	1579
Grp Volume(v), veh/h	21	0	0	42	0	0	7	747	18	38	693	15
Grp Sat Flow(s),veh/h/ln	1573	0	0	1556	0	0	741	1870	1579	702	1870	1579
Q Serve(g_s), s	0.0	0.0	0.0	0.5	0.0	0.0	0.5	21.2	0.5	2.6	15.7	0.3
Cycle Q Clear(g_c), s	0.7	0.0	0.0	1.5	0.0	0.0	16.2	21.2	0.5	23.8	15.7	0.3
Prop In Lane	0.67		0.24	0.19		0.79	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	202	0	0	172	0	0	445	1310	1106	363	1310	1106
V/C Ratio(X)	0.10	0.00	0.00	0.24	0.00	0.00	0.02	0.57	0.02	0.10	0.53	0.01
Avail Cap(c_a), veh/h	604	0	0	601	0	0	445	1310	1106	363	1310	1106
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	0.67	0.67	0.67
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.89	0.89	0.89	0.84	0.84	0.84
Uniform Delay (d), s/veh	26.5	0.0	0.0	26.9	0.0	0.0	19.9	15.1	7.1	19.5	8.9	4.9
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.7	0.0	0.0	0.1	1.6	0.0	0.5	1.3	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(95%),veh/ln	0.5	0.0	0.0	1.1	0.0	0.0	0.2	15.8	0.2	0.8	10.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.8	0.0	0.0	27.7	0.0	0.0	19.9	16.7	7.1	20.0	10.2	4.9
LnGrp LOS	C	A	A	C	A	A	B	B	A	C	B	A
Approach Vol, veh/h		21			42			772			746	
Approach Delay, s/veh		26.8			27.7			16.5			10.6	
Approach LOS		C			C			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		46.8		13.2		46.8		13.2				
Change Period (Y+Rc), s		4.8		* 9.3		4.8		* 9.3				
Max Green Setting (Gmax), s		25.2		* 21		25.2		* 21				
Max Q Clear Time (g_c+I1), s		23.2		2.7		25.8		3.5				
Green Ext Time (p_c), s		1.0		0.0		0.0		0.1				

Intersection Summary

HCM 6th Ctrl Delay	14.2
HCM 6th LOS	B

Notes

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

Queues

10: Landale Street & Colfax Avenue

06/24/2024



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	41	15	741	705	26
v/c Ratio	0.17	0.03	0.47	0.44	0.02
Control Delay	17.7	3.9	5.2	2.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.7	3.9	5.2	2.3	0.1
Queue Length 50th (ft)	7	0	0	0	0
Queue Length 95th (ft)	31	7	236	5	m0
Internal Link Dist (ft)	262		575	593	
Turn Bay Length (ft)		40			80
Base Capacity (vph)	524	539	1587	1587	1351
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.08	0.03	0.47	0.44	0.02

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

10: Landale Street & Colfax Avenue

06/24/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	21	17	14	682	649	24
Future Volume (vph)	21	17	14	682	649	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	9.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1705		1770	1863	1863	1583
Flt Permitted	0.97		0.34	1.00	1.00	1.00
Satd. Flow (perm)	1705		633	1863	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	23	18	15	741	705	26
RTOR Reduction (vph)	17	0	0	0	0	5
Lane Group Flow (vph)	24	0	15	741	705	21
Turn Type	Perm		Perm	NA	NA	Perm
Protected Phases				6	2	
Permitted Phases	8		6			2
Actuated Green, G (s)	3.3		42.7	42.7	42.7	42.7
Effective Green, g (s)	3.3		42.7	42.7	42.7	42.7
Actuated g/C Ratio	0.05		0.71	0.71	0.71	0.71
Clearance Time (s)	9.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		4.9	4.9	5.3	5.3
Lane Grp Cap (vph)	93		450	1325	1325	1126
v/s Ratio Prot				c0.40	0.38	
v/s Ratio Perm	c0.01		0.02			0.01
v/c Ratio	0.26		0.03	0.56	0.53	0.02
Uniform Delay, d1	27.2		2.6	4.1	4.0	2.5
Progression Factor	1.00		1.00	1.00	0.44	0.05
Incremental Delay, d2	1.5		0.1	1.7	1.2	0.0
Delay (s)	28.7		2.7	5.9	3.0	0.2
Level of Service	C		A	A	A	A
Approach Delay (s)	28.7			5.8	2.9	
Approach LOS	C			A	A	

Intersection Summary

HCM 2000 Control Delay	5.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		










c Critical Lane Group

HCM 6th Signalized Intersection Summary

11: Whitsett Avenue & Moorpark Street

06/24/2024












Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	789	80	122	573	83	106	687	131	82	364	113
Future Volume (veh/h)	130	789	80	122	573	83	106	687	131	82	364	113
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	141	858	87	133	623	90	115	747	142	89	396	123
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	158	850	720	80	726	105	371	1281	243	230	1151	353
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	737	1870	1585	593	1598	231	882	2979	566	625	2677	822
Grp Volume(v), veh/h	141	858	87	133	0	713	115	445	444	89	261	258
Grp Sat Flow(s),veh/h/ln	737	1870	1585	593	0	1829	882	1777	1768	625	1777	1722
Q Serve(g_s), s	9.5	40.9	2.9	0.0	0.0	31.4	9.0	17.2	17.2	11.4	8.8	9.0
Cycle Q Clear(g_c), s	40.9	40.9	2.9	40.9	0.0	31.4	18.1	17.2	17.2	28.5	8.8	9.0
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.32	1.00		0.48
Lane Grp Cap(c), veh/h	158	850	720	80	0	831	371	764	760	230	764	741
V/C Ratio(X)	0.89	1.01	0.12	1.66	0.00	0.86	0.31	0.58	0.58	0.39	0.34	0.35
Avail Cap(c_a), veh/h	158	850	720	80	0	831	371	764	760	230	764	741
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.4	24.5	14.2	45.0	0.0	22.0	23.2	19.5	19.5	30.4	17.1	17.2
Incr Delay (d2), s/veh	47.6	33.2	0.3	346.7	0.0	11.1	2.2	3.2	3.3	4.9	1.2	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.9	32.5	1.9	17.0	0.0	21.2	3.7	11.7	11.7	3.5	6.6	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	90.0	57.8	14.5	391.7	0.0	33.1	25.4	22.8	22.8	35.2	18.4	18.5
LnGrp LOS	F	F	B	F	A	C	C	C	C	D	B	B
Approach Vol, veh/h	1086					846		1004		608		
Approach Delay, s/veh	58.5					89.5		23.1		20.9		
Approach LOS	E					F		C		C		
Timer - Assigned Phs	2		4			6		8				
Phs Duration (G+Y+Rc), s	46.0		44.0			46.0		44.0				
Change Period (Y+Rc), s	5.1		5.3			5.1		5.3				
Max Green Setting (Gmax), s	40.9		38.7			40.9		38.7				
Max Q Clear Time (g_c+I1), s	42.9		30.5			42.9		20.1				
Green Ext Time (p_c), s	0.0		2.4			0.0		6.1				
Intersection Summary												
HCM 6th Ctrl Delay	49.4											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary

12: Laurel Canyon Boulevard & Moorpark Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	287	530	120	159	426	99	185	1374	186	103	1177	262
Future Volume (veh/h)	287	530	120	159	426	99	185	1374	186	103	1177	262
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	312	576	130	173	463	108	201	1493	202	112	1279	285
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	293	822	185	320	505	560	252	913	122	229	804	177
Arrive On Green	0.11	0.29	0.29	0.09	0.27	0.27	0.10	0.29	0.29	0.11	0.37	0.37
Sat Flow, veh/h	1781	2882	649	1781	1870	1585	1781	3151	421	1781	2896	636
Grp Volume(v), veh/h	312	354	352	173	463	108	201	834	861	112	778	786
Grp Sat Flow(s),veh/h/ln	1781	1777	1754	1781	1870	1585	1781	1777	1795	1781	1777	1756
Q Serve(g_s), s	9.5	16.0	16.1	6.2	21.6	4.3	7.2	26.1	26.1	3.8	25.0	25.0
Cycle Q Clear(g_c), s	9.5	16.0	16.1	6.2	21.6	4.3	7.2	26.1	26.1	3.8	25.0	25.0
Prop In Lane	1.00		0.37	1.00		1.00	1.00		0.23	1.00		0.36
Lane Grp Cap(c), veh/h	293	507	500	320	505	560	252	515	520	229	494	488
V/C Ratio(X)	1.06	0.70	0.70	0.54	0.92	0.19	0.80	1.62	1.66	0.49	1.58	1.61
Avail Cap(c_a), veh/h	293	507	501	347	534	585	252	515	520	250	494	488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.35	0.35	0.35
Uniform Delay (d), s/veh	26.3	28.7	28.8	22.0	31.9	20.2	23.3	32.0	32.0	22.4	28.4	28.4
Incr Delay (d2), s/veh	70.6	4.2	4.4	1.4	20.2	0.2	16.2	287.4	303.7	0.6	262.6	278.9
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(95%),veh/ln	15.7	11.5	11.5	4.6	17.9	2.8	7.1	80.0	84.6	2.7	65.3	68.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	96.8	33.0	33.2	23.4	52.0	20.3	39.5	319.4	335.6	22.9	291.0	307.3
LnGrp LOS	F	C	C	C	D	C	D	F	F	C	F	F
Approach Vol, veh/h	1018			744			1896			1676		
Approach Delay, s/veh	52.6			40.8			297.1			280.7		
Approach LOS	D			D			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	34.0	30.4	15.0	30.6	12.9	31.5	13.6	32.0				
Change Period (Y+Rc), s	5.3	* 5.4	* 5.5	6.3	* 5.4	* 5.4	* 5.5	6.3				
Max Green Setting (Gmax), s	30.7	* 24	* 9.5	25.7	* 8.6	* 24	* 9.5	25.7				
Max Q Clear Time (g_c+I), s	19.2	27.0	11.5	23.6	5.8	28.1	8.2	18.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.1	0.0	0.1	2.6				

Intersection Summary

HCM 6th Ctrl Delay 209.5

HCM 6th LOS F

Notes

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






HCM 6th TWSC

13: Moorpark Street & Radford Avenue

06/24/2024

Intersection

Int Delay, s/veh 1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	82	765	745	39	11	49
Future Vol, veh/h	82	765	745	39	11	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	50
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	89	832	810	42	12	53

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	852	0	0	1425	426
Stage 1	-	-	-	831	-
Stage 2	-	-	-	594	-
Critical Hdwy	4.14	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	3.52	3.32
Pot Cap-1 Maneuver	783	-	-	126	577
Stage 1	-	-	-	388	-
Stage 2	-	-	-	514	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	783	-	-	112	577
Mov Cap-2 Maneuver	-	-	-	112	-
Stage 1	-	-	-	344	-
Stage 2	-	-	-	514	-























Approach	EB	WB	SB
HCM Control Delay, s	1	0	17.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	783	-	-	-	112	577
HCM Lane V/C Ratio	0.114	-	-	-	0.107	0.092
HCM Control Delay (s)	10.2	-	-	-	40.9	11.9
HCM Lane LOS	B	-	-	-	E	B
HCM 95th %tile Q(veh)	0.4	-	-	-	0.3	0.3

HCM 6th Signalized Intersection Summary

14: Colfax Avenue & Moorpark Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	568	111	135	534	121	122	374	211	141	418	121
Future Volume (veh/h)	92	568	111	135	534	121	122	374	211	141	418	121
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	0.98		0.95	0.98		0.95	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	100	617	121	147	580	132	133	407	229	153	454	132
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	253	1164	228	266	748	170	244	461	371	264	740	720
Arrive On Green	0.14	0.79	0.79	0.09	0.09	0.09	0.25	0.25	0.25	0.09	0.40	0.40
Sat Flow, veh/h	1781	2943	576	706	2844	645	814	1870	1504	1781	1870	1535
Grp Volume(v), veh/h	100	372	366	147	362	350	133	407	229	153	454	132
Grp Sat Flow(s),veh/h/ln	1781	1777	1742	706	1777	1712	814	1870	1504	1781	1870	1535
Q Serve(g_s), s	3.4	6.8	6.8	18.4	17.9	18.0	14.0	18.9	12.2	5.4	17.4	4.5
Cycle Q Clear(g_c), s	3.4	6.8	6.8	18.4	17.9	18.0	18.0	18.9	12.2	5.4	17.4	4.5
Prop In Lane	1.00		0.33	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	253	703	689	266	467	450	244	461	371	264	740	720
V/C Ratio(X)	0.39	0.53	0.53	0.55	0.77	0.78	0.54	0.88	0.62	0.58	0.61	0.18
Avail Cap(c_a), veh/h	294	703	689	266	467	450	244	461	371	275	740	720
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	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	0.90	0.90	0.90
Uniform Delay (d), s/veh	20.6	6.4	6.4	38.7	38.5	38.5	34.3	32.7	30.1	23.4	21.7	14.0
Incr Delay (d2), s/veh	1.0	2.8	2.9	8.1	11.8	12.5	8.5	21.1	7.5	2.5	3.4	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(95%),veh/ln	2.4	4.0	3.9	7.3	15.2	14.9	5.9	16.3	8.7	4.2	12.3	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.5	9.2	9.3	46.7	50.3	51.0	42.7	53.7	37.7	25.9	25.1	14.5
LnGrp LOS	C	A	A	D	D	D	D	D	D	C	C	B
Approach Vol, veh/h		838			859			769			739	
Approach Delay, s/veh		10.7			50.0			47.1			23.4	
Approach LOS		B			D			D			C	
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	11.9	33.1		45.0		45.0	13.4	31.6				
Change Period (Y+Rc), s	* 5.5	* 9.4		* 9.4		* 9.4	5.6	* 9.4				
Max Green Setting (Gmax), s	* 8.5	* 22		* 36		* 36	8.4	* 22				
Max Q Clear Time (g_c+I1), s	5.4	20.4		19.4		8.8	7.4	20.9				
Green Ext Time (p_c), s	0.1	0.7		2.9		4.9	0.0	0.3				

Intersection Summary

HCM 6th Ctrl Delay	32.9
HCM 6th LOS	C

Notes

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

HCM 6th TWSC
15: Irvine Avenue & Moorpark Street























06/24/2024

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕↕			↕↕			↕			↕		
Traffic Vol, veh/h	5	815	15	14	773	6	4	0	10	0	0	13
Future Vol, veh/h	5	815	15	14	773	6	4	0	10	0	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	886	16	15	840	7	4	0	11	0	0	14
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	847	0	0	902	0	0	1354	1781	451	1327	1786	424
Stage 1	-	-	-	-	-	-	904	904	-	874	874	-
Stage 2	-	-	-	-	-	-	450	877	-	453	912	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	786	-	-	749	-	-	108	81	556	113	81	579
Stage 1	-	-	-	-	-	-	298	354	-	311	365	-
Stage 2	-	-	-	-	-	-	558	364	-	556	351	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	786	-	-	749	-	-	101	77	556	107	77	579
Mov Cap-2 Maneuver	-	-	-	-	-	-	101	77	-	107	77	-
Stage 1	-	-	-	-	-	-	294	349	-	307	351	-
Stage 2	-	-	-	-	-	-	524	350	-	538	346	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.4			20.8			11.4		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	243	786	-	-	749	-	-	579				
HCM Lane V/C Ratio	0.063	0.007	-	-	0.02	-	-	0.024				
HCM Control Delay (s)	20.8	9.6	0.1	-	9.9	0.2	-	11.4				
HCM Lane LOS	C	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.1				

HCM 6th Signalized Intersection Summary

16: Tujunga Avenue & Moorpark Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	711	83	87	509	63	82	466	93	89	216	89
Future Volume (veh/h)	164	711	83	87	509	63	82	466	93	89	216	89
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	178	773	90	95	553	68	89	507	101	97	235	97
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	399	1609	187	300	1599	196	353	708	600	200	468	396
Arrive On Green	0.50	0.50	0.50	0.50	0.50	0.50	0.07	0.38	0.38	0.25	0.25	0.25
Sat Flow, veh/h	803	3207	373	641	3186	391	1781	1870	1585	813	1870	1585
Grp Volume(v), veh/h	178	428	435	95	308	313	89	507	101	97	235	97
Grp Sat Flow(s),veh/h/ln	803	1777	1803	641	1777	1800	1781	1870	1585	813	1870	1585
Q Serve(g_s), s	15.5	14.2	14.2	10.3	9.4	9.4	3.1	20.8	3.8	10.4	9.7	4.4
Cycle Q Clear(g_c), s	24.9	14.2	14.2	24.5	9.4	9.4	3.1	20.8	3.8	19.7	9.7	4.4
Prop In Lane	1.00		0.21	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	399	891	905	300	891	903	353	708	600	200	468	396
V/C Ratio(X)	0.45	0.48	0.48	0.32	0.35	0.35	0.25	0.72	0.17	0.49	0.50	0.24
Avail Cap(c_a), veh/h	399	891	905	300	891	903	401	708	600	228	532	451
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	0.91	0.91	0.91	0.76	0.76	0.76
Uniform Delay (d), s/veh	21.0	14.7	14.7	22.8	13.5	13.5	21.4	23.9	18.6	37.2	28.9	27.0
Incr Delay (d2), s/veh	3.6	1.9	1.8	2.8	1.1	1.1	0.3	3.2	0.1	1.4	0.6	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(95%),veh/ln	5.6	9.7	9.8	3.1	6.7	6.9	2.3	14.0	2.4	3.7	7.2	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.6	16.6	16.5	25.5	14.6	14.6	21.7	27.0	18.7	38.6	29.6	27.2
LnGrp LOS	C	B	B	C	B	B	C	C	B	D	C	C
Approach Vol, veh/h		1041			716			697			429	
Approach Delay, s/veh		17.9			16.0			25.1			31.1	
Approach LOS		B			B			C			C	
Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		50.6	11.5	27.9		50.6		39.4				
Change Period (Y+Rc), s		* 5.4	* 5.3	* 5.4		* 5.4		* 5.4				
Max Green Setting (Gmax), s		* 40	* 8.7	* 26		* 40		* 34				
Max Q Clear Time (g_c+I1), s		26.5	5.1	21.7		26.9		22.8				
Green Ext Time (p_c), s		5.2	0.1	0.8		7.4		2.6				
Intersection Summary												
HCM 6th Ctrl Delay			21.2									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary

17: Woodbridge Street & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↕	
Traffic Volume (veh/h)	10	7	17	15	9	56	17	594	26	39	319	32
Future Volume (veh/h)	10	7	17	15	9	56	17	594	26	39	319	32
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	11	8	18	16	10	61	18	646	28	42	347	35
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	76	49	69	63	25	95	889	1512	1281	621	1351	136
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.81	0.81	0.81	1.00	1.00	1.00
Sat Flow, veh/h	283	578	815	186	293	1124	1001	1870	1585	764	1671	169
Grp Volume(v), veh/h	37	0	0	87	0	0	18	646	28	42	0	382
Grp Sat Flow(s),veh/h/ln	1676	0	0	1603	0	0	1001	1870	1585	764	0	1840
Q Serve(g_s), s	0.0	0.0	0.0	2.0	0.0	0.0	0.3	9.1	0.3	0.7	0.0	0.0
Cycle Q Clear(g_c), s	1.8	0.0	0.0	4.7	0.0	0.0	0.3	9.1	0.3	9.8	0.0	0.0
Prop In Lane	0.30		0.49	0.18		0.70	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	194	0	0	183	0	0	889	1512	1281	621	0	1488
V/C Ratio(X)	0.19	0.00	0.00	0.47	0.00	0.00	0.02	0.43	0.02	0.07	0.00	0.26
Avail Cap(c_a), veh/h	508	0	0	502	0	0	889	1512	1281	621	0	1488
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.76	0.76	0.76	0.84	0.00	0.84
Uniform Delay (d), s/veh	38.5	0.0	0.0	39.8	0.0	0.0	1.7	2.5	1.7	0.6	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	1.9	0.0	0.0	0.0	0.7	0.0	0.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	0.0	0.0	3.5	0.0	0.0	0.1	3.5	0.1	0.1	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.0	0.0	0.0	41.7	0.0	0.0	1.7	3.2	1.7	0.8	0.0	0.4
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	37			87			692			424		
Approach Delay, s/veh	39.0			41.7			3.1			0.4		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	77.3			12.7			77.3			12.7		
Change Period (Y+Rc), s	* 4.5			* 5.1			* 4.5			* 5.1		
Max Green Setting (Gmax), s	* 55			* 26			* 55			* 26		
Max Q Clear Time (g_c+I1), s	11.8			3.8			11.1			6.7		
Green Ext Time (p_c), s	6.2			0.1			12.3			0.4		

Intersection Summary

HCM 6th Ctrl Delay	6.0
HCM 6th LOS	A

Notes

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

Queues

18: Whitsett Avenue & Ventura Boulevard

06/24/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	250	1076	221	36	1109	333	89	191	292	159	209
v/c Ratio	0.76	0.56	0.24	0.21	0.91	0.52	0.55	0.67	0.62	0.56	0.24
Control Delay	38.7	17.7	5.1	20.5	31.2	9.3	50.6	49.4	46.5	45.9	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.7	17.7	5.1	20.5	31.2	9.3	50.6	49.4	46.5	45.9	10.1
Queue Length 50th (ft)	100	225	16	13	254	62	53	112	91	95	53
Queue Length 95th (ft)	#279	350	64	m21	m#463	m98	98	173	129	150	84
Internal Link Dist (ft)	1429			2938			634			1297	
Turn Bay Length (ft)	95		135	145		60	60		220		65
Base Capacity (vph)	328	1921	934	170	1218	646	253	438	523	441	857
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.56	0.24	0.21	0.91	0.52	0.35	0.44	0.56	0.36	0.24

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
























Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

18: Whitsett Avenue & Ventura Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	990	203	33	1020	306	82	154	22	269	146	192
Future Volume (vph)	230	990	203	33	1020	306	82	154	22	269	146	192
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	5.4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1828		3433	1863	1583
Flt Permitted	0.10	1.00	1.00	0.27	1.00	1.00	0.57	1.00		0.95	1.00	1.00
Satd. Flow (perm)	187	3539	1583	495	3539	1583	1070	1828		3433	1863	1583
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)	250	1076	221	36	1109	333	89	167	24	292	159	209
RTOR Reduction (vph)	0	0	75	0	0	101	0	6	0	0	0	11
Lane Group Flow (vph)	250	1076	146	36	1109	232	89	185	0	292	159	198
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Prot	NA	custom
Protected Phases	1	6			2			4		3	8	1 3
Permitted Phases	6		6	2		2	4					8
Actuated Green, G (s)	54.3	54.3	54.3	34.5	34.5	34.5	15.3	15.3		13.7	15.3	48.8
Effective Green, g (s)	54.3	54.3	54.3	34.5	34.5	34.5	15.3	15.3		13.7	15.3	48.8
Actuated g/C Ratio	0.54	0.54	0.54	0.34	0.34	0.34	0.15	0.15		0.14	0.15	0.49
Clearance Time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	
Vehicle Extension (s)	3.0	4.9	4.9	4.7	4.7	4.7	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	329	1921	859	170	1220	546	163	279		470	285	772
v/s Ratio Prot	c0.11	0.30			c0.31			c0.10		c0.09	0.09	0.09
v/s Ratio Perm	0.30		0.09	0.07		0.15	0.08					0.04
v/c Ratio	0.76	0.56	0.17	0.21	0.91	0.43	0.55	0.66		0.62	0.56	0.26
Uniform Delay, d1	24.4	15.0	11.5	23.1	31.3	25.1	39.1	39.9		40.7	39.2	15.0
Progression Factor	1.00	1.00	1.00	0.67	0.63	0.49	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.7	1.2	0.4	1.8	7.8	1.5	3.7	5.8		2.6	2.4	0.2
Delay (s)	34.1	16.2	11.9	17.4	27.5	13.8	42.8	45.7		43.3	41.6	15.2
Level of Service	C	B	B	B	C	B	D	D		D	D	B
Approach Delay (s)		18.5			24.2			44.8			34.0	
Approach LOS		B			C			D			C	
Intersection Summary												
HCM 2000 Control Delay			25.0									
HCM 2000 Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			100.0									
Intersection Capacity Utilization			76.5%									
Analysis Period (min)			15									
c Critical Lane Group												

Queues

19: Laurel Canyon Boulevard & Ventura Place

06/24/2024



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	177	71	318	29	1239	33	93	1305
v/c Ratio	1.11	0.28	0.91	0.16	0.70	0.04	0.81	0.63
Control Delay	145.3	42.5	50.5	30.4	24.6	0.1	75.1	25.3
Queue Delay	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0
Total Delay	145.3	42.5	50.5	30.4	25.7	0.1	75.1	25.3
Queue Length 50th (ft)	~158	41	89	17	383	0	53	244
Queue Length 95th (ft)	#294	85	#266	m23	460	m0	#150	290
Internal Link Dist (ft)	123	395			458			232
Turn Bay Length (ft)			380	105		85	55	
Base Capacity (vph)	160	251	348	177	1942	930	116	2069
Starvation Cap Reductn	0	0	0	0	429	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.11	0.28	0.91	0.16	0.82	0.04	0.80	0.63

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.





















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

19: Laurel Canyon Boulevard & Ventura Place

06/24/2024













														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations														
Traffic Volume (vph)	102	39	22	40	26	293	27	1140	30	86	1128	73		
Future Volume (vph)	102	39	22	40	26	293	27	1140	30	86	1128	73		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Total Lost time (s)		9.4				9.6	9.6	5.0	5.1	5.1	5.1	5.1		
Lane Util. Factor		1.00				1.00	1.00	1.00	0.95	1.00	1.00	0.91		
Frpb, ped/bikes		1.00				1.00	0.88	1.00	1.00	0.98	1.00	1.00		
Flpb, ped/bikes		0.93				1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Frt		0.98				1.00	0.85	1.00	1.00	0.85	1.00	0.99		
Flt Protected		0.97				0.97	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)		1653				1808	1400	1770	3539	1550	1768	5039		
Flt Permitted		0.77				0.97	1.00	0.95	1.00	1.00	0.15	1.00		
Satd. Flow (perm)		1308				1808	1400	1770	3539	1550	285	5039		
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)	111	42	24	43	28	318	29	1239	33	93	1226	79		
RTOR Reduction (vph)	0	5	0	0	0	157	0	0	17	0	7	0		
Lane Group Flow (vph)	0	172	0	0	71	161	29	1239	16	93	1298	0		
Confl. Peds. (#/hr)	49						49		5		5			
Turn Type	Perm	NA		Split		NA	Perm	Prot	NA	Perm	Perm	NA		
Protected Phases	3		4		4	1		6		2				
Permitted Phases	3							4		6		2		
Actuated Green, G (s)	12.3							13.9	13.9	6.0	49.7	49.7	38.7	38.7
Effective Green, g (s)	12.3							13.9	13.9	6.0	49.7	49.7	38.7	38.7
Actuated g/C Ratio	0.12							0.14	0.14	0.06	0.50	0.50	0.39	0.39
Clearance Time (s)	9.4							9.6	9.6	5.0	5.1	5.1	5.1	5.1
Vehicle Extension (s)	3.0							3.0	3.0	3.0	4.8	4.8	3.1	3.1
Lane Grp Cap (vph)	160							251	194	106	1758	770	110	1950
v/s Ratio Prot						0.04	0.02		c0.35		0.26			
v/s Ratio Perm	c0.13							c0.12		0.01		c0.33		
v/c Ratio	1.07							0.28	0.83	0.27	0.70	0.02	0.85	0.67
Uniform Delay, d1	43.9							38.6	41.9	44.9	19.5	12.8	27.9	25.3
Progression Factor	1.00							1.00	1.00	0.70	1.21	1.00	1.00	1.00
Incremental Delay, d2	92.0							0.6	25.0	0.9	1.6	0.0	51.5	1.8
Delay (s)	135.9							39.2	67.0	32.3	25.1	12.8	79.4	27.1
Level of Service	F							D	E	C	C	B	E	C
Approach Delay (s)	135.9							61.9			24.9		30.6	
Approach LOS	F							E			C		C	
Intersection Summary														
HCM 2000 Control Delay			37.8		HCM 2000 Level of Service				D					
HCM 2000 Volume to Capacity ratio			0.89											
Actuated Cycle Length (s)			100.0		Sum of lost time (s)				29.1					
Intersection Capacity Utilization			82.7%		ICU Level of Service				E					
Analysis Period (min)			15											
c Critical Lane Group														

HCM 6th Signalized Intersection Summary

20: Laurel Canyon Boulevard & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	181	612	251	217	653	215	435	844	212	237	761	199
Future Volume (veh/h)	181	612	251	217	653	215	435	844	212	237	761	199
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.93	0.98		0.93	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	197	665	273	236	710	234	473	917	230	258	827	216
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	287	1062	605	312	1027	575	359	1070	462	328	1038	581
Arrive On Green	0.17	0.60	0.60	0.08	0.29	0.29	0.10	0.30	0.30	0.03	0.10	0.10
Sat Flow, veh/h	1781	3554	1474	1781	3554	1470	3456	3554	1533	3456	3554	1531
Grp Volume(v), veh/h	197	665	273	236	710	234	473	917	230	258	827	216
Grp Sat Flow(s),veh/h/ln	1781	1777	1474	1781	1777	1470	1728	1777	1533	1728	1777	1531
Q Serve(g_s), s	8.1	12.0	2.2	7.6	17.8	11.7	10.4	24.3	12.3	7.4	22.8	6.6
Cycle Q Clear(g_c), s	8.1	12.0	2.2	7.6	17.8	11.7	10.4	24.3	12.3	7.4	22.8	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	287	1062	605	312	1027	575	359	1070	462	328	1038	581
V/C Ratio(X)	0.69	0.63	0.45	0.76	0.69	0.41	1.32	0.86	0.50	0.79	0.80	0.37
Avail Cap(c_a), veh/h	287	1062	605	312	1027	575	359	1080	466	359	1080	599
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	0.79	0.79	0.79	0.81	0.81	0.81	0.42	0.42	0.42	0.73	0.73	0.73
Uniform Delay (d), s/veh	22.2	16.5	4.4	27.3	31.6	22.6	44.8	32.9	28.7	47.4	42.3	11.4
Incr Delay (d2), s/veh	5.3	2.2	1.9	8.3	3.1	1.7	150.5	3.3	0.7	7.6	4.3	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(95%),veh/ln	5.9	6.7	2.6	4.0	12.0	7.2	17.3	14.0	6.7	6.3	16.1	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.5	18.7	6.3	35.6	34.7	24.3	195.3	36.2	29.4	55.0	46.5	12.4
LnGrp LOS	C	B	A	D	C	C	F	D	C	E	D	B
Approach Vol, veh/h	1135			1180			1620			1301		
Approach Delay, s/veh	17.3			32.8			81.7			42.6		
Approach LOS	B			C			F			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	33.0	36.2	16.0	34.8	14.0	35.2	15.1	35.7				
Change Period (Y+Rc), s	5.4	6.3	5.6	5.6	5.6	6.3	5.6	5.6				
Max Green Setting (G_max), s	28.7	28.7	10.4	30.4	8.4	27.7	10.4	30.4				
Max Q Clear Time (g_c+I), s	19.6	14.0	12.4	24.8	10.1	19.8	9.4	26.3				
Green Ext Time (p_c), s	0.0	8.9	0.0	4.4	0.0	3.9	0.1	3.2				

Intersection Summary

HCM 6th Ctrl Delay 47.0

HCM 6th LOS D

Notes

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

Queues

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Lane Group	EBL	EBT	WBL	WBT	WBR2	NBT	NBR	SBL	SBT	SBR2
Lane Group Flow (vph)	170	1179	110	1102	84	61	77	91	157	173
v/c Ratio	0.31	0.70	1.08	1.49	0.29	0.21	0.19	0.41	0.96	1.41
Control Delay	8.8	3.5	171.5	266.2	49.5	52.8	1.1	63.1	119.9	269.0
Queue Delay	71.1	25.4	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.0	28.9	171.5	268.9	49.5	52.8	1.1	63.1	119.9	269.0
Queue Length 50th (ft)	89	73	~111	~728	65	49	0	76	142	~200
Queue Length 95th (ft)	m69	m1	#238	#866	117	93	0	139	#314	#383
Internal Link Dist (ft)		48		634		66			226	
Turn Bay Length (ft)	90		95		55		30	90		90
Base Capacity (vph)	580	1746	102	739	287	308	405	224	164	123
Starvation Cap Reductn	439	611	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	234	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.21	1.04	1.08	2.18	0.29	0.20	0.19	0.41	0.96	1.41

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

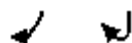
06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	156	1068	17	101	938	75	77	44	12	71	84	19
Future Volume (vph)	156	1068	17	101	938	75	77	44	12	71	84	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.7		4.9	6.1		6.1		6.9	6.9	7.0	7.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		0.85		1.00	0.85	1.00	0.84
Flpb, ped/bikes	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	0.99		0.85		1.00	0.85	1.00	0.87
Flt Protected	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (prot)	1770	3525		1770	3460		1344		1792	1352	1770	1360
Flt Permitted	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (perm)	1770	3525		1770	3460		1344		1792	1352	1770	1360
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)	170	1161	18	110	1020	82	84	48	13	77	91	21
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	64	0	0
Lane Group Flow (vph)	170	1178	0	110	1102	0	84	0	61	13	91	157
Confl. Peds. (#/hr)	42		32	32		42	42	75		75	75	
Turn Type	Prot	NA		Prot	NA		Perm	Split	NA	Perm	Split	NA
Protected Phases	1 3	3 6		5	2			7	7		8	8
Permitted Phases							2			7		
Actuated Green, G (s)	43.6	66.6		8.1	29.9		29.9		23.0	23.0	17.8	17.8
Effective Green, g (s)	43.6	60.5		8.1	29.9		29.9		23.0	23.0	17.8	17.8
Actuated g/C Ratio	0.31	0.43		0.06	0.21		0.21		0.16	0.16	0.13	0.13
Clearance Time (s)				4.9	6.1		6.1		6.9	6.9	7.0	7.0
Vehicle Extension (s)				3.0	4.8		4.8		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	551	1523		102	738		287		294	222	225	172
v/s Ratio Prot	0.10	c0.33		0.06	c0.32				c0.03		0.05	0.12
v/s Ratio Perm							0.06			0.01		
v/c Ratio	0.31	0.77		1.08	1.49		0.29		0.21	0.06	0.40	0.91
Uniform Delay, d1	36.7	33.9		66.0	55.0		46.2		50.6	49.4	56.2	60.3
Progression Factor	0.24	0.11		1.00	1.00		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0	0.2		111.9	229.1		2.6		0.4	0.1	1.2	44.1
Delay (s)	8.7	4.1		177.8	284.2		48.8		51.0	49.5	57.4	104.5
Level of Service	A	A		F	F		D		D	D	E	F
Approach Delay (s)		4.7			259.9				50.1			140.8
Approach LOS		A			F				D			F
Intersection Summary												
HCM 2000 Control Delay			127.7			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			0.95									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			31.8			
Intersection Capacity Utilization			92.2%			ICU Level of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Movement	SBR	SBR2
Lane Configurations		
Traffic Volume (vph)	125	159
Future Volume (vph)	125	159
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		7.0
Lane Util. Factor		1.00
Frpb, ped/bikes		0.69
Flpb, ped/bikes		1.00
Frt		0.85
Flt Protected		1.00
Satd. Flow (prot)		1094
Flt Permitted		1.00
Satd. Flow (perm)		1094
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	136	173
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	173
Confl. Peds. (#/hr)	75	75
Turn Type		Perm
Protected Phases		
Permitted Phases		8
Actuated Green, G (s)		17.8
Effective Green, g (s)		17.8
Actuated g/C Ratio		0.13
Clearance Time (s)		7.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)		139
v/s Ratio Prot		
v/s Ratio Perm		c0.16
v/c Ratio		1.24
Uniform Delay, d1		61.1
Progression Factor		1.00
Incremental Delay, d2		156.4
Delay (s)		217.5
Level of Service		F
Approach Delay (s)		
Approach LOS		
Intersection Summary		

HCM 6th Signalized Intersection Summary

22: Carpenter Avenue & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	151	965	76	184	883	121	71	24	157	196	38	277
Future Volume (veh/h)	151	965	76	184	883	121	71	24	157	196	38	277
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		0.96	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	1049	83	200	960	132	77	26	171	213	41	301
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	187	1689	134	212	1585	218	46	32	53	228	31	477
Arrive On Green	0.51	0.51	0.51	0.17	0.17	0.17	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	516	3324	263	497	3120	429	0	104	173	529	102	1563
Grp Volume(v), veh/h	164	560	572	200	546	546	274	0	0	254	0	301
Grp Sat Flow(s),veh/h/ln	516	1777	1810	497	1777	1772	278	0	0	631	0	1563
Q Serve(g_s), s	22.3	22.7	22.7	28.1	28.5	28.5	0.0	0.0	0.0	0.0	0.0	16.6
Cycle Q Clear(g_c), s	50.8	22.7	22.7	50.8	28.5	28.5	30.5	0.0	0.0	30.5	0.0	16.6
Prop In Lane	1.00		0.15	1.00		0.24	0.28		0.62	0.84		1.00
Lane Grp Cap(c), veh/h	187	903	920	212	903	900	131	0	0	259	0	477
V/C Ratio(X)	0.88	0.62	0.62	0.94	0.61	0.61	2.09	0.00	0.00	0.98	0.00	0.63
Avail Cap(c_a), veh/h	187	903	920	212	903	900	131	0	0	259	0	477
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.71	0.43	0.43	0.43	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.2	17.7	17.7	57.2	32.3	32.3	31.9	0.0	0.0	38.4	0.0	29.9
Incr Delay (d2), s/veh	31.1	2.3	2.3	28.9	1.3	1.3	517.6	0.0	0.0	50.7	0.0	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(95%),veh/ln	8.9	13.4	13.6	9.9	17.8	17.7	38.8	0.0	0.0	15.2	0.0	10.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.3	20.0	19.9	86.1	33.6	33.7	549.5	0.0	0.0	89.1	0.0	32.6
LnGrp LOS	E	B	B	F	C	C	F	A	A	F	A	C
Approach Vol, veh/h	1296			1292			274			555		
Approach Delay, s/veh	26.7			41.8			549.5			58.5		
Approach LOS	C			D			F			E		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	60.0			40.0			60.0			40.0		
Change Period (Y+Rc), s	* 9.2			9.5			* 9.2			9.5		
Max Green Setting (Gmax), s	* 51			30.5			* 51			30.5		
Max Q Clear Time (g_c+I1), s	52.8			32.5			52.8			32.5		
Green Ext Time (p_c), s	0.0			0.0			0.0			0.0		

Intersection Summary

HCM 6th Ctrl Delay 79.5

HCM 6th LOS E

Notes

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

Queues

23: Ventura Boulevard & Colfax Avenue

06/24/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	338	1112	1100	287	361
v/c Ratio	0.56	0.46	1.00	0.76	0.34
Control Delay	14.9	9.5	48.3	49.8	2.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	14.9	9.5	48.3	49.8	2.0
Queue Length 50th (ft)	111	237	154	173	1
Queue Length 95th (ft)	m246	353	#545	243	35
Internal Link Dist (ft)		981	464		
Turn Bay Length (ft)	160			360	360
Base Capacity (vph)	607	2403	1097	490	1054
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.56	0.46	1.00	0.59	0.34

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.




















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

23: Ventura Boulevard & Colfax Avenue

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					 							
Traffic Volume (vph)	311	1023	0	0	797	215	0	0	0	264	0	332
Future Volume (vph)	311	1023	0	0	797	215	0	0	0	264	0	332
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.4			5.4					5.4		5.7
Lane Util. Factor	1.00	0.95			0.95					1.00		1.00
Frt	1.00	1.00			0.97					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1770	3539			3426					1770		1583
Flt Permitted	0.11	1.00			1.00					0.95		1.00
Satd. Flow (perm)	198	3539			3426					1770		1583
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)	338	1112	0	0	866	234	0	0	0	287	0	361
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	174
Lane Group Flow (vph)	338	1112	0	0	1100	0	0	0	0	287	0	187
Turn Type	pm+pt	NA			NA					pm+pt		pm+ov
Protected Phases	5	2			6			3		4		5
Permitted Phases	2						3			7		4
Actuated Green, G (s)	67.9	67.9			32.0					21.3		51.5
Effective Green, g (s)	67.9	67.9			32.0					21.3		51.5
Actuated g/C Ratio	0.68	0.68			0.32					0.21		0.52
Clearance Time (s)	5.7	5.4			5.4					5.4		5.7
Vehicle Extension (s)	3.0	4.3			4.5					3.0		3.0
Lane Grp Cap (vph)	609	2402			1096					377		815
v/s Ratio Prot	c0.17	0.31			c0.32					c0.16		0.07
v/s Ratio Perm	0.21											0.05
v/c Ratio	0.56	0.46			1.00					0.76		0.23
Uniform Delay, d1	19.4	7.5			34.0					37.0		13.3
Progression Factor	0.67	1.08			0.56					1.00		1.00
Incremental Delay, d2	0.8	0.5			26.8					8.8		0.1
Delay (s)	13.9	8.6			46.0					45.7		13.5
Level of Service	B	A			D					D		B
Approach Delay (s)		9.8			46.0			0.0			27.8	
Approach LOS		A			D			A			C	
Intersection Summary												
HCM 2000 Control Delay	25.9				HCM 2000 Level of Service				C			
HCM 2000 Volume to Capacity ratio	0.85											
Actuated Cycle Length (s)	100.0				Sum of lost time (s)				22.8			
Intersection Capacity Utilization	73.3%				ICU Level of Service				D			
Analysis Period (min)	15											
c Critical Lane Group												

Queues

24: Berry Drive & Ventura Boulevard

06/24/2024



Lane Group	EBT	WBL	WBT	NBT
Lane Group Flow (vph)	1555	50	1326	88
v/c Ratio	0.53	0.23	0.45	0.38
Control Delay	5.9	6.1	3.8	8.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.9	6.1	3.8	8.3
Queue Length 50th (ft)	340	5	94	0
Queue Length 95th (ft)	82	m17	190	25
Internal Link Dist (ft)	342		273	287
Turn Bay Length (ft)		65		
Base Capacity (vph)	2922	216	2927	391
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.53	0.23	0.45	0.23



















Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

24: Berry Drive & Ventura Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1412	18	46	1220	0	19	0	62	0	0	0
Future Volume (vph)	0	1412	18	46	1220	0	19	0	62	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0			9.4				
Lane Util. Factor		0.95		1.00	0.95			1.00				
Frt		1.00		1.00	1.00			0.90				
Flt Protected		1.00		0.95	1.00			0.99				
Satd. Flow (prot)		3532		1770	3539			1652				
Flt Permitted		1.00		0.14	1.00			0.99				
Satd. Flow (perm)		3532		260	3539			1652				
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)	0	1535	20	50	1326	0	21	0	67	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	83	0	0	0	0
Lane Group Flow (vph)	0	1555	0	50	1326	0	0	5	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		6			2		3	3			4	
Permitted Phases	6			2						4		
Actuated Green, G (s)		79.8		79.8	79.8			5.8				
Effective Green, g (s)		79.8		79.8	79.8			5.8				
Actuated g/C Ratio		0.80		0.80	0.80			0.06				
Clearance Time (s)		5.0		5.0	5.0			9.4				
Vehicle Extension (s)		4.9		4.0	4.0			3.0				
Lane Grp Cap (vph)		2818		207	2824			95				
v/s Ratio Prot		c0.44			0.37			c0.00				
v/s Ratio Perm				0.19								
v/c Ratio		0.55		0.24	0.47			0.05				
Uniform Delay, d1		3.6		2.5	3.3			44.5				
Progression Factor		1.42		1.16	1.02			1.00				
Incremental Delay, d2		0.7		2.3	0.5			0.2				
Delay (s)		5.9		5.2	3.8			44.7				
Level of Service		A		A	A			D				
Approach Delay (s)		5.9			3.8			44.7			0.0	
Approach LOS		A			A			D			A	
Intersection Summary												
HCM 2000 Control Delay			6.1			HCM 2000 Level of Service			A			
HCM 2000 Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			23.7			
Intersection Capacity Utilization			57.4%			ICU Level of Service			B			
Analysis Period (min)			15									

c Critical Lane Group

Queues

25: Ventura Boulevard & Tujunga Avenue

06/24/2024

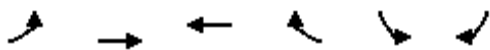


Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	400	1063	1101	142	195
v/c Ratio	0.61	0.39	0.82	0.35	0.24
Control Delay	30.9	2.7	32.6	42.8	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	30.9	2.7	32.6	42.8	11.7
Queue Length 50th (ft)	179	59	301	44	53
Queue Length 95th (ft)	254	75	411	71	90
Internal Link Dist (ft)		426	233	3083	
Turn Bay Length (ft)	180			100	60
Base Capacity (vph)	661	2736	1361	1218	819
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.61	0.39	0.81	0.12	0.24
Intersection Summary					

HCM Signalized Intersection Capacity Analysis

25: Ventura Boulevard & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	368	978	812	201	131	179
Future Volume (vph)	368	978	812	201	131	179
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.5	5.5		5.5	5.6
Lane Util. Factor	1.00	0.95	0.95		0.97	1.00
Frt	1.00	1.00	0.97		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3434		3433	1583
Flt Permitted	0.09	1.00	1.00		0.95	1.00
Satd. Flow (perm)	169	3539	3434		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	400	1063	883	218	142	195
RTOR Reduction (vph)	0	0	22	0	0	25
Lane Group Flow (vph)	400	1063	1079	0	142	170
Turn Type	pm+pt	NA	NA		Prot	pt+ov
Protected Phases	1	6	2		4	1 7
Permitted Phases	6					4
Actuated Green, G (s)	77.3	77.3	38.5		11.7	50.4
Effective Green, g (s)	77.3	77.3	38.5		11.7	44.9
Actuated g/C Ratio	0.77	0.77	0.38		0.12	0.45
Clearance Time (s)	5.6	5.5	5.5		5.5	
Vehicle Extension (s)	3.0	4.4	4.9		3.0	
Lane Grp Cap (vph)	662	2735	1322		401	710
v/s Ratio Prot	c0.20	0.30	c0.31		c0.04	0.11
v/s Ratio Perm	0.27					
v/c Ratio	0.60	0.39	0.82		0.35	0.24
Uniform Delay, d1	20.1	3.7	27.6		40.7	17.0
Progression Factor	1.46	0.60	1.00		1.00	1.00
Incremental Delay, d2	1.4	0.4	5.7		0.5	0.2
Delay (s)	30.6	2.6	33.3		41.2	17.2
Level of Service	C	A	C		D	B
Approach Delay (s)		10.2	33.3		27.3	
Approach LOS		B	C		C	
Intersection Summary						
HCM 2000 Control Delay			21.0		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.72			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	22.1
Intersection Capacity Utilization			71.4%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

26: Laurel Canyon Boulevard & Maxwellton Road

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Volume (veh/h)	64	0	69	0	0	0	14	1498	0	0	1068	69
Future Volume (veh/h)	64	0	69	0	0	0	14	1498	0	0	1068	69
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93				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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h	70	0	75				15	1628	0	0	1161	75
Peak Hour Factor	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	0	0	2	2
Cap, veh/h	128	0	137				48	2176	0	0	2145	138
Arrive On Green	0.16	0.00	0.16				0.63	0.63	0.00	0.00	0.63	0.63
Sat Flow, veh/h	774	0	829				12	3523	0	0	3482	219
Grp Volume(v), veh/h	145	0	0				877	766	0	0	608	628
Grp Sat Flow(s),veh/h/ln	1603	0	0				1833	1617	0	0	1777	1830
Q Serve(g_s), s	7.5	0.0	0.0				0.0	29.7	0.0	0.0	17.2	17.2
Cycle Q Clear(g_c), s	7.5	0.0	0.0				29.2	29.7	0.0	0.0	17.2	17.2
Prop In Lane	0.48		0.52				0.02		0.00	0.00		0.12
Lane Grp Cap(c), veh/h	264	0	0				1201	1024	0	0	1125	1158
V/C Ratio(X)	0.55	0.00	0.00				0.73	0.75	0.00	0.00	0.54	0.54
Avail Cap(c_a), veh/h	442	0	0				1201	1024	0	0	1125	1158
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.58	0.58	0.00	0.00	0.61	0.61
Uniform Delay (d), s/veh	34.5	0.0	0.0				11.4	11.5	0.0	0.0	9.2	9.2
Incr Delay (d2), s/veh	1.8	0.0	0.0				2.3	3.0	0.0	0.0	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
%ile BackOfQ(95%),veh/ln	5.5	0.0	0.0				14.9	13.6	0.0	0.0	9.1	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.3	0.0	0.0				13.7	14.5	0.0	0.0	10.4	10.3
LnGrp LOS	D	A	A				B	B	A	A	B	B
Approach Vol, veh/h	145								1643		1236	
Approach Delay, s/veh	36.3								14.1		10.3	
Approach LOS	D								B		B	
Timer - Assigned Phs	2		4		6							
Phs Duration (G+Y+Rc), s	66.0		24.0		66.0							
Change Period (Y+Rc), s	9.0		9.2		9.0							
Max Green Setting (Gmax), s	47.0		24.8		47.0							
Max Q Clear Time (g_c+I1), s	19.2		9.5		31.7							
Green Ext Time (p_c), s	18.3		0.7		13.7							
Intersection Summary												
HCM 6th Ctrl Delay			13.6									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary

27: Laurel Canyon Boulevard & Laurel Terrace Drive/Sunshine Terrace Drive

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (veh/h)	16	18	164	119	33	27	152	1449	196	31	1075	10
Future Volume (veh/h)	16	18	164	119	33	27	152	1449	196	31	1075	10
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	17	20	178	129	36	29	165	1575	213	34	1168	11
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	48	46	293	184	49	32	110	2239	298	169	2201	21
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.06	0.71	0.71	0.61	0.61	0.61
Sat Flow, veh/h	74	219	1410	642	235	154	1781	3152	419	265	3607	34
Grp Volume(v), veh/h	215	0	0	194	0	0	165	877	911	34	575	604
Grp Sat Flow(s), veh/h/ln	703	0	0	1031	0	0	1781	1777	1795	265	1777	1864
Q Serve(g_s), s	0.0	0.0	0.0	8.6	0.0	0.0	7.4	33.9	35.9	10.4	22.4	22.4
Cycle Q Clear(g_c), s	14.2	0.0	0.0	22.8	0.0	0.0	7.4	33.9	35.9	34.3	22.4	22.4
Prop In Lane	0.08		0.83	0.66		0.15	1.00		0.23	1.00		0.02
Lane Grp Cap(c), veh/h	387	0	0	265	0	0	110	1262	1275	169	1084	1138
V/C Ratio(X)	0.56	0.00	0.00	0.73	0.00	0.00	1.50	0.69	0.71	0.20	0.53	0.53
Avail Cap(c_a), veh/h	414	0	0	287	0	0	110	1262	1275	169	1084	1138
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.77	0.77	0.77
Uniform Delay (d), s/veh	43.3	0.0	0.0	47.7	0.0	0.0	56.3	9.9	10.2	23.9	13.5	13.5
Incr Delay (d2), s/veh	1.4	0.0	0.0	8.6	0.0	0.0	267.4	3.2	3.4	2.1	1.4	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(95%),veh/ln	0.0	0.0	0.0	10.5	0.0	0.0	19.0	18.2	19.3	1.3	13.1	13.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.8	0.0	0.0	56.3	0.0	0.0	323.7	13.1	13.7	25.9	14.9	14.9
LnGrp LOS	D	A	A	E	A	A	F	B	B	C	B	B
Approach Vol, veh/h		215			194			1953			1213	
Approach Delay, s/veh		44.8			56.3			39.6			15.2	
Approach LOS		D			E			D			B	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	12.0	78.0		30.0		90.0		30.0				
Change Period (Y+Rc), s	4.6	4.8		* 5		4.8		* 5				
Max Green Setting (Gmax), s	71.2			* 27		83.2		* 27				
Max Q Clear Time (g_c+I), s	36.3			16.2		37.9		24.8				
Green Ext Time (p_c), s	0.0	10.8		0.9		21.5		0.2				

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.

Queues

28: Laurel Canyon Boulevard & Fryman Road

06/24/2024
























Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	180	13	12	1783	1490
v/c Ratio	0.63	0.05	0.07	0.70	0.59
Control Delay	44.7	29.8	6.1	9.8	7.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.7	29.8	6.1	9.8	7.9
Queue Length 50th (ft)	97	6	2	253	180
Queue Length 95th (ft)	153	21	9	417	296
Internal Link Dist (ft)				236	183
Turn Bay Length (ft)			145		
Base Capacity (vph)	542	485	183	2544	2507
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.33	0.03	0.07	0.70	0.59
Intersection Summary					

HCM Signalized Intersection Capacity Analysis

28: Laurel Canyon Boulevard & Fryman Road

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								 			 	
Traffic Volume (vph)	166	0	12	0	0	0	11	1640	0	0	1202	168
Future Volume (vph)	166	0	12	0	0	0	11	1640	0	0	1202	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4		5.4				5.4	5.4			5.4	
Lane Util. Factor	1.00		1.00				1.00	0.95			0.95	
Frt	1.00		0.85				1.00	1.00			0.98	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	3539			3474	
Flt Permitted	0.95		1.00				0.14	1.00			1.00	
Satd. Flow (perm)	1770		1583				255	3539			3474	
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)	180	0	13	0	0	0	12	1783	0	0	1307	183
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	8	0
Lane Group Flow (vph)	180	0	13	0	0	0	12	1783	0	0	1482	0
Turn Type	Perm		Perm				Perm	NA		Perm	NA	
Protected Phases								2			6	
Permitted Phases	8		8				2			6		
Actuated Green, G (s)	14.5		14.5				64.7	64.7			64.7	
Effective Green, g (s)	14.5		14.5				64.7	64.7			64.7	
Actuated g/C Ratio	0.16		0.16				0.72	0.72			0.72	
Clearance Time (s)	5.4		5.4				5.4	5.4			5.4	
Vehicle Extension (s)	3.0		3.0				4.8	4.8			5.1	
Lane Grp Cap (vph)	285		255				183	2544			2497	
v/s Ratio Prot								c0.50			0.43	
v/s Ratio Perm	c0.10		0.01				0.05					
v/c Ratio	0.63		0.05				0.07	0.70			0.59	
Uniform Delay, d1	35.3		31.9				3.7	7.2			6.2	
Progression Factor	1.00		1.00				1.00	1.00			1.00	
Incremental Delay, d2	4.5		0.1				0.7	1.6			1.0	
Delay (s)	39.8		32.0				4.4	8.8			7.2	
Level of Service	D		C				A	A			A	
Approach Delay (s)		39.2			0.0			8.8			7.2	
Approach LOS		D			A			A			A	
Intersection Summary												
HCM 2000 Control Delay			9.8				HCM 2000 Level of Service			A		
HCM 2000 Volume to Capacity ratio			0.69									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			10.8		
Intersection Capacity Utilization			62.4%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th TWSC
29: Laurel Canyon Boulevard & Woodbridge Street

06/24/2024

Intersection												
Int Delay, s/veh	36.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	4	1	31	5	1	138	33	1658	20	69	1442	27
Future Vol, veh/h	4	1	31	5	1	138	33	1658	20	69	1442	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	65	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	1	34	5	1	150	36	1802	22	75	1567	29

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2706	3628	798	2819	3631	912	1596	0	0	1824	0	0
Stage 1	1732	1732	-	1885	1885	-	-	-	-	-	-	-
Stage 2	974	1896	-	934	1746	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	10	5	329	8	5	276	407	-	-	332	-	-
Stage 1	91	141	-	73	118	-	-	-	-	-	-	-
Stage 2	270	117	-	286	139	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 3	4	329	~ 4	4	276	407	-	-	332	-	-
Mov Cap-2 Maneuver	~ 3	4	-	~ 4	4	-	-	-	-	-	-	-
Stage 1	83	109	-	67	108	-	-	-	-	-	-	-
Stage 2	111	107	-	197	108	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s\$	796.7		\$ 663.6		0.3		0.9	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	407	-	-	21 72	332	-	-
HCM Lane V/C Ratio	0.088	-	-	1.863 2.174	0.226	-	-
HCM Control Delay (s)	14.7	-	-	\$ 796.7\$ 663.6	19	-	-
HCM Lane LOS	B	-	-	F F	C	-	-
HCM 95th %tile Q(veh)	0.3	-	-	5.1 14.6	0.9	-	-

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

HCM 6th TWSC
30: Valleyheart Drive (North) & Laurel Canyon Boulevard

06/24/2024

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	2	0	14	2	0	10	18	1777	48	10	1489	5
Future Vol, veh/h	2	0	14	2	0	10	18	1777	48	10	1489	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	40	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	15	2	0	11	20	1932	52	11	1618	5

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2649	3667	812	2829	3643	992	1623	0	0	1984	0	0
Stage 1	1643	1643	-	1998	1998	-	-	-	-	-	-	-
Stage 2	1006	2024	-	831	1645	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	11	5	322	8	5	244	397	-	-	287	-	-
Stage 1	104	156	-	62	103	-	-	-	-	-	-	-
Stage 2	258	100	-	330	156	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	10	5	322	7	5	244	397	-	-	287	-	-
Mov Cap-2 Maneuver	10	5	-	7	5	-	-	-	-	-	-	-
Stage 1	99	150	-	59	98	-	-	-	-	-	-	-
Stage 2	234	95	-	302	150	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	78	148.1	0.1	0.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	397	-	-	66 37	287	-	-
HCM Lane V/C Ratio	0.049	-	-	0.264 0.353	0.038	-	-
HCM Control Delay (s)	14.5	-	-	78 148.1	18	-	-
HCM Lane LOS	B	-	-	F F	C	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.9 1.2	0.1	-	-





HCM 6th TWSC

31: Laurel Canyon Boulevard & Valleyheart Drive (South)

06/24/2024

Intersection

Int Delay, s/veh 4.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	123	1710	37	107	1410
Future Vol, veh/h	3	123	1710	37	107	1410
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	35	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	134	1859	40	116	1533

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	2878	950	0
Stage 1	1879	-	-
Stage 2	999	-	-
Critical Hdwy	6.84	6.94	-
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	-
Pot Cap-1 Maneuver	13	261	-
Stage 1	106	-	-
Stage 2	317	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	8	261	-
Mov Cap-2 Maneuver	8	-	-
Stage 1	106	-	-
Stage 2	198	-	-

Approach	WB	NB	SB
HCM Control Delay, s	112.6	0	1.7
HCM LOS	F		





Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	149	310
HCM Lane V/C Ratio	-	-	0.919	0.375
HCM Control Delay (s)	-	-	112.6	23.4
HCM Lane LOS	-	-	F	C
HCM 95th %tile Q(veh)	-	-	6.5	1.7

HCM 6th AWSC
32: Radford Avenue & Sarah Street

06/24/2024

Intersection

Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	0	6	1	6	1	51	3	7	70	9
Future Vol, veh/h	5	0	0	6	1	6	1	51	3	7	70	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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	0	7	1	7	1	55	3	8	76	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0




Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.5	7.2	7.3	7.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	100%	46%	8%
Vol Thru, %	93%	0%	8%	81%
Vol Right, %	5%	0%	46%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	55	5	13	86
LT Vol	1	5	6	7
Through Vol	51	0	1	70
RT Vol	3	0	6	9
Lane Flow Rate	60	5	14	93
Geometry Grp	1	1	1	1
Degree of Util (X)	0.067	0.007	0.016	0.103
Departure Headway (Hd)	4.01	4.41	4.017	3.967
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	893	804	882	904
Service Time	2.037	2.478	2.084	1.989
HCM Lane V/C Ratio	0.067	0.006	0.016	0.103
HCM Control Delay	7.3	7.5	7.2	7.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0	0	0.3

Intersection

Intersection Delay, s/veh 0

Intersection LOS -

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	0	0	0
HCM LOS	-	-	-

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0
LT Vol	0	0	0
Through Vol	0	0	0
RT Vol	0	0	0
Lane Flow Rate	0	0	0
Geometry Grp	1	1	1
Degree of Util (X)	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0
HCM Control Delay	6.9	6.9	6.9
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

HCM 6th AWSC

54: Radford Avenue & Radford Gate

06/24/2024

Intersection

Intersection Delay, s/veh 0

Intersection LOS -

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

HCM 6th AWSC
55: Alley & Carpenter Gate

06/24/2024

Intersection

Intersection Delay, s/veh 0

Intersection LOS -




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

HCM 6th TWSC
56: Colfax Avenue & Colfax Gate

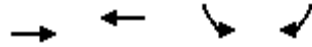
06/24/2024

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1	1	-	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	1022	1084	0	-	-	0
Stage 1	1022	-	0	-	-	0
Stage 2	-	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	1022	1084	-	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT EBLn1		SBT			
Capacity (veh/h)	-		-			
HCM Lane V/C Ratio	-		-			
HCM Control Delay (s)	-		0			
HCM Lane LOS	-		A			
HCM 95th %tile Q(veh)	-		-			

Queues

121: Ventura Boulevard & Ventura PI

06/24/2024



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1198	1204	151	24
v/c Ratio	1.32	0.56	0.25	0.08
Control Delay	193.0	21.5	50.5	16.8
Queue Delay	1.6	50.9	0.0	0.0
Total Delay	194.6	72.4	50.5	16.8
Queue Length 50th (ft)	~740	183	62	0
Queue Length 95th (ft)	#879	m37	93	27
Internal Link Dist (ft)	509	48	136	
Turn Bay Length (ft)				40
Base Capacity (vph)	907	2137	669	328
Starvation Cap Reductn	0	1301	0	0
Spillback Cap Reductn	216	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.73	1.44	0.23	0.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

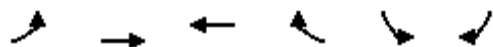
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

121: Ventura Boulevard & Ventura PI

06/24/2024



























Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	↑
Traffic Volume (vph)	0	1102	1108	0	139	22
Future Volume (vph)	0	1102	1108	0	139	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.1	6.1		5.7	5.7
Lane Util. Factor		0.95	0.95		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3433	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1198	1204	0	151	24
RTOR Reduction (vph)	0	0	0	0	0	20
Lane Group Flow (vph)	0	1198	1204	0	151	4
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2 4		3	
Permitted Phases						3
Actuated Green, G (s)		35.9	84.6		24.6	24.6
Effective Green, g (s)		35.9	84.6		24.6	24.6
Actuated g/C Ratio		0.26	0.60		0.18	0.18
Clearance Time (s)		6.1			5.7	5.7
Vehicle Extension (s)		4.6			3.0	3.0
Lane Grp Cap (vph)		907	2138		603	278
v/s Ratio Prot		c0.34	c0.34		c0.04	
v/s Ratio Perm						0.00
v/c Ratio		1.32	0.56		0.25	0.02
Uniform Delay, d1		52.0	16.6		49.8	47.7
Progression Factor		1.00	1.25		1.00	1.00
Incremental Delay, d2		152.1	0.0		0.2	0.0
Delay (s)		204.2	20.8		50.0	47.7
Level of Service		F	C		D	D
Approach Delay (s)		204.2	20.8		49.7	
Approach LOS		F	C		D	
Intersection Summary						
HCM 2000 Control Delay		108.0		HCM 2000 Level of Service		F
HCM 2000 Volume to Capacity ratio		0.83				
Actuated Cycle Length (s)		140.0		Sum of lost time (s)		31.8
Intersection Capacity Utilization		47.1%		ICU Level of Service		A
Analysis Period (min)		15				
c Critical Lane Group						

Future without Project Conditions (Year 2028)

HCM 6th Signalized Intersection Summary

1: Riverside Drive & Laurel Canyon Boulevard

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	637	117	159	991	145	239	834	103	136	852	325
Future Volume (veh/h)	260	637	117	159	991	145	239	834	103	136	852	325
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	283	692	127	173	1077	158	260	907	112	148	926	353
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	273	1313	586	258	1025	457	252	1063	593	211	943	359
Arrive On Green	0.15	0.37	0.37	0.02	0.10	0.10	0.11	0.30	0.30	0.07	0.26	0.26
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	3554	1585	1781	3640	1385
Grp Volume(v), veh/h	283	692	127	173	1077	158	260	907	112	148	866	413
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1777	1585	1781	1702	1621
Q Serve(g_s), s	18.4	18.3	6.6	6.0	34.6	11.2	12.8	28.8	5.7	7.3	30.3	30.4
Cycle Q Clear(g_c), s	18.4	18.3	6.6	6.0	34.6	11.2	12.8	28.8	5.7	7.3	30.3	30.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.85
Lane Grp Cap(c), veh/h	273	1313	586	258	1025	457	252	1063	593	211	882	420
V/C Ratio(X)	1.04	0.53	0.22	0.67	1.05	0.35	1.03	0.85	0.19	0.70	0.98	0.98
Avail Cap(c_a), veh/h	273	1313	586	320	1025	457	252	1063	593	211	882	420
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	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	0.96	0.96	0.96	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.8	29.6	25.9	57.0	54.3	43.7	33.5	39.6	25.3	33.0	44.2	44.2
Incr Delay (d2), s/veh	64.2	1.5	0.8	3.9	42.5	2.1	63.4	8.4	0.7	9.8	26.1	40.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	19.1	12.5	4.6	5.0	31.2	8.6	15.1	19.5	4.0	6.6	22.1	23.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	115.0	31.1	26.8	60.9	96.8	45.8	96.9	47.9	26.0	42.8	70.3	84.2
LnGrp LOS	F	C	C	E	F	D	F	D	C	D	E	F
Approach Vol, veh/h	1102				1408				1279			
Approach Delay, s/veh	52.2				86.7				56.0			
Approach LOS	D				F				E			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.4	37.0	24.3	40.3	13.6	41.8	14.6	50.0				
Change Period (Y+Rc), s	5.6	5.9	5.9	* 5.7	5.6	5.9	5.6	* 5.7				
Max Green Setting (Gmax), s	12.8	31.1	18.4	* 35	8.0	35.9	11.1	* 42				
Max Q Clear Time (g_c+I1), s	14.8	32.4	20.4	36.6	9.3	30.8	8.0	20.3				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	2.8	0.1	4.9				

Intersection Summary

HCM 6th Ctrl Delay	67.7
HCM 6th LOS	E








Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

HCM 6th TWSC

2: Riverside Drive & Radford Avenue

06/21/2024

Intersection												
Int Delay, s/veh	33.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	965	94	80	1067	12	29	6	91	4	11	29
Future Vol, veh/h	24	965	94	80	1067	12	29	6	91	4	11	29
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	105	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	1049	102	87	1160	13	32	7	99	4	12	32

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1173	0	0	1151	0	0	1861	2448	525	1921	2544	587
Stage 1	-	-	-	-	-	-	1101	1101	-	1341	1341	-
Stage 2	-	-	-	-	-	-	760	1347	-	580	1203	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	591	-	-	603	-	-	45	31	497	41	27	453
Stage 1	-	-	-	-	-	-	226	286	-	161	219	-
Stage 2	-	-	-	-	-	-	364	218	-	467	256	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	591	-	-	603	-	-	~ 21	25	497	23	22	453
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 21	25	-	23	22	-
Stage 1	-	-	-	-	-	-	216	273	-	154	187	-
Stage 2	-	-	-	-	-	-	271	187	-	349	245	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.8	\$ 574.3	173
HCM LOS			F	F

























Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	70	591	-	-	603	-	-	60
HCM Lane V/C Ratio	1.957	0.044	-	-	0.144	-	-	0.797
HCM Control Delay (s)	\$ 574.3	11.4	-	-	12	-	-	173
HCM Lane LOS	F	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	12.5	0.1	-	-	0.5	-	-	3.5

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

HCM 6th Signalized Intersection Summary

3: Colfax Avenue & Riverside Drive

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	656	215	198	776	81	126	430	75	84	506	126
Future Volume (veh/h)	108	656	215	198	776	81	126	430	75	84	506	126
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	117	713	234	215	843	88	137	467	82	91	550	137
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	234	1356	605	254	1356	605	278	826	700	449	826	700
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.88	0.88	0.88	0.44	0.44	0.44
Sat Flow, veh/h	601	3554	1585	592	3554	1585	755	1870	1585	858	1870	1585
Grp Volume(v), veh/h	117	713	234	215	843	88	137	467	82	91	550	137
Grp Sat Flow(s),veh/h/ln	601	1777	1585	592	1777	1585	755	1870	1585	858	1870	1585
Q Serve(g_s), s	11.4	9.3	6.4	13.6	11.5	2.2	9.9	3.5	0.4	4.4	14.0	3.2
Cycle Q Clear(g_c), s	22.9	9.3	6.4	22.9	11.5	2.2	23.9	3.5	0.4	7.9	14.0	3.2
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	234	1356	605	254	1356	605	278	826	700	449	826	700
V/C Ratio(X)	0.50	0.53	0.39	0.85	0.62	0.15	0.49	0.57	0.12	0.20	0.67	0.20
Avail Cap(c_a), veh/h	234	1356	605	254	1356	605	278	826	700	449	826	700
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	0.93	0.93	0.93	0.78	0.78	0.78	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.5	14.3	13.5	25.8	15.0	12.1	9.7	2.2	2.0	12.8	13.2	10.2
Incr Delay (d2), s/veh	7.5	1.5	1.9	26.3	2.0	0.5	4.8	2.2	0.3	1.0	4.2	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(95%),veh/ln	3.5	6.1	4.0	8.1	7.5	1.3	2.0	2.0	0.3	1.5	9.7	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.9	15.8	15.3	52.0	17.0	12.6	14.5	4.3	2.2	13.8	17.5	10.9
LnGrp LOS	C	B	B	D	B	B	B	A	A	B	B	B
Approach Vol, veh/h	1064			1146			686			778		
Approach Delay, s/veh	17.5			23.3			6.1			15.9		
Approach LOS	B			C			A			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	28.0			32.0			28.0			32.0		
Change Period (Y+Rc), s	* 5.1			* 5.5			* 5.1			* 5.5		
Max Green Setting (Gmax), s	* 23			* 27			* 23			* 27		
Max Q Clear Time (g_c+I1), s	24.9			25.9			24.9			16.0		
Green Ext Time (p_c), s	0.0			0.3			0.0			3.3		
Intersection Summary												
HCM 6th Ctrl Delay	16.8											
HCM 6th LOS	B											
Notes												

Queues

4: Riverside Drive & SR 170 Southbound Off-Ramp

06/21/2024



Lane Group	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	867	9	750	30	203	194	185
v/c Ratio	0.43	0.03	0.37	0.11	0.63	0.57	0.42
Control Delay	11.6	13.2	14.3	0.8	34.7	24.7	7.3
Queue Delay	0.8	0.0	0.5	0.2	0.8	0.9	0.0
Total Delay	12.4	13.2	14.8	1.0	35.5	25.6	7.3
Queue Length 50th (ft)	81	4	162	0	83	58	0
Queue Length 95th (ft)	202	m8	214	0	146	120	48
Internal Link Dist (ft)	2214		245	105		344	
Turn Bay Length (ft)		25			140		150
Base Capacity (vph)	2033	287	2033	269	387	397	489
Starvation Cap Reductn	0	0	792	0	0	0	0
Spillback Cap Reductn	800	0	0	64	48	60	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.03	0.60	0.15	0.60	0.58	0.38


Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: Riverside Drive & SR 170 Southbound Off-Ramp













06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑	↑↑			↑↓		↑	↑↓	↑
Traffic Volume (vph)	0	796	2	8	690	0	7	0	20	279	6	250
Future Volume (vph)	0	796	2	8	690	0	7	0	20	279	6	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Lane Util. Factor		0.95		1.00	0.95			1.00		0.95	0.91	0.95
Frt		1.00		1.00	1.00			0.90		1.00	0.93	0.85
Flt Protected		1.00		0.95	1.00			0.99		0.95	0.97	1.00
Satd. Flow (prot)		3538		1770	3539			1656		1681	1541	1504
Flt Permitted		1.00		0.27	1.00			0.84		0.95	0.97	1.00
Satd. Flow (perm)		3538		500	3539			1408		1681	1541	1504
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)	0	865	2	9	750	0	8	0	22	303	7	272
RTOR Reduction (vph)	0	0	0	0	0	0	0	29	0	0	44	150
Lane Group Flow (vph)	0	867	0	9	750	0	0	1	0	203	150	35
Turn Type		NA		Perm	NA		Perm	NA		Split	NA	Perm
Protected Phases		6			2			4		3	3	
Permitted Phases				2			4					3
Actuated Green, G (s)		36.4		36.4	36.4			3.2		13.4	13.4	13.4
Effective Green, g (s)		36.4		36.4	36.4			3.2		13.4	13.4	13.4
Actuated g/C Ratio		0.52		0.52	0.52			0.05		0.19	0.19	0.19
Clearance Time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Vehicle Extension (s)		3.8		2.4	2.4			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1839		260	1840			64		321	294	287
v/s Ratio Prot		c0.25			0.21					c0.12	0.10	
v/s Ratio Perm				0.02				c0.00				0.02
v/c Ratio		0.47		0.03	0.41			0.02		0.63	0.51	0.12
Uniform Delay, d1		10.7		8.2	10.2			31.9		26.0	25.4	23.4
Progression Factor		1.00		1.16	1.39			1.00		1.00	1.00	1.00
Incremental Delay, d2		0.9		0.2	0.6			0.1		4.0	1.5	0.2
Delay (s)		11.6		9.7	14.8			32.0		30.1	26.9	23.6
Level of Service		B		A	B			C		C	C	C
Approach Delay (s)		11.6			14.7			32.0			27.0	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			16.9			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.48									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			50.2%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/21/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	NWL	NWR
Lane Group Flow (vph)	207	665	314	252	450	136	25	613	159	1077	251	85
v/c Ratio	0.70	1.00	1.03	1.20	0.57	0.38	0.33	0.90	0.62	0.79	0.60	0.48
Control Delay	46.9	87.4	110.7	160.0	51.5	49.9	63.6	72.7	67.9	43.3	63.7	65.8
Queue Delay	0.0	35.0	24.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Total Delay	46.9	122.4	135.4	160.0	51.5	49.9	63.6	72.7	67.9	43.3	63.8	65.8
Queue Length 50th (ft)	148	~328	~340	~227	193	106	20	291	137	451	113	80
Queue Length 95th (ft)	174	#490	#561	#407	251	173	54	#427	#235	573	153	138
Internal Link Dist (ft)		245			745			2580		383	758	
Turn Bay Length (ft)	140		230	85		110	270		290		215	
Base Capacity (vph)	295	665	304	210	793	355	76	678	256	1363	686	288
Starvation Cap Reductn	0	123	46	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	52	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	1.23	1.22	1.20	0.57	0.38	0.33	0.90	0.62	0.79	0.40	0.30

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.






















95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/21/2024

												
Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	190	320	389	191	13	219	414	125	23	470	75	18
Future Volume (vph)	190	320	389	191	13	219	414	125	23	470	75	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Lane Util. Factor	1.00	0.91	0.91			1.00	0.95	1.00	1.00	0.95		
Frt	1.00	0.93	0.85			1.00	1.00	0.85	1.00	0.98		
Flt Protected	0.95	1.00	1.00			0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1770	3148	1441			1770	3539	1583	1770	3451		
Flt Permitted	0.36	1.00	1.00			0.13	1.00	1.00	0.21	1.00		
Satd. Flow (perm)	670	3148	1441			237	3539	1583	389	3451		
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)	207	348	423	208	14	238	450	136	25	511	82	20
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	207	665	314	0	0	252	450	136	25	613	0	0
Turn Type	pm+pt	NA	Perm		pm+pt	pm+pt	NA	Perm	Perm	NA		
Protected Phases	1	6			5	5	2			8		
Permitted Phases	6		6		2	2		2	8			
Actuated Green, G (s)	41.3	29.6	29.6			43.8	31.4	31.4	27.5	27.5		
Effective Green, g (s)	41.3	29.6	29.6			43.8	31.4	31.4	27.5	27.5		
Actuated g/C Ratio	0.29	0.21	0.21			0.31	0.22	0.22	0.20	0.20		
Clearance Time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Vehicle Extension (s)	3.0	3.9	3.9			3.0	4.6	4.6	4.7	4.7		
Lane Grp Cap (vph)	289	665	304			209	793	355	76	677		
v/s Ratio Prot	0.06	0.21				c0.11	0.13			c0.18		
v/s Ratio Perm	0.15		0.22			c0.27		0.09	0.06			
v/c Ratio	0.72	1.00	1.03			1.21	0.57	0.38	0.33	0.91		
Uniform Delay, d1	40.5	55.2	55.2			40.8	48.3	46.1	48.3	55.0		
Progression Factor	0.98	0.99	0.99			1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2	7.5	33.3	58.1			128.9	2.9	3.1	4.7	16.3		
Delay (s)	47.1	87.8	112.7			169.6	51.2	49.2	53.0	71.3		
Level of Service	D	F	F			F	D	D	D	E		
Approach Delay (s)		87.3					86.5			70.6		
Approach LOS		F					F			E		
Intersection Summary												
HCM 2000 Control Delay			69.8			HCM 2000 Level of Service			E			
HCM 2000 Volume to Capacity ratio			1.00									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			33.0			
Intersection Capacity Utilization			101.0%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/21/2024



Movement	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	17	130	914	77	39	184	83	4
Future Volume (vph)	17	130	914	77	39	184	83	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.3			6.6	6.6	
Lane Util. Factor		1.00	0.95			0.97	0.91	
Frt		1.00	0.99			0.99	0.85	
Flt Protected		0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	3498			3429	1441	
Flt Permitted		0.95	1.00			0.95	1.00	
Satd. Flow (perm)		1770	3498			3429	1441	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	141	993	84	42	200	90	4
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	159	1077	0	0	251	85	0
Turn Type	Prot	Prot	NA		Prot	Prot	Perm	
Protected Phases	7	7	4		3	3		
Permitted Phases							3	
Actuated Green, G (s)		20.3	54.6			17.2	17.2	
Effective Green, g (s)		20.3	54.6			17.2	17.2	
Actuated g/C Ratio		0.15	0.39			0.12	0.12	
Clearance Time (s)		6.8	6.3			6.6	6.6	
Vehicle Extension (s)		3.0	4.9			4.6	4.6	
Lane Grp Cap (vph)		256	1364			421	177	
v/s Ratio Prot		0.09	c0.31			c0.07		
v/s Ratio Perm							0.06	
v/c Ratio		0.62	0.79			0.60	0.48	
Uniform Delay, d1		56.2	37.6			58.1	57.2	
Progression Factor		1.00	1.00			1.00	1.00	
Incremental Delay, d2		4.6	3.6			3.1	3.7	
Delay (s)		60.9	41.2			61.2	60.9	
Level of Service		E	D			E	E	
Approach Delay (s)			43.8			61.1		
Approach LOS			D			E		
Intersection Summary								

HCM 6th Signalized Intersection Summary

6: Laurel Canyon Boulevard & US 101 Northbound Ramps

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰	↰	↰	↰			↰	↰
Traffic Volume (veh/h)	0	0	0	424	2	246	446	587	0	0	1308	363
Future Volume (veh/h)	0	0	0	424	2	246	446	587	0	0	1308	363
Initial Q (Qb), veh				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
Parking Bus, Adj				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	0	0	1870	1870
Adj Flow Rate, veh/h				545	0	179	485	638	0	0	1422	395
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				664	0	295	560	2493	0	0	2454	762
Arrive On Green				0.19	0.00	0.19	0.32	1.00	0.00	0.00	0.48	0.48
Sat Flow, veh/h				3563	0	1585	3456	3647	0	0	5274	1585
Grp Volume(v), veh/h				545	0	179	485	638	0	0	1422	395
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	0	1702	1585
Q Serve(g_s), s				13.2	0.0	9.3	11.9	0.0	0.0	0.0	18.0	15.5
Cycle Q Clear(g_c), s				13.2	0.0	9.3	11.9	0.0	0.0	0.0	18.0	15.5
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				664	0	295	560	2493	0	0	2454	762
V/C Ratio(X)				0.82	0.00	0.61	0.87	0.26	0.00	0.00	0.58	0.52
Avail Cap(c_a), veh/h				859	0	382	680	2493	0	0	2454	762
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.91	0.91	0.00	0.00	0.39	0.39
Uniform Delay (d), s/veh				35.2	0.0	33.6	29.5	0.0	0.0	0.0	16.8	16.2
Incr Delay (d2), s/veh				5.0	0.0	2.0	9.1	0.2	0.0	0.0	0.4	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
%ile BackOfQ(95%),veh/ln				9.8	0.0	6.4	8.0	0.1	0.0	0.0	9.2	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				40.2	0.0	35.6	38.6	0.2	0.0	0.0	17.2	17.2
LnGrp LOS				D	A	D	D	A	A	A	B	B
Approach Vol, veh/h					724			1123			1817	
Approach Delay, s/veh					39.0			16.8			17.2	
Approach LOS					D			B			B	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	19.9	48.1		22.1		67.9						
Change Period (Y+Rc), s	5.3	4.8		* 5.3		4.8						
Max Green Setting (Gmax), s	18	35.2		* 22		58.2						
Max Q Clear Time (g_c+M3), s	20.0			15.2		2.0						
Green Ext Time (p_c), s	0.7	9.8		1.5		4.9						

Intersection Summary

HCM 6th Ctrl Delay	21.4
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.








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

HCM 6th Signalized Intersection Summary

7: US 101 Southbound Ramps & Laurel Canyon Boulevard

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	11	351	0	0	0	0	892	533	518	1219	0
Future Volume (veh/h)	156	11	351	0	0	0	0	892	533	518	1219	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	117	0	446				0	970	579	563	1325	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	306	0	545				0	2057	638	878	2536	0
Arrive On Green	0.17	0.00	0.17				0.00	0.40	0.40	0.51	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	5274	1585	3456	3647	0
Grp Volume(v), veh/h	117	0	446				0	970	579	563	1325	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1702	1585	1728	1777	0
Q Serve(g_s), s	5.2	0.0	12.2				0.0	12.6	30.9	10.7	0.0	0.0
Cycle Q Clear(g_c), s	5.2	0.0	12.2				0.0	12.6	30.9	10.7	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	306	0	545				0	2057	638	878	2536	0
V/C Ratio(X)	0.38	0.00	0.82				0.00	0.47	0.91	0.64	0.52	0.00
Avail Cap(c_a), veh/h	416	0	740				0	2139	664	878	2536	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.71	0.71	0.00
Uniform Delay (d), s/veh	33.0	0.0	35.9				0.0	19.8	25.3	19.1	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	5.3				0.0	0.8	18.9	1.1	0.5	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
%ile BackOfQ(95%),veh/ln	0.0	0.0	8.5				0.0	8.5	20.3	5.9	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.8	0.0	41.2				0.0	20.6	44.2	20.3	0.5	0.0
LnGrp LOS	C	A	D				A	C	D	C	A	A
Approach Vol, veh/h	563						1549			1888		
Approach Delay, s/veh	39.7						29.4			6.4		
Approach LOS	D						C			A		
Timer - Assigned Phs	1	2	4		6							
Phs Duration (G+Y+Rc), s	38.0	41.3	20.7		69.3							
Change Period (Y+Rc), s	* 5.1	* 5.1	* 5.2		* 5.1							
Max Green Setting (Gmax), s	16	* 38	* 21		* 59							
Max Q Clear Time (g_c+M2), s	32.9		14.2		2.0							
Green Ext Time (p_c), s	0.8	3.3	1.3		14.1							

Intersection Summary

HCM 6th Ctrl Delay 20.0

HCM 6th LOS C

Notes

User approved volume balancing among the lanes for turning movement.

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

Queues

8: Laurel Canyon Boulevard & Landale Street

06/21/2024



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	156	205	172	66	182	1342	30	1368	261
v/c Ratio	0.74	0.63	0.77	0.18	0.66	0.71	0.27	1.06	0.58
Control Delay	60.2	18.7	60.7	1.1	34.1	8.9	24.8	68.2	25.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.2	18.7	60.7	1.1	34.1	8.9	24.8	68.2	25.9
Queue Length 50th (ft)	91	17	95	0	70	116	11	~475	116
Queue Length 95th (ft)	#189	90	#189	0	m50	m94	m23	#596	188
Internal Link Dist (ft)		140	232			591		375	
Turn Bay Length (ft)	85			40	155		125		115
Base Capacity (vph)	212	325	237	380	290	1878	112	1293	453
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.63	0.73	0.17	0.63	0.71	0.27	1.06	0.58

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

8: Laurel Canyon Boulevard & Landale Street

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	159	14	159	25	133	61	167	1204	30	28	1259	240
Future Volume (vph)	159	14	159	25	133	61	167	1204	30	28	1259	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.89			1.00	1.00	1.00	1.00		1.00	1.00	0.78
Flpb, ped/bikes	1.00	1.00			0.99	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.87			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1375			1825	1583	1770	3521		1762	3539	1241
Flt Permitted	0.95	1.00			0.90	1.00	0.10	1.00		0.16	1.00	1.00
Satd. Flow (perm)	1681	1375			1653	1583	195	3521		306	3539	1241
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)	173	15	173	27	145	66	182	1309	33	30	1368	261
RTOR Reduction (vph)	0	151	0	0	0	57	0	2	0	0	0	0
Lane Group Flow (vph)	156	54	0	0	172	9	182	1340	0	30	1368	261
Confl. Peds. (#/hr)			49	49			89		12	12		89
Turn Type	Split	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	3	3			4		1	6			2	
Permitted Phases				4		4	6			2		2
Actuated Green, G (s)	11.3	11.3			12.2	12.2	48.0	48.0		32.9	32.9	32.9
Effective Green, g (s)	11.3	11.3			12.2	12.2	48.0	48.0		32.9	32.9	32.9
Actuated g/C Ratio	0.13	0.13			0.14	0.14	0.53	0.53		0.37	0.37	0.37
Clearance Time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	5.2		4.5	4.5	4.5
Lane Grp Cap (vph)	211	172			224	214	273	1877		111	1293	453
v/s Ratio Prot	c0.09	0.04					0.07	c0.38			c0.39	
v/s Ratio Perm					c0.10	0.01	0.28			0.10		0.21
v/c Ratio	0.74	0.31			0.77	0.04	0.67	0.71		0.27	1.06	0.58
Uniform Delay, d1	37.9	35.8			37.5	33.8	18.2	15.8		20.1	28.6	22.9
Progression Factor	1.00	1.00			1.00	1.00	2.17	0.53		0.85	0.93	0.87
Incremental Delay, d2	12.7	1.0			14.6	0.1	0.6	0.2		5.0	40.0	4.4
Delay (s)	50.6	36.9			52.1	33.9	39.9	8.7		22.1	66.5	24.4
Level of Service	D	D			D	C	D	A		C	E	C
Approach Delay (s)		42.8			47.0			12.4			59.1	
Approach LOS		D			D			B			E	
Intersection Summary												
HCM 2000 Control Delay			37.9		HCM 2000 Level of Service					D		
HCM 2000 Volume to Capacity ratio			0.93									
Actuated Cycle Length (s)			90.0		Sum of lost time (s)					23.9		
Intersection Capacity Utilization			83.9%		ICU Level of Service					E		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

9: Colfax Avenue & Sarah Street

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↑	↕
Traffic Volume (veh/h)	38	84	11	35	17	154	21	493	49	138	742	47
Future Volume (veh/h)	38	84	11	35	17	154	21	493	49	138	742	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.89		0.81	0.86		0.81	1.00		0.93	0.99		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	41	91	12	38	18	167	23	536	53	150	807	51
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	157	304	35	104	51	251	211	957	752	379	957	752
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.51	0.51	0.51	0.51	0.51	0.51
Sat Flow, veh/h	315	1202	138	132	200	991	644	1870	1470	822	1870	1470
Grp Volume(v), veh/h	144	0	0	223	0	0	23	536	53	150	807	51
Grp Sat Flow(s),veh/h/ln	1654	0	0	1323	0	0	644	1870	1470	822	1870	1470
Q Serve(g_s), s	0.0	0.0	0.0	2.9	0.0	0.0	1.9	11.8	1.1	9.2	22.2	1.1
Cycle Q Clear(g_c), s	3.9	0.0	0.0	8.8	0.0	0.0	24.1	11.8	1.1	20.9	22.2	1.1
Prop In Lane	0.28		0.08	0.17		0.75	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	496	0	0	405	0	0	211	957	752	379	957	752
V/C Ratio(X)	0.29	0.00	0.00	0.55	0.00	0.00	0.11	0.56	0.07	0.40	0.84	0.07
Avail Cap(c_a), veh/h	633	0	0	523	0	0	211	957	752	379	957	752
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.92	0.92	0.92	0.70	0.70	0.70
Uniform Delay (d), s/veh	18.2	0.0	0.0	19.9	0.0	0.0	23.0	10.0	7.4	17.2	12.6	7.4
Incr Delay (d2), s/veh	0.3	0.0	0.0	1.2	0.0	0.0	1.0	2.2	0.2	2.2	6.5	0.1
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(95%),veh/ln	2.8	0.0	0.0	4.9	0.0	0.0	0.6	7.7	0.6	3.1	13.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.5	0.0	0.0	21.1	0.0	0.0	23.9	12.2	7.6	19.4	19.1	7.5
LnGrp LOS	B	A	A	C	A	A	C	B	A	B	B	A
Approach Vol, veh/h	144			223			612			1008		
Approach Delay, s/veh	18.5			21.1			12.2			18.5		
Approach LOS	B			C			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	35.5			24.5			35.5			24.5		
Change Period (Y+Rc), s	4.8			* 9.3			4.8			* 9.3		
Max Green Setting (Gmax), s	25.2			* 21			25.2			* 21		
Max Q Clear Time (g_c+I1), s	26.1			5.9			24.2			10.8		
Green Ext Time (p_c), s	0.0			0.7			0.6			1.1		

Intersection Summary

HCM 6th Ctrl Delay	16.9
HCM 6th LOS	B

Notes

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

Queues

10: Landale Street & Colfax Avenue

06/21/2024



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	85	33	537	907	39
v/c Ratio	0.31	0.13	0.41	0.70	0.04
Control Delay	20.6	6.8	7.0	4.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.6	6.8	7.0	4.9	0.1
Queue Length 50th (ft)	20	4	84	30	0
Queue Length 95th (ft)	52	17	162	m55	m0
Internal Link Dist (ft)	262		575	593	
Turn Bay Length (ft)		40			80
Base Capacity (vph)	535	246	1296	1296	1107
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.16	0.13	0.41	0.70	0.04

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

10: Landale Street & Colfax Avenue

06/21/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	55	23	30	494	834	36
Future Volume (vph)	55	23	30	494	834	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	9.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.96		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1728		1770	1863	1863	1583
Flt Permitted	0.97		0.19	1.00	1.00	1.00
Satd. Flow (perm)	1728		354	1863	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	60	25	33	537	907	39
RTOR Reduction (vph)	22	0	0	0	0	7
Lane Group Flow (vph)	63	0	33	537	907	32
Turn Type	Perm		Perm	NA	NA	Perm
Protected Phases				6	2	
Permitted Phases	8		6			2
Actuated Green, G (s)	7.1		38.9	38.9	38.9	38.9
Effective Green, g (s)	7.1		38.9	38.9	38.9	38.9
Actuated g/C Ratio	0.12		0.65	0.65	0.65	0.65
Clearance Time (s)	9.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		4.9	4.9	5.3	5.3
Lane Grp Cap (vph)	204		229	1207	1207	1026
v/s Ratio Prot				0.29	c0.49	
v/s Ratio Perm	c0.04		0.09			0.02
v/c Ratio	0.31		0.14	0.44	0.75	0.03
Uniform Delay, d1	24.2		4.1	5.2	7.2	3.8
Progression Factor	1.00		1.00	1.00	0.34	0.03
Incremental Delay, d2	0.9		1.3	1.2	2.7	0.0
Delay (s)	25.1		5.4	6.4	5.1	0.1
Level of Service	C		A	A	A	A
Approach Delay (s)	25.1			6.3	4.9	
Approach LOS	C			A	A	

Intersection Summary

HCM 2000 Control Delay	6.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		










c Critical Lane Group

HCM 6th Signalized Intersection Summary

11: Whitsett Avenue & Moorpark Street

06/21/2024












Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	850	212	109	630	65	73	240	75	83	490	61
Future Volume (veh/h)	67	850	212	109	630	65	73	240	75	83	490	61
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	73	924	230	118	685	71	79	261	82	90	533	66
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	132	850	720	80	757	78	338	1151	354	461	1369	169
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	708	1870	1585	487	1667	173	820	2677	822	1038	3183	393
Grp Volume(v), veh/h	73	924	230	118	0	756	79	171	172	90	297	302
Grp Sat Flow(s),veh/h/ln	708	1870	1585	487	0	1839	820	1777	1722	1038	1777	1800
Q Serve(g_s), s	6.6	40.9	8.3	0.0	0.0	34.3	6.6	5.5	5.7	5.4	10.3	10.4
Cycle Q Clear(g_c), s	40.9	40.9	8.3	40.9	0.0	34.3	16.9	5.5	5.7	11.1	10.3	10.4
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.48	1.00		0.22
Lane Grp Cap(c), veh/h	132	850	720	80	0	836	338	764	741	461	764	774
V/C Ratio(X)	0.55	1.09	0.32	1.47	0.00	0.90	0.23	0.22	0.23	0.20	0.39	0.39
Avail Cap(c_a), veh/h	132	850	720	80	0	836	338	764	741	461	764	774
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(l)	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	42.6	24.5	15.7	45.0	0.0	22.7	23.4	16.2	16.2	19.8	17.6	17.6
Incr Delay (d2), s/veh	15.6	57.3	1.2	269.2	0.0	15.1	1.6	0.7	0.7	0.9	1.5	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(95%),veh/ln	8.9	41.4	5.5	13.9	0.0	23.8	2.5	4.1	4.1	2.5	7.7	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.2	81.8	16.8	314.2	0.0	37.8	25.0	16.9	17.0	20.7	19.0	19.1
LnGrp LOS	E	F	B	F	A	D	C	B	B	C	B	B
Approach Vol, veh/h	1227					874		422		689		
Approach Delay, s/veh	68.2					75.1		18.4		19.3		
Approach LOS	E					E		B		B		
Timer - Assigned Phs	2		4			6		8				
Phs Duration (G+Y+Rc), s	46.0		44.0			46.0		44.0				
Change Period (Y+Rc), s	5.1		5.3			5.1		5.3				
Max Green Setting (Gmax), s	40.9		38.7			40.9		38.7				
Max Q Clear Time (g_c+I1), s	42.9		13.1			42.9		18.9				
Green Ext Time (p_c), s	0.0		4.1			0.0		2.4				
Intersection Summary												
HCM 6th Ctrl Delay	53.1											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary

12: Laurel Canyon Boulevard & Moorpark Street

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	302	630	199	217	478	112	103	1038	171	88	1167	239
Future Volume (veh/h)	302	630	199	217	478	112	103	1038	171	88	1167	239
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	328	685	216	236	520	122	112	1128	186	96	1268	260
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	248	727	229	269	520	568	229	904	149	224	866	176
Arrive On Green	0.09	0.27	0.27	0.10	0.28	0.28	0.08	0.30	0.30	0.16	0.59	0.59
Sat Flow, veh/h	1781	2658	838	1781	1870	1585	1781	3055	502	1781	2943	597
Grp Volume(v), veh/h	328	458	443	236	520	122	112	654	660	96	760	768
Grp Sat Flow(s),veh/h/ln	1781	1777	1720	1781	1870	1585	1781	1777	1780	1781	1777	1763
Q Serve(g_s), s	8.5	22.7	22.7	8.6	25.0	4.8	3.8	26.6	26.6	3.1	26.5	26.5
Cycle Q Clear(g_c), s	8.5	22.7	22.7	8.6	25.0	4.8	3.8	26.6	26.6	3.1	26.5	26.5
Prop In Lane	1.00		0.49	1.00		1.00	1.00		0.28	1.00		0.34
Lane Grp Cap(c), veh/h	248	486	470	269	520	568	229	526	527	224	523	519
V/C Ratio(X)	1.32	0.94	0.94	0.88	1.00	0.21	0.49	1.25	1.25	0.43	1.45	1.48
Avail Cap(c_a), veh/h	248	486	470	269	520	568	238	526	527	238	523	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	25.4	32.0	32.0	23.8	32.5	20.1	22.5	31.7	31.7	20.5	18.5	18.5
Incr Delay (d2), s/veh	170.0	27.0	27.7	26.1	39.7	0.2	1.6	125.5	128.6	0.1	204.8	217.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	24.1	18.8	18.4	9.2	23.1	3.1	2.9	43.1	43.9	1.7	47.5	49.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	195.4	59.1	59.7	49.9	72.2	20.2	24.1	157.2	160.3	20.6	223.3	235.8
LnGrp LOS	F	E	E	D	F	C	C	F	F	C	F	F
Approach Vol, veh/h	1229			878			1426			1624		
Approach Delay, s/veh	95.7			59.0			148.2			217.2		
Approach LOS	F			E			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.8	31.9	14.0	31.3	12.7	32.0	14.4	30.9				
Change Period (Y+Rc), s	5.3	* 5.4	* 5.5	6.3	* 5.4	* 5.4	* 5.5	6.3				
Max Green Setting (Gmax), s	8	* 26	* 8.5	25.0	* 8	* 26	* 8.9	24.6				
Max Q Clear Time (g_c+1/8), s	17.8	28.5	10.5	27.0	5.1	28.6	10.6	24.7				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 142.2

HCM 6th LOS F

Notes

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






HCM 6th TWSC

13: Moorpark Street & Radford Avenue

06/21/2024

Intersection

Int Delay, s/veh 0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	55	780	873	40	14	32
Future Vol, veh/h	55	780	873	40	14	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	50
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	60	848	949	43	15	35

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	992	0	0 1515 496
Stage 1	-	-	- 971 -
Stage 2	-	-	- 544 -
Critical Hdwy	4.14	-	- 6.84 6.94
Critical Hdwy Stg 1	-	-	- 5.84 -
Critical Hdwy Stg 2	-	-	- 5.84 -
Follow-up Hdwy	2.22	-	- 3.52 3.32
Pot Cap-1 Maneuver	693	-	- 110 519
Stage 1	-	-	- 328 -
Stage 2	-	-	- 546 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	693	-	- 100 519
Mov Cap-2 Maneuver	-	-	- 100 -
Stage 1	-	-	- 299 -
Stage 2	-	-	- 546 -























Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	23.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	693	-	-	-	100	519
HCM Lane V/C Ratio	0.086	-	-	-	0.152	0.067
HCM Control Delay (s)	10.7	-	-	-	47.4	12.4
HCM Lane LOS	B	-	-	-	E	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.5	0.2

HCM 6th Signalized Intersection Summary

14: Colfax Avenue & Moorpark Street

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	588	118	197	661	154	125	236	169	152	494	109
Future Volume (veh/h)	94	588	118	197	661	154	125	236	169	152	494	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		0.97	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	102	639	128	214	718	167	136	257	184	165	537	118
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	253	1326	265	301	905	210	137	353	293	295	636	646
Arrive On Green	0.14	0.90	0.90	0.11	0.11	0.11	0.19	0.19	0.19	0.09	0.34	0.34
Sat Flow, veh/h	1781	2939	588	694	2843	661	774	1870	1552	1781	1870	1567
Grp Volume(v), veh/h	102	386	381	214	449	436	136	257	184	165	537	118
Grp Sat Flow(s),veh/h/ln	1781	1777	1750	694	1777	1727	774	1870	1552	1781	1870	1567
Q Serve(g_s), s	3.2	3.4	3.4	27.7	22.2	22.2	6.7	11.6	9.8	6.4	23.9	4.3
Cycle Q Clear(g_c), s	3.2	3.4	3.4	27.7	22.2	22.2	17.0	11.6	9.8	6.4	23.9	4.3
Prop In Lane	1.00		0.34	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	253	802	789	301	566	550	137	353	293	295	636	646
V/C Ratio(X)	0.40	0.48	0.48	0.71	0.79	0.79	0.99	0.73	0.63	0.56	0.84	0.18
Avail Cap(c_a), veh/h	264	802	789	301	566	550	137	353	293	295	636	646
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	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	0.65	0.65	0.65
Uniform Delay (d), s/veh	18.7	2.6	2.6	39.8	37.4	37.4	43.6	34.3	33.6	25.6	27.5	16.8
Incr Delay (d2), s/veh	1.0	2.1	2.1	13.4	10.9	11.2	74.2	12.4	9.8	1.6	8.9	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(95%),veh/ln	2.2	2.2	2.2	10.3	17.9	17.5	9.8	10.4	7.8	4.9	16.2	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.8	4.6	4.7	53.2	48.3	48.6	117.7	46.7	43.4	27.1	36.4	17.2
LnGrp LOS	B	A	A	D	D	D	F	D	D	C	D	B
Approach Vol, veh/h		869			1099			577			820	
Approach Delay, s/veh		6.4			49.4			62.4			31.7	
Approach LOS		A			D			E			C	
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	12.0	38.0		40.0		50.0	13.6	26.4				
Change Period (Y+Rc), s	* 5.5	* 9.4		* 9.4		* 9.4	5.6	* 9.4				
Max Green Setting (Gmax), s	* 7	* 28		* 31		* 41	8.0	* 17				
Max Q Clear Time (g_c+I1), s	5.2	29.7		25.9		5.4	8.4	19.0				
Green Ext Time (p_c), s	0.0	0.0		1.6		5.3	0.0	0.0				

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.

HCM 6th TWSC
15: Irvine Avenue & Moorpark Street























06/21/2024

Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕↕			↕↕			↕			↕		
Traffic Vol, veh/h	59	784	5	16	873	112	2	1	18	8	1	146
Future Vol, veh/h	59	784	5	16	873	112	2	1	18	8	1	146
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	64	852	5	17	949	122	2	1	20	9	1	159
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1071	0	0	857	0	0	1492	2088	429	1599	2029	536
Stage 1	-	-	-	-	-	-	983	983	-	1044	1044	-
Stage 2	-	-	-	-	-	-	509	1105	-	555	985	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	647	-	-	779	-	-	85	52	574	71	57	489
Stage 1	-	-	-	-	-	-	267	325	-	245	304	-
Stage 2	-	-	-	-	-	-	515	285	-	484	324	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	647	-	-	779	-	-	46	40	574	55	44	489
Mov Cap-2 Maneuver	-	-	-	-	-	-	46	40	-	55	44	-
Stage 1	-	-	-	-	-	-	217	264	-	199	287	-
Stage 2	-	-	-	-	-	-	327	269	-	378	263	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.6			0.4			24.2			26.5		
HCM LOS							C			D		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	210	647	-	-	779	-	-	332				
HCM Lane V/C Ratio	0.109	0.099	-	-	0.022	-	-	0.507				
HCM Control Delay (s)	24.2	11.2	0.9	-	9.7	0.3	-	26.5				
HCM Lane LOS	C	B	A	-	A	A	-	D				
HCM 95th %tile Q(veh)	0.4	0.3	-	-	0.1	-	-	2.7				

HCM 6th Signalized Intersection Summary

16: Tujunga Avenue & Moorpark Street

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	158	714	79	96	729	53	68	225	73	153	389	192
Future Volume (veh/h)	158	714	79	96	729	53	68	225	73	153	389	192
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	172	776	86	104	792	58	74	245	79	166	423	209
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	309	1629	181	282	1696	124	222	701	594	344	468	397
Arrive On Green	0.34	0.34	0.34	0.51	0.51	0.51	0.13	0.75	0.75	0.25	0.25	0.25
Sat Flow, veh/h	649	3225	357	641	3357	246	1781	1870	1585	1056	1870	1585
Grp Volume(v), veh/h	172	427	435	104	419	431	74	245	79	166	423	209
Grp Sat Flow(s),veh/h/ln	649	1777	1806	641	1777	1826	1781	1870	1585	1056	1870	1585
Q Serve(g_s), s	22.2	17.1	17.1	11.9	13.7	13.8	2.5	4.0	1.2	12.6	19.7	10.2
Cycle Q Clear(g_c), s	35.9	17.1	17.1	29.0	13.7	13.8	2.5	4.0	1.2	12.6	19.7	10.2
Prop In Lane	1.00		0.20	1.00		0.13	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	309	898	912	282	898	922	222	701	594	344	468	397
V/C Ratio(X)	0.56	0.48	0.48	0.37	0.47	0.47	0.33	0.35	0.13	0.48	0.90	0.53
Avail Cap(c_a), veh/h	309	898	912	282	898	922	243	746	632	357	490	416
HCM Platoon Ratio	0.67	0.67	0.67	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	0.98	0.98	0.98	0.38	0.38	0.38
Uniform Delay (d), s/veh	33.0	20.4	20.4	25.2	14.4	14.4	21.8	7.5	7.2	30.0	32.7	29.1
Incr Delay (d2), s/veh	7.1	1.8	1.8	3.7	1.7	1.7	0.9	0.3	0.1	0.4	8.9	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(95%),veh/ln	7.5	12.4	12.6	3.6	9.4	9.6	1.8	2.4	0.8	4.9	12.8	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.1	22.2	22.2	28.8	16.2	16.1	22.6	7.8	7.3	30.4	41.5	29.5
LnGrp LOS	D	C	C	C	B	B	C	A	A	C	D	C
Approach Vol, veh/h		1034			954			398			798	
Approach Delay, s/veh		25.2			17.5			10.5			36.1	
Approach LOS		C			B			B			D	
Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		50.9	11.2	27.9		50.9		39.1				
Change Period (Y+Rc), s		* 5.4	* 5.3	* 5.4		* 5.4		* 5.4				
Max Green Setting (Gmax), s		* 43	* 7	* 24		* 43		* 36				
Max Q Clear Time (g_c+I1), s		31.0	4.5	21.7		37.9		6.0				
Green Ext Time (p_c), s		6.5	0.0	0.8		3.7		1.7				
Intersection Summary												
HCM 6th Ctrl Delay			23.8									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary

17: Woodbridge Street & Tujunga Avenue

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↕	
Traffic Volume (veh/h)	9	7	16	18	8	32	13	315	17	42	516	25
Future Volume (veh/h)	9	7	16	18	8	32	13	315	17	42	516	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	10	8	17	20	9	35	14	342	18	46	561	27
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	73	48	65	80	31	71	752	1519	1287	866	1437	69
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.81	0.81	0.81	1.00	1.00	1.00
Sat Flow, veh/h	260	584	797	339	384	872	828	1870	1585	1022	1770	85
Grp Volume(v), veh/h	35	0	0	64	0	0	14	342	18	46	0	588
Grp Sat Flow(s),veh/h/ln	1640	0	0	1595	0	0	828	1870	1585	1022	0	1855
Q Serve(g_s), s	0.0	0.0	0.0	1.1	0.0	0.0	0.3	3.8	0.2	0.2	0.0	0.0
Cycle Q Clear(g_c), s	1.7	0.0	0.0	3.3	0.0	0.0	0.3	3.8	0.2	4.0	0.0	0.0
Prop In Lane	0.29		0.49	0.31		0.55	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	185	0	0	182	0	0	752	1519	1287	866	0	1506
V/C Ratio(X)	0.19	0.00	0.00	0.35	0.00	0.00	0.02	0.23	0.01	0.05	0.00	0.39
Avail Cap(c_a), veh/h	508	0	0	502	0	0	752	1519	1287	866	0	1506
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.93	0.93	0.93	0.50	0.00	0.50
Uniform Delay (d), s/veh	38.8	0.0	0.0	39.5	0.0	0.0	1.6	1.9	1.6	0.1	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	1.1	0.0	0.0	0.0	0.3	0.0	0.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	0.0	0.0	2.5	0.0	0.0	0.1	1.4	0.1	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.3	0.0	0.0	40.6	0.0	0.0	1.7	2.3	1.6	0.2	0.0	0.4
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	35			64			374			634		
Approach Delay, s/veh	39.3			40.6			2.2			0.4		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	77.6			12.4			77.6			12.4		
Change Period (Y+Rc), s	* 4.5			* 5.1			* 4.5			* 5.1		
Max Green Setting (Gmax), s	* 55			* 26			* 55			* 26		
Max Q Clear Time (g_c+I1), s	6.0			3.7			5.8			5.3		
Green Ext Time (p_c), s	10.6			0.1			5.5			0.3		

Intersection Summary

HCM 6th Ctrl Delay	4.5
HCM 6th LOS	A

Notes

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

Queues

18: Whitsett Avenue & Ventura Boulevard

06/21/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	85	1074	66	29	855	125	65	88	667	260	492
v/c Ratio	0.38	0.68	0.09	0.24	0.79	0.21	0.52	0.25	0.97	0.75	0.52
Control Delay	21.2	24.8	16.3	44.0	50.9	12.4	50.5	34.3	69.0	51.5	13.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.2	24.8	16.3	44.0	50.9	12.4	50.5	34.3	69.0	51.5	13.9
Queue Length 50th (ft)	31	276	23	14	312	19	37	47	~225	157	168
Queue Length 95th (ft)	60	348	49	m26	m366	m37	79	86	#398	231	240
Internal Link Dist (ft)		1440			2938			648		1328	
Turn Bay Length (ft)	95		135	145		60	60		220		65
Base Capacity (vph)	259	1592	712	119	1082	590	159	440	690	441	976
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.67	0.09	0.24	0.79	0.21	0.41	0.20	0.97	0.59	0.50

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
























Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

18: Whitsett Avenue & Ventura Boulevard

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	988	61	27	787	115	60	78	3	614	239	453
Future Volume (vph)	78	988	61	27	787	115	60	78	3	614	239	453
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	5.4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1853		3433	1863	1583
Flt Permitted	0.11	1.00	1.00	0.21	1.00	1.00	0.36	1.00		0.95	1.00	1.00
Satd. Flow (perm)	213	3539	1583	390	3539	1583	672	1853		3433	1863	1583
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)	85	1074	66	29	855	125	65	85	3	667	260	492
RTOR Reduction (vph)	0	0	0	0	0	87	0	2	0	0	0	10
Lane Group Flow (vph)	85	1074	66	29	855	38	65	86	0	667	260	482
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Prot	NA	custom
Protected Phases	1	6			2			4		3	8	1 3
Permitted Phases	6		6	2		2	4					8
Actuated Green, G (s)	44.5	44.5	44.5	30.6	30.6	30.6	18.7	18.7		20.1	18.7	52.7
Effective Green, g (s)	44.5	44.5	44.5	30.6	30.6	30.6	18.7	18.7		20.1	18.7	52.7
Actuated g/C Ratio	0.44	0.44	0.44	0.31	0.31	0.31	0.19	0.19		0.20	0.19	0.53
Clearance Time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	
Vehicle Extension (s)	3.0	4.9	4.9	4.7	4.7	4.7	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	227	1574	704	119	1082	484	125	346		690	348	834
v/s Ratio Prot	0.03	c0.30			c0.24			0.05		c0.19	c0.14	0.20
v/s Ratio Perm	0.13		0.04	0.07		0.02	0.10					0.11
v/c Ratio	0.37	0.68	0.09	0.24	0.79	0.08	0.52	0.25		0.97	0.75	0.58
Uniform Delay, d1	19.4	22.1	16.1	26.0	31.8	24.7	36.6	34.7		39.6	38.4	16.1
Progression Factor	1.00	1.00	1.00	1.43	1.44	4.48	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	2.4	0.3	3.6	4.4	0.2	3.9	0.4		25.9	8.5	1.0
Delay (s)	20.4	24.5	16.3	40.9	50.3	110.7	40.5	35.0		65.6	46.9	17.1
Level of Service	C	C	B	D	D	F	D	D		E	D	B
Approach Delay (s)		23.8			57.5			37.4			45.3	
Approach LOS		C			E			D			D	
Intersection Summary												
HCM 2000 Control Delay			41.3									D
HCM 2000 Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			100.0							22.1		
Intersection Capacity Utilization			77.1%									D
Analysis Period (min)			15									
c Critical Lane Group												

Queues

19: Laurel Canyon Boulevard & Ventura Place

06/21/2024



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	53	42	182	12	1049	37	82	1419
v/c Ratio	0.41	0.26	0.60	0.07	0.48	0.04	0.31	0.48
Control Delay	48.7	45.8	15.5	33.3	30.8	1.4	19.8	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0
Total Delay	48.7	45.8	15.5	33.3	31.4	1.4	19.8	14.8
Queue Length 50th (ft)	28	26	0	7	374	0	24	173
Queue Length 95th (ft)	68	57	62	m11	m380	m0	88	324
Internal Link Dist (ft)	123	395			458			232
Turn Bay Length (ft)			380	105		85	55	
Base Capacity (vph)	131	223	345	177	2180	1003	264	2966
Starvation Cap Reductn	0	0	0	0	656	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.19	0.53	0.07	0.69	0.04	0.31	0.48





















Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

19: Laurel Canyon Boulevard & Ventura Place

06/21/2024













												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	12	7	28	11	167	11	965	34	75	1256	50
Future Volume (vph)	29	12	7	28	11	167	11	965	34	75	1256	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		9.4			9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.91	
Frpb, ped/bikes		1.00			1.00	0.94	1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes		0.96			1.00	1.00	1.00	1.00	1.00	0.99	1.00	
Frt		0.98			1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.97			0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1703			1799	1482	1770	3539	1518	1759	5056	
Flt Permitted		0.79			0.97	1.00	0.95	1.00	1.00	0.24	1.00	
Satd. Flow (perm)		1387			1799	1482	1770	3539	1518	451	5056	
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)	32	13	8	30	12	182	12	1049	37	82	1365	54
RTOR Reduction (vph)	0	7	0	0	0	166	0	0	15	0	3	0
Lane Group Flow (vph)	0	46	0	0	42	16	12	1049	22	82	1416	0
Confl. Peds. (#/hr)	16					16			16	16		
Turn Type	Perm	NA		Split	NA	Perm	Prot	NA	Perm	Perm	NA	
Protected Phases		3		4	4		1	6			2	
Permitted Phases	3					4			6	2		
Actuated Green, G (s)		7.1			9.0	9.0	2.0	59.8	59.8	52.8	52.8	
Effective Green, g (s)		7.1			9.0	9.0	2.0	59.8	59.8	52.8	52.8	
Actuated g/C Ratio		0.07			0.09	0.09	0.02	0.60	0.60	0.53	0.53	
Clearance Time (s)		9.4			9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	4.8	4.8	3.1	3.1	
Lane Grp Cap (vph)		98			161	133	35	2116	907	238	2669	
v/s Ratio Prot					c0.02		0.01	c0.30			c0.28	
v/s Ratio Perm		c0.03				0.01			0.01	0.18		
v/c Ratio		0.47			0.26	0.12	0.34	0.50	0.02	0.34	0.53	
Uniform Delay, d1		44.7			42.4	41.9	48.4	11.5	8.2	13.6	15.5	
Progression Factor		1.00			1.00	1.00	0.80	2.56	1.00	1.00	1.00	
Incremental Delay, d2		3.6			0.9	0.4	3.5	0.5	0.0	3.9	0.8	
Delay (s)		48.2			43.3	42.3	42.1	29.9	8.2	17.5	16.2	
Level of Service		D			D	D	D	C	A	B	B	
Approach Delay (s)		48.2			42.5			29.3			16.3	
Approach LOS		D			D			C			B	
Intersection Summary												
HCM 2000 Control Delay			23.9		HCM 2000 Level of Service					C		
HCM 2000 Volume to Capacity ratio			0.51									
Actuated Cycle Length (s)			100.0		Sum of lost time (s)					29.1		
Intersection Capacity Utilization			65.4%		ICU Level of Service					C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

20: Laurel Canyon Boulevard & Ventura Boulevard

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	573	456	312	612	60	304	870	185	130	911	181
Future Volume (veh/h)	156	573	456	312	612	60	304	870	185	130	911	181
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	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	170	623	496	339	665	65	330	946	201	141	990	197
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	327	1009	600	320	1078	606	359	1037	449	305	981	560
Arrive On Green	0.03	0.09	0.09	0.11	0.30	0.30	0.10	0.29	0.29	0.06	0.18	0.18
Sat Flow, veh/h	1781	3554	1533	1781	3554	1536	3456	3554	1539	3456	3554	1537
Grp Volume(v), veh/h	170	623	496	339	665	65	330	946	201	141	990	197
Grp Sat Flow(s),veh/h/ln	1781	1777	1533	1781	1777	1536	1728	1777	1539	1728	1777	1537
Q Serve(g_s), s	6.6	16.9	15.3	10.7	16.0	2.7	9.5	25.7	10.6	3.9	27.6	5.8
Cycle Q Clear(g_c), s	6.6	16.9	15.3	10.7	16.0	2.7	9.5	25.7	10.6	3.9	27.6	5.8
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	327	1009	600	320	1078	606	359	1037	449	305	981	560
V/C Ratio(X)	0.52	0.62	0.83	1.06	0.62	0.11	0.92	0.91	0.45	0.46	1.01	0.35
Avail Cap(c_a), veh/h	346	1009	600	320	1078	606	359	1037	449	311	981	560
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Upstream Filter(I)	0.51	0.51	0.51	0.89	0.89	0.89	0.74	0.74	0.74	0.87	0.87	0.87
Uniform Delay (d), s/veh	24.7	40.1	18.7	28.9	29.9	19.3	44.4	34.2	28.8	44.8	40.8	10.4
Incr Delay (d2), s/veh	0.7	1.5	6.7	63.6	2.4	0.3	22.5	9.6	1.0	1.0	29.1	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(95%),veh/ln	5.0	11.5	10.2	13.0	11.1	1.8	8.3	17.0	6.8	3.1	22.6	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.4	41.5	25.4	92.4	32.2	19.6	66.9	43.8	29.9	45.7	69.9	11.6
LnGrp LOS	C	D	C	F	C	B	E	D	C	D	F	B
Approach Vol, veh/h	1289			1069			1477			1328		
Approach Delay, s/veh	33.2			50.5			47.1			58.7		
Approach LOS	C			D			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	36.1	34.7	16.0	33.2	14.2	36.6	14.4	34.8				
Change Period (Y+Rc), s	5.4	6.3	5.6	5.6	5.6	6.3	5.6	5.6				
Max Green Setting (Gmax), s	28.4	10.4	27.6	9.6	29.3	9.0	29.0					
Max Q Clear Time (g_c+M2), s	18.9	11.5	29.6	8.6	18.0	5.9	27.7					
Green Ext Time (p_c), s	0.0	7.0	0.0	0.0	0.0	4.0	0.1	1.1				

Intersection Summary

HCM 6th Ctrl Delay 47.3

HCM 6th LOS D

Notes

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

Queues

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/21/2024



Lane Group	EBL	EBT	WBL	WBT	WBR2	NBT	NBR	SBL	SBT	SBR2
Lane Group Flow (vph)	159	893	66	1001	126	38	47	75	102	74
v/c Ratio	0.30	0.50	0.59	1.20	0.37	0.13	0.11	0.39	0.65	0.23
Control Delay	12.2	1.0	84.7	146.2	49.1	51.4	0.6	62.8	78.1	1.7
Queue Delay	48.0	1.2	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.2	2.2	84.7	147.1	49.1	51.4	0.6	62.8	78.1	1.7
Queue Length 50th (ft)	89	0	59	~584	96	30	0	64	90	0
Queue Length 95th (ft)	m101	m0	#132	#767	167	65	0	114	150	0
Internal Link Dist (ft)		48		634		86			226	
Turn Bay Length (ft)	90		95		55		30	90		90
Base Capacity (vph)	580	1888	115	834	341	308	420	206	167	324
Starvation Cap Reductn	426	716	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	114	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.03	0.76	0.57	1.39	0.37	0.12	0.11	0.36	0.61	0.23

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

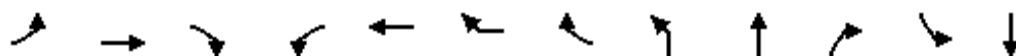
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	146	806	16	61	821	100	116	27	8	43	69	17
Future Volume (vph)	146	806	16	61	821	100	116	27	8	43	69	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.7		4.9	6.1		6.1		6.9	6.9	7.0	7.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		0.89		1.00	0.91	1.00	0.89
Flpb, ped/bikes	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	0.98		0.85		1.00	0.85	1.00	0.88
Flt Protected	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (prot)	1770	3525		1770	3440		1408		1794	1440	1770	1457
Flt Permitted	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (perm)	1770	3525		1770	3440		1408		1794	1440	1770	1457
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)	159	876	17	66	892	109	126	29	9	47	75	18
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	39	0	0
Lane Group Flow (vph)	159	892	0	66	1001	0	126	0	38	8	75	102
Confl. Peds. (#/hr)	29		16	16		29	29	44		44	44	
Turn Type	Prot	NA		Prot	NA		Perm	Split	NA	Perm	Split	NA
Protected Phases	1 3	3 6		5	2			7	7		8	8
Permitted Phases							2			7		
Actuated Green, G (s)	43.0	69.7		7.5	33.0		33.0		23.0	23.0	15.3	15.3
Effective Green, g (s)	43.0	63.6		7.5	33.0		33.0		23.0	23.0	15.3	15.3
Actuated g/C Ratio	0.31	0.45		0.05	0.24		0.24		0.16	0.16	0.11	0.11
Clearance Time (s)				4.9	6.1		6.1		6.9	6.9	7.0	7.0
Vehicle Extension (s)				3.0	4.8		4.8		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	543	1601		94	810		331		294	236	193	159
v/s Ratio Prot	0.09	c0.25		0.04	c0.29				c0.02		0.04	c0.07
v/s Ratio Perm							0.09			0.01		
v/c Ratio	0.29	0.56		0.70	1.24		0.38		0.13	0.03	0.39	0.64
Uniform Delay, d1	36.9	27.9		65.2	53.5		44.9		49.9	49.2	58.0	59.7
Progression Factor	0.30	0.02		1.00	1.00		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.2		21.1	116.7		3.3		0.2	0.1	1.3	8.5
Delay (s)	11.2	0.8		86.2	170.2		48.2		50.1	49.2	59.3	68.3
Level of Service	B	A		F	F		D		D	D	E	E
Approach Delay (s)		2.4			152.7				49.6			62.0
Approach LOS		A			F				D			E

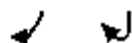
Intersection Summary

HCM 2000 Control Delay	79.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	31.8
Intersection Capacity Utilization	80.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/21/2024



Movement	SBR	SBR2
Lane Configurations		
Traffic Volume (vph)	77	68
Future Volume (vph)	77	68
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		7.0
Lane Util. Factor		1.00
Frpb, ped/bikes		0.78
Flpb, ped/bikes		1.00
Frt		0.85
Flt Protected		1.00
Satd. Flow (prot)		1239
Flt Permitted		1.00
Satd. Flow (perm)		1239
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	84	74
RTOR Reduction (vph)	0	66
Lane Group Flow (vph)	0	8
Confl. Peds. (#/hr)	44	44
Turn Type		Perm
Protected Phases		
Permitted Phases		8
Actuated Green, G (s)		15.3
Effective Green, g (s)		15.3
Actuated g/C Ratio		0.11
Clearance Time (s)		7.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)		135
v/s Ratio Prot		
v/s Ratio Perm		0.01
v/c Ratio		0.06
Uniform Delay, d1		55.9
Progression Factor		1.00
Incremental Delay, d2		0.2
Delay (s)		56.1
Level of Service		E
Approach Delay (s)		
Approach LOS		
Intersection Summary		

HCM 6th Signalized Intersection Summary

22: Carpenter Avenue & Ventura Boulevard

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	803	101	117	1037	23	63	4	88	11	32	6
Future Volume (veh/h)	19	803	101	117	1037	23	63	4	88	11	32	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	0.91		0.90	0.94		0.90
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	873	110	127	1127	25	68	4	96	12	35	7
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	233	1931	243	337	2174	48	144	25	159	107	283	285
Arrive On Green	0.61	0.61	0.61	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	488	3152	397	571	3549	79	467	127	791	307	1412	1424
Grp Volume(v), veh/h	21	492	491	127	564	588	168	0	0	47	0	7
Grp Sat Flow(s),veh/h/ln	488	1777	1772	571	1777	1851	1385	0	0	1719	0	1424
Q Serve(g_s), s	3.0	14.8	14.8	20.3	28.3	28.3	7.9	0.0	0.0	0.0	0.0	0.4
Cycle Q Clear(g_c), s	31.3	14.8	14.8	35.2	28.3	28.3	10.8	0.0	0.0	2.1	0.0	0.4
Prop In Lane	1.00		0.22	1.00		0.04	0.40		0.57	0.26		1.00
Lane Grp Cap(c), veh/h	233	1089	1086	337	1089	1134	328	0	0	390	0	285
V/C Ratio(X)	0.09	0.45	0.45	0.38	0.52	0.52	0.51	0.00	0.00	0.12	0.00	0.02
Avail Cap(c_a), veh/h	233	1089	1086	337	1089	1134	469	0	0	562	0	434
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.62	0.62	0.62	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.5	10.4	10.4	36.3	26.7	26.7	36.1	0.0	0.0	32.8	0.0	32.1
Incr Delay (d2), s/veh	0.7	1.2	1.2	2.0	1.1	1.1	1.2	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	9.2	9.2	5.6	18.4	19.1	6.9	0.0	0.0	1.7	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.2	11.6	11.6	38.3	27.8	27.8	37.4	0.0	0.0	32.9	0.0	32.2
LnGrp LOS	C	B	B	D	C	C	D	A	A	C	A	C
Approach Vol, veh/h	1004			1279			168			54		
Approach Delay, s/veh	11.8			28.9			37.4			32.8		
Approach LOS	B			C			D			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	70.5			29.5			70.5			29.5		
Change Period (Y+Rc), s	* 9.2			9.5			* 9.2			9.5		
Max Green Setting (Gmax), s	* 51			30.5			* 51			30.5		
Max Q Clear Time (g_c+I1), s	33.3			4.1			37.2			12.8		
Green Ext Time (p_c), s	11.4			0.2			11.0			1.0		

Intersection Summary

HCM 6th Ctrl Delay	22.7
HCM 6th LOS	C

Notes

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

Queues

23: Ventura Boulevard & Colfax Avenue

06/21/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	215	801	1125	411	407
v/c Ratio	0.62	0.37	0.83	0.82	0.42
Control Delay	17.2	7.0	26.7	46.9	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.2	7.0	26.7	46.9	3.3
Queue Length 50th (ft)	21	29	143	242	16
Queue Length 95th (ft)	104	168	#557	331	50
Internal Link Dist (ft)		981	464		
Turn Bay Length (ft)	160			360	360
Base Capacity (vph)	347	2153	1356	532	961
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.62	0.37	0.83	0.77	0.42

Intersection Summary




















95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

23: Ventura Boulevard & Colfax Avenue

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	198	737	0	0	799	236	0	0	0	378	0	374
Future Volume (vph)	198	737	0	0	799	236	0	0	0	378	0	374
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.4			5.4					5.4		5.7
Lane Util. Factor	1.00	0.95			0.95					1.00		1.00
Frt	1.00	1.00			0.97					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1770	3539			3418					1770		1583
Flt Permitted	0.09	1.00			1.00					0.95		1.00
Satd. Flow (perm)	164	3539			3418					1770		1583
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)	215	801	0	0	868	257	0	0	0	411	0	407
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	201
Lane Group Flow (vph)	215	801	0	0	1125	0	0	0	0	411	0	206
Turn Type	pm+pt	NA			NA					pm+pt		pm+ov
Protected Phases	5	2			6			3		4		5
Permitted Phases	2						3			7		4
Actuated Green, G (s)	60.9	60.9			39.7					28.3		43.8
Effective Green, g (s)	60.9	60.9			39.7					28.3		43.8
Actuated g/C Ratio	0.61	0.61			0.40					0.28		0.44
Clearance Time (s)	5.7	5.4			5.4					5.4		5.7
Vehicle Extension (s)	3.0	4.3			4.5					3.0		3.0
Lane Grp Cap (vph)	348	2155			1356					500		693
v/s Ratio Prot	c0.10	0.23			c0.33					c0.23		0.05
v/s Ratio Perm	0.28											0.08
v/c Ratio	0.62	0.37			0.83					0.82		0.30
Uniform Delay, d1	21.2	9.9			27.1					33.5		18.2
Progression Factor	0.54	0.61			0.66					1.00		1.00
Incremental Delay, d2	3.0	0.5			5.7					10.5		0.2
Delay (s)	14.4	6.5			23.5					44.0		18.4
Level of Service	B	A			C					D		B
Approach Delay (s)		8.2			23.5			0.0			31.2	
Approach LOS		A			C			A			C	
Intersection Summary												
HCM 2000 Control Delay		20.4			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		0.85										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)			22.8				
Intersection Capacity Utilization		74.1%			ICU Level of Service			D				
Analysis Period (min)		15										
c Critical Lane Group												

Queues

24: Berry Drive & Ventura Boulevard

06/21/2024



Lane Group	EBT	WBL	WBT	NBT
Lane Group Flow (vph)	2203	42	1137	64
v/c Ratio	0.76	0.54	0.39	0.28
Control Delay	6.1	36.3	4.6	3.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	6.1	36.3	4.6	3.4
Queue Length 50th (ft)	174	15	232	0
Queue Length 95th (ft)	234	m28	17	4
Internal Link Dist (ft)	342		273	287
Turn Bay Length (ft)		65		
Base Capacity (vph)	2908	78	2933	394
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.76	0.54	0.39	0.16



















Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

24: Berry Drive & Ventura Boulevard

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1911	116	39	1046	0	19	0	40	0	0	0
Future Volume (vph)	0	1911	116	39	1046	0	19	0	40	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0			9.4				
Lane Util. Factor		0.95		1.00	0.95			1.00				
Frt		0.99		1.00	1.00			0.91				
Flt Protected		1.00		0.95	1.00			0.98				
Satd. Flow (prot)		3509		1770	3539			1666				
Flt Permitted		1.00		0.05	1.00			0.98				
Satd. Flow (perm)		3509		95	3539			1666				
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)	0	2077	126	42	1137	0	21	0	43	0	0	0
RTOR Reduction (vph)	0	2	0	0	0	0	0	60	0	0	0	0
Lane Group Flow (vph)	0	2201	0	42	1137	0	0	4	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		6			2		3	3			4	
Permitted Phases	6			2						4		
Actuated Green, G (s)		80.0		80.0	80.0			5.6				
Effective Green, g (s)		80.0		80.0	80.0			5.6				
Actuated g/C Ratio		0.80		0.80	0.80			0.06				
Clearance Time (s)		5.0		5.0	5.0			9.4				
Vehicle Extension (s)		4.9		4.0	4.0			3.0				
Lane Grp Cap (vph)		2807		76	2831			93				
v/s Ratio Prot		c0.63			0.32			c0.00				
v/s Ratio Perm				0.44								
v/c Ratio		0.78		0.55	0.40			0.04				
Uniform Delay, d1		5.4		3.6	2.9			44.7				
Progression Factor		0.76		1.74	1.44			1.00				
Incremental Delay, d2		2.2		21.8	0.4			0.2				
Delay (s)		6.3		28.0	4.6			44.8				
Level of Service		A		C	A			D				
Approach Delay (s)		6.3			5.4			44.8			0.0	
Approach LOS		A			A			D			A	
Intersection Summary												
HCM 2000 Control Delay		6.7										
HCM 2000 Volume to Capacity ratio		0.82										
Actuated Cycle Length (s)		100.0										
Intersection Capacity Utilization		74.4%										
Analysis Period (min)		15										
c Critical Lane Group												

Queues

25: Ventura Boulevard & Tujunga Avenue

06/21/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	138	1127	1087	255	334
v/c Ratio	0.38	0.46	0.59	0.37	0.56
Control Delay	11.1	12.1	18.8	34.7	24.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	11.1	12.1	18.8	34.7	24.6
Queue Length 50th (ft)	40	221	232	72	146
Queue Length 95th (ft)	m66	357	363	98	198
Internal Link Dist (ft)		426	233	3083	
Turn Bay Length (ft)	180			100	60
Base Capacity (vph)	396	2434	1846	1012	637
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.35	0.46	0.59	0.25	0.52

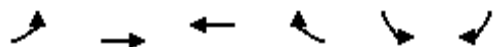
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

25: Ventura Boulevard & Tujunga Avenue

06/21/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	127	1037	898	102	235	307
Future Volume (vph)	127	1037	898	102	235	307
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.5	5.5		5.5	5.6
Lane Util. Factor	1.00	0.95	0.95		0.97	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3485		3433	1583
Flt Permitted	0.16	1.00	1.00		0.95	1.00
Satd. Flow (perm)	304	3539	3485		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	138	1127	976	111	255	334
RTOR Reduction (vph)	0	0	7	0	0	31
Lane Group Flow (vph)	138	1127	1080	0	255	303
Turn Type	pm+pt	NA	NA		Prot	pt+ov
Protected Phases	1	6	2		4	1 7
Permitted Phases	6					4
Actuated Green, G (s)	68.8	68.8	52.8		20.2	36.1
Effective Green, g (s)	68.8	68.8	52.8		20.2	30.6
Actuated g/C Ratio	0.69	0.69	0.53		0.20	0.31
Clearance Time (s)	5.6	5.5	5.5		5.5	
Vehicle Extension (s)	3.0	4.4	4.9		3.0	
Lane Grp Cap (vph)	361	2434	1840		693	484
v/s Ratio Prot	0.04	0.32	c0.31		0.07	c0.19
v/s Ratio Perm	0.22					
v/c Ratio	0.38	0.46	0.59		0.37	0.63
Uniform Delay, d1	8.7	7.1	16.1		34.4	29.8
Progression Factor	1.42	1.46	1.00		1.00	1.00
Incremental Delay, d2	0.4	0.4	1.4		0.3	2.5
Delay (s)	12.7	10.8	17.5		34.7	32.3
Level of Service	B	B	B		C	C
Approach Delay (s)		11.0	17.5		33.4	
Approach LOS		B	B		C	
Intersection Summary						
HCM 2000 Control Delay			17.9		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.64			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	22.1
Intersection Capacity Utilization			58.6%		ICU Level of Service	B
Analysis Period (min)			15			

c Critical Lane Group

HCM 6th Signalized Intersection Summary

26: Laurel Canyon Boulevard & Maxwellton Road

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Volume (veh/h)	126	0	79	0	0	0	2	1144	0	0	1573	102
Future Volume (veh/h)	126	0	79	0	0	0	2	1144	0	0	1573	102
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.83				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
Work Zone On Approach	No						No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h	137	0	86				2	1243	0	0	1710	111
Peak Hour Factor	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	0	0	2	2
Cap, veh/h	220	0	138				41	1982	0	0	1929	124
Arrive On Green	0.23	0.00	0.23				0.57	0.57	0.00	0.00	0.57	0.57
Sat Flow, veh/h	963	0	604				1	3567	0	0	3483	218
Grp Volume(v), veh/h	223	0	0				667	578	0	0	890	931
Grp Sat Flow(s),veh/h/ln	1567	0	0				1866	1617	0	0	1777	1831
Q Serve(g_s), s	11.5	0.0	0.0				0.0	21.6	0.0	0.0	38.9	40.2
Cycle Q Clear(g_c), s	11.5	0.0	0.0				21.5	21.6	0.0	0.0	38.9	40.2
Prop In Lane	0.61		0.39				0.00		0.00	0.00		0.12
Lane Grp Cap(c), veh/h	358	0	0				1102	920	0	0	1011	1042
V/C Ratio(X)	0.62	0.00	0.00				0.61	0.63	0.00	0.00	0.88	0.89
Avail Cap(c_a), veh/h	432	0	0				1102	920	0	0	1011	1042
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				0.81	0.81	0.00	0.00	0.22	0.22
Uniform Delay (d), s/veh	31.2	0.0	0.0				13.0	13.0	0.0	0.0	16.7	17.0
Incr Delay (d2), s/veh	2.0	0.0	0.0				2.0	2.6	0.0	0.0	2.7	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
%ile BackOfQ(95%),veh/ln	8.0	0.0	0.0				12.9	11.6	0.0	0.0	17.3	18.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.2	0.0	0.0				15.0	15.6	0.0	0.0	19.4	20.0
LnGrp LOS	C	A	A				B	B	A	A	B	C
Approach Vol, veh/h	223						1245			1821		
Approach Delay, s/veh	33.2						15.3			19.7		
Approach LOS	C						B			B		
Timer - Assigned Phs	2			4			6					
Phs Duration (G+Y+Rc), s	60.2			29.8			60.2					
Change Period (Y+Rc), s	9.0			9.2			9.0					
Max Green Setting (Gmax), s	47.0			24.8			47.0					
Max Q Clear Time (g_c+I1), s	42.2			13.5			23.6					
Green Ext Time (p_c), s	4.7			1.0			16.3					

Intersection Summary

HCM 6th Ctrl Delay	19.0
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary

27: Laurel Canyon Boulevard & Laurel Terrace Drive/Sunshine Terrace Drive

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (veh/h)	17	16	262	98	23	94	60	1160	49	23	1612	19
Future Volume (veh/h)	17	16	262	98	23	94	60	1160	49	23	1612	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	17	285	107	25	102	65	1261	53	25	1752	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	44	30	340	121	34	86	83	2409	101	277	2187	26
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.05	0.69	0.69	0.61	0.61	0.61
Sat Flow, veh/h	54	132	1512	342	152	382	1781	3475	146	418	3596	43
Grp Volume(v), veh/h	320	0	0	234	0	0	65	644	670	25	864	909
Grp Sat Flow(s), veh/h/ln	1697	0	0	876	0	0	1781	1777	1844	418	1777	1863
Q Serve(g_s), s	0.0	0.0	0.0	5.1	0.0	0.0	4.3	20.9	21.0	3.7	44.5	44.8
Cycle Q Clear(g_c), s	21.9	0.0	0.0	27.0	0.0	0.0	4.3	20.9	21.0	14.4	44.5	44.8
Prop In Lane	0.06		0.89	0.46		0.44	1.00		0.08	1.00		0.02
Lane Grp Cap(c), veh/h	414	0	0	241	0	0	83	1232	1279	277	1081	1133
V/C Ratio(X)	0.77	0.00	0.00	0.97	0.00	0.00	0.78	0.52	0.52	0.09	0.80	0.80
Avail Cap(c_a), veh/h	414	0	0	241	0	0	110	1232	1279	277	1081	1133
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.34	0.34	0.34
Uniform Delay (d), s/veh	44.8	0.0	0.0	49.0	0.0	0.0	56.6	8.9	8.9	14.8	17.9	18.0
Incr Delay (d2), s/veh	8.8	0.0	0.0	49.9	0.0	0.0	22.4	1.6	1.5	0.2	2.2	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(95%),veh/ln	15.4	0.0	0.0	15.8	0.0	0.0	4.4	12.3	12.7	0.6	21.4	22.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.6	0.0	0.0	98.9	0.0	0.0	79.0	10.4	10.4	15.0	20.1	20.1
LnGrp LOS	D	A	A	F	A	A	E	B	B	B	C	C
Approach Vol, veh/h		320			234			1379			1798	
Approach Delay, s/veh		53.6			98.9			13.7			20.1	
Approach LOS		D			F			B			C	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	30.2	77.8		32.0		88.0		32.0				
Change Period (Y+Rc), s	4.6	4.8		* 5		4.8		* 5				
Max Green Setting (Gmax), s	71.2			* 27		83.2		* 27				
Max Q Clear Time (g_c+I), s	46.8			23.9		23.0		29.0				
Green Ext Time (p_c), s	0.0	15.3		0.6		12.5		0.0				

Intersection Summary

HCM 6th Ctrl Delay	25.5
HCM 6th LOS	C

Notes

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

Queues

28: Laurel Canyon Boulevard & Fryman Road

06/21/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	261	7	24	1093	2193
v/c Ratio	0.72	0.02	0.29	0.46	0.94
Control Delay	44.1	25.5	19.5	8.4	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.1	25.5	19.5	8.4	23.6
Queue Length 50th (ft)	139	3	5	135	501
Queue Length 95th (ft)	202	13	32	222	#856
Internal Link Dist (ft)				236	183
Turn Bay Length (ft)			145		
Base Capacity (vph)	542	485	82	2386	2345
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.48	0.01	0.29	0.46	0.94

Intersection Summary






















95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

28: Laurel Canyon Boulevard & Fryman Road

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								 			 	
Traffic Volume (vph)	240	0	6	0	0	0	22	1006	0	0	1717	301
Future Volume (vph)	240	0	6	0	0	0	22	1006	0	0	1717	301
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4		5.4				5.4	5.4			5.4	
Lane Util. Factor	1.00		1.00				1.00	0.95			0.95	
Frt	1.00		0.85				1.00	1.00			0.98	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	3539			3460	
Flt Permitted	0.95		1.00				0.07	1.00			1.00	
Satd. Flow (perm)	1770		1583				123	3539			3460	
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)	261	0	7	0	0	0	24	1093	0	0	1866	327
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	12	0
Lane Group Flow (vph)	261	0	7	0	0	0	24	1093	0	0	2181	0
Turn Type	Perm		Perm				Perm	NA		Perm	NA	
Protected Phases								2				6
Permitted Phases	8		8				2			6		
Actuated Green, G (s)	18.5		18.5				60.7	60.7			60.7	
Effective Green, g (s)	18.5		18.5				60.7	60.7			60.7	
Actuated g/C Ratio	0.21		0.21				0.67	0.67			0.67	
Clearance Time (s)	5.4		5.4				5.4	5.4			5.4	
Vehicle Extension (s)	3.0		3.0				4.8	4.8			5.1	
Lane Grp Cap (vph)	363		325				82	2386			2333	
v/s Ratio Prot								0.31			c0.63	
v/s Ratio Perm	c0.15		0.00				0.20					
v/c Ratio	0.72		0.02				0.29	0.46			0.93	
Uniform Delay, d1	33.3		28.5				5.9	6.9			12.9	
Progression Factor	1.00		1.00				1.00	1.00			1.00	
Incremental Delay, d2	6.7		0.0				8.8	0.6			8.6	
Delay (s)	40.0		28.6				14.8	7.5			21.5	
Level of Service	D		C				B	A			C	
Approach Delay (s)		39.7			0.0			7.7			21.5	
Approach LOS		D			A			A			C	
Intersection Summary												
HCM 2000 Control Delay			18.5				HCM 2000 Level of Service				B	
HCM 2000 Volume to Capacity ratio			0.88									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			10.8		
Intersection Capacity Utilization			78.2%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th TWSC
29: Laurel Canyon Boulevard & Woodbridge Street

06/21/2024

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↙	↕		↙	↕	
Traffic Vol, veh/h	3	0	17	4	0	49	15	1214	4	131	1507	22
Future Vol, veh/h	3	0	17	4	0	49	15	1214	4	131	1507	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	65	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	18	4	0	53	16	1320	4	142	1638	24
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2626	3290	831	2457	3300	662	1662	0	0	1324	0	0
Stage 1	1934	1934	-	1354	1354	-	-	-	-	-	-	-
Stage 2	692	1356	-	1103	1946	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	12	9	313	16	8	404	383	-	-	518	-	-
Stage 1	68	111	-	158	216	-	-	-	-	-	-	-
Stage 2	400	216	-	225	110	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	8	6	313	12	6	404	383	-	-	518	-	-
Mov Cap-2 Maneuver	8	6	-	12	6	-	-	-	-	-	-	-
Stage 1	65	81	-	151	207	-	-	-	-	-	-	-
Stage 2	333	207	-	154	80	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	135.5		62.5		0.2		1.1					
HCM LOS	F		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	383	-	-	47	117	518	-	-				
HCM Lane V/C Ratio	0.043	-	-	0.463	0.492	0.275	-	-				
HCM Control Delay (s)	14.8	-	-	135.5	62.5	14.6	-	-				
HCM Lane LOS	B	-	-	F	F	B	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	1.7	2.2	1.1	-	-				





HCM 6th TWSC
30: Valleyheart Drive (North) & Laurel Canyon Boulevard

06/21/2024

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↵	↕↵		↵	↕↵	
Traffic Vol, veh/h	2	0	12	6	0	28	19	1206	8	30	1513	7
Future Vol, veh/h	2	0	12	6	0	28	19	1206	8	30	1513	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	40	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	13	7	0	30	21	1311	9	33	1645	8
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2413	3077	827	2247	3077	660	1653	0	0	1320	0	0
Stage 1	1715	1715	-	1358	1358	-	-	-	-	-	-	-
Stage 2	698	1362	-	889	1719	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	17	12	315	23	12	406	386	-	-	519	-	-
Stage 1	94	144	-	157	215	-	-	-	-	-	-	-
Stage 2	397	214	-	304	143	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	14	11	315	20	11	406	386	-	-	519	-	-
Mov Cap-2 Maneuver	14	11	-	20	11	-	-	-	-	-	-	-
Stage 1	89	135	-	149	203	-	-	-	-	-	-	-
Stage 2	347	202	-	273	134	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	62.9		68.2		0.2		0.2					
HCM LOS	F		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	386	-	-	77	92	519	-	-				
HCM Lane V/C Ratio	0.054	-	-	0.198	0.402	0.063	-	-				
HCM Control Delay (s)	14.9	-	-	62.9	68.2	12.4	-	-				
HCM Lane LOS	B	-	-	F	F	B	-	-				
HCM 95th %tile Q(veh)	0.2	-	-	0.7	1.6	0.2	-	-				

Intersection

Int Delay, s/veh 1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	98	1140	19	127	1388
Future Vol, veh/h	5	98	1140	19	127	1388
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	35	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	107	1239	21	138	1509

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	2281	630	0
Stage 1	1250	-	-
Stage 2	1031	-	-
Critical Hdwy	6.84	6.94	4.14
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	2.22
Pot Cap-1 Maneuver	34	424	548
Stage 1	233	-	-
Stage 2	305	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	25	424	548
Mov Cap-2 Maneuver	25	-	-
Stage 1	233	-	-
Stage 2	228	-	-

Approach	WB	NB	SB
HCM Control Delay, s	32.7	0	1.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	239	548
HCM Lane V/C Ratio	-	-	0.468	0.252
HCM Control Delay (s)	-	-	32.7	13.8
HCM Lane LOS	-	-	D	B
HCM 95th %tile Q(veh)	-	-	2.3	1

HCM 6th AWSC

32: Radford Avenue & Sarah Street

06/21/2024

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	1	0	3	6	57	2	38	1	120	108	14
Future Vol, veh/h	13	1	0	3	6	57	2	38	1	120	108	14
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	1	0	3	7	62	2	41	1	130	117	15
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0




Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8	7.5	7.6	9.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	93%	5%	50%
Vol Thru, %	93%	7%	9%	45%
Vol Right, %	2%	0%	86%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	41	14	66	242
LT Vol	2	13	3	120
Through Vol	38	1	6	108
RT Vol	1	0	57	14
Lane Flow Rate	45	15	72	263
Geometry Grp	1	1	1	1
Degree of Util (X)	0.054	0.021	0.082	0.306
Departure Headway (Hd)	4.391	4.893	4.134	4.186
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	819	735	872	852
Service Time	2.399	2.898	2.137	2.247
HCM Lane V/C Ratio	0.055	0.02	0.083	0.309
HCM Control Delay	7.6	8	7.5	9.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.1	0.3	1.3

Intersection

Intersection Delay, s/veh 0

Intersection LOS -

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	0	0	0
HCM LOS	-	-	-

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0
LT Vol	0	0	0
Through Vol	0	0	0
RT Vol	0	0	0
Lane Flow Rate	0	0	0
Geometry Grp	1	1	1
Degree of Util (X)	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0
HCM Control Delay	6.9	6.9	6.9
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

HCM 6th AWSC

54: Radford Avenue & Radford Gate

06/21/2024

Intersection

Intersection Delay, s/veh 0

Intersection LOS -

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

Intersection

Intersection Delay, s/veh 0

Intersection LOS -




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

HCM 6th TWSC
56: Colfax Avenue & Colfax Gate

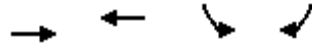
06/21/2024

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1	1	-	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	1022	1084	0	-	-	0
Stage 1	1022	-	0	-	-	0
Stage 2	-	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	1022	1084	-	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT EBLn1		SBT			
Capacity (veh/h)	-		-			
HCM Lane V/C Ratio	-		-			
HCM Control Delay (s)	-		0			
HCM Lane LOS	-		A			
HCM 95th %tile Q(veh)	-		-			

Queues

121: Ventura Boulevard & Ventura PI

06/21/2024



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	978	1005	74	32
v/c Ratio	0.93	0.46	0.13	0.11
Control Delay	63.8	11.6	50.7	16.5
Queue Delay	45.5	51.1	0.0	0.0
Total Delay	109.3	62.7	50.7	16.5
Queue Length 50th (ft)	~510	63	29	0
Queue Length 95th (ft)	#657	m49	54	31
Internal Link Dist (ft)	509	48	136	
Turn Bay Length (ft)				40
Base Capacity (vph)	1051	2152	669	334
Starvation Cap Reductn	0	1327	0	0
Spillback Cap Reductn	221	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.18	1.22	0.11	0.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

121: Ventura Boulevard & Ventura PI

06/21/2024



























Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	↑
Traffic Volume (vph)	0	900	925	0	68	29
Future Volume (vph)	0	900	925	0	68	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.1	6.1		5.7	5.7
Lane Util. Factor		0.95	0.95		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3433	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	978	1005	0	74	32
RTOR Reduction (vph)	0	0	0	0	0	27
Lane Group Flow (vph)	0	978	1005	0	74	5
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2 4		3	
Permitted Phases						3
Actuated Green, G (s)		40.6	85.2		23.0	23.0
Effective Green, g (s)		40.6	85.2		23.0	23.0
Actuated g/C Ratio		0.29	0.61		0.16	0.16
Clearance Time (s)		6.1			5.7	5.7
Vehicle Extension (s)		4.6			3.0	3.0
Lane Grp Cap (vph)		1026	2153		563	260
v/s Ratio Prot		c0.28	c0.28		c0.02	
v/s Ratio Perm						0.00
v/c Ratio		0.95	0.47		0.13	0.02
Uniform Delay, d1		48.8	15.0		50.0	49.1
Progression Factor		1.00	0.79		1.00	1.00
Incremental Delay, d2		18.9	0.0		0.1	0.0
Delay (s)		67.6	11.8		50.1	49.1
Level of Service		E	B		D	D
Approach Delay (s)		67.6	11.8		49.8	
Approach LOS		E	B		D	
Intersection Summary						
HCM 2000 Control Delay			39.9		HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.65			
Actuated Cycle Length (s)			140.0		Sum of lost time (s)	31.8
Intersection Capacity Utilization			42.1%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

1: Riverside Drive & Laurel Canyon Boulevard









06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	326	1004	150	117	526	110	186	802	122	164	844	232
Future Volume (veh/h)	326	1004	150	117	526	110	186	802	122	164	844	232
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	354	1091	163	127	572	120	202	872	133	178	917	252
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	380	1315	586	255	810	361	258	1023	573	231	1069	293
Arrive On Green	0.21	0.37	0.37	0.02	0.08	0.08	0.10	0.29	0.29	0.08	0.27	0.27
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	3554	1585	1781	3986	1092
Grp Volume(v), veh/h	354	1091	163	127	572	120	202	872	133	178	783	386
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1777	1585	1781	1702	1674
Q Serve(g_s), s	23.4	33.5	8.7	4.4	18.9	8.6	9.7	27.8	7.0	8.7	26.2	26.4
Cycle Q Clear(g_c), s	23.4	33.5	8.7	4.4	18.9	8.6	9.7	27.8	7.0	8.7	26.2	26.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.65
Lane Grp Cap(c), veh/h	380	1315	586	255	810	361	258	1023	573	231	913	449
V/C Ratio(X)	0.93	0.83	0.28	0.50	0.71	0.33	0.78	0.85	0.23	0.77	0.86	0.86
Avail Cap(c_a), veh/h	402	1315	586	259	810	361	267	1023	573	231	913	449
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	0.80	0.80	0.80	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.3	34.4	26.5	56.3	51.6	46.8	31.2	40.3	26.7	32.2	41.7	41.8
Incr Delay (d2), s/veh	27.5	6.2	1.2	1.5	5.1	2.5	11.2	7.3	0.8	14.7	10.2	19.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.9	21.4	6.1	3.5	14.6	6.8	8.1	18.2	4.9	8.1	17.7	18.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.8	40.5	27.7	57.8	56.7	49.3	42.4	47.7	27.4	46.9	52.0	60.8
LnGrp LOS	E	D	C	E	E	D	D	D	C	D	D	E
Approach Vol, veh/h	1608		819				1207				1347	
Approach Delay, s/veh	46.6		55.8				44.6				53.8	
Approach LOS	D		E				D				D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.4	38.1	31.5	33.1	15.0	40.4	14.5	50.1				
Change Period (Y+Rc), s	5.6	5.9	5.9	* 5.7	5.6	5.9	5.6	* 5.7				
Max Green Setting (Gmax), s	12.4	31.4	27.1	* 26	9.4	34.4	9.0	* 44				
Max Q Clear Time (g_c+I1), s	11.7	28.4	25.4	20.9	10.7	29.8	6.4	35.5				
Green Ext Time (p_c), s	0.0	2.0	0.2	1.8	0.0	2.5	0.1	5.0				
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.												
User approved changes to right turn type.												

HCM 6th TWSC

2: Riverside Drive & Radford Avenue

06/24/2024

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	1020	34	38	1029	7	17	2	29	1	0	8
Future Vol, veh/h	12	1020	34	38	1029	7	17	2	29	1	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	105	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	1109	37	41	1118	8	18	2	32	1	0	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1126	0	0	1146	0	0	1776	2343	555	1786	2376	563
Stage 1	-	-	-	-	-	-	1135	1135	-	1204	1204	-
Stage 2	-	-	-	-	-	-	641	1208	-	582	1172	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	616	-	-	605	-	-	52	36	475	51	34	470
Stage 1	-	-	-	-	-	-	215	275	-	195	255	-
Stage 2	-	-	-	-	-	-	430	254	-	466	264	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	616	-	-	605	-	-	48	33	475	42	31	470
Mov Cap-2 Maneuver	-	-	-	-	-	-	48	33	-	42	31	-
Stage 1	-	-	-	-	-	-	210	269	-	191	238	-
Stage 2	-	-	-	-	-	-	393	237	-	422	258	-

























Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.4			73.7			22.1		
HCM LOS							F			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	101	616	-	-	605	-	-	220
HCM Lane V/C Ratio	0.517	0.021	-	-	0.068	-	-	0.044
HCM Control Delay (s)	73.7	11	-	-	11.4	-	-	22.1
HCM Lane LOS	F	B	-	-	B	-	-	C
HCM 95th %tile Q(veh)	2.3	0.1	-	-	0.2	-	-	0.1

HCM 6th Signalized Intersection Summary

3: Colfax Avenue & Riverside Drive

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	674	189	182	750	41	152	492	87	30	329	84
Future Volume (veh/h)	156	674	189	182	750	41	152	492	87	30	329	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	170	733	205	198	815	45	165	535	95	33	358	91
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	247	1356	605	298	1356	605	411	826	700	410	826	700
Arrive On Green	0.76	0.76	0.76	0.38	0.38	0.38	0.88	0.88	0.88	0.44	0.44	0.44
Sat Flow, veh/h	643	3554	1585	597	3554	1585	941	1870	1585	796	1870	1585
Grp Volume(v), veh/h	170	733	205	198	815	45	165	535	95	33	358	91
Grp Sat Flow(s),veh/h/ln	643	1777	1585	597	1777	1585	941	1870	1585	796	1870	1585
Q Serve(g_s), s	11.9	5.0	2.5	17.9	11.0	1.1	6.2	4.7	0.5	1.7	7.9	2.0
Cycle Q Clear(g_c), s	22.9	5.0	2.5	22.9	11.0	1.1	14.1	4.7	0.5	6.3	7.9	2.0
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	247	1356	605	298	1356	605	411	826	700	410	826	700
V/C Ratio(X)	0.69	0.54	0.34	0.66	0.60	0.07	0.40	0.65	0.14	0.08	0.43	0.13
Avail Cap(c_a), veh/h	247	1356	605	298	1356	605	411	826	700	410	826	700
HCM Platoon Ratio	2.00	2.00	2.00	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	0.92	0.92	0.92	0.62	0.62	0.62	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.1	5.0	4.7	21.9	14.9	11.8	5.1	2.2	2.0	12.7	11.6	9.9
Incr Delay (d2), s/veh	14.6	1.5	1.5	10.3	1.8	0.2	1.8	2.4	0.3	0.4	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(95%),veh/ln	4.0	2.4	1.5	6.0	7.2	0.6	0.9	2.3	0.3	0.5	5.6	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.7	6.5	6.2	32.2	16.7	12.0	6.9	4.7	2.2	13.1	13.2	10.3
LnGrp LOS	C	A	A	C	B	B	A	A	A	B	B	B
Approach Vol, veh/h	1108			1058			795			482		
Approach Delay, s/veh	9.9			19.4			4.8			12.7		
Approach LOS	A			B			A			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	28.0			32.0			28.0			32.0		
Change Period (Y+Rc), s	* 5.1			* 5.5			* 5.1			* 5.5		
Max Green Setting (Gmax), s	* 23			* 27			* 23			* 27		
Max Q Clear Time (g_c+I1), s	24.9			16.1			24.9			9.9		
Green Ext Time (p_c), s	0.0			3.4			0.0			2.4		
Intersection Summary												
HCM 6th Ctrl Delay	12.0											
HCM 6th LOS	B											
Notes												

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

Queues

4: Riverside Drive & SR 170 Southbound Off-Ramp

06/24/2024



Lane Group	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	889	5	784	15	244	234	225
v/c Ratio	0.44	0.02	0.38	0.05	0.64	0.50	0.44
Control Delay	11.1	10.2	11.3	0.4	31.9	10.9	6.2
Queue Delay	0.9	0.0	0.3	0.1	0.7	0.7	0.0
Total Delay	12.0	10.2	11.7	0.4	32.6	11.6	6.2
Queue Length 50th (ft)	94	1	86	0	97	24	0
Queue Length 95th (ft)	221	m5	234	0	168	84	50
Internal Link Dist (ft)	2214		245	105		344	
Turn Bay Length (ft)		25			140		150
Base Capacity (vph)	2039	273	2040	294	448	522	566
Starvation Cap Reductn	0	0	646	0	0	0	0
Spillback Cap Reductn	805	0	0	81	50	94	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.02	0.56	0.07	0.61	0.55	0.40


Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: Riverside Drive & SR 170 Southbound Off-Ramp













06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑	↑↑			↑		↑	↑↑	↑
Traffic Volume (vph)	0	813	5	5	721	0	0	0	14	277	6	363
Future Volume (vph)	0	813	5	5	721	0	0	0	14	277	6	363
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Lane Util. Factor		0.95		1.00	0.95			1.00		0.95	0.91	0.95
Frt		1.00		1.00	1.00			0.86		1.00	0.89	0.85
Flt Protected		1.00		0.95	1.00			1.00		0.95	0.99	1.00
Satd. Flow (prot)		3536		1770	3539			1611		1681	1492	1504
Flt Permitted		1.00		0.25	1.00			1.00		0.95	0.99	1.00
Satd. Flow (perm)		3536		475	3539			1611		1681	1492	1504
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)	0	884	5	5	784	0	0	0	15	301	7	395
RTOR Reduction (vph)	0	0	0	0	0	0	0	15	0	0	131	174
Lane Group Flow (vph)	0	889	0	5	784	0	0	0	0	244	103	51
Turn Type		NA		Perm	NA			NA		Split	NA	Perm
Protected Phases		6			2			4		3	3	
Permitted Phases				2			4					3
Actuated Green, G (s)		35.5		35.5	35.5			1.6		15.9	15.9	15.9
Effective Green, g (s)		35.5		35.5	35.5			1.6		15.9	15.9	15.9
Actuated g/C Ratio		0.51		0.51	0.51			0.02		0.23	0.23	0.23
Clearance Time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Vehicle Extension (s)		3.8		2.4	2.4			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1793		240	1794			36		381	338	341
v/s Ratio Prot		c0.25			0.22			c0.00		c0.15	0.07	
v/s Ratio Perm				0.01								0.03
v/c Ratio		0.50		0.02	0.44			0.01		0.64	0.30	0.15
Uniform Delay, d1		11.4		8.6	10.9			33.4		24.5	22.5	21.6
Progression Factor		1.00		0.94	1.13			1.00		1.00	1.00	1.00
Incremental Delay, d2		1.0		0.1	0.7			0.1		3.7	0.5	0.2
Delay (s)		12.3		8.2	13.1			33.5		28.1	23.0	21.8
Level of Service		B		A	B			C		C	C	C
Approach Delay (s)		12.3			13.0			33.5			24.4	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			16.2			HCM 2000 Level of Service			B			
HCM 2000 Volume to Capacity ratio			0.52									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			55.7%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	NWL	NWR
Lane Group Flow (vph)	232	695	309	238	384	157	32	851	64	553	357	129
v/c Ratio	0.84	1.04	1.04	1.37	0.49	0.44	0.14	0.90	0.42	0.42	0.66	0.57
Control Delay	66.7	97.0	114.5	229.8	49.8	51.6	45.9	62.6	69.8	33.8	61.4	64.2
Queue Delay	0.0	25.4	22.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
Total Delay	66.7	122.4	137.0	229.8	49.8	51.6	45.9	62.6	69.8	33.8	61.7	64.2
Queue Length 50th (ft)	173	~368	~328	~229	161	124	23	410	56	194	159	120
Queue Length 95th (ft)	#248	#519	#556	#408	214	198	57	#627	107	264	204	190
Internal Link Dist (ft)		245			745			2580		383	758	
Turn Bay Length (ft)	140		230	85		110	270		290		215	
Base Capacity (vph)	275	671	297	174	791	353	227	949	151	1316	686	288
Starvation Cap Reductn	0	147	46	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	14	67	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	1.33	1.23	1.37	0.49	0.44	0.14	0.90	0.42	0.42	0.58	0.45

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.





















95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024

												
Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	213	463	285	176	17	202	353	144	29	658	107	18
Future Volume (vph)	213	463	285	176	17	202	353	144	29	658	107	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Lane Util. Factor	1.00	0.91	0.91			1.00	0.95	1.00	1.00	0.95		
Frt	1.00	0.96	0.85			1.00	1.00	0.85	1.00	0.98		
Flt Protected	0.95	1.00	1.00			0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1770	3250	1441			1770	3539	1583	1770	3454		
Flt Permitted	0.43	1.00	1.00			0.13	1.00	1.00	0.45	1.00		
Satd. Flow (perm)	805	3250	1441			249	3539	1583	829	3454		
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)	232	503	310	191	18	220	384	157	32	715	116	20
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	232	695	309	0	0	238	384	157	32	851	0	0
Turn Type	pm+pt	NA	Perm		pm+pt	pm+pt	NA	Perm	Perm	NA		
Protected Phases	1	6			5	5	2			8		
Permitted Phases	6		6		2	2		2	8			
Actuated Green, G (s)	35.6	27.5	27.5			39.3	29.9	29.9	38.5	38.5		
Effective Green, g (s)	35.6	27.5	27.5			39.3	29.9	29.9	38.5	38.5		
Actuated g/C Ratio	0.25	0.20	0.20			0.28	0.21	0.21	0.28	0.28		
Clearance Time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Vehicle Extension (s)	3.0	3.9	3.9			3.0	4.6	4.6	4.7	4.7		
Lane Grp Cap (vph)	260	638	283			172	755	338	227	949		
v/s Ratio Prot	0.05	0.21				c0.09	0.11			c0.25		
v/s Ratio Perm	0.17		0.21			c0.30		0.10	0.04			
v/c Ratio	0.89	1.09	1.09			1.38	0.51	0.46	0.14	0.90		
Uniform Delay, d1	48.7	56.2	56.2			45.5	48.6	48.1	38.3	48.8		
Progression Factor	1.01	1.02	1.01			1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2	27.5	60.9	78.0			204.5	2.4	4.5	0.5	11.6		
Delay (s)	76.5	118.2	135.0			250.0	51.0	52.6	38.8	60.4		
Level of Service	E	F	F			F	D	D	D	E		
Approach Delay (s)		114.5					112.1			59.6		
Approach LOS		F					F			E		
Intersection Summary												
HCM 2000 Control Delay			83.0			HCM 2000 Level of Service				F		
HCM 2000 Volume to Capacity ratio			1.02									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			33.0			
Intersection Capacity Utilization			99.5%			ICU Level of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024



Movement	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	16	43	419	90	30	286	116	15
Future Volume (vph)	16	43	419	90	30	286	116	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.3			6.6	6.6	
Lane Util. Factor		1.00	0.95			0.97	0.91	
Frt		1.00	0.97			0.99	0.85	
Flt Protected		0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	3445			3429	1441	
Flt Permitted		0.95	1.00			0.95	1.00	
Satd. Flow (perm)		1770	3445			3429	1441	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	47	455	98	33	311	126	16
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	64	553	0	0	357	129	0
Turn Type	Prot	Prot	NA		Prot	Prot	Perm	
Protected Phases	7	7	4		3	3		
Permitted Phases							3	
Actuated Green, G (s)		9.6	54.9			22.0	22.0	
Effective Green, g (s)		9.6	54.9			22.0	22.0	
Actuated g/C Ratio		0.07	0.39			0.16	0.16	
Clearance Time (s)		6.8	6.3			6.6	6.6	
Vehicle Extension (s)		3.0	4.9			4.6	4.6	
Lane Grp Cap (vph)		121	1350			538	226	
v/s Ratio Prot		0.04	c0.16			c0.10		
v/s Ratio Perm							0.09	
v/c Ratio		0.53	0.41			0.66	0.57	
Uniform Delay, d1		63.0	30.8			55.5	54.6	
Progression Factor		1.00	1.00			1.00	1.00	
Incremental Delay, d2		4.1	0.4			3.8	4.9	
Delay (s)		67.1	31.2			59.3	59.6	
Level of Service		E	C			E	E	
Approach Delay (s)			35.0			59.4		
Approach LOS			C			E		
Intersection Summary								

HCM 6th Signalized Intersection Summary

6: Laurel Canyon Boulevard & US 101 Northbound Ramps

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰	↰	↰	↰			↰	↰
Traffic Volume (veh/h)	0	0	0	535	0	527	378	999	0	1	892	169
Future Volume (veh/h)	0	0	0	535	0	527	378	999	0	1	892	169
Initial Q (Qb), veh				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
Parking Bus, Adj				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	0	1870	1870	1870
Adj Flow Rate, veh/h				760	0	382	411	1086	0	1	970	184
Peak Hour Factor				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	0	2	2	2
Cap, veh/h				1006	0	448	503	2151	0	40	1992	636
Arrive On Green				0.28	0.00	0.28	0.05	0.20	0.00	0.40	0.40	0.40
Sat Flow, veh/h				3563	0	1585	3456	3647	0	1	4966	1585
Grp Volume(v), veh/h				760	0	382	411	1086	0	365	606	184
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	1869	1549	1585
Q Serve(g_s), s				17.5	0.0	20.5	10.6	24.5	0.0	0.0	13.1	7.1
Cycle Q Clear(g_c), s				17.5	0.0	20.5	10.6	24.5	0.0	13.1	13.1	7.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1006	0	448	503	2151	0	790	1242	636
V/C Ratio(X)				0.76	0.00	0.85	0.82	0.50	0.00	0.46	0.49	0.29
Avail Cap(c_a), veh/h				1215	0	541	603	2151	0	790	1242	636
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.90	0.90	0.00	0.55	0.55	0.55
Uniform Delay (d), s/veh				29.5	0.0	30.5	41.7	24.0	0.0	20.1	20.1	18.3
Incr Delay (d2), s/veh				2.2	0.0	10.9	6.7	0.8	0.0	1.1	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
%ile BackOfQ(95%),veh/ln				11.7	0.0	13.4	8.9	17.0	0.0	8.5	7.2	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				31.7	0.0	41.4	48.4	24.8	0.0	21.1	20.8	18.9
LnGrp LOS				C	A	D	D	C	A	C	C	B
Approach Vol, veh/h				1142			1497			1155		
Approach Delay, s/veh				34.9			31.2			20.6		
Approach LOS				C			C			C		
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	18.4	40.9		30.7		59.3						
Change Period (Y+Rc), s	5.3	4.8		* 5.3		4.8						
Max Green Setting (Gmax), s	18	28.2		* 31		49.2						
Max Q Clear Time (g_c+M2), s	12.6	15.1		22.5		26.5						
Green Ext Time (p_c), s	0.5	5.6		2.9		8.2						

Intersection Summary

HCM 6th Ctrl Delay	29.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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

HCM 6th Signalized Intersection Summary

7: US 101 Southbound Ramps & Laurel Canyon Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	333	22	496	0	0	0	0	1060	590	274	1126	0
Future Volume (veh/h)	333	22	496	0	0	0	0	1060	590	274	1126	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	249	0	676				0	1152	641	298	1224	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	436	0	776				0	3272	1016	434	2277	0
Arrive On Green	0.24	0.00	0.24				0.00	0.64	0.64	1.00	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	5274	1585	511	3647	0
Grp Volume(v), veh/h	249	0	676				0	1152	641	298	1224	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1702	1585	256	1777	0
Q Serve(g_s), s	11.0	0.0	18.4				0.0	9.4	21.9	48.3	0.0	0.0
Cycle Q Clear(g_c), s	11.0	0.0	18.4				0.0	9.4	21.9	57.7	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	436	0	776				0	3272	1016	434	2277	0
V/C Ratio(X)	0.57	0.00	0.87				0.00	0.35	0.63	0.69	0.54	0.00
Avail Cap(c_a), veh/h	491	0	874				0	3272	1016	434	2277	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.74	0.74	0.00
Uniform Delay (d), s/veh	29.8	0.0	32.6				0.0	7.5	9.7	6.6	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	8.8				0.0	0.3	3.0	6.4	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
%ile BackOfQ(95%),veh/ln	8.1	0.0	12.0				0.0	5.4	11.5	0.7	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.1	0.0	41.4				0.0	7.8	12.7	13.1	0.7	0.0
LnGrp LOS	C	A	D				A	A	B	B	A	A
Approach Vol, veh/h	925						1793			1522		
Approach Delay, s/veh	38.6						9.6			3.1		
Approach LOS	D						A			A		
Timer - Assigned Phs	2			4			6					
Phs Duration (G+Y+Rc), s	62.8			27.2			62.8					
Change Period (Y+Rc), s	* 5.1			* 5.2			* 5.1					
Max Green Setting (Gmax), s	* 55			* 25			* 55					
Max Q Clear Time (g_c+I1), s	23.9			20.4			59.7					
Green Ext Time (p_c), s	13.6			1.6			0.0					

Intersection Summary

HCM 6th Ctrl Delay	13.6
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

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

Queues

8: Laurel Canyon Boulevard & Landale Street

06/24/2024



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	187	173	53	82	72	1579	62	1514	111
v/c Ratio	0.88	0.63	0.39	0.24	0.30	0.76	0.71	0.92	0.24
Control Delay	78.2	25.1	44.9	1.7	19.1	10.3	60.2	31.2	12.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Total Delay	78.2	25.1	44.9	1.7	19.1	10.6	60.2	31.2	12.6
Queue Length 50th (ft)	111	29	29	0	9	117	36	~510	40
Queue Length 95th (ft)	#238	#105	63	0	m7	m85	m#90	#671	m49
Internal Link Dist (ft)		140	232			591		375	
Turn Bay Length (ft)	85			40	155		125		115
Base Capacity (vph)	212	273	173	380	287	2074	87	1649	456
Starvation Cap Reductn	0	0	0	0	0	97	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.63	0.31	0.22	0.25	0.80	0.71	0.92	0.24

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

8: Laurel Canyon Boulevard & Landale Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	11	115	30	18	75	66	1434	18	57	1393	102
Future Volume (vph)	205	11	115	30	18	75	66	1434	18	57	1393	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.86			1.00	1.00	1.00	1.00		1.00	1.00	0.62
Flpb, ped/bikes	1.00	1.00			0.88	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.89			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.99			0.97	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1341			1582	1583	1770	3529		1770	3539	979
Flt Permitted	0.95	0.99			0.71	1.00	0.09	1.00		0.10	1.00	1.00
Satd. Flow (perm)	1681	1341			1152	1583	165	3529		188	3539	979
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)	223	12	125	33	20	82	72	1559	20	62	1514	111
RTOR Reduction (vph)	0	104	0	0	0	74	0	1	0	0	0	0
Lane Group Flow (vph)	187	69	0	0	53	8	72	1578	0	62	1514	111
Confl. Peds. (#/hr)			79	79			164		19	19		164
Turn Type	Split	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	3	3			4		1	6			2	
Permitted Phases				4		4	6			2		2
Actuated Green, G (s)	11.4	11.4			8.4	8.4	51.7	51.7		39.7	39.7	39.7
Effective Green, g (s)	11.4	11.4			8.4	8.4	51.7	51.7		39.7	39.7	39.7
Actuated g/C Ratio	0.13	0.13			0.09	0.09	0.57	0.57		0.44	0.44	0.44
Clearance Time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	5.2		4.5	4.5	4.5
Lane Grp Cap (vph)	212	169			107	147	212	2027		82	1561	431
v/s Ratio Prot	c0.11	0.05					0.02	c0.45			c0.43	
v/s Ratio Perm					c0.05	0.00	0.17			0.33		0.11
v/c Ratio	0.88	0.41			0.50	0.05	0.34	0.78		0.76	0.97	0.26
Uniform Delay, d1	38.6	36.2			38.8	37.2	17.7	14.7		21.1	24.6	15.9
Progression Factor	1.00	1.00			1.00	1.00	1.94	0.63		0.67	0.80	0.61
Incremental Delay, d2	32.0	1.6			3.6	0.1	0.1	0.3		41.0	14.7	1.2
Delay (s)	70.6	37.8			42.4	37.3	34.3	9.6		55.2	34.4	10.8
Level of Service	E	D			D	D	C	A		E	C	B
Approach Delay (s)		54.9			39.3			10.7			33.6	
Approach LOS		D			D			B			C	
Intersection Summary												
HCM 2000 Control Delay			25.9									
HCM 2000 Volume to Capacity ratio			0.91									
Actuated Cycle Length (s)			90.0									
Intersection Capacity Utilization			87.6%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

9: Colfax Avenue & Sarah Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↑	↕
Traffic Volume (veh/h)	14	2	5	7	1	32	6	706	18	37	663	15
Future Volume (veh/h)	14	2	5	7	1	32	6	706	18	37	663	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.99	0.98		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	15	2	5	8	1	35	7	767	20	40	721	16
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	156	26	24	84	8	83	424	1306	1103	349	1306	1103
Arrive On Green	0.07	0.07	0.07	0.07	0.07	0.07	0.23	0.23	0.23	0.47	0.47	0.47
Sat Flow, veh/h	831	385	357	199	119	1239	721	1870	1579	688	1870	1579
Grp Volume(v), veh/h	22	0	0	44	0	0	7	767	20	40	721	16
Grp Sat Flow(s),veh/h/ln	1572	0	0	1557	0	0	721	1870	1579	688	1870	1579
Q Serve(g_s), s	0.0	0.0	0.0	0.4	0.0	0.0	0.5	21.9	0.6	2.8	16.6	0.3
Cycle Q Clear(g_c), s	0.7	0.0	0.0	1.6	0.0	0.0	17.1	21.9	0.6	24.7	16.6	0.3
Prop In Lane	0.68		0.23	0.18		0.80	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	206	0	0	175	0	0	424	1306	1103	349	1306	1103
V/C Ratio(X)	0.11	0.00	0.00	0.25	0.00	0.00	0.02	0.59	0.02	0.11	0.55	0.01
Avail Cap(c_a), veh/h	604	0	0	601	0	0	424	1306	1103	349	1306	1103
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	0.67	0.67	0.67
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.88	0.88	0.88	0.83	0.83	0.83
Uniform Delay (d), s/veh	26.5	0.0	0.0	26.9	0.0	0.0	20.7	15.4	7.2	20.2	9.2	4.9
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.7	0.0	0.0	0.1	1.7	0.0	0.6	1.4	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(95%),veh/ln	0.5	0.0	0.0	1.1	0.0	0.0	0.2	16.2	0.2	0.9	11.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.7	0.0	0.0	27.6	0.0	0.0	20.8	17.1	7.2	20.8	10.6	4.9
LnGrp LOS	C	A	A	C	A	A	C	B	A	C	B	A
Approach Vol, veh/h	22			44			794			777		
Approach Delay, s/veh	26.7			27.6			16.9			11.0		
Approach LOS	C			C			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	46.7			13.3			46.7			13.3		
Change Period (Y+Rc), s	4.8			* 9.3			4.8			* 9.3		
Max Green Setting (Gmax), s	25.2			* 21			25.2			* 21		
Max Q Clear Time (g_c+I1), s	23.9			2.7			26.7			3.6		
Green Ext Time (p_c), s	0.7			0.0			0.0			0.1		

Intersection Summary

HCM 6th Ctrl Delay	14.5
HCM 6th LOS	B

Notes

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

Queues

10: Landale Street & Colfax Avenue

06/24/2024



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	44	16	762	733	27
v/c Ratio	0.18	0.03	0.48	0.46	0.02
Control Delay	17.4	3.9	5.4	2.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.4	3.9	5.4	2.5	0.1
Queue Length 50th (ft)	8	0	0	0	0
Queue Length 95th (ft)	32	8	250	5	m0
Internal Link Dist (ft)	262		575	593	
Turn Bay Length (ft)		40			80
Base Capacity (vph)	524	514	1586	1586	1350
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.08	0.03	0.48	0.46	0.02

Intersection Summary






m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

10: Landale Street & Colfax Avenue

06/24/2024












Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	22	18	15	701	674	25
Future Volume (vph)	22	18	15	701	674	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	9.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1702		1770	1863	1863	1583
Flt Permitted	0.97		0.32	1.00	1.00	1.00
Satd. Flow (perm)	1702		604	1863	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	20	16	762	733	27
RTOR Reduction (vph)	19	0	0	0	0	5
Lane Group Flow (vph)	25	0	16	762	733	22
Turn Type	Perm		Perm	NA	NA	Perm
Protected Phases				6	2	
Permitted Phases	8		6			2
Actuated Green, G (s)	3.3		42.7	42.7	42.7	42.7
Effective Green, g (s)	3.3		42.7	42.7	42.7	42.7
Actuated g/C Ratio	0.05		0.71	0.71	0.71	0.71
Clearance Time (s)	9.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		4.9	4.9	5.3	5.3
Lane Grp Cap (vph)	93		429	1325	1325	1126
v/s Ratio Prot				0.41	0.39	
v/s Ratio Perm	0.01		0.03			0.01
v/c Ratio	0.27		0.04	0.58	0.55	0.02
Uniform Delay, d1	27.2		2.6	4.2	4.1	2.5
Progression Factor	1.00		1.00	1.00	0.47	0.05
Incremental Delay, d2	1.6		0.2	1.8	1.3	0.0
Delay (s)	28.8		2.7	6.0	3.2	0.2
Level of Service	C		A	A	A	A
Approach Delay (s)	28.8			6.0	3.1	
Approach LOS	C			A	A	
Intersection Summary						
HCM 2000 Control Delay			5.2	HCM 2000 Level of Service		A
HCM 2000 Volume to Capacity ratio			0.55			
Actuated Cycle Length (s)			60.0	Sum of lost time (s)		14.0
Intersection Capacity Utilization			55.2%	ICU Level of Service		B
Analysis Period (min)			15			
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

11: Whitsett Avenue & Moorpark Street

06/24/2024












Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	137	857	98	132	596	87	109	713	137	86	390	119
Future Volume (veh/h)	137	857	98	132	596	87	109	713	137	86	390	119
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	149	932	107	143	648	95	118	775	149	93	424	129
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	138	850	720	80	725	106	355	1278	246	219	1157	349
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	717	1870	1585	543	1595	234	855	2973	572	605	2691	811
Grp Volume(v), veh/h	149	932	107	143	0	743	118	463	461	93	279	274
Grp Sat Flow(s),veh/h/ln	717	1870	1585	543	0	1828	855	1777	1767	605	1777	1724
Q Serve(g_s), s	7.3	40.9	3.6	0.0	0.0	33.6	9.8	18.1	18.1	12.6	9.5	9.7
Cycle Q Clear(g_c), s	40.9	40.9	3.6	40.9	0.0	33.6	19.5	18.1	18.1	30.7	9.5	9.7
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.32	1.00		0.47
Lane Grp Cap(c), veh/h	138	850	720	80	0	831	355	764	760	219	764	742
V/C Ratio(X)	1.08	1.10	0.15	1.79	0.00	0.89	0.33	0.61	0.61	0.43	0.36	0.37
Avail Cap(c_a), veh/h	138	850	720	80	0	831	355	764	760	219	764	742
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.5	24.5	14.4	45.0	0.0	22.6	24.0	19.8	19.8	31.6	17.3	17.4
Incr Delay (d2), s/veh	99.5	60.7	0.4	399.7	0.0	14.1	2.5	3.6	3.6	6.0	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(95%),veh/ln	11.6	42.6	2.3	19.1	0.0	23.1	3.9	12.3	12.2	3.8	7.1	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	142.9	85.2	14.8	444.7	0.0	36.7	26.5	23.3	23.4	37.6	18.7	18.8
LnGrp LOS	F	F	B	F	A	D	C	C	C	D	B	B
Approach Vol, veh/h	1188				886		1042				646	
Approach Delay, s/veh	86.1				102.5		23.7				21.5	
Approach LOS	F				F		C				C	
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	46.0		44.0		46.0		44.0					
Change Period (Y+Rc), s	5.1		5.3		5.1		5.3					
Max Green Setting (Gmax), s	40.9		38.7		40.9		38.7					
Max Q Clear Time (g_c+I1), s	42.9		32.7		42.9		21.5					
Green Ext Time (p_c), s	0.0		2.1		0.0		6.2					
Intersection Summary												
HCM 6th Ctrl Delay	61.6											
HCM 6th LOS	E											

HCM 6th Signalized Intersection Summary

12: Laurel Canyon Boulevard & Moorpark Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	301	595	112	167	474	104	160	1233	195	108	1223	279
Future Volume (veh/h)	301	595	112	167	474	104	160	1233	195	108	1223	279
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	327	647	122	182	515	113	174	1340	212	117	1329	303
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	251	833	157	301	520	574	238	900	141	230	835	187
Arrive On Green	0.09	0.28	0.28	0.12	0.37	0.37	0.09	0.29	0.29	0.11	0.38	0.38
Sat Flow, veh/h	1781	2984	562	1781	1870	1585	1781	3078	482	1781	2885	646
Grp Volume(v), veh/h	327	385	384	182	515	113	174	768	784	117	809	823
Grp Sat Flow(s),veh/h/ln	1781	1777	1769	1781	1870	1585	1781	1777	1784	1781	1777	1754
Q Serve(g_s), s	8.5	17.9	18.0	6.5	24.7	3.9	6.1	26.3	26.3	3.9	26.0	26.0
Cycle Q Clear(g_c), s	8.5	17.9	18.0	6.5	24.7	3.9	6.1	26.3	26.3	3.9	26.0	26.0
Prop In Lane	1.00		0.32	1.00		1.00	1.00		0.27	1.00		0.37
Lane Grp Cap(c), veh/h	251	496	494	301	520	574	238	520	522	230	514	508
V/C Ratio(X)	1.30	0.78	0.78	0.60	0.99	0.20	0.73	1.48	1.50	0.51	1.57	1.62
Avail Cap(c_a), veh/h	251	496	494	308	520	574	238	520	522	238	514	508
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.28	0.28	0.28
Uniform Delay (d), s/veh	25.4	29.9	29.9	21.5	28.3	17.1	23.1	31.8	31.8	22.0	27.7	27.7
Incr Delay (d2), s/veh	161.5	7.6	7.7	3.2	37.1	0.2	11.0	225.2	235.9	0.5	261.1	281.9
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(95%),veh/ln	28.4	13.1	13.1	4.9	21.1	2.5	5.6	66.0	68.8	2.6	66.9	70.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	187.0	37.5	37.6	24.7	65.4	17.3	34.1	257.0	267.8	22.5	288.8	309.5
LnGrp LOS	F	D	D	C	E	B	C	F	F	C	F	F
Approach Vol, veh/h	1096			810			1726			1749		
Approach Delay, s/veh	82.1			49.5			239.4			280.8		
Approach LOS	F			D			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.3	31.4	14.0	31.3	13.0	31.7	13.9	31.4				
Change Period (Y+Rc), s	5.3	* 5.4	* 5.5	6.3	* 5.4	* 5.4	* 5.5	6.3				
Max Green Setting (Gmax), s	8	* 26	* 8.5	25.0	* 8	* 26	* 8.7	24.8				
Max Q Clear Time (g_c+I1), s	28.0	28.0	10.5	26.7	5.9	28.3	8.5	20.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0				

Intersection Summary

HCM 6th Ctrl Delay 192.2

HCM 6th LOS F

Notes

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






HCM 6th TWSC

13: Moorpark Street & Radford Avenue

06/24/2024

Intersection

Int Delay, s/veh 1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	86	842	809	41	12	51
Future Vol, veh/h	86	842	809	41	12	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	50
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	93	915	879	45	13	55

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	924	0	0 1546 462
Stage 1	-	-	- - 902 -
Stage 2	-	-	- - 644 -
Critical Hdwy	4.14	-	- - 6.84 6.94
Critical Hdwy Stg 1	-	-	- - 5.84 -
Critical Hdwy Stg 2	-	-	- - 5.84 -
Follow-up Hdwy	2.22	-	- - 3.52 3.32
Pot Cap-1 Maneuver	735	-	- - 105 547
Stage 1	-	-	- - 356 -
Stage 2	-	-	- - 485 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	735	-	- - 92 547
Mov Cap-2 Maneuver	-	-	- - 92 -
Stage 1	-	-	- - 311 -
Stage 2	-	-	- - 485 -

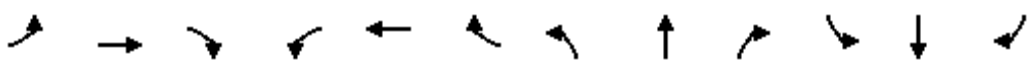










Approach	EB	WB	SB
HCM Control Delay, s	1	0	19.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	735	-	-	-	92	547
HCM Lane V/C Ratio	0.127	-	-	-	0.142	0.101
HCM Control Delay (s)	10.6	-	-	-	50.5	12.3
HCM Lane LOS	B	-	-	-	F	B
HCM 95th %tile Q(veh)	0.4	-	-	-	0.5	0.3

HCM 6th Signalized Intersection Summary

14: Colfax Avenue & Moorpark Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	597	155	150	561	127	154	377	224	148	432	127
Future Volume (veh/h)	97	597	155	150	561	127	154	377	224	148	432	127
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	0.98		0.95	0.98		0.94	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	105	649	168	163	610	138	167	410	243	161	470	138
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	260	1152	298	266	804	181	212	423	338	242	702	690
Arrive On Green	0.14	0.83	0.83	0.09	0.09	0.09	0.23	0.23	0.23	0.09	0.38	0.38
Sat Flow, veh/h	1781	2772	717	658	2849	643	797	1870	1497	1781	1870	1532
Grp Volume(v), veh/h	105	416	401	163	380	368	167	410	243	161	470	138
Grp Sat Flow(s),veh/h/ln	1781	1777	1712	658	1777	1715	797	1870	1497	1781	1870	1532
Q Serve(g_s), s	3.5	6.7	6.7	22.0	18.8	18.9	14.9	19.6	13.5	5.9	18.9	4.9
Cycle Q Clear(g_c), s	3.5	6.7	6.7	22.0	18.8	18.9	20.3	19.6	13.5	5.9	18.9	4.9
Prop In Lane	1.00		0.42	1.00		0.37	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	260	738	711	266	502	484	212	423	338	242	702	690
V/C Ratio(X)	0.40	0.56	0.56	0.61	0.76	0.76	0.79	0.97	0.72	0.66	0.67	0.20
Avail Cap(c_a), veh/h	270	738	711	266	502	484	212	423	338	245	702	690
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	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	0.88	0.88	0.88
Uniform Delay (d), s/veh	19.7	5.0	5.0	39.3	37.8	37.8	39.1	34.5	32.2	24.6	23.4	15.1
Incr Delay (d2), s/veh	1.0	3.1	3.2	10.1	10.2	10.7	24.8	36.8	12.4	5.8	4.4	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(95%),veh/ln	2.4	3.8	3.7	8.1	15.5	15.2	8.8	18.7	9.8	5.0	13.3	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.7	8.1	8.2	49.4	48.0	48.6	63.9	71.4	44.5	30.4	27.9	15.7
LnGrp LOS	C	A	A	D	D	D	E	E	D	C	C	B
Approach Vol, veh/h	922			911			820			769		
Approach Delay, s/veh	9.6			48.5			61.9			26.2		
Approach LOS	A			D			E			C		
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	12.0	34.8		43.2		46.8	13.5	29.7				
Change Period (Y+Rc), s	* 5.5	* 9.4		* 9.4		* 9.4	5.6	* 9.4				
Max Green Setting (Gmax), s	* 7	* 25		* 34		* 37	8.0	* 20				
Max Q Clear Time (g_c+I1), s	5.5	24.0		20.9		8.7	7.9	22.3				
Green Ext Time (p_c), s	0.0	0.5		2.8		5.6	0.0	0.0				

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.

HCM 6th TWSC
15: Irvine Avenue & Moorpark Street























06/24/2024

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕↕			↕↕			↕			↕		
Traffic Vol, veh/h	5	859	16	15	823	6	4	0	11	0	0	14
Future Vol, veh/h	5	859	16	15	823	6	4	0	11	0	0	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	934	17	16	895	7	4	0	12	0	0	15
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	902	0	0	951	0	0	1433	1887	476	1408	1892	451
Stage 1	-	-	-	-	-	-	953	953	-	931	931	-
Stage 2	-	-	-	-	-	-	480	934	-	477	961	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	749	-	-	718	-	-	95	70	535	99	69	556
Stage 1	-	-	-	-	-	-	278	336	-	287	344	-
Stage 2	-	-	-	-	-	-	536	343	-	538	333	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	749	-	-	718	-	-	88	66	535	92	65	556
Mov Cap-2 Maneuver	-	-	-	-	-	-	88	66	-	92	65	-
Stage 1	-	-	-	-	-	-	274	331	-	283	329	-
Stage 2	-	-	-	-	-	-	498	328	-	519	328	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.4			22.1			11.7		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	227	749	-	-	718	-	-	556				
HCM Lane V/C Ratio	0.072	0.007	-	-	0.023	-	-	0.027				
HCM Control Delay (s)	22.1	9.8	0.1	-	10.1	0.2	-	11.7				
HCM Lane LOS	C	A	A	-	B	A	-	B				
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.1				

HCM 6th Signalized Intersection Summary

16: Tujunga Avenue & Moorpark Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	703	87	91	546	66	86	391	98	94	241	94
Future Volume (veh/h)	220	703	87	91	546	66	86	391	98	94	241	94
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	239	764	95	99	593	72	93	425	107	102	262	102
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	417	1724	214	365	1729	210	287	632	536	205	391	331
Arrive On Green	0.72	0.72	0.72	0.54	0.54	0.54	0.07	0.34	0.34	0.21	0.21	0.21
Sat Flow, veh/h	771	3181	395	643	3191	387	1781	1870	1585	872	1870	1585
Grp Volume(v), veh/h	239	427	432	99	330	335	93	425	107	102	262	102
Grp Sat Flow(s),veh/h/ln	771	1777	1799	643	1777	1801	1781	1870	1585	872	1870	1585
Q Serve(g_s), s	19.9	8.9	8.9	9.1	9.4	9.4	3.5	17.5	4.3	10.2	11.6	4.9
Cycle Q Clear(g_c), s	29.3	8.9	8.9	18.0	9.4	9.4	3.5	17.5	4.3	16.1	11.6	4.9
Prop In Lane	1.00		0.22	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	417	963	975	365	963	976	287	632	536	205	391	331
V/C Ratio(X)	0.57	0.44	0.44	0.27	0.34	0.34	0.32	0.67	0.20	0.50	0.67	0.31
Avail Cap(c_a), veh/h	417	963	975	365	963	976	300	692	586	226	436	370
HCM Platoon Ratio	1.33	1.33	1.33	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	0.64	0.64	0.64
Uniform Delay (d), s/veh	13.2	7.0	7.0	16.5	11.6	11.6	24.3	25.5	21.1	37.4	32.7	30.1
Incr Delay (d2), s/veh	5.6	1.5	1.5	1.8	1.0	1.0	0.6	2.1	0.2	1.2	2.2	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(95%),veh/ln	5.8	5.3	5.4	2.6	6.5	6.7	2.6	12.2	2.8	3.9	8.3	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.8	8.5	8.5	18.3	12.6	12.6	24.9	27.6	21.3	38.6	34.9	30.4
LnGrp LOS	B	A	A	B	B	B	C	C	C	D	C	C
Approach Vol, veh/h	1098				764				625			
Approach Delay, s/veh	10.7				13.3				26.2			
Approach LOS	B				B				C			
Timer - Assigned Phs	2			3		4		6		8		
Phs Duration (G+Y+Rc), s	54.2			11.6		24.2		54.2		35.8		
Change Period (Y+Rc), s	* 5.4			* 5.3		* 5.4		* 5.4		* 5.4		
Max Green Setting (Gmax), s	* 46			* 7		* 21		* 46		* 33		
Max Q Clear Time (g_c+I1), s	20.0			5.5		18.1		31.3		19.5		
Green Ext Time (p_c), s	7.9			0.0		0.7		8.6		2.5		
Intersection Summary												
HCM 6th Ctrl Delay	18.5											
HCM 6th LOS	B											
Notes												

HCM 6th Signalized Intersection Summary

17: Woodbridge Street & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↕	
Traffic Volume (veh/h)	11	7	18	16	9	59	18	526	27	41	349	34
Future Volume (veh/h)	11	7	18	16	9	59	18	526	27	41	349	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	12	8	20	17	10	64	20	572	29	45	379	37
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	77	47	72	64	24	96	864	1511	1280	672	1355	132
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.81	0.81	0.81	1.00	1.00	1.00
Sat Flow, veh/h	294	547	841	192	283	1125	970	1870	1585	818	1677	164
Grp Volume(v), veh/h	40	0	0	91	0	0	20	572	29	45	0	416
Grp Sat Flow(s),veh/h/ln	1682	0	0	1600	0	0	970	1870	1585	818	0	1841
Q Serve(g_s), s	0.0	0.0	0.0	2.2	0.0	0.0	0.4	7.6	0.3	0.6	0.0	0.0
Cycle Q Clear(g_c), s	2.0	0.0	0.0	4.9	0.0	0.0	0.4	7.6	0.3	8.2	0.0	0.0
Prop In Lane	0.30		0.50	0.19		0.70	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	196	0	0	184	0	0	864	1511	1280	672	0	1487
V/C Ratio(X)	0.20	0.00	0.00	0.49	0.00	0.00	0.02	0.38	0.02	0.07	0.00	0.28
Avail Cap(c_a), veh/h	508	0	0	502	0	0	864	1511	1280	672	0	1487
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.67	0.67	0.67	0.78	0.00	0.78
Uniform Delay (d), s/veh	38.5	0.0	0.0	39.8	0.0	0.0	1.7	2.4	1.7	0.4	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	2.0	0.0	0.0	0.0	0.5	0.0	0.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	0.0	0.0	3.7	0.0	0.0	0.1	2.9	0.1	0.1	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.0	0.0	0.0	41.9	0.0	0.0	1.7	2.9	1.7	0.6	0.0	0.4
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	40			91			621			461		
Approach Delay, s/veh	39.0			41.9			2.8			0.4		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	77.2			12.8			77.2			12.8		
Change Period (Y+Rc), s	* 4.5			* 5.1			* 4.5			* 5.1		
Max Green Setting (Gmax), s	* 55			* 26			* 55			* 26		
Max Q Clear Time (g_c+I1), s	10.2			4.0			9.6			6.9		
Green Ext Time (p_c), s	6.8			0.1			10.5			0.4		

Intersection Summary

HCM 6th Ctrl Delay	6.0
HCM 6th LOS	A

Notes

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

Queues

18: Whitsett Avenue & Ventura Boulevard

06/24/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	273	1166	232	38	1167	336	93	201	303	166	232
v/c Ratio	0.75	0.61	0.25	0.27	1.04	0.55	0.56	0.68	0.64	0.56	0.25
Control Delay	36.9	19.1	5.9	24.0	60.6	11.5	51.2	49.4	47.0	45.5	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.9	19.1	5.9	24.0	60.6	11.5	51.2	49.4	47.0	45.5	9.6
Queue Length 50th (ft)	112	257	22	14	-465	64	55	118	95	99	56
Queue Length 95th (ft)	#309	392	73	m23	m#554	m112	101	181	135	154	94
Internal Link Dist (ft)	1429			2938			634			1297	
Turn Bay Length (ft)	95		135	145		60	60		220		65
Base Capacity (vph)	366	1898	922	143	1120	606	247	438	521	441	897
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.61	0.25	0.27	1.04	0.55	0.38	0.46	0.58	0.38	0.26

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.




























Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

18: Whitsett Avenue & Ventura Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 		 		
Traffic Volume (vph)	251	1073	213	35	1074	309	86	162	23	279	153	213
Future Volume (vph)	251	1073	213	35	1074	309	86	162	23	279	153	213
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	5.4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1828		3433	1863	1583
Flt Permitted	0.11	1.00	1.00	0.24	1.00	1.00	0.56	1.00		0.95	1.00	1.00
Satd. Flow (perm)	201	3539	1583	452	3539	1583	1043	1828		3433	1863	1583
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)	273	1166	232	38	1167	336	93	176	25	303	166	232
RTOR Reduction (vph)	0	0	73	0	0	105	0	6	0	0	0	11
Lane Group Flow (vph)	273	1166	159	38	1167	231	93	195	0	303	166	221
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Prot	NA	custom
Protected Phases	1	6			2			4		3	8	1 3
Permitted Phases	6		6	2		2	4					8
Actuated Green, G (s)	53.6	53.6	53.6	31.6	31.6	31.6	15.9	15.9		13.8	15.9	51.7
Effective Green, g (s)	53.6	53.6	53.6	31.6	31.6	31.6	15.9	15.9		13.8	15.9	51.7
Actuated g/C Ratio	0.54	0.54	0.54	0.32	0.32	0.32	0.16	0.16		0.14	0.16	0.52
Clearance Time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	
Vehicle Extension (s)	3.0	4.9	4.9	4.7	4.7	4.7	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	368	1896	848	142	1118	500	165	290		473	296	818
v/s Ratio Prot	c0.12	0.33			c0.33			c0.11		c0.09	0.09	0.10
v/s Ratio Perm	0.27		0.10	0.08		0.15	0.09					0.04
v/c Ratio	0.74	0.61	0.19	0.27	1.04	0.46	0.56	0.67		0.64	0.56	0.27
Uniform Delay, d1	24.4	16.1	12.0	25.6	34.2	27.4	38.8	39.6		40.8	38.8	13.6
Progression Factor	1.00	1.00	1.00	0.72	0.68	0.56	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	7.8	1.5	0.5	3.2	34.8	2.1	4.4	6.0		3.0	2.4	0.2
Delay (s)	32.3	17.6	12.5	21.6	58.0	17.4	43.2	45.6		43.7	41.3	13.7
Level of Service	C	B	B	C	E	B	D	D		D	D	B
Approach Delay (s)		19.3			48.3			44.9			33.2	
Approach LOS		B			D			D			C	
Intersection Summary												
HCM 2000 Control Delay			34.0									
HCM 2000 Volume to Capacity ratio			0.83									
Actuated Cycle Length (s)			100.0									
Intersection Capacity Utilization			79.9%									
Analysis Period (min)			15									
c Critical Lane Group												

Queues

19: Laurel Canyon Boulevard & Ventura Place

06/24/2024



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	186	75	285	30	1157	35	118	1347
v/c Ratio	1.01	0.36	0.89	0.17	0.65	0.04	0.83	0.65
Control Delay	115.9	45.7	47.0	27.1	24.5	0.5	71.0	25.2
Queue Delay	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0
Total Delay	115.9	45.7	47.0	27.1	25.9	0.5	71.0	25.2
Queue Length 50th (ft)	~170	44	64	18	379	0	67	250
Queue Length 95th (ft)	#310	89	#214	m21	m451	m0	#178	301
Internal Link Dist (ft)	123	395			458			232
Turn Bay Length (ft)			380	105		85	55	
Base Capacity (vph)	184	224	330	177	1942	930	143	2087
Starvation Cap Reductn	0	0	0	0	540	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.01	0.33	0.86	0.17	0.83	0.04	0.83	0.65

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.



















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

19: Laurel Canyon Boulevard & Ventura Place

06/24/2024













													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	107	41	23	42	27	262	28	1064	32	109	1162	77	
Future Volume (vph)	107	41	23	42	27	262	28	1064	32	109	1162	77	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		9.4				9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Lane Util. Factor		1.00				1.00	1.00	1.00	0.95	1.00	1.00	0.91	
Frpb, ped/bikes		1.00				1.00	0.86	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes		0.94				1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.98				1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.97				0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1670				1807	1366	1770	3539	1550	1767	5038	
Flt Permitted		0.77				0.97	1.00	0.95	1.00	1.00	0.19	1.00	
Satd. Flow (perm)		1319				1807	1366	1770	3539	1550	347	5038	
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)	116	45	25	46	29	285	30	1157	35	118	1263	84	
RTOR Reduction (vph)	0	5	0	0	0	161	0	0	17	0	7	0	
Lane Group Flow (vph)	0	181	0	0	75	124	30	1157	18	118	1340	0	
Confl. Peds. (#/hr)	49					49			5	5			
Turn Type	Perm	NA			Split	NA	Perm	Prot	NA	Perm	Perm	NA	
Protected Phases		3			4	4		1	6			2	
Permitted Phases	3						4			6	2		
Actuated Green, G (s)		14.2				11.5	11.5	6.0	50.2	50.2	39.2	39.2	
Effective Green, g (s)		14.2				11.5	11.5	6.0	50.2	50.2	39.2	39.2	
Actuated g/C Ratio		0.14				0.12	0.12	0.06	0.50	0.50	0.39	0.39	
Clearance Time (s)		9.4				9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Vehicle Extension (s)		3.0				3.0	3.0	3.0	4.8	4.8	3.1	3.1	
Lane Grp Cap (vph)		187				207	157	106	1776	778	136	1974	
v/s Ratio Prot						0.04		0.02	c0.33			0.27	
v/s Ratio Perm		c0.14					c0.09			0.01	c0.34		
v/c Ratio		0.97				0.36	0.79	0.28	0.65	0.02	0.87	0.68	
Uniform Delay, d1		42.7				40.9	43.1	44.9	18.4	12.5	28.0	25.2	
Progression Factor		1.00				1.00	1.00	0.62	1.30	1.00	1.00	1.00	
Incremental Delay, d2		55.7				1.1	22.6	0.9	1.1	0.0	48.0	1.9	
Delay (s)		98.3				41.9	65.7	28.7	25.0	12.6	76.0	27.1	
Level of Service		F				D	E	C	C	B	E	C	
Approach Delay (s)		98.3				60.7			24.7			31.0	
Approach LOS		F				E			C			C	
Intersection Summary													
HCM 2000 Control Delay			35.8		HCM 2000 Level of Service					D			
HCM 2000 Volume to Capacity ratio			0.88										
Actuated Cycle Length (s)			100.0		Sum of lost time (s)					29.1			
Intersection Capacity Utilization			79.1%		ICU Level of Service					D			
Analysis Period (min)			15										
c Critical Lane Group													

HCM 6th Signalized Intersection Summary

20: Laurel Canyon Boulevard & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	661	267	206	655	86	465	887	236	214	800	220
Future Volume (veh/h)	195	661	267	206	655	86	465	887	236	214	800	220
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.92	0.99		0.92	1.00		0.97	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	212	718	290	224	712	93	505	964	257	233	870	239
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	277	988	656	285	981	547	543	1148	496	311	910	517
Arrive On Green	0.16	0.56	0.56	0.08	0.28	0.28	0.16	0.32	0.32	0.03	0.08	0.08
Sat Flow, veh/h	1781	3554	1465	1781	3554	1464	3456	3554	1536	3456	3554	1524
Grp Volume(v), veh/h	212	718	290	224	712	93	505	964	257	233	870	239
Grp Sat Flow(s),veh/h/ln	1781	1777	1465	1781	1777	1464	1728	1777	1536	1728	1777	1524
Q Serve(g_s), s	8.0	15.1	2.7	8.0	18.1	4.3	14.4	25.2	13.6	6.7	24.4	6.9
Cycle Q Clear(g_c), s	8.0	15.1	2.7	8.0	18.1	4.3	14.4	25.2	13.6	6.7	24.4	6.9
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	277	988	656	285	981	547	543	1148	496	311	910	517
V/C Ratio(X)	0.76	0.73	0.44	0.79	0.73	0.17	0.93	0.84	0.52	0.75	0.96	0.46
Avail Cap(c_a), veh/h	277	988	656	285	981	547	543	1148	496	321	910	517
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	0.75	0.75	0.75	0.87	0.87	0.87	0.31	0.31	0.31	0.72	0.72	0.72
Uniform Delay (d), s/veh	25.8	19.4	4.0	27.9	32.8	21.5	41.6	31.4	27.5	47.4	45.2	11.9
Incr Delay (d2), s/veh	9.1	3.5	1.6	12.0	4.1	0.6	9.5	2.0	0.5	6.7	16.6	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(95%),veh/ln	6.7	7.8	2.5	8.0	12.5	2.8	9.1	13.7	6.9	5.8	18.8	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.9	22.9	5.7	39.9	36.9	22.1	51.1	33.4	28.0	54.1	61.8	13.6
LnGrp LOS	C	C	A	D	D	C	D	C	C	D	E	B
Approach Vol, veh/h	1220			1029			1726			1342		
Approach Delay, s/veh	20.9			36.2			37.8			51.9		
Approach LOS	C			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	33.4	34.1	21.3	31.2	13.6	33.9	14.6	37.9				
Change Period (Y+Rc), s	5.4	6.3	5.6	5.6	5.6	6.3	5.6	5.6				
Max Green Setting (Gmax), s	27.8	15.7	15.7	25.6	8.0	27.6	9.3	32.0				
Max Q Clear Time (g_c+max), s	17.1	17.1	16.4	26.4	10.0	20.1	8.7	27.2				
Green Ext Time (p_c), s	0.0	7.4	0.0	0.0	0.0	3.3	0.1	3.8				

Intersection Summary

HCM 6th Ctrl Delay 37.2
 HCM 6th LOS D

Notes

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

Queues

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Lane Group	EBL	EBT	WBL	WBT	WBR2	NBT	NBR	SBL	SBT	SBR2
Lane Group Flow (vph)	200	1215	115	960	101	64	82	127	170	117
v/c Ratio	0.36	0.72	1.13	1.31	0.35	0.22	0.21	0.58	1.06	0.97
Control Delay	9.5	3.8	184.5	192.7	51.0	53.0	1.2	69.8	145.8	135.8
Queue Delay	70.4	36.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.8	39.7	184.5	194.2	51.0	53.0	1.2	69.8	145.8	135.8
Queue Length 50th (ft)	112	80	~121	~590	79	51	0	110	~164	107
Queue Length 95th (ft)	m83	m1	#251	#725	138	97	0	#196	#343	#253
Internal Link Dist (ft)		48		634		66			226	
Turn Bay Length (ft)	90		95		55		30	90		90
Base Capacity (vph)	580	1745	102	732	287	308	405	219	160	120
Starvation Cap Reductn	434	607	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	142	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.37	1.07	1.13	1.63	0.35	0.21	0.20	0.58	1.06	0.97

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	184	1099	18	106	791	92	93	46	13	75	117	20
Future Volume (vph)	184	1099	18	106	791	92	93	46	13	75	117	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.7		4.9	6.1		6.1		6.9	6.9	7.0	7.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.98		0.85		1.00	0.85	1.00	0.84
Flpb, ped/bikes	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	0.98		0.85		1.00	0.85	1.00	0.87
Flt Protected	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (prot)	1770	3524		1770	3429		1344		1793	1352	1770	1352
Flt Permitted	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (perm)	1770	3524		1770	3429		1344		1793	1352	1770	1352
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)	200	1195	20	115	860	100	101	50	14	82	127	22
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	69	0	0
Lane Group Flow (vph)	200	1214	0	115	960	0	101	0	64	13	127	170
Confl. Peds. (#/hr)	42		32	32		42	42	75		75	75	
Turn Type	Prot	NA		Prot	NA		Perm	Split	NA	Perm	Split	NA
Protected Phases	1 3	3 6		5	2			7	7		8	8
Permitted Phases							2			7		
Actuated Green, G (s)	44.0	67.0		8.1	29.9		29.9		23.0	23.0	17.4	17.4
Effective Green, g (s)	44.0	60.9		8.1	29.9		29.9		23.0	23.0	17.4	17.4
Actuated g/C Ratio	0.31	0.43		0.06	0.21		0.21		0.16	0.16	0.12	0.12
Clearance Time (s)				4.9	6.1		6.1		6.9	6.9	7.0	7.0
Vehicle Extension (s)				3.0	4.8		4.8		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	556	1532		102	732		287		294	222	219	168
v/s Ratio Prot	0.11	c0.34		0.06	c0.28				c0.04		0.07	c0.13
v/s Ratio Perm							0.08			0.01		
v/c Ratio	0.36	0.79		1.13	1.31		0.35		0.22	0.06	0.58	1.01
Uniform Delay, d1	37.1	34.1		66.0	55.0		46.8		50.7	49.4	57.9	61.3
Progression Factor	0.25	0.12		1.00	1.00		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0	0.3		127.5	149.8		3.4		0.4	0.1	3.7	72.6
Delay (s)	9.3	4.4		193.5	204.9		50.2		51.1	49.5	61.5	133.9
Level of Service	A	A		F	F		D		D	D	E	F
Approach Delay (s)		5.1			190.5				50.2			102.8
Approach LOS		A			F				D			F
Intersection Summary												
HCM 2000 Control Delay			89.2			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			0.87									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			31.8			
Intersection Capacity Utilization			89.4%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Movement	SBR	SBR2
Lane Configurations		
Traffic Volume (vph)	136	108
Future Volume (vph)	136	108
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		7.0
Lane Util. Factor		1.00
Frpb, ped/bikes		0.68
Flpb, ped/bikes		1.00
Frt		0.85
Flt Protected		1.00
Satd. Flow (prot)		1083
Flt Permitted		1.00
Satd. Flow (perm)		1083
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	148	117
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	117
Confl. Peds. (#/hr)	75	75
Turn Type		Perm
Protected Phases		
Permitted Phases		8
Actuated Green, G (s)		17.4
Effective Green, g (s)		17.4
Actuated g/C Ratio		0.12
Clearance Time (s)		7.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)		134
v/s Ratio Prot		
v/s Ratio Perm		0.11
v/c Ratio		0.87
Uniform Delay, d1		60.2
Progression Factor		1.00
Incremental Delay, d2		42.1
Delay (s)		102.3
Level of Service		F
Approach Delay (s)		
Approach LOS		
Intersection Summary		

HCM 6th Signalized Intersection Summary

22: Carpenter Avenue & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	1164	80	193	1025	37	75	13	165	26	16	24
Future Volume (veh/h)	33	1164	80	193	1025	37	75	13	165	26	16	24
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	0.98		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	36	1265	87	210	1114	40	82	14	179	28	17	26
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	225	2020	139	217	2098	75	128	31	210	183	99	330
Arrive On Green	0.60	0.60	0.60	0.20	0.20	0.20	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	487	3365	231	403	3494	125	383	147	988	587	463	1554
Grp Volume(v), veh/h	36	667	685	210	566	588	275	0	0	45	0	26
Grp Sat Flow(s),veh/h/ln	487	1777	1819	403	1777	1843	1518	0	0	1050	0	1554
Q Serve(g_s), s	5.5	24.0	24.2	35.9	28.6	28.6	14.3	0.0	0.0	0.0	0.0	1.3
Cycle Q Clear(g_c), s	34.1	24.0	24.2	60.0	28.6	28.6	17.4	0.0	0.0	2.7	0.0	1.3
Prop In Lane	1.00		0.13	1.00		0.07	0.30		0.65	0.62		1.00
Lane Grp Cap(c), veh/h	225	1067	1092	217	1067	1106	369	0	0	282	0	330
V/C Ratio(X)	0.16	0.62	0.63	0.97	0.53	0.53	0.74	0.00	0.00	0.16	0.00	0.08
Avail Cap(c_a), veh/h	225	1067	1092	217	1067	1106	508	0	0	408	0	474
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.68	0.68	0.68	0.09	0.09	0.09	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.4	12.8	12.8	57.8	27.5	27.5	37.7	0.0	0.0	31.9	0.0	31.5
Incr Delay (d2), s/veh	1.0	1.9	1.9	12.4	0.2	0.2	3.9	0.0	0.0	0.3	0.0	0.1
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(95%),veh/ln	1.2	13.2	13.5	7.6	15.3	15.9	11.1	0.0	0.0	1.6	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.4	14.7	14.7	70.2	27.6	27.7	41.6	0.0	0.0	32.1	0.0	31.6
LnGrp LOS	C	B	B	E	C	C	D	A	A	C	A	C
Approach Vol, veh/h	1388			1364			275			71		
Approach Delay, s/veh	15.0			34.2			41.6			31.9		
Approach LOS	B			C			D			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	69.2			30.8			69.2			30.8		
Change Period (Y+Rc), s	* 9.2			9.5			* 9.2			9.5		
Max Green Setting (Gmax), s	* 51			30.5			* 51			30.5		
Max Q Clear Time (g_c+I1), s	36.1			4.7			62.0			19.4		
Green Ext Time (p_c), s	12.4			0.3			0.0			1.3		

Intersection Summary

HCM 6th Ctrl Delay	26.2
HCM 6th LOS	C

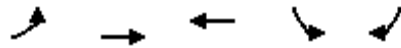
Notes

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

Queues

23: Ventura Boulevard & Colfax Avenue

06/24/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	346	1146	1298	378	310
v/c Ratio	0.60	0.52	1.33	0.81	0.29
Control Delay	15.6	14.7	180.6	48.3	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	15.6	14.7	180.6	48.3	1.7
Queue Length 50th (ft)	153	303	~575	225	0
Queue Length 95th (ft)	#246	434	#693	306	32
Internal Link Dist (ft)		981	464		
Turn Bay Length (ft)	160			360	360
Base Capacity (vph)	579	2225	975	515	1077
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.60	0.52	1.33	0.73	0.29

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.



















95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

23: Ventura Boulevard & Colfax Avenue

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	318	1054	0	0	909	285	0	0	0	348	0	285
Future Volume (vph)	318	1054	0	0	909	285	0	0	0	348	0	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.4			5.4					5.4		5.7
Lane Util. Factor	1.00	0.95			0.95					1.00		1.00
Frt	1.00	1.00			0.96					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1770	3539			3412					1770		1583
Flt Permitted	0.12	1.00			1.00					0.95		1.00
Satd. Flow (perm)	217	3539			3412					1770		1583
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)	346	1146	0	0	988	310	0	0	0	378	0	310
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	140
Lane Group Flow (vph)	346	1146	0	0	1298	0	0	0	0	378	0	170
Turn Type	pm+pt	NA			NA					pm+pt		pm+ov
Protected Phases	5	2			6			3		4		5
Permitted Phases	2						3			7		4
Actuated Green, G (s)	62.9	62.9			28.6					26.3		54.9
Effective Green, g (s)	62.9	62.9			28.6					26.3		54.9
Actuated g/C Ratio	0.63	0.63			0.29					0.26		0.55
Clearance Time (s)	5.7	5.4			5.4					5.4		5.7
Vehicle Extension (s)	3.0	4.3			4.5					3.0		3.0
Lane Grp Cap (vph)	580	2226			975					465		869
v/s Ratio Prot	c0.17	0.32			c0.38					c0.21		0.06
v/s Ratio Perm	0.20											0.05
v/c Ratio	0.60	0.51			1.33					0.81		0.20
Uniform Delay, d1	20.1	10.2			35.7					34.5		11.4
Progression Factor	0.60	1.26			0.70					1.00		1.00
Incremental Delay, d2	1.3	0.7			155.3					10.4		0.1
Delay (s)	13.4	13.4			180.2					45.0		11.5
Level of Service	B	B			F					D		B
Approach Delay (s)		13.4			180.2			0.0			29.9	
Approach LOS		B			F			A			C	
Intersection Summary												
HCM 2000 Control Delay			78.9		HCM 2000 Level of Service				E			
HCM 2000 Volume to Capacity ratio			0.99									
Actuated Cycle Length (s)			100.0		Sum of lost time (s)				22.8			
Intersection Capacity Utilization			83.7%		ICU Level of Service				E			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

24: Berry Drive & Ventura Boulevard

06/24/2024



Lane Group	EBT	WBL	WBT	NBT
Lane Group Flow (vph)	1626	52	1498	89
v/c Ratio	0.56	0.27	0.51	0.38
Control Delay	5.6	6.5	3.7	8.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.6	6.5	3.7	8.6
Queue Length 50th (ft)	427	5	107	0
Queue Length 95th (ft)	112	m18	202	25
Internal Link Dist (ft)	342		273	287
Turn Bay Length (ft)		65		
Base Capacity (vph)	2921	196	2926	390
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.56	0.27	0.51	0.23



















Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

24: Berry Drive & Ventura Boulevard

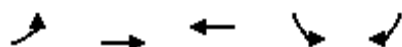
06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1479	17	48	1378	0	17	0	65	0	0	0
Future Volume (vph)	0	1479	17	48	1378	0	17	0	65	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0			9.4				
Lane Util. Factor		0.95		1.00	0.95			1.00				
Frt		1.00		1.00	1.00			0.89				
Flt Protected		1.00		0.95	1.00			0.99				
Satd. Flow (prot)		3533		1770	3539			1645				
Flt Permitted		1.00		0.13	1.00			0.99				
Satd. Flow (perm)		3533		237	3539			1645				
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)	0	1608	18	52	1498	0	18	0	71	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	84	0	0	0	0
Lane Group Flow (vph)	0	1626	0	52	1498	0	0	5	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		6			2		3	3			4	
Permitted Phases	6			2						4		
Actuated Green, G (s)		79.8		79.8	79.8			5.8				
Effective Green, g (s)		79.8		79.8	79.8			5.8				
Actuated g/C Ratio		0.80		0.80	0.80			0.06				
Clearance Time (s)		5.0		5.0	5.0			9.4				
Vehicle Extension (s)		4.9		4.0	4.0			3.0				
Lane Grp Cap (vph)		2819		189	2824			95				
v/s Ratio Prot		c0.46			0.42			c0.00				
v/s Ratio Perm				0.22								
v/c Ratio		0.58		0.28	0.53			0.05				
Uniform Delay, d1		3.8		2.6	3.5			44.5				
Progression Factor		1.27		1.02	0.86			1.00				
Incremental Delay, d2		0.7		3.0	0.6			0.2				
Delay (s)		5.5		5.7	3.7			44.7				
Level of Service		A		A	A			D				
Approach Delay (s)		5.5			3.7			44.7			0.0	
Approach LOS		A			A			D			A	
Intersection Summary												
HCM 2000 Control Delay			5.7			HCM 2000 Level of Service			A			
HCM 2000 Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			23.7			
Intersection Capacity Utilization			59.3%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

25: Ventura Boulevard & Tujunga Avenue

06/24/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	292	1265	1306	150	199
v/c Ratio	0.69	0.47	0.72	0.33	0.33
Control Delay	40.3	2.3	22.3	40.5	19.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	40.3	2.3	22.3	40.5	19.7
Queue Length 50th (ft)	130	68	313	45	77
Queue Length 95th (ft)	199	68	#500	72	112
Internal Link Dist (ft)		426	233	3083	
Turn Bay Length (ft)	180			100	60
Base Capacity (vph)	434	2676	1817	1012	606
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.67	0.47	0.72	0.15	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

25: Ventura Boulevard & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	269	1164	991	211	138	183
Future Volume (vph)	269	1164	991	211	138	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.5	5.5		5.5	5.6
Lane Util. Factor	1.00	0.95	0.95		0.97	1.00
Frt	1.00	1.00	0.97		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3446		3433	1583
Flt Permitted	0.10	1.00	1.00		0.95	1.00
Satd. Flow (perm)	192	3539	3446		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	292	1265	1077	229	150	199
RTOR Reduction (vph)	0	0	14	0	0	19
Lane Group Flow (vph)	292	1265	1292	0	150	180
Turn Type	pm+pt	NA	NA		Prot	pt+ov
Protected Phases	1	6	2		4	1 7
Permitted Phases	6					4
Actuated Green, G (s)	75.6	75.6	52.3		13.4	36.6
Effective Green, g (s)	75.6	75.6	52.3		13.4	31.1
Actuated g/C Ratio	0.76	0.76	0.52		0.13	0.31
Clearance Time (s)	5.6	5.5	5.5		5.5	
Vehicle Extension (s)	3.0	4.4	4.9		3.0	
Lane Grp Cap (vph)	424	2675	1802		460	492
v/s Ratio Prot	c0.12	0.36	0.37		0.04	c0.11
v/s Ratio Perm	c0.40					
v/c Ratio	0.69	0.47	0.72		0.33	0.37
Uniform Delay, d1	21.1	4.6	18.2		39.2	26.8
Progression Factor	2.07	0.35	1.00		1.00	1.00
Incremental Delay, d2	3.9	0.5	2.5		0.4	0.5
Delay (s)	47.5	2.2	20.7		39.6	27.3
Level of Service	D	A	C		D	C
Approach Delay (s)		10.7	20.7		32.6	
Approach LOS		B	C		C	
Intersection Summary						
HCM 2000 Control Delay			17.1		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.71			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	22.1
Intersection Capacity Utilization			71.2%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

26: Laurel Canyon Boulevard & Maxwellton Road

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Volume (veh/h)	64	0	73	0	0	0	15	1598	0	0	1106	70
Future Volume (veh/h)	64	0	73	0	0	0	15	1598	0	0	1106	70
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93				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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h	70	0	79				16	1737	0	0	1202	76
Peak Hour Factor	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	0	0	2	2
Cap, veh/h	125	0	141				48	2168	0	0	2142	135
Arrive On Green	0.17	0.00	0.17				0.63	0.63	0.00	0.00	0.63	0.63
Sat Flow, veh/h	752	0	848				12	3520	0	0	3487	214
Grp Volume(v), veh/h	149	0	0				937	816	0	0	629	649
Grp Sat Flow(s),veh/h/ln	1600	0	0				1830	1617	0	0	1777	1831
Q Serve(g_s), s	7.7	0.0	0.0				0.0	33.8	0.0	0.0	18.2	18.2
Cycle Q Clear(g_c), s	7.7	0.0	0.0				33.3	33.8	0.0	0.0	18.2	18.2
Prop In Lane	0.47		0.53				0.02		0.00	0.00		0.12
Lane Grp Cap(c), veh/h	267	0	0				1196	1021	0	0	1122	1156
V/C Ratio(X)	0.56	0.00	0.00				0.78	0.80	0.00	0.00	0.56	0.56
Avail Cap(c_a), veh/h	441	0	0				1196	1021	0	0	1122	1156
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.54	0.54	0.00	0.00	0.47	0.47
Uniform Delay (d), s/veh	34.5	0.0	0.0				12.3	12.4	0.0	0.0	9.5	9.5
Incr Delay (d2), s/veh	1.8	0.0	0.0				2.9	3.7	0.0	0.0	1.0	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
%ile BackOfQ(95%),veh/ln	5.6	0.0	0.0				16.6	15.1	0.0	0.0	9.0	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.3	0.0	0.0				15.1	16.0	0.0	0.0	10.4	10.4
LnGrp LOS	D	A	A				B	B	A	A	B	B
Approach Vol, veh/h	149						1753				1278	
Approach Delay, s/veh	36.3						15.5				10.4	
Approach LOS	D						B				B	
Timer - Assigned Phs	2		4		6							
Phs Duration (G+Y+Rc), s	65.8		24.2		65.8							
Change Period (Y+Rc), s	9.0		9.2		9.0							
Max Green Setting (Gmax), s	47.0		24.8		47.0							
Max Q Clear Time (g_c+I1), s	20.2		9.7		35.8							
Green Ext Time (p_c), s	18.4		0.7		10.5							
Intersection Summary												
HCM 6th Ctrl Delay			14.5									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary

27: Laurel Canyon Boulevard & Laurel Terrace Drive/Sunshine Terrace Drive

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗		↖	↗	
Traffic Volume (veh/h)	17	19	172	102	35	28	160	1546	195	33	1114	11
Future Volume (veh/h)	17	19	172	102	35	28	160	1546	195	33	1114	11
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	18	21	187	111	38	30	174	1680	212	36	1211	12
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	48	43	277	162	54	34	110	2295	284	155	2239	22
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.06	0.72	0.72	0.62	0.62	0.62
Sat Flow, veh/h	77	216	1406	574	275	171	1781	3182	394	239	3605	36
Grp Volume(v), veh/h	226	0	0	179	0	0	174	924	968	36	597	626
Grp Sat Flow(s),veh/h/ln	700	0	0	1019	0	0	1781	1777	1799	239	1777	1864
Q Serve(g_s), s	0.0	0.0	0.0	6.4	0.0	0.0	7.4	36.2	39.0	12.8	23.0	23.0
Cycle Q Clear(g_c), s	15.0	0.0	0.0	21.4	0.0	0.0	7.4	36.2	39.0	39.8	23.0	23.0
Prop In Lane	0.08		0.83	0.62		0.17	1.00		0.22	1.00		0.02
Lane Grp Cap(c), veh/h	367	0	0	249	0	0	110	1281	1298	155	1104	1158
V/C Ratio(X)	0.62	0.00	0.00	0.72	0.00	0.00	1.58	0.72	0.75	0.23	0.54	0.54
Avail Cap(c_a), veh/h	412	0	0	287	0	0	110	1281	1298	155	1104	1158
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.75	0.75	0.75
Uniform Delay (d), s/veh	44.8	0.0	0.0	48.0	0.0	0.0	56.3	9.7	10.1	25.7	13.0	13.0
Incr Delay (d2), s/veh	2.3	0.0	0.0	7.1	0.0	0.0	301.5	3.5	3.9	2.6	1.4	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(95%),veh/ln	0.7	0.0	0.0	9.7	0.0	0.0	20.6	19.1	20.6	1.5	13.3	13.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.1	0.0	0.0	55.1	0.0	0.0	357.8	13.2	14.0	28.4	14.4	14.3
LnGrp LOS	D	A	A	E	A	A	F	B	B	C	B	B
Approach Vol, veh/h	226		179			2066			1259			
Approach Delay, s/veh	47.1		55.1			42.6			14.8			
Approach LOS	D		E			D			B			
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	2.0	79.3	28.7		91.3		28.7					
Change Period (Y+Rc), s	4.6	4.8	* 5		4.8		* 5					
Max Green Setting (Gmax), s	71.2	71.2	* 27		83.2		* 27					
Max Q Clear Time (g_c+I19), s	41.8	41.8	17.0		41.0		23.4					
Green Ext Time (p_c), s	0.0	11.0	1.0		23.1		0.3					

Intersection Summary

HCM 6th Ctrl Delay 34.1

HCM 6th LOS C

Notes

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

Queues

28: Laurel Canyon Boulevard & Fryman Road

06/24/2024
























Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	189	14	13	1888	1522
v/c Ratio	0.65	0.05	0.08	0.75	0.61
Control Delay	44.8	29.5	6.4	11.1	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.8	29.5	6.4	11.1	8.3
Queue Length 50th (ft)	102	7	2	291	190
Queue Length 95th (ft)	159	22	10	480	314
Internal Link Dist (ft)				236	183
Turn Bay Length (ft)			145		
Base Capacity (vph)	542	485	171	2527	2488
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.35	0.03	0.08	0.75	0.61
Intersection Summary					

HCM Signalized Intersection Capacity Analysis

28: Laurel Canyon Boulevard & Fryman Road

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								 			 	
Traffic Volume (vph)	174	0	13	0	0	0	12	1737	0	0	1224	177
Future Volume (vph)	174	0	13	0	0	0	12	1737	0	0	1224	177
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4		5.4				5.4	5.4			5.4	
Lane Util. Factor	1.00		1.00				1.00	0.95			0.95	
Frt	1.00		0.85				1.00	1.00			0.98	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	3539			3472	
Flt Permitted	0.95		1.00				0.13	1.00			1.00	
Satd. Flow (perm)	1770		1583				241	3539			3472	
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)	189	0	14	0	0	0	13	1888	0	0	1330	192
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	9	0
Lane Group Flow (vph)	189	0	14	0	0	0	13	1888	0	0	1513	0
Turn Type	Perm		Perm				Perm	NA		Perm	NA	
Protected Phases								2			6	
Permitted Phases	8		8				2			6		
Actuated Green, G (s)	14.9		14.9				64.3	64.3			64.3	
Effective Green, g (s)	14.9		14.9				64.3	64.3			64.3	
Actuated g/C Ratio	0.17		0.17				0.71	0.71			0.71	
Clearance Time (s)	5.4		5.4				5.4	5.4			5.4	
Vehicle Extension (s)	3.0		3.0				4.8	4.8			5.1	
Lane Grp Cap (vph)	293		262				172	2528			2480	
v/s Ratio Prot								c0.53			0.44	
v/s Ratio Perm	c0.11		0.01				0.05					
v/c Ratio	0.65		0.05				0.08	0.75			0.61	
Uniform Delay, d1	35.1		31.6				3.9	7.9			6.5	
Progression Factor	1.00		1.00				1.00	1.00			1.00	
Incremental Delay, d2	4.8		0.1				0.9	2.1			1.1	
Delay (s)	39.9		31.7				4.7	9.9			7.6	
Level of Service	D		C				A	A			A	
Approach Delay (s)		39.3			0.0			9.9			7.6	
Approach LOS		D			A			A			A	
Intersection Summary												
HCM 2000 Control Delay			10.6				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			10.8		
Intersection Capacity Utilization			65.5%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th TWSC
29: Laurel Canyon Boulevard & Woodbridge Street

06/24/2024

Intersection												
Int Delay, s/veh	19.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	4	1	33	5	1	102	35	1539	21	65	1495	28
Future Vol, veh/h	4	1	33	5	1	102	35	1539	21	65	1495	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	65	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	1	36	5	1	111	38	1673	23	71	1625	30

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2695	3554	828	2716	3558	848	1655	0	0	1696	0	0
Stage 1	1782	1782	-	1761	1761	-	-	-	-	-	-	-
Stage 2	913	1772	-	955	1797	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	10	6	314	10	6	305	386	-	-	372	-	-
Stage 1	85	133	-	87	136	-	-	-	-	-	-	-
Stage 2	294	135	-	278	131	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 4	4	314	6	4	305	386	-	-	372	-	-
Mov Cap-2 Maneuver	~ 4	4	-	6	4	-	-	-	-	-	-	-
Stage 1	77	108	-	78	123	-	-	-	-	-	-	-
Stage 2	167	122	-	197	106	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s\$	551.6		\$ 393.9		0.3		0.7	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	386	-	-	28 76	372	-	-
HCM Lane V/C Ratio	0.099	-	-	1.475 1.545	0.19	-	-
HCM Control Delay (s)	15.3	-	-	\$ 551.6\$ 393.9	16.9	-	-
HCM Lane LOS	C	-	-	F F	C	-	-
HCM 95th %tile Q(veh)	0.3	-	-	4.9 9.7	0.7	-	-

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

HCM 6th TWSC

30: Valleyheart Drive (North) & Laurel Canyon Boulevard

06/24/2024

Intersection

Int Delay, s/veh 1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	2	0	34	2	0	11	32	1664	50	11	1545	5
Future Vol, veh/h	2	0	34	2	0	11	32	1664	50	11	1545	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	40	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	37	2	0	12	35	1809	54	12	1679	5

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2681	3639	842	2770	3614	932	1684	0	0	1863	0	0
Stage 1	1706	1706	-	1906	1906	-	-	-	-	-	-	-
Stage 2	975	1933	-	864	1708	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	11	5	308	9	5	268	376	-	-	320	-	-
Stage 1	95	145	-	71	115	-	-	-	-	-	-	-
Stage 2	270	112	-	315	145	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	9	4	308	7	4	268	376	-	-	320	-	-
Mov Cap-2 Maneuver	9	4	-	7	4	-	-	-	-	-	-	-
Stage 1	86	140	-	64	104	-	-	-	-	-	-	-
Stage 2	234	102	-	267	140	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	56.2	137.9	0.3	0.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	376	-	-	108	40	320	-
HCM Lane V/C Ratio	0.093	-	-	0.362	0.353	0.037	-
HCM Control Delay (s)	15.5	-	-	56.2	137.9	16.7	-
HCM Lane LOS	C	-	-	F	F	C	-
HCM 95th %tile Q(veh)	0.3	-	-	1.5	1.2	0.1	-





HCM 6th TWSC

31: Laurel Canyon Boulevard & Valleyheart Drive (South)

06/24/2024

Intersection

Int Delay, s/veh 3.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	120	1616	39	117	1477
Future Vol, veh/h	3	120	1616	39	117	1477
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	35	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	130	1757	42	127	1605

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	2835	900	0
Stage 1	1778	-	-
Stage 2	1057	-	-
Critical Hdwy	6.84	6.94	-
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	-
Pot Cap-1 Maneuver	14	282	-
Stage 1	121	-	-
Stage 2	295	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	9	282	-
Mov Cap-2 Maneuver	9	-	-
Stage 1	121	-	-
Stage 2	184	-	-

Approach	WB	NB	SB
HCM Control Delay, s	86.9	0	1.6
HCM LOS	F		





Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	162	339
HCM Lane V/C Ratio	-	-	0.825	0.375
HCM Control Delay (s)	-	-	86.9	21.9
HCM Lane LOS	-	-	F	C
HCM 95th %tile Q(veh)	-	-	5.5	1.7

HCM 6th AWSC
32: Radford Avenue & Sarah Street

06/24/2024

Intersection

Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	0	6	1	6	1	54	3	7	74	9
Future Vol, veh/h	5	0	0	6	1	6	1	54	3	7	74	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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	0	7	1	7	1	59	3	8	80	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0




Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.5	7.2	7.3	7.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	100%	46%	8%
Vol Thru, %	93%	0%	8%	82%
Vol Right, %	5%	0%	46%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	58	5	13	90
LT Vol	1	5	6	7
Through Vol	54	0	1	74
RT Vol	3	0	6	9
Lane Flow Rate	63	5	14	98
Geometry Grp	1	1	1	1
Degree of Util (X)	0.07	0.007	0.016	0.108
Departure Headway (Hd)	4.015	4.423	4.03	3.972
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	891	801	878	903
Service Time	2.042	2.493	2.099	1.994
HCM Lane V/C Ratio	0.071	0.006	0.016	0.109
HCM Control Delay	7.3	7.5	7.2	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0	0	0.4

Intersection

Intersection Delay, s/veh 0

Intersection LOS -

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	0	0	0
HCM LOS	-	-	-

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0
LT Vol	0	0	0
Through Vol	0	0	0
RT Vol	0	0	0
Lane Flow Rate	0	0	0
Geometry Grp	1	1	1
Degree of Util (X)	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0
HCM Control Delay	6.9	6.9	6.9
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

HCM 6th AWSC
54: Radford Avenue & Radford Gate

06/24/2024

Intersection

Intersection Delay, s/veh 0

Intersection LOS -

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

HCM 6th AWSC
55: Alley & Carpenter Gate

06/24/2024

Intersection

Intersection Delay, s/veh 0

Intersection LOS -




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

HCM 6th TWSC
56: Colfax Avenue & Colfax Gate

06/24/2024

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1	1	0
Stage 1	1	-	-
Stage 2	0	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	1022	1084	0
Stage 1	1022	-	0
Stage 2	-	-	0
Platoon blocked, %			-
Mov Cap-1 Maneuver	1022	1084	-
Mov Cap-2 Maneuver	1022	-	-
Stage 1	1022	-	-
Stage 2	-	-	-

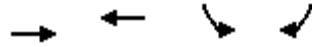
Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

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

Queues

121: Ventura Boulevard & Ventura PI

06/24/2024



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1235	1058	179	25
v/c Ratio	1.36	0.50	0.29	0.08
Control Delay	209.6	13.2	50.8	18.6
Queue Delay	1.7	51.1	0.0	0.0
Total Delay	211.3	64.3	50.8	18.6
Queue Length 50th (ft)	~776	101	74	2
Queue Length 95th (ft)	#916	m36	108	28
Internal Link Dist (ft)	509	48	136	
Turn Bay Length (ft)				40
Base Capacity (vph)	907	2128	669	327
Starvation Cap Reductn	0	1309	0	0
Spillback Cap Reductn	225	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.81	1.29	0.27	0.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

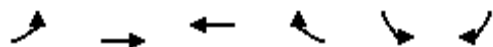
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

121: Ventura Boulevard & Ventura PI

06/24/2024



























Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	↑
Traffic Volume (vph)	0	1136	973	0	165	23
Future Volume (vph)	0	1136	973	0	165	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.1	6.1		5.7	5.7
Lane Util. Factor		0.95	0.95		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3433	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1235	1058	0	179	25
RTOR Reduction (vph)	0	0	0	0	0	19
Lane Group Flow (vph)	0	1235	1058	0	179	6
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2 4		3	
Permitted Phases						3
Actuated Green, G (s)		35.9	84.2		25.0	25.0
Effective Green, g (s)		35.9	84.2		25.0	25.0
Actuated g/C Ratio		0.26	0.60		0.18	0.18
Clearance Time (s)		6.1			5.7	5.7
Vehicle Extension (s)		4.6			3.0	3.0
Lane Grp Cap (vph)		907	2128		613	282
v/s Ratio Prot		c0.35	c0.30		c0.05	
v/s Ratio Perm						0.00
v/c Ratio		1.36	0.50		0.29	0.02
Uniform Delay, d1		52.0	15.9		49.8	47.4
Progression Factor		1.00	0.81		1.00	1.00
Incremental Delay, d2		169.9	0.0		0.3	0.0
Delay (s)		221.9	12.8		50.1	47.4
Level of Service		F	B		D	D
Approach Delay (s)		221.9	12.8		49.8	
Approach LOS		F	B		D	
Intersection Summary						
HCM 2000 Control Delay		119.3		HCM 2000 Level of Service		F
HCM 2000 Volume to Capacity ratio		0.82				
Actuated Cycle Length (s)		140.0		Sum of lost time (s)		31.8
Intersection Capacity Utilization		47.9%		ICU Level of Service		A
Analysis Period (min)		15				
c Critical Lane Group						

***Future with Project Conditions (Year 2028)
without Radford Mobility Connector***

HCM 6th Signalized Intersection Summary

1: Riverside Drive & Laurel Canyon Boulevard








06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	637	155	161	991	145	249	854	105	136	928	325
Future Volume (veh/h)	260	637	155	161	991	145	249	854	105	136	928	325
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	283	692	168	175	1077	158	271	928	114	148	1009	353
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	272	1301	580	258	1016	453	260	1075	598	209	958	335
Arrive On Green	0.15	0.37	0.37	0.02	0.09	0.09	0.11	0.30	0.30	0.07	0.26	0.26
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	3554	1585	1781	3734	1306
Grp Volume(v), veh/h	283	692	168	175	1077	158	271	928	114	148	920	442
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1777	1585	1781	1702	1635
Q Serve(g_s), s	18.3	18.4	9.0	6.0	34.3	11.2	13.5	29.6	5.8	7.4	30.8	30.8
Cycle Q Clear(g_c), s	18.3	18.4	9.0	6.0	34.3	11.2	13.5	29.6	5.8	7.4	30.8	30.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.80
Lane Grp Cap(c), veh/h	272	1301	580	258	1016	453	260	1075	598	209	874	420
V/C Ratio(X)	1.04	0.53	0.29	0.68	1.06	0.35	1.04	0.86	0.19	0.71	1.05	1.05
Avail Cap(c_a), veh/h	272	1301	580	320	1016	453	260	1075	598	209	874	420
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	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	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.8	29.9	27.0	57.1	54.3	43.9	34.7	39.5	25.1	33.2	44.6	44.6
Incr Delay (d2), s/veh	65.9	1.6	1.3	4.1	45.7	2.1	65.4	8.8	0.7	10.5	45.3	58.7
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(95%),veh/ln	19.2	12.6	6.4	5.1	31.7	8.6	15.9	19.9	4.0	6.7	25.8	26.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	116.8	31.5	28.2	61.2	100.0	46.0	100.1	48.3	25.7	43.7	89.9	103.3
LnGrp LOS	F	C	C	E	F	D	F	D	C	D	F	F
Approach Vol, veh/h		1143			1410			1313			1510	
Approach Delay, s/veh		52.1			89.1			57.0			89.3	
Approach LOS		D			F			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.1	36.7	24.2	40.0	13.6	42.2	14.6	49.6				
Change Period (Y+Rc), s	5.6	5.9	5.9	* 5.7	5.6	5.9	5.6	* 5.7				
Max Green Setting (Gmax), s	13.5	30.8	18.3	* 34	8.0	36.3	11.1	* 42				
Max Q Clear Time (g_c+I1), s	15.5	32.8	20.3	36.3	9.4	31.6	8.0	20.4				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	2.6	0.1	5.1				
Intersection Summary												
HCM 6th Ctrl Delay			73.5									
HCM 6th LOS			E									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
User approved changes to right turn type.												

HCM 6th TWSC

2: Riverside Drive & Radford Avenue

06/24/2024

Intersection												
Int Delay, s/veh	33.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	965	94	80	1067	12	29	6	91	4	11	29
Future Vol, veh/h	24	965	94	80	1067	12	29	6	91	4	11	29
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	105	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	1049	102	87	1160	13	32	7	99	4	12	32

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1173	0	0	1151	0	0	1861	2448	525	1921	2544	587
Stage 1	-	-	-	-	-	-	1101	1101	-	1341	1341	-
Stage 2	-	-	-	-	-	-	760	1347	-	580	1203	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	591	-	-	603	-	-	45	31	497	41	27	453
Stage 1	-	-	-	-	-	-	226	286	-	161	219	-
Stage 2	-	-	-	-	-	-	364	218	-	467	256	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	591	-	-	603	-	-	~ 21	25	497	23	22	453
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 21	25	-	23	22	-
Stage 1	-	-	-	-	-	-	216	273	-	154	187	-
Stage 2	-	-	-	-	-	-	271	187	-	349	245	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.8	\$ 574.3	173
HCM LOS			F	F

























Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	70	591	-	-	603	-	-	60
HCM Lane V/C Ratio	1.957	0.044	-	-	0.144	-	-	0.797
HCM Control Delay (s)	\$ 574.3	11.4	-	-	12	-	-	173
HCM Lane LOS	F	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	12.5	0.1	-	-	0.5	-	-	3.5

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

HCM 6th Signalized Intersection Summary

3: Colfax Avenue & Riverside Drive

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	656	215	269	776	81	126	440	75	84	544	126
Future Volume (veh/h)	108	656	215	269	776	81	126	440	75	84	544	126
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	117	713	234	292	843	88	137	478	82	91	591	137
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	234	1356	605	254	1356	605	254	826	700	443	826	700
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.88	0.88	0.88	0.44	0.44	0.44
Sat Flow, veh/h	601	3554	1585	592	3554	1585	727	1870	1585	850	1870	1585
Grp Volume(v), veh/h	117	713	234	292	843	88	137	478	82	91	591	137
Grp Sat Flow(s),veh/h/ln	601	1777	1585	592	1777	1585	727	1870	1585	850	1870	1585
Q Serve(g_s), s	11.4	9.3	6.4	13.6	11.5	2.2	11.0	3.7	0.4	4.5	15.5	3.2
Cycle Q Clear(g_c), s	22.9	9.3	6.4	22.9	11.5	2.2	26.5	3.7	0.4	8.1	15.5	3.2
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	234	1356	605	254	1356	605	254	826	700	443	826	700
V/C Ratio(X)	0.50	0.53	0.39	1.15	0.62	0.15	0.54	0.58	0.12	0.21	0.72	0.20
Avail Cap(c_a), veh/h	234	1356	605	254	1356	605	254	826	700	443	826	700
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	0.93	0.93	0.93	0.77	0.77	0.77	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.5	14.3	13.5	26.4	15.0	12.1	11.4	2.2	2.0	12.9	13.7	10.2
Incr Delay (d2), s/veh	7.5	1.5	1.9	100.9	2.0	0.5	6.2	2.3	0.3	1.0	5.3	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(95%),veh/ln	3.5	6.1	4.0	17.0	7.5	1.3	2.5	2.1	0.3	1.6	10.8	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.9	15.8	15.3	127.3	17.0	12.6	17.6	4.4	2.2	13.9	18.9	10.9
LnGrp LOS	C	B	B	F	B	B	B	A	A	B	B	B
Approach Vol, veh/h	1064			1223			697			819		
Approach Delay, s/veh	17.5			43.0			6.8			17.0		
Approach LOS	B			D			A			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	28.0			32.0			28.0			32.0		
Change Period (Y+Rc), s	* 5.1			* 5.5			* 5.1			* 5.5		
Max Green Setting (Gmax), s	* 23			* 27			* 23			* 27		
Max Q Clear Time (g_c+I1), s	24.9			28.5			24.9			17.5		
Green Ext Time (p_c), s	0.0			0.0			0.0			3.2		
Intersection Summary												
HCM 6th Ctrl Delay	23.6											
HCM 6th LOS	C											
Notes												

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

Queues

4: Riverside Drive & SR 170 Southbound Off-Ramp

06/21/2024



Lane Group	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	867	9	750	30	230	220	209
v/c Ratio	0.44	0.03	0.38	0.11	0.66	0.54	0.44
Control Delay	12.3	13.5	14.6	0.9	34.5	16.5	6.8
Queue Delay	1.0	0.0	0.5	0.2	0.6	0.7	0.0
Total Delay	13.4	13.5	15.1	1.0	35.1	17.2	6.8
Queue Length 50th (ft)	89	3	177	0	92	39	0
Queue Length 95th (ft)	208	m8	215	0	162	104	50
Internal Link Dist (ft)	2214		245	105		344	
Turn Bay Length (ft)		25			140		150
Base Capacity (vph)	1966	272	1966	267	408	456	523
Starvation Cap Reductn	0	0	735	0	0	0	0
Spillback Cap Reductn	785	0	0	62	37	68	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.03	0.61	0.15	0.62	0.57	0.40


Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: Riverside Drive & SR 170 Southbound Off-Ramp













06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑	↑↑			↑↓		↑	↑↓	↑
Traffic Volume (vph)	0	796	2	8	690	0	7	0	20	279	6	321
Future Volume (vph)	0	796	2	8	690	0	7	0	20	279	6	321
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Lane Util. Factor		0.95		1.00	0.95			1.00		0.95	0.91	0.95
Frt		1.00		1.00	1.00			0.90		1.00	0.90	0.85
Flt Protected		1.00		0.95	1.00			0.99		0.95	0.98	1.00
Satd. Flow (prot)		3538		1770	3539			1656		1681	1508	1504
Flt Permitted		1.00		0.26	1.00			0.83		0.95	0.98	1.00
Satd. Flow (perm)		3538		489	3539			1392		1681	1508	1504
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)	0	865	2	9	750	0	8	0	22	303	7	349
RTOR Reduction (vph)	0	0	0	0	0	0	0	29	0	0	94	165
Lane Group Flow (vph)	0	867	0	9	750	0	0	1	0	230	126	44
Turn Type		NA		Perm	NA		Perm	NA		Split	NA	Perm
Protected Phases		6			2			4		3	3	
Permitted Phases				2			4					3
Actuated Green, G (s)		35.2		35.2	35.2			3.2		14.6	14.6	14.6
Effective Green, g (s)		35.2		35.2	35.2			3.2		14.6	14.6	14.6
Actuated g/C Ratio		0.50		0.50	0.50			0.05		0.21	0.21	0.21
Clearance Time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Vehicle Extension (s)		3.8		2.4	2.4			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1779		245	1779			63		350	314	313
v/s Ratio Prot		c0.25			0.21					c0.14	0.08	
v/s Ratio Perm				0.02				c0.00				0.03
v/c Ratio		0.49		0.04	0.42			0.02		0.66	0.40	0.14
Uniform Delay, d1		11.5		8.8	11.0			31.9		25.4	23.9	22.6
Progression Factor		1.00		1.13	1.33			1.00		1.00	1.00	1.00
Incremental Delay, d2		1.0		0.2	0.6			0.1		4.4	0.8	0.2
Delay (s)		12.4		10.2	15.2			32.0		29.8	24.8	22.8
Level of Service		B		B	B			C		C	C	C
Approach Delay (s)		12.4			15.1			32.0			25.9	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			17.4			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.51									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			53.2%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/21/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	NWL	NWR
Lane Group Flow (vph)	207	665	314	252	450	136	25	631	159	1077	251	85
v/c Ratio	0.70	1.00	1.03	1.20	0.57	0.38	0.33	0.93	0.62	0.79	0.60	0.48
Control Delay	46.2	87.5	110.4	160.0	51.5	49.9	63.6	76.3	67.9	43.3	63.7	65.8
Queue Delay	0.0	35.1	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Total Delay	46.2	122.6	135.3	160.0	51.5	49.9	63.6	76.3	67.9	43.3	63.9	65.8
Queue Length 50th (ft)	148	319	~334	~227	193	106	20	302	137	451	113	80
Queue Length 95th (ft)	174	#490	#562	#407	251	173	54	#446	#235	573	153	138
Internal Link Dist (ft)		245			745			2580		383	758	
Turn Bay Length (ft)	140		230	85		110	270		290		215	
Base Capacity (vph)	295	665	304	210	793	355	76	678	256	1363	686	288
Starvation Cap Reductn	0	132	49	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	73	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	1.25	1.23	1.20	0.57	0.38	0.33	0.93	0.62	0.79	0.41	0.30

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.





















95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/21/2024

												
Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	190	320	389	191	13	219	414	125	23	487	75	18
Future Volume (vph)	190	320	389	191	13	219	414	125	23	487	75	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Lane Util. Factor	1.00	0.91	0.91			1.00	0.95	1.00	1.00	0.95		
Frt	1.00	0.93	0.85			1.00	1.00	0.85	1.00	0.98		
Flt Protected	0.95	1.00	1.00			0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1770	3148	1441			1770	3539	1583	1770	3453		
Flt Permitted	0.36	1.00	1.00			0.13	1.00	1.00	0.21	1.00		
Satd. Flow (perm)	670	3148	1441			237	3539	1583	389	3453		
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)	207	348	423	208	14	238	450	136	25	529	82	20
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	207	665	314	0	0	252	450	136	25	631	0	0
Turn Type	pm+pt	NA	Perm		pm+pt	pm+pt	NA	Perm	Perm	NA		
Protected Phases	1	6			5	5	2			8		
Permitted Phases	6		6		2	2		2	8			
Actuated Green, G (s)	41.3	29.6	29.6			43.8	31.4	31.4	27.5	27.5		
Effective Green, g (s)	41.3	29.6	29.6			43.8	31.4	31.4	27.5	27.5		
Actuated g/C Ratio	0.29	0.21	0.21			0.31	0.22	0.22	0.20	0.20		
Clearance Time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Vehicle Extension (s)	3.0	3.9	3.9			3.0	4.6	4.6	4.7	4.7		
Lane Grp Cap (vph)	289	665	304			209	793	355	76	678		
v/s Ratio Prot	0.06	0.21				c0.11	0.13			c0.18		
v/s Ratio Perm	0.15		0.22			c0.27		0.09	0.06			
v/c Ratio	0.72	1.00	1.03			1.21	0.57	0.38	0.33	0.93		
Uniform Delay, d1	40.5	55.2	55.2			40.8	48.3	46.1	48.3	55.3		
Progression Factor	0.96	0.99	0.99			1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2	7.4	33.2	57.8			128.9	2.9	3.1	4.7	20.0		
Delay (s)	46.4	87.9	112.4			169.6	51.2	49.2	53.0	75.3		
Level of Service	D	F	F			F	D	D	D	E		
Approach Delay (s)		87.1					86.5			74.5		
Approach LOS		F					F			E		
Intersection Summary												
HCM 2000 Control Delay			70.4			HCM 2000 Level of Service				E		
HCM 2000 Volume to Capacity ratio			1.01									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			33.0			
Intersection Capacity Utilization			101.0%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/21/2024



Movement	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	17	130	914	77	39	184	83	4
Future Volume (vph)	17	130	914	77	39	184	83	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.3			6.6	6.6	
Lane Util. Factor		1.00	0.95			0.97	0.91	
Frt		1.00	0.99			0.99	0.85	
Flt Protected		0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	3498			3429	1441	
Flt Permitted		0.95	1.00			0.95	1.00	
Satd. Flow (perm)		1770	3498			3429	1441	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	141	993	84	42	200	90	4
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	159	1077	0	0	251	85	0
Turn Type	Prot	Prot	NA		Prot	Prot	Perm	
Protected Phases	7	7	4		3	3		
Permitted Phases							3	
Actuated Green, G (s)		20.3	54.6			17.2	17.2	
Effective Green, g (s)		20.3	54.6			17.2	17.2	
Actuated g/C Ratio		0.15	0.39			0.12	0.12	
Clearance Time (s)		6.8	6.3			6.6	6.6	
Vehicle Extension (s)		3.0	4.9			4.6	4.6	
Lane Grp Cap (vph)		256	1364			421	177	
v/s Ratio Prot		0.09	c0.31			c0.07		
v/s Ratio Perm							0.06	
v/c Ratio		0.62	0.79			0.60	0.48	
Uniform Delay, d1		56.2	37.6			58.1	57.2	
Progression Factor		1.00	1.00			1.00	1.00	
Incremental Delay, d2		4.6	3.6			3.1	3.7	
Delay (s)		60.9	41.2			61.2	60.9	
Level of Service		E	D			E	E	
Approach Delay (s)			43.8			61.1		
Approach LOS			D			E		
Intersection Summary								

HCM 6th Signalized Intersection Summary

6: Laurel Canyon Boulevard & US 101 Northbound Ramps

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↶	↷	↶	↶↷	↶↷			↶↷↶	↶
Traffic Volume (veh/h)	0	0	0	495	2	246	470	619	0	0	1424	363
Future Volume (veh/h)	0	0	0	495	2	246	470	619	0	0	1424	363
Initial Q (Qb), veh				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
Parking Bus, Adj				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		
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				622	0	179	511	673	0	0	1548	395
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				732	0	326	583	2425	0	0	2322	721
Arrive On Green				0.21	0.00	0.21	0.34	1.00	0.00	0.00	0.45	0.45
Sat Flow, veh/h				3563	0	1585	3456	3647	0	0	5274	1585
Grp Volume(v), veh/h				622	0	179	511	673	0	0	1548	395
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	0	1702	1585
Q Serve(g_s), s				15.1	0.0	9.1	12.5	0.0	0.0	0.0	21.3	16.3
Cycle Q Clear(g_c), s				15.1	0.0	9.1	12.5	0.0	0.0	0.0	21.3	16.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				732	0	326	583	2425	0	0	2322	721
V/C Ratio(X)				0.85	0.00	0.55	0.88	0.28	0.00	0.00	0.67	0.55
Avail Cap(c_a), veh/h				859	0	382	680	2425	0	0	2322	721
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.89	0.89	0.00	0.00	0.28	0.28
Uniform Delay (d), s/veh				34.4	0.0	32.0	29.0	0.0	0.0	0.0	19.2	17.8
Incr Delay (d2), s/veh				7.1	0.0	1.4	10.1	0.3	0.0	0.0	0.4	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
%ile BackOfQ(95%),veh/ln				11.2	0.0	6.2	8.3	0.2	0.0	0.0	10.3	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				41.6	0.0	33.5	39.1	0.3	0.0	0.0	19.6	18.7
LnGrp LOS				D	A	C	D	A	A	A	B	B
Approach Vol, veh/h					801			1184			1943	
Approach Delay, s/veh					39.7			17.0			19.4	
Approach LOS					D			B			B	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	30.5	45.7		23.8		66.2						
Change Period (Y+Rc), s	5.3	4.8		* 5.3		4.8						
Max Green Setting (Gmax), s	18	35.2		* 22		58.2						
Max Q Clear Time (g_c+M), s	14.5	23.3		17.1		2.0						
Green Ext Time (p_c), s	0.6	8.6		1.4		5.2						

Intersection Summary

HCM 6th Ctrl Delay	22.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.












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

HCM 6th Signalized Intersection Summary

7: US 101 Southbound Ramps & Laurel Canyon Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  		 	 	
Traffic Volume (veh/h)	156	11	458	0	0	0	0	948	550	518	1406	0
Future Volume (veh/h)	156	11	458	0	0	0	0	948	550	518	1406	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	117	0	562				0	1030	598	563	1528	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	365	0	649				0	2089	648	743	2419	0
Arrive On Green	0.20	0.00	0.20				0.00	0.41	0.41	0.43	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	5274	1585	3456	3647	0
Grp Volume(v), veh/h	117	0	562				0	1030	598	563	1528	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1702	1585	1728	1777	0
Q Serve(g_s), s	5.0	0.0	15.4				0.0	13.4	32.2	12.4	0.0	0.0
Cycle Q Clear(g_c), s	5.0	0.0	15.4				0.0	13.4	32.2	12.4	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	365	0	649				0	2089	648	743	2419	0
V/C Ratio(X)	0.32	0.00	0.87				0.00	0.49	0.92	0.76	0.63	0.00
Avail Cap(c_a), veh/h	416	0	740				0	2139	664	743	2419	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.62	0.62	0.00
Uniform Delay (d), s/veh	30.5	0.0	34.6				0.0	19.7	25.2	23.7	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	9.6				0.0	0.8	20.7	2.8	0.8	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
%ile BackOfQ(95%),veh/ln	8.8	0.0	10.6				0.0	8.9	21.3	6.7	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.0	0.0	44.2				0.0	20.5	45.9	26.5	0.8	0.0
LnGrp LOS	C	A	D				A	C	D	C	A	A
Approach Vol, veh/h	679						1628			2091		
Approach Delay, s/veh	41.9						29.8			7.7		
Approach LOS	D						C			A		
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	34.5	41.9	23.6	66.4								
Change Period (Y+Rc), s	* 5.1	* 5.1	* 5.2	* 5.1								
Max Green Setting (Gmax), s	* 16	* 38	* 21	* 59								
Max Q Clear Time (g_c+M), s	14.5	34.2	17.4	2.0								
Green Ext Time (p_c), s	0.4	2.6	1.0	18.3								

Intersection Summary

HCM 6th Ctrl Delay	21.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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

Queues

8: Laurel Canyon Boulevard & Landale Street

06/21/2024



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	156	205	172	66	182	1420	30	1688	261
v/c Ratio	0.74	0.63	0.77	0.18	0.66	0.75	0.32	1.31	0.58
Control Delay	60.2	18.7	60.7	1.1	34.4	9.1	29.7	168.2	26.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.2	18.7	60.7	1.1	34.4	9.1	29.7	168.2	26.4
Queue Length 50th (ft)	91	17	95	0	69	118	12	~661	123
Queue Length 95th (ft)	#189	90	#189	0	m46	m90	m20	#810	m190
Internal Link Dist (ft)		140	232			591		375	
Turn Bay Length (ft)	85			40	155		125		115
Base Capacity (vph)	212	325	237	380	290	1881	93	1293	453
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.63	0.73	0.17	0.63	0.75	0.32	1.31	0.58

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

8: Laurel Canyon Boulevard & Landale Street

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	159	14	159	25	133	61	167	1276	30	28	1553	240
Future Volume (vph)	159	14	159	25	133	61	167	1276	30	28	1553	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.89			1.00	1.00	1.00	1.00		1.00	1.00	0.78
Flpb, ped/bikes	1.00	1.00			0.99	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.87			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1375			1825	1583	1770	3522		1763	3539	1241
Flt Permitted	0.95	1.00			0.90	1.00	0.10	1.00		0.14	1.00	1.00
Satd. Flow (perm)	1681	1375			1653	1583	195	3522		254	3539	1241
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)	173	15	173	27	145	66	182	1387	33	30	1688	261
RTOR Reduction (vph)	0	151	0	0	0	57	0	2	0	0	0	0
Lane Group Flow (vph)	156	54	0	0	172	9	182	1418	0	30	1688	261
Confl. Peds. (#/hr)			49	49			89		12	12		89
Turn Type	Split	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	3	3			4		1	6			2	
Permitted Phases				4		4	6			2		2
Actuated Green, G (s)	11.3	11.3			12.2	12.2	48.0	48.0		32.9	32.9	32.9
Effective Green, g (s)	11.3	11.3			12.2	12.2	48.0	48.0		32.9	32.9	32.9
Actuated g/C Ratio	0.13	0.13			0.14	0.14	0.53	0.53		0.37	0.37	0.37
Clearance Time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	5.2		4.5	4.5	4.5
Lane Grp Cap (vph)	211	172			224	214	273	1878		92	1293	453
v/s Ratio Prot	c0.09	0.04					0.07	c0.40			c0.48	
v/s Ratio Perm					c0.10	0.01	0.28			0.12		0.21
v/c Ratio	0.74	0.31			0.77	0.04	0.67	0.76		0.33	1.31	0.58
Uniform Delay, d1	37.9	35.8			37.5	33.8	18.2	16.4		20.6	28.6	22.9
Progression Factor	1.00	1.00			1.00	1.00	2.18	0.52		0.94	0.93	0.92
Incremental Delay, d2	12.7	1.0			14.6	0.1	0.6	0.3		6.8	141.7	3.9
Delay (s)	50.6	36.9			52.1	33.9	40.1	8.8		26.2	168.2	24.9
Level of Service	D	D			D	C	D	A		C	F	C
Approach Delay (s)		42.8			47.0			12.4			147.2	
Approach LOS		D			D			B			F	
Intersection Summary												
HCM 2000 Control Delay			80.8									F
HCM 2000 Volume to Capacity ratio			1.06									
Actuated Cycle Length (s)			90.0							23.9		
Intersection Capacity Utilization			92.0%									F
ICU Level of Service												
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

9: Colfax Avenue & Sarah Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↙	↑	↘	↙	↑	↘
Traffic Volume (veh/h)	38	84	11	35	17	154	21	503	49	138	851	47
Future Volume (veh/h)	38	84	11	35	17	154	21	503	49	138	851	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.89		0.81	0.86		0.81	1.00		0.93	0.99		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	41	91	12	38	18	167	23	547	53	150	925	51
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	157	304	35	104	51	251	140	957	752	372	957	752
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.51	0.51	0.51	0.51	0.51	0.51
Sat Flow, veh/h	315	1202	138	132	200	991	576	1870	1470	814	1870	1470
Grp Volume(v), veh/h	144	0	0	223	0	0	23	547	53	150	925	51
Grp Sat Flow(s),veh/h/ln	1654	0	0	1323	0	0	576	1870	1470	814	1870	1470
Q Serve(g_s), s	0.0	0.0	0.0	2.9	0.0	0.0	2.0	12.1	1.1	9.4	28.7	1.1
Cycle Q Clear(g_c), s	3.9	0.0	0.0	8.8	0.0	0.0	30.7	12.1	1.1	21.5	28.7	1.1
Prop In Lane	0.28		0.08	0.17		0.75	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	496	0	0	405	0	0	140	957	752	372	957	752
V/C Ratio(X)	0.29	0.00	0.00	0.55	0.00	0.00	0.16	0.57	0.07	0.40	0.97	0.07
Avail Cap(c_a), veh/h	633	0	0	523	0	0	140	957	752	372	957	752
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.92	0.92	0.92	0.49	0.49	0.49
Uniform Delay (d), s/veh	18.2	0.0	0.0	19.9	0.0	0.0	29.1	10.1	7.4	17.5	14.2	7.4
Incr Delay (d2), s/veh	0.3	0.0	0.0	1.2	0.0	0.0	2.3	2.3	0.2	1.6	13.9	0.1
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(95%),veh/ln	2.8	0.0	0.0	4.9	0.0	0.0	0.7	7.9	0.6	3.1	17.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.5	0.0	0.0	21.1	0.0	0.0	31.5	12.4	7.6	19.1	28.0	7.5
LnGrp LOS	B	A	A	C	A	A	C	B	A	B	C	A
Approach Vol, veh/h	144		223			623			1126			
Approach Delay, s/veh	18.5		21.1			12.7			25.9			
Approach LOS	B		C			B			C			
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	35.5		24.5		35.5		24.5					
Change Period (Y+Rc), s	4.8		* 9.3		4.8		* 9.3					
Max Green Setting (Gmax), s	25.2		* 21		25.2		* 21					
Max Q Clear Time (g_c+I1), s	32.7		5.9		30.7		10.8					
Green Ext Time (p_c), s	0.0		0.7		0.0		1.1					
Intersection Summary												
HCM 6th Ctrl Delay			21.0									
HCM 6th LOS			C									
Notes												

Queues

10: Landale Street & Colfax Avenue

06/21/2024



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	85	33	548	1025	39
v/c Ratio	0.31	0.21	0.42	0.79	0.04
Control Delay	20.6	9.8	7.0	7.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.6	9.8	7.0	7.3	0.1
Queue Length 50th (ft)	20	4	86	31	0
Queue Length 95th (ft)	52	21	166	m56	m0
Internal Link Dist (ft)	262		575	593	
Turn Bay Length (ft)		40			80
Base Capacity (vph)	535	156	1296	1296	1106
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.16	0.21	0.42	0.79	0.04

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

10: Landale Street & Colfax Avenue

06/21/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	55	23	30	504	943	36
Future Volume (vph)	55	23	30	504	943	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	9.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.96		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1728		1770	1863	1863	1583
Flt Permitted	0.97		0.12	1.00	1.00	1.00
Satd. Flow (perm)	1728		225	1863	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	60	25	33	548	1025	39
RTOR Reduction (vph)	22	0	0	0	0	6
Lane Group Flow (vph)	63	0	33	548	1025	33
Turn Type	Perm		Perm	NA	NA	Perm
Protected Phases				6	2	
Permitted Phases	8		6			2
Actuated Green, G (s)	7.1		38.9	38.9	38.9	38.9
Effective Green, g (s)	7.1		38.9	38.9	38.9	38.9
Actuated g/C Ratio	0.12		0.65	0.65	0.65	0.65
Clearance Time (s)	9.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		4.9	4.9	5.3	5.3
Lane Grp Cap (vph)	204		145	1207	1207	1026
v/s Ratio Prot				0.29	c0.55	
v/s Ratio Perm	c0.04		0.15			0.02
v/c Ratio	0.31		0.23	0.45	0.85	0.03
Uniform Delay, d1	24.2		4.4	5.3	8.3	3.8
Progression Factor	1.00		1.00	1.00	0.42	0.02
Incremental Delay, d2	0.9		3.6	1.2	3.3	0.0
Delay (s)	25.1		8.0	6.5	6.7	0.1
Level of Service	C		A	A	A	A
Approach Delay (s)	25.1			6.6	6.5	
Approach LOS	C			A	A	
Intersection Summary						
HCM 2000 Control Delay			7.4		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.77			
Actuated Cycle Length (s)			60.0		Sum of lost time (s)	14.0
Intersection Capacity Utilization			68.0%		ICU Level of Service	C
Analysis Period (min)			15			










c Critical Lane Group

HCM 6th Signalized Intersection Summary

11: Whitsett Avenue & Moorpark Street

06/24/2024












Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	886	212	109	638	65	73	244	75	83	505	61
Future Volume (veh/h)	67	886	212	109	638	65	73	244	75	83	505	61
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	73	963	230	118	693	71	79	265	82	90	549	66
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	127	850	720	80	758	78	331	1155	350	458	1374	165
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	703	1870	1585	469	1669	171	807	2687	814	1034	3195	383
Grp Volume(v), veh/h	73	963	230	118	0	764	79	173	174	90	305	310
Grp Sat Flow(s),veh/h/ln	703	1870	1585	469	0	1840	807	1777	1724	1034	1777	1801
Q Serve(g_s), s	6.0	40.9	8.3	0.0	0.0	34.9	6.7	5.5	5.7	5.4	10.6	10.7
Cycle Q Clear(g_c), s	40.9	40.9	8.3	40.9	0.0	34.9	17.4	5.5	5.7	11.2	10.6	10.7
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.47	1.00		0.21
Lane Grp Cap(c), veh/h	127	850	720	80	0	836	331	764	741	458	764	775
V/C Ratio(X)	0.57	1.13	0.32	1.47	0.00	0.91	0.24	0.23	0.23	0.20	0.40	0.40
Avail Cap(c_a), veh/h	127	850	720	80	0	836	331	764	741	458	764	775
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	43.1	24.5	15.7	45.0	0.0	22.9	23.7	16.2	16.3	19.8	17.6	17.7
Incr Delay (d2), s/veh	17.5	74.4	1.2	269.2	0.0	16.1	1.7	0.7	0.7	1.0	1.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	47.6	5.5	13.9	0.0	24.4	2.5	4.1	4.1	2.5	7.9	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.6	98.9	16.8	314.2	0.0	39.0	25.3	16.9	17.0	20.8	19.2	19.2
LnGrp LOS	E	F	B	F	A	D	C	B	B	C	B	B
Approach Vol, veh/h	1266					882		426		705		
Approach Delay, s/veh	81.8					75.9		18.5		19.4		
Approach LOS	F					E		B		B		
Timer - Assigned Phs	2		4			6		8				
Phs Duration (G+Y+Rc), s	46.0		44.0			46.0		44.0				
Change Period (Y+Rc), s	5.1		5.3			5.1		5.3				
Max Green Setting (Gmax), s	40.9		38.7			40.9		38.7				
Max Q Clear Time (g_c+I1), s	42.9		13.2			42.9		19.4				
Green Ext Time (p_c), s	0.0		4.3			0.0		2.4				
Intersection Summary												
HCM 6th Ctrl Delay	58.6											
HCM 6th LOS	E											

HCM 6th Signalized Intersection Summary

12: Laurel Canyon Boulevard & Moorpark Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	302	630	237	217	478	112	113	1110	171	88	1461	239
Future Volume (veh/h)	302	630	237	217	478	112	113	1110	171	88	1461	239
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	328	685	258	236	520	122	123	1207	186	96	1588	260
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	248	696	262	256	520	568	231	914	140	224	899	144
Arrive On Green	0.09	0.28	0.28	0.13	0.37	0.37	0.08	0.30	0.30	0.11	0.39	0.39
Sat Flow, veh/h	1781	2525	951	1781	1870	1585	1781	3088	474	1781	3068	491
Grp Volume(v), veh/h	328	482	461	236	520	122	123	692	701	96	905	943
Grp Sat Flow(s),veh/h/ln	1781	1777	1699	1781	1870	1585	1781	1777	1785	1781	1777	1782
Q Serve(g_s), s	8.5	24.3	24.3	8.7	25.0	4.3	4.2	26.6	26.6	3.2	26.4	26.4
Cycle Q Clear(g_c), s	8.5	24.3	24.3	8.7	25.0	4.3	4.2	26.6	26.6	3.2	26.4	26.4
Prop In Lane	1.00		0.56	1.00		1.00	1.00		0.27	1.00		0.28
Lane Grp Cap(c), veh/h	248	490	468	256	520	568	231	526	528	224	521	522
V/C Ratio(X)	1.32	0.98	0.98	0.92	1.00	0.21	0.53	1.32	1.33	0.43	1.74	1.81
Avail Cap(c_a), veh/h	248	490	468	256	520	568	238	526	528	238	521	522
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	25.3	32.4	32.4	23.2	28.4	17.4	22.6	31.7	31.7	21.8	27.5	27.5
Incr Delay (d2), s/veh	170.0	36.5	37.4	36.3	39.7	0.2	2.1	155.4	160.1	0.1	332.7	363.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	24.0	21.2	20.6	9.8	21.7	2.7	3.2	50.1	51.4	1.8	81.4	88.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	195.3	68.9	69.8	59.4	68.1	17.6	24.7	187.1	191.8	22.0	360.2	391.2
LnGrp LOS	F	E	E	E	F	B	C	F	F	C	F	F
Approach Vol, veh/h	1271			878			1516			1944		
Approach Delay, s/veh	101.9			58.7			176.1			358.5		
Approach LOS	F			E			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.8	31.8	14.0	31.3	12.7	32.0	14.2	31.1				
Change Period (Y+Rc), s	5.3	* 5.4	* 5.5	6.3	* 5.4	* 5.4	* 5.5	6.3				
Max Green Setting (Gmax), s	26	* 26	* 8.5	25.0	* 8	* 26	* 8.7	24.8				
Max Q Clear Time (g_c+I1), s	28.4	28.4	10.5	27.0	5.2	28.6	10.7	26.3				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 204.1

HCM 6th LOS F

Notes

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






HCM 6th TWSC

13: Moorpark Street & Radford Avenue

06/24/2024

Intersection

Int Delay, s/veh 0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	55	780	873	40	14	32
Future Vol, veh/h	55	780	873	40	14	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	50
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	60	848	949	43	15	35

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	992	0	0 1515 496
Stage 1	-	-	- - 971 -
Stage 2	-	-	- - 544 -
Critical Hdwy	4.14	-	- - 6.84 6.94
Critical Hdwy Stg 1	-	-	- - 5.84 -
Critical Hdwy Stg 2	-	-	- - 5.84 -
Follow-up Hdwy	2.22	-	- - 3.52 3.32
Pot Cap-1 Maneuver	693	-	- - 110 519
Stage 1	-	-	- - 328 -
Stage 2	-	-	- - 546 -
Platoon blocked, %		-	- -
Mov Cap-1 Maneuver	693	-	- - 100 519
Mov Cap-2 Maneuver	-	-	- - 100 -
Stage 1	-	-	- - 299 -
Stage 2	-	-	- - 546 -























Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	23.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	693	-	-	-	100	519
HCM Lane V/C Ratio	0.086	-	-	-	0.152	0.067
HCM Control Delay (s)	10.7	-	-	-	47.4	12.4
HCM Lane LOS	B	-	-	-	E	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.5	0.2

HCM 6th Signalized Intersection Summary

14: Colfax Avenue & Moorpark Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	588	118	275	661	154	125	246	169	152	603	109
Future Volume (veh/h)	94	588	118	275	661	154	125	246	169	152	603	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		0.97	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	102	639	128	299	718	167	136	267	184	165	655	118
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	225	1208	241	273	790	184	112	429	358	332	711	710
Arrive On Green	0.14	0.82	0.82	0.09	0.09	0.09	0.23	0.23	0.23	0.09	0.38	0.38
Sat Flow, veh/h	1781	2938	587	693	2840	660	697	1870	1558	1781	1870	1569
Grp Volume(v), veh/h	102	386	381	299	449	436	136	267	184	165	655	118
Grp Sat Flow(s),veh/h/ln	1781	1777	1748	693	1777	1724	697	1870	1558	1781	1870	1569
Q Serve(g_s), s	3.4	6.1	6.2	25.0	22.5	22.6	4.1	11.5	9.3	6.1	30.1	4.0
Cycle Q Clear(g_c), s	3.4	6.1	6.2	25.0	22.5	22.6	20.7	11.5	9.3	6.1	30.1	4.0
Prop In Lane	1.00		0.34	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	225	730	719	273	494	480	112	429	358	332	711	710
V/C Ratio(X)	0.45	0.53	0.53	1.10	0.91	0.91	1.21	0.62	0.51	0.50	0.92	0.17
Avail Cap(c_a), veh/h	236	730	719	273	494	480	112	429	358	333	711	710
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	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	0.51	0.51	0.51
Uniform Delay (d), s/veh	20.9	5.3	5.3	44.5	39.7	39.7	44.4	31.2	30.3	22.8	26.6	14.6
Incr Delay (d2), s/veh	1.4	2.7	2.8	82.6	23.1	23.7	153.8	6.6	5.2	0.6	11.5	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(95%),veh/ln	2.4	3.6	3.6	19.7	19.9	19.5	12.7	9.8	7.0	4.3	19.3	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.3	8.0	8.0	127.2	62.8	63.4	198.2	37.8	35.5	23.4	38.1	14.9
LnGrp LOS	C	A	A	F	E	E	F	D	D	C	D	B
Approach Vol, veh/h	869			1184			587			938		
Approach Delay, s/veh	9.7			79.3			74.2			32.6		
Approach LOS	A			E			E			C		
Timer - Assigned Phs	1	2	4		6		7	8				
Phs Duration (G+Y+Rc), s	12.0	34.4	43.6		46.4		13.5	30.1				
Change Period (Y+Rc), s	* 5.5	* 9.4	* 9.4		* 9.4		5.6	* 9.4				
Max Green Setting (Gmax), s	* 7	* 25	* 34		* 37		8.0	* 21				
Max Q Clear Time (g_c+I1), s	5.4	27.0	32.1		8.2		8.1	22.7				
Green Ext Time (p_c), s	0.0	0.0	1.0		5.2		0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 49.3

HCM 6th LOS D

Notes

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

HCM 6th TWSC
15: Irvine Avenue & Moorpark Street

06/24/2024

Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔			↔	
Traffic Vol, veh/h	59	782	5	16	949	112	2	1	18	8	1	146
Future Vol, veh/h	59	782	5	16	949	112	2	1	18	8	1	146
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	64	850	5	17	1032	122	2	1	20	9	1	159

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1154	0	0	855	0	0	1532	2169	428	1681	2110	577
Stage 1	-	-	-	-	-	-	981	981	-	1127	1127	-
Stage 2	-	-	-	-	-	-	551	1188	-	554	983	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	601	-	-	781	-	-	80	46	575	62	50	460
Stage 1	-	-	-	-	-	-	268	326	-	218	278	-
Stage 2	-	-	-	-	-	-	486	260	-	484	325	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	601	-	-	781	-	-	41	34	575	47	37	460
Mov Cap-2 Maneuver	-	-	-	-	-	-	41	34	-	47	37	-
Stage 1	-	-	-	-	-	-	214	260	-	174	260	-
Stage 2	-	-	-	-	-	-	297	244	-	371	259	-























Approach	EB	WB	NB	SB
HCM Control Delay, s	1.7	0.4	26.3	31.1
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	192	601	-	-	781	-	-	301
HCM Lane V/C Ratio	0.119	0.107	-	-	0.022	-	-	0.56
HCM Control Delay (s)	26.3	11.7	1	-	9.7	0.3	-	31.1
HCM Lane LOS	D	B	A	-	A	A	-	D
HCM 95th %tile Q(veh)	0.4	0.4	-	-	0.1	-	-	3.2

HCM 6th Signalized Intersection Summary

16: Tujunga Avenue & Moorpark Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	137	734	79	96	805	53	68	264	73	153	391	192
Future Volume (veh/h)	137	734	79	96	805	53	68	264	73	153	391	192
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	149	798	86	104	875	58	74	287	79	166	425	209
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	279	1632	176	295	1706	113	221	703	595	335	470	398
Arrive On Green	0.50	0.50	0.50	0.50	0.50	0.50	0.13	0.75	0.75	0.25	0.25	0.25
Sat Flow, veh/h	600	3236	349	628	3383	224	1781	1870	1585	1016	1870	1585
Grp Volume(v), veh/h	149	438	446	104	460	473	74	287	79	166	425	209
Grp Sat Flow(s),veh/h/ln	600	1777	1808	628	1777	1830	1781	1870	1585	1016	1870	1585
Q Serve(g_s), s	19.9	14.6	14.6	11.7	15.6	15.6	2.5	5.0	1.2	13.2	19.8	10.2
Cycle Q Clear(g_c), s	35.4	14.6	14.6	26.3	15.6	15.6	2.5	5.0	1.2	13.2	19.8	10.2
Prop In Lane	1.00		0.19	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	279	896	912	295	896	923	221	703	595	335	470	398
V/C Ratio(X)	0.53	0.49	0.49	0.35	0.51	0.51	0.33	0.41	0.13	0.50	0.90	0.52
Avail Cap(c_a), veh/h	279	896	912	295	896	923	243	746	632	346	490	416
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	0.98	0.98	0.98	0.38	0.38	0.38
Uniform Delay (d), s/veh	26.8	14.7	14.7	23.3	14.9	14.9	21.7	7.6	7.1	30.2	32.7	29.1
Incr Delay (d2), s/veh	7.2	1.9	1.9	3.3	2.1	2.0	0.9	0.4	0.1	0.4	9.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.8	9.9	10.0	3.5	10.4	10.6	1.8	2.9	0.8	4.9	12.9	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.9	16.6	16.5	26.6	17.0	16.9	22.6	8.0	7.2	30.6	41.7	29.5
LnGrp LOS	C	B	B	C	B	B	C	A	A	C	D	C
Approach Vol, veh/h	1033			1037			440			800		
Approach Delay, s/veh	19.1			17.9			10.3			36.2		
Approach LOS	B			B			B			D		
Timer - Assigned Phs	2		3	4		6		8				
Phs Duration (G+Y+Rc), s	50.8		11.2	28.0		50.8		39.2				
Change Period (Y+Rc), s	* 5.4		* 5.3	* 5.4		* 5.4		* 5.4				
Max Green Setting (Gmax), s	* 43		* 7	* 24		* 43		* 36				
Max Q Clear Time (g_c+I1), s	28.3		4.5	21.8		37.4		7.0				
Green Ext Time (p_c), s	8.1		0.0	0.8		4.0		1.9				
Intersection Summary												
HCM 6th Ctrl Delay	21.7											
HCM 6th LOS	C											
Notes												

HCM 6th Signalized Intersection Summary

17: Woodbridge Street & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↕	
Traffic Volume (veh/h)	9	7	16	18	8	32	13	354	17	42	518	25
Future Volume (veh/h)	9	7	16	18	8	32	13	354	17	42	518	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	10	8	17	20	9	35	14	385	18	46	563	27
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	73	48	65	80	31	71	751	1519	1287	829	1437	69
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.81	0.81	0.81	1.00	1.00	1.00
Sat Flow, veh/h	260	584	797	339	384	872	826	1870	1585	982	1770	85
Grp Volume(v), veh/h	35	0	0	64	0	0	14	385	18	46	0	590
Grp Sat Flow(s),veh/h/ln	1640	0	0	1595	0	0	826	1870	1585	982	0	1855
Q Serve(g_s), s	0.0	0.0	0.0	1.1	0.0	0.0	0.3	4.4	0.2	0.3	0.0	0.0
Cycle Q Clear(g_c), s	1.7	0.0	0.0	3.3	0.0	0.0	0.3	4.4	0.2	4.7	0.0	0.0
Prop In Lane	0.29		0.49	0.31		0.55	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	185	0	0	182	0	0	751	1519	1287	829	0	1506
V/C Ratio(X)	0.19	0.00	0.00	0.35	0.00	0.00	0.02	0.25	0.01	0.06	0.00	0.39
Avail Cap(c_a), veh/h	508	0	0	502	0	0	751	1519	1287	829	0	1506
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.84	0.84	0.84	0.49	0.00	0.49
Uniform Delay (d), s/veh	38.8	0.0	0.0	39.5	0.0	0.0	1.6	2.0	1.6	0.1	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	1.1	0.0	0.0	0.0	0.3	0.0	0.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	0.0	0.0	2.5	0.0	0.0	0.1	1.7	0.1	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.3	0.0	0.0	40.6	0.0	0.0	1.7	2.3	1.6	0.2	0.0	0.4
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	35			64			417			636		
Approach Delay, s/veh	39.3			40.6			2.3			0.4		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	77.6			12.4			77.6			12.4		
Change Period (Y+Rc), s	* 4.5			* 5.1			* 4.5			* 5.1		
Max Green Setting (Gmax), s	* 55			* 26			* 55			* 26		
Max Q Clear Time (g_c+I1), s	6.7			3.7			6.4			5.3		
Green Ext Time (p_c), s	10.6			0.1			6.3			0.3		

Intersection Summary

HCM 6th Ctrl Delay	4.5
HCM 6th LOS	A

Notes

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

Queues

18: Whitsett Avenue & Ventura Boulevard

06/21/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	85	1139	66	29	872	129	65	88	684	260	492
v/c Ratio	0.38	0.72	0.09	0.29	0.80	0.22	0.52	0.25	1.00	0.75	0.52
Control Delay	21.3	25.8	16.3	47.0	51.2	12.7	50.5	34.3	75.8	51.5	13.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.3	25.8	16.3	47.0	51.2	12.7	50.5	34.3	75.8	51.5	13.9
Queue Length 50th (ft)	31	301	23	14	318	20	37	47	~243	157	168
Queue Length 95th (ft)	60	379	49	m27	m368	m37	79	86	#410	231	240
Internal Link Dist (ft)		1440			2938			648		1328	
Turn Bay Length (ft)	95		135	145		60	60		220		65
Base Capacity (vph)	257	1592	712	101	1085	592	159	440	687	441	974
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.72	0.09	0.29	0.80	0.22	0.41	0.20	1.00	0.59	0.51

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

























Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

18: Whitsett Avenue & Ventura Boulevard

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	1048	61	27	802	119	60	78	3	629	239	453
Future Volume (vph)	78	1048	61	27	802	119	60	78	3	629	239	453
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	5.4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1853		3433	1863	1583
Flt Permitted	0.11	1.00	1.00	0.18	1.00	1.00	0.36	1.00		0.95	1.00	1.00
Satd. Flow (perm)	206	3539	1583	332	3539	1583	672	1853		3433	1863	1583
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)	85	1139	66	29	872	129	65	85	3	684	260	492
RTOR Reduction (vph)	0	0	0	0	0	89	0	2	0	0	0	10
Lane Group Flow (vph)	85	1139	66	29	872	40	65	86	0	684	260	482
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Prot	NA	custom
Protected Phases	1	6			2			4		3	8	1 3
Permitted Phases	6		6	2		2	4					8
Actuated Green, G (s)	44.6	44.6	44.6	30.7	30.7	30.7	18.7	18.7		20.0	18.7	52.6
Effective Green, g (s)	44.6	44.6	44.6	30.7	30.7	30.7	18.7	18.7		20.0	18.7	52.6
Actuated g/C Ratio	0.45	0.45	0.45	0.31	0.31	0.31	0.19	0.19		0.20	0.19	0.53
Clearance Time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	
Vehicle Extension (s)	3.0	4.9	4.9	4.7	4.7	4.7	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	224	1578	706	101	1086	485	125	346		686	348	832
v/s Ratio Prot	0.03	c0.32			c0.25			0.05		c0.20	c0.14	0.20
v/s Ratio Perm	0.14		0.04	0.09		0.03	0.10					0.11
v/c Ratio	0.38	0.72	0.09	0.29	0.80	0.08	0.52	0.25		1.00	0.75	0.58
Uniform Delay, d1	19.5	22.6	16.0	26.3	31.9	24.6	36.6	34.7		40.0	38.4	16.2
Progression Factor	1.00	1.00	1.00	1.44	1.44	4.10	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.1	2.9	0.3	5.1	4.6	0.2	3.9	0.4		33.4	8.5	1.0
Delay (s)	20.6	25.5	16.3	43.1	50.5	101.1	40.5	35.0		73.4	46.9	17.1
Level of Service	C	C	B	D	D	F	D	D		E	D	B
Approach Delay (s)		24.7			56.6			37.4			49.3	
Approach LOS		C			E			D			D	
Intersection Summary												
HCM 2000 Control Delay			42.7			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			0.86									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)				22.1		
Intersection Capacity Utilization			79.2%			ICU Level of Service				D		
Analysis Period (min)			15									
c Critical Lane Group												

Queues

19: Laurel Canyon Boulevard & Ventura Place

06/21/2024



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	53	42	198	12	1118	37	82	1715
v/c Ratio	0.41	0.25	0.65	0.07	0.51	0.04	0.35	0.58
Control Delay	48.7	45.3	19.0	33.0	33.9	1.9	21.8	16.5
Queue Delay	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0
Total Delay	48.7	45.3	19.0	33.0	34.6	1.9	21.8	16.5
Queue Length 50th (ft)	28	26	10	8	380	0	25	228
Queue Length 95th (ft)	68	57	76	m11	m381	m0	94	421
Internal Link Dist (ft)	123	395			458			232
Turn Bay Length (ft)			380	105		85	55	
Base Capacity (vph)	131	223	345	177	2172	1000	236	2957
Starvation Cap Reductn	0	0	0	0	652	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.19	0.57	0.07	0.74	0.04	0.35	0.58


Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

19: Laurel Canyon Boulevard & Ventura Place

06/21/2024













												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	29	12	7	28	11	182	11	1029	34	75	1528	50
Future Volume (vph)	29	12	7	28	11	182	11	1029	34	75	1528	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		9.4			9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.91	
Frpb, ped/bikes		1.00			1.00	0.94	1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes		0.96			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.98			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.97			0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1703			1799	1484	1770	3539	1518	1761	5061	
Flt Permitted		0.79			0.97	1.00	0.95	1.00	1.00	0.22	1.00	
Satd. Flow (perm)		1387			1799	1484	1770	3539	1518	404	5061	
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)	32	13	8	30	12	198	12	1118	37	82	1661	54
RTOR Reduction (vph)	0	7	0	0	0	165	0	0	15	0	3	0
Lane Group Flow (vph)	0	46	0	0	42	33	12	1118	22	82	1712	0
Confl. Peds. (#/hr)	16					16			16	16		
Turn Type	Perm	NA		Split	NA	Perm	Prot	NA	Perm	Perm	NA	
Protected Phases		3		4	4		1	6			2	
Permitted Phases	3					4			6	2		
Actuated Green, G (s)		7.1			9.3	9.3	2.0	59.5	59.5	52.5	52.5	
Effective Green, g (s)		7.1			9.3	9.3	2.0	59.5	59.5	52.5	52.5	
Actuated g/C Ratio		0.07			0.09	0.09	0.02	0.60	0.60	0.52	0.52	
Clearance Time (s)		9.4			9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	4.8	4.8	3.1	3.1	
Lane Grp Cap (vph)		98			167	138	35	2105	903	212	2657	
v/s Ratio Prot					c0.02		0.01	c0.32			c0.34	
v/s Ratio Perm		c0.03				0.02			0.01	0.20		
v/c Ratio		0.47			0.25	0.24	0.34	0.53	0.02	0.39	0.64	
Uniform Delay, d1		44.7			42.1	42.1	48.4	12.0	8.3	14.2	17.0	
Progression Factor		1.00			1.00	1.00	0.79	2.72	1.00	1.00	1.00	
Incremental Delay, d2		3.6			0.8	0.9	2.4	0.4	0.0	5.3	1.2	
Delay (s)		48.2			42.9	43.0	40.8	33.0	8.3	19.4	18.3	
Level of Service		D			D	D	D	C	A	B	B	
Approach Delay (s)		48.2			43.0			32.3			18.3	
Approach LOS		D			D			C			B	
Intersection Summary												
HCM 2000 Control Delay		25.6										
HCM 2000 Volume to Capacity ratio		0.59										
Actuated Cycle Length (s)		100.0										
Intersection Capacity Utilization		68.1%										
Analysis Period (min)		15										
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

20: Laurel Canyon Boulevard & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	649	456	325	632	124	304	870	237	402	911	181
Future Volume (veh/h)	156	649	456	325	632	124	304	870	237	402	911	181
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	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	170	705	496	353	687	135	330	946	258	437	990	197
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	318	984	583	319	1086	668	346	896	386	432	984	563
Arrive On Green	0.03	0.09	0.09	0.12	0.31	0.31	0.10	0.25	0.25	0.08	0.19	0.19
Sat Flow, veh/h	1781	3554	1532	1781	3554	1537	3456	3554	1532	3456	3554	1537
Grp Volume(v), veh/h	170	705	496	353	687	135	330	946	258	437	990	197
Grp Sat Flow(s),veh/h/ln	1781	1777	1532	1781	1777	1537	1728	1777	1532	1728	1777	1537
Q Serve(g_s), s	6.7	19.3	15.9	11.7	16.6	5.5	9.5	25.2	15.1	12.5	27.7	5.8
Cycle Q Clear(g_c), s	6.7	19.3	15.9	11.7	16.6	5.5	9.5	25.2	15.1	12.5	27.7	5.8
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	318	984	583	319	1086	668	346	896	386	432	984	563
V/C Ratio(X)	0.53	0.72	0.85	1.11	0.63	0.20	0.95	1.06	0.67	1.01	1.01	0.35
Avail Cap(c_a), veh/h	337	984	583	319	1086	668	346	896	386	432	984	563
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Upstream Filter(I)	0.46	0.46	0.46	0.85	0.85	0.85	0.70	0.70	0.70	0.79	0.79	0.79
Uniform Delay (d), s/veh	25.2	41.6	19.4	27.6	29.9	17.8	44.8	37.4	33.6	45.8	40.7	10.5
Incr Delay (d2), s/veh	0.7	2.1	7.3	77.9	2.4	0.6	29.3	41.5	3.9	41.4	26.9	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(95%),veh/ln	4.9	12.8	10.4	18.3	11.3	3.6	8.6	21.9	9.2	12.2	22.0	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.9	43.7	26.7	105.5	32.3	18.4	74.1	78.9	37.6	87.2	67.6	11.5
LnGrp LOS	C	D	C	F	C	B	E	F	D	F	F	B
Approach Vol, veh/h	1371			1175			1534			1624		
Approach Delay, s/veh	35.3			52.7			70.9			66.1		
Approach LOS	D			D			E			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.1	34.0	15.6	33.3	14.2	36.9	18.1	30.8				
Change Period (Y+Rc), s	5.4	6.3	5.6	5.6	5.6	6.3	5.6	5.6				
Max Green Setting (Gmax), s	27.7	10.0	27.7	9.7	29.5	12.5	25.2					
Max Q Clear Time (g_c+M3), s	21.3	11.5	29.7	8.7	18.6	14.5	27.2					
Green Ext Time (p_c), s	0.0	5.1	0.0	0.0	0.0	4.3	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 57.2

HCM 6th LOS E

Notes

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

Queues

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/21/2024



Lane Group	EBL	EBT	WBL	WBT	WBR2	NBT	NBR	SBL	SBT	SBR2
Lane Group Flow (vph)	291	1195	66	1101	114	38	47	74	106	90
v/c Ratio	0.53	0.65	0.62	1.34	0.34	0.13	0.11	0.42	0.74	0.29
Control Delay	16.4	4.7	88.7	204.1	49.1	51.4	0.6	66.1	89.4	2.4
Queue Delay	70.3	49.5	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.7	54.2	88.7	205.9	49.1	51.4	0.6	66.1	89.4	2.4
Queue Length 50th (ft)	269	118	59	~707	88	30	0	63	94	0
Queue Length 95th (ft)	m157	m0	#132	#866	152	65	0	117	#180	0
Internal Link Dist (ft)		48		634		86			226	
Turn Bay Length (ft)	90		95		55		30	90		90
Base Capacity (vph)	580	1883	109	819	334	308	420	188	153	314
Starvation Cap Reductn	437	819	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	203	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	2.03	1.12	0.61	1.79	0.34	0.12	0.11	0.39	0.69	0.29

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	268	1084	16	61	913	100	105	27	8	43	68	17
Future Volume (vph)	268	1084	16	61	913	100	105	27	8	43	68	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.7		4.9	6.1		6.1		6.9	6.9	7.0	7.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		0.89		1.00	0.91	1.00	0.88
Flpb, ped/bikes	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	0.99		0.85		1.00	0.85	1.00	0.88
Flt Protected	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (prot)	1770	3528		1770	3449		1408		1794	1440	1770	1439
Flt Permitted	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (perm)	1770	3528		1770	3449		1408		1794	1440	1770	1439
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)	291	1178	17	66	992	109	114	29	9	47	74	18
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	39	0	0
Lane Group Flow (vph)	291	1194	0	66	1101	0	114	0	38	8	74	106
Confl. Peds. (#/hr)	29		16	16		29	29	44		44	44	
Turn Type	Prot	NA		Prot	NA		Perm	Split	NA	Perm	Split	NA
Protected Phases	1 3	3 6		5	2			7	7		8	8
Permitted Phases							2			7		
Actuated Green, G (s)	44.9	71.5		7.0	32.4		32.4		23.0	23.0	14.0	14.0
Effective Green, g (s)	44.9	65.4		7.0	32.4		32.4		23.0	23.0	14.0	14.0
Actuated g/C Ratio	0.32	0.47		0.05	0.23		0.23		0.16	0.16	0.10	0.10
Clearance Time (s)				4.9	6.1		6.1		6.9	6.9	7.0	7.0
Vehicle Extension (s)				3.0	4.8		4.8		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	567	1648		88	798		325		294	236	177	143
v/s Ratio Prot	0.16	c0.34		0.04	c0.32				c0.02		0.04	c0.07
v/s Ratio Perm							0.08			0.01		
v/c Ratio	0.51	0.72		0.75	1.38		0.35		0.13	0.03	0.42	0.74
Uniform Delay, d1	38.7	30.1		65.6	53.8		45.0		49.9	49.2	59.2	61.2
Progression Factor	0.40	0.17		1.00	1.00		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1		29.6	178.7		3.0		0.2	0.1	1.6	18.5
Delay (s)	15.7	5.4		95.3	232.5		48.0		50.1	49.2	60.8	79.8
Level of Service	B	A		F	F		D		D	D	E	E
Approach Delay (s)		7.4			209.0				49.6			67.1
Approach LOS		A			F				D			E
Intersection Summary												
HCM 2000 Control Delay			96.4			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			0.81									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			31.8			
Intersection Capacity Utilization			90.5%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/21/2024



Movement	SBR	SBR2
Lane Configurations		
Traffic Volume (vph)	81	83
Future Volume (vph)	81	83
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		7.0
Lane Util. Factor		1.00
Frpb, ped/bikes		0.76
Flpb, ped/bikes		1.00
Frt		0.85
Flt Protected		1.00
Satd. Flow (prot)		1210
Flt Permitted		1.00
Satd. Flow (perm)		1210
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	88	90
RTOR Reduction (vph)	0	81
Lane Group Flow (vph)	0	9
Confl. Peds. (#/hr)	44	44
Turn Type		Perm
Protected Phases		
Permitted Phases		8
Actuated Green, G (s)		14.0
Effective Green, g (s)		14.0
Actuated g/C Ratio		0.10
Clearance Time (s)		7.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)		121
v/s Ratio Prot		
v/s Ratio Perm		0.01
v/c Ratio		0.07
Uniform Delay, d1		57.1
Progression Factor		1.00
Incremental Delay, d2		0.3
Delay (s)		57.4
Level of Service		E
Approach Delay (s)		
Approach LOS		
Intersection Summary		

HCM 6th Signalized Intersection Summary

22: Carpenter Avenue & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	297	802	101	117	1026	211	63	30	88	77	41	98
Future Volume (veh/h)	297	802	101	117	1026	211	63	30	88	77	41	98
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.91	0.95		0.91	0.96		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	323	872	110	127	1115	229	68	33	96	84	45	107
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	292	1388	175	158	1057	215	106	59	111	197	94	343
Arrive On Green	0.16	0.44	0.44	0.03	0.12	0.12	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3142	396	1781	2885	588	242	251	468	582	396	1448
Grp Volume(v), veh/h	323	493	489	127	683	661	197	0	0	129	0	107
Grp Sat Flow(s), veh/h/ln	1781	1777	1761	1781	1777	1696	961	0	0	978	0	1448
Q Serve(g_s), s	16.4	21.4	21.4	7.1	36.6	36.6	9.4	0.0	0.0	0.0	0.0	6.1
Cycle Q Clear(g_c), s	16.4	21.4	21.4	7.1	36.6	36.6	21.1	0.0	0.0	11.7	0.0	6.1
Prop In Lane	1.00		0.23	1.00		0.35	0.35		0.49	0.65		1.00
Lane Grp Cap(c), veh/h	292	785	778	158	651	621	276	0	0	291	0	343
V/C Ratio(X)	1.11	0.63	0.63	0.80	1.05	1.06	0.71	0.00	0.00	0.44	0.00	0.31
Avail Cap(c_a), veh/h	292	785	778	192	651	621	281	0	0	296	0	348
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.74	0.74	0.74	0.45	0.45	0.45	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.8	21.6	21.6	47.7	44.0	44.0	38.3	0.0	0.0	33.2	0.0	31.5
Incr Delay (d2), s/veh	77.0	2.8	2.8	8.9	37.7	43.1	8.2	0.0	0.0	1.1	0.0	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(95%),veh/ln	19.4	13.3	13.2	5.7	30.7	30.8	9.1	0.0	0.0	5.1	0.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	118.8	24.4	24.4	56.6	81.7	87.1	46.5	0.0	0.0	34.2	0.0	32.0
LnGrp LOS	F	C	C	E	F	F	D	A	A	C	A	C
Approach Vol, veh/h	1305			1471			197			236		
Approach Delay, s/veh	47.8			81.9			46.5			33.2		
Approach LOS	D			F			D			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	33.5	53.4		33.2	21.0	45.8		33.2				
Change Period (Y+Rc), s	4.6	* 9.2		9.5	4.6	* 9.2		9.5				
Max Green Setting (Gmax), s	40.8	* 42		24.0	16.4	* 36		24.0				
Max Q Clear Time (g_c+I), s	19.5	23.4		13.7	18.4	38.6		23.1				
Green Ext Time (p_c), s	0.0	11.6		0.8	0.0	0.0		0.1				

Intersection Summary

HCM 6th Ctrl Delay 62.3

HCM 6th LOS E

Notes

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

Queues

23: Ventura Boulevard & Colfax Avenue

06/21/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	226	861	1216	420	547
v/c Ratio	0.60	0.40	0.96	0.82	0.55
Control Delay	39.0	5.7	40.0	46.3	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	39.0	5.7	40.0	46.3	6.7
Queue Length 50th (ft)	91	53	157	246	64
Queue Length 95th (ft)	m130	66	#633	338	119
Internal Link Dist (ft)		981	464		
Turn Bay Length (ft)	160			360	360
Base Capacity (vph)	377	2130	1273	538	987
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.60	0.40	0.96	0.78	0.55

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.



















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

23: Ventura Boulevard & Colfax Avenue

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	208	792	0	0	846	272	0	0	0	386	0	503
Future Volume (vph)	208	792	0	0	846	272	0	0	0	386	0	503
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.4			5.4					5.4		5.7
Lane Util. Factor	1.00	0.95			0.95					1.00		1.00
Frt	1.00	1.00			0.96					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1770	3539			3410					1770		1583
Flt Permitted	0.09	1.00			1.00					0.95		1.00
Satd. Flow (perm)	173	3539			3410					1770		1583
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)	226	861	0	0	920	296	0	0	0	420	0	547
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	191
Lane Group Flow (vph)	226	861	0	0	1216	0	0	0	0	420	0	356
Turn Type	pm+pt	NA			NA					pm+pt		pm+ov
Protected Phases	5	2			6			3		4		5
Permitted Phases	2						3			7		4
Actuated Green, G (s)	60.2	60.2			37.4					29.0		46.1
Effective Green, g (s)	60.2	60.2			37.4					29.0		46.1
Actuated g/C Ratio	0.60	0.60			0.37					0.29		0.46
Clearance Time (s)	5.7	5.4			5.4					5.4		5.7
Vehicle Extension (s)	3.0	4.3			4.5					3.0		3.0
Lane Grp Cap (vph)	377	2130			1275					513		729
v/s Ratio Prot	c0.10	0.24			c0.36					c0.24		0.08
v/s Ratio Perm	0.26											0.14
v/c Ratio	0.60	0.40			0.95					0.82		0.49
Uniform Delay, d1	21.7	10.5			30.5					33.1		18.7
Progression Factor	1.84	0.46			0.67					1.00		1.00
Incremental Delay, d2	2.1	0.5			15.5					9.8		0.5
Delay (s)	42.0	5.3			35.9					42.9		19.3
Level of Service	D	A			D					D		B
Approach Delay (s)		12.9			35.9			0.0			29.5	
Approach LOS		B			D			A			C	
Intersection Summary												
HCM 2000 Control Delay		26.4			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		0.90										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)			22.8				
Intersection Capacity Utilization		77.6%			ICU Level of Service			D				
Analysis Period (min)		15										
c Critical Lane Group												

Queues

24: Berry Drive & Ventura Boulevard

06/21/2024



Lane Group	EBT	WBL	WBT	NBT
Lane Group Flow (vph)	2273	42	1224	66
v/c Ratio	0.78	0.55	0.42	0.29
Control Delay	7.6	35.2	3.9	3.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.6	35.2	3.9	3.7
Queue Length 50th (ft)	241	10	253	0
Queue Length 95th (ft)	383	m18	20	5
Internal Link Dist (ft)	342		273	287
Turn Bay Length (ft)		65		
Base Capacity (vph)	2911	77	2933	395
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.78	0.55	0.42	0.17



















Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

24: Berry Drive & Ventura Boulevard

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1973	118	39	1126	0	21	0	40	0	0	0
Future Volume (vph)	0	1973	118	39	1126	0	21	0	40	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0			9.4				
Lane Util. Factor		0.95		1.00	0.95			1.00				
Frt		0.99		1.00	1.00			0.91				
Flt Protected		1.00		0.95	1.00			0.98				
Satd. Flow (prot)		3509		1770	3539			1670				
Flt Permitted		1.00		0.05	1.00			0.98				
Satd. Flow (perm)		3509		93	3539			1670				
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)	0	2145	128	42	1224	0	23	0	43	0	0	0
RTOR Reduction (vph)	0	2	0	0	0	0	0	62	0	0	0	0
Lane Group Flow (vph)	0	2271	0	42	1224	0	0	4	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		6			2		3	3			4	
Permitted Phases	6			2						4		
Actuated Green, G (s)		80.0		80.0	80.0			5.6				
Effective Green, g (s)		80.0		80.0	80.0			5.6				
Actuated g/C Ratio		0.80		0.80	0.80			0.06				
Clearance Time (s)		5.0		5.0	5.0			9.4				
Vehicle Extension (s)		4.9		4.0	4.0			3.0				
Lane Grp Cap (vph)		2807		74	2831			93				
v/s Ratio Prot		c0.65			0.35			c0.00				
v/s Ratio Perm				0.45								
v/c Ratio		0.81		0.57	0.43			0.04				
Uniform Delay, d1		5.7		3.7	3.1			44.7				
Progression Factor		0.92		1.50	1.17			1.00				
Incremental Delay, d2		2.6		22.4	0.4			0.2				
Delay (s)		7.8		27.9	4.0			44.8				
Level of Service		A		C	A			D				
Approach Delay (s)		7.8			4.7			44.8			0.0	
Approach LOS		A			A			D			A	
Intersection Summary												
HCM 2000 Control Delay			7.4			HCM 2000 Level of Service			A			
HCM 2000 Volume to Capacity ratio			0.85									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			23.7			
Intersection Capacity Utilization			76.1%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

25: Ventura Boulevard & Tujunga Avenue

06/21/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	183	1149	1170	255	339
v/c Ratio	0.53	0.47	0.65	0.36	0.55
Control Delay	14.4	13.4	21.3	34.5	24.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	14.4	13.4	21.3	34.5	24.2
Queue Length 50th (ft)	63	235	269	71	151
Queue Length 95th (ft)	m87	367	421	100	197
Internal Link Dist (ft)		426	233	3083	
Turn Bay Length (ft)	180			100	60
Base Capacity (vph)	368	2421	1791	1012	641
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.50	0.47	0.65	0.25	0.53

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

25: Ventura Boulevard & Tujunga Avenue

06/21/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	168	1057	974	102	235	312
Future Volume (vph)	168	1057	974	102	235	312
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.5	5.5		5.5	5.6
Lane Util. Factor	1.00	0.95	0.95		0.97	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	3539	3489		3433	1583
Flt Permitted	0.13	1.00	1.00		0.95	1.00
Satd. Flow (perm)	248	3539	3489		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	183	1149	1059	111	255	339
RTOR Reduction (vph)	0	0	7	0	0	24
Lane Group Flow (vph)	183	1149	1163	0	255	315
Turn Type	pm+pt	NA	NA		Prot	pt+ov
Protected Phases	1	6	2		4	1 7
Permitted Phases	6					4
Actuated Green, G (s)	68.4	68.4	51.1		20.6	37.8
Effective Green, g (s)	68.4	68.4	51.1		20.6	32.3
Actuated g/C Ratio	0.68	0.68	0.51		0.21	0.32
Clearance Time (s)	5.6	5.5	5.5		5.5	
Vehicle Extension (s)	3.0	4.4	4.9		3.0	
Lane Grp Cap (vph)	347	2420	1782		707	511
v/s Ratio Prot	0.06	0.32	c0.33		0.07	c0.20
v/s Ratio Perm	0.30					
v/c Ratio	0.53	0.47	0.65		0.36	0.62
Uniform Delay, d1	11.1	7.4	17.9		34.1	28.6
Progression Factor	1.37	1.59	1.00		1.00	1.00
Incremental Delay, d2	0.9	0.4	1.9		0.3	2.2
Delay (s)	16.0	12.2	19.8		34.4	30.8
Level of Service	B	B	B		C	C
Approach Delay (s)		12.7	19.8		32.4	
Approach LOS		B	B		C	
Intersection Summary						
HCM 2000 Control Delay			19.2		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.68			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	22.1
Intersection Capacity Utilization			61.6%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

26: Laurel Canyon Boulevard & Maxwellton Road

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Volume (veh/h)	128	0	79	0	0	0	2	1194	0	0	1584	104
Future Volume (veh/h)	128	0	79	0	0	0	2	1194	0	0	1584	104
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.83				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
Work Zone On Approach	No						No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h	139	0	86				2	1298	0	0	1722	113
Peak Hour Factor	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	0	0	2	2
Cap, veh/h	222	0	137				41	1981	0	0	1927	125
Arrive On Green	0.23	0.00	0.23				0.57	0.57	0.00	0.00	0.57	0.57
Sat Flow, veh/h	969	0	600				1	3567	0	0	3480	220
Grp Volume(v), veh/h	225	0	0				697	603	0	0	896	939
Grp Sat Flow(s),veh/h/ln	1569	0	0				1866	1617	0	0	1777	1830
Q Serve(g_s), s	11.6	0.0	0.0				0.0	23.1	0.0	0.0	39.5	40.9
Cycle Q Clear(g_c), s	11.6	0.0	0.0				23.0	23.1	0.0	0.0	39.5	40.9
Prop In Lane	0.62		0.38				0.00		0.00	0.00		0.12
Lane Grp Cap(c), veh/h	359	0	0				1102	920	0	0	1011	1041
V/C Ratio(X)	0.63	0.00	0.00				0.63	0.66	0.00	0.00	0.89	0.90
Avail Cap(c_a), veh/h	432	0	0				1102	920	0	0	1011	1041
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				0.78	0.78	0.00	0.00	0.15	0.15
Uniform Delay (d), s/veh	31.2	0.0	0.0				13.3	13.3	0.0	0.0	16.9	17.2
Incr Delay (d2), s/veh	2.1	0.0	0.0				2.2	2.9	0.0	0.0	2.0	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
%ile BackOfQ(95%),veh/ln	8.1	0.0	0.0				13.5	12.2	0.0	0.0	16.8	17.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.3	0.0	0.0				15.5	16.2	0.0	0.0	18.9	19.4
LnGrp LOS	C	A	A				B	B	A	A	B	B
Approach Vol, veh/h	225						1300			1835		
Approach Delay, s/veh	33.3						15.8			19.2		
Approach LOS	C						B			B		
Timer - Assigned Phs	2			4			6					
Phs Duration (G+Y+Rc), s	60.2			29.8			60.2					
Change Period (Y+Rc), s	9.0			9.2			9.0					
Max Green Setting (Gmax), s	47.0			24.8			47.0					
Max Q Clear Time (g_c+I1), s	42.9			13.6			25.1					
Green Ext Time (p_c), s	4.0			1.0			16.1					

Intersection Summary

HCM 6th Ctrl Delay	18.8
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary

27: Laurel Canyon Boulevard & Laurel Terrace Drive/Sunshine Terrace Drive

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↔		↔	↔	
Traffic Volume (veh/h)	17	16	262	106	23	94	60	1210	73	23	1623	19
Future Volume (veh/h)	17	16	262	106	23	94	60	1210	73	23	1623	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	17	285	115	25	102	65	1315	79	25	1764	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	44	30	341	123	31	80	83	2362	142	254	2188	26
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.05	0.69	0.69	0.61	0.61	0.61
Sat Flow, veh/h	54	132	1514	351	138	356	1781	3406	204	387	3597	43
Grp Volume(v), veh/h	320	0	0	242	0	0	65	685	709	25	870	915
Grp Sat Flow(s), veh/h/ln	700	0	0	844	0	0	1781	1777	1834	387	1777	1863
Q Serve(g_s), s	0.0	0.0	0.0	5.2	0.0	0.0	4.3	23.1	23.2	4.1	45.1	45.4
Cycle Q Clear(g_c), s	21.8	0.0	0.0	27.0	0.0	0.0	4.3	23.1	23.2	17.1	45.1	45.4
Prop In Lane	0.06		0.89	0.48		0.42	1.00		0.11	1.00		0.02
Lane Grp Cap(c), veh/h	414	0	0	234	0	0	83	1232	1271	254	1081	1133
V/C Ratio(X)	0.77	0.00	0.00	1.03	0.00	0.00	0.78	0.56	0.56	0.10	0.81	0.81
Avail Cap(c_a), veh/h	414	0	0	234	0	0	110	1232	1271	254	1081	1133
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.33	0.33	0.33
Uniform Delay (d), s/veh	44.8	0.0	0.0	49.6	0.0	0.0	56.6	9.2	9.2	16.0	18.0	18.1
Incr Delay (d2), s/veh	8.8	0.0	0.0	67.7	0.0	0.0	22.4	1.8	1.8	0.3	2.2	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(95%),veh/ln	15.4	0.0	0.0	17.5	0.0	0.0	4.4	13.4	13.8	0.7	21.6	22.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.5	0.0	0.0	117.3	0.0	0.0	79.0	11.0	11.0	16.3	20.3	20.2
LnGrp LOS	D	A	A	F	A	A	E	B	B	B	C	C
Approach Vol, veh/h	320			242			1459			1810		
Approach Delay, s/veh	53.5			117.3			14.0			20.2		
Approach LOS	D			F			B			C		
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	30.2	77.8		32.0		88.0		32.0				
Change Period (Y+Rc), s	4.6	4.8		* 5		4.8		* 5				
Max Green Setting (Gmax), s	71.2			* 27		83.2		* 27				
Max Q Clear Time (g_c+I), s	47.4			23.8		25.2		29.0				
Green Ext Time (p_c), s	0.0	15.3		0.6		14.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay 26.8

HCM 6th LOS C

Notes

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

Queues

28: Laurel Canyon Boulevard & Fryman Road

06/21/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	261	7	24	1173	2213
v/c Ratio	0.72	0.02	0.29	0.49	0.94
Control Delay	44.1	25.5	19.5	8.7	24.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.1	25.5	19.5	8.7	24.6
Queue Length 50th (ft)	139	3	5	150	514
Queue Length 95th (ft)	202	13	32	245	#869
Internal Link Dist (ft)				236	183
Turn Bay Length (ft)			145		
Base Capacity (vph)	542	485	82	2386	2345
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.48	0.01	0.29	0.49	0.94






















Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

28: Laurel Canyon Boulevard & Fryman Road

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								 			 	
Traffic Volume (vph)	240	0	6	0	0	0	22	1079	0	0	1735	301
Future Volume (vph)	240	0	6	0	0	0	22	1079	0	0	1735	301
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4		5.4				5.4	5.4			5.4	
Lane Util. Factor	1.00		1.00				1.00	0.95			0.95	
Frt	1.00		0.85				1.00	1.00			0.98	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	3539			3461	
Flt Permitted	0.95		1.00				0.07	1.00			1.00	
Satd. Flow (perm)	1770		1583				123	3539			3461	
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)	261	0	7	0	0	0	24	1173	0	0	1886	327
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	12	0
Lane Group Flow (vph)	261	0	7	0	0	0	24	1173	0	0	2201	0
Turn Type	Perm		Perm				Perm	NA		Perm	NA	
Protected Phases								2			6	
Permitted Phases	8		8				2			6		
Actuated Green, G (s)	18.5		18.5				60.7	60.7			60.7	
Effective Green, g (s)	18.5		18.5				60.7	60.7			60.7	
Actuated g/C Ratio	0.21		0.21				0.67	0.67			0.67	
Clearance Time (s)	5.4		5.4				5.4	5.4			5.4	
Vehicle Extension (s)	3.0		3.0				4.8	4.8			5.1	
Lane Grp Cap (vph)	363		325				82	2386			2334	
v/s Ratio Prot								0.33			c0.64	
v/s Ratio Perm	c0.15		0.00				0.20					
v/c Ratio	0.72		0.02				0.29	0.49			0.94	
Uniform Delay, d1	33.3		28.5				5.9	7.1			13.1	
Progression Factor	1.00		1.00				1.00	1.00			1.00	
Incremental Delay, d2	6.7		0.0				8.8	0.7			9.3	
Delay (s)	40.0		28.6				14.8	7.9			22.5	
Level of Service	D		C				B	A			C	
Approach Delay (s)		39.7			0.0			8.0			22.5	
Approach LOS		D			A			A			C	
Intersection Summary												
HCM 2000 Control Delay			19.0				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.89									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			10.8		
Intersection Capacity Utilization			78.7%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th TWSC
29: Laurel Canyon Boulevard & Woodbridge Street

06/24/2024

Intersection												
Int Delay, s/veh	8.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	3	0	17	4	0	55	15	1291	4	179	1791	22
Future Vol, veh/h	3	0	17	4	0	55	15	1291	4	179	1791	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	65	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	18	4	0	60	16	1403	4	195	1947	24

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	3083	3788	986	2801	3798	704	1971	0	0	1407	0	0
Stage 1	2349	2349	-	1437	1437	-	-	-	-	-	-	-
Stage 2	734	1439	-	1364	2361	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	5	4	247	8	4	379	290	-	-	481	-	-
Stage 1	37	68	-	140	197	-	-	-	-	-	-	-
Stage 2	378	197	-	155	67	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 3	2	247	5	2	379	290	-	-	481	-	-
Mov Cap-2 Maneuver	~ 3	2	-	5	2	-	-	-	-	-	-	-
Stage 1	35	40	-	132	186	-	-	-	-	-	-	-
Stage 2	301	186	-	85	40	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s\$ 540.9		235.4	0.2	1.6
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	290	-	-	19 62	481	-	-
HCM Lane V/C Ratio	0.056	-	-	1.144 1.034	0.405	-	-
HCM Control Delay (s)	18.2	-	-	\$ 540.9 235.4	17.5	-	-
HCM Lane LOS	C	-	-	F F	C	-	-
HCM 95th %tile Q(veh)	0.2	-	-	3 5	1.9	-	-

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

HCM 6th TWSC
30: Valleyheart Drive (North) & Laurel Canyon Boulevard

06/24/2024

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	2	0	12	6	0	28	19	1283	8	30	1797	7
Future Vol, veh/h	2	0	12	6	0	28	19	1283	8	30	1797	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	40	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	13	7	0	30	21	1395	9	33	1953	8

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2763	3469	981	2485	3469	702	1961	0	0	1404	0	0
Stage 1	2023	2023	-	1442	1442	-	-	-	-	-	-	-
Stage 2	740	1446	-	1043	2027	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	9	6	249	15	6	381	293	-	-	482	-	-
Stage 1	60	100	-	139	196	-	-	-	-	-	-	-
Stage 2	375	195	-	245	100	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	7	5	249	13	5	381	293	-	-	482	-	-
Mov Cap-2 Maneuver	7	5	-	13	5	-	-	-	-	-	-	-
Stage 1	56	93	-	129	182	-	-	-	-	-	-	-
Stage 2	320	181	-	216	93	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	133.1		120		0.3		0.2	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	293	-	-	42 64	482	-	-
HCM Lane V/C Ratio	0.07	-	-	0.362 0.577	0.068	-	-
HCM Control Delay (s)	18.2	-	-	133.1 120	13	-	-
HCM Lane LOS	C	-	-	F F	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.2 2.4	0.2	-	-





HCM 6th TWSC

31: Laurel Canyon Boulevard & Valleyheart Drive (South)

06/24/2024

Intersection

Int Delay, s/veh 2.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	96	1219	19	139	1660
Future Vol, veh/h	5	96	1219	19	139	1660
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	35	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	104	1325	21	151	1804

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	2540	673	0
Stage 1	1336	-	-
Stage 2	1204	-	-
Critical Hdwy	6.84	6.94	-
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	-
Pot Cap-1 Maneuver	22	398	-
Stage 1	210	-	-
Stage 2	247	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	15	398	-
Mov Cap-2 Maneuver	15	-	-
Stage 1	210	-	-
Stage 2	174	-	-

Approach	WB	NB	SB
HCM Control Delay, s	54.4	0	1.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	176	508
HCM Lane V/C Ratio	-	-	0.624	0.297
HCM Control Delay (s)	-	-	54.4	15.1
HCM Lane LOS	-	-	F	C
HCM 95th %tile Q(veh)	-	-	3.5	1.2

HCM 6th AWSC

32: Radford Avenue & Sarah Street

06/24/2024

Intersection

Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	1	0	3	6	57	2	38	1	120	108	14
Future Vol, veh/h	13	1	0	3	6	57	2	38	1	120	108	14
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	1	0	3	7	62	2	41	1	130	117	15
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0




Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8	7.5	7.6	9.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	93%	5%	50%
Vol Thru, %	93%	7%	9%	45%
Vol Right, %	2%	0%	86%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	41	14	66	242
LT Vol	2	13	3	120
Through Vol	38	1	6	108
RT Vol	1	0	57	14
Lane Flow Rate	45	15	72	263
Geometry Grp	1	1	1	1
Degree of Util (X)	0.054	0.021	0.082	0.306
Departure Headway (Hd)	4.391	4.893	4.134	4.186
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	819	735	872	852
Service Time	2.399	2.898	2.137	2.247
HCM Lane V/C Ratio	0.055	0.02	0.083	0.309
HCM Control Delay	7.6	8	7.5	9.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.1	0.3	1.3

Intersection

Intersection Delay, s/veh 9.4

Intersection LOS A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	56	56	40	177	177	86
Future Vol, veh/h	56	56	40	177	177	86
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	61	61	43	192	192	93
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8.9	8.6	10.3
HCM LOS	A	A	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	50%	67%
Vol Thru, %	18%	0%	33%
Vol Right, %	82%	50%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	217	112	263
LT Vol	0	56	177
Through Vol	40	0	86
RT Vol	177	56	0
Lane Flow Rate	236	122	286
Geometry Grp	1	1	1
Degree of Util (X)	0.267	0.164	0.366
Departure Headway (Hd)	4.069	4.86	4.606
Convergence, Y/N	Yes	Yes	Yes
Cap	882	737	780
Service Time	2.095	2.902	2.634
HCM Lane V/C Ratio	0.268	0.166	0.367
HCM Control Delay	8.6	8.9	10.3
HCM Lane LOS	A	A	B
HCM 95th-tile Q	1.1	0.6	1.7

HCM 6th AWSC

54: Radford Avenue & Radford Gate

06/24/2024

Intersection

Intersection Delay, s/veh13.4

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	40	64	0	0	19	345	150	0	174	1
Future Vol, veh/h	2	0	40	64	0	0	19	345	150	0	174	1
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	43	70	0	0	21	375	163	0	189	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0





Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.6	9.7	15.6	9.6
HCM LOS	A	A	C	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	5%	100%	0%
Vol Thru, %	67%	0%	0%	99%
Vol Right, %	29%	95%	0%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	514	42	64	175
LT Vol	19	2	64	0
Through Vol	345	0	0	174
RT Vol	150	40	0	1
Lane Flow Rate	559	46	70	190
Geometry Grp	1	1	1	1
Degree of Util (X)	0.668	0.065	0.113	0.255
Departure Headway (Hd)	4.302	5.125	5.837	4.829
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	838	691	609	740
Service Time	2.343	3.213	3.92	2.887
HCM Lane V/C Ratio	0.667	0.067	0.115	0.257
HCM Control Delay	15.6	8.6	9.7	9.6
HCM Lane LOS	C	A	A	A
HCM 95th-tile Q	5.2	0.2	0.4	1

Intersection

Intersection Delay, s/veh15.6

Intersection LOS C




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	13	27	46	32	0	21	498	18	0	172	0
Future Vol, veh/h	0	13	27	46	32	0	21	498	18	0	172	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	14	29	50	35	0	23	541	20	0	187	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.9	9.9	18.8	9.7
HCM LOS	A	A	C	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	0%	59%	0%
Vol Thru, %	93%	32%	41%	100%
Vol Right, %	3%	68%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	537	40	78	172
LT Vol	21	0	46	0
Through Vol	498	13	32	172
RT Vol	18	27	0	0
Lane Flow Rate	584	43	85	187
Geometry Grp	1	1	1	1
Degree of Util (X)	0.73	0.067	0.138	0.256
Departure Headway (Hd)	4.502	5.525	5.856	4.935
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	800	652	606	722
Service Time	2.556	3.525	3.955	3.009
HCM Lane V/C Ratio	0.73	0.066	0.14	0.259
HCM Control Delay	18.8	8.9	9.9	9.7
HCM Lane LOS	C	A	A	A
HCM 95th-tile Q	6.5	0.2	0.5	1

HCM 6th TWSC
56: Colfax Avenue & Colfax Gate

06/24/2024

Intersection						
Int Delay, s/veh	4.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	56	19	59	352	938	177
Future Vol, veh/h	56	19	59	352	938	177
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	61	21	64	383	1020	192

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1627	1116	1212
Stage 1	1116	-	-
Stage 2	511	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	112	253	576
Stage 1	313	-	-
Stage 2	602	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	96	253	576
Mov Cap-2 Maneuver	96	-	-
Stage 1	269	-	-
Stage 2	602	-	-

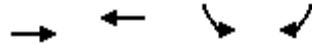
Approach	EB	NB	SB
HCM Control Delay, s	91.9	1.7	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	576	-	114	-	-
HCM Lane V/C Ratio	0.111	-	0.715	-	-
HCM Control Delay (s)	12	-	91.9	-	-
HCM Lane LOS	B	-	F	-	-
HCM 95th %tile Q(veh)	0.4	-	3.9	-	-

Queues

121: Ventura Boulevard & Ventura PI

06/21/2024



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1413	1110	74	32
v/c Ratio	1.35	0.52	0.12	0.10
Control Delay	203.7	17.3	48.2	15.2
Queue Delay	1.4	51.2	0.0	0.0
Total Delay	205.1	68.4	48.2	15.2
Queue Length 50th (ft)	~954	141	29	0
Queue Length 95th (ft)	#1094	m51	52	30
Internal Link Dist (ft)	509	48	136	
Turn Bay Length (ft)				40
Base Capacity (vph)	1043	2099	669	334
Starvation Cap Reductn	0	1293	0	0
Spillback Cap Reductn	246	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.77	1.38	0.11	0.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

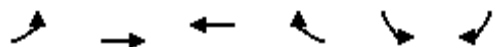
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

121: Ventura Boulevard & Ventura PI

06/21/2024



























Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	↑
Traffic Volume (vph)	0	1300	1021	0	68	29
Future Volume (vph)	0	1300	1021	0	68	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.1	6.1		5.7	5.7
Lane Util. Factor		0.95	0.95		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3433	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1413	1110	0	74	32
RTOR Reduction (vph)	0	0	0	0	0	26
Lane Group Flow (vph)	0	1413	1110	0	74	6
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2 4		3	
Permitted Phases						3
Actuated Green, G (s)		40.4	83.3		25.0	25.0
Effective Green, g (s)		40.4	83.3		25.0	25.0
Actuated g/C Ratio		0.29	0.59		0.18	0.18
Clearance Time (s)		6.1			5.7	5.7
Vehicle Extension (s)		4.6			3.0	3.0
Lane Grp Cap (vph)		1021	2105		613	282
v/s Ratio Prot		c0.40	c0.31		c0.02	
v/s Ratio Perm						0.00
v/c Ratio		1.38	0.53		0.12	0.02
Uniform Delay, d1		49.8	16.7		48.3	47.4
Progression Factor		1.00	1.03		1.00	1.00
Incremental Delay, d2		178.9	0.0		0.1	0.0
Delay (s)		228.7	17.3		48.4	47.4
Level of Service		F	B		D	D
Approach Delay (s)		228.7	17.3		48.1	
Approach LOS		F	B		D	
Intersection Summary						
HCM 2000 Control Delay		132.2		HCM 2000 Level of Service		F
HCM 2000 Volume to Capacity ratio		0.84				
Actuated Cycle Length (s)		140.0		Sum of lost time (s)		31.8
Intersection Capacity Utilization		52.4%		ICU Level of Service		A
Analysis Period (min)		15				
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

1: Riverside Drive & Laurel Canyon Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	326	1004	163	120	526	110	219	869	124	164	870	232
Future Volume (veh/h)	326	1004	163	120	526	110	219	869	124	164	870	232
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	354	1091	177	130	572	120	238	945	135	178	946	252
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	379	1285	573	256	784	350	276	1052	586	221	1051	279
Arrive On Green	0.21	0.36	0.36	0.02	0.07	0.07	0.11	0.30	0.30	0.08	0.26	0.26
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	3554	1585	1781	4016	1067
Grp Volume(v), veh/h	354	1091	177	130	572	120	238	945	135	178	802	396
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1777	1585	1781	1702	1678
Q Serve(g_s), s	23.4	33.9	9.6	4.5	18.9	8.6	11.5	30.6	7.0	8.8	27.3	27.4
Cycle Q Clear(g_c), s	23.4	33.9	9.6	4.5	18.9	8.6	11.5	30.6	7.0	8.8	27.3	27.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.64
Lane Grp Cap(c), veh/h	379	1285	573	256	784	350	276	1052	586	221	891	439
V/C Ratio(X)	0.93	0.85	0.31	0.51	0.73	0.34	0.86	0.90	0.23	0.81	0.90	0.90
Avail Cap(c_a), veh/h	387	1285	573	259	784	350	278	1052	586	221	891	439
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	0.76	0.76	0.76	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.4	35.3	27.5	56.4	52.1	47.4	30.9	40.5	26.0	32.8	42.8	42.8
Incr Delay (d2), s/veh	29.4	7.1	1.4	1.6	5.9	2.7	18.5	9.5	0.7	19.3	13.8	24.4
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(95%),veh/ln	19.2	21.8	6.8	3.6	14.7	6.9	9.8	19.9	4.9	8.5	18.7	20.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.8	42.4	28.9	58.0	58.1	50.0	49.4	50.0	26.7	52.1	56.6	67.2
LnGrp LOS	E	D	C	E	E	D	D	D	C	D	E	E
Approach Vol, veh/h	1622			822			1318			1376		
Approach Delay, s/veh	48.2			56.9			47.5			59.1		
Approach LOS	D			E			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.1	37.3	31.4	32.2	15.0	41.4	14.5	49.1				
Change Period (Y+Rc), s	5.6	5.9	5.9	* 5.7	5.6	5.9	5.6	* 5.7				
Max Green Setting (Gmax), s	13.6	31.2	26.1	* 26	9.4	35.4	9.0	* 43				
Max Q Clear Time (g_c+I1), s	13.5	29.4	25.4	20.9	10.8	32.6	6.5	35.9				
Green Ext Time (p_c), s	0.0	1.2	0.1	1.8	0.0	1.7	0.1	4.4				

Intersection Summary

HCM 6th Ctrl Delay	52.3
HCM 6th LOS	D








Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

HCM 6th TWSC

2: Riverside Drive & Radford Avenue

06/24/2024

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	1020	34	38	1029	7	17	2	29	1	0	8
Future Vol, veh/h	12	1020	34	38	1029	7	17	2	29	1	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	105	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	1109	37	41	1118	8	18	2	32	1	0	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1126	0	0	1146	0	0	1776	2343	555	1786	2376	563
Stage 1	-	-	-	-	-	-	1135	1135	-	1204	1204	-
Stage 2	-	-	-	-	-	-	641	1208	-	582	1172	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	616	-	-	605	-	-	52	36	475	51	34	470
Stage 1	-	-	-	-	-	-	215	275	-	195	255	-
Stage 2	-	-	-	-	-	-	430	254	-	466	264	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	616	-	-	605	-	-	48	33	475	42	31	470
Mov Cap-2 Maneuver	-	-	-	-	-	-	48	33	-	42	31	-
Stage 1	-	-	-	-	-	-	210	269	-	191	238	-
Stage 2	-	-	-	-	-	-	393	237	-	422	258	-

























Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.4	73.7	22.1
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	101	616	-	-	605	-	-	220
HCM Lane V/C Ratio	0.517	0.021	-	-	0.068	-	-	0.044
HCM Control Delay (s)	73.7	11	-	-	11.4	-	-	22.1
HCM Lane LOS	F	B	-	-	B	-	-	C
HCM 95th %tile Q(veh)	2.3	0.1	-	-	0.2	-	-	0.1

HCM 6th Signalized Intersection Summary

3: Colfax Avenue & Riverside Drive

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	674	189	203	750	41	152	525	87	30	342	84
Future Volume (veh/h)	156	674	189	203	750	41	152	525	87	30	342	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	170	733	205	221	815	45	165	571	95	33	372	91
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	247	1356	605	298	1356	605	402	826	700	390	826	700
Arrive On Green	0.76	0.76	0.76	0.38	0.38	0.38	0.88	0.88	0.88	0.44	0.44	0.44
Sat Flow, veh/h	643	3554	1585	597	3554	1585	929	1870	1585	770	1870	1585
Grp Volume(v), veh/h	170	733	205	221	815	45	165	571	95	33	372	91
Grp Sat Flow(s),veh/h/ln	643	1777	1585	597	1777	1585	929	1870	1585	770	1870	1585
Q Serve(g_s), s	11.9	5.0	2.5	17.9	11.0	1.1	6.5	5.5	0.5	1.7	8.3	2.0
Cycle Q Clear(g_c), s	22.9	5.0	2.5	22.9	11.0	1.1	14.8	5.5	0.5	7.2	8.3	2.0
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	247	1356	605	298	1356	605	402	826	700	390	826	700
V/C Ratio(X)	0.69	0.54	0.34	0.74	0.60	0.07	0.41	0.69	0.14	0.08	0.45	0.13
Avail Cap(c_a), veh/h	247	1356	605	298	1356	605	402	826	700	390	826	700
HCM Platoon Ratio	2.00	2.00	2.00	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	0.92	0.92	0.92	0.57	0.57	0.57	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.1	5.0	4.7	22.8	14.9	11.8	5.4	2.3	2.0	13.2	11.7	9.9
Incr Delay (d2), s/veh	14.6	1.5	1.5	14.2	1.8	0.2	1.8	2.7	0.2	0.4	1.8	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(95%),veh/ln	4.0	2.4	1.5	7.3	7.2	0.6	0.9	2.5	0.3	0.6	5.9	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.7	6.5	6.2	36.9	16.7	12.0	7.1	5.0	2.2	13.7	13.4	10.3
LnGrp LOS	C	A	A	D	B	B	A	A	A	B	B	B
Approach Vol, veh/h	1108			1081			831			496		
Approach Delay, s/veh	9.9			20.6			5.1			12.9		
Approach LOS	A			C			A			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	28.0			32.0			28.0			32.0		
Change Period (Y+Rc), s	* 5.1			* 5.5			* 5.1			* 5.5		
Max Green Setting (Gmax), s	* 23			* 27			* 23			* 27		
Max Q Clear Time (g_c+I1), s	24.9			16.8			24.9			10.3		
Green Ext Time (p_c), s	0.0			3.4			0.0			2.4		
Intersection Summary												
HCM 6th Ctrl Delay	12.5											
HCM 6th LOS	B											
Notes												

Queues

4: Riverside Drive & SR 170 Southbound Off-Ramp

06/24/2024



Lane Group	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	889	5	784	15	253	238	234
v/c Ratio	0.44	0.02	0.39	0.05	0.64	0.49	0.44
Control Delay	11.5	11.0	11.9	0.3	31.5	9.8	6.0
Queue Delay	1.0	0.0	0.3	0.1	0.7	0.6	0.0
Total Delay	12.5	11.0	12.3	0.4	32.1	10.4	6.0
Queue Length 50th (ft)	100	1	128	0	100	19	0
Queue Length 95th (ft)	226	m5	245	0	171	79	50
Internal Link Dist (ft)	2214		245	105		344	
Turn Bay Length (ft)		25			140		150
Base Capacity (vph)	2015	267	2016	302	466	543	585
Starvation Cap Reductn	0	0	618	0	0	0	0
Spillback Cap Reductn	800	0	0	90	54	100	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.02	0.56	0.07	0.61	0.54	0.40

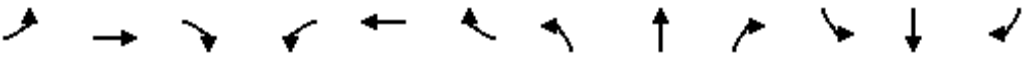
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: Riverside Drive & SR 170 Southbound Off-Ramp













06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑	↑↑			↑↓		↑	↑↓	↑
Traffic Volume (vph)	0	813	5	5	721	0	0	0	14	277	6	384
Future Volume (vph)	0	813	5	5	721	0	0	0	14	277	6	384
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Lane Util. Factor		0.95		1.00	0.95			1.00		0.95	0.91	0.95
Frt		1.00		1.00	1.00			0.86		1.00	0.88	0.85
Flt Protected		1.00		0.95	1.00			1.00		0.95	0.99	1.00
Satd. Flow (prot)		3536		1770	3539			1611		1681	1485	1504
Flt Permitted		1.00		0.25	1.00			1.00		0.95	0.99	1.00
Satd. Flow (perm)		3536		470	3539			1611		1681	1485	1504
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)	0	884	5	5	784	0	0	0	15	301	7	417
RTOR Reduction (vph)	0	1	0	0	0	0	0	15	0	0	140	179
Lane Group Flow (vph)	0	889	0	5	784	0	0	0	0	253	98	55
Turn Type		NA		Perm	NA			NA		Split	NA	Perm
Protected Phases		6			2			4		3	3	
Permitted Phases				2			4					3
Actuated Green, G (s)		35.0		35.0	35.0			1.6		16.4	16.4	16.4
Effective Green, g (s)		35.0		35.0	35.0			1.6		16.4	16.4	16.4
Actuated g/C Ratio		0.50		0.50	0.50			0.02		0.23	0.23	0.23
Clearance Time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Vehicle Extension (s)		3.8		2.4	2.4			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1768		235	1769			36		393	347	352
v/s Ratio Prot		c0.25			0.22			c0.00		c0.15	0.07	
v/s Ratio Perm				0.01								0.04
v/c Ratio		0.50		0.02	0.44			0.01		0.64	0.28	0.16
Uniform Delay, d1		11.7		8.8	11.2			33.4		24.2	22.0	21.3
Progression Factor		1.00		0.98	1.16			1.00		1.00	1.00	1.00
Incremental Delay, d2		1.0		0.1	0.7			0.1		3.6	0.4	0.2
Delay (s)		12.7		8.8	13.7			33.5		27.8	22.4	21.5
Level of Service		B		A	B			C		C	C	C
Approach Delay (s)		12.7			13.7			33.5			24.0	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			16.5			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.53									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			56.6%			ICU Level of Service				B		
Analysis Period (min)			15									
c Critical Lane Group												

Queues

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	NWL	NWR
Lane Group Flow (vph)	232	695	309	238	384	157	32	921	64	553	357	129
v/c Ratio	0.87	1.07	1.08	1.37	0.50	0.46	0.14	0.94	0.42	0.41	0.66	0.57
Control Delay	71.3	108.2	125.0	230.3	50.9	52.8	45.0	67.6	69.8	33.0	61.4	64.2
Queue Delay	0.0	11.8	10.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0
Total Delay	71.3	120.0	135.4	230.3	50.9	52.8	45.0	67.6	69.8	33.0	61.8	64.2
Queue Length 50th (ft)	177	~381	~339	~230	163	126	23	~478	56	191	159	120
Queue Length 95th (ft)	#262	#532	#567	#409	216	200	56	#686	107	261	204	190
Internal Link Dist (ft)		245			745			2580		383	758	
Turn Bay Length (ft)	140		230	85		110	270		290		215	
Base Capacity (vph)	267	647	287	174	765	342	233	976	151	1341	686	288
Starvation Cap Reductn	0	139	41	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	18	88	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	1.37	1.26	1.37	0.50	0.46	0.14	0.94	0.42	0.42	0.60	0.45

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.





















95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024

												
Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	213	463	285	176	17	202	353	144	29	722	107	18
Future Volume (vph)	213	463	285	176	17	202	353	144	29	722	107	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Lane Util. Factor	1.00	0.91	0.91			1.00	0.95	1.00	1.00	0.95		
Frt	1.00	0.96	0.85			1.00	1.00	0.85	1.00	0.98		
Flt Protected	0.95	1.00	1.00			0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1770	3250	1441			1770	3539	1583	1770	3461		
Flt Permitted	0.43	1.00	1.00			0.14	1.00	1.00	0.45	1.00		
Satd. Flow (perm)	794	3250	1441			258	3539	1583	829	3461		
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)	232	503	310	191	18	220	384	157	32	785	116	20
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	232	695	309	0	0	238	384	157	32	921	0	0
Turn Type	pm+pt	NA	Perm		pm+pt	pm+pt	NA	Perm	Perm	NA		
Protected Phases	1	6			5	5	2			8		
Permitted Phases	6		6		2	2		2	8			
Actuated Green, G (s)	34.6	26.5	26.5			38.3	28.9	28.9	39.5	39.5		
Effective Green, g (s)	34.6	26.5	26.5			38.3	28.9	28.9	39.5	39.5		
Actuated g/C Ratio	0.25	0.19	0.19			0.27	0.21	0.21	0.28	0.28		
Clearance Time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Vehicle Extension (s)	3.0	3.9	3.9			3.0	4.6	4.6	4.7	4.7		
Lane Grp Cap (vph)	252	615	272			172	730	326	233	976		
v/s Ratio Prot	0.05	0.21				c0.09	0.11			c0.27		
v/s Ratio Perm	0.17		0.21			c0.29		0.10	0.04			
v/c Ratio	0.92	1.13	1.14			1.38	0.53	0.48	0.14	0.94		
Uniform Delay, d1	49.7	56.8	56.8			46.2	49.5	48.9	37.5	49.2		
Progression Factor	1.01	1.01	1.01			1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2	33.8	76.3	94.0			204.5	2.7	5.0	0.5	17.2		
Delay (s)	83.9	133.8	151.3			250.7	52.2	54.0	38.0	66.3		
Level of Service	F	F	F			F	D	D	D	E		
Approach Delay (s)		128.8					113.2			65.4		
Approach LOS		F					F			E		
Intersection Summary												
HCM 2000 Control Delay			88.4			HCM 2000 Level of Service				F		
HCM 2000 Volume to Capacity ratio			1.03									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			33.0			
Intersection Capacity Utilization			101.3%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024



Movement	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	16	43	419	90	30	286	116	15
Future Volume (vph)	16	43	419	90	30	286	116	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.3			6.6	6.6	
Lane Util. Factor		1.00	0.95			0.97	0.91	
Frt		1.00	0.97			0.99	0.85	
Flt Protected		0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	3445			3429	1441	
Flt Permitted		0.95	1.00			0.95	1.00	
Satd. Flow (perm)		1770	3445			3429	1441	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	47	455	98	33	311	126	16
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	64	553	0	0	357	129	0
Turn Type	Prot	Prot	NA		Prot	Prot	Perm	
Protected Phases	7	7	4		3	3		
Permitted Phases							3	
Actuated Green, G (s)		9.6	55.9			22.0	22.0	
Effective Green, g (s)		9.6	55.9			22.0	22.0	
Actuated g/C Ratio		0.07	0.40			0.16	0.16	
Clearance Time (s)		6.8	6.3			6.6	6.6	
Vehicle Extension (s)		3.0	4.9			4.6	4.6	
Lane Grp Cap (vph)		121	1375			538	226	
v/s Ratio Prot		0.04	c0.16			c0.10		
v/s Ratio Perm							0.09	
v/c Ratio		0.53	0.40			0.66	0.57	
Uniform Delay, d1		63.0	30.1			55.5	54.6	
Progression Factor		1.00	1.00			1.00	1.00	
Incremental Delay, d2		4.1	0.4			3.8	4.9	
Delay (s)		67.1	30.5			59.3	59.6	
Level of Service		E	C			E	E	
Approach Delay (s)			34.3			59.4		
Approach LOS			C			E		
Intersection Summary								

HCM 6th Signalized Intersection Summary

6: Laurel Canyon Boulevard & US 101 Northbound Ramps

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰	↰	↰	↰			↰	↰
Traffic Volume (veh/h)	0	0	0	556	0	527	473	1100	0	1	933	169
Future Volume (veh/h)	0	0	0	556	0	527	473	1100	0	1	933	169
Initial Q (Qb), veh				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
Parking Bus, Adj				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		No
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	1870	1870	1870
Adj Flow Rate, veh/h				782	0	382	514	1196	0	1	1014	184
Peak Hour Factor				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	0	2	2	2
Cap, veh/h				1001	0	445	606	2157	0	40	1850	591
Arrive On Green				0.28	0.00	0.28	0.06	0.20	0.00	0.37	0.37	0.37
Sat Flow, veh/h				3563	0	1585	3456	3647	0	1	4966	1585
Grp Volume(v), veh/h				782	0	382	514	1196	0	382	633	184
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	1869	1549	1585
Q Serve(g_s), s				18.2	0.0	20.6	13.3	27.2	0.0	0.0	14.5	7.4
Cycle Q Clear(g_c), s				18.2	0.0	20.6	13.3	27.2	0.0	14.5	14.5	7.4
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1001	0	445	606	2157	0	736	1154	591
V/C Ratio(X)				0.78	0.00	0.86	0.85	0.55	0.00	0.52	0.55	0.31
Avail Cap(c_a), veh/h				1176	0	523	680	2157	0	736	1154	591
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.86	0.86	0.00	0.50	0.50	0.50
Uniform Delay (d), s/veh				29.8	0.0	30.7	41.2	25.0	0.0	22.3	22.3	20.0
Incr Delay (d2), s/veh				3.0	0.0	11.9	7.9	0.9	0.0	1.3	0.9	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
%ile BackOfQ(95%),veh/ln				12.2	0.0	13.6	10.7	18.5	0.0	9.2	7.8	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				32.8	0.0	42.5	49.1	25.9	0.0	23.6	23.2	20.7
LnGrp LOS				C	A	D	D	C	A	C	C	C
Approach Vol, veh/h					1164			1710			1199	
Approach Delay, s/veh					36.0			32.9			22.9	
Approach LOS					D			C			C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	31.1	38.3		30.6		59.4						
Change Period (Y+Rc), s	5.3	4.8		* 5.3		4.8						
Max Green Setting (Gmax), s	30	27.2		* 30		50.2						
Max Q Clear Time (g_c+M), s	16.5	16.5		22.6		29.2						
Green Ext Time (p_c), s	0.5	5.2		2.7		8.9						

Intersection Summary

HCM 6th Ctrl Delay 30.8

HCM 6th LOS C

Notes

User approved volume balancing among the lanes for turning movement.

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

HCM 6th Signalized Intersection Summary

7: US 101 Southbound Ramps & Laurel Canyon Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	333	22	527	0	0	0	0	1257	654	274	1188	0
Future Volume (veh/h)	333	22	527	0	0	0	0	1257	654	274	1188	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	249	0	710				0	1366	711	298	1291	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	432	0	769				0	3283	1019	358	2285	0
Arrive On Green	0.24	0.00	0.24				0.00	0.64	0.64	0.43	0.43	0.00
Sat Flow, veh/h	1781	0	3170				0	5274	1585	387	3647	0
Grp Volume(v), veh/h	249	0	710				0	1366	711	298	1291	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1702	1585	194	1777	0
Q Serve(g_s), s	11.1	0.0	19.7				0.0	11.7	26.1	46.1	24.6	0.0
Cycle Q Clear(g_c), s	11.1	0.0	19.7				0.0	11.7	26.1	57.9	24.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	432	0	769				0	3283	1019	358	2285	0
V/C Ratio(X)	0.58	0.00	0.92				0.00	0.42	0.70	0.83	0.56	0.00
Avail Cap(c_a), veh/h	435	0	775				0	3283	1019	358	2285	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.67	0.67	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.68	0.68	0.00
Uniform Delay (d), s/veh	30.0	0.0	33.3				0.0	7.8	10.4	39.2	16.1	0.0
Incr Delay (d2), s/veh	1.8	0.0	16.5				0.0	0.4	4.0	14.2	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
%ile BackOfQ(95%),veh/ln	8.2	0.0	13.6				0.0	6.7	13.4	6.9	15.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.9	0.0	49.8				0.0	8.2	14.4	53.4	16.8	0.0
LnGrp LOS	C	A	D				A	A	B	D	B	A
Approach Vol, veh/h	959						2077			1589		
Approach Delay, s/veh	45.2						10.3			23.7		
Approach LOS	D						B			C		
Timer - Assigned Phs	2			4			6					
Phs Duration (G+Y+Rc), s	63.0			27.0			63.0					
Change Period (Y+Rc), s	* 5.1			* 5.2			* 5.1					
Max Green Setting (Gmax), s	* 58			* 22			* 58					
Max Q Clear Time (g_c+I1), s	28.1			21.7			59.9					
Green Ext Time (p_c), s	16.3			0.2			0.0					

Intersection Summary

HCM 6th Ctrl Delay	22.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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

Queues

8: Laurel Canyon Boulevard & Landale Street

06/24/2024



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	187	173	53	82	72	1861	62	1616	111
v/c Ratio	0.88	0.63	0.39	0.24	0.30	0.90	0.71	0.98	0.24
Control Delay	78.2	25.1	44.9	1.7	19.8	17.1	56.3	37.2	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0
Total Delay	78.2	25.1	44.9	1.7	19.8	18.8	56.3	37.2	10.3
Queue Length 50th (ft)	111	29	29	0	8	372	18	~572	19
Queue Length 95th (ft)	#238	#105	63	0	m6	m75	m#81	#738	m51
Internal Link Dist (ft)		140	232			591		375	
Turn Bay Length (ft)	85			40	155		125		115
Base Capacity (vph)	212	273	173	380	287	2074	87	1649	456
Starvation Cap Reductn	0	0	0	0	0	97	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.63	0.31	0.22	0.25	0.94	0.71	0.98	0.24

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.























Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

8: Laurel Canyon Boulevard & Landale Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	11	115	30	18	75	66	1694	18	57	1487	102
Future Volume (vph)	205	11	115	30	18	75	66	1694	18	57	1487	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.86			1.00	1.00	1.00	1.00		1.00	1.00	0.62
Flpb, ped/bikes	1.00	1.00			0.88	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.89			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.99			0.97	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1341			1582	1583	1770	3531		1770	3539	979
Flt Permitted	0.95	0.99			0.71	1.00	0.09	1.00		0.10	1.00	1.00
Satd. Flow (perm)	1681	1341			1152	1583	165	3531		188	3539	979
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)	223	12	125	33	20	82	72	1841	20	62	1616	111
RTOR Reduction (vph)	0	104	0	0	0	74	0	1	0	0	0	0
Lane Group Flow (vph)	187	69	0	0	53	8	72	1860	0	62	1616	111
Confl. Peds. (#/hr)			79	79			164		19	19		164
Turn Type	Split	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	3	3			4		1	6			2	
Permitted Phases				4		4	6			2		2
Actuated Green, G (s)	11.4	11.4			8.4	8.4	51.7	51.7		39.7	39.7	39.7
Effective Green, g (s)	11.4	11.4			8.4	8.4	51.7	51.7		39.7	39.7	39.7
Actuated g/C Ratio	0.13	0.13			0.09	0.09	0.57	0.57		0.44	0.44	0.44
Clearance Time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	5.2		4.5	4.5	4.5
Lane Grp Cap (vph)	212	169			107	147	212	2028		82	1561	431
v/s Ratio Prot	c0.11	0.05					0.02	c0.53			c0.46	
v/s Ratio Perm					c0.05	0.00	0.17			0.33		0.11
v/c Ratio	0.88	0.41			0.50	0.05	0.34	0.92		0.76	1.04	0.26
Uniform Delay, d1	38.6	36.2			38.8	37.2	18.3	17.2		21.1	25.1	15.9
Progression Factor	1.00	1.00			1.00	1.00	2.00	0.85		0.54	0.67	0.49
Incremental Delay, d2	32.0	1.6			3.6	0.1	0.1	0.9		39.4	30.0	1.1
Delay (s)	70.6	37.8			42.4	37.3	36.7	15.6		50.9	46.8	8.9
Level of Service	E	D			D	D	D	B		D	D	A
Approach Delay (s)		54.9			39.3			16.4			44.6	
Approach LOS		D			D			B			D	
Intersection Summary												
HCM 2000 Control Delay			32.3									
HCM 2000 Volume to Capacity ratio			0.97									
Actuated Cycle Length (s)			90.0									
Intersection Capacity Utilization			89.1%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

9: Colfax Avenue & Sarah Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↑	↕
Traffic Volume (veh/h)	14	2	5	7	1	32	6	739	18	37	697	15
Future Volume (veh/h)	14	2	5	7	1	32	6	739	18	37	697	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.99	0.98		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	15	2	5	8	1	35	7	803	20	40	758	16
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	156	26	24	84	8	83	463	1306	1103	328	1306	1103
Arrive On Green	0.07	0.07	0.07	0.07	0.07	0.07	0.23	0.23	0.23	0.70	0.70	0.70
Sat Flow, veh/h	831	385	357	199	119	1239	696	1870	1579	665	1870	1579
Grp Volume(v), veh/h	22	0	0	44	0	0	7	803	20	40	758	16
Grp Sat Flow(s),veh/h/ln	1572	0	0	1557	0	0	696	1870	1579	665	1870	1579
Q Serve(g_s), s	0.0	0.0	0.0	0.4	0.0	0.0	0.5	23.1	0.6	2.6	12.3	0.2
Cycle Q Clear(g_c), s	0.7	0.0	0.0	1.6	0.0	0.0	12.8	23.1	0.6	25.7	12.3	0.2
Prop In Lane	0.68		0.23	0.18		0.80	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	206	0	0	175	0	0	463	1306	1103	328	1306	1103
V/C Ratio(X)	0.11	0.00	0.00	0.25	0.00	0.00	0.02	0.61	0.02	0.12	0.58	0.01
Avail Cap(c_a), veh/h	604	0	0	601	0	0	463	1306	1103	328	1306	1103
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.87	0.87	0.87	0.79	0.79	0.79
Uniform Delay (d), s/veh	26.5	0.0	0.0	26.9	0.0	0.0	17.1	15.9	7.2	15.0	4.6	2.8
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.7	0.0	0.0	0.1	1.9	0.0	0.6	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.0	0.0	1.1	0.0	0.0	0.2	17.0	0.2	0.7	5.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.7	0.0	0.0	27.6	0.0	0.0	17.1	17.7	7.2	15.6	6.1	2.8
LnGrp LOS	C	A	A	C	A	A	B	B	A	B	A	A
Approach Vol, veh/h	22			44			830			814		
Approach Delay, s/veh	26.7			27.6			17.5			6.5		
Approach LOS	C			C			B			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	46.7			13.3			46.7			13.3		
Change Period (Y+Rc), s	4.8			* 9.3			4.8			* 9.3		
Max Green Setting (Gmax), s	25.2			* 21			25.2			* 21		
Max Q Clear Time (g_c+I1), s	25.1			2.7			27.7			3.6		
Green Ext Time (p_c), s	0.1			0.0			0.0			0.1		

Intersection Summary

HCM 6th Ctrl Delay	12.6
HCM 6th LOS	B

Notes

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

Queues

10: Landale Street & Colfax Avenue

06/24/2024



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	44	16	798	770	27
v/c Ratio	0.18	0.03	0.50	0.49	0.02
Control Delay	17.4	3.9	5.7	2.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.4	3.9	5.7	2.7	0.1
Queue Length 50th (ft)	8	0	0	0	0
Queue Length 95th (ft)	32	8	272	5	m0
Internal Link Dist (ft)	262		575	593	
Turn Bay Length (ft)		40			80
Base Capacity (vph)	524	482	1586	1586	1350
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.08	0.03	0.50	0.49	0.02

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

10: Landale Street & Colfax Avenue

06/24/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	22	18	15	734	708	25
Future Volume (vph)	22	18	15	734	708	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	9.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1702		1770	1863	1863	1583
Flt Permitted	0.97		0.30	1.00	1.00	1.00
Satd. Flow (perm)	1702		567	1863	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	20	16	798	770	27
RTOR Reduction (vph)	19	0	0	0	0	5
Lane Group Flow (vph)	25	0	16	798	770	22
Turn Type	Perm		Perm	NA	NA	Perm
Protected Phases				6	2	
Permitted Phases	8		6			2
Actuated Green, G (s)	3.3		42.7	42.7	42.7	42.7
Effective Green, g (s)	3.3		42.7	42.7	42.7	42.7
Actuated g/C Ratio	0.05		0.71	0.71	0.71	0.71
Clearance Time (s)	9.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		4.9	4.9	5.3	5.3
Lane Grp Cap (vph)	93		403	1325	1325	1126
v/s Ratio Prot				0.43	0.41	
v/s Ratio Perm	0.01		0.03			0.01
v/c Ratio	0.27		0.04	0.60	0.58	0.02
Uniform Delay, d1	27.2		2.6	4.4	4.3	2.5
Progression Factor	1.00		1.00	1.00	0.51	0.05
Incremental Delay, d2	1.6		0.2	2.0	1.4	0.0
Delay (s)	28.8		2.8	6.4	3.5	0.2
Level of Service	C		A	A	A	A
Approach Delay (s)	28.8			6.3	3.4	
Approach LOS	C			A	A	

Intersection Summary

HCM 2000 Control Delay	5.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		










c Critical Lane Group

HCM 6th Signalized Intersection Summary

11: Whitsett Avenue & Moorpark Street

06/24/2024












Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	137	867	98	132	627	87	109	726	137	86	394	119
Future Volume (veh/h)	137	867	98	132	627	87	109	726	137	86	394	119
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	149	942	107	143	682	95	118	789	149	93	428	129
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	116	850	720	80	730	102	354	1283	242	214	1160	346
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	694	1870	1585	538	1606	224	852	2983	563	597	2697	805
Grp Volume(v), veh/h	149	942	107	143	0	777	118	470	468	93	281	276
Grp Sat Flow(s),veh/h/ln	694	1870	1585	538	0	1830	852	1777	1769	597	1777	1725
Q Serve(g_s), s	4.7	40.9	3.6	0.0	0.0	36.2	9.8	18.5	18.5	12.9	9.6	9.8
Cycle Q Clear(g_c), s	40.9	40.9	3.6	40.9	0.0	36.2	19.6	18.5	18.5	31.3	9.6	9.8
Prop In Lane	1.00		1.00	1.00		0.12	1.00		0.32	1.00		0.47
Lane Grp Cap(c), veh/h	116	850	720	80	0	832	354	764	761	214	764	742
V/C Ratio(X)	1.28	1.11	0.15	1.79	0.00	0.93	0.33	0.62	0.62	0.43	0.37	0.37
Avail Cap(c_a), veh/h	116	850	720	80	0	832	354	764	761	214	764	742
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.3	24.5	14.4	45.0	0.0	23.3	24.1	19.9	19.9	32.0	17.4	17.4
Incr Delay (d2), s/veh	178.1	65.0	0.4	399.7	0.0	18.8	2.5	3.7	3.7	6.3	1.4	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(95%),veh/ln	44.9	44.2	2.3	19.1	0.0	25.6	3.9	12.5	12.5	3.9	7.2	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	222.4	89.5	14.8	444.7	0.0	42.1	26.6	23.6	23.6	38.3	18.7	18.8
LnGrp LOS	F	F	B	F	A	D	C	C	C	D	B	B
Approach Vol, veh/h	1198					920		1056		650		
Approach Delay, s/veh	99.4					104.7		23.9		21.6		
Approach LOS	F					F		C		C		
Timer - Assigned Phs	2		4			6		8				
Phs Duration (G+Y+Rc), s	46.0		44.0			46.0		44.0				
Change Period (Y+Rc), s	5.1		5.3			5.1		5.3				
Max Green Setting (Gmax), s	40.9		38.7			40.9		38.7				
Max Q Clear Time (g_c+I1), s	42.9		33.3			42.9		21.6				
Green Ext Time (p_c), s	0.0		1.9			0.0		6.3				
Intersection Summary												
HCM 6th Ctrl Delay	66.6											
HCM 6th LOS	E											

HCM 6th Signalized Intersection Summary

12: Laurel Canyon Boulevard & Moorpark Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	301	595	125	167	474	104	193	1493	195	108	1317	279
Future Volume (veh/h)	301	595	125	167	474	104	193	1493	195	108	1317	279
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	327	647	136	182	515	113	210	1623	212	117	1432	303
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	251	815	171	297	520	574	238	927	119	230	847	175
Arrive On Green	0.09	0.28	0.28	0.09	0.28	0.28	0.09	0.29	0.29	0.11	0.38	0.38
Sat Flow, veh/h	1781	2923	614	1781	1870	1585	1781	3167	407	1781	2931	607
Grp Volume(v), veh/h	327	393	390	182	515	113	210	898	937	117	856	879
Grp Sat Flow(s),veh/h/ln	1781	1777	1760	1781	1870	1585	1781	1777	1797	1781	1777	1761
Q Serve(g_s), s	8.5	18.4	18.5	6.4	24.7	4.4	7.5	26.3	26.3	3.9	26.0	26.0
Cycle Q Clear(g_c), s	8.5	18.4	18.5	6.4	24.7	4.4	7.5	26.3	26.3	3.9	26.0	26.0
Prop In Lane	1.00		0.35	1.00		1.00	1.00		0.23	1.00		0.34
Lane Grp Cap(c), veh/h	251	496	491	297	520	574	238	520	526	230	513	509
V/C Ratio(X)	1.30	0.79	0.79	0.61	0.99	0.20	0.88	1.73	1.78	0.51	1.67	1.73
Avail Cap(c_a), veh/h	251	496	491	315	520	574	238	520	526	238	513	509
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.14	0.14	0.14
Uniform Delay (d), s/veh	25.4	30.0	30.1	22.4	32.4	19.7	23.5	31.8	31.8	22.0	27.7	27.7
Incr Delay (d2), s/veh	162.4	8.6	8.8	3.2	37.1	0.2	29.4	335.4	359.6	0.2	301.2	329.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	28.5	13.5	13.5	5.1	22.5	2.9	8.5	92.2	99.0	2.3	74.1	79.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	187.8	38.6	38.8	25.6	69.5	19.9	52.9	367.2	391.5	22.2	328.9	356.8
LnGrp LOS	F	D	D	C	E	B	D	F	F	C	F	F
Approach Vol, veh/h	1110			810			2045			1852		
Approach Delay, s/veh	82.6			52.7			346.1			322.8		
Approach LOS	F			D			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.3	31.4	14.0	31.3	13.0	31.7	13.9	31.4				
Change Period (Y+Rc), s	5.3	* 5.4	* 5.5	6.3	* 5.4	* 5.4	* 5.5	6.3				
Max Green Setting (Gmax), s	8	* 26	* 8.5	25.0	* 8	* 26	* 9.3	24.2				
Max Q Clear Time (g_c+I), s	19.5	28.0	10.5	26.7	5.9	28.3	8.4	20.5				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7				

Intersection Summary

HCM 6th Ctrl Delay 247.5

HCM 6th LOS F






Notes

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

HCM 6th TWSC

13: Moorpark Street & Radford Avenue























06/24/2024

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	86	842	809	41	12	51
Future Vol, veh/h	86	842	809	41	12	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	50
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	93	915	879	45	13	55
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	924	0	-	0	1546	462
Stage 1	-	-	-	-	902	-
Stage 2	-	-	-	-	644	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	735	-	-	-	105	547
Stage 1	-	-	-	-	356	-
Stage 2	-	-	-	-	485	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	735	-	-	-	92	547
Mov Cap-2 Maneuver	-	-	-	-	92	-
Stage 1	-	-	-	-	311	-
Stage 2	-	-	-	-	485	-
Approach	EB	WB		SB		
HCM Control Delay, s	1	0		19.6		
HCM LOS	C					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	735	-	-	-	92	547
HCM Lane V/C Ratio	0.127	-	-	-	0.142	0.101
HCM Control Delay (s)	10.6	-	-	-	50.5	12.3
HCM Lane LOS	B	-	-	-	F	B
HCM 95th %tile Q(veh)	0.4	-	-	-	0.5	0.3

HCM 6th Signalized Intersection Summary

14: Colfax Avenue & Moorpark Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	597	155	178	561	127	154	410	247	148	466	127
Future Volume (veh/h)	97	597	155	178	561	127	154	410	247	148	466	127
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	0.99		0.95	0.98		0.94	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	105	649	168	193	610	138	167	446	268	161	507	138
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	274	1202	311	278	856	193	172	387	308	237	669	661
Arrive On Green	0.14	0.87	0.87	0.10	0.10	0.10	0.21	0.21	0.21	0.09	0.36	0.36
Sat Flow, veh/h	1781	2773	717	659	2851	643	771	1870	1489	1781	1870	1529
Grp Volume(v), veh/h	105	416	401	193	380	368	167	446	268	161	507	138
Grp Sat Flow(s),veh/h/ln	1781	1777	1713	659	1777	1717	771	1870	1489	1781	1870	1529
Q Serve(g_s), s	3.4	5.3	5.3	26.3	18.6	18.7	10.7	18.6	15.7	6.1	21.5	5.1
Cycle Q Clear(g_c), s	3.4	5.3	5.3	26.3	18.6	18.7	18.6	18.6	15.7	6.1	21.5	5.1
Prop In Lane	1.00		0.42	1.00		0.37	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	274	770	742	278	533	515	172	387	308	237	669	661
V/C Ratio(X)	0.38	0.54	0.54	0.69	0.71	0.71	0.97	1.15	0.87	0.68	0.76	0.21
Avail Cap(c_a), veh/h	284	770	742	278	533	515	172	387	308	238	669	661
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	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	0.87	0.87	0.87
Uniform Delay (d), s/veh	18.7	3.8	3.8	40.2	36.8	36.8	42.1	35.7	34.5	25.4	25.5	16.1
Incr Delay (d2), s/veh	0.9	2.7	2.8	13.4	7.9	8.2	61.8	93.7	26.7	6.5	6.9	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(95%),veh/ln	2.3	3.1	3.0	9.5	15.1	14.8	10.8	27.2	12.3	5.2	15.2	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.6	6.5	6.6	53.7	44.6	45.0	103.8	129.4	61.2	31.9	32.3	16.7
LnGrp LOS	B	A	A	D	D	D	F	F	E	C	C	B
Approach Vol, veh/h	922			941			881			806		
Approach Delay, s/veh	8.0			46.6			103.8			29.6		
Approach LOS	A			D			F			C		
Timer - Assigned Phs	1	2	4			6	7	8				
Phs Duration (G+Y+Rc), s	12.0	36.4	41.6			48.4	13.6	28.0				
Change Period (Y+Rc), s	* 5.5	* 9.4	* 9.4			* 9.4	5.6	* 9.4				
Max Green Setting (Gmax), s	* 7	* 27	* 32			* 39	8.0	* 19				
Max Q Clear Time (g_c+I1), s	5.4	28.3	23.5			7.3	8.1	20.6				
Green Ext Time (p_c), s	0.0	0.0	2.4			5.8	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 46.9

HCM 6th LOS D

Notes

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

HCM 6th TWSC
15: Irvine Avenue & Moorpark Street























06/24/2024

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔			↔	
Traffic Vol, veh/h	5	881	16	15	849	6	4	0	11	0	0	14
Future Vol, veh/h	5	881	16	15	849	6	4	0	11	0	0	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	958	17	16	923	7	4	0	12	0	0	15
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	930	0	0	975	0	0	1471	1939	488	1448	1944	465
Stage 1	-	-	-	-	-	-	977	977	-	959	959	-
Stage 2	-	-	-	-	-	-	494	962	-	489	985	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	731	-	-	703	-	-	89	65	526	92	64	544
Stage 1	-	-	-	-	-	-	269	327	-	276	334	-
Stage 2	-	-	-	-	-	-	526	332	-	529	324	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	731	-	-	703	-	-	82	61	526	86	60	544
Mov Cap-2 Maneuver	-	-	-	-	-	-	82	61	-	86	60	-
Stage 1	-	-	-	-	-	-	265	322	-	272	318	-
Stage 2	-	-	-	-	-	-	487	316	-	509	319	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.4			23.1			11.8		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	215	731	-	-	703	-	-	544				
HCM Lane V/C Ratio	0.076	0.007	-	-	0.023	-	-	0.028				
HCM Control Delay (s)	23.1	10	0.1	-	10.2	0.2	-	11.8				
HCM Lane LOS	C	A	A	-	B	A	-	B				
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.1				

HCM 6th Signalized Intersection Summary

16: Tujunga Avenue & Moorpark Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	175	770	87	91	572	66	86	501	98	94	244	94
Future Volume (veh/h)	175	770	87	91	572	66	86	501	98	94	244	94
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	190	837	95	99	622	72	93	545	107	102	265	102
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	354	1572	178	265	1569	181	348	732	620	190	490	416
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.07	0.39	0.39	0.26	0.26	0.26
Sat Flow, veh/h	750	3216	365	601	3210	371	1781	1870	1585	780	1870	1585
Grp Volume(v), veh/h	190	462	470	99	344	350	93	545	107	102	265	102
Grp Sat Flow(s),veh/h/ln	750	1777	1805	601	1777	1804	1781	1870	1585	780	1870	1585
Q Serve(g_s), s	19.4	16.2	16.2	12.3	11.0	11.1	3.2	22.5	4.0	11.6	11.0	4.6
Cycle Q Clear(g_c), s	30.4	16.2	16.2	28.5	11.0	11.1	3.2	22.5	4.0	22.5	11.0	4.6
Prop In Lane	1.00		0.20	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	354	868	882	265	868	881	348	732	620	190	490	416
V/C Ratio(X)	0.54	0.53	0.53	0.37	0.40	0.40	0.27	0.74	0.17	0.54	0.54	0.25
Avail Cap(c_a), veh/h	354	868	882	265	868	881	361	746	632	190	490	416
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	0.90	0.90	0.90	0.65	0.65	0.65
Uniform Delay (d), s/veh	24.3	15.9	15.9	25.7	14.6	14.6	20.8	23.5	17.9	38.2	28.5	26.2
Incr Delay (d2), s/veh	5.7	2.3	2.3	4.0	1.4	1.3	0.4	3.6	0.1	1.9	0.8	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(95%),veh/ln	6.8	10.8	11.0	3.6	7.9	8.0	2.4	15.0	2.5	4.1	7.7	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.0	18.2	18.2	29.7	15.9	15.9	21.2	27.1	18.0	40.1	29.3	26.4
LnGrp LOS	C	B	B	C	B	B	C	C	B	D	C	C
Approach Vol, veh/h	1122			793			745			469		
Approach Delay, s/veh	20.2			17.7			25.1			31.0		
Approach LOS	C			B			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	49.4			11.6			29.0			49.4		
Change Period (Y+Rc), s	* 5.4			* 5.3			* 5.4			* 5.4		
Max Green Setting (Gmax), s	* 43			* 7			* 24			* 43		
Max Q Clear Time (g_c+I1), s	30.5			5.2			24.5			32.4		
Green Ext Time (p_c), s	5.7			0.0			0.0			7.0		

Intersection Summary

HCM 6th Ctrl Delay	22.3
HCM 6th LOS	C

Notes

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

HCM 6th Signalized Intersection Summary

17: Woodbridge Street & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↕	
Traffic Volume (veh/h)	11	7	18	16	9	59	18	636	27	41	352	34
Future Volume (veh/h)	11	7	18	16	9	59	18	636	27	41	352	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	12	8	20	17	10	64	20	691	29	45	383	37
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	77	47	72	64	24	96	861	1511	1280	589	1356	131
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.81	0.81	0.81	1.00	1.00	1.00
Sat Flow, veh/h	294	547	841	192	283	1125	967	1870	1585	732	1679	162
Grp Volume(v), veh/h	40	0	0	91	0	0	20	691	29	45	0	420
Grp Sat Flow(s), veh/h/ln	1682	0	0	1600	0	0	967	1870	1585	732	0	1841
Q Serve(g_s), s	0.0	0.0	0.0	2.2	0.0	0.0	0.4	10.1	0.3	0.8	0.0	0.0
Cycle Q Clear(g_c), s	2.0	0.0	0.0	4.9	0.0	0.0	0.4	10.1	0.3	11.0	0.0	0.0
Prop In Lane	0.30		0.50	0.19		0.70	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	196	0	0	184	0	0	861	1511	1280	589	0	1487
V/C Ratio(X)	0.20	0.00	0.00	0.49	0.00	0.00	0.02	0.46	0.02	0.08	0.00	0.28
Avail Cap(c_a), veh/h	508	0	0	502	0	0	861	1511	1280	589	0	1487
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.61	0.61	0.61	0.81	0.00	0.81
Uniform Delay (d), s/veh	38.5	0.0	0.0	39.8	0.0	0.0	1.7	2.6	1.7	0.8	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	2.0	0.0	0.0	0.0	0.6	0.0	0.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	0.0	0.0	3.7	0.0	0.0	0.1	3.8	0.1	0.1	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.0	0.0	0.0	41.9	0.0	0.0	1.7	3.2	1.7	1.0	0.0	0.4
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	40			91			740			465		
Approach Delay, s/veh	39.0			41.9			3.1			0.4		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	77.2			12.8			77.2			12.8		
Change Period (Y+Rc), s	* 4.5			* 5.1			* 4.5			* 5.1		
Max Green Setting (Gmax), s	* 55			* 26			* 55			* 26		
Max Q Clear Time (g_c+I1), s	13.0			4.0			12.1			6.9		
Green Ext Time (p_c), s	6.9			0.1			13.5			0.4		

Intersection Summary

HCM 6th Ctrl Delay	5.9
HCM 6th LOS	A

Notes

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

Queues

18: Whitsett Avenue & Ventura Boulevard

06/24/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	273	1188	232	38	1224	350	93	201	308	166	232
v/c Ratio	0.75	0.63	0.25	0.27	1.09	0.58	0.56	0.68	0.65	0.56	0.25
Control Delay	37.0	19.4	6.1	23.9	78.2	11.8	51.2	49.4	47.1	45.5	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.0	19.4	6.1	23.9	78.2	11.8	51.2	49.4	47.1	45.5	9.6
Queue Length 50th (ft)	112	266	23	14	-502	66	55	118	96	99	56
Queue Length 95th (ft)	#309	402	74	m22	m#573	m109	101	181	137	154	94
Internal Link Dist (ft)	1429			2938			634			1297	
Turn Bay Length (ft)	95		135	145		60	60		220		65
Base Capacity (vph)	366	1894	919	139	1118	605	247	438	522	441	897
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.63	0.25	0.27	1.09	0.58	0.38	0.46	0.59	0.38	0.26

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
























Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

18: Whitsett Avenue & Ventura Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	251	1093	213	35	1126	322	86	162	23	283	153	213
Future Volume (vph)	251	1093	213	35	1126	322	86	162	23	283	153	213
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	5.4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1828		3433	1863	1583
Flt Permitted	0.11	1.00	1.00	0.24	1.00	1.00	0.56	1.00		0.95	1.00	1.00
Satd. Flow (perm)	201	3539	1583	442	3539	1583	1043	1828		3433	1863	1583
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)	273	1188	232	38	1224	350	93	176	25	308	166	232
RTOR Reduction (vph)	0	0	72	0	0	105	0	6	0	0	0	11
Lane Group Flow (vph)	273	1188	160	38	1224	245	93	195	0	308	166	221
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Prot	NA	custom
Protected Phases	1	6			2			4		3	8	1 3
Permitted Phases	6		6	2		2	4					8
Actuated Green, G (s)	53.5	53.5	53.5	31.6	31.6	31.6	15.9	15.9		13.9	15.9	51.7
Effective Green, g (s)	53.5	53.5	53.5	31.6	31.6	31.6	15.9	15.9		13.9	15.9	51.7
Actuated g/C Ratio	0.54	0.54	0.54	0.32	0.32	0.32	0.16	0.16		0.14	0.16	0.52
Clearance Time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	
Vehicle Extension (s)	3.0	4.9	4.9	4.7	4.7	4.7	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	366	1893	846	139	1118	500	165	290		477	296	818
v/s Ratio Prot	c0.12	0.34			c0.35			c0.11		c0.09	0.09	0.10
v/s Ratio Perm	0.28		0.10	0.09		0.15	0.09					0.04
v/c Ratio	0.75	0.63	0.19	0.27	1.09	0.49	0.56	0.67		0.65	0.56	0.27
Uniform Delay, d1	24.5	16.3	12.0	25.6	34.2	27.7	38.8	39.6		40.7	38.8	13.6
Progression Factor	1.00	1.00	1.00	0.72	0.67	0.55	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	8.0	1.6	0.5	3.1	52.3	2.2	4.4	6.0		3.0	2.4	0.2
Delay (s)	32.5	17.9	12.5	21.4	75.3	17.4	43.2	45.6		43.7	41.3	13.7
Level of Service	C	B	B	C	E	B	D	D		D	D	B
Approach Delay (s)		19.5			61.5			44.9			33.3	
Approach LOS		B			E			D			C	
Intersection Summary												
HCM 2000 Control Delay			39.2									HCM 2000 Level of Service D
HCM 2000 Volume to Capacity ratio			0.86									
Actuated Cycle Length (s)			100.0									Sum of lost time (s) 22.1
Intersection Capacity Utilization			81.4%									ICU Level of Service D
Analysis Period (min)			15									
c Critical Lane Group												

Queues

19: Laurel Canyon Boulevard & Ventura Place

06/24/2024



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	186	75	365	30	1340	35	118	1459
v/c Ratio	1.63	0.33	1.11	0.17	0.69	0.04	0.97	0.63
Control Delay	351.1	44.7	103.4	30.6	23.3	0.3	106.7	23.2
Queue Delay	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0
Total Delay	351.1	44.7	103.4	30.6	25.3	0.3	106.7	23.2
Queue Length 50th (ft)	~170	44	~157	17	431	0	~86	280
Queue Length 95th (ft)	#310	89	#339	m22	m467	m0	#199	335
Internal Link Dist (ft)	123	395			458			232
Turn Bay Length (ft)			380	105		85	55	
Base Capacity (vph)	114	224	330	177	1942	930	122	2319
Starvation Cap Reductn	0	0	0	0	432	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.63	0.33	1.11	0.17	0.89	0.04	0.97	0.63

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

19: Laurel Canyon Boulevard & Ventura Place

06/24/2024













												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	107	41	23	42	27	336	28	1233	32	109	1265	77
Future Volume (vph)	107	41	23	42	27	336	28	1233	32	109	1265	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		9.4			9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.91	
Frpb, ped/bikes		1.00			1.00	0.87	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes		0.90			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.98			1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.97			0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1603			1807	1380	1770	3539	1550	1768	5041	
Flt Permitted		0.77			0.97	1.00	0.95	1.00	1.00	0.14	1.00	
Satd. Flow (perm)		1266			1807	1380	1770	3539	1550	267	5041	
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)	116	45	25	46	29	365	30	1340	35	118	1375	84
RTOR Reduction (vph)	0	5	0	0	0	159	0	0	16	0	6	0
Lane Group Flow (vph)	0	181	0	0	75	206	30	1340	19	118	1453	0
Confl. Peds. (#/hr)	49					49			5	5		
Turn Type	Perm	NA		Split	NA	Perm	Prot	NA	Perm	Perm	NA	
Protected Phases		3		4	4		1	6			2	
Permitted Phases	3					4			6	2		
Actuated Green, G (s)		8.6			12.4	12.4	6.0	54.9	54.9	43.9	43.9	
Effective Green, g (s)		8.6			12.4	12.4	6.0	54.9	54.9	43.9	43.9	
Actuated g/C Ratio		0.09			0.12	0.12	0.06	0.55	0.55	0.44	0.44	
Clearance Time (s)		9.4			9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	4.8	4.8	3.1	3.1	
Lane Grp Cap (vph)		108			224	171	106	1942	850	117	2212	
v/s Ratio Prot					0.04		0.02	c0.38			0.29	
v/s Ratio Perm		c0.14				c0.15			0.01	c0.44		
v/c Ratio		1.67			0.33	1.20	0.28	0.69	0.02	1.01	0.66	
Uniform Delay, d1		45.7			40.0	43.8	44.9	16.4	10.3	28.1	22.1	
Progression Factor		1.00			1.00	1.00	0.71	1.33	1.00	1.00	1.00	
Incremental Delay, d2		339.1			0.9	133.6	0.8	1.1	0.0	85.5	1.5	
Delay (s)		384.8			40.9	177.4	32.6	22.9	10.3	113.6	23.7	
Level of Service		F			D	F	C	C	B	F	C	
Approach Delay (s)		384.8			154.1			22.7			30.4	
Approach LOS		F			F			C			C	
Intersection Summary												
HCM 2000 Control Delay			60.8		HCM 2000 Level of Service					E		
HCM 2000 Volume to Capacity ratio			1.12									
Actuated Cycle Length (s)			100.0		Sum of lost time (s)					29.1		
Intersection Capacity Utilization			88.4%		ICU Level of Service					E		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

20: Laurel Canyon Boulevard & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	687	267	251	722	255	465	887	252	317	800	220
Future Volume (veh/h)	195	687	267	251	722	255	465	887	252	317	800	220
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.92	0.99		0.93	1.00		0.97	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	212	747	290	273	785	277	505	964	274	345	870	239
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	270	991	637	310	1031	601	498	1009	434	380	888	515
Arrive On Green	0.17	0.56	0.56	0.10	0.29	0.29	0.14	0.28	0.28	0.04	0.08	0.08
Sat Flow, veh/h	1781	3554	1466	1781	3554	1470	3456	3554	1530	3456	3554	1522
Grp Volume(v), veh/h	212	747	290	273	785	277	505	964	274	345	870	239
Grp Sat Flow(s),veh/h/ln	1781	1777	1466	1781	1777	1470	1728	1777	1530	1728	1777	1522
Q Serve(g_s), s	8.5	16.0	3.1	9.8	20.1	13.9	14.4	26.7	15.6	9.9	24.4	7.2
Cycle Q Clear(g_c), s	8.5	16.0	3.1	9.8	20.1	13.9	14.4	26.7	15.6	9.9	24.4	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	270	991	637	310	1031	601	498	1009	434	380	888	515
V/C Ratio(X)	0.79	0.75	0.46	0.88	0.76	0.46	1.01	0.96	0.63	0.91	0.98	0.46
Avail Cap(c_a), veh/h	270	991	637	310	1031	601	498	1009	434	380	888	515
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	0.74	0.74	0.74	0.73	0.73	0.73	0.29	0.29	0.29	0.74	0.74	0.74
Uniform Delay (d), s/veh	24.4	19.5	4.1	27.6	32.4	22.2	42.8	35.2	31.2	47.7	45.6	12.2
Incr Delay (d2), s/veh	10.7	4.0	1.7	18.7	3.9	1.9	25.5	7.6	1.2	19.9	21.3	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(95%),veh/ln	6.7	8.1	2.5	9.6	13.1	8.0	10.3	15.2	7.8	8.9	19.5	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.2	23.4	5.8	46.3	36.3	24.0	68.3	42.8	32.4	67.6	67.0	13.9
LnGrp LOS	D	C	A	D	D	C	F	D	C	E	E	B
Approach Vol, veh/h	1249			1335			1743			1454		
Approach Delay, s/veh	21.3			35.8			48.5			58.4		
Approach LOS	C			D			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	35.2	34.2	20.0	30.6	14.1	35.3	16.6	34.0				
Change Period (Y+Rc), s	5.4	6.3	5.6	5.6	5.6	6.3	5.6	5.6				
Max Green Setting (Gmax), s	27.9	27.9	14.4	25.0	8.5	29.0	11.0	28.4				
Max Q Clear Time (g_c+III), s	18.0	18.0	16.4	26.4	10.5	22.1	11.9	28.7				
Green Ext Time (p_c), s	0.0	7.0	0.0	0.0	0.0	3.8	0.0	0.0				

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.

Queues

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Lane Group	EBL	EBT	WBL	WBT	WBR2	NBT	NBR	SBL	SBT	SBR2
Lane Group Flow (vph)	227	1345	115	1236	100	64	82	111	198	198
v/c Ratio	0.40	0.78	1.13	1.68	0.35	0.22	0.21	0.54	1.33	1.75
Control Delay	10.5	6.5	184.5	344.6	50.9	53.0	1.2	69.4	232.5	409.6
Queue Delay	73.7	48.9	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.2	55.3	184.5	348.2	50.9	53.0	1.2	69.4	232.5	409.6
Queue Length 50th (ft)	143	147	~121	~862	78	51	0	98	~244	~275
Queue Length 95th (ft)	m87	m1	#251	#1001	136	97	0	164	#406	#438
Internal Link Dist (ft)		48		634		66			226	
Turn Bay Length (ft)	90		95		55		30	90		90
Base Capacity (vph)	580	1745	102	737	287	308	405	206	149	113
Starvation Cap Reductn	457	658	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	282	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.85	1.24	1.13	2.72	0.35	0.21	0.20	0.54	1.33	1.75

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	209	1219	18	106	1045	92	92	46	13	75	102	20
Future Volume (vph)	209	1219	18	106	1045	92	92	46	13	75	102	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.7		4.9	6.1		6.1		6.9	6.9	7.0	7.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		0.85		1.00	0.85	1.00	0.82
Flpb, ped/bikes	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	0.99		0.85		1.00	0.85	1.00	0.87
Flt Protected	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (prot)	1770	3525		1770	3454		1344		1793	1352	1770	1325
Flt Permitted	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (perm)	1770	3525		1770	3454		1344		1793	1352	1770	1325
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)	227	1325	20	115	1136	100	100	50	14	82	111	22
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	69	0	0
Lane Group Flow (vph)	227	1344	0	115	1236	0	100	0	64	13	111	198
Confl. Peds. (#/hr)	42		32	32		42	42	75		75	75	
Turn Type	Prot	NA		Prot	NA		Perm	Split	NA	Perm	Split	NA
Protected Phases	1 3	3 6		5	2			7	7		8	8
Permitted Phases							2			7		
Actuated Green, G (s)	45.1	68.1		8.1	29.9		29.9		23.0	23.0	16.3	16.3
Effective Green, g (s)	45.1	62.0		8.1	29.9		29.9		23.0	23.0	16.3	16.3
Actuated g/C Ratio	0.32	0.44		0.06	0.21		0.21		0.16	0.16	0.12	0.12
Clearance Time (s)				4.9	6.1		6.1		6.9	6.9	7.0	7.0
Vehicle Extension (s)				3.0	4.8		4.8		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	570	1561		102	737		287		294	222	206	154
v/s Ratio Prot	0.13	c0.38		0.06	c0.36				c0.04		0.06	0.15
v/s Ratio Perm							0.07			0.01		
v/c Ratio	0.40	0.86		1.13	1.68		0.35		0.22	0.06	0.54	1.29
Uniform Delay, d1	36.9	35.1		66.0	55.0		46.8		50.7	49.4	58.3	61.9
Progression Factor	0.28	0.20		1.00	1.00		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0	0.5		127.5	310.6		3.3		0.4	0.1	2.7	168.7
Delay (s)	10.2	7.6		193.5	365.7		50.1		51.1	49.5	61.0	230.5
Level of Service	B	A		F	F		D		D	D	E	F
Approach Delay (s)		8.0			330.3				50.2			250.4
Approach LOS		A			F				D			F
Intersection Summary												
HCM 2000 Control Delay			170.3			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			1.08									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			31.8			
Intersection Capacity Utilization			100.0%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Movement	SBR	SBR2
Lane Configurations		
Traffic Volume (vph)	162	182
Future Volume (vph)	162	182
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		7.0
Lane Util. Factor		1.00
Frpb, ped/bikes		0.66
Flpb, ped/bikes		1.00
Frt		0.85
Flt Protected		1.00
Satd. Flow (prot)		1052
Flt Permitted		1.00
Satd. Flow (perm)		1052
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	176	198
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	198
Confl. Peds. (#/hr)	75	75
Turn Type		Perm
Protected Phases		
Permitted Phases		8
Actuated Green, G (s)		16.3
Effective Green, g (s)		16.3
Actuated g/C Ratio		0.12
Clearance Time (s)		7.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)		122
v/s Ratio Prot		
v/s Ratio Perm		c0.19
v/c Ratio		1.62
Uniform Delay, d1		61.9
Progression Factor		1.00
Incremental Delay, d2		314.6
Delay (s)		376.4
Level of Service		F
Approach Delay (s)		
Approach LOS		
Intersection Summary		

HCM 6th Signalized Intersection Summary

22: Carpenter Avenue & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	153	1149	80	193	1024	123	75	25	165	197	39	278
Future Volume (veh/h)	153	1149	80	193	1024	123	75	25	165	197	39	278
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	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	166	1249	87	210	1113	134	82	27	179	214	42	302
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	194	1282	89	228	1273	153	46	26	42	208	28	401
Arrive On Green	0.11	0.38	0.38	0.04	0.13	0.13	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1781	3357	233	1781	3174	381	0	100	164	552	108	1559
Grp Volume(v), veh/h	166	660	676	210	622	625	288	0	0	256	0	302
Grp Sat Flow(s),veh/h/ln	1781	1777	1813	1781	1777	1778	263	0	0	661	0	1559
Q Serve(g_s), s	9.2	36.5	36.8	11.7	34.3	34.5	0.0	0.0	0.0	0.0	0.0	17.8
Cycle Q Clear(g_c), s	9.2	36.5	36.8	11.7	34.3	34.5	25.7	0.0	0.0	25.7	0.0	17.8
Prop In Lane	1.00		0.13	1.00		0.21	0.28		0.62	0.84		1.00
Lane Grp Cap(c), veh/h	194	679	693	228	713	713	114	0	0	236	0	401
V/C Ratio(X)	0.85	0.97	0.98	0.92	0.87	0.88	2.53	0.00	0.00	1.09	0.00	0.75
Avail Cap(c_a), veh/h	194	679	693	228	713	713	114	0	0	236	0	401
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.60	0.60	0.60	0.09	0.09	0.09	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.8	30.4	30.5	47.4	40.9	41.0	35.9	0.0	0.0	40.8	0.0	34.2
Incr Delay (d2), s/veh	19.5	20.8	21.4	6.2	1.5	1.6	712.6	0.0	0.0	83.2	0.0	7.9
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(95%),veh/ln	7.9	24.2	24.8	7.2	18.5	18.6	44.1	0.0	0.0	17.7	0.0	12.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.3	51.2	51.8	53.6	42.4	42.5	748.5	0.0	0.0	124.0	0.0	42.1
LnGrp LOS	E	D	D	D	D	D	F	A	A	F	A	D
Approach Vol, veh/h	1502			1457			288			558		
Approach Delay, s/veh	52.8			44.1			748.5			79.7		
Approach LOS	D			D			F			E		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.4	47.4		35.2	15.5	49.3		35.2				
Change Period (Y+Rc), s	4.6	* 9.2		9.5	4.6	* 9.2		9.5				
Max Green Setting (Gmax), s	12.8	* 38		25.7	10.9	* 40		25.7				
Max Q Clear Time (g_c+Tb), s	11.3	38.8		27.7	11.2	36.5		27.7				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	3.2		0.0				

Intersection Summary

HCM 6th Ctrl Delay 106.1

HCM 6th LOS F

Notes

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

Queues

23: Ventura Boulevard & Colfax Avenue

06/24/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	354	1307	1334	412	376
v/c Ratio	0.65	0.61	1.37	0.82	0.34
Control Delay	14.2	8.4	195.5	46.8	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	14.2	8.4	195.5	46.8	2.2
Queue Length 50th (ft)	72	214	~581	242	6
Queue Length 95th (ft)	m152	m442	#716	331	41
Internal Link Dist (ft)		981	464		
Turn Bay Length (ft)	160			360	360
Base Capacity (vph)	542	2150	975	533	1094
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.65	0.61	1.37	0.77	0.34

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.





















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

23: Ventura Boulevard & Colfax Avenue

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					 			 				
Traffic Volume (vph)	326	1202	0	0	932	295	0	0	0	379	0	346
Future Volume (vph)	326	1202	0	0	932	295	0	0	0	379	0	346
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.4			5.4					5.4		5.7
Lane Util. Factor	1.00	0.95			0.95					1.00		1.00
Frt	1.00	1.00			0.96					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1770	3539			3411					1770		1583
Flt Permitted	0.12	1.00			1.00					0.95		1.00
Satd. Flow (perm)	217	3539			3411					1770		1583
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)	354	1307	0	0	1013	321	0	0	0	412	0	376
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	159
Lane Group Flow (vph)	354	1307	0	0	1334	0	0	0	0	412	0	217
Turn Type	pm+pt	NA			NA					pm+pt		pm+ov
Protected Phases	5	2			6			3		4		5
Permitted Phases	2						3			7		4
Actuated Green, G (s)	60.8	60.8			28.6					28.4		54.9
Effective Green, g (s)	60.8	60.8			28.6					28.4		54.9
Actuated g/C Ratio	0.61	0.61			0.29					0.28		0.55
Clearance Time (s)	5.7	5.4			5.4					5.4		5.7
Vehicle Extension (s)	3.0	4.3			4.5					3.0		3.0
Lane Grp Cap (vph)	543	2151			975					502		869
v/s Ratio Prot	0.17	c0.37			c0.39					c0.23		0.07
v/s Ratio Perm	0.22											0.07
v/c Ratio	0.65	0.61			1.37					0.82		0.25
Uniform Delay, d1	21.8	12.2			35.7					33.4		11.8
Progression Factor	0.49	0.59			0.64					1.00		1.00
Incremental Delay, d2	1.3	0.6			171.4					10.4		0.2
Delay (s)	11.9	7.7			194.3					43.8		11.9
Level of Service	B	A			F					D		B
Approach Delay (s)		8.6			194.3			0.0			28.6	
Approach LOS		A			F			A			C	
Intersection Summary												
HCM 2000 Control Delay			78.3		HCM 2000 Level of Service					E		
HCM 2000 Volume to Capacity ratio			1.04									
Actuated Cycle Length (s)			100.0		Sum of lost time (s)					22.8		
Intersection Capacity Utilization			86.8%		ICU Level of Service					E		
Analysis Period (min)			15									
c Critical Lane Group												

Queues

24: Berry Drive & Ventura Boulevard

06/24/2024



Lane Group	EBT	WBL	WBT	NBT
Lane Group Flow (vph)	1822	52	1532	93
v/c Ratio	0.62	0.35	0.52	0.40
Control Delay	5.2	13.6	5.4	9.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.2	13.6	5.4	9.1
Queue Length 50th (ft)	93	7	133	0
Queue Length 95th (ft)	125	m18	m240	28
Internal Link Dist (ft)	342		273	287
Turn Bay Length (ft)		65		
Base Capacity (vph)	2918	147	2923	391
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.62	0.35	0.52	0.24



















Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

24: Berry Drive & Ventura Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1657	19	48	1409	0	20	0	65	0	0	0
Future Volume (vph)	0	1657	19	48	1409	0	20	0	65	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0			9.4				
Lane Util. Factor		0.95		1.00	0.95			1.00				
Frt		1.00		1.00	1.00			0.90				
Flt Protected		1.00		0.95	1.00			0.99				
Satd. Flow (prot)		3533		1770	3539			1651				
Flt Permitted		1.00		0.10	1.00			0.99				
Satd. Flow (perm)		3533		179	3539			1651				
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)	0	1801	21	52	1532	0	22	0	71	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	88	0	0	0	0
Lane Group Flow (vph)	0	1822	0	52	1532	0	0	5	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		6			2		3	3			4	
Permitted Phases	6			2						4		
Actuated Green, G (s)		79.7		79.7	79.7			5.9				
Effective Green, g (s)		79.7		79.7	79.7			5.9				
Actuated g/C Ratio		0.80		0.80	0.80			0.06				
Clearance Time (s)		5.0		5.0	5.0			9.4				
Vehicle Extension (s)		4.9		4.0	4.0			3.0				
Lane Grp Cap (vph)		2815		142	2820			97				
v/s Ratio Prot		c0.52			0.43			c0.00				
v/s Ratio Perm				0.29								
v/c Ratio		0.65		0.37	0.54			0.06				
Uniform Delay, d1		4.3		2.9	3.6			44.4				
Progression Factor		1.00		1.87	1.33			1.00				
Incremental Delay, d2		0.9		5.4	0.6			0.2				
Delay (s)		5.2		10.8	5.4			44.7				
Level of Service		A		B	A			D				
Approach Delay (s)		5.2			5.6			44.7			0.0	
Approach LOS		A			A			D			A	
Intersection Summary												
HCM 2000 Control Delay			6.4			HCM 2000 Level of Service				A		
HCM 2000 Volume to Capacity ratio			0.68									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			23.7			
Intersection Capacity Utilization			64.2%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

25: Ventura Boulevard & Tujunga Avenue

06/24/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	414	1338	1334	150	204
v/c Ratio	0.73	0.50	0.90	0.34	0.28
Control Delay	41.4	2.7	36.5	41.2	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	41.4	2.7	36.5	41.2	15.6
Queue Length 50th (ft)	208	78	393	45	72
Queue Length 95th (ft)	270	78	#634	73	103
Internal Link Dist (ft)		426	233	3083	
Turn Bay Length (ft)	180			100	60
Base Capacity (vph)	566	2693	1488	1012	738
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.73	0.50	0.90	0.15	0.28

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

25: Ventura Boulevard & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	381	1231	1017	211	138	188
Future Volume (vph)	381	1231	1017	211	138	188
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.5	5.5		5.5	5.6
Lane Util. Factor	1.00	0.95	0.95		0.97	1.00
Frt	1.00	1.00	0.97		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3448		3433	1583
Flt Permitted	0.08	1.00	1.00		0.95	1.00
Satd. Flow (perm)	154	3539	3448		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	414	1338	1105	229	150	204
RTOR Reduction (vph)	0	0	15	0	0	9
Lane Group Flow (vph)	414	1338	1319	0	150	195
Turn Type	pm+pt	NA	NA		Prot	pt+ov
Protected Phases	1	6	2		4	1 7
Permitted Phases	6					4
Actuated Green, G (s)	76.1	76.1	42.7		12.9	46.2
Effective Green, g (s)	76.1	76.1	42.7		12.9	40.7
Actuated g/C Ratio	0.76	0.76	0.43		0.13	0.41
Clearance Time (s)	5.6	5.5	5.5		5.5	
Vehicle Extension (s)	3.0	4.4	4.9		3.0	
Lane Grp Cap (vph)	566	2693	1472		442	644
v/s Ratio Prot	c0.20	0.38	c0.38		c0.04	0.12
v/s Ratio Perm	0.35					
v/c Ratio	0.73	0.50	0.90		0.34	0.30
Uniform Delay, d1	25.2	4.6	26.6		39.7	20.1
Progression Factor	1.57	0.44	1.00		1.00	1.00
Incremental Delay, d2	3.9	0.5	8.8		0.5	0.3
Delay (s)	43.5	2.6	35.4		40.1	20.3
Level of Service	D	A	D		D	C
Approach Delay (s)		12.2	35.4		28.7	
Approach LOS		B	D		C	
Intersection Summary						
HCM 2000 Control Delay			22.9		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.81			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	22.1
Intersection Capacity Utilization			78.1%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

26: Laurel Canyon Boulevard & Maxwellton Road

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Volume (veh/h)	67	0	73	0	0	0	15	1612	0	0	1149	72
Future Volume (veh/h)	67	0	73	0	0	0	15	1612	0	0	1149	72
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93				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
Work Zone On Approach	No						No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h	73	0	79				16	1752	0	0	1249	78
Peak Hour Factor	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	0	0	2	2
Cap, veh/h	129	0	140				48	2163	0	0	2140	133
Arrive On Green	0.17	0.00	0.17				0.63	0.63	0.00	0.00	0.63	0.63
Sat Flow, veh/h	770	0	834				12	3518	0	0	3490	212
Grp Volume(v), veh/h	152	0	0				945	823	0	0	653	674
Grp Sat Flow(s),veh/h/ln	1604	0	0				1828	1617	0	0	1777	1831
Q Serve(g_s), s	7.8	0.0	0.0				0.1	34.5	0.0	0.0	19.3	19.4
Cycle Q Clear(g_c), s	7.8	0.0	0.0				34.0	34.5	0.0	0.0	19.3	19.4
Prop In Lane	0.48		0.52				0.02		0.00	0.00		0.12
Lane Grp Cap(c), veh/h	269	0	0				1193	1019	0	0	1120	1154
V/C Ratio(X)	0.57	0.00	0.00				0.79	0.81	0.00	0.00	0.58	0.58
Avail Cap(c_a), veh/h	442	0	0				1193	1019	0	0	1120	1154
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.47	0.47	0.00	0.00	0.39	0.39
Uniform Delay (d), s/veh	34.4	0.0	0.0				12.4	12.5	0.0	0.0	9.7	9.7
Incr Delay (d2), s/veh	1.9	0.0	0.0				2.6	3.4	0.0	0.0	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.7	0.0	0.0				16.6	15.0	0.0	0.0	9.2	9.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.3	0.0	0.0				15.1	15.9	0.0	0.0	10.6	10.6
LnGrp LOS	D	A	A				B	B	A	A	B	B
Approach Vol, veh/h	152						1768			1327		
Approach Delay, s/veh	36.3						15.5			10.6		
Approach LOS	D						B			B		
Timer - Assigned Phs	2			4			6					
Phs Duration (G+Y+Rc), s	65.7			24.3			65.7					
Change Period (Y+Rc), s	9.0			9.2			9.0					
Max Green Setting (Gmax), s	47.0			24.8			47.0					
Max Q Clear Time (g_c+I1), s	21.4			9.8			36.5					
Green Ext Time (p_c), s	18.4			0.7			9.9					

Intersection Summary







HCM 6th Ctrl Delay	14.4
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary

27: Laurel Canyon Boulevard & Laurel Terrace Drive/Sunshine Terrace Drive

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	19	172	124	35	28	160	1560	205	33	1157	11
Future Volume (veh/h)	17	19	172	124	35	28	160	1560	205	33	1157	11
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	18	21	187	135	38	30	174	1696	223	36	1258	12
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	49	48	309	189	50	33	110	2214	285	138	2161	21
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.06	0.70	0.70	0.60	0.60	0.60
Sat Flow, veh/h	76	218	1411	634	230	150	1781	3166	408	233	3607	34
Grp Volume(v), veh/h	226	0	0	203	0	0	174	936	983	36	620	650
Grp Sat Flow(s),veh/h/ln	705	0	0	1014	0	0	1781	1777	1797	233	1777	1864
Q Serve(g_s), s	0.0	0.0	0.0	9.5	0.0	0.0	7.4	40.2	43.6	14.6	25.8	25.8
Cycle Q Clear(g_c), s	14.8	0.0	0.0	24.2	0.0	0.0	7.4	40.2	43.6	46.1	25.8	25.8
Prop In Lane	0.08		0.83	0.67		0.15	1.00		0.23	1.00		0.02
Lane Grp Cap(c), veh/h	406	0	0	272	0	0	110	1242	1256	138	1065	1117
V/C Ratio(X)	0.56	0.00	0.00	0.75	0.00	0.00	1.58	0.75	0.78	0.26	0.58	0.58
Avail Cap(c_a), veh/h	415	0	0	280	0	0	110	1242	1256	138	1065	1117
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.72	0.72	0.72
Uniform Delay (d), s/veh	42.5	0.0	0.0	47.3	0.0	0.0	56.3	11.5	12.0	31.3	14.8	14.8
Incr Delay (d2), s/veh	1.6	0.0	0.0	10.2	0.0	0.0	301.5	4.3	4.9	3.3	1.7	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.4	0.0	0.0	11.1	0.0	0.0	20.6	21.5	23.4	1.7	14.7	15.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.0	0.0	0.0	57.5	0.0	0.0	357.8	15.7	16.9	34.6	16.5	16.4
LnGrp LOS	D	A	A	E	A	A	F	B	B	C	B	B
Approach Vol, veh/h	226		203			2093			1306			
Approach Delay, s/veh	44.0		57.5			44.7			16.9			
Approach LOS	D		E			D			B			
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	2.0	76.7	31.3		88.7		31.3					
Change Period (Y+Rc), s	4.6	4.8	* 5		4.8		* 5					
Max Green Setting (Gmax), s	71.2	71.2	* 27		83.2		* 27					
Max Q Clear Time (g_c+I), s	48.1	48.1	16.8		45.6		26.2					
Green Ext Time (p_c), s	0.0	10.4	1.0		22.2		0.1					

Intersection Summary

HCM 6th Ctrl Delay 35.9

HCM 6th LOS D

Notes

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

Queues

28: Laurel Canyon Boulevard & Fryman Road

06/24/2024










Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	189	14	13	1913	1593
v/c Ratio	0.65	0.05	0.08	0.76	0.64
Control Delay	44.8	29.5	6.8	11.4	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.8	29.5	6.8	11.4	8.8
Queue Length 50th (ft)	102	7	2	301	206
Queue Length 95th (ft)	159	22	10	495	342
Internal Link Dist (ft)				236	183
Turn Bay Length (ft)			145		
Base Capacity (vph)	542	485	154	2527	2490
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.35	0.03	0.08	0.76	0.64
Intersection Summary					

HCM Signalized Intersection Capacity Analysis

28: Laurel Canyon Boulevard & Fryman Road

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	174	0	13	0	0	0	12	1760	0	0	1289	177
Future Volume (vph)	174	0	13	0	0	0	12	1760	0	0	1289	177
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4		5.4				5.4	5.4			5.4	
Lane Util. Factor	1.00		1.00				1.00	0.95			0.95	
Frt	1.00		0.85				1.00	1.00			0.98	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	3539			3475	
Flt Permitted	0.95		1.00				0.12	1.00			1.00	
Satd. Flow (perm)	1770		1583				216	3539			3475	
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)	189	0	14	0	0	0	13	1913	0	0	1401	192
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	8	0
Lane Group Flow (vph)	189	0	14	0	0	0	13	1913	0	0	1585	0
Turn Type	Perm		Perm				Perm	NA		Perm	NA	
Protected Phases								2			6	
Permitted Phases	8		8				2			6		
Actuated Green, G (s)	14.9		14.9				64.3	64.3			64.3	
Effective Green, g (s)	14.9		14.9				64.3	64.3			64.3	
Actuated g/C Ratio	0.17		0.17				0.71	0.71			0.71	
Clearance Time (s)	5.4		5.4				5.4	5.4			5.4	
Vehicle Extension (s)	3.0		3.0				4.8	4.8			5.1	
Lane Grp Cap (vph)	293		262				154	2528			2482	
v/s Ratio Prot								c0.54			0.46	
v/s Ratio Perm	c0.11		0.01				0.06					
v/c Ratio	0.65		0.05				0.08	0.76			0.64	
Uniform Delay, d1	35.1		31.6				3.9	8.0			6.7	
Progression Factor	1.00		1.00				1.00	1.00			1.00	
Incremental Delay, d2	4.8		0.1				1.1	2.2			1.3	
Delay (s)	39.9		31.7				5.0	10.2			8.0	
Level of Service	D		C				A	B			A	
Approach Delay (s)		39.3			0.0			10.1			8.0	
Approach LOS		D			A			B			A	
Intersection Summary												
HCM 2000 Control Delay			10.8				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.74									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			10.8		
Intersection Capacity Utilization			66.1%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th TWSC
29: Laurel Canyon Boulevard & Woodbridge Street

06/24/2024

Intersection												
Int Delay, s/veh	88.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	4	1	33	5	1	143	35	1792	21	72	1595	28
Future Vol, veh/h	4	1	33	5	1	143	35	1792	21	72	1595	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	65	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	1	36	5	1	155	38	1948	23	78	1734	30

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2956	3952	882	3060	3956	986	1764	0	0	1971	0	0
Stage 1	1905	1905	-	2036	2036	-	-	-	-	-	-	-
Stage 2	1051	2047	-	1024	1920	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	6	3	289	~ 5	3	247	350	-	-	290	-	-
Stage 1	71	115	-	58	99	-	-	-	-	-	-	-
Stage 2	243	98	-	252	113	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 1	2	289	~ 2	2	247	350	-	-	290	-	-
Mov Cap-2 Maneuver	~ 1	2	-	~ 2	2	-	-	-	-	-	-	-
Stage 1	63	84	-	52	88	-	-	-	-	-	-	-
Stage 2	79	87	-	159	83	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$ 2778.4		\$ 1482.8	0.3	0.9
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	350	-	-	8 42	290	-	-
HCM Lane V/C Ratio	0.109	-	-	5.163 3.856	0.27	-	-
HCM Control Delay (s)	16.5	-	-	\$ 2778.4 1482.8	21.9	-	-
HCM Lane LOS	C	-	-	F F	C	-	-
HCM 95th %tile Q(veh)	0.4	-	-	6.5 18.3	1.1	-	-

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

HCM 6th TWSC
30: Valleyheart Drive (North) & Laurel Canyon Boulevard

06/24/2024

Intersection

Int Delay, s/veh 2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	2	0	34	2	0	11	32	1917	50	11	1645	5
Future Vol, veh/h	2	0	34	2	0	11	32	1917	50	11	1645	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	40	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	37	2	0	12	35	2084	54	12	1788	5

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2927	4023	897	3099	3998	1069	1793	0	0	2138	0	0
Stage 1	1815	1815	-	2181	2181	-	-	-	-	-	-	-
Stage 2	1112	2208	-	918	1817	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	7	3	283	5	3	217	341	-	-	250	-	-
Stage 1	81	128	-	47	83	-	-	-	-	-	-	-
Stage 2	223	81	-	292	128	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	6	3	283	4	3	217	341	-	-	250	-	-
Mov Cap-2 Maneuver	6	3	-	4	3	-	-	-	-	-	-	-
Stage 1	73	122	-	42	74	-	-	-	-	-	-	-
Stage 2	189	73	-	242	122	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	88.8		282.3		0.3		0.1	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	341	-	-	79 24	250	-	-
HCM Lane V/C Ratio	0.102	-	-	0.495 0.589	0.048	-	-
HCM Control Delay (s)	16.8	-	-	88.8 282.3	20.1	-	-
HCM Lane LOS	C	-	-	F F	C	-	-
HCM 95th %tile Q(veh)	0.3	-	-	2.1 1.8	0.1	-	-





HCM 6th TWSC

31: Laurel Canyon Boulevard & Valleyheart Drive (South)

06/24/2024

Intersection

Int Delay, s/veh 12

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	129	1860	39	113	1580
Future Vol, veh/h	3	129	1860	39	113	1580
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	35	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	140	2022	42	123	1717

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	3148	1032	0
Stage 1	2043	-	-
Stage 2	1105	-	-
Critical Hdwy	6.84	6.94	-
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	-
Pot Cap-1 Maneuver	8	230	-
Stage 1	86	-	-
Stage 2	279	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	4	230	-
Mov Cap-2 Maneuver	4	-	-
Stage 1	86	-	-
Stage 2	150	-	-

Approach	WB	NB	SB
HCM Control Delay, s\$	313.4	0	2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	101	267
HCM Lane V/C Ratio	-	-	1.421	0.46
HCM Control Delay (s)	-	-	\$ 313.4	29.5
HCM Lane LOS	-	-	F	D
HCM 95th %tile Q(veh)	-	-	10.5	2.3

Notes

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

HCM 6th AWSC
32: Radford Avenue & Sarah Street

06/24/2024

Intersection

Intersection Delay, s/veh 7.4
Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	0	6	1	6	1	54	3	7	74	9
Future Vol, veh/h	5	0	0	6	1	6	1	54	3	7	74	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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	0	7	1	7	1	59	3	8	80	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0




Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.5	7.2	7.3	7.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	100%	46%	8%
Vol Thru, %	93%	0%	8%	82%
Vol Right, %	5%	0%	46%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	58	5	13	90
LT Vol	1	5	6	7
Through Vol	54	0	1	74
RT Vol	3	0	6	9
Lane Flow Rate	63	5	14	98
Geometry Grp	1	1	1	1
Degree of Util (X)	0.07	0.007	0.016	0.108
Departure Headway (Hd)	4.015	4.423	4.03	3.972
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	891	801	878	903
Service Time	2.042	2.493	2.099	1.994
HCM Lane V/C Ratio	0.071	0.006	0.016	0.109
HCM Control Delay	7.3	7.5	7.2	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0	0	0.4

Intersection

Intersection Delay, s/veh10.1

Intersection LOS B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	163	163	71	73	73	53
Future Vol, veh/h	163	163	71	73	73	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	177	177	77	79	79	58
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	10.9	8.9	9.3
HCM LOS	B	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	50%	58%
Vol Thru, %	49%	0%	42%
Vol Right, %	51%	50%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	144	326	126
LT Vol	0	163	73
Through Vol	71	0	53
RT Vol	73	163	0
Lane Flow Rate	157	354	137
Geometry Grp	1	1	1
Degree of Util (X)	0.201	0.437	0.193
Departure Headway (Hd)	4.632	4.438	5.064
Convergence, Y/N	Yes	Yes	Yes
Cap	770	808	705
Service Time	2.686	2.476	3.118
HCM Lane V/C Ratio	0.204	0.438	0.194
HCM Control Delay	8.9	10.9	9.3
HCM Lane LOS	A	B	A
HCM 95th-tile Q	0.7	2.2	0.7

HCM 6th AWSC
54: Radford Avenue & Radford Gate

06/24/2024

Intersection

Intersection Delay, s/veh13.6

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	0	47	131	0	0	54	238	83	0	354	4
Future Vol, veh/h	8	0	47	131	0	0	54	238	83	0	354	4
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	0	51	142	0	0	59	259	90	0	385	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0





Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.4	11.3	14.4	14.3
HCM LOS	A	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	15%	100%	0%
Vol Thru, %	63%	0%	0%	99%
Vol Right, %	22%	85%	0%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	375	55	131	358
LT Vol	54	8	131	0
Through Vol	238	0	0	354
RT Vol	83	47	0	4
Lane Flow Rate	408	60	142	389
Geometry Grp	1	1	1	1
Degree of Util (X)	0.567	0.096	0.246	0.553
Departure Headway (Hd)	5.004	5.762	6.223	5.116
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	721	620	577	704
Service Time	3.039	3.818	4.273	3.151
HCM Lane V/C Ratio	0.566	0.097	0.246	0.553
HCM Control Delay	14.4	9.4	11.3	14.3
HCM Lane LOS	B	A	B	B
HCM 95th-tile Q	3.6	0.3	1	3.4

Intersection

Intersection Delay, s/veh13.2

Intersection LOS B




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	35	38	8	22	0	54	224	13	0	452	0
Future Vol, veh/h	0	35	38	8	22	0	54	224	13	0	452	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	38	41	9	24	0	59	243	14	0	491	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.4	9.4	11.4	15.2
HCM LOS	A	A	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	19%	0%	27%	0%
Vol Thru, %	77%	48%	73%	100%
Vol Right, %	4%	52%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	291	73	30	452
LT Vol	54	0	8	0
Through Vol	224	35	22	452
RT Vol	13	38	0	0
Lane Flow Rate	316	79	33	491
Geometry Grp	1	1	1	1
Degree of Util (X)	0.421	0.123	0.055	0.628
Departure Headway (Hd)	4.794	5.575	6.049	4.602
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	743	647	595	781
Service Time	2.865	3.575	4.052	2.664
HCM Lane V/C Ratio	0.425	0.122	0.055	0.629
HCM Control Delay	11.4	9.4	9.4	15.2
HCM Lane LOS	B	A	A	C
HCM 95th-tile Q	2.1	0.4	0.2	4.5

HCM 6th TWSC
56: Colfax Avenue & Colfax Gate

06/24/2024

Intersection						
Int Delay, s/veh	40.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	163	54	24	640	630	73
Future Vol, veh/h	163	54	24	640	630	73
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	177	59	26	696	685	79

Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1473	725	764	0	-	0
Stage 1	725	-	-	-	-	-
Stage 2	748	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	~ 140	425	849	-	-	-
Stage 1	479	-	-	-	-	-
Stage 2	468	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 133	425	849	-	-	-
Mov Cap-2 Maneuver	~ 133	-	-	-	-	-
Stage 1	455	-	-	-	-	-
Stage 2	468	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	296.4	0.3	0
HCM LOS	F		

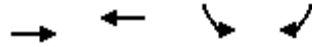
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	849	-	160	-	-
HCM Lane V/C Ratio	0.031	-	1.474	-	-
HCM Control Delay (s)	9.4	-	296.4	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0.1	-	15.3	-	-

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

Queues

121: Ventura Boulevard & Ventura PI

06/24/2024



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1392	1362	179	25
v/c Ratio	1.53	0.65	0.28	0.08
Control Delay	281.9	26.8	49.8	18.5
Queue Delay	1.7	50.7	0.0	0.0
Total Delay	283.6	77.5	49.8	18.5
Queue Length 50th (ft)	~933	245	72	2
Queue Length 95th (ft)	#1073	m37	108	28
Internal Link Dist (ft)	509	48	136	
Turn Bay Length (ft)				40
Base Capacity (vph)	907	2101	669	327
Starvation Cap Reductn	0	1254	0	0
Spillback Cap Reductn	233	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	2.07	1.61	0.27	0.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

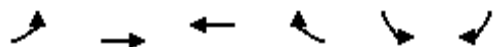
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

121: Ventura Boulevard & Ventura PI

06/24/2024



























Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	↑
Traffic Volume (vph)	0	1281	1253	0	165	23
Future Volume (vph)	0	1281	1253	0	165	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.1	6.1		5.7	5.7
Lane Util. Factor		0.95	0.95		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3433	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1392	1362	0	179	25
RTOR Reduction (vph)	0	0	0	0	0	19
Lane Group Flow (vph)	0	1392	1362	0	179	6
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2 4		3	
Permitted Phases						3
Actuated Green, G (s)		35.9	83.1		26.1	26.1
Effective Green, g (s)		35.9	83.1		26.1	26.1
Actuated g/C Ratio		0.26	0.59		0.19	0.19
Clearance Time (s)		6.1			5.7	5.7
Vehicle Extension (s)		4.6			3.0	3.0
Lane Grp Cap (vph)		907	2100		640	295
v/s Ratio Prot		c0.39	c0.38		c0.05	
v/s Ratio Perm						0.00
v/c Ratio		1.53	0.65		0.28	0.02
Uniform Delay, d1		52.0	18.8		48.9	46.5
Progression Factor		1.00	1.38		1.00	1.00
Incremental Delay, d2		246.2	0.1		0.2	0.0
Delay (s)		298.2	26.1		49.1	46.5
Level of Service		F	C		D	D
Approach Delay (s)		298.2	26.1		48.8	
Approach LOS		F	C		D	
Intersection Summary						
HCM 2000 Control Delay		155.7		HCM 2000 Level of Service		F
HCM 2000 Volume to Capacity ratio		0.96				
Actuated Cycle Length (s)		140.0		Sum of lost time (s)		31.8
Intersection Capacity Utilization		51.9%		ICU Level of Service		A
Analysis Period (min)		15				
c Critical Lane Group						

***Future with Project Conditions (Year 2028)
with Radford Mobility Connector***

HCM 6th Signalized Intersection Summary

1: Riverside Drive & Laurel Canyon Boulevard








06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	260	637	155	161	991	145	249	854	105	136	928	325
Future Volume (veh/h)	260	637	155	161	991	145	249	854	105	136	928	325
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	283	692	168	175	1077	158	271	928	114	148	1009	353
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	272	1301	580	258	1016	453	260	1075	598	209	958	335
Arrive On Green	0.15	0.37	0.37	0.02	0.09	0.09	0.11	0.30	0.30	0.07	0.26	0.26
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	3554	1585	1781	3734	1306
Grp Volume(v), veh/h	283	692	168	175	1077	158	271	928	114	148	920	442
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1777	1585	1781	1702	1635
Q Serve(g_s), s	18.3	18.4	9.0	6.0	34.3	11.2	13.5	29.6	5.8	7.4	30.8	30.8
Cycle Q Clear(g_c), s	18.3	18.4	9.0	6.0	34.3	11.2	13.5	29.6	5.8	7.4	30.8	30.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.80
Lane Grp Cap(c), veh/h	272	1301	580	258	1016	453	260	1075	598	209	874	420
V/C Ratio(X)	1.04	0.53	0.29	0.68	1.06	0.35	1.04	0.86	0.19	0.71	1.05	1.05
Avail Cap(c_a), veh/h	272	1301	580	320	1016	453	260	1075	598	209	874	420
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	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	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.8	29.9	27.0	57.1	54.3	43.9	34.7	39.5	25.1	33.2	44.6	44.6
Incr Delay (d2), s/veh	65.9	1.6	1.3	4.1	45.7	2.1	65.4	8.8	0.7	10.5	45.3	58.7
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(95%),veh/ln	19.2	12.6	6.4	5.1	31.7	8.6	15.9	19.9	4.0	6.7	25.8	26.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	116.8	31.5	28.2	61.2	100.0	46.0	100.1	48.3	25.7	43.7	89.9	103.3
LnGrp LOS	F	C	C	E	F	D	F	D	C	D	F	F
Approach Vol, veh/h		1143			1410			1313			1510	
Approach Delay, s/veh		52.1			89.1			57.0			89.3	
Approach LOS		D			F			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.1	36.7	24.2	40.0	13.6	42.2	14.6	49.6				
Change Period (Y+Rc), s	5.6	5.9	5.9	* 5.7	5.6	5.9	5.6	* 5.7				
Max Green Setting (Gmax), s	13.5	30.8	18.3	* 34	8.0	36.3	11.1	* 42				
Max Q Clear Time (g_c+I1), s	15.5	32.8	20.3	36.3	9.4	31.6	8.0	20.4				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	2.6	0.1	5.1				
Intersection Summary												
HCM 6th Ctrl Delay			73.5									
HCM 6th LOS			E									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
User approved changes to right turn type.												

HCM 6th TWSC

2: Riverside Drive & Radford Avenue

06/24/2024

Intersection												
Int Delay, s/veh	33.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	965	94	80	1067	12	29	6	91	4	11	29
Future Vol, veh/h	24	965	94	80	1067	12	29	6	91	4	11	29
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	105	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	1049	102	87	1160	13	32	7	99	4	12	32

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1173	0	0	1151	0	0	1861	2448	525	1921	2544	587
Stage 1	-	-	-	-	-	-	1101	1101	-	1341	1341	-
Stage 2	-	-	-	-	-	-	760	1347	-	580	1203	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	591	-	-	603	-	-	45	31	497	41	27	453
Stage 1	-	-	-	-	-	-	226	286	-	161	219	-
Stage 2	-	-	-	-	-	-	364	218	-	467	256	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	591	-	-	603	-	-	~ 21	25	497	23	22	453
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 21	25	-	23	22	-
Stage 1	-	-	-	-	-	-	216	273	-	154	187	-
Stage 2	-	-	-	-	-	-	271	187	-	349	245	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.8	\$ 574.3	173
HCM LOS			F	F

























Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	70	591	-	-	603	-	-	60
HCM Lane V/C Ratio	1.957	0.044	-	-	0.144	-	-	0.797
HCM Control Delay (s)	\$ 574.3	11.4	-	-	12	-	-	173
HCM Lane LOS	F	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	12.5	0.1	-	-	0.5	-	-	3.5

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

HCM 6th Signalized Intersection Summary

3: Colfax Avenue & Riverside Drive

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	656	215	269	776	81	126	440	75	84	544	126
Future Volume (veh/h)	108	656	215	269	776	81	126	440	75	84	544	126
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	117	713	234	292	843	88	137	478	82	91	591	137
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	234	1356	605	254	1356	605	254	826	700	443	826	700
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.88	0.88	0.88	0.44	0.44	0.44
Sat Flow, veh/h	601	3554	1585	592	3554	1585	727	1870	1585	850	1870	1585
Grp Volume(v), veh/h	117	713	234	292	843	88	137	478	82	91	591	137
Grp Sat Flow(s),veh/h/ln	601	1777	1585	592	1777	1585	727	1870	1585	850	1870	1585
Q Serve(g_s), s	11.4	9.3	6.4	13.6	11.5	2.2	11.0	3.7	0.4	4.5	15.5	3.2
Cycle Q Clear(g_c), s	22.9	9.3	6.4	22.9	11.5	2.2	26.5	3.7	0.4	8.1	15.5	3.2
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	234	1356	605	254	1356	605	254	826	700	443	826	700
V/C Ratio(X)	0.50	0.53	0.39	1.15	0.62	0.15	0.54	0.58	0.12	0.21	0.72	0.20
Avail Cap(c_a), veh/h	234	1356	605	254	1356	605	254	826	700	443	826	700
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	0.93	0.93	0.93	0.77	0.77	0.77	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.5	14.3	13.5	26.4	15.0	12.1	11.4	2.2	2.0	12.9	13.7	10.2
Incr Delay (d2), s/veh	7.5	1.5	1.9	100.9	2.0	0.5	6.2	2.3	0.3	1.0	5.3	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(95%),veh/ln	3.5	6.1	4.0	17.0	7.5	1.3	2.5	2.1	0.3	1.6	10.8	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.9	15.8	15.3	127.3	17.0	12.6	17.6	4.4	2.2	13.9	18.9	10.9
LnGrp LOS	C	B	B	F	B	B	B	A	A	B	B	B
Approach Vol, veh/h	1064			1223			697			819		
Approach Delay, s/veh	17.5			43.0			6.8			17.0		
Approach LOS	B			D			A			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	28.0			32.0			28.0			32.0		
Change Period (Y+Rc), s	* 5.1			* 5.5			* 5.1			* 5.5		
Max Green Setting (Gmax), s	* 23			* 27			* 23			* 27		
Max Q Clear Time (g_c+I1), s	24.9			28.5			24.9			17.5		
Green Ext Time (p_c), s	0.0			0.0			0.0			3.2		
Intersection Summary												
HCM 6th Ctrl Delay	23.6											
HCM 6th LOS	C											
Notes												

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

Queues

4: Riverside Drive & SR 170 Southbound Off-Ramp

06/24/2024



Lane Group	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	867	9	750	30	230	220	209
v/c Ratio	0.44	0.03	0.38	0.11	0.66	0.54	0.44
Control Delay	12.3	13.5	14.6	0.9	34.5	16.5	6.8
Queue Delay	1.0	0.0	0.5	0.2	0.6	0.7	0.0
Total Delay	13.4	13.5	15.1	1.0	35.1	17.2	6.8
Queue Length 50th (ft)	89	3	177	0	92	39	0
Queue Length 95th (ft)	208	m8	215	0	162	104	50
Internal Link Dist (ft)	2214		245	105		344	
Turn Bay Length (ft)		25			140		150
Base Capacity (vph)	1966	272	1966	267	408	456	523
Starvation Cap Reductn	0	0	735	0	0	0	0
Spillback Cap Reductn	785	0	0	62	37	68	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.03	0.61	0.15	0.62	0.57	0.40


Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: Riverside Drive & SR 170 Southbound Off-Ramp













06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑	↑↑			↑↓		↑	↑↓	↑
Traffic Volume (vph)	0	796	2	8	690	0	7	0	20	279	6	321
Future Volume (vph)	0	796	2	8	690	0	7	0	20	279	6	321
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Lane Util. Factor		0.95		1.00	0.95			1.00		0.95	0.91	0.95
Frt		1.00		1.00	1.00			0.90		1.00	0.90	0.85
Flt Protected		1.00		0.95	1.00			0.99		0.95	0.98	1.00
Satd. Flow (prot)		3538		1770	3539			1656		1681	1508	1504
Flt Permitted		1.00		0.26	1.00			0.83		0.95	0.98	1.00
Satd. Flow (perm)		3538		489	3539			1392		1681	1508	1504
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)	0	865	2	9	750	0	8	0	22	303	7	349
RTOR Reduction (vph)	0	0	0	0	0	0	0	29	0	0	94	165
Lane Group Flow (vph)	0	867	0	9	750	0	0	1	0	230	126	44
Turn Type		NA		Perm	NA		Perm	NA		Split	NA	Perm
Protected Phases		6			2			4		3	3	
Permitted Phases				2			4					3
Actuated Green, G (s)		35.2		35.2	35.2			3.2		14.6	14.6	14.6
Effective Green, g (s)		35.2		35.2	35.2			3.2		14.6	14.6	14.6
Actuated g/C Ratio		0.50		0.50	0.50			0.05		0.21	0.21	0.21
Clearance Time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Vehicle Extension (s)		3.8		2.4	2.4			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1779		245	1779			63		350	314	313
v/s Ratio Prot		c0.25			0.21					c0.14	0.08	
v/s Ratio Perm				0.02				c0.00				0.03
v/c Ratio		0.49		0.04	0.42			0.02		0.66	0.40	0.14
Uniform Delay, d1		11.5		8.8	11.0			31.9		25.4	23.9	22.6
Progression Factor		1.00		1.13	1.33			1.00		1.00	1.00	1.00
Incremental Delay, d2		1.0		0.2	0.6			0.1		4.4	0.8	0.2
Delay (s)		12.4		10.2	15.2			32.0		29.8	24.8	22.8
Level of Service		B		B	B			C		C	C	C
Approach Delay (s)		12.4			15.1			32.0			25.9	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			17.4			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.51									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			53.2%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	NWL	NWR
Lane Group Flow (vph)	207	665	314	252	450	136	25	631	159	1077	251	85
v/c Ratio	0.70	1.00	1.03	1.20	0.57	0.38	0.33	0.93	0.62	0.79	0.60	0.48
Control Delay	46.2	87.5	110.4	160.0	51.5	49.9	63.6	76.3	67.9	43.3	63.7	65.8
Queue Delay	0.0	35.1	24.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Total Delay	46.2	122.6	135.3	160.0	51.5	49.9	63.6	76.3	67.9	43.3	63.9	65.8
Queue Length 50th (ft)	148	319	~334	~227	193	106	20	302	137	451	113	80
Queue Length 95th (ft)	174	#490	#562	#407	251	173	54	#446	#235	573	153	138
Internal Link Dist (ft)		245			745			2580		383	758	
Turn Bay Length (ft)	140		230	85		110	270		290		215	
Base Capacity (vph)	295	665	304	210	793	355	76	678	256	1363	686	288
Starvation Cap Reductn	0	132	49	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	73	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	1.25	1.23	1.20	0.57	0.38	0.33	0.93	0.62	0.79	0.41	0.30

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.





















95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024

												
Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	190	320	389	191	13	219	414	125	23	487	75	18
Future Volume (vph)	190	320	389	191	13	219	414	125	23	487	75	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Lane Util. Factor	1.00	0.91	0.91			1.00	0.95	1.00	1.00	0.95		
Frt	1.00	0.93	0.85			1.00	1.00	0.85	1.00	0.98		
Flt Protected	0.95	1.00	1.00			0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1770	3148	1441			1770	3539	1583	1770	3453		
Flt Permitted	0.36	1.00	1.00			0.13	1.00	1.00	0.21	1.00		
Satd. Flow (perm)	670	3148	1441			237	3539	1583	389	3453		
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)	207	348	423	208	14	238	450	136	25	529	82	20
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	207	665	314	0	0	252	450	136	25	631	0	0
Turn Type	pm+pt	NA	Perm		pm+pt	pm+pt	NA	Perm	Perm	NA		
Protected Phases	1	6			5	5	2			8		
Permitted Phases	6		6		2	2		2	8			
Actuated Green, G (s)	41.3	29.6	29.6			43.8	31.4	31.4	27.5	27.5		
Effective Green, g (s)	41.3	29.6	29.6			43.8	31.4	31.4	27.5	27.5		
Actuated g/C Ratio	0.29	0.21	0.21			0.31	0.22	0.22	0.20	0.20		
Clearance Time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Vehicle Extension (s)	3.0	3.9	3.9			3.0	4.6	4.6	4.7	4.7		
Lane Grp Cap (vph)	289	665	304			209	793	355	76	678		
v/s Ratio Prot	0.06	0.21				c0.11	0.13			c0.18		
v/s Ratio Perm	0.15		0.22			c0.27		0.09	0.06			
v/c Ratio	0.72	1.00	1.03			1.21	0.57	0.38	0.33	0.93		
Uniform Delay, d1	40.5	55.2	55.2			40.8	48.3	46.1	48.3	55.3		
Progression Factor	0.96	0.99	0.99			1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2	7.4	33.2	57.8			128.9	2.9	3.1	4.7	20.0		
Delay (s)	46.4	87.9	112.4			169.6	51.2	49.2	53.0	75.3		
Level of Service	D	F	F			F	D	D	D	E		
Approach Delay (s)		87.1					86.5			74.5		
Approach LOS		F					F			E		
Intersection Summary												
HCM 2000 Control Delay			70.4			HCM 2000 Level of Service				E		
HCM 2000 Volume to Capacity ratio			1.01									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			33.0			
Intersection Capacity Utilization			101.0%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024



Movement	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	17	130	914	77	39	184	83	4
Future Volume (vph)	17	130	914	77	39	184	83	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.3			6.6	6.6	
Lane Util. Factor		1.00	0.95			0.97	0.91	
Frt		1.00	0.99			0.99	0.85	
Flt Protected		0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	3498			3429	1441	
Flt Permitted		0.95	1.00			0.95	1.00	
Satd. Flow (perm)		1770	3498			3429	1441	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	141	993	84	42	200	90	4
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	159	1077	0	0	251	85	0
Turn Type	Prot	Prot	NA		Prot	Prot	Perm	
Protected Phases	7	7	4		3	3		
Permitted Phases							3	
Actuated Green, G (s)		20.3	54.6			17.2	17.2	
Effective Green, g (s)		20.3	54.6			17.2	17.2	
Actuated g/C Ratio		0.15	0.39			0.12	0.12	
Clearance Time (s)		6.8	6.3			6.6	6.6	
Vehicle Extension (s)		3.0	4.9			4.6	4.6	
Lane Grp Cap (vph)		256	1364			421	177	
v/s Ratio Prot		0.09	c0.31			c0.07		
v/s Ratio Perm							0.06	
v/c Ratio		0.62	0.79			0.60	0.48	
Uniform Delay, d1		56.2	37.6			58.1	57.2	
Progression Factor		1.00	1.00			1.00	1.00	
Incremental Delay, d2		4.6	3.6			3.1	3.7	
Delay (s)		60.9	41.2			61.2	60.9	
Level of Service		E	D			E	E	
Approach Delay (s)			43.8			61.1		
Approach LOS			D			E		
Intersection Summary								

HCM 6th Signalized Intersection Summary

6: Laurel Canyon Boulevard & US 101 Northbound Ramps

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰	↰	↰	↰			↰	↰
Traffic Volume (veh/h)	0	0	0	495	2	246	470	619	0	0	1424	363
Future Volume (veh/h)	0	0	0	495	2	246	470	619	0	0	1424	363
Initial Q (Qb), veh				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
Parking Bus, Adj				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		
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				622	0	179	511	673	0	0	1548	395
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				732	0	326	583	2425	0	0	2322	721
Arrive On Green				0.21	0.00	0.21	0.34	1.00	0.00	0.00	0.45	0.45
Sat Flow, veh/h				3563	0	1585	3456	3647	0	0	5274	1585
Grp Volume(v), veh/h				622	0	179	511	673	0	0	1548	395
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	0	1702	1585
Q Serve(g_s), s				15.1	0.0	9.1	12.5	0.0	0.0	0.0	21.3	16.3
Cycle Q Clear(g_c), s				15.1	0.0	9.1	12.5	0.0	0.0	0.0	21.3	16.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				732	0	326	583	2425	0	0	2322	721
V/C Ratio(X)				0.85	0.00	0.55	0.88	0.28	0.00	0.00	0.67	0.55
Avail Cap(c_a), veh/h				859	0	382	680	2425	0	0	2322	721
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.89	0.89	0.00	0.00	0.28	0.28
Uniform Delay (d), s/veh				34.4	0.0	32.0	29.0	0.0	0.0	0.0	19.2	17.8
Incr Delay (d2), s/veh				7.1	0.0	1.4	10.1	0.3	0.0	0.0	0.4	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
%ile BackOfQ(95%),veh/ln				11.2	0.0	6.2	8.3	0.2	0.0	0.0	10.3	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				41.6	0.0	33.5	39.1	0.3	0.0	0.0	19.6	18.7
LnGrp LOS				D	A	C	D	A	A	A	B	B
Approach Vol, veh/h					801			1184			1943	
Approach Delay, s/veh					39.7			17.0			19.4	
Approach LOS					D			B			B	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	30.5	45.7		23.8		66.2						
Change Period (Y+Rc), s	5.3	4.8		* 5.3		4.8						
Max Green Setting (Gmax), s	18	35.2		* 22		58.2						
Max Q Clear Time (g_c+M), s	14.5	23.3		17.1		2.0						
Green Ext Time (p_c), s	0.6	8.6		1.4		5.2						

Intersection Summary

HCM 6th Ctrl Delay	22.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.








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

HCM 6th Signalized Intersection Summary

7: US 101 Southbound Ramps & Laurel Canyon Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	11	458	0	0	0	0	948	550	518	1406	0
Future Volume (veh/h)	156	11	458	0	0	0	0	948	550	518	1406	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	117	0	562				0	1030	598	563	1528	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	365	0	649				0	2089	648	743	2419	0
Arrive On Green	0.20	0.00	0.20				0.00	0.41	0.41	0.43	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	5274	1585	3456	3647	0
Grp Volume(v), veh/h	117	0	562				0	1030	598	563	1528	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1702	1585	1728	1777	0
Q Serve(g_s), s	5.0	0.0	15.4				0.0	13.4	32.2	12.4	0.0	0.0
Cycle Q Clear(g_c), s	5.0	0.0	15.4				0.0	13.4	32.2	12.4	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	365	0	649				0	2089	648	743	2419	0
V/C Ratio(X)	0.32	0.00	0.87				0.00	0.49	0.92	0.76	0.63	0.00
Avail Cap(c_a), veh/h	416	0	740				0	2139	664	743	2419	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.62	0.62	0.00
Uniform Delay (d), s/veh	30.5	0.0	34.6				0.0	19.7	25.2	23.7	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	9.6				0.0	0.8	20.7	2.8	0.8	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
%ile BackOfQ(95%),veh/ln	8.8	0.0	10.6				0.0	8.9	21.3	6.7	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.0	0.0	44.2				0.0	20.5	45.9	26.5	0.8	0.0
LnGrp LOS	C	A	D				A	C	D	C	A	A
Approach Vol, veh/h	679						1628			2091		
Approach Delay, s/veh	41.9						29.8			7.7		
Approach LOS	D						C			A		
Timer - Assigned Phs	1	2	4		6							
Phs Duration (G+Y+Rc), s	41.5	41.9	23.6		66.4							
Change Period (Y+Rc), s	5.1	* 5.1	* 5.2		* 5.1							
Max Green Setting (Gmax), s	16	* 38	* 21		* 59							
Max Q Clear Time (g_c+M), s	11.4	34.2	17.4		2.0							
Green Ext Time (p_c), s	0.4	2.6	1.0		18.3							

Intersection Summary

HCM 6th Ctrl Delay	21.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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

Queues

8: Laurel Canyon Boulevard & Landale Street

06/24/2024



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	156	205	172	66	182	1420	30	1688	261
v/c Ratio	0.74	0.63	0.77	0.18	0.66	0.75	0.32	1.31	0.58
Control Delay	60.2	18.7	60.7	1.1	34.1	9.7	29.7	168.2	26.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.2	18.7	60.7	1.1	34.1	9.7	29.7	168.2	26.4
Queue Length 50th (ft)	91	17	95	0	69	122	12	~661	123
Queue Length 95th (ft)	#189	90	#189	0	m52	m103	m20	#810	m190
Internal Link Dist (ft)		140	232			591		375	
Turn Bay Length (ft)	85			40	155		125		115
Base Capacity (vph)	212	325	237	380	290	1881	93	1293	453
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.63	0.73	0.17	0.63	0.75	0.32	1.31	0.58

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

8: Laurel Canyon Boulevard & Landale Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	159	14	159	25	133	61	167	1276	30	28	1553	240
Future Volume (vph)	159	14	159	25	133	61	167	1276	30	28	1553	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.89			1.00	1.00	1.00	1.00		1.00	1.00	0.78
Flpb, ped/bikes	1.00	1.00			0.99	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.87			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1375			1825	1583	1770	3522		1763	3539	1241
Flt Permitted	0.95	1.00			0.90	1.00	0.10	1.00		0.14	1.00	1.00
Satd. Flow (perm)	1681	1375			1653	1583	195	3522		254	3539	1241
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)	173	15	173	27	145	66	182	1387	33	30	1688	261
RTOR Reduction (vph)	0	151	0	0	0	57	0	2	0	0	0	0
Lane Group Flow (vph)	156	54	0	0	172	9	182	1418	0	30	1688	261
Confl. Peds. (#/hr)			49	49			89		12	12		89
Turn Type	Split	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	3	3			4		1	6			2	
Permitted Phases				4		4	6			2		2
Actuated Green, G (s)	11.3	11.3			12.2	12.2	48.0	48.0		32.9	32.9	32.9
Effective Green, g (s)	11.3	11.3			12.2	12.2	48.0	48.0		32.9	32.9	32.9
Actuated g/C Ratio	0.13	0.13			0.14	0.14	0.53	0.53		0.37	0.37	0.37
Clearance Time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	5.2		4.5	4.5	4.5
Lane Grp Cap (vph)	211	172			224	214	273	1878		92	1293	453
v/s Ratio Prot	c0.09	0.04					0.07	c0.40			c0.48	
v/s Ratio Perm					c0.10	0.01	0.28			0.12		0.21
v/c Ratio	0.74	0.31			0.77	0.04	0.67	0.76		0.33	1.31	0.58
Uniform Delay, d1	37.9	35.8			37.5	33.8	18.2	16.4		20.6	28.6	22.9
Progression Factor	1.00	1.00			1.00	1.00	2.16	0.56		0.94	0.93	0.92
Incremental Delay, d2	12.7	1.0			14.6	0.1	0.6	0.3		6.8	141.7	3.9
Delay (s)	50.6	36.9			52.1	33.9	39.9	9.4		26.2	168.2	24.9
Level of Service	D	D			D	C	D	A		C	F	C
Approach Delay (s)		42.8			47.0			12.9			147.2	
Approach LOS		D			D			B			F	
Intersection Summary												
HCM 2000 Control Delay			81.0									F
HCM 2000 Volume to Capacity ratio			1.06									
Actuated Cycle Length (s)			90.0							23.9		
Intersection Capacity Utilization			92.0%									F
ICU Level of Service												
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

9: Colfax Avenue & Sarah Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↑	↕
Traffic Volume (veh/h)	38	84	11	35	17	154	21	503	49	138	851	47
Future Volume (veh/h)	38	84	11	35	17	154	21	503	49	138	851	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.89		0.81	0.86		0.81	1.00		0.93	0.99		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	41	91	12	38	18	167	23	547	53	150	925	51
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	157	304	35	104	51	251	140	957	752	372	957	752
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.51	0.51	0.51	0.51	0.51	0.51
Sat Flow, veh/h	315	1202	138	132	200	991	576	1870	1470	814	1870	1470
Grp Volume(v), veh/h	144	0	0	223	0	0	23	547	53	150	925	51
Grp Sat Flow(s),veh/h/ln	1654	0	0	1323	0	0	576	1870	1470	814	1870	1470
Q Serve(g_s), s	0.0	0.0	0.0	2.9	0.0	0.0	2.0	12.1	1.1	9.4	28.7	1.1
Cycle Q Clear(g_c), s	3.9	0.0	0.0	8.8	0.0	0.0	30.7	12.1	1.1	21.5	28.7	1.1
Prop In Lane	0.28		0.08	0.17		0.75	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	496	0	0	405	0	0	140	957	752	372	957	752
V/C Ratio(X)	0.29	0.00	0.00	0.55	0.00	0.00	0.16	0.57	0.07	0.40	0.97	0.07
Avail Cap(c_a), veh/h	633	0	0	523	0	0	140	957	752	372	957	752
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.92	0.92	0.92	0.49	0.49	0.49
Uniform Delay (d), s/veh	18.2	0.0	0.0	19.9	0.0	0.0	29.1	10.1	7.4	17.5	14.2	7.4
Incr Delay (d2), s/veh	0.3	0.0	0.0	1.2	0.0	0.0	2.3	2.3	0.2	1.6	13.9	0.1
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(95%),veh/ln	2.8	0.0	0.0	4.9	0.0	0.0	0.7	7.9	0.6	3.1	17.1	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.5	0.0	0.0	21.1	0.0	0.0	31.5	12.4	7.6	19.1	28.0	7.5
LnGrp LOS	B	A	A	C	A	A	C	B	A	B	C	A
Approach Vol, veh/h	144			223			623			1126		
Approach Delay, s/veh	18.5			21.1			12.7			25.9		
Approach LOS	B			C			B			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	35.5			24.5			35.5			24.5		
Change Period (Y+Rc), s	4.8			* 9.3			4.8			* 9.3		
Max Green Setting (Gmax), s	25.2			* 21			25.2			* 21		
Max Q Clear Time (g_c+I1), s	32.7			5.9			30.7			10.8		
Green Ext Time (p_c), s	0.0			0.7			0.0			1.1		

Intersection Summary

HCM 6th Ctrl Delay	21.0
HCM 6th LOS	C

Notes

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

Queues

10: Landale Street & Colfax Avenue

06/24/2024



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	85	33	548	1025	39
v/c Ratio	0.31	0.21	0.42	0.79	0.04
Control Delay	20.6	9.8	7.0	7.3	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.6	9.8	7.0	7.3	0.1
Queue Length 50th (ft)	20	4	86	31	0
Queue Length 95th (ft)	52	21	166	m56	m0
Internal Link Dist (ft)	262		575	593	
Turn Bay Length (ft)		40			80
Base Capacity (vph)	535	156	1296	1296	1106
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.16	0.21	0.42	0.79	0.04

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

10: Landale Street & Colfax Avenue

06/24/2024












Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	55	23	30	504	943	36
Future Volume (vph)	55	23	30	504	943	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	9.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.96		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1728		1770	1863	1863	1583
Flt Permitted	0.97		0.12	1.00	1.00	1.00
Satd. Flow (perm)	1728		225	1863	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	60	25	33	548	1025	39
RTOR Reduction (vph)	22	0	0	0	0	6
Lane Group Flow (vph)	63	0	33	548	1025	33
Turn Type	Perm		Perm	NA	NA	Perm
Protected Phases				6	2	
Permitted Phases	8		6			2
Actuated Green, G (s)	7.1		38.9	38.9	38.9	38.9
Effective Green, g (s)	7.1		38.9	38.9	38.9	38.9
Actuated g/C Ratio	0.12		0.65	0.65	0.65	0.65
Clearance Time (s)	9.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		4.9	4.9	5.3	5.3
Lane Grp Cap (vph)	204		145	1207	1207	1026
v/s Ratio Prot				0.29	c0.55	
v/s Ratio Perm	c0.04		0.15			0.02
v/c Ratio	0.31		0.23	0.45	0.85	0.03
Uniform Delay, d1	24.2		4.4	5.3	8.3	3.8
Progression Factor	1.00		1.00	1.00	0.42	0.02
Incremental Delay, d2	0.9		3.6	1.2	3.3	0.0
Delay (s)	25.1		8.0	6.5	6.7	0.1
Level of Service	C		A	A	A	A
Approach Delay (s)	25.1			6.6	6.5	
Approach LOS	C			A	A	
Intersection Summary						
HCM 2000 Control Delay			7.4		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.77			
Actuated Cycle Length (s)			60.0		Sum of lost time (s)	14.0
Intersection Capacity Utilization			68.0%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

11: Whitsett Avenue & Moorpark Street

06/24/2024












Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	886	212	109	638	65	73	244	75	83	505	61
Future Volume (veh/h)	67	886	212	109	638	65	73	244	75	83	505	61
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	73	963	230	118	693	71	79	265	82	90	549	66
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	127	850	720	80	758	78	331	1155	350	458	1374	165
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	703	1870	1585	469	1669	171	807	2687	814	1034	3195	383
Grp Volume(v), veh/h	73	963	230	118	0	764	79	173	174	90	305	310
Grp Sat Flow(s),veh/h/ln	703	1870	1585	469	0	1840	807	1777	1724	1034	1777	1801
Q Serve(g_s), s	6.0	40.9	8.3	0.0	0.0	34.9	6.7	5.5	5.7	5.4	10.6	10.7
Cycle Q Clear(g_c), s	40.9	40.9	8.3	40.9	0.0	34.9	17.4	5.5	5.7	11.2	10.6	10.7
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.47	1.00		0.21
Lane Grp Cap(c), veh/h	127	850	720	80	0	836	331	764	741	458	764	775
V/C Ratio(X)	0.57	1.13	0.32	1.47	0.00	0.91	0.24	0.23	0.23	0.20	0.40	0.40
Avail Cap(c_a), veh/h	127	850	720	80	0	836	331	764	741	458	764	775
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	43.1	24.5	15.7	45.0	0.0	22.9	23.7	16.2	16.3	19.8	17.6	17.7
Incr Delay (d2), s/veh	17.5	74.4	1.2	269.2	0.0	16.1	1.7	0.7	0.7	1.0	1.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	47.6	5.5	13.9	0.0	24.4	2.5	4.1	4.1	2.5	7.9	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.6	98.9	16.8	314.2	0.0	39.0	25.3	16.9	17.0	20.8	19.2	19.2
LnGrp LOS	E	F	B	F	A	D	C	B	B	C	B	B
Approach Vol, veh/h	1266					882		426		705		
Approach Delay, s/veh	81.8					75.9		18.5		19.4		
Approach LOS	F					E		B		B		
Timer - Assigned Phs	2		4			6		8				
Phs Duration (G+Y+Rc), s	46.0		44.0			46.0		44.0				
Change Period (Y+Rc), s	5.1		5.3			5.1		5.3				
Max Green Setting (Gmax), s	40.9		38.7			40.9		38.7				
Max Q Clear Time (g_c+I1), s	42.9		13.2			42.9		19.4				
Green Ext Time (p_c), s	0.0		4.3			0.0		2.4				
Intersection Summary												
HCM 6th Ctrl Delay	58.6											
HCM 6th LOS	E											

HCM 6th Signalized Intersection Summary

12: Laurel Canyon Boulevard & Moorpark Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	302	630	237	217	478	150	113	1072	171	206	1343	239
Future Volume (veh/h)	302	630	237	217	478	150	113	1072	171	206	1343	239
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	328	685	258	236	520	163	123	1165	186	224	1460	260
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	248	696	262	256	520	581	231	884	141	238	886	155
Arrive On Green	0.09	0.28	0.28	0.03	0.09	0.09	0.08	0.29	0.29	0.12	0.39	0.39
Sat Flow, veh/h	1781	2525	951	1781	1870	1585	1781	3071	488	1781	3023	529
Grp Volume(v), veh/h	328	482	461	236	520	163	123	672	679	224	847	873
Grp Sat Flow(s),veh/h/ln	1781	1777	1699	1781	1870	1585	1781	1777	1782	1781	1777	1775
Q Serve(g_s), s	8.5	24.3	24.3	8.4	25.0	7.6	4.2	25.9	25.9	8.0	26.4	26.4
Cycle Q Clear(g_c), s	8.5	24.3	24.3	8.4	25.0	7.6	4.2	25.9	25.9	8.0	26.4	26.4
Prop In Lane	1.00		0.56	1.00		1.00	1.00		0.27	1.00		0.30
Lane Grp Cap(c), veh/h	248	490	468	256	520	581	231	511	513	238	521	520
V/C Ratio(X)	1.32	0.98	0.98	0.92	1.00	0.28	0.53	1.31	1.32	0.94	1.63	1.68
Avail Cap(c_a), veh/h	248	490	468	256	520	581	238	511	513	238	521	520
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	25.3	32.4	32.4	25.5	40.9	25.7	22.8	32.0	32.1	23.4	27.5	27.5
Incr Delay (d2), s/veh	170.0	36.5	37.4	35.1	38.7	0.2	2.1	154.9	158.8	7.5	283.2	305.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	24.0	21.2	20.6	10.2	24.8	5.5	3.2	48.7	49.7	4.5	70.2	75.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	195.3	68.9	69.8	60.6	79.6	26.0	24.9	186.9	190.9	30.9	310.7	333.3
LnGrp LOS	F	E	E	E	F	C	C	F	F	C	F	F
Approach Vol, veh/h	1271			919			1474			1944		
Approach Delay, s/veh	101.9			65.2			175.2			288.6		
Approach LOS	F			E			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.8	31.8	14.0	31.3	13.4	31.3	14.2	31.1				
Change Period (Y+Rc), s	5.3	* 5.4	* 5.5	6.3	* 5.4	* 5.4	* 5.5	6.3				
Max Green Setting (Gmax), s	26	* 26	* 8.5	25.0	* 8	* 26	* 8.7	24.8				
Max Q Clear Time (g_c+10), s	28.4	28.4	10.5	27.0	10.0	27.9	10.4	26.3				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	179.9
HCM 6th LOS	F

Notes









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

HCM 6th Signalized Intersection Summary

13: Moorpark Street & Radford Avenue

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	780	118	118	873	40	38	0	38	14	0	32
Future Volume (veh/h)	55	780	118	118	873	40	38	0	38	14	0	32
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			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	0	1870	1870	0	1870
Adj Flow Rate, veh/h	60	848	128	128	949	43	41	0	41	15	0	35
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	0	2	2	0	2
Cap, veh/h	463	2091	316	157	2844	129	104	0	0	104	0	0
Arrive On Green	0.90	0.90	0.90	0.18	1.00	1.00	0.06	0.00	0.00	0.06	0.00	0.00
Sat Flow, veh/h	568	3096	467	1781	3462	157	1781	41		1781	15	
Grp Volume(v), veh/h	60	487	489	128	487	505	41	43.2		15	40.8	
Grp Sat Flow(s),veh/h/ln	568	1777	1786	1781	1777	1842	1781	D		1781	D	
Q Serve(g_s), s	1.1	3.9	3.9	6.2	0.0	0.0	2.0			0.7		
Cycle Q Clear(g_c), s	1.1	3.9	3.9	6.2	0.0	0.0	2.0			0.7		
Prop In Lane	1.00		0.26	1.00		0.09	1.00			1.00		
Lane Grp Cap(c), veh/h	463	1200	1207	157	1460	1513	104			104		
V/C Ratio(X)	0.13	0.41	0.41	0.82	0.33	0.33	0.39			0.14		
Avail Cap(c_a), veh/h	463	1200	1207	194	1460	1513	416			139		
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00			1.00		
Upstream Filter(I)	0.19	0.19	0.19	0.39	0.39	0.39	1.00			1.00		
Uniform Delay (d), s/veh	1.5	1.7	1.7	36.4	0.0	0.0	40.8			40.2		
Incr Delay (d2), s/veh	0.1	0.2	0.2	8.4	0.2	0.2	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		
%ile BackOfQ(95%),veh/ln	0.2	1.6	1.6	4.5	0.2	0.2	1.7			0.6		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1.6	1.9	1.9	44.8	0.2	0.2	43.2			40.8		
LnGrp LOS	A	A	A	D	A	A	D			D		
Approach Vol, veh/h	1036				1120							
Approach Delay, s/veh	1.9				5.3							
Approach LOS	A				A							
Timer - Assigned Phs	1	3		4	5			8				
Phs Duration (G+Y+Rc), s	10.7	13.1		66.2	10.7			79.3				
Change Period (Y+Rc), s	5.4	* 5.2		* 5.4	5.4			5.4				
Max Green Setting (Gmax), s	7.8	* 9.8		* 31	21.0			45.8				
Max Q Clear Time (g_c+I_T), s	12.5			8.2	5.9	4.0			2.0			
Green Ext Time (p_c), s	0.0			0.0	7.5	0.1			7.6			
Intersection Summary												
HCM 6th Ctrl Delay			4.6									
HCM 6th LOS			A									
Notes												

HCM 6th Signalized Intersection Summary

14: Colfax Avenue & Moorpark Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	626	118	216	720	154	125	246	151	152	544	168
Future Volume (veh/h)	94	626	118	216	720	154	125	246	151	152	544	168
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		0.97	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	102	680	128	235	783	167	136	267	164	165	591	183
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	227	1288	242	281	870	186	122	387	321	309	669	675
Arrive On Green	0.14	0.87	0.87	0.10	0.10	0.10	0.21	0.21	0.21	0.09	0.36	0.36
Sat Flow, veh/h	1781	2973	559	668	2895	617	694	1870	1555	1781	1870	1568
Grp Volume(v), veh/h	102	406	402	235	481	469	136	267	164	165	591	183
Grp Sat Flow(s), veh/h/ln	1781	1777	1755	668	1777	1735	694	1870	1555	1781	1870	1568
Q Serve(g_s), s	3.3	5.1	5.1	27.0	24.1	24.1	5.5	11.9	8.4	6.3	26.7	6.8
Cycle Q Clear(g_c), s	3.3	5.1	5.1	27.0	24.1	24.1	18.6	11.9	8.4	6.3	26.7	6.8
Prop In Lane	1.00		0.32	1.00		0.36	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	227	770	760	281	534	522	122	387	321	309	669	675
V/C Ratio(X)	0.45	0.53	0.53	0.84	0.90	0.90	1.11	0.69	0.51	0.53	0.88	0.27
Avail Cap(c_a), veh/h	238	770	760	281	534	522	122	387	321	309	669	675
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00	0.51	0.51	0.51
Uniform Delay (d), s/veh	20.2	3.7	3.7	42.5	39.2	39.2	44.0	33.0	31.7	24.4	27.1	16.6
Incr Delay (d2), s/veh	1.2	2.3	2.3	24.7	20.8	21.1	114.2	9.7	5.7	0.9	8.9	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(95%),veh/ln	2.3	2.9	2.9	12.1	20.7	20.3	11.3	10.4	6.4	4.5	17.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.4	6.0	6.0	67.2	60.0	60.3	158.3	42.8	37.3	25.3	36.0	17.1
LnGrp LOS	C	A	A	E	E	E	F	D	D	C	D	B
Approach Vol, veh/h	910			1185			567			939		
Approach Delay, s/veh	7.8			61.6			68.9			30.4		
Approach LOS	A			E			E			C		
Timer - Assigned Phs	1	2	4		6		7	8				
Phs Duration (G+Y+Rc), s	2.0	36.4	41.6		48.4		13.6	28.0				
Change Period (Y+Rc), s	5.5	* 9.4	* 9.4		* 9.4		5.6	* 9.4				
Max Green Setting (Gmax), s	27	* 27	* 32		* 39		8.0	* 19				
Max Q Clear Time (g_c+1/3), s	29.0	29.0	28.7		7.1		8.3	20.6				
Green Ext Time (p_c), s	0.0	0.0	1.5		5.6		0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 41.0
 HCM 6th LOS D

Notes

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

HCM 6th TWSC
15: Irvine Avenue & Moorpark Street























06/24/2024

Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕↕				↕↕			↕			↕	
Traffic Vol, veh/h	59	801	5	16	949	112	2	1	18	8	1	146
Future Vol, veh/h	59	801	5	16	949	112	2	1	18	8	1	146
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	64	871	5	17	1032	122	2	1	20	9	1	159
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1154	0	0	876	0	0	1553	2190	438	1691	2131	577
Stage 1	-	-	-	-	-	-	1002	1002	-	1127	1127	-
Stage 2	-	-	-	-	-	-	551	1188	-	564	1004	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	601	-	-	766	-	-	77	45	567	61	49	460
Stage 1	-	-	-	-	-	-	260	318	-	218	278	-
Stage 2	-	-	-	-	-	-	486	260	-	478	318	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	601	-	-	766	-	-	40	33	567	46	36	460
Mov Cap-2 Maneuver	-	-	-	-	-	-	40	33	-	46	36	-
Stage 1	-	-	-	-	-	-	206	252	-	173	260	-
Stage 2	-	-	-	-	-	-	297	243	-	364	252	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.8			0.4			26.9			31.5		
HCM LOS							D			D		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	187	601	-	-	766	-	-	299				
HCM Lane V/C Ratio	0.122	0.107	-	-	0.023	-	-	0.563				
HCM Control Delay (s)	26.9	11.7	1.1	-	9.8	0.3	-	31.5				
HCM Lane LOS	D	B	A	-	A	A	-	D				
HCM 95th %tile Q(veh)	0.4	0.4	-	-	0.1	-	-	3.2				

HCM 6th Signalized Intersection Summary

16: Tujunga Avenue & Moorpark Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	734	79	96	805	53	68	246	73	153	391	192
Future Volume (veh/h)	156	734	79	96	805	53	68	246	73	153	391	192
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	170	798	86	104	875	58	74	267	79	166	425	209
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	282	1645	177	298	1720	114	217	695	589	336	462	392
Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.51	0.13	0.74	0.74	0.25	0.25	0.25
Sat Flow, veh/h	600	3236	349	628	3383	224	1781	1870	1585	1035	1870	1585
Grp Volume(v), veh/h	170	438	446	104	460	473	74	267	79	166	425	209
Grp Sat Flow(s),veh/h/ln	600	1777	1808	628	1777	1830	1781	1870	1585	1035	1870	1585
Q Serve(g_s), s	23.6	14.5	14.5	11.6	15.4	15.4	2.5	4.6	1.3	12.9	19.9	10.3
Cycle Q Clear(g_c), s	39.0	14.5	14.5	26.1	15.4	15.4	2.5	4.6	1.3	12.9	19.9	10.3
Prop In Lane	1.00		0.19	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	282	903	919	298	903	930	217	695	589	336	462	392
V/C Ratio(X)	0.60	0.48	0.49	0.35	0.51	0.51	0.34	0.38	0.13	0.49	0.92	0.53
Avail Cap(c_a), veh/h	282	903	919	298	903	930	239	725	615	340	470	398
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	0.98	0.98	0.98	0.38	0.38	0.38
Uniform Delay (d), s/veh	27.6	14.4	14.4	23.0	14.7	14.7	22.0	7.9	7.4	30.4	33.0	29.4
Incr Delay (d2), s/veh	9.2	1.9	1.8	3.2	2.0	2.0	0.9	0.3	0.1	0.4	11.0	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(95%),veh/ln	7.0	9.8	9.9	3.4	10.3	10.5	1.8	2.7	0.8	4.9	13.3	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.8	16.3	16.3	26.2	16.7	16.7	22.9	8.2	7.5	30.8	44.0	29.9
LnGrp LOS	D	B	B	C	B	B	C	A	A	C	D	C
Approach Vol, veh/h	1054				1037				420			
Approach Delay, s/veh	19.6				17.6				10.7			
Approach LOS	B				B				B			
Timer - Assigned Phs	2			3		4		6		8		
Phs Duration (G+Y+Rc), s	51.2			11.2		27.6		51.2		38.8		
Change Period (Y+Rc), s	* 5.4			* 5.3		* 5.4		* 5.4		* 5.4		
Max Green Setting (Gmax), s	* 44			* 7		* 23		* 44		* 35		
Max Q Clear Time (g_c+I1), s	28.1			4.5		21.9		41.0		6.6		
Green Ext Time (p_c), s	8.5			0.0		0.3		2.4		1.8		
Intersection Summary												
HCM 6th Ctrl Delay	22.2											
HCM 6th LOS	C											
Notes												

HCM 6th Signalized Intersection Summary

17: Woodbridge Street & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↕	
Traffic Volume (veh/h)	9	7	16	18	8	32	13	336	17	42	518	25
Future Volume (veh/h)	9	7	16	18	8	32	13	336	17	42	518	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	10	8	17	20	9	35	14	365	18	46	563	27
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	73	48	65	80	31	71	751	1519	1287	846	1437	69
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.81	0.81	0.81	1.00	1.00	1.00
Sat Flow, veh/h	260	584	797	339	384	872	826	1870	1585	1000	1770	85
Grp Volume(v), veh/h	35	0	0	64	0	0	14	365	18	46	0	590
Grp Sat Flow(s),veh/h/ln	1640	0	0	1595	0	0	826	1870	1585	1000	0	1855
Q Serve(g_s), s	0.0	0.0	0.0	1.1	0.0	0.0	0.3	4.1	0.2	0.2	0.0	0.0
Cycle Q Clear(g_c), s	1.7	0.0	0.0	3.3	0.0	0.0	0.3	4.1	0.2	4.4	0.0	0.0
Prop In Lane	0.29		0.49	0.31		0.55	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	185	0	0	182	0	0	751	1519	1287	846	0	1506
V/C Ratio(X)	0.19	0.00	0.00	0.35	0.00	0.00	0.02	0.24	0.01	0.05	0.00	0.39
Avail Cap(c_a), veh/h	508	0	0	502	0	0	751	1519	1287	846	0	1506
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.88	0.88	0.88	0.46	0.00	0.46
Uniform Delay (d), s/veh	38.8	0.0	0.0	39.5	0.0	0.0	1.6	2.0	1.6	0.1	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	1.1	0.0	0.0	0.0	0.3	0.0	0.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	0.0	0.0	2.5	0.0	0.0	0.1	1.6	0.1	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.3	0.0	0.0	40.6	0.0	0.0	1.7	2.3	1.6	0.2	0.0	0.4
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	35			64			397			636		
Approach Delay, s/veh	39.3			40.6			2.3			0.3		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	77.6			12.4			77.6			12.4		
Change Period (Y+Rc), s	* 4.5			* 5.1			* 4.5			* 5.1		
Max Green Setting (Gmax), s	* 55			* 26			* 55			* 26		
Max Q Clear Time (g_c+I1), s	6.4			3.7			6.1			5.3		
Green Ext Time (p_c), s	10.6			0.1			5.9			0.3		

Intersection Summary

HCM 6th Ctrl Delay	4.5
HCM 6th LOS	A

Notes

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

Queues

18: Whitsett Avenue & Ventura Boulevard

06/24/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	85	1139	66	29	872	129	65	88	684	260	492
v/c Ratio	0.38	0.72	0.09	0.29	0.80	0.22	0.52	0.25	1.00	0.75	0.52
Control Delay	21.3	25.8	16.3	47.9	52.0	12.6	50.5	34.3	75.8	51.5	13.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.3	25.8	16.3	47.9	52.0	12.6	50.5	34.3	75.8	51.5	13.9
Queue Length 50th (ft)	31	301	23	14	0	19	37	47	~243	157	168
Queue Length 95th (ft)	60	379	49	m29	m0	m38	79	86	#410	231	240
Internal Link Dist (ft)	1440				2938				648		1328
Turn Bay Length (ft)	95			135	145			60	60		
Base Capacity (vph)	257	1592	712	101	1085	592	159	440	687	441	974
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.72	0.09	0.29	0.80	0.22	0.41	0.20	1.00	0.59	0.51

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
























Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

18: Whitsett Avenue & Ventura Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	1048	61	27	802	119	60	78	3	629	239	453
Future Volume (vph)	78	1048	61	27	802	119	60	78	3	629	239	453
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	5.4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1853		3433	1863	1583
Flt Permitted	0.11	1.00	1.00	0.18	1.00	1.00	0.36	1.00		0.95	1.00	1.00
Satd. Flow (perm)	206	3539	1583	332	3539	1583	672	1853		3433	1863	1583
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)	85	1139	66	29	872	129	65	85	3	684	260	492
RTOR Reduction (vph)	0	0	0	0	0	89	0	2	0	0	0	10
Lane Group Flow (vph)	85	1139	66	29	872	40	65	86	0	684	260	482
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Prot	NA	custom
Protected Phases	1	6			2			4		3	8	1 3
Permitted Phases	6		6	2		2	4					8
Actuated Green, G (s)	44.6	44.6	44.6	30.7	30.7	30.7	18.7	18.7		20.0	18.7	52.6
Effective Green, g (s)	44.6	44.6	44.6	30.7	30.7	30.7	18.7	18.7		20.0	18.7	52.6
Actuated g/C Ratio	0.45	0.45	0.45	0.31	0.31	0.31	0.19	0.19		0.20	0.19	0.53
Clearance Time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	
Vehicle Extension (s)	3.0	4.9	4.9	4.7	4.7	4.7	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	224	1578	706	101	1086	485	125	346		686	348	832
v/s Ratio Prot	0.03	c0.32			c0.25			0.05		c0.20	c0.14	0.20
v/s Ratio Perm	0.14		0.04	0.09		0.03	0.10					0.11
v/c Ratio	0.38	0.72	0.09	0.29	0.80	0.08	0.52	0.25		1.00	0.75	0.58
Uniform Delay, d1	19.5	22.6	16.0	26.3	31.9	24.6	36.6	34.7		40.0	38.4	16.2
Progression Factor	1.00	1.00	1.00	1.47	1.46	4.08	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.1	2.9	0.3	5.2	4.7	0.2	3.9	0.4		33.4	8.5	1.0
Delay (s)	20.6	25.5	16.3	43.9	51.4	100.7	40.5	35.0		73.4	46.9	17.1
Level of Service	C	C	B	D	D	F	D	D		E	D	B
Approach Delay (s)		24.7			57.3			37.4			49.3	
Approach LOS		C			E			D			D	
Intersection Summary												
HCM 2000 Control Delay			42.8									HCM 2000 Level of Service D
HCM 2000 Volume to Capacity ratio			0.86									
Actuated Cycle Length (s)			100.0							22.1		
Intersection Capacity Utilization			79.2%									ICU Level of Service D
Analysis Period (min)			15									
c Critical Lane Group												

Queues

19: Laurel Canyon Boulevard & Ventura Place

06/24/2024



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	53	42	198	12	1098	37	82	1651
v/c Ratio	0.41	0.25	0.65	0.07	0.51	0.04	0.34	0.56
Control Delay	48.7	45.3	19.0	34.7	32.6	1.8	21.3	16.1
Queue Delay	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0
Total Delay	48.7	45.3	19.0	34.7	33.1	1.8	21.3	16.1
Queue Length 50th (ft)	28	26	10	8	356	0	25	215
Queue Length 95th (ft)	68	57	76	m11	m364	m0	92	399
Internal Link Dist (ft)	123	395			458			232
Turn Bay Length (ft)			380	105		85	55	
Base Capacity (vph)	131	223	345	177	2172	1000	242	2957
Starvation Cap Reductn	0	0	0	0	620	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.19	0.57	0.07	0.71	0.04	0.34	0.56



















Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

19: Laurel Canyon Boulevard & Ventura Place

06/24/2024













													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	29	12	7	28	11	182	11	1010	34	75	1469	50	
Future Volume (vph)	29	12	7	28	11	182	11	1010	34	75	1469	50	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		9.4			9.6		9.6	5.0	5.1	5.1	5.1	5.1	
Lane Util. Factor		1.00			1.00		1.00	0.95	1.00	1.00	0.91		
Frpb, ped/bikes		1.00			1.00		0.94	1.00	0.96	1.00	1.00		
Flpb, ped/bikes		0.96			1.00		1.00	1.00	1.00	0.99	1.00		
Frt		0.98			1.00		0.85	1.00	0.85	1.00	1.00		
Flt Protected		0.97			0.97		1.00	0.95	1.00	0.95	1.00		
Satd. Flow (prot)		1703			1799		1484	1770	3539	1518	1761	5060	
Flt Permitted		0.79			0.97		1.00	0.95	1.00	1.00	0.23	1.00	
Satd. Flow (perm)		1387			1799		1484	1770	3539	1518	417	5060	
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)	32	13	8	30	12	198	12	1098	37	82	1597	54	
RTOR Reduction (vph)	0	7	0	0	0	165	0	0	15	0	3	0	
Lane Group Flow (vph)	0	46	0	0	42	33	12	1098	22	82	1648	0	
Confl. Peds. (#/hr)	16					16			16	16			
Turn Type	Perm	NA		Split	NA	Perm	Prot	NA	Perm	Perm	NA		
Protected Phases		3		4	4		1	6			2		
Permitted Phases	3					4			6	2			
Actuated Green, G (s)		7.1			9.3	9.3	2.0	59.5	59.5	52.5	52.5		
Effective Green, g (s)		7.1			9.3	9.3	2.0	59.5	59.5	52.5	52.5		
Actuated g/C Ratio		0.07			0.09	0.09	0.02	0.60	0.60	0.52	0.52		
Clearance Time (s)		9.4			9.6	9.6	5.0	5.1	5.1	5.1	5.1		
Vehicle Extension (s)		3.0			3.0	3.0	3.0	4.8	4.8	3.1	3.1		
Lane Grp Cap (vph)		98			167	138	35	2105	903	218	2656		
v/s Ratio Prot					c0.02		0.01	c0.31			c0.33		
v/s Ratio Perm		c0.03				0.02			0.01	0.20			
v/c Ratio		0.47			0.25	0.24	0.34	0.52	0.02	0.38	0.62		
Uniform Delay, d1		44.7			42.1	42.1	48.4	11.9	8.3	14.1	16.7		
Progression Factor		1.00			1.00	1.00	0.84	2.63	1.00	1.00	1.00		
Incremental Delay, d2		3.6			0.8	0.9	2.6	0.4	0.0	4.9	1.1		
Delay (s)		48.2			42.9	43.0	43.0	31.6	8.3	19.0	17.8		
Level of Service		D			D	D	D	C	A	B	B		
Approach Delay (s)		48.2			43.0			31.0			17.9		
Approach LOS		D			D			C			B		
Intersection Summary													
HCM 2000 Control Delay			25.0		HCM 2000 Level of Service					C			
HCM 2000 Volume to Capacity ratio			0.57										
Actuated Cycle Length (s)			100.0		Sum of lost time (s)					29.1			
Intersection Capacity Utilization			67.5%		ICU Level of Service					C			
Analysis Period (min)			15										
c Critical Lane Group													

HCM 6th Signalized Intersection Summary

20: Laurel Canyon Boulevard & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	649	456	325	632	105	304	870	237	343	911	181
Future Volume (veh/h)	156	649	456	325	632	105	304	870	237	343	911	181
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	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	170	705	496	353	687	114	330	946	258	373	990	197
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	327	1006	592	328	1120	659	346	917	396	380	952	547
Arrive On Green	0.03	0.09	0.09	0.12	0.32	0.32	0.10	0.26	0.26	0.07	0.18	0.18
Sat Flow, veh/h	1781	3554	1533	1781	3554	1538	3456	3554	1533	3456	3554	1535
Grp Volume(v), veh/h	170	705	496	353	687	114	330	946	258	373	990	197
Grp Sat Flow(s),veh/h/ln	1781	1777	1533	1781	1777	1538	1728	1777	1533	1728	1777	1535
Q Serve(g_s), s	6.6	19.2	15.8	12.0	16.4	4.6	9.5	25.8	15.0	10.8	26.8	6.0
Cycle Q Clear(g_c), s	6.6	19.2	15.8	12.0	16.4	4.6	9.5	25.8	15.0	10.8	26.8	6.0
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	327	1006	592	328	1120	659	346	917	396	380	952	547
V/C Ratio(X)	0.52	0.70	0.84	1.08	0.61	0.17	0.95	1.03	0.65	0.98	1.04	0.36
Avail Cap(c_a), veh/h	345	1006	592	328	1120	659	346	917	396	380	952	547
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Upstream Filter(I)	0.46	0.46	0.46	0.86	0.86	0.86	0.70	0.70	0.70	0.81	0.81	0.81
Uniform Delay (d), s/veh	24.7	41.2	18.9	27.1	29.1	17.8	44.8	37.1	33.1	46.2	41.0	10.9
Incr Delay (d2), s/veh	0.6	1.9	6.6	68.2	2.2	0.5	29.3	33.4	3.5	36.5	37.1	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(95%),veh/ln	9	12.8	10.2	17.4	11.2	3.0	8.6	20.8	9.1	10.5	23.6	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.2	43.1	25.5	95.2	31.2	18.3	74.1	70.5	36.6	82.8	78.1	12.0
LnGrp LOS	C	D	C	F	C	B	E	F	D	F	F	B
Approach Vol, veh/h	1371		1154				1534			1560		
Approach Delay, s/veh	34.5		49.5				65.6			70.9		
Approach LOS	C		D				E			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	34.6	15.6	32.4	14.2	37.8	16.6	31.4				
Change Period (Y+Rc), s	5.4	6.3	5.6	5.6	5.6	6.3	5.6	5.6				
Max Green Setting (Gmax),s	28.3	28.3	10.0	26.8	9.6	30.5	11.0	25.8				
Max Q Clear Time (g_c+M),s	21.2	21.2	11.5	28.8	8.6	18.4	12.8	27.8				
Green Ext Time (p_c), s	0.0	5.6	0.0	0.0	0.0	4.5	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 56.2

HCM 6th LOS E

Notes

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

Queues

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Lane Group	EBL	EBT	WBL	WBT	WBR2	NBT	NBR	SBL	SBT	SBR2
Lane Group Flow (vph)	291	1131	66	1081	114	38	47	74	106	90
v/c Ratio	0.53	0.62	0.61	1.31	0.34	0.13	0.11	0.42	0.74	0.29
Control Delay	16.5	3.7	86.9	191.3	48.9	51.4	0.6	66.1	89.4	2.4
Queue Delay	68.8	32.9	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.3	36.5	86.9	192.8	48.9	51.4	0.6	66.1	89.4	2.4
Queue Length 50th (ft)	269	85	59	~677	87	30	0	63	94	0
Queue Length 95th (ft)	m171	m0	#132	#847	152	65	0	117	#180	0
Internal Link Dist (ft)		48		634		86			226	
Turn Bay Length (ft)	90		95		55		30	90		90
Base Capacity (vph)	580	1883	111	823	336	308	420	188	153	314
Starvation Cap Reductn	425	814	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	183	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.88	1.06	0.59	1.69	0.34	0.12	0.11	0.39	0.69	0.29

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	268	1025	16	61	894	100	105	27	8	43	68	17
Future Volume (vph)	268	1025	16	61	894	100	105	27	8	43	68	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.7		4.9	6.1		6.1		6.9	6.9	7.0	7.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		0.89		1.00	0.91	1.00	0.88
Flpb, ped/bikes	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	0.98		0.85		1.00	0.85	1.00	0.88
Flt Protected	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (prot)	1770	3528		1770	3447		1408		1794	1440	1770	1439
Flt Permitted	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (perm)	1770	3528		1770	3447		1408		1794	1440	1770	1439
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)	291	1114	17	66	972	109	114	29	9	47	74	18
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	39	0	0
Lane Group Flow (vph)	291	1130	0	66	1081	0	114	0	38	8	74	106
Confl. Peds. (#/hr)	29		16	16		29	29	44		44	44	
Turn Type	Prot	NA		Prot	NA		Perm	Split	NA	Perm	Split	NA
Protected Phases	1 3	3 6		5	2			7	7		8	8
Permitted Phases							2			7		
Actuated Green, G (s)	44.8	71.3		7.2	32.5		32.5		23.0	23.0	14.0	14.0
Effective Green, g (s)	44.8	65.2		7.2	32.5		32.5		23.0	23.0	14.0	14.0
Actuated g/C Ratio	0.32	0.47		0.05	0.23		0.23		0.16	0.16	0.10	0.10
Clearance Time (s)				4.9	6.1		6.1		6.9	6.9	7.0	7.0
Vehicle Extension (s)				3.0	4.8		4.8		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	566	1643		91	800		326		294	236	177	143
v/s Ratio Prot	0.16	c0.32		0.04	c0.31				c0.02		0.04	c0.07
v/s Ratio Perm							0.08			0.01		
v/c Ratio	0.51	0.69		0.73	1.35		0.35		0.13	0.03	0.42	0.74
Uniform Delay, d1	38.7	29.4		65.4	53.8		44.9		49.9	49.2	59.2	61.2
Progression Factor	0.40	0.14		1.00	1.00		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1		24.7	166.3		2.9		0.2	0.1	1.6	18.5
Delay (s)	15.7	4.2		90.1	220.0		47.9		50.1	49.2	60.8	79.8
Level of Service	B	A		F	F		D		D	D	E	E
Approach Delay (s)		6.5			197.7				49.6			67.1
Approach LOS		A			F				D			E
Intersection Summary												
HCM 2000 Control Delay			92.5			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			0.79									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			31.8			
Intersection Capacity Utilization			90.0%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Movement	SBR	SBR2
Lane Configurations		
Traffic Volume (vph)	81	83
Future Volume (vph)	81	83
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		7.0
Lane Util. Factor		1.00
Frpb, ped/bikes		0.76
Flpb, ped/bikes		1.00
Frt		0.85
Flt Protected		1.00
Satd. Flow (prot)		1210
Flt Permitted		1.00
Satd. Flow (perm)		1210
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	88	90
RTOR Reduction (vph)	0	81
Lane Group Flow (vph)	0	9
Confl. Peds. (#/hr)	44	44
Turn Type		Perm
Protected Phases		
Permitted Phases		8
Actuated Green, G (s)		14.0
Effective Green, g (s)		14.0
Actuated g/C Ratio		0.10
Clearance Time (s)		7.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)		121
v/s Ratio Prot		
v/s Ratio Perm		0.01
v/c Ratio		0.07
Uniform Delay, d1		57.1
Progression Factor		1.00
Incremental Delay, d2		0.3
Delay (s)		57.4
Level of Service		E
Approach Delay (s)		
Approach LOS		
Intersection Summary		

HCM 6th Signalized Intersection Summary

22: Carpenter Avenue & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	238	802	101	117	1026	152	63	30	88	58	41	79
Future Volume (veh/h)	238	802	101	117	1026	152	63	30	88	58	41	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.91	0.94		0.91	0.95		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	259	872	110	127	1115	165	68	33	96	63	45	86
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	278	1430	180	158	1188	175	116	64	126	189	121	322
Arrive On Green	0.16	0.46	0.46	0.03	0.13	0.13	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1781	3143	396	1781	3065	452	304	288	563	592	542	1440
Grp Volume(v), veh/h	259	493	489	127	645	635	197	0	0	108	0	86
Grp Sat Flow(s), veh/h/ln	1781	1777	1762	1781	1777	1739	1155	0	0	1134	0	1440
Q Serve(g_s), s	14.4	20.9	20.9	7.1	35.9	36.2	9.0	0.0	0.0	0.0	0.0	4.9
Cycle Q Clear(g_c), s	14.4	20.9	20.9	7.1	35.9	36.2	17.2	0.0	0.0	8.2	0.0	4.9
Prop In Lane	1.00		0.22	1.00		0.26	0.35		0.49	0.58		1.00
Lane Grp Cap(c), veh/h	278	809	802	158	689	674	306	0	0	310	0	322
V/C Ratio(X)	0.93	0.61	0.61	0.80	0.94	0.94	0.64	0.00	0.00	0.35	0.00	0.27
Avail Cap(c_a), veh/h	278	809	802	192	689	674	329	0	0	334	0	346
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.78	0.47	0.47	0.47	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.7	20.5	20.5	47.7	42.4	42.5	37.4	0.0	0.0	32.9	0.0	32.1
Incr Delay (d2), s/veh	30.8	2.7	2.7	9.3	12.5	13.5	3.8	0.0	0.0	0.7	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.8	13.1	13.0	5.8	24.3	24.2	8.5	0.0	0.0	4.2	0.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.5	23.2	23.2	57.0	54.8	56.0	41.2	0.0	0.0	33.6	0.0	32.5
LnGrp LOS	E	C	C	E	D	E	D	A	A	C	A	C
Approach Vol, veh/h	1241			1407			197			194		
Approach Delay, s/veh	33.5			55.5			41.2			33.1		
Approach LOS	C			E			D			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	31.5	54.7		31.8	20.2	48.0		31.8				
Change Period (Y+Rc), s	4.6	* 9.2		9.5	4.6	* 9.2		9.5				
Max Green Setting (Gmax), s	40.8	* 42		24.0	15.6	* 37		24.0				
Max Q Clear Time (g_c+I), s	19.1	22.9		10.2	16.4	38.2		19.2				
Green Ext Time (p_c), s	0.0	11.8		0.8	0.0	0.0		0.5				

Intersection Summary

HCM 6th Ctrl Delay	44.2
HCM 6th LOS	D

Notes

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

Queues

23: Ventura Boulevard & Colfax Avenue

06/24/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	226	840	1216	420	483
v/c Ratio	0.61	0.39	0.95	0.82	0.49
Control Delay	38.1	5.2	39.1	46.3	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	38.1	5.2	39.1	46.3	5.1
Queue Length 50th (ft)	89	47	157	246	42
Queue Length 95th (ft)	122	60	#633	338	83
Internal Link Dist (ft)		981	464		
Turn Bay Length (ft)	160			360	360
Base Capacity (vph)	373	2130	1280	538	985
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.61	0.39	0.95	0.78	0.49

Intersection Summary





















95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

23: Ventura Boulevard & Colfax Avenue

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	208	773	0	0	846	272	0	0	0	386	0	444
Future Volume (vph)	208	773	0	0	846	272	0	0	0	386	0	444
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.4			5.4					5.4		5.7
Lane Util. Factor	1.00	0.95			0.95					1.00		1.00
Frt	1.00	1.00			0.96					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1770	3539			3410					1770		1583
Flt Permitted	0.09	1.00			1.00					0.95		1.00
Satd. Flow (perm)	172	3539			3410					1770		1583
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)	226	840	0	0	920	296	0	0	0	420	0	483
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	192
Lane Group Flow (vph)	226	840	0	0	1216	0	0	0	0	420	0	291
Turn Type	pm+pt	NA			NA					pm+pt		pm+ov
Protected Phases	5	2			6			3		4		5
Permitted Phases	2						3			7		4
Actuated Green, G (s)	60.2	60.2			37.6					29.0		45.9
Effective Green, g (s)	60.2	60.2			37.6					29.0		45.9
Actuated g/C Ratio	0.60	0.60			0.38					0.29		0.46
Clearance Time (s)	5.7	5.4			5.4					5.4		5.7
Vehicle Extension (s)	3.0	4.3			4.5					3.0		3.0
Lane Grp Cap (vph)	373	2130			1282					513		726
v/s Ratio Prot	c0.10	0.24			c0.36					c0.24		0.07
v/s Ratio Perm	0.26											0.12
v/c Ratio	0.61	0.39			0.95					0.82		0.40
Uniform Delay, d1	21.8	10.4			30.3					33.1		17.9
Progression Factor	1.74	0.42			0.67					1.00		1.00
Incremental Delay, d2	2.3	0.5			14.7					9.8		0.4
Delay (s)	40.4	4.9			35.0					42.9		18.3
Level of Service	D	A			D					D		B
Approach Delay (s)		12.4			35.0			0.0			29.7	
Approach LOS		B			D			A			C	
Intersection Summary												
HCM 2000 Control Delay		26.0			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		0.90										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)			22.8				
Intersection Capacity Utilization		77.6%			ICU Level of Service			D				
Analysis Period (min)		15										
c Critical Lane Group												

Queues

24: Berry Drive & Ventura Boulevard

06/24/2024



Lane Group	EBT	WBL	WBT	NBT
Lane Group Flow (vph)	2252	42	1224	66
v/c Ratio	0.77	0.55	0.42	0.29
Control Delay	7.2	35.4	4.1	3.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.2	35.4	4.1	3.7
Queue Length 50th (ft)	226	10	253	0
Queue Length 95th (ft)	352	m18	20	5
Internal Link Dist (ft)	342		273	287
Turn Bay Length (ft)		65		
Base Capacity (vph)	2908	77	2933	395
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.77	0.55	0.42	0.17



















Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

24: Berry Drive & Ventura Boulevard

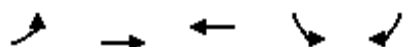
06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1954	118	39	1126	0	21	0	40	0	0	0
Future Volume (vph)	0	1954	118	39	1126	0	21	0	40	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0			9.4				
Lane Util. Factor		0.95		1.00	0.95			1.00				
Frt		0.99		1.00	1.00			0.91				
Flt Protected		1.00		0.95	1.00			0.98				
Satd. Flow (prot)		3509		1770	3539			1670				
Flt Permitted		1.00		0.05	1.00			0.98				
Satd. Flow (perm)		3509		93	3539			1670				
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)	0	2124	128	42	1224	0	23	0	43	0	0	0
RTOR Reduction (vph)	0	2	0	0	0	0	0	62	0	0	0	0
Lane Group Flow (vph)	0	2250	0	42	1224	0	0	4	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		6			2		3	3			4	
Permitted Phases	6			2						4		
Actuated Green, G (s)		80.0		80.0	80.0			5.6				
Effective Green, g (s)		80.0		80.0	80.0			5.6				
Actuated g/C Ratio		0.80		0.80	0.80			0.06				
Clearance Time (s)		5.0		5.0	5.0			9.4				
Vehicle Extension (s)		4.9		4.0	4.0			3.0				
Lane Grp Cap (vph)		2807		74	2831			93				
v/s Ratio Prot		c0.64			0.35			c0.00				
v/s Ratio Perm				0.45								
v/c Ratio		0.80		0.57	0.43			0.04				
Uniform Delay, d1		5.6		3.7	3.1			44.7				
Progression Factor		0.86		1.52	1.21			1.00				
Incremental Delay, d2		2.4		22.4	0.4			0.2				
Delay (s)		7.3		28.0	4.1			44.8				
Level of Service		A		C	A			D				
Approach Delay (s)		7.3			4.9			44.8			0.0	
Approach LOS		A			A			D			A	
Intersection Summary												
HCM 2000 Control Delay			7.1			HCM 2000 Level of Service			A			
HCM 2000 Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			23.7			
Intersection Capacity Utilization			75.6%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

25: Ventura Boulevard & Tujunga Avenue

06/24/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	163	1149	1170	255	339
v/c Ratio	0.48	0.48	0.65	0.36	0.55
Control Delay	13.4	13.4	21.1	34.4	24.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.4	13.4	21.1	34.4	24.4
Queue Length 50th (ft)	54	232	267	71	151
Queue Length 95th (ft)	m75	366	421	100	197
Internal Link Dist (ft)		426	233	3083	
Turn Bay Length (ft)	180			100	60
Base Capacity (vph)	367	2417	1799	1012	640
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.44	0.48	0.65	0.25	0.53

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

25: Ventura Boulevard & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	150	1057	974	102	235	312
Future Volume (vph)	150	1057	974	102	235	312
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.5	5.5		5.5	5.6
Lane Util. Factor	1.00	0.95	0.95		0.97	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	3539	3489		3433	1583
Flt Permitted	0.13	1.00	1.00		0.95	1.00
Satd. Flow (perm)	249	3539	3489		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	163	1149	1059	111	255	339
RTOR Reduction (vph)	0	0	7	0	0	24
Lane Group Flow (vph)	163	1149	1163	0	255	315
Turn Type	pm+pt	NA	NA		Prot	pt+ov
Protected Phases	1	6	2		4	1 7
Permitted Phases	6					4
Actuated Green, G (s)	68.3	68.3	51.3		20.7	37.6
Effective Green, g (s)	68.3	68.3	51.3		20.7	32.1
Actuated g/C Ratio	0.68	0.68	0.51		0.21	0.32
Clearance Time (s)	5.6	5.5	5.5		5.5	
Vehicle Extension (s)	3.0	4.4	4.9		3.0	
Lane Grp Cap (vph)	343	2417	1789		710	508
v/s Ratio Prot	0.05	0.32	c0.33		0.07	c0.20
v/s Ratio Perm	0.27					
v/c Ratio	0.48	0.48	0.65		0.36	0.62
Uniform Delay, d1	10.6	7.4	17.8		34.0	28.8
Progression Factor	1.50	1.58	1.00		1.00	1.00
Incremental Delay, d2	0.7	0.4	1.8		0.3	2.4
Delay (s)	16.6	12.2	19.6		34.3	31.1
Level of Service	B	B	B		C	C
Approach Delay (s)		12.7	19.6		32.5	
Approach LOS		B	B		C	
Intersection Summary						
HCM 2000 Control Delay			19.2		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.68			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	22.1
Intersection Capacity Utilization			60.7%		ICU Level of Service	B
Analysis Period (min)			15			

c Critical Lane Group

HCM 6th Signalized Intersection Summary

26: Laurel Canyon Boulevard & Maxwellton Road

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Volume (veh/h)	128	0	79	0	0	0	2	1194	0	0	1584	104
Future Volume (veh/h)	128	0	79	0	0	0	2	1194	0	0	1584	104
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.83				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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h	139	0	86				2	1298	0	0	1722	113
Peak Hour Factor	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	0	0	2	2
Cap, veh/h	222	0	137				41	1981	0	0	1927	125
Arrive On Green	0.23	0.00	0.23				0.57	0.57	0.00	0.00	0.57	0.57
Sat Flow, veh/h	969	0	600				1	3567	0	0	3480	220
Grp Volume(v), veh/h	225	0	0				697	603	0	0	896	939
Grp Sat Flow(s),veh/h/ln	1569	0	0				1866	1617	0	0	1777	1830
Q Serve(g_s), s	11.6	0.0	0.0				0.0	23.1	0.0	0.0	39.5	40.9
Cycle Q Clear(g_c), s	11.6	0.0	0.0				23.0	23.1	0.0	0.0	39.5	40.9
Prop In Lane	0.62		0.38				0.00		0.00	0.00		0.12
Lane Grp Cap(c), veh/h	359	0	0				1102	920	0	0	1011	1041
V/C Ratio(X)	0.63	0.00	0.00				0.63	0.66	0.00	0.00	0.89	0.90
Avail Cap(c_a), veh/h	432	0	0				1102	920	0	0	1011	1041
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				0.78	0.78	0.00	0.00	0.13	0.13
Uniform Delay (d), s/veh	31.2	0.0	0.0				13.3	13.3	0.0	0.0	16.9	17.2
Incr Delay (d2), s/veh	2.1	0.0	0.0				2.2	2.9	0.0	0.0	1.7	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.1	0.0	0.0				13.5	12.2	0.0	0.0	16.6	17.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.3	0.0	0.0				15.5	16.2	0.0	0.0	18.6	19.1
LnGrp LOS	C	A	A				B	B	A	A	B	B
Approach Vol, veh/h	225								1300		1835	
Approach Delay, s/veh	33.3								15.8		18.9	
Approach LOS	C								B		B	
Timer - Assigned Phs	2		4		6							
Phs Duration (G+Y+Rc), s	60.2		29.8		60.2							
Change Period (Y+Rc), s	9.0		9.2		9.0							
Max Green Setting (Gmax), s	47.0		24.8		47.0							
Max Q Clear Time (g_c+I1), s	42.9		13.6		25.1							
Green Ext Time (p_c), s	4.0		1.0		16.1							
Intersection Summary												
HCM 6th Ctrl Delay			18.7									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary

27: Laurel Canyon Boulevard & Laurel Terrace Drive/Sunshine Terrace Drive

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↔		↔	↔	
Traffic Volume (veh/h)	17	16	262	106	23	94	60	1210	73	23	1623	19
Future Volume (veh/h)	17	16	262	106	23	94	60	1210	73	23	1623	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	17	285	115	25	102	65	1315	79	25	1764	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	44	30	341	123	31	80	83	2362	142	254	2188	26
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.05	0.69	0.69	0.61	0.61	0.61
Sat Flow, veh/h	54	132	1514	351	138	356	1781	3406	204	387	3597	43
Grp Volume(v), veh/h	320	0	0	242	0	0	65	685	709	25	870	915
Grp Sat Flow(s), veh/h/ln	700	0	0	844	0	0	1781	1777	1834	387	1777	1863
Q Serve(g_s), s	0.0	0.0	0.0	5.2	0.0	0.0	4.3	23.1	23.2	4.1	45.1	45.4
Cycle Q Clear(g_c), s	21.8	0.0	0.0	27.0	0.0	0.0	4.3	23.1	23.2	17.1	45.1	45.4
Prop In Lane	0.06		0.89	0.48		0.42	1.00		0.11	1.00		0.02
Lane Grp Cap(c), veh/h	414	0	0	234	0	0	83	1232	1271	254	1081	1133
V/C Ratio(X)	0.77	0.00	0.00	1.03	0.00	0.00	0.78	0.56	0.56	0.10	0.81	0.81
Avail Cap(c_a), veh/h	414	0	0	234	0	0	110	1232	1271	254	1081	1133
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.33	0.33	0.33
Uniform Delay (d), s/veh	44.8	0.0	0.0	49.6	0.0	0.0	56.6	9.2	9.2	16.0	18.0	18.1
Incr Delay (d2), s/veh	8.8	0.0	0.0	67.7	0.0	0.0	22.4	1.8	1.8	0.3	2.2	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(95%),veh/ln	15.4	0.0	0.0	17.5	0.0	0.0	4.4	13.4	13.8	0.7	21.6	22.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.5	0.0	0.0	117.3	0.0	0.0	79.0	11.0	11.0	16.3	20.3	20.2
LnGrp LOS	D	A	A	F	A	A	E	B	B	B	C	C
Approach Vol, veh/h	320			242			1459			1810		
Approach Delay, s/veh	53.5			117.3			14.0			20.2		
Approach LOS	D			F			B			C		
Timer - Assigned Phs	1	2		4			6		8			
Phs Duration (G+Y+Rc), s	30.2	77.8		32.0			88.0		32.0			
Change Period (Y+Rc), s	4.6	4.8		* 5			4.8		* 5			
Max Green Setting (Gmax), s	71.2			* 27			83.2		* 27			
Max Q Clear Time (g_c+I), s	47.4			23.8			25.2		29.0			
Green Ext Time (p_c), s	0.0	15.3		0.6			14.0		0.0			

Intersection Summary

HCM 6th Ctrl Delay 26.8

HCM 6th LOS C

Notes

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

Queues

28: Laurel Canyon Boulevard & Fryman Road

06/24/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	261	7	24	1173	2213
v/c Ratio	0.72	0.02	0.29	0.49	0.94
Control Delay	44.1	25.5	19.5	8.7	24.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.1	25.5	19.5	8.7	24.6
Queue Length 50th (ft)	139	3	5	150	514
Queue Length 95th (ft)	202	13	32	245	#869
Internal Link Dist (ft)				236	183
Turn Bay Length (ft)			145		
Base Capacity (vph)	542	485	82	2386	2345
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.48	0.01	0.29	0.49	0.94






















Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

28: Laurel Canyon Boulevard & Fryman Road

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								 			 	
Traffic Volume (vph)	240	0	6	0	0	0	22	1079	0	0	1735	301
Future Volume (vph)	240	0	6	0	0	0	22	1079	0	0	1735	301
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4		5.4				5.4	5.4			5.4	
Lane Util. Factor	1.00		1.00				1.00	0.95			0.95	
Frt	1.00		0.85				1.00	1.00			0.98	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	3539			3461	
Flt Permitted	0.95		1.00				0.07	1.00			1.00	
Satd. Flow (perm)	1770		1583				123	3539			3461	
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)	261	0	7	0	0	0	24	1173	0	0	1886	327
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	12	0
Lane Group Flow (vph)	261	0	7	0	0	0	24	1173	0	0	2201	0
Turn Type	Perm		Perm				Perm	NA		Perm	NA	
Protected Phases								2			6	
Permitted Phases	8		8				2			6		
Actuated Green, G (s)	18.5		18.5				60.7	60.7			60.7	
Effective Green, g (s)	18.5		18.5				60.7	60.7			60.7	
Actuated g/C Ratio	0.21		0.21				0.67	0.67			0.67	
Clearance Time (s)	5.4		5.4				5.4	5.4			5.4	
Vehicle Extension (s)	3.0		3.0				4.8	4.8			5.1	
Lane Grp Cap (vph)	363		325				82	2386			2334	
v/s Ratio Prot								0.33			c0.64	
v/s Ratio Perm	c0.15		0.00				0.20					
v/c Ratio	0.72		0.02				0.29	0.49			0.94	
Uniform Delay, d1	33.3		28.5				5.9	7.1			13.1	
Progression Factor	1.00		1.00				1.00	1.00			1.00	
Incremental Delay, d2	6.7		0.0				8.8	0.7			9.3	
Delay (s)	40.0		28.6				14.8	7.9			22.5	
Level of Service	D		C				B	A			C	
Approach Delay (s)		39.7			0.0			8.0			22.5	
Approach LOS		D			A			A			C	
Intersection Summary												
HCM 2000 Control Delay			19.0				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.89									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			10.8		
Intersection Capacity Utilization			78.7%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th TWSC
29: Laurel Canyon Boulevard & Woodbridge Street

06/24/2024

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↙	↕		↙	↕	
Traffic Vol, veh/h	3	0	17	4	0	36	15	1272	4	120	1732	22
Future Vol, veh/h	3	0	17	4	0	36	15	1272	4	120	1732	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	65	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	18	4	0	39	16	1383	4	130	1883	24

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2879	3574	954	2619	3584	694	1907	0	0	1387	0	0
Stage 1	2155	2155	-	1417	1417	-	-	-	-	-	-	-
Stage 2	724	1419	-	1202	2167	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	7	6	259	12	5	385	308	-	-	490	-	-
Stage 1	49	86	-	144	201	-	-	-	-	-	-	-
Stage 2	383	201	-	196	85	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	5	4	259	9	3	385	308	-	-	490	-	-
Mov Cap-2 Maneuver	5	4	-	9	3	-	-	-	-	-	-	-
Stage 1	46	63	-	137	191	-	-	-	-	-	-	-
Stage 2	326	191	-	134	62	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	270.3		107.4		0.2		1	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	308	-	-	30	74	490	-
HCM Lane V/C Ratio	0.053	-	-	0.725	0.588	0.266	-
HCM Control Delay (s)	17.3	-	-	270.3	107.4	15	-
HCM Lane LOS	C	-	-	F	F	B	-
HCM 95th %tile Q(veh)	0.2	-	-	2.4	2.6	1.1	-

HCM 6th TWSC
30: Valleyheart Drive (North) & Laurel Canyon Boulevard

06/24/2024

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↱	↕↱		↱	↕↱	
Traffic Vol, veh/h	2	0	12	6	0	28	19	1264	8	30	1738	7
Future Vol, veh/h	2	0	12	6	0	28	19	1264	8	30	1738	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	40	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	13	7	0	30	21	1374	9	33	1889	8
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2688	3384	949	2432	3384	692	1897	0	0	1383	0	0
Stage 1	1959	1959	-	1421	1421	-	-	-	-	-	-	-
Stage 2	729	1425	-	1011	1963	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	10	7	261	16	7	386	310	-	-	491	-	-
Stage 1	65	108	-	143	201	-	-	-	-	-	-	-
Stage 2	380	200	-	257	108	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	8	6	261	14	6	386	310	-	-	491	-	-
Mov Cap-2 Maneuver	8	6	-	14	6	-	-	-	-	-	-	-
Stage 1	61	101	-	133	187	-	-	-	-	-	-	-
Stage 2	326	186	-	228	101	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	114.7		108.5		0.3		0.2					
HCM LOS	F		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	310	-	-	47 68	491	-	-					
HCM Lane V/C Ratio	0.067	-	-	0.324 0.543	0.066	-	-					
HCM Control Delay (s)	17.4	-	-	114.7 108.5	12.9	-	-					
HCM Lane LOS	C	-	-	F F	B	-	-					
HCM 95th %tile Q(veh)	0.2	-	-	1.1 2.3	0.2	-	-					





HCM 6th TWSC

31: Laurel Canyon Boulevard & Valleyheart Drive (South)

06/24/2024

Intersection

Int Delay, s/veh 2.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	96	1200	19	139	1601
Future Vol, veh/h	5	96	1200	19	139	1601
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	35	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	104	1304	21	151	1740

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	2487	663	0
Stage 1	1315	-	-
Stage 2	1172	-	-
Critical Hdwy	6.84	6.94	-
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	-
Pot Cap-1 Maneuver	24	404	-
Stage 1	215	-	-
Stage 2	257	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	17	404	-
Mov Cap-2 Maneuver	17	-	-
Stage 1	215	-	-
Stage 2	182	-	-

Approach	WB	NB	SB
HCM Control Delay, s	47.1	0	1.2
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	190	517
HCM Lane V/C Ratio	-	-	0.578	0.292
HCM Control Delay (s)	-	-	47.1	14.8
HCM Lane LOS	-	-	E	B
HCM 95th %tile Q(veh)	-	-	3.1	1.2

HCM 6th AWSC
32: Radford Avenue & Sarah Street

06/24/2024

Intersection

Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	1	0	3	6	57	2	38	1	120	108	14
Future Vol, veh/h	13	1	0	3	6	57	2	38	1	120	108	14
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	1	0	3	7	62	2	41	1	130	117	15
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8	7.5	7.6	9.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	93%	5%	50%
Vol Thru, %	93%	7%	9%	45%
Vol Right, %	2%	0%	86%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	41	14	66	242
LT Vol	2	13	3	120
Through Vol	38	1	6	108
RT Vol	1	0	57	14
Lane Flow Rate	45	15	72	263
Geometry Grp	1	1	1	1
Degree of Util (X)	0.054	0.021	0.082	0.306
Departure Headway (Hd)	4.391	4.893	4.134	4.186
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	819	735	872	852
Service Time	2.399	2.898	2.137	2.247
HCM Lane V/C Ratio	0.055	0.02	0.083	0.309
HCM Control Delay	7.6	8	7.5	9.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.1	0.3	1.3

HCM 6th AWSC




51: Radford Avenue & Moorpark Gate

06/24/2024

Intersection

Intersection Delay, s/veh 8.9

Intersection LOS A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	75	0	0	236	0
Future Vol, veh/h	0	75	0	0	236	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	82	0	0	257	0
Number of Lanes	1	0	2	0	0	1




Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left NB			WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	7.3	0	9.4
HCM LOS	A	-	A

Lane	NBLn1	NBLn2	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	100%
Vol Thru, %	100%	100%	0%	0%
Vol Right, %	0%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	75	236
LT Vol	0	0	0	236
Through Vol	0	0	0	0
RT Vol	0	0	75	0
Lane Flow Rate	0	0	82	257
Geometry Grp	5	5	2	4a
Degree of Util (X)	0	0	0.089	0.312
Departure Headway (Hd)	4.812	3.072	3.944	4.376
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	914	821
Service Time	2.599	0.857	1.944	2.409
HCM Lane V/C Ratio	0	0	0.09	0.313
HCM Control Delay	7.6	5.9	7.3	9.4
HCM Lane LOS	N	N	A	A
HCM 95th-tile Q	0	0	0.3	1.3

Intersection

Intersection Delay, s/veh 8.8

Intersection LOS A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	56	38	40	177	118	86
Future Vol, veh/h	56	38	40	177	118	86
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	61	41	43	192	128	93
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8.6	8.3	9.3
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	60%	58%
Vol Thru, %	18%	0%	42%
Vol Right, %	82%	40%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	217	94	204
LT Vol	0	56	118
Through Vol	40	0	86
RT Vol	177	38	0
Lane Flow Rate	236	102	222
Geometry Grp	1	1	1
Degree of Util (X)	0.258	0.136	0.279
Departure Headway (Hd)	3.94	4.781	4.528
Convergence, Y/N	Yes	Yes	Yes
Cap	913	750	794
Service Time	1.959	2.809	2.548
HCM Lane V/C Ratio	0.258	0.136	0.28
HCM Control Delay	8.3	8.6	9.3
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1	0.5	1.1

HCM 6th AWSC

54: Radford Avenue & Radford Gate

06/24/2024

Intersection

Intersection Delay, s/veh13.4

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	40	64	0	0	19	345	150	0	174	1
Future Vol, veh/h	2	0	40	64	0	0	19	345	150	0	174	1
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	43	70	0	0	21	375	163	0	189	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.6	9.7	15.6	9.6
HCM LOS	A	A	C	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	5%	100%	0%
Vol Thru, %	67%	0%	0%	99%
Vol Right, %	29%	95%	0%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	514	42	64	175
LT Vol	19	2	64	0
Through Vol	345	0	0	174
RT Vol	150	40	0	1
Lane Flow Rate	559	46	70	190
Geometry Grp	1	1	1	1
Degree of Util (X)	0.668	0.065	0.113	0.255
Departure Headway (Hd)	4.302	5.125	5.837	4.829
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	838	691	609	740
Service Time	2.343	3.213	3.92	2.887
HCM Lane V/C Ratio	0.667	0.067	0.115	0.257
HCM Control Delay	15.6	8.6	9.7	9.6
HCM Lane LOS	C	A	A	A
HCM 95th-tile Q	5.2	0.2	0.4	1

Intersection

Intersection Delay, s/veh11.5

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	13	27	46	32	0	21	380	18	0	135	0
Future Vol, veh/h	0	13	27	46	32	0	21	380	18	0	135	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	14	29	50	35	0	23	413	20	0	147	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.4	9.4	13	9
HCM LOS	A	A	B	A




Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	0%	59%	0%
Vol Thru, %	91%	32%	41%	100%
Vol Right, %	4%	68%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	419	40	78	135
LT Vol	21	0	46	0
Through Vol	380	13	32	135
RT Vol	18	27	0	0
Lane Flow Rate	455	43	85	147
Geometry Grp	1	1	1	1
Degree of Util (X)	0.56	0.061	0.129	0.194
Departure Headway (Hd)	4.427	5.02	5.47	4.767
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	815	708	652	750
Service Time	2.464	3.09	3.534	2.818
HCM Lane V/C Ratio	0.558	0.061	0.13	0.196
HCM Control Delay	13	8.4	9.4	9
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	3.5	0.2	0.4	0.7

HCM 6th TWSC
56: Colfax Avenue & Colfax Gate

06/24/2024

Intersection

Int Delay, s/veh 2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	38	19	59	352	879	118
Future Vol, veh/h	38	19	59	352	879	118
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	41	21	64	383	955	128

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1530	1019	1083
Stage 1	1019	-	-
Stage 2	511	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	129	288	644
Stage 1	348	-	-
Stage 2	602	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	113	288	644
Mov Cap-2 Maneuver	113	-	-
Stage 1	304	-	-
Stage 2	602	-	-

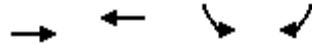
Approach	EB	NB	SB
HCM Control Delay, s	48.7	1.6	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	644	-	142	-	-
HCM Lane V/C Ratio	0.1	-	0.436	-	-
HCM Control Delay (s)	11.2	-	48.7	-	-
HCM Lane LOS	B	-	E	-	-
HCM 95th %tile Q(veh)	0.3	-	1.9	-	-

Queues

121: Ventura Boulevard & Ventura PI

06/24/2024



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1349	1089	74	32
v/c Ratio	1.29	0.51	0.12	0.10
Control Delay	178.5	16.0	48.3	15.3
Queue Delay	1.4	51.2	0.0	0.0
Total Delay	179.9	67.1	48.3	15.3
Queue Length 50th (ft)	~890	118	29	0
Queue Length 95th (ft)	#1030	m51	52	30
Internal Link Dist (ft)	509	48	136	
Turn Bay Length (ft)				40
Base Capacity (vph)	1043	2104	669	334
Starvation Cap Reductn	0	1296	0	0
Spillback Cap Reductn	246	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.69	1.35	0.11	0.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

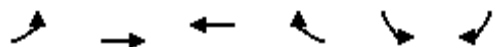
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

121: Ventura Boulevard & Ventura PI

06/24/2024



























Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	↑
Traffic Volume (vph)	0	1241	1002	0	68	29
Future Volume (vph)	0	1241	1002	0	68	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.1	6.1		5.7	5.7
Lane Util. Factor		0.95	0.95		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3433	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1349	1089	0	74	32
RTOR Reduction (vph)	0	0	0	0	0	26
Lane Group Flow (vph)	0	1349	1089	0	74	6
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2 4		3	
Permitted Phases						3
Actuated Green, G (s)		40.4	83.4		24.8	24.8
Effective Green, g (s)		40.4	83.4		24.8	24.8
Actuated g/C Ratio		0.29	0.60		0.18	0.18
Clearance Time (s)		6.1			5.7	5.7
Vehicle Extension (s)		4.6			3.0	3.0
Lane Grp Cap (vph)		1021	2108		608	280
v/s Ratio Prot		c0.38	c0.31		c0.02	
v/s Ratio Perm						0.00
v/c Ratio		1.32	0.52		0.12	0.02
Uniform Delay, d1		49.8	16.5		48.4	47.6
Progression Factor		1.00	0.97		1.00	1.00
Incremental Delay, d2		151.5	0.0		0.1	0.0
Delay (s)		201.3	16.1		48.5	47.6
Level of Service		F	B		D	D
Approach Delay (s)		201.3	16.1		48.2	
Approach LOS		F	B		D	
Intersection Summary						
HCM 2000 Control Delay		115.6		HCM 2000 Level of Service		F
HCM 2000 Volume to Capacity ratio		0.81				
Actuated Cycle Length (s)		140.0		Sum of lost time (s)		31.8
Intersection Capacity Utilization		50.8%		ICU Level of Service		A
Analysis Period (min)		15				
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

1: Riverside Drive & Laurel Canyon Boulevard









06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	326	1004	163	120	526	110	219	869	124	164	870	232
Future Volume (veh/h)	326	1004	163	120	526	110	219	869	124	164	870	232
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	354	1091	177	130	572	120	238	945	135	178	946	252
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	379	1285	573	256	784	350	276	1052	586	221	1051	279
Arrive On Green	0.21	0.36	0.36	0.02	0.07	0.07	0.11	0.30	0.30	0.08	0.26	0.26
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	3554	1585	1781	4016	1067
Grp Volume(v), veh/h	354	1091	177	130	572	120	238	945	135	178	802	396
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1777	1585	1781	1702	1678
Q Serve(g_s), s	23.4	33.9	9.6	4.5	18.9	8.6	11.5	30.6	7.0	8.8	27.3	27.4
Cycle Q Clear(g_c), s	23.4	33.9	9.6	4.5	18.9	8.6	11.5	30.6	7.0	8.8	27.3	27.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.64
Lane Grp Cap(c), veh/h	379	1285	573	256	784	350	276	1052	586	221	891	439
V/C Ratio(X)	0.93	0.85	0.31	0.51	0.73	0.34	0.86	0.90	0.23	0.81	0.90	0.90
Avail Cap(c_a), veh/h	387	1285	573	259	784	350	278	1052	586	221	891	439
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	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	0.76	0.76	0.76	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.4	35.3	27.5	56.4	52.1	47.4	30.9	40.5	26.0	32.8	42.8	42.8
Incr Delay (d2), s/veh	29.4	7.1	1.4	1.6	5.9	2.7	18.5	9.5	0.7	19.3	13.8	24.4
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(95%),veh/ln	19.2	21.8	6.8	3.6	14.7	6.9	9.8	19.9	4.9	8.5	18.7	20.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.8	42.4	28.9	58.0	58.1	50.0	49.4	50.0	26.7	52.1	56.6	67.2
LnGrp LOS	E	D	C	E	E	D	D	D	C	D	E	E
Approach Vol, veh/h	1622			822			1318			1376		
Approach Delay, s/veh	48.2			56.9			47.5			59.1		
Approach LOS	D			E			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.1	37.3	31.4	32.2	15.0	41.4	14.5	49.1				
Change Period (Y+Rc), s	5.6	5.9	5.9	* 5.7	5.6	5.9	5.6	* 5.7				
Max Green Setting (Gmax), s	13.6	31.2	26.1	* 26	9.4	35.4	9.0	* 43				
Max Q Clear Time (g_c+I1), s	13.5	29.4	25.4	20.9	10.8	32.6	6.5	35.9				
Green Ext Time (p_c), s	0.0	1.2	0.1	1.8	0.0	1.7	0.1	4.4				
Intersection Summary												
HCM 6th Ctrl Delay	52.3											
HCM 6th LOS	D											
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
User approved changes to right turn type.												

HCM 6th TWSC

2: Riverside Drive & Radford Avenue

06/24/2024

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	1020	34	38	1029	7	17	2	29	1	0	8
Future Vol, veh/h	12	1020	34	38	1029	7	17	2	29	1	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	105	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	1109	37	41	1118	8	18	2	32	1	0	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1126	0	0	1146	0	0	1776	2343	555	1786	2376	563
Stage 1	-	-	-	-	-	-	1135	1135	-	1204	1204	-
Stage 2	-	-	-	-	-	-	641	1208	-	582	1172	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	616	-	-	605	-	-	52	36	475	51	34	470
Stage 1	-	-	-	-	-	-	215	275	-	195	255	-
Stage 2	-	-	-	-	-	-	430	254	-	466	264	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	616	-	-	605	-	-	48	33	475	42	31	470
Mov Cap-2 Maneuver	-	-	-	-	-	-	48	33	-	42	31	-
Stage 1	-	-	-	-	-	-	210	269	-	191	238	-
Stage 2	-	-	-	-	-	-	393	237	-	422	258	-

























Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.4			73.7			22.1		
HCM LOS							F			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	101	616	-	-	605	-	-	220
HCM Lane V/C Ratio	0.517	0.021	-	-	0.068	-	-	0.044
HCM Control Delay (s)	73.7	11	-	-	11.4	-	-	22.1
HCM Lane LOS	F	B	-	-	B	-	-	C
HCM 95th %tile Q(veh)	2.3	0.1	-	-	0.2	-	-	0.1

HCM 6th Signalized Intersection Summary

3: Colfax Avenue & Riverside Drive

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	674	189	203	750	41	152	525	87	30	342	84
Future Volume (veh/h)	156	674	189	203	750	41	152	525	87	30	342	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	170	733	205	221	815	45	165	571	95	33	372	91
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	247	1356	605	298	1356	605	402	826	700	390	826	700
Arrive On Green	0.76	0.76	0.76	0.38	0.38	0.38	0.88	0.88	0.88	0.44	0.44	0.44
Sat Flow, veh/h	643	3554	1585	597	3554	1585	929	1870	1585	770	1870	1585
Grp Volume(v), veh/h	170	733	205	221	815	45	165	571	95	33	372	91
Grp Sat Flow(s),veh/h/ln	643	1777	1585	597	1777	1585	929	1870	1585	770	1870	1585
Q Serve(g_s), s	11.9	5.0	2.5	17.9	11.0	1.1	6.5	5.5	0.5	1.7	8.3	2.0
Cycle Q Clear(g_c), s	22.9	5.0	2.5	22.9	11.0	1.1	14.8	5.5	0.5	7.2	8.3	2.0
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	247	1356	605	298	1356	605	402	826	700	390	826	700
V/C Ratio(X)	0.69	0.54	0.34	0.74	0.60	0.07	0.41	0.69	0.14	0.08	0.45	0.13
Avail Cap(c_a), veh/h	247	1356	605	298	1356	605	402	826	700	390	826	700
HCM Platoon Ratio	2.00	2.00	2.00	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	0.92	0.92	0.92	0.57	0.57	0.57	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.1	5.0	4.7	22.8	14.9	11.8	5.4	2.3	2.0	13.2	11.7	9.9
Incr Delay (d2), s/veh	14.6	1.5	1.5	14.2	1.8	0.2	1.8	2.7	0.2	0.4	1.8	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(95%),veh/ln	4.0	2.4	1.5	7.3	7.2	0.6	0.9	2.5	0.3	0.6	5.9	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.7	6.5	6.2	36.9	16.7	12.0	7.1	5.0	2.2	13.7	13.4	10.3
LnGrp LOS	C	A	A	D	B	B	A	A	A	B	B	B
Approach Vol, veh/h	1108			1081			831			496		
Approach Delay, s/veh	9.9			20.6			5.1			12.9		
Approach LOS	A			C			A			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	28.0			32.0			28.0			32.0		
Change Period (Y+Rc), s	* 5.1			* 5.5			* 5.1			* 5.5		
Max Green Setting (Gmax), s	* 23			* 27			* 23			* 27		
Max Q Clear Time (g_c+I1), s	24.9			16.8			24.9			10.3		
Green Ext Time (p_c), s	0.0			3.4			0.0			2.4		
Intersection Summary												
HCM 6th Ctrl Delay	12.5											
HCM 6th LOS	B											
Notes												

Queues

4: Riverside Drive & SR 170 Southbound Off-Ramp

06/24/2024



Lane Group	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	889	5	784	15	253	238	234
v/c Ratio	0.44	0.02	0.39	0.05	0.64	0.49	0.44
Control Delay	11.5	11.0	11.9	0.3	31.5	9.8	6.0
Queue Delay	1.0	0.0	0.3	0.1	0.7	0.6	0.0
Total Delay	12.5	11.0	12.3	0.4	32.1	10.4	6.0
Queue Length 50th (ft)	100	1	128	0	100	19	0
Queue Length 95th (ft)	226	m5	245	0	171	79	50
Internal Link Dist (ft)	2214		245	105		344	
Turn Bay Length (ft)		25			140		150
Base Capacity (vph)	2015	267	2016	302	466	543	585
Starvation Cap Reductn	0	0	618	0	0	0	0
Spillback Cap Reductn	800	0	0	90	54	100	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.02	0.56	0.07	0.61	0.54	0.40


Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: Riverside Drive & SR 170 Southbound Off-Ramp













06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑	↑↑			↑↓		↑	↑↓	↑
Traffic Volume (vph)	0	813	5	5	721	0	0	0	14	277	6	384
Future Volume (vph)	0	813	5	5	721	0	0	0	14	277	6	384
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Lane Util. Factor		0.95		1.00	0.95			1.00		0.95	0.91	0.95
Frt		1.00		1.00	1.00			0.86		1.00	0.88	0.85
Flt Protected		1.00		0.95	1.00			1.00		0.95	0.99	1.00
Satd. Flow (prot)		3536		1770	3539			1611		1681	1485	1504
Flt Permitted		1.00		0.25	1.00			1.00		0.95	0.99	1.00
Satd. Flow (perm)		3536		470	3539			1611		1681	1485	1504
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)	0	884	5	5	784	0	0	0	15	301	7	417
RTOR Reduction (vph)	0	1	0	0	0	0	0	15	0	0	140	179
Lane Group Flow (vph)	0	889	0	5	784	0	0	0	0	253	98	55
Turn Type		NA		Perm	NA			NA		Split	NA	Perm
Protected Phases		6			2			4		3	3	
Permitted Phases				2			4					3
Actuated Green, G (s)		35.0		35.0	35.0			1.6		16.4	16.4	16.4
Effective Green, g (s)		35.0		35.0	35.0			1.6		16.4	16.4	16.4
Actuated g/C Ratio		0.50		0.50	0.50			0.02		0.23	0.23	0.23
Clearance Time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Vehicle Extension (s)		3.8		2.4	2.4			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1768		235	1769			36		393	347	352
v/s Ratio Prot		c0.25			0.22			c0.00		c0.15	0.07	
v/s Ratio Perm				0.01								0.04
v/c Ratio		0.50		0.02	0.44			0.01		0.64	0.28	0.16
Uniform Delay, d1		11.7		8.8	11.2			33.4		24.2	22.0	21.3
Progression Factor		1.00		0.98	1.16			1.00		1.00	1.00	1.00
Incremental Delay, d2		1.0		0.1	0.7			0.1		3.6	0.4	0.2
Delay (s)		12.7		8.8	13.7			33.5		27.8	22.4	21.5
Level of Service		B		A	B			C		C	C	C
Approach Delay (s)		12.7			13.7			33.5			24.0	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			16.5			HCM 2000 Level of Service			B			
HCM 2000 Volume to Capacity ratio			0.53									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			56.6%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	NWL	NWR
Lane Group Flow (vph)	232	695	309	238	384	157	32	921	64	553	357	129
v/c Ratio	0.87	1.07	1.08	1.37	0.50	0.46	0.14	0.94	0.42	0.41	0.66	0.57
Control Delay	71.3	108.2	125.0	230.3	50.9	52.8	45.0	67.6	69.8	33.0	61.4	64.2
Queue Delay	0.0	11.8	10.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0
Total Delay	71.3	120.0	135.4	230.3	50.9	52.8	45.0	67.6	69.8	33.0	61.8	64.2
Queue Length 50th (ft)	177	~381	~339	~230	163	126	23	~478	56	191	159	120
Queue Length 95th (ft)	#262	#532	#567	#409	216	200	56	#686	107	261	204	190
Internal Link Dist (ft)		245			745			2580		383	758	
Turn Bay Length (ft)	140		230	85		110	270		290		215	
Base Capacity (vph)	267	647	287	174	765	342	233	976	151	1341	686	288
Starvation Cap Reductn	0	139	41	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	18	88	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	1.37	1.26	1.37	0.50	0.46	0.14	0.94	0.42	0.42	0.60	0.45

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.





















95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024

												
Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	213	463	285	176	17	202	353	144	29	722	107	18
Future Volume (vph)	213	463	285	176	17	202	353	144	29	722	107	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Lane Util. Factor	1.00	0.91	0.91			1.00	0.95	1.00	1.00	0.95		
Frt	1.00	0.96	0.85			1.00	1.00	0.85	1.00	0.98		
Flt Protected	0.95	1.00	1.00			0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1770	3250	1441			1770	3539	1583	1770	3461		
Flt Permitted	0.43	1.00	1.00			0.14	1.00	1.00	0.45	1.00		
Satd. Flow (perm)	794	3250	1441			258	3539	1583	829	3461		
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)	232	503	310	191	18	220	384	157	32	785	116	20
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	232	695	309	0	0	238	384	157	32	921	0	0
Turn Type	pm+pt	NA	Perm		pm+pt	pm+pt	NA	Perm	Perm	NA		
Protected Phases	1	6			5	5	2			8		
Permitted Phases	6		6		2	2		2	8			
Actuated Green, G (s)	34.6	26.5	26.5			38.3	28.9	28.9	39.5	39.5		
Effective Green, g (s)	34.6	26.5	26.5			38.3	28.9	28.9	39.5	39.5		
Actuated g/C Ratio	0.25	0.19	0.19			0.27	0.21	0.21	0.28	0.28		
Clearance Time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Vehicle Extension (s)	3.0	3.9	3.9			3.0	4.6	4.6	4.7	4.7		
Lane Grp Cap (vph)	252	615	272			172	730	326	233	976		
v/s Ratio Prot	0.05	0.21				c0.09	0.11			c0.27		
v/s Ratio Perm	0.17		0.21			c0.29		0.10	0.04			
v/c Ratio	0.92	1.13	1.14			1.38	0.53	0.48	0.14	0.94		
Uniform Delay, d1	49.7	56.8	56.8			46.2	49.5	48.9	37.5	49.2		
Progression Factor	1.01	1.01	1.01			1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2	33.8	76.3	94.0			204.5	2.7	5.0	0.5	17.2		
Delay (s)	83.9	133.8	151.3			250.7	52.2	54.0	38.0	66.3		
Level of Service	F	F	F			F	D	D	D	E		
Approach Delay (s)		128.8					113.2			65.4		
Approach LOS		F					F			E		
Intersection Summary												
HCM 2000 Control Delay			88.4			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			1.03									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			33.0			
Intersection Capacity Utilization			101.3%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024



Movement	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	16	43	419	90	30	286	116	15
Future Volume (vph)	16	43	419	90	30	286	116	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.3			6.6	6.6	
Lane Util. Factor		1.00	0.95			0.97	0.91	
Frt		1.00	0.97			0.99	0.85	
Flt Protected		0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	3445			3429	1441	
Flt Permitted		0.95	1.00			0.95	1.00	
Satd. Flow (perm)		1770	3445			3429	1441	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	47	455	98	33	311	126	16
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	64	553	0	0	357	129	0
Turn Type	Prot	Prot	NA		Prot	Prot	Perm	
Protected Phases	7	7	4		3	3		
Permitted Phases							3	
Actuated Green, G (s)		9.6	55.9			22.0	22.0	
Effective Green, g (s)		9.6	55.9			22.0	22.0	
Actuated g/C Ratio		0.07	0.40			0.16	0.16	
Clearance Time (s)		6.8	6.3			6.6	6.6	
Vehicle Extension (s)		3.0	4.9			4.6	4.6	
Lane Grp Cap (vph)		121	1375			538	226	
v/s Ratio Prot		0.04	c0.16			c0.10		
v/s Ratio Perm							0.09	
v/c Ratio		0.53	0.40			0.66	0.57	
Uniform Delay, d1		63.0	30.1			55.5	54.6	
Progression Factor		1.00	1.00			1.00	1.00	
Incremental Delay, d2		4.1	0.4			3.8	4.9	
Delay (s)		67.1	30.5			59.3	59.6	
Level of Service		E	C			E	E	
Approach Delay (s)			34.3			59.4		
Approach LOS			C			E		
Intersection Summary								

HCM 6th Signalized Intersection Summary

6: Laurel Canyon Boulevard & US 101 Northbound Ramps

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↱	↱	↰	↱			↱	↰
Traffic Volume (veh/h)	0	0	0	556	0	527	473	1100	0	1	933	169
Future Volume (veh/h)	0	0	0	556	0	527	473	1100	0	1	933	169
Initial Q (Qb), veh				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
Parking Bus, Adj				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		
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	1870	1870	1870
Adj Flow Rate, veh/h				782	0	382	514	1196	0	1	1014	184
Peak Hour Factor				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	0	2	2	2
Cap, veh/h				1001	0	445	606	2157	0	40	1850	591
Arrive On Green				0.28	0.00	0.28	0.06	0.20	0.00	0.37	0.37	0.37
Sat Flow, veh/h				3563	0	1585	3456	3647	0	1	4966	1585
Grp Volume(v), veh/h				782	0	382	514	1196	0	382	633	184
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	1869	1549	1585
Q Serve(g_s), s				18.2	0.0	20.6	13.3	27.2	0.0	0.0	14.5	7.4
Cycle Q Clear(g_c), s				18.2	0.0	20.6	13.3	27.2	0.0	14.5	14.5	7.4
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1001	0	445	606	2157	0	736	1154	591
V/C Ratio(X)				0.78	0.00	0.86	0.85	0.55	0.00	0.52	0.55	0.31
Avail Cap(c_a), veh/h				1176	0	523	680	2157	0	736	1154	591
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.85	0.85	0.00	0.50	0.50	0.50
Uniform Delay (d), s/veh				29.8	0.0	30.7	41.2	25.0	0.0	22.3	22.3	20.0
Incr Delay (d2), s/veh				3.0	0.0	11.9	7.8	0.9	0.0	1.3	0.9	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
%ile BackOfQ(95%),veh/ln				12.2	0.0	13.6	10.7	18.5	0.0	9.2	7.8	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				32.8	0.0	42.5	49.0	25.9	0.0	23.6	23.2	20.7
LnGrp LOS				C	A	D	D	C	A	C	C	C
Approach Vol, veh/h					1164			1710			1199	
Approach Delay, s/veh					36.0			32.9			22.9	
Approach LOS					D			C			C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	31.1	38.3		30.6		59.4						
Change Period (Y+Rc), s	5.3	4.8		* 5.3		4.8						
Max Green Setting (Gmax), s	30	27.2		* 30		50.2						
Max Q Clear Time (g_c+M3), s	16.5	16.5		22.6		29.2						
Green Ext Time (p_c), s	0.5	5.2		2.7		8.9						

Intersection Summary

HCM 6th Ctrl Delay	30.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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

HCM 6th Signalized Intersection Summary

7: US 101 Southbound Ramps & Laurel Canyon Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	333	22	527	0	0	0	1	1256	654	274	1188	0
Future Volume (veh/h)	333	22	527	0	0	0	1	1256	654	274	1188	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	249	0	710				1	1365	711	298	1291	0
Peak Hour Factor	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	0
Cap, veh/h	432	0	769				40	3193	1019	357	2285	0
Arrive On Green	0.24	0.00	0.24				0.64	0.64	0.64	0.43	0.43	0.00
Sat Flow, veh/h	1781	0	3170				0	4967	1585	388	3647	0
Grp Volume(v), veh/h	249	0	710				514	852	711	298	1291	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				1869	1549	1585	194	1777	0
Q Serve(g_s), s	11.1	0.0	19.7				0.0	12.2	26.1	45.7	24.6	0.0
Cycle Q Clear(g_c), s	11.1	0.0	19.7				12.2	12.2	26.1	57.9	24.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	432	0	769				1242	1992	1019	357	2285	0
V/C Ratio(X)	0.58	0.00	0.92				0.41	0.43	0.70	0.84	0.56	0.00
Avail Cap(c_a), veh/h	435	0	775				1242	1992	1019	357	2285	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.67	0.67	1.00
Upstream Filter(I)	1.00	0.00	1.00				1.00	1.00	1.00	0.68	0.68	0.00
Uniform Delay (d), s/veh	30.0	0.0	33.3				7.9	7.9	10.4	39.5	16.1	0.0
Incr Delay (d2), s/veh	1.8	0.0	16.5				1.0	0.7	4.0	14.5	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
%ile BackOfQ(95%),veh/ln	8.2	0.0	13.6				8.0	6.5	13.4	6.9	15.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.9	0.0	49.8				8.9	8.6	14.4	54.0	16.8	0.0
LnGrp LOS	C	A	D				A	A	B	D	B	A
Approach Vol, veh/h	959						2077			1589		
Approach Delay, s/veh	45.2						10.6			23.8		
Approach LOS	D						B			C		
Timer - Assigned Phs	2			4			6					
Phs Duration (G+Y+Rc), s	63.0			27.0			63.0					
Change Period (Y+Rc), s	* 5.1			* 5.2			* 5.1					
Max Green Setting (Gmax), s	* 58			* 22			* 58					
Max Q Clear Time (g_c+I1), s	28.1			21.7			59.9					
Green Ext Time (p_c), s	15.6			0.2			0.0					

Intersection Summary

HCM 6th Ctrl Delay	22.3
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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

Queues

8: Laurel Canyon Boulevard & Landale Street

06/24/2024



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	187	173	53	82	72	1861	62	1616	111
v/c Ratio	0.88	0.63	0.39	0.24	0.30	0.90	0.71	0.98	0.24
Control Delay	78.2	25.1	44.9	1.7	18.8	15.6	56.3	37.2	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0
Total Delay	78.2	25.1	44.9	1.7	18.8	17.2	56.3	37.2	10.3
Queue Length 50th (ft)	111	29	29	0	10	199	18	~572	19
Queue Length 95th (ft)	#238	#105	63	0	m9	m107	m#81	#738	m51
Internal Link Dist (ft)		140	232			591		375	
Turn Bay Length (ft)	85			40	155		125		115
Base Capacity (vph)	212	273	173	380	287	2074	87	1649	456
Starvation Cap Reductn	0	0	0	0	0	96	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.63	0.31	0.22	0.25	0.94	0.71	0.98	0.24

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.























Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

8: Laurel Canyon Boulevard & Landale Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	205	11	115	30	18	75	66	1694	18	57	1487	102
Future Volume (vph)	205	11	115	30	18	75	66	1694	18	57	1487	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.86			1.00	1.00	1.00	1.00		1.00	1.00	0.62
Flpb, ped/bikes	1.00	1.00			0.88	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.89			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.99			0.97	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1341			1582	1583	1770	3531		1770	3539	979
Flt Permitted	0.95	0.99			0.71	1.00	0.09	1.00		0.10	1.00	1.00
Satd. Flow (perm)	1681	1341			1152	1583	165	3531		188	3539	979
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)	223	12	125	33	20	82	72	1841	20	62	1616	111
RTOR Reduction (vph)	0	104	0	0	0	74	0	1	0	0	0	0
Lane Group Flow (vph)	187	69	0	0	53	8	72	1860	0	62	1616	111
Confl. Peds. (#/hr)			79	79			164		19	19		164
Turn Type	Split	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	3	3			4		1	6			2	
Permitted Phases				4		4	6			2		2
Actuated Green, G (s)	11.4	11.4			8.4	8.4	51.7	51.7		39.7	39.7	39.7
Effective Green, g (s)	11.4	11.4			8.4	8.4	51.7	51.7		39.7	39.7	39.7
Actuated g/C Ratio	0.13	0.13			0.09	0.09	0.57	0.57		0.44	0.44	0.44
Clearance Time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	5.2		4.5	4.5	4.5
Lane Grp Cap (vph)	212	169			107	147	212	2028		82	1561	431
v/s Ratio Prot	c0.11	0.05					0.02	c0.53			c0.46	
v/s Ratio Perm					c0.05	0.00	0.17			0.33		0.11
v/c Ratio	0.88	0.41			0.50	0.05	0.34	0.92		0.76	1.04	0.26
Uniform Delay, d1	38.6	36.2			38.8	37.2	18.3	17.2		21.1	25.1	15.9
Progression Factor	1.00	1.00			1.00	1.00	1.90	0.76		0.54	0.67	0.49
Incremental Delay, d2	32.0	1.6			3.6	0.1	0.1	0.9		39.4	30.0	1.1
Delay (s)	70.6	37.8			42.4	37.3	34.8	13.9		50.9	46.7	8.9
Level of Service	E	D			D	D	C	B		D	D	A
Approach Delay (s)		54.9			39.3			14.7			44.5	
Approach LOS		D			D			B			D	
Intersection Summary												
HCM 2000 Control Delay			31.6									
HCM 2000 Volume to Capacity ratio			0.97									
Actuated Cycle Length (s)			90.0									
Intersection Capacity Utilization			89.1%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

9: Colfax Avenue & Sarah Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↑	↔	↔	↑	↔
Traffic Volume (veh/h)	14	2	5	7	1	32	6	739	18	37	697	15
Future Volume (veh/h)	14	2	5	7	1	32	6	739	18	37	697	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.99	0.98		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	15	2	5	8	1	35	7	803	20	40	758	16
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	156	26	24	84	8	83	463	1306	1103	328	1306	1103
Arrive On Green	0.07	0.07	0.07	0.07	0.07	0.07	0.23	0.23	0.23	0.70	0.70	0.70
Sat Flow, veh/h	831	385	357	199	119	1239	696	1870	1579	665	1870	1579
Grp Volume(v), veh/h	22	0	0	44	0	0	7	803	20	40	758	16
Grp Sat Flow(s),veh/h/ln	1572	0	0	1557	0	0	696	1870	1579	665	1870	1579
Q Serve(g_s), s	0.0	0.0	0.0	0.4	0.0	0.0	0.5	23.1	0.6	2.6	12.3	0.2
Cycle Q Clear(g_c), s	0.7	0.0	0.0	1.6	0.0	0.0	12.8	23.1	0.6	25.7	12.3	0.2
Prop In Lane	0.68		0.23	0.18		0.80	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	206	0	0	175	0	0	463	1306	1103	328	1306	1103
V/C Ratio(X)	0.11	0.00	0.00	0.25	0.00	0.00	0.02	0.61	0.02	0.12	0.58	0.01
Avail Cap(c_a), veh/h	604	0	0	601	0	0	463	1306	1103	328	1306	1103
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.87	0.87	0.87	0.79	0.79	0.79
Uniform Delay (d), s/veh	26.5	0.0	0.0	26.9	0.0	0.0	17.1	15.9	7.2	15.0	4.6	2.8
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.7	0.0	0.0	0.1	1.9	0.0	0.6	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.0	0.0	1.1	0.0	0.0	0.2	17.0	0.2	0.7	5.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.7	0.0	0.0	27.6	0.0	0.0	17.1	17.7	7.2	15.6	6.1	2.8
LnGrp LOS	C	A	A	C	A	A	B	B	A	B	A	A
Approach Vol, veh/h	22			44			830			814		
Approach Delay, s/veh	26.7			27.6			17.5			6.5		
Approach LOS	C			C			B			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	46.7			13.3			46.7			13.3		
Change Period (Y+Rc), s	4.8			* 9.3			4.8			* 9.3		
Max Green Setting (Gmax), s	25.2			* 21			25.2			* 21		
Max Q Clear Time (g_c+I1), s	25.1			2.7			27.7			3.6		
Green Ext Time (p_c), s	0.1			0.0			0.0			0.1		

Intersection Summary

HCM 6th Ctrl Delay	12.6
HCM 6th LOS	B

Notes

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

Queues

10: Landale Street & Colfax Avenue

06/24/2024



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	44	16	798	770	27
v/c Ratio	0.18	0.03	0.50	0.49	0.02
Control Delay	17.4	3.9	5.7	2.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.4	3.9	5.7	2.7	0.1
Queue Length 50th (ft)	8	0	0	0	0
Queue Length 95th (ft)	32	8	272	5	m0
Internal Link Dist (ft)	262		575	593	
Turn Bay Length (ft)		40			80
Base Capacity (vph)	524	482	1586	1586	1350
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.08	0.03	0.50	0.49	0.02

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

10: Landale Street & Colfax Avenue

06/24/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	22	18	15	734	708	25
Future Volume (vph)	22	18	15	734	708	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	9.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1702		1770	1863	1863	1583
Flt Permitted	0.97		0.30	1.00	1.00	1.00
Satd. Flow (perm)	1702		567	1863	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	24	20	16	798	770	27
RTOR Reduction (vph)	19	0	0	0	0	5
Lane Group Flow (vph)	25	0	16	798	770	22
Turn Type	Perm		Perm	NA	NA	Perm
Protected Phases				6	2	
Permitted Phases	8		6			2
Actuated Green, G (s)	3.3		42.7	42.7	42.7	42.7
Effective Green, g (s)	3.3		42.7	42.7	42.7	42.7
Actuated g/C Ratio	0.05		0.71	0.71	0.71	0.71
Clearance Time (s)	9.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		4.9	4.9	5.3	5.3
Lane Grp Cap (vph)	93		403	1325	1325	1126
v/s Ratio Prot				0.43	0.41	
v/s Ratio Perm	0.01		0.03			0.01
v/c Ratio	0.27		0.04	0.60	0.58	0.02
Uniform Delay, d1	27.2		2.6	4.4	4.3	2.5
Progression Factor	1.00		1.00	1.00	0.51	0.05
Incremental Delay, d2	1.6		0.2	2.0	1.4	0.0
Delay (s)	28.8		2.8	6.4	3.5	0.2
Level of Service	C		A	A	A	A
Approach Delay (s)	28.8			6.3	3.4	
Approach LOS	C			A	A	

Intersection Summary

HCM 2000 Control Delay	5.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		










c Critical Lane Group

HCM 6th Signalized Intersection Summary

11: Whitsett Avenue & Moorpark Street

06/24/2024












Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	137	867	98	132	627	87	109	726	137	86	394	119
Future Volume (veh/h)	137	867	98	132	627	87	109	726	137	86	394	119
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	149	942	107	143	682	95	118	789	149	93	428	129
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	116	850	720	80	730	102	354	1283	242	214	1160	346
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	694	1870	1585	538	1606	224	852	2983	563	597	2697	805
Grp Volume(v), veh/h	149	942	107	143	0	777	118	470	468	93	281	276
Grp Sat Flow(s),veh/h/ln	694	1870	1585	538	0	1830	852	1777	1769	597	1777	1725
Q Serve(g_s), s	4.7	40.9	3.6	0.0	0.0	36.2	9.8	18.5	18.5	12.9	9.6	9.8
Cycle Q Clear(g_c), s	40.9	40.9	3.6	40.9	0.0	36.2	19.6	18.5	18.5	31.3	9.6	9.8
Prop In Lane	1.00		1.00	1.00		0.12	1.00		0.32	1.00		0.47
Lane Grp Cap(c), veh/h	116	850	720	80	0	832	354	764	761	214	764	742
V/C Ratio(X)	1.28	1.11	0.15	1.79	0.00	0.93	0.33	0.62	0.62	0.43	0.37	0.37
Avail Cap(c_a), veh/h	116	850	720	80	0	832	354	764	761	214	764	742
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.3	24.5	14.4	45.0	0.0	23.3	24.1	19.9	19.9	32.0	17.4	17.4
Incr Delay (d2), s/veh	178.1	65.0	0.4	399.7	0.0	18.8	2.5	3.7	3.7	6.3	1.4	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(95%),veh/ln	44.9	44.2	2.3	19.1	0.0	25.6	3.9	12.5	12.5	3.9	7.2	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	222.4	89.5	14.8	444.7	0.0	42.1	26.6	23.6	23.6	38.3	18.7	18.8
LnGrp LOS	F	F	B	F	A	D	C	C	C	D	B	B
Approach Vol, veh/h	1198					920		1056		650		
Approach Delay, s/veh	99.4					104.7		23.9		21.6		
Approach LOS	F					F		C		C		
Timer - Assigned Phs	2		4			6		8				
Phs Duration (G+Y+Rc), s	46.0		44.0			46.0		44.0				
Change Period (Y+Rc), s	5.1		5.3			5.1		5.3				
Max Green Setting (Gmax), s	40.9		38.7			40.9		38.7				
Max Q Clear Time (g_c+I1), s	42.9		33.3			42.9		21.6				
Green Ext Time (p_c), s	0.0		1.9			0.0		6.3				
Intersection Summary												
HCM 6th Ctrl Delay	66.6											
HCM 6th LOS	E											

HCM 6th Signalized Intersection Summary

12: Laurel Canyon Boulevard & Moorpark Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	301	595	125	167	474	213	193	1385	195	157	1268	279
Future Volume (veh/h)	301	595	125	167	474	213	193	1385	195	157	1268	279
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	327	647	136	182	515	232	210	1505	212	171	1378	303
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	250	817	171	297	520	579	238	906	126	236	840	181
Arrive On Green	0.09	0.28	0.28	0.03	0.09	0.09	0.09	0.29	0.29	0.12	0.38	0.38
Sat Flow, veh/h	1781	2923	614	1781	1870	1585	1781	3134	435	1781	2908	627
Grp Volume(v), veh/h	327	393	390	182	515	232	210	844	873	171	831	850
Grp Sat Flow(s),veh/h/ln	1781	1777	1760	1781	1870	1585	1781	1777	1792	1781	1777	1758
Q Serve(g_s), s	8.5	18.4	18.5	6.4	24.8	11.0	7.5	26.0	26.0	6.0	26.0	26.0
Cycle Q Clear(g_c), s	8.5	18.4	18.5	6.4	24.8	11.0	7.5	26.0	26.0	6.0	26.0	26.0
Prop In Lane	1.00		0.35	1.00		1.00	1.00		0.24	1.00		0.36
Lane Grp Cap(c), veh/h	250	496	492	297	520	579	238	514	518	236	513	508
V/C Ratio(X)	1.31	0.79	0.79	0.61	0.99	0.40	0.88	1.64	1.69	0.72	1.62	1.67
Avail Cap(c_a), veh/h	250	496	492	315	520	579	238	514	518	238	513	508
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	0.92	0.92	0.92	1.00	1.00	1.00	0.14	0.14	0.14
Uniform Delay (d), s/veh	25.3	30.0	30.0	24.0	40.8	27.2	23.5	32.0	32.0	22.4	27.7	27.7
Incr Delay (d2), s/veh	164.1	8.5	8.7	2.9	35.5	0.4	29.4	298.5	316.7	1.5	280.2	304.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	28.6	13.5	13.5	5.4	24.0	8.0	8.5	82.4	87.3	3.3	69.4	73.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	189.4	38.5	38.7	26.9	76.3	27.6	52.9	330.4	348.7	23.9	307.9	331.9
LnGrp LOS	F	D	D	C	E	C	D	F	F	C	F	F
Approach Vol, veh/h	1110			929			1927			1852		
Approach Delay, s/veh	83.0			54.5			308.4			292.7		
Approach LOS	F			D			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.3	31.4	14.0	31.3	13.3	31.4	13.9	31.4				
Change Period (Y+Rc), s	5.3	* 5.4	* 5.5	6.3	* 5.4	* 5.4	* 5.5	6.3				
Max Green Setting (Gmax), s	8	* 26	* 8.5	25.0	* 8	* 26	* 9.3	24.2				
Max Q Clear Time (g_c+I), s	19.5	28.0	10.5	26.8	8.0	28.0	8.4	20.5				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7				

Intersection Summary

HCM 6th Ctrl Delay 219.9

HCM 6th LOS F

Notes









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

HCM 6th Signalized Intersection Summary

13: Moorpark Street & Radford Avenue

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	842	49	51	809	41	109	0	109	12	0	51
Future Volume (veh/h)	86	842	49	51	809	41	109	0	109	12	0	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	0	1870	1870	0	1870
Adj Flow Rate, veh/h	93	915	53	55	879	45	118	0	118	13	0	55
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	0	2	2	0	2
Cap, veh/h	491	2319	134	104	2735	140	151	0	0	151	0	0
Arrive On Green	1.00	1.00	1.00	0.12	1.00	1.00	0.08	0.00	0.00	0.08	0.00	0.00
Sat Flow, veh/h	605	3414	198	1781	3439	176	1781	118		1781	13	
Grp Volume(v), veh/h	93	476	492	55	454	470	118	48.8		13	38.2	
Grp Sat Flow(s),veh/h/ln	605	1777	1835	1781	1777	1839	1781	D		1781	D	
Q Serve(g_s), s	0.0	0.0	0.0	2.6	0.0	0.0	5.8			0.6		
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.6	0.0	0.0	5.8			0.6		
Prop In Lane	1.00		0.11	1.00		0.10	1.00			1.00		
Lane Grp Cap(c), veh/h	491	1207	1246	104	1413	1462	151			151		
V/C Ratio(X)	0.19	0.39	0.39	0.53	0.32	0.32	0.78			0.09		
Avail Cap(c_a), veh/h	491	1207	1246	139	1413	1462	416			151		
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00			1.00		
Upstream Filter(I)	0.50	0.50	0.50	0.65	0.65	0.65	1.00			1.00		
Uniform Delay (d), s/veh	0.0	0.0	0.0	38.6	0.0	0.0	40.4			38.0		
Incr Delay (d2), s/veh	0.4	0.5	0.5	2.7	0.4	0.4	8.4			0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(95%),veh/ln	0.1	0.3	0.3	2.1	0.3	0.3	5.2			0.5		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.4	0.5	0.5	41.3	0.4	0.4	48.8			38.2		
LnGrp LOS	A	A	A	D	A	A	D			D		
Approach Vol, veh/h	1061			979								
Approach Delay, s/veh	0.5			2.7								
Approach LOS	A			A								
Timer - Assigned Phs	1	3		4	5	8						
Phs Duration (G+Y+Rc), s	3.0	10.4		66.5	13.0	77.0						
Change Period (Y+Rc), s	5.4	* 5.2		* 5.4	5.4	5.4						
Max Green Setting (Gmax), s	7.0	* 7		* 34	21.0	45.8						
Max Q Clear Time (g_c+I), s	12.6	4.6		2.0	7.8	2.0						
Green Ext Time (p_c), s	0.0	0.0		8.3	0.2	6.9						
Intersection Summary												
HCM 6th Ctrl Delay			4.3									
HCM 6th LOS			A									
Notes												

HCM 6th Signalized Intersection Summary

14: Colfax Avenue & Moorpark Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	706	155	154	585	127	154	410	193	148	441	151
Future Volume (veh/h)	97	706	155	154	585	127	154	410	193	148	441	151
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	0.99		0.95	0.98		0.94	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	105	767	168	167	636	138	167	446	210	161	479	164
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	267	1247	273	257	863	187	185	387	308	237	669	661
Arrive On Green	0.14	0.87	0.87	0.10	0.10	0.10	0.21	0.21	0.21	0.09	0.36	0.36
Sat Flow, veh/h	1781	2878	630	591	2876	623	772	1870	1489	1781	1870	1529
Grp Volume(v), veh/h	105	473	462	167	392	382	167	446	210	161	479	164
Grp Sat Flow(s), veh/h/ln	1781	1777	1732	591	1777	1722	772	1870	1489	1781	1870	1529
Q Serve(g_s), s	3.4	6.8	6.8	25.3	19.3	19.4	12.3	18.6	11.7	6.1	19.9	6.2
Cycle Q Clear(g_c), s	3.4	6.8	6.8	25.3	19.3	19.4	18.6	18.6	11.7	6.1	19.9	6.2
Prop In Lane	1.00		0.36	1.00		0.36	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	267	770	751	257	533	517	185	387	308	237	669	661
V/C Ratio(X)	0.39	0.61	0.61	0.65	0.74	0.74	0.90	1.15	0.68	0.68	0.72	0.25
Avail Cap(c_a), veh/h	278	770	751	257	533	517	185	387	308	238	669	661
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	18.9	3.9	3.9	39.8	37.1	37.1	41.1	35.7	32.9	25.4	24.9	16.4
Incr Delay (d2), s/veh	0.8	3.1	3.2	12.0	8.8	9.1	44.2	93.7	11.5	6.5	5.6	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(95%),veh/ln	2.3	3.5	3.5	8.4	15.7	15.4	9.9	27.2	8.8	5.2	14.1	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.7	6.9	7.0	51.8	45.8	46.2	85.3	129.4	44.5	31.9	30.6	17.2
LnGrp LOS	B	A	A	D	D	D	F	F	D	C	C	B
Approach Vol, veh/h	1040			941			823			804		
Approach Delay, s/veh	8.3			47.0			98.8			28.1		
Approach LOS	A			D			F			C		
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	2.0	36.4		41.6		48.4	13.6	28.0				
Change Period (Y+Rc), s	5.5	* 9.4		* 9.4		* 9.4	5.6	* 9.4				
Max Green Setting (Gmax), s	27	* 27		* 32		* 39	8.0	* 19				
Max Q Clear Time (g_c+I), s	27.3			21.9		8.8	8.1	20.6				
Green Ext Time (p_c), s	0.0	0.0		2.6		6.8	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	43.4
HCM 6th LOS	D

Notes

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

HCM 6th TWSC
15: Irvine Avenue & Moorpark Street























06/24/2024

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕↕			↕↕			↕			↕		
Traffic Vol, veh/h	5	935	16	15	849	6	4	0	11	0	0	14
Future Vol, veh/h	5	935	16	15	849	6	4	0	11	0	0	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	1016	17	16	923	7	4	0	12	0	0	15
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	930	0	0	1033	0	0	1529	1997	517	1477	2002	465
Stage 1	-	-	-	-	-	-	1035	1035	-	959	959	-
Stage 2	-	-	-	-	-	-	494	962	-	518	1043	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	731	-	-	668	-	-	80	59	503	88	59	544
Stage 1	-	-	-	-	-	-	248	307	-	276	334	-
Stage 2	-	-	-	-	-	-	526	332	-	509	305	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	731	-	-	668	-	-	74	55	503	82	55	544
Mov Cap-2 Maneuver	-	-	-	-	-	-	74	55	-	82	55	-
Stage 1	-	-	-	-	-	-	244	302	-	272	317	-
Stage 2	-	-	-	-	-	-	486	315	-	489	300	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.5			24.8			11.8		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	198	731	-	-	668	-	-	544				
HCM Lane V/C Ratio	0.082	0.007	-	-	0.024	-	-	0.028				
HCM Control Delay (s)	24.8	10	0.1	-	10.5	0.3	-	11.8				
HCM Lane LOS	C	A	A	-	B	A	-	B				
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.1				

HCM 6th Signalized Intersection Summary

16: Tujunga Avenue & Moorpark Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	229	770	87	91	572	66	86	447	98	94	244	94
Future Volume (veh/h)	229	770	87	91	572	66	86	447	98	94	244	94
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	249	837	95	99	622	72	93	486	107	102	265	102
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	381	1665	189	316	1661	192	313	678	574	194	436	370
Arrive On Green	0.69	0.69	0.69	0.52	0.52	0.52	0.07	0.36	0.36	0.23	0.23	0.23
Sat Flow, veh/h	750	3216	365	601	3210	371	1781	1870	1585	824	1870	1585
Grp Volume(v), veh/h	249	462	470	99	344	350	93	486	107	102	265	102
Grp Sat Flow(s),veh/h/ln	750	1777	1805	601	1777	1804	1781	1870	1585	824	1870	1585
Q Serve(g_s), s	24.9	11.2	11.2	10.8	10.4	10.5	3.3	20.1	4.2	11.0	11.4	4.7
Cycle Q Clear(g_c), s	35.4	11.2	11.2	21.9	10.4	10.5	3.3	20.1	4.2	19.5	11.4	4.7
Prop In Lane	1.00		0.20	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	381	920	934	316	920	934	313	678	574	194	436	370
V/C Ratio(X)	0.65	0.50	0.50	0.31	0.37	0.38	0.30	0.72	0.19	0.53	0.61	0.28
Avail Cap(c_a), veh/h	381	920	934	316	920	934	327	692	586	194	436	370
HCM Platoon Ratio	1.33	1.33	1.33	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	0.92	0.92	0.92	0.65	0.65	0.65
Uniform Delay (d), s/veh	16.6	8.5	8.5	19.8	13.0	13.0	22.7	24.7	19.6	38.1	30.8	28.3
Incr Delay (d2), s/veh	8.4	2.0	1.9	2.6	1.2	1.2	0.5	3.2	0.1	1.7	1.6	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(95%),veh/ln	7.6	6.7	6.8	3.0	7.4	7.5	2.5	13.8	2.7	4.0	8.1	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.1	10.5	10.4	22.4	14.1	14.1	23.2	27.9	19.8	39.8	32.4	28.5
LnGrp LOS	C	B	B	C	B	B	C	C	B	D	C	C
Approach Vol, veh/h	1181			793			686			469		
Approach Delay, s/veh	13.5			15.2			26.0			33.2		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	2		3	4		6		8				
Phs Duration (G+Y+Rc), s	52.0		11.6	26.4		52.0		38.0				
Change Period (Y+Rc), s	* 5.4		* 5.3	* 5.4		* 5.4		* 5.4				
Max Green Setting (Gmax), s	* 46		* 7	* 21		* 46		* 33				
Max Q Clear Time (g_c+I1), s	23.9		5.3	21.5		37.4		22.1				
Green Ext Time (p_c), s	7.7		0.0	0.0		6.0		2.6				
Intersection Summary												
HCM 6th Ctrl Delay				19.6								
HCM 6th LOS				B								
Notes												

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

HCM 6th Signalized Intersection Summary

17: Woodbridge Street & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↕	
Traffic Volume (veh/h)	11	7	18	16	9	59	18	582	27	41	352	34
Future Volume (veh/h)	11	7	18	16	9	59	18	582	27	41	352	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	12	8	20	17	10	64	20	633	29	45	383	37
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	77	47	72	64	24	96	861	1511	1280	628	1356	131
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.81	0.81	0.81	1.00	1.00	1.00
Sat Flow, veh/h	294	547	841	192	283	1125	967	1870	1585	773	1679	162
Grp Volume(v), veh/h	40	0	0	91	0	0	20	633	29	45	0	420
Grp Sat Flow(s),veh/h/ln	1682	0	0	1600	0	0	967	1870	1585	773	0	1841
Q Serve(g_s), s	0.0	0.0	0.0	2.2	0.0	0.0	0.4	8.8	0.3	0.7	0.0	0.0
Cycle Q Clear(g_c), s	2.0	0.0	0.0	4.9	0.0	0.0	0.4	8.8	0.3	9.5	0.0	0.0
Prop In Lane	0.30		0.50	0.19		0.70	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	196	0	0	184	0	0	861	1511	1280	628	0	1487
V/C Ratio(X)	0.20	0.00	0.00	0.49	0.00	0.00	0.02	0.42	0.02	0.07	0.00	0.28
Avail Cap(c_a), veh/h	508	0	0	502	0	0	861	1511	1280	628	0	1487
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.58	0.58	0.58	0.77	0.00	0.77
Uniform Delay (d), s/veh	38.5	0.0	0.0	39.8	0.0	0.0	1.7	2.5	1.7	0.6	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	2.0	0.0	0.0	0.0	0.5	0.0	0.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	0.0	0.0	3.7	0.0	0.0	0.1	3.3	0.1	0.1	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.0	0.0	0.0	41.9	0.0	0.0	1.7	3.0	1.7	0.8	0.0	0.4
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	40			91			682			465		
Approach Delay, s/veh	39.0			41.9			2.9			0.4		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	77.2			12.8			77.2			12.8		
Change Period (Y+Rc), s	* 4.5			* 5.1			* 4.5			* 5.1		
Max Green Setting (Gmax), s	* 55			* 26			* 55			* 26		
Max Q Clear Time (g_c+I1), s	11.5			4.0			10.8			6.9		
Green Ext Time (p_c), s	6.9			0.1			12.0			0.4		

Intersection Summary

HCM 6th Ctrl Delay	5.9
HCM 6th LOS	A

Notes

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

Queues

18: Whitsett Avenue & Ventura Boulevard

06/24/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	273	1188	232	38	1224	350	93	201	308	166	232
v/c Ratio	0.75	0.63	0.25	0.27	1.09	0.58	0.56	0.68	0.65	0.56	0.25
Control Delay	37.0	19.4	6.1	23.9	78.2	11.8	51.2	49.4	47.1	45.5	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.0	19.4	6.1	23.9	78.2	11.8	51.2	49.4	47.1	45.5	9.6
Queue Length 50th (ft)	112	266	23	14	~502	66	55	118	96	99	56
Queue Length 95th (ft)	#309	402	74	m22	m#573	m109	101	181	137	154	94
Internal Link Dist (ft)	1429		2938		634		1297				
Turn Bay Length (ft)	95	135		145	60		60	220		65	
Base Capacity (vph)	366	1894	919	139	1118	605	247	438	522	441	897
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.63	0.25	0.27	1.09	0.58	0.38	0.46	0.59	0.38	0.26

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
























Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

18: Whitsett Avenue & Ventura Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	251	1093	213	35	1126	322	86	162	23	283	153	213
Future Volume (vph)	251	1093	213	35	1126	322	86	162	23	283	153	213
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	5.4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1828		3433	1863	1583
Flt Permitted	0.11	1.00	1.00	0.24	1.00	1.00	0.56	1.00		0.95	1.00	1.00
Satd. Flow (perm)	201	3539	1583	442	3539	1583	1043	1828		3433	1863	1583
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)	273	1188	232	38	1224	350	93	176	25	308	166	232
RTOR Reduction (vph)	0	0	72	0	0	105	0	6	0	0	0	11
Lane Group Flow (vph)	273	1188	160	38	1224	245	93	195	0	308	166	221
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Prot	NA	custom
Protected Phases	1	6			2			4		3	8	13
Permitted Phases	6		6	2		2	4					8
Actuated Green, G (s)	53.5	53.5	53.5	31.6	31.6	31.6	15.9	15.9		13.9	15.9	51.7
Effective Green, g (s)	53.5	53.5	53.5	31.6	31.6	31.6	15.9	15.9		13.9	15.9	51.7
Actuated g/C Ratio	0.54	0.54	0.54	0.32	0.32	0.32	0.16	0.16		0.14	0.16	0.52
Clearance Time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	
Vehicle Extension (s)	3.0	4.9	4.9	4.7	4.7	4.7	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	366	1893	846	139	1118	500	165	290		477	296	818
v/s Ratio Prot	c0.12	0.34			c0.35			c0.11		c0.09	0.09	0.10
v/s Ratio Perm	0.28		0.10	0.09		0.15	0.09					0.04
v/c Ratio	0.75	0.63	0.19	0.27	1.09	0.49	0.56	0.67		0.65	0.56	0.27
Uniform Delay, d1	24.5	16.3	12.0	25.6	34.2	27.7	38.8	39.6		40.7	38.8	13.6
Progression Factor	1.00	1.00	1.00	0.72	0.67	0.55	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	8.0	1.6	0.5	3.1	52.3	2.2	4.4	6.0		3.0	2.4	0.2
Delay (s)	32.5	17.9	12.5	21.4	75.3	17.5	43.2	45.6		43.7	41.3	13.7
Level of Service	C	B	B	C	E	B	D	D		D	D	B
Approach Delay (s)		19.5			61.5			44.9			33.3	
Approach LOS		B			E			D			C	
Intersection Summary												
HCM 2000 Control Delay			39.2									HCM 2000 Level of Service D
HCM 2000 Volume to Capacity ratio			0.86									
Actuated Cycle Length (s)			100.0									Sum of lost time (s) 22.1
Intersection Capacity Utilization			81.4%									ICU Level of Service D
Analysis Period (min)			15									
c Critical Lane Group												

Queues

19: Laurel Canyon Boulevard & Ventura Place

06/24/2024



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	186	75	365	30	1282	35	118	1433
v/c Ratio	1.63	0.29	1.04	0.17	0.68	0.04	0.94	0.64
Control Delay	351.1	43.3	81.2	29.7	24.0	0.4	98.6	24.1
Queue Delay	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0
Total Delay	351.1	43.3	81.2	29.7	25.8	0.4	98.6	24.1
Queue Length 50th (ft)	~170	44	~157	17	419	0	~81	273
Queue Length 95th (ft)	#310	89	#339	m22	m467	m0	#194	328
Internal Link Dist (ft)	123	395			458			232
Turn Bay Length (ft)			380	105		85	55	
Base Capacity (vph)	114	258	352	177	1942	930	126	2225
Starvation Cap Reductn	0	0	0	0	468	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.63	0.29	1.04	0.17	0.87	0.04	0.94	0.64

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.


















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

19: Laurel Canyon Boulevard & Ventura Place

06/24/2024













												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	107	41	23	42	27	336	28	1179	32	109	1241	77
Future Volume (vph)	107	41	23	42	27	336	28	1179	32	109	1241	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		9.4				9.6	9.6	5.0	5.1	5.1	5.1	5.1
Lane Util. Factor		1.00				1.00	1.00	1.00	0.95	1.00	1.00	0.91
Frbp, ped/bikes		1.00				1.00	0.89	1.00	1.00	0.98	1.00	1.00
Flpb, ped/bikes		0.90				1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98				1.00	0.85	1.00	1.00	0.85	1.00	0.99
Flt Protected		0.97				0.97	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1603				1807	1405	1770	3539	1550	1768	5041
Flt Permitted		0.77				0.97	1.00	0.95	1.00	1.00	0.15	1.00
Satd. Flow (perm)		1266				1807	1405	1770	3539	1550	287	5041
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)	116	45	25	46	29	365	30	1282	35	118	1349	84
RTOR Reduction (vph)	0	5	0	0	0	156	0	0	16	0	6	0
Lane Group Flow (vph)	0	181	0	0	75	209	30	1282	19	118	1427	0
Confl. Peds. (#/hr)	49					49			5	5		
Turn Type	Perm	NA			Split	NA	Perm	Prot	NA	Perm	Perm	NA
Protected Phases		3			4	4		1	6			2
Permitted Phases	3					4			6	2		
Actuated Green, G (s)		8.6				14.3	14.3	6.0	53.0	53.0	42.0	42.0
Effective Green, g (s)		8.6				14.3	14.3	6.0	53.0	53.0	42.0	42.0
Actuated g/C Ratio		0.09				0.14	0.14	0.06	0.53	0.53	0.42	0.42
Clearance Time (s)		9.4				9.6	9.6	5.0	5.1	5.1	5.1	5.1
Vehicle Extension (s)		3.0				3.0	3.0	3.0	4.8	4.8	3.1	3.1
Lane Grp Cap (vph)		108				258	200	106	1875	821	120	2117
v/s Ratio Prot						0.04		0.02	c0.36			0.28
v/s Ratio Perm		c0.14					c0.15			0.01	c0.41	
v/c Ratio		1.67				0.29	1.05	0.28	0.68	0.02	0.98	0.67
Uniform Delay, d1		45.7				38.3	42.9	44.9	17.3	11.2	28.7	23.5
Progression Factor		1.00				1.00	1.00	0.68	1.33	1.00	1.00	1.00
Incremental Delay, d2		339.1				0.6	76.0	0.8	1.1	0.0	77.8	1.7
Delay (s)		384.8				38.9	118.9	31.6	24.1	11.2	106.5	25.2
Level of Service		F				D	F	C	C	B	F	C
Approach Delay (s)		384.8				105.2			23.9			31.4
Approach LOS		F				F			C			C
Intersection Summary												
HCM 2000 Control Delay			56.4		HCM 2000 Level of Service					E		
HCM 2000 Volume to Capacity ratio			1.07									
Actuated Cycle Length (s)			100.0		Sum of lost time (s)					29.1		
Intersection Capacity Utilization			86.9%		ICU Level of Service					E		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

20: Laurel Canyon Boulevard & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	687	267	251	722	201	465	887	252	293	800	220
Future Volume (veh/h)	195	687	267	251	722	201	465	887	252	293	800	220
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.92	0.99		0.93	1.00		0.97	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	212	747	290	273	785	218	505	964	274	318	870	239
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	273	991	637	310	1031	590	498	1034	446	356	888	515
Arrive On Green	0.17	0.56	0.56	0.10	0.29	0.29	0.14	0.29	0.29	0.03	0.08	0.08
Sat Flow, veh/h	1781	3554	1466	1781	3554	1470	3456	3554	1531	3456	3554	1522
Grp Volume(v), veh/h	212	747	290	273	785	218	505	964	274	318	870	239
Grp Sat Flow(s),veh/h/ln	1781	1777	1466	1781	1777	1470	1728	1777	1531	1728	1777	1522
Q Serve(g_s), s	8.5	16.0	3.1	9.8	20.1	10.6	14.4	26.4	15.5	9.2	24.4	7.2
Cycle Q Clear(g_c), s	8.5	16.0	3.1	9.8	20.1	10.6	14.4	26.4	15.5	9.2	24.4	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	273	991	637	310	1031	590	498	1034	446	356	888	515
V/C Ratio(X)	0.78	0.75	0.46	0.88	0.76	0.37	1.01	0.93	0.61	0.89	0.98	0.46
Avail Cap(c_a), veh/h	273	991	637	310	1031	590	498	1034	446	356	888	515
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	0.74	0.74	0.74	0.76	0.76	0.76	0.29	0.29	0.29	0.72	0.72	0.72
Uniform Delay (d), s/veh	24.3	19.5	4.1	27.6	32.4	21.6	42.8	34.5	30.6	47.8	45.6	12.2
Incr Delay (d2), s/veh	10.1	4.0	1.7	19.3	4.1	1.4	25.5	5.4	1.0	18.4	21.0	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(95%),veh/ln	6.7	8.1	2.5	9.8	13.2	6.5	10.3	14.8	7.8	8.2	19.4	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.4	23.4	5.8	46.9	36.4	23.0	68.3	39.9	31.6	66.1	66.6	13.9
LnGrp LOS	C	C	A	D	D	C	F	D	C	E	E	B
Approach Vol, veh/h	1249			1276			1743			1427		
Approach Delay, s/veh	21.2			36.4			46.8			57.7		
Approach LOS	C			D			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.2	34.2	20.0	30.6	14.1	35.3	15.9	34.7				
Change Period (Y+Rc), s	5.4	6.3	5.6	5.6	5.6	6.3	5.6	5.6				
Max Green Setting (Gmax), s	27.9	27.9	14.4	25.0	8.5	29.0	10.3	29.1				
Max Q Clear Time (g_c+III), s	18.0	18.0	16.4	26.4	10.5	22.1	11.2	28.4				
Green Ext Time (p_c), s	0.0	7.0	0.0	0.0	0.0	3.7	0.0	0.6				

Intersection Summary

HCM 6th Ctrl Delay	41.6
HCM 6th LOS	D

Notes

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

Queues

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Lane Group	EBL	EBT	WBL	WBT	WBR2	NBT	NBR	SBL	SBT	SBR2
Lane Group Flow (vph)	227	1319	115	1177	100	64	82	111	198	198
v/c Ratio	0.40	0.77	1.13	1.60	0.35	0.22	0.21	0.53	1.31	1.74
Control Delay	10.4	5.9	184.5	311.6	50.9	53.0	1.2	68.8	224.3	397.7
Queue Delay	73.5	49.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	83.9	54.9	184.5	314.8	50.9	53.0	1.2	68.8	224.3	397.7
Queue Length 50th (ft)	143	134	~121	~804	78	51	0	98	~244	~275
Queue Length 95th (ft)	m89	m1	#251	#943	136	97	0	164	#406	#438
Internal Link Dist (ft)		48		634		66			226	
Turn Bay Length (ft)	90		95		55		30	90		90
Base Capacity (vph)	580	1746	102	736	287	308	405	209	151	114
Starvation Cap Reductn	456	662	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	259	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.83	1.22	1.13	2.47	0.35	0.21	0.20	0.53	1.31	1.74

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

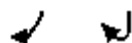
06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	209	1195	18	106	991	92	92	46	13	75	102	20
Future Volume (vph)	209	1195	18	106	991	92	92	46	13	75	102	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.7		4.9	6.1		6.1		6.9	6.9	7.0	7.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		0.85		1.00	0.85	1.00	0.82
Flpb, ped/bikes	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	0.99		0.85		1.00	0.85	1.00	0.87
Flt Protected	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (prot)	1770	3525		1770	3449		1344		1793	1352	1770	1330
Flt Permitted	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (perm)	1770	3525		1770	3449		1344		1793	1352	1770	1330
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)	227	1299	20	115	1077	100	100	50	14	82	111	22
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	69	0	0
Lane Group Flow (vph)	227	1318	0	115	1177	0	100	0	64	13	111	198
Confl. Peds. (#/hr)	42		32	32		42	42	75		75	75	
Turn Type	Prot	NA		Prot	NA		Perm	Split	NA	Perm	Split	NA
Protected Phases	1 3	3 6		5	2			7	7		8	8
Permitted Phases							2			7		
Actuated Green, G (s)	44.8	67.8		8.1	29.9		29.9		23.0	23.0	16.6	16.6
Effective Green, g (s)	44.8	61.7		8.1	29.9		29.9		23.0	23.0	16.6	16.6
Actuated g/C Ratio	0.32	0.44		0.06	0.21		0.21		0.16	0.16	0.12	0.12
Clearance Time (s)				4.9	6.1		6.1		6.9	6.9	7.0	7.0
Vehicle Extension (s)				3.0	4.8		4.8		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	566	1553		102	736		287		294	222	209	157
v/s Ratio Prot	0.13	c0.37		0.06	c0.34				c0.04		0.06	0.15
v/s Ratio Perm							0.07			0.01		
v/c Ratio	0.40	0.85		1.13	1.60		0.35		0.22	0.06	0.53	1.26
Uniform Delay, d1	37.1	35.0		66.0	55.0		46.8		50.7	49.4	58.0	61.7
Progression Factor	0.27	0.19		1.00	1.00		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0	0.4		127.5	276.0		3.3		0.4	0.1	2.6	158.6
Delay (s)	10.2	6.9		193.5	331.1		50.1		51.1	49.5	60.6	220.3
Level of Service	B	A		F	F		D		D	D	E	F
Approach Delay (s)		7.4			299.5				50.2			239.5
Approach LOS		A			F				D			F
Intersection Summary												
HCM 2000 Control Delay			155.2			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			1.05									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			31.8			
Intersection Capacity Utilization			98.6%			ICU Level of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Movement	SBR	SBR2
Lane Configurations		
Traffic Volume (vph)	162	182
Future Volume (vph)	162	182
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		7.0
Lane Util. Factor		1.00
Frpb, ped/bikes		0.67
Flpb, ped/bikes		1.00
Frt		0.85
Flt Protected		1.00
Satd. Flow (prot)		1061
Flt Permitted		1.00
Satd. Flow (perm)		1061
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	176	198
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	198
Confl. Peds. (#/hr)	75	75
Turn Type		Perm
Protected Phases		
Permitted Phases		8
Actuated Green, G (s)		16.6
Effective Green, g (s)		16.6
Actuated g/C Ratio		0.12
Clearance Time (s)		7.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)		125
v/s Ratio Prot		
v/s Ratio Perm		c0.19
v/c Ratio		1.58
Uniform Delay, d1		61.7
Progression Factor		1.00
Incremental Delay, d2		297.3
Delay (s)		359.0
Level of Service		F
Approach Delay (s)		
Approach LOS		
Intersection Summary		

HCM 6th Signalized Intersection Summary

22: Carpenter Avenue & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	1149	80	193	1024	98	75	25	165	142	39	224
Future Volume (veh/h)	129	1149	80	193	1024	98	75	25	165	142	39	224
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	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	140	1249	87	210	1113	107	82	27	179	154	42	243
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	171	1316	91	239	1403	135	46	23	38	196	36	375
Arrive On Green	0.10	0.39	0.39	0.04	0.14	0.14	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3357	233	1781	3260	313	0	96	158	548	149	1557
Grp Volume(v), veh/h	140	660	676	210	606	614	288	0	0	196	0	243
Grp Sat Flow(s), veh/h/ln	1781	1777	1814	1781	1777	1796	255	0	0	698	0	1557
Q Serve(g_s), s	7.7	35.9	36.2	11.7	33.0	33.1	0.0	0.0	0.0	0.0	0.0	14.0
Cycle Q Clear(g_c), s	7.7	35.9	36.2	11.7	33.0	33.1	24.1	0.0	0.0	24.1	0.0	14.0
Prop In Lane	1.00		0.13	1.00		0.17	0.28		0.62	0.79		1.00
Lane Grp Cap(c), veh/h	171	697	711	239	765	773	108	0	0	232	0	375
V/C Ratio(X)	0.82	0.95	0.95	0.88	0.79	0.79	2.68	0.00	0.00	0.84	0.00	0.65
Avail Cap(c_a), veh/h	207	697	711	239	765	773	108	0	0	232	0	375
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.62	0.62	0.62	0.09	0.09	0.09	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.4	29.4	29.5	47.0	38.6	38.6	37.3	0.0	0.0	39.7	0.0	34.1
Incr Delay (d2), s/veh	12.8	16.8	17.2	3.8	0.8	0.8	780.1	0.0	0.0	23.6	0.0	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.5	23.2	23.8	7.0	17.7	17.9	45.0	0.0	0.0	10.6	0.0	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.2	46.2	46.6	50.8	39.4	39.4	817.4	0.0	0.0	63.2	0.0	38.0
LnGrp LOS	E	D	D	D	D	D	F	A	A	E	A	D
Approach Vol, veh/h	1476			1430			288			439		
Approach Delay, s/veh	47.5			41.1			817.4			49.3		
Approach LOS	D			D			F			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.0	48.4		33.6	14.2	52.2		33.6				
Change Period (Y+Rc), s	4.6	* 9.2		9.5	4.6	* 9.2		9.5				
Max Green Setting (Gmax), s	13.4	* 39		24.1	11.6	* 41		24.1				
Max Q Clear Time (g_c+I1), s	13.7	38.2		26.1	9.7	35.1		26.1				
Green Ext Time (p_c), s	0.0	1.0		0.0	0.1	5.1		0.0				

Intersection Summary

HCM 6th Ctrl Delay 106.2

HCM 6th LOS F

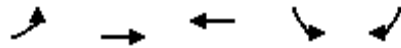
Notes

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

Queues

23: Ventura Boulevard & Colfax Avenue

06/24/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	354	1247	1334	412	350
v/c Ratio	0.65	0.58	1.37	0.82	0.32
Control Delay	13.6	6.4	196.0	46.8	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.6	6.4	196.0	46.8	1.8
Queue Length 50th (ft)	56	92	~598	242	0
Queue Length 95th (ft)	m141	m404	#716	331	34
Internal Link Dist (ft)		981	464		
Turn Bay Length (ft)	160			360	360
Base Capacity (vph)	542	2150	975	533	1093
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.65	0.58	1.37	0.77	0.32

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.



















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

23: Ventura Boulevard & Colfax Avenue

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	326	1147	0	0	932	295	0	0	0	379	0	322
Future Volume (vph)	326	1147	0	0	932	295	0	0	0	379	0	322
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.4			5.4					5.4		5.7
Lane Util. Factor	1.00	0.95			0.95					1.00		1.00
Frt	1.00	1.00			0.96					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1770	3539			3411					1770		1583
Flt Permitted	0.12	1.00			1.00					0.95		1.00
Satd. Flow (perm)	217	3539			3411					1770		1583
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)	354	1247	0	0	1013	321	0	0	0	412	0	350
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	158
Lane Group Flow (vph)	354	1247	0	0	1334	0	0	0	0	412	0	192
Turn Type	pm+pt	NA			NA					pm+pt		pm+ov
Protected Phases	5	2			6			3		4		5
Permitted Phases	2						3			7		4
Actuated Green, G (s)	60.8	60.8			28.6					28.4		54.9
Effective Green, g (s)	60.8	60.8			28.6					28.4		54.9
Actuated g/C Ratio	0.61	0.61			0.29					0.28		0.55
Clearance Time (s)	5.7	5.4			5.4					5.4		5.7
Vehicle Extension (s)	3.0	4.3			4.5					3.0		3.0
Lane Grp Cap (vph)	543	2151			975					502		869
v/s Ratio Prot	c0.17	0.35			c0.39					c0.23		0.06
v/s Ratio Perm	0.22											0.06
v/c Ratio	0.65	0.58			1.37					0.82		0.22
Uniform Delay, d1	21.8	11.9			35.7					33.4		11.6
Progression Factor	0.46	0.46			0.67					1.00		1.00
Incremental Delay, d2	1.2	0.5			171.4					10.4		0.1
Delay (s)	11.3	5.9			195.3					43.8		11.7
Level of Service	B	A			F					D		B
Approach Delay (s)		7.1			195.3			0.0			29.0	
Approach LOS		A			F			A			C	
Intersection Summary												
HCM 2000 Control Delay		79.5			HCM 2000 Level of Service			E				
HCM 2000 Volume to Capacity ratio		1.04										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)			22.8				
Intersection Capacity Utilization		86.8%			ICU Level of Service			E				
Analysis Period (min)		15										
c Critical Lane Group												

Queues

24: Berry Drive & Ventura Boulevard

06/24/2024



Lane Group	EBT	WBL	WBT	NBT
Lane Group Flow (vph)	1763	52	1532	93
v/c Ratio	0.60	0.32	0.52	0.40
Control Delay	5.2	10.3	4.6	9.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.2	10.3	4.6	9.1
Queue Length 50th (ft)	93	5	108	0
Queue Length 95th (ft)	125	m19	222	28
Internal Link Dist (ft)	342		273	287
Turn Bay Length (ft)		65		
Base Capacity (vph)	2918	162	2923	391
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.60	0.32	0.52	0.24



















Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

24: Berry Drive & Ventura Boulevard

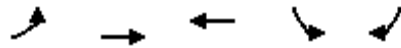
06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1603	19	48	1409	0	20	0	65	0	0	0
Future Volume (vph)	0	1603	19	48	1409	0	20	0	65	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0			9.4				
Lane Util. Factor		0.95		1.00	0.95			1.00				
Frt		1.00		1.00	1.00			0.90				
Flt Protected		1.00		0.95	1.00			0.99				
Satd. Flow (prot)		3533		1770	3539			1651				
Flt Permitted		1.00		0.10	1.00			0.99				
Satd. Flow (perm)		3533		195	3539			1651				
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)	0	1742	21	52	1532	0	22	0	71	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	88	0	0	0	0
Lane Group Flow (vph)	0	1763	0	52	1532	0	0	5	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		6			2		3	3			4	
Permitted Phases	6			2						4		
Actuated Green, G (s)		79.7		79.7	79.7			5.9				
Effective Green, g (s)		79.7		79.7	79.7			5.9				
Actuated g/C Ratio		0.80		0.80	0.80			0.06				
Clearance Time (s)		5.0		5.0	5.0			9.4				
Vehicle Extension (s)		4.9		4.0	4.0			3.0				
Lane Grp Cap (vph)		2815		155	2820			97				
v/s Ratio Prot		c0.50			0.43			c0.00				
v/s Ratio Perm				0.27								
v/c Ratio		0.63		0.34	0.54			0.06				
Uniform Delay, d1		4.1		2.8	3.6			44.4				
Progression Factor		1.03		1.44	1.09			1.00				
Incremental Delay, d2		0.9		4.6	0.6			0.2				
Delay (s)		5.1		8.7	4.6			44.7				
Level of Service		A		A	A			D				
Approach Delay (s)		5.1			4.7			44.7			0.0	
Approach LOS		A			A			D			A	
Intersection Summary												
HCM 2000 Control Delay			6.0			HCM 2000 Level of Service			A			
HCM 2000 Volume to Capacity ratio			0.66									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			23.7			
Intersection Capacity Utilization			62.7%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

25: Ventura Boulevard & Tujunga Avenue

06/24/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	354	1338	1334	150	204
v/c Ratio	0.75	0.50	0.81	0.33	0.31
Control Delay	46.6	2.7	28.4	40.6	17.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	46.6	2.7	28.4	40.6	17.7
Queue Length 50th (ft)	190	84	362	45	77
Queue Length 95th (ft)	244	81	#605	72	107
Internal Link Dist (ft)		426	233	3083	
Turn Bay Length (ft)	180			100	60
Base Capacity (vph)	475	2679	1651	1012	667
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.75	0.50	0.81	0.15	0.31

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

25: Ventura Boulevard & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	326	1231	1017	211	138	188
Future Volume (vph)	326	1231	1017	211	138	188
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.5	5.5		5.5	5.6
Lane Util. Factor	1.00	0.95	0.95		0.97	1.00
Frt	1.00	1.00	0.97		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3448		3433	1583
Flt Permitted	0.08	1.00	1.00		0.95	1.00
Satd. Flow (perm)	140	3539	3448		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	354	1338	1105	229	150	204
RTOR Reduction (vph)	0	0	15	0	0	12
Lane Group Flow (vph)	354	1338	1319	0	150	192
Turn Type	pm+pt	NA	NA		Prot	pt+ov
Protected Phases	1	6	2		4	1 7
Permitted Phases	6					4
Actuated Green, G (s)	75.7	75.7	47.5		13.3	41.4
Effective Green, g (s)	75.7	75.7	47.5		13.3	35.9
Actuated g/C Ratio	0.76	0.76	0.48		0.13	0.36
Clearance Time (s)	5.6	5.5	5.5		5.5	
Vehicle Extension (s)	3.0	4.4	4.9		3.0	
Lane Grp Cap (vph)	474	2679	1637		456	568
v/s Ratio Prot	c0.17	0.38	c0.38		0.04	c0.12
v/s Ratio Perm	0.40					
v/c Ratio	0.75	0.50	0.81		0.33	0.34
Uniform Delay, d1	26.8	4.7	22.3		39.3	23.4
Progression Factor	1.66	0.42	1.00		1.00	1.00
Incremental Delay, d2	5.2	0.5	4.3		0.4	0.4
Delay (s)	49.7	2.5	26.7		39.7	23.7
Level of Service	D	A	C		D	C
Approach Delay (s)		12.4	26.7		30.5	
Approach LOS		B	C		C	
Intersection Summary						
HCM 2000 Control Delay			19.9		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.77			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	22.1
Intersection Capacity Utilization			75.1%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						

HCM 6th Signalized Intersection Summary 26: Laurel Canyon Boulevard & Maxwellton Road

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕↕			↕↕	
Traffic Volume (veh/h)	67	0	73	0	0	0	15	1612	0	0	1149	72
Future Volume (veh/h)	67	0	73	0	0	0	15	1612	0	0	1149	72
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93				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
Work Zone On Approach	No						No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h	73	0	79				16	1752	0	0	1249	78
Peak Hour Factor	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	0	0	2	2
Cap, veh/h	129	0	140				48	2163	0	0	2140	133
Arrive On Green	0.17	0.00	0.17				0.63	0.63	0.00	0.00	0.63	0.63
Sat Flow, veh/h	770	0	834				12	3518	0	0	3490	212
Grp Volume(v), veh/h	152	0	0				945	823	0	0	653	674
Grp Sat Flow(s),veh/h/ln	1604	0	0				1828	1617	0	0	1777	1831
Q Serve(g_s), s	7.8	0.0	0.0				0.1	34.5	0.0	0.0	19.3	19.4
Cycle Q Clear(g_c), s	7.8	0.0	0.0				34.0	34.5	0.0	0.0	19.3	19.4
Prop In Lane	0.48		0.52				0.02		0.00	0.00		0.12
Lane Grp Cap(c), veh/h	269	0	0				1193	1019	0	0	1120	1154
V/C Ratio(X)	0.57	0.00	0.00				0.79	0.81	0.00	0.00	0.58	0.58
Avail Cap(c_a), veh/h	442	0	0				1193	1019	0	0	1120	1154
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.47	0.47	0.00	0.00	0.39	0.39
Uniform Delay (d), s/veh	34.4	0.0	0.0				12.4	12.5	0.0	0.0	9.7	9.7
Incr Delay (d2), s/veh	1.9	0.0	0.0				2.6	3.4	0.0	0.0	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.7	0.0	0.0				16.6	15.0	0.0	0.0	9.2	9.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.3	0.0	0.0				15.1	15.9	0.0	0.0	10.6	10.6
LnGrp LOS	D	A	A				B	B	A	A	B	B
Approach Vol, veh/h	152						1768			1327		
Approach Delay, s/veh	36.3						15.5			10.6		
Approach LOS	D						B			B		
Timer - Assigned Phs	2			4			6					
Phs Duration (G+Y+Rc), s	65.7			24.3			65.7					
Change Period (Y+Rc), s	9.0			9.2			9.0					
Max Green Setting (Gmax), s	47.0			24.8			47.0					
Max Q Clear Time (g_c+I1), s	21.4			9.8			36.5					
Green Ext Time (p_c), s	18.4			0.7			9.9					
Intersection Summary												
HCM 6th Ctrl Delay			14.4									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary

27: Laurel Canyon Boulevard & Laurel Terrace Drive/Sunshine Terrace Drive

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↖	↗		↖	↗	
Traffic Volume (veh/h)	17	19	172	124	35	28	160	1560	205	33	1157	11
Future Volume (veh/h)	17	19	172	124	35	28	160	1560	205	33	1157	11
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	18	21	187	135	38	30	174	1696	223	36	1258	12
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	49	48	309	189	50	33	110	2214	285	138	2161	21
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.06	0.70	0.70	0.60	0.60	0.60
Sat Flow, veh/h	76	218	1411	634	230	150	1781	3166	408	233	3607	34
Grp Volume(v), veh/h	226	0	0	203	0	0	174	936	983	36	620	650
Grp Sat Flow(s),veh/h/ln	705	0	0	1014	0	0	1781	1777	1797	233	1777	1864
Q Serve(g_s), s	0.0	0.0	0.0	9.5	0.0	0.0	7.4	40.2	43.6	14.6	25.8	25.8
Cycle Q Clear(g_c), s	14.8	0.0	0.0	24.2	0.0	0.0	7.4	40.2	43.6	46.1	25.8	25.8
Prop In Lane	0.08		0.83	0.67		0.15	1.00		0.23	1.00		0.02
Lane Grp Cap(c), veh/h	406	0	0	272	0	0	110	1242	1256	138	1065	1117
V/C Ratio(X)	0.56	0.00	0.00	0.75	0.00	0.00	1.58	0.75	0.78	0.26	0.58	0.58
Avail Cap(c_a), veh/h	415	0	0	280	0	0	110	1242	1256	138	1065	1117
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.72	0.72	0.72
Uniform Delay (d), s/veh	42.5	0.0	0.0	47.3	0.0	0.0	56.3	11.5	12.0	31.3	14.8	14.8
Incr Delay (d2), s/veh	1.6	0.0	0.0	10.2	0.0	0.0	301.5	4.3	4.9	3.3	1.7	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.4	0.0	0.0	11.1	0.0	0.0	20.6	21.5	23.4	1.7	14.7	15.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.0	0.0	0.0	57.5	0.0	0.0	357.8	15.7	16.9	34.6	16.5	16.4
LnGrp LOS	D	A	A	E	A	A	F	B	B	C	B	B
Approach Vol, veh/h	226		203			2093			1306			
Approach Delay, s/veh	44.0		57.5			44.7			16.9			
Approach LOS	D		E			D			B			
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	2.0	76.7	31.3		88.7		31.3					
Change Period (Y+Rc), s	4.6	4.8	* 5		4.8		* 5					
Max Green Setting (Gmax), s	71.2	* 27		83.2		* 27						
Max Q Clear Time (g_c+I), s	19.4	48.1	16.8		45.6		26.2					
Green Ext Time (p_c), s	0.0	10.4	1.0		22.2		0.1					

Intersection Summary

HCM 6th Ctrl Delay 35.9

HCM 6th LOS D

Notes

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

Queues

28: Laurel Canyon Boulevard & Fryman Road

06/24/2024
























Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	189	14	13	1913	1593
v/c Ratio	0.65	0.05	0.08	0.76	0.64
Control Delay	44.8	29.5	6.8	11.4	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.8	29.5	6.8	11.4	8.8
Queue Length 50th (ft)	102	7	2	301	206
Queue Length 95th (ft)	159	22	10	495	342
Internal Link Dist (ft)				236	183
Turn Bay Length (ft)			145		
Base Capacity (vph)	542	485	154	2527	2490
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.35	0.03	0.08	0.76	0.64
Intersection Summary					

HCM Signalized Intersection Capacity Analysis

28: Laurel Canyon Boulevard & Fryman Road

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								 			 	
Traffic Volume (vph)	174	0	13	0	0	0	12	1760	0	0	1289	177
Future Volume (vph)	174	0	13	0	0	0	12	1760	0	0	1289	177
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4		5.4				5.4	5.4			5.4	
Lane Util. Factor	1.00		1.00				1.00	0.95			0.95	
Frt	1.00		0.85				1.00	1.00			0.98	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	3539			3475	
Flt Permitted	0.95		1.00				0.12	1.00			1.00	
Satd. Flow (perm)	1770		1583				216	3539			3475	
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)	189	0	14	0	0	0	13	1913	0	0	1401	192
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	8	0
Lane Group Flow (vph)	189	0	14	0	0	0	13	1913	0	0	1585	0
Turn Type	Perm		Perm				Perm	NA		Perm	NA	
Protected Phases								2			6	
Permitted Phases	8		8				2			6		
Actuated Green, G (s)	14.9		14.9				64.3	64.3			64.3	
Effective Green, g (s)	14.9		14.9				64.3	64.3			64.3	
Actuated g/C Ratio	0.17		0.17				0.71	0.71			0.71	
Clearance Time (s)	5.4		5.4				5.4	5.4			5.4	
Vehicle Extension (s)	3.0		3.0				4.8	4.8			5.1	
Lane Grp Cap (vph)	293		262				154	2528			2482	
v/s Ratio Prot								c0.54			0.46	
v/s Ratio Perm	c0.11		0.01				0.06					
v/c Ratio	0.65		0.05				0.08	0.76			0.64	
Uniform Delay, d1	35.1		31.6				3.9	8.0			6.7	
Progression Factor	1.00		1.00				1.00	1.00			1.00	
Incremental Delay, d2	4.8		0.1				1.1	2.2			1.3	
Delay (s)	39.9		31.7				5.0	10.2			8.0	
Level of Service	D		C				A	B			A	
Approach Delay (s)		39.3			0.0			10.1			8.0	
Approach LOS		D			A			B			A	
Intersection Summary												
HCM 2000 Control Delay			10.8				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.74									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			10.8		
Intersection Capacity Utilization			66.1%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th TWSC
29: Laurel Canyon Boulevard & Woodbridge Street

06/24/2024

Intersection												
Int Delay, s/veh	27.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	4	1	33	5	1	88	35	1738	21	47	1570	28
Future Vol, veh/h	4	1	33	5	1	88	35	1738	21	47	1570	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	65	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	1	36	5	1	96	38	1889	23	51	1707	30

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2845	3812	869	2933	3816	956	1737	0	0	1912	0	0
Stage 1	1824	1824	-	1977	1977	-	-	-	-	-	-	-
Stage 2	1021	1988	-	956	1839	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	8	4	295	7	4	258	358	-	-	306	-	-
Stage 1	80	127	-	64	106	-	-	-	-	-	-	-
Stage 2	253	105	-	277	124	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 3	3	295	~ 4	3	258	358	-	-	306	-	-
Mov Cap-2 Maneuver	~ 3	3	-	~ 4	3	-	-	-	-	-	-	-
Stage 1	72	106	-	57	95	-	-	-	-	-	-	-
Stage 2	141	94	-	201	103	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s\$	840.1		\$ 681.2		0.3		0.5	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	358	-	-	21 49	306	-	-
HCM Lane V/C Ratio	0.106	-	-	1.967 2.085	0.167	-	-
HCM Control Delay (s)	16.2	-	-	\$ 840.1\$ 681.2	19.1	-	-
HCM Lane LOS	C	-	-	F F	C	-	-
HCM 95th %tile Q(veh)	0.4	-	-	5.4 10.3	0.6	-	-

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

HCM 6th TWSC
30: Valleyheart Drive (North) & Laurel Canyon Boulevard

06/24/2024

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	2	0	34	2	0	11	32	1863	50	11	1620	5
Future Vol, veh/h	2	0	34	2	0	11	32	1863	50	11	1620	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	40	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	37	2	0	12	35	2025	54	12	1761	5

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2871	3937	883	3027	3912	1040	1766	0	0	2079	0	0
Stage 1	1788	1788	-	2122	2122	-	-	-	-	-	-	-
Stage 2	1083	2149	-	905	1790	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	7	3	289	6	3	227	349	-	-	263	-	-
Stage 1	84	132	-	51	89	-	-	-	-	-	-	-
Stage 2	232	87	-	298	132	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	6	3	289	5	3	227	349	-	-	263	-	-
Mov Cap-2 Maneuver	6	3	-	5	3	-	-	-	-	-	-	-
Stage 1	76	126	-	46	80	-	-	-	-	-	-	-
Stage 2	198	78	-	248	126	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	87.1		215.1		0.3		0.1	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	349	-	-	80	29	263	-
HCM Lane V/C Ratio	0.1	-	-	0.489	0.487	0.045	-
HCM Control Delay (s)	16.5	-	-	87.1	215.1	19.3	-
HCM Lane LOS	C	-	-	F	F	C	-
HCM 95th %tile Q(veh)	0.3	-	-	2	1.6	0.1	-





HCM 6th TWSC

31: Laurel Canyon Boulevard & Valleyheart Drive (South)

06/24/2024

Intersection

Int Delay, s/veh 9.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	129	1805	39	113	1556
Future Vol, veh/h	3	129	1805	39	113	1556
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	35	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	140	1962	42	123	1691

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	3075	1002	0
Stage 1	1983	-	-
Stage 2	1092	-	-
Critical Hdwy	6.84	6.94	-
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	-
Pot Cap-1 Maneuver	9	241	-
Stage 1	93	-	-
Stage 2	283	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	5	241	-
Mov Cap-2 Maneuver	5	-	-
Stage 1	93	-	-
Stage 2	160	-	-

Approach	WB	NB	SB
HCM Control Delay, s	231.2	0	1.8
HCM LOS	F		





Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	116	282
HCM Lane V/C Ratio	-	-	1.237	0.436
HCM Control Delay (s)	-	-	231.2	27.3
HCM Lane LOS	-	-	F	D
HCM 95th %tile Q(veh)	-	-	9.3	2.1

HCM 6th AWSC
32: Radford Avenue & Sarah Street

06/24/2024

Intersection

Intersection Delay, s/veh 7.4
Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	0	6	1	6	1	54	3	7	74	9
Future Vol, veh/h	5	0	0	6	1	6	1	54	3	7	74	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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	0	7	1	7	1	59	3	8	80	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.5	7.2	7.3	7.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	100%	46%	8%
Vol Thru, %	93%	0%	8%	82%
Vol Right, %	5%	0%	46%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	58	5	13	90
LT Vol	1	5	6	7
Through Vol	54	0	1	74
RT Vol	3	0	6	9
Lane Flow Rate	63	5	14	98
Geometry Grp	1	1	1	1
Degree of Util (X)	0.07	0.007	0.016	0.108
Departure Headway (Hd)	4.015	4.423	4.03	3.972
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	891	801	878	903
Service Time	2.042	2.493	2.099	1.994
HCM Lane V/C Ratio	0.071	0.006	0.016	0.109
HCM Control Delay	7.3	7.5	7.2	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0	0	0.4

HCM 6th AWSC




51: Radford Avenue & Moorpark Gate

06/24/2024

Intersection

Intersection Delay, s/veh 7.9

Intersection LOS A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	217	0	0	98	0
Future Vol, veh/h	0	217	0	0	98	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	236	0	0	107	0
Number of Lanes	1	0	2	0	0	1




Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left NB			WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	7.7	0	8.4
HCM LOS	A	-	A

Lane	NBLn1	NBLn2	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	100%
Vol Thru, %	100%	100%	0%	0%
Vol Right, %	0%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	217	98
LT Vol	0	0	0	98
Through Vol	0	0	0	0
RT Vol	0	0	217	0
Lane Flow Rate	0	0	236	107
Geometry Grp	5	5	2	4a
Degree of Util (X)	0	0	0.231	0.138
Departure Headway (Hd)	5.016	3.346	3.52	4.648
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	1002	769
Service Time	2.79	1.046	1.604	2.689
HCM Lane V/C Ratio	0	0	0.236	0.139
HCM Control Delay	7.8	6	7.7	8.4
HCM Lane LOS	N	N	A	A
HCM 95th-tile Q	0	0	0.9	0.5

Intersection

Intersection Delay, s/veh 9.4

Intersection LOS A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	163	109	71	73	49	53
Future Vol, veh/h	163	109	71	73	49	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	177	118	77	79	53	58
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	10	8.6	8.8
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	60%	48%
Vol Thru, %	49%	0%	52%
Vol Right, %	51%	40%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	144	272	102
LT Vol	0	163	49
Through Vol	71	0	53
RT Vol	73	109	0
Lane Flow Rate	157	296	111
Geometry Grp	1	1	1
Degree of Util (X)	0.194	0.364	0.151
Departure Headway (Hd)	4.461	4.435	4.904
Convergence, Y/N	Yes	Yes	Yes
Cap	803	810	731
Service Time	2.495	2.467	2.941
HCM Lane V/C Ratio	0.196	0.365	0.152
HCM Control Delay	8.6	10	8.8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.7	1.7	0.5

HCM 6th AWSC
54: Radford Avenue & Radford Gate

06/24/2024

Intersection

Intersection Delay, s/veh13.6

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	0	47	131	0	0	54	238	83	0	354	4
Future Vol, veh/h	8	0	47	131	0	0	54	238	83	0	354	4
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	0	51	142	0	0	59	259	90	0	385	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0





Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.4	11.3	14.4	14.3
HCM LOS	A	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	15%	100%	0%
Vol Thru, %	63%	0%	0%	99%
Vol Right, %	22%	85%	0%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	375	55	131	358
LT Vol	54	8	131	0
Through Vol	238	0	0	354
RT Vol	83	47	0	4
Lane Flow Rate	408	60	142	389
Geometry Grp	1	1	1	1
Degree of Util (X)	0.567	0.096	0.246	0.553
Departure Headway (Hd)	5.004	5.762	6.223	5.116
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	721	620	577	704
Service Time	3.039	3.818	4.273	3.151
HCM Lane V/C Ratio	0.566	0.097	0.246	0.553
HCM Control Delay	14.4	9.4	11.3	14.3
HCM Lane LOS	B	A	B	B
HCM 95th-tile Q	3.6	0.3	1	3.4

Intersection

Intersection Delay, s/veh10.6

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	35	38	8	22	0	54	175	13	0	344	0
Future Vol, veh/h	0	35	38	8	22	0	54	175	13	0	344	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	38	41	9	24	0	59	190	14	0	374	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.8	8.9	10.1	11.5
HCM LOS	A	A	B	B




Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	0%	27%	0%
Vol Thru, %	72%	48%	73%	100%
Vol Right, %	5%	52%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	242	73	30	344
LT Vol	54	0	8	0
Through Vol	175	35	22	344
RT Vol	13	38	0	0
Lane Flow Rate	263	79	33	374
Geometry Grp	1	1	1	1
Degree of Util (X)	0.339	0.112	0.05	0.469
Departure Headway (Hd)	4.644	5.095	5.541	4.517
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	773	699	642	796
Service Time	2.686	3.159	3.612	2.556
HCM Lane V/C Ratio	0.34	0.113	0.051	0.47
HCM Control Delay	10.1	8.8	8.9	11.5
HCM Lane LOS	B	A	A	B
HCM 95th-tile Q	1.5	0.4	0.2	2.5

HCM 6th TWSC
56: Colfax Avenue & Colfax Gate

06/24/2024

Intersection

Int Delay, s/veh 12.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	109	54	24	640	606	49
Future Vol, veh/h	109	54	24	640	606	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	118	59	26	696	659	53

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1434	686	712
Stage 1	686	-	-
Stage 2	748	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	147	447	888
Stage 1	500	-	-
Stage 2	468	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	140	447	888
Mov Cap-2 Maneuver	140	-	-
Stage 1	476	-	-
Stage 2	468	-	-

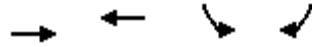
Approach	EB	NB	SB
HCM Control Delay, s	113.9	0.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	888	-	181	-	-
HCM Lane V/C Ratio	0.029	-	0.979	-	-
HCM Control Delay (s)	9.2	-	113.9	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0.1	-	7.9	-	-

Queues

121: Ventura Boulevard & Ventura PI

06/24/2024



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1366	1303	179	25
v/c Ratio	1.51	0.62	0.28	0.08
Control Delay	269.8	24.0	50.1	18.6
Queue Delay	1.7	50.7	0.0	0.0
Total Delay	271.6	74.7	50.1	18.6
Queue Length 50th (ft)	~907	214	72	2
Queue Length 95th (ft)	#1047	m36	108	28
Internal Link Dist (ft)	509	48	136	
Turn Bay Length (ft)				40
Base Capacity (vph)	907	2107	669	327
Starvation Cap Reductn	0	1258	0	0
Spillback Cap Reductn	233	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	2.03	1.53	0.27	0.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

121: Ventura Boulevard & Ventura PI

06/24/2024



























Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	↑
Traffic Volume (vph)	0	1257	1199	0	165	23
Future Volume (vph)	0	1257	1199	0	165	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.1	6.1		5.7	5.7
Lane Util. Factor		0.95	0.95		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3433	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1366	1303	0	179	25
RTOR Reduction (vph)	0	0	0	0	0	19
Lane Group Flow (vph)	0	1366	1303	0	179	6
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2 4		3	
Permitted Phases						3
Actuated Green, G (s)		35.9	83.4		25.8	25.8
Effective Green, g (s)		35.9	83.4		25.8	25.8
Actuated g/C Ratio		0.26	0.60		0.18	0.18
Clearance Time (s)		6.1			5.7	5.7
Vehicle Extension (s)		4.6			3.0	3.0
Lane Grp Cap (vph)		907	2108		632	291
v/s Ratio Prot		c0.39	c0.37		c0.05	
v/s Ratio Perm						0.00
v/c Ratio		1.51	0.62		0.28	0.02
Uniform Delay, d1		52.0	18.1		49.1	46.8
Progression Factor		1.00	1.28		1.00	1.00
Incremental Delay, d2		233.5	0.0		0.2	0.0
Delay (s)		285.5	23.3		49.4	46.8
Level of Service		F	C		D	D
Approach Delay (s)		285.5	23.3		49.1	
Approach LOS		F	C		D	
Intersection Summary						
HCM 2000 Control Delay		149.8		HCM 2000 Level of Service		F
HCM 2000 Volume to Capacity ratio		0.93				
Actuated Cycle Length (s)		140.0		Sum of lost time (s)		31.8
Intersection Capacity Utilization		51.2%		ICU Level of Service		A
Analysis Period (min)		15				
c Critical Lane Group						

Future without Project Conditions (Year 2045)

HCM 6th Signalized Intersection Summary

1: Riverside Drive & Laurel Canyon Boulevard








06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	284	696	128	174	1083	159	261	909	113	148	929	355
Future Volume (veh/h)	284	696	128	174	1083	159	261	909	113	148	929	355
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	309	757	139	189	1177	173	284	988	123	161	1010	386
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	269	1324	591	259	1045	466	229	1051	588	191	972	372
Arrive On Green	0.15	0.37	0.37	0.02	0.10	0.10	0.09	0.30	0.30	0.07	0.27	0.27
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	3554	1585	1781	3635	1389
Grp Volume(v), veh/h	309	757	139	189	1177	173	284	988	123	161	946	450
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1777	1585	1781	1702	1620
Q Serve(g_s), s	18.1	20.4	7.2	6.5	35.3	12.3	11.4	32.5	6.4	7.9	32.1	32.1
Cycle Q Clear(g_c), s	18.1	20.4	7.2	6.5	35.3	12.3	11.4	32.5	6.4	7.9	32.1	32.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.86
Lane Grp Cap(c), veh/h	269	1324	591	259	1045	466	229	1051	588	191	911	433
V/C Ratio(X)	1.15	0.57	0.24	0.73	1.13	0.37	1.24	0.94	0.21	0.84	1.04	1.04
Avail Cap(c_a), veh/h	269	1324	591	334	1045	466	229	1051	588	191	911	433
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	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	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.0	30.0	25.9	57.3	54.2	43.8	32.8	41.2	25.8	33.4	44.0	44.0
Incr Delay (d2), s/veh	101.6	1.8	0.9	5.7	69.3	2.3	137.7	16.0	0.8	27.2	40.3	53.7
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(95%),veh/ln	23.4	13.6	0.3	5.6	38.0	9.3	21.1	22.7	4.5	8.4	25.8	26.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	152.6	31.8	26.8	63.1	123.4	46.0	170.5	57.2	26.5	60.6	84.2	97.6
LnGrp LOS	F	C	C	E	F	D	F	E	C	E	F	F
Approach Vol, veh/h	1205			1539				1395			1557	
Approach Delay, s/veh	62.2			107.3				77.6			85.7	
Approach LOS	E			F				E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	38.0	24.0	41.0	13.6	41.4	14.6	50.4				
Change Period (Y+Rc), s	5.6	5.9	5.9	* 5.7	5.6	5.9	5.6	* 5.7				
Max Green Setting (Gmax), s	11.4	32.1	18.1	* 35	8.0	35.5	11.6	* 42				
Max Q Clear Time (g_c+I1), s	13.4	34.1	20.1	37.3	9.9	34.5	8.5	22.4				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.6	0.2	5.3				
Intersection Summary												
HCM 6th Ctrl Delay	84.6											
HCM 6th LOS	F											
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
User approved changes to right turn type.												

HCM 6th TWSC

2: Riverside Drive & Radford Avenue

06/21/2024

Intersection												
Int Delay, s/veh	105.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	1054	102	87	1166	13	32	7	100	5	11	32
Future Vol, veh/h	26	1054	102	87	1166	13	32	7	100	5	11	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	105	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	1146	111	95	1267	14	35	8	109	5	12	35

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1281	0	0	1257	0	0	2032	2673	573	2097	2777	641
Stage 1	-	-	-	-	-	-	1202	1202	-	1464	1464	-
Stage 2	-	-	-	-	-	-	830	1471	-	633	1313	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	538	-	-	549	-	-	~ 33	22	463	30	19	417
Stage 1	-	-	-	-	-	-	196	256	-	135	191	-
Stage 2	-	-	-	-	-	-	331	190	-	434	226	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	538	-	-	549	-	-	~ 9	17	463	13	15	417
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 9	17	-	13	15	-
Stage 1	-	-	-	-	-	-	186	243	-	128	158	-
Stage 2	-	-	-	-	-	-	232	157	-	305	214	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.9	\$ 1853.6	\$ 403.3
HCM LOS			F	F

























Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	33	538	-	-	549	-	-	40
HCM Lane V/C Ratio	4.578	0.053	-	-	0.172	-	-	1.304
HCM Control Delay (s)	\$ 1853.6	12.1	-	-	12.9	-	-	\$ 403.3
HCM Lane LOS	F	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	17.9	0.2	-	-	0.6	-	-	5.2

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

HCM 6th Signalized Intersection Summary

3: Colfax Avenue & Riverside Drive

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	716	236	216	847	89	138	470	82	92	553	138
Future Volume (veh/h)	118	716	236	216	847	89	138	470	82	92	553	138
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	128	778	257	235	921	97	150	511	89	100	601	150
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	212	1356	605	245	1356	605	246	826	700	424	826	700
Arrive On Green	0.51	0.51	0.51	0.38	0.38	0.38	0.88	0.88	0.88	0.44	0.44	0.44
Sat Flow, veh/h	554	3554	1585	545	3554	1585	712	1870	1585	819	1870	1585
Grp Volume(v), veh/h	128	778	257	235	921	97	150	511	89	100	601	150
Grp Sat Flow(s),veh/h/ln	554	1777	1585	545	1777	1585	712	1870	1585	819	1870	1585
Q Serve(g_s), s	9.9	9.1	6.1	13.8	13.0	2.4	10.6	4.2	0.4	5.2	15.9	3.5
Cycle Q Clear(g_c), s	22.9	9.1	6.1	22.9	13.0	2.4	26.5	4.2	0.4	9.5	15.9	3.5
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	212	1356	605	245	1356	605	246	826	700	424	826	700
V/C Ratio(X)	0.60	0.57	0.42	0.96	0.68	0.16	0.61	0.62	0.13	0.24	0.73	0.21
Avail Cap(c_a), veh/h	212	1356	605	245	1356	605	246	826	700	424	826	700
HCM Platoon Ratio	1.33	1.33	1.33	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	0.91	0.91	0.91	0.72	0.72	0.72	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	11.4	10.6	26.3	15.5	12.2	12.3	2.2	2.0	13.5	13.8	10.3
Incr Delay (d2), s/veh	12.2	1.8	2.2	45.2	2.5	0.5	7.9	2.5	0.3	1.3	5.6	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(95%),veh/ln	4.1	5.3	3.6	10.1	8.2	1.5	3.1	2.3	0.3	1.8	11.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.9	13.1	12.8	71.5	18.0	12.7	20.1	4.7	2.2	14.8	19.3	11.0
LnGrp LOS	C	B	B	E	B	B	C	A	A	B	B	B
Approach Vol, veh/h	1163			1253			750			851		
Approach Delay, s/veh	15.5			27.6			7.5			17.3		
Approach LOS	B			C			A			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	28.0			32.0			28.0			32.0		
Change Period (Y+Rc), s	* 5.1			* 5.5			* 5.1			* 5.5		
Max Green Setting (Gmax), s	* 23			* 27			* 23			* 27		
Max Q Clear Time (g_c+I1), s	24.9			28.5			24.9			17.9		
Green Ext Time (p_c), s	0.0			0.0			0.0			3.3		
Intersection Summary												
HCM 6th Ctrl Delay	18.2											
HCM 6th LOS	B											
Notes												

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

Queues

4: Riverside Drive & SR 170 Southbound Off-Ramp

06/21/2024



Lane Group	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	947	10	818	33	221	215	200
v/c Ratio	0.48	0.04	0.41	0.12	0.64	0.60	0.43
Control Delay	12.7	14.1	15.2	0.9	33.9	24.9	6.9
Queue Delay	1.9	0.0	0.6	0.3	1.0	1.1	0.0
Total Delay	14.6	14.1	15.8	1.2	34.9	26.0	6.9
Queue Length 50th (ft)	98	3	226	0	89	64	0
Queue Length 95th (ft)	233	m9	m245	0	155	131	48
Internal Link Dist (ft)	2214		245	105		344	
Turn Bay Length (ft)		25			140		150
Base Capacity (vph)	1976	240	1976	267	408	417	516
Starvation Cap Reductn	0	0	723	0	0	0	0
Spillback Cap Reductn	826	0	0	77	58	70	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.04	0.65	0.17	0.63	0.62	0.39


Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: Riverside Drive & SR 170 Southbound Off-Ramp













06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑	↑↑			↑		↑	↑	↑
Traffic Volume (vph)	0	869	2	9	753	0	8	0	22	304	7	274
Future Volume (vph)	0	869	2	9	753	0	8	0	22	304	7	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Lane Util. Factor		0.95		1.00	0.95			1.00		0.95	0.91	0.95
Frt		1.00		1.00	1.00			0.90		1.00	0.93	0.85
Flt Protected		1.00		0.95	1.00			0.99		0.95	0.98	1.00
Satd. Flow (prot)		3538		1770	3539			1657		1681	1540	1504
Flt Permitted		1.00		0.23	1.00			0.83		0.95	0.98	1.00
Satd. Flow (perm)		3538		430	3539			1391		1681	1540	1504
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)	0	945	2	10	818	0	9	0	24	330	8	298
RTOR Reduction (vph)	0	0	0	0	0	0	0	31	0	0	45	159
Lane Group Flow (vph)	0	947	0	10	818	0	0	2	0	221	170	41
Turn Type		NA		Perm	NA		Perm	NA		Split	NA	Perm
Protected Phases		6			2			4		3	3	
Permitted Phases				2			4					3
Actuated Green, G (s)		35.4		35.4	35.4			3.2		14.4	14.4	14.4
Effective Green, g (s)		35.4		35.4	35.4			3.2		14.4	14.4	14.4
Actuated g/C Ratio		0.51		0.51	0.51			0.05		0.21	0.21	0.21
Clearance Time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Vehicle Extension (s)		3.8		2.4	2.4			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1789		217	1789			63		345	316	309
v/s Ratio Prot		c0.27			0.23					c0.13	0.11	
v/s Ratio Perm				0.02				c0.00				0.03
v/c Ratio		0.53		0.05	0.46			0.02		0.64	0.54	0.13
Uniform Delay, d1		11.7		8.8	11.1			31.9		25.4	24.8	22.7
Progression Factor		1.00		1.17	1.36			1.00		1.00	1.00	1.00
Incremental Delay, d2		1.1		0.3	0.7			0.2		4.0	1.8	0.2
Delay (s)		12.8		10.6	15.8			32.1		29.5	26.6	22.9
Level of Service		B		B	B			C		C	C	C
Approach Delay (s)		12.8			15.7			32.1			26.4	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			17.6			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.53									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			53.0%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/21/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	NWL	NWR
Lane Group Flow (vph)	226	725	342	274	491	148	27	669	175	1178	275	94
v/c Ratio	0.82	1.06	1.10	1.39	0.62	0.41	0.51	1.08	0.64	0.88	0.62	0.51
Control Delay	57.7	101.5	126.2	234.1	52.6	50.5	86.6	111.1	67.3	48.8	63.6	65.7
Queue Delay	0.0	16.5	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.6	1.0	0.0
Total Delay	57.7	118.0	129.8	234.1	52.6	50.5	86.6	111.1	67.3	49.4	64.6	65.7
Queue Length 50th (ft)	161	~390	~379	~281	213	116	23	~358	151	519	124	89
Queue Length 95th (ft)	#221	#546	#613	#467	274	186	#69	#486	#281	#703	165	150
Internal Link Dist (ft)		245			745			2580		383	758	
Turn Bay Length (ft)	140		230	85		110	270		290		215	
Base Capacity (vph)	274	683	312	197	798	357	53	622	275	1345	686	288
Starvation Cap Reductn	0	146	51	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	30	213	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	1.35	1.31	1.39	0.62	0.41	0.51	1.08	0.64	0.90	0.58	0.33

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.





















95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/21/2024

												
Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	208	348	425	209	14	238	452	136	25	514	81	20
Future Volume (vph)	208	348	425	209	14	238	452	136	25	514	81	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Lane Util. Factor	1.00	0.91	0.91			1.00	0.95	1.00	1.00	0.95		
Frt	1.00	0.93	0.85			1.00	1.00	0.85	1.00	0.98		
Flt Protected	0.95	1.00	1.00			0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1770	3147	1441			1770	3539	1583	1770	3452		
Flt Permitted	0.31	1.00	1.00			0.13	1.00	1.00	0.16	1.00		
Satd. Flow (perm)	583	3147	1441			236	3539	1583	295	3452		
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)	226	378	462	227	15	259	491	148	27	559	88	22
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	226	725	342	0	0	274	491	148	27	669	0	0
Turn Type	pm+pt	NA	Perm		pm+pt	pm+pt	NA	Perm	Perm	NA		
Protected Phases	1	6			5	5	2			8		
Permitted Phases	6		6		2	2		2	8			
Actuated Green, G (s)	41.7	30.4	30.4			43.0	31.6	31.6	25.3	25.3		
Effective Green, g (s)	41.7	30.4	30.4			43.0	31.6	31.6	25.3	25.3		
Actuated g/C Ratio	0.30	0.22	0.22			0.31	0.23	0.23	0.18	0.18		
Clearance Time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Vehicle Extension (s)	3.0	3.9	3.9			3.0	4.6	4.6	4.7	4.7		
Lane Grp Cap (vph)	269	683	312			197	798	357	53	623		
v/s Ratio Prot	0.07	0.23				c0.11	0.14			c0.19		
v/s Ratio Perm	0.18		0.24			c0.31		0.09	0.09			
v/c Ratio	0.84	1.06	1.10			1.39	0.62	0.41	0.51	1.07		
Uniform Delay, d1	42.5	54.8	54.8			41.9	48.7	46.3	51.8	57.4		
Progression Factor	0.97	1.00	1.00			1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2	18.5	50.0	76.4			203.9	3.5	3.5	13.7	57.5		
Delay (s)	59.5	104.7	130.9			245.8	52.3	49.8	65.4	114.9		
Level of Service	E	F	F			F	D	D	E	F		
Approach Delay (s)		103.7					110.0			112.9		
Approach LOS		F					F			F		
Intersection Summary												
HCM 2000 Control Delay			86.9			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			1.13									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			33.0			
Intersection Capacity Utilization			106.1%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/21/2024



Movement	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	18	143	1000	84	43	201	91	5
Future Volume (vph)	18	143	1000	84	43	201	91	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.3			6.6	6.6	
Lane Util. Factor		1.00	0.95			0.97	0.91	
Frt		1.00	0.99			0.99	0.85	
Flt Protected		0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	3498			3429	1441	
Flt Permitted		0.95	1.00			0.95	1.00	
Satd. Flow (perm)		1770	3498			3429	1441	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	155	1087	91	47	218	99	5
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	175	1178	0	0	275	94	0
Turn Type	Prot	Prot	NA		Prot	Prot	Perm	
Protected Phases	7	7	4		3	3		
Permitted Phases							3	
Actuated Green, G (s)		21.8	53.9			18.1	18.1	
Effective Green, g (s)		21.8	53.9			18.1	18.1	
Actuated g/C Ratio		0.16	0.38			0.13	0.13	
Clearance Time (s)		6.8	6.3			6.6	6.6	
Vehicle Extension (s)		3.0	4.9			4.6	4.6	
Lane Grp Cap (vph)		275	1346			443	186	
v/s Ratio Prot		0.10	c0.34			c0.08		
v/s Ratio Perm							0.07	
v/c Ratio		0.64	0.88			0.62	0.51	
Uniform Delay, d1		55.4	39.9			57.7	56.8	
Progression Factor		1.00	1.00			1.00	1.00	
Incremental Delay, d2		4.8	7.2			3.5	3.8	
Delay (s)		60.1	47.1			61.2	60.6	
Level of Service		E	D			E	E	
Approach Delay (s)			48.8			61.1		
Approach LOS			D			E		
Intersection Summary								

HCM 6th Signalized Intersection Summary

6: Laurel Canyon Boulevard & US 101 Northbound Ramps

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰	↰	↰	↰			↰	↰
Traffic Volume (veh/h)	0	0	0	463	2	269	487	639	0	0	1428	397
Future Volume (veh/h)	0	0	0	463	2	269	487	639	0	0	1428	397
Initial Q (Qb), veh				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
Parking Bus, Adj				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		
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				595	0	195	529	695	0	0	1552	432
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				703	0	313	598	2454	0	0	2342	727
Arrive On Green				0.20	0.00	0.20	0.35	1.00	0.00	0.00	0.46	0.46
Sat Flow, veh/h				3563	0	1585	3456	3647	0	0	5274	1585
Grp Volume(v), veh/h				595	0	195	529	695	0	0	1552	432
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	0	1702	1585
Q Serve(g_s), s				14.5	0.0	10.1	13.0	0.0	0.0	0.0	21.3	18.3
Cycle Q Clear(g_c), s				14.5	0.0	10.1	13.0	0.0	0.0	0.0	21.3	18.3
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				703	0	313	598	2454	0	0	2342	727
V/C Ratio(X)				0.85	0.00	0.62	0.88	0.28	0.00	0.00	0.66	0.59
Avail Cap(c_a), veh/h				819	0	365	680	2454	0	0	2342	727
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.88	0.88	0.00	0.00	0.28	0.28
Uniform Delay (d), s/veh				34.8	0.0	33.1	28.6	0.0	0.0	0.0	19.0	18.1
Incr Delay (d2), s/veh				7.3	0.0	2.5	10.9	0.3	0.0	0.0	0.4	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
%ile BackOfQ(95%),veh/ln				10.8	0.0	7.0	8.6	0.2	0.0	0.0	10.3	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				42.1	0.0	35.6	39.5	0.3	0.0	0.0	19.4	19.1
LnGrp LOS				D	A	D	D	A	A	A	B	B
Approach Vol, veh/h						790		1224			1984	
Approach Delay, s/veh						40.5		17.2			19.3	
Approach LOS						D		B			B	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	30.9	46.1		23.0		67.0						
Change Period (Y+Rc), s	5.3	4.8		* 5.3		4.8						
Max Green Setting (Gmax), s	18	36.2		* 21		59.2						
Max Q Clear Time (g_c+M), s	18	23.3		16.5		2.0						
Green Ext Time (p_c), s	0.6	9.3		1.3		5.4						

Intersection Summary

HCM 6th Ctrl Delay	22.9
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.












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

HCM 6th Signalized Intersection Summary

7: US 101 Southbound Ramps & Laurel Canyon Boulevard

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  		 	 	
Traffic Volume (veh/h)	170	11	384	0	0	0	0	973	581	567	1330	0
Future Volume (veh/h)	170	11	384	0	0	0	0	973	581	567	1330	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	127	0	487				0	1058	632	616	1446	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	328	0	584				0	2129	661	787	2492	0
Arrive On Green	0.18	0.00	0.18				0.00	0.42	0.42	0.46	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	5274	1585	3456	3647	0
Grp Volume(v), veh/h	127	0	487				0	1058	632	616	1446	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1702	1585	1728	1777	0
Q Serve(g_s), s	5.6	0.0	13.3				0.0	13.7	34.8	13.6	0.0	0.0
Cycle Q Clear(g_c), s	5.6	0.0	13.3				0.0	13.7	34.8	13.6	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	328	0	584				0	2129	661	787	2492	0
V/C Ratio(X)	0.39	0.00	0.83				0.00	0.50	0.96	0.78	0.58	0.00
Avail Cap(c_a), veh/h	416	0	740				0	2139	664	787	2492	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	1.00	0.62	0.62	0.00
Uniform Delay (d), s/veh	32.3	0.0	35.4				0.0	19.3	25.4	22.6	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	6.6				0.0	0.8	25.7	3.3	0.6	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
%ile BackOfQ(95%),veh/ln	4.3	0.0	9.2				0.0	9.0	23.5	7.1	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.0	0.0	42.0				0.0	20.1	51.2	25.9	0.6	0.0
LnGrp LOS	C	A	D				A	C	D	C	A	A
Approach Vol, veh/h	614						1690			2062		
Approach Delay, s/veh	40.1						31.7			8.2		
Approach LOS	D						C			A		
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	35.6	42.6	21.8	68.2								
Change Period (Y+Rc), s	* 5.1	* 5.1	* 5.2	* 5.1								
Max Green Setting (Gmax), s	16	* 38	* 21	* 59								
Max Q Clear Time (g_c+M), s	15.6	36.8	15.3	2.0								
Green Ext Time (p_c), s	0.1	0.7	1.2	16.5								

Intersection Summary

HCM 6th Ctrl Delay	21.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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

Queues

8: Laurel Canyon Boulevard & Landale Street

06/21/2024



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	170	224	189	73	199	1463	34	1493	285
v/c Ratio	0.81	0.66	0.83	0.20	0.72	0.78	0.41	1.17	0.64
Control Delay	67.3	19.3	67.6	1.2	35.7	9.9	35.4	111.5	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.3	19.3	67.6	1.2	35.7	10.0	35.4	111.5	27.9
Queue Length 50th (ft)	100	18	105	0	80	127	14	~538	128
Queue Length 95th (ft)	#211	#100	#217	0	m50	m95	m26	#680	206
Internal Link Dist (ft)		140	232			591		375	
Turn Bay Length (ft)	85			40	155		125		115
Base Capacity (vph)	212	339	235	380	290	1867	82	1273	446
Starvation Cap Reductn	0	0	0	0	0	4	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.66	0.80	0.19	0.69	0.79	0.41	1.17	0.64

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

8: Laurel Canyon Boulevard & Landale Street

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	174	15	174	28	146	67	183	1313	33	31	1374	262
Future Volume (vph)	174	15	174	28	146	67	183	1313	33	31	1374	262
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.89			1.00	1.00	1.00	1.00		1.00	1.00	0.78
Flpb, ped/bikes	1.00	1.00			0.99	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.87			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1375			1825	1583	1770	3521		1764	3539	1241
Flt Permitted	0.95	1.00			0.89	1.00	0.11	1.00		0.12	1.00	1.00
Satd. Flow (perm)	1681	1375			1641	1583	197	3521		229	3539	1241
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)	189	16	189	30	159	73	199	1427	36	34	1493	285
RTOR Reduction (vph)	0	165	0	0	0	63	0	2	0	0	0	0
Lane Group Flow (vph)	170	59	0	0	189	10	199	1461	0	34	1493	285
Confl. Peds. (#/hr)			49	49			89		12	12		89
Turn Type	Split	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	3	3			4		1	6			2	
Permitted Phases				4		4	6			2		2
Actuated Green, G (s)	11.3	11.3			12.5	12.5	47.7	47.7		32.4	32.4	32.4
Effective Green, g (s)	11.3	11.3			12.5	12.5	47.7	47.7		32.4	32.4	32.4
Actuated g/C Ratio	0.13	0.13			0.14	0.14	0.53	0.53		0.36	0.36	0.36
Clearance Time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	5.2		4.5	4.5	4.5
Lane Grp Cap (vph)	211	172			227	219	277	1866		82	1274	446
v/s Ratio Prot	c0.10	0.04					0.08	c0.41			c0.42	
v/s Ratio Perm					c0.12	0.01	0.30			0.15		0.23
v/c Ratio	0.81	0.34			0.83	0.05	0.72	0.78		0.41	1.17	0.64
Uniform Delay, d1	38.3	36.0			37.7	33.6	18.5	17.0		21.7	28.8	23.9
Progression Factor	1.00	1.00			1.00	1.00	2.17	0.55		0.89	0.90	0.88
Incremental Delay, d2	19.6	1.2			22.2	0.1	0.8	0.3		11.9	84.4	5.5
Delay (s)	57.9	37.1			59.9	33.7	40.9	9.6		31.2	110.2	26.5
Level of Service	E	D			E	C	D	A		C	F	C
Approach Delay (s)		46.1			52.6			13.4			95.5	
Approach LOS		D			D			B			F	
Intersection Summary												
HCM 2000 Control Delay			55.0		HCM 2000 Level of Service					E		
HCM 2000 Volume to Capacity ratio			1.02									
Actuated Cycle Length (s)			90.0		Sum of lost time (s)					23.9		
Intersection Capacity Utilization			89.7%		ICU Level of Service					E		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

9: Colfax Avenue & Sarah Street

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↑	↕
Traffic Volume (veh/h)	41	92	11	38	18	169	23	537	54	151	809	52
Future Volume (veh/h)	41	92	11	38	18	169	23	537	54	151	809	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.90		0.81	0.86		0.81	1.00		0.93	1.00		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	45	100	12	41	20	184	25	584	59	164	879	57
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	159	311	33	105	52	261	158	942	740	338	942	740
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	314	1191	125	133	198	999	598	1870	1469	784	1870	1469
Grp Volume(v), veh/h	157	0	0	245	0	0	25	584	59	164	879	57
Grp Sat Flow(s), veh/h/ln	1630	0	0	1330	0	0	598	1870	1469	784	1870	1469
Q Serve(g_s), s	0.0	0.0	0.0	3.8	0.0	0.0	2.4	13.5	1.2	11.4	26.4	1.2
Cycle Q Clear(g_c), s	4.2	0.0	0.0	9.8	0.0	0.0	28.8	13.5	1.2	25.0	26.4	1.2
Prop In Lane	0.29		0.08	0.17		0.75	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	503	0	0	417	0	0	158	942	740	338	942	740
V/C Ratio(X)	0.31	0.00	0.00	0.59	0.00	0.00	0.16	0.62	0.08	0.48	0.93	0.08
Avail Cap(c_a), veh/h	628	0	0	525	0	0	158	942	740	338	942	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	0.00	0.00	1.00	0.00	0.00	0.90	0.90	0.90	0.57	0.57	0.57
Uniform Delay (d), s/veh	17.9	0.0	0.0	19.9	0.0	0.0	27.4	10.7	7.7	19.7	13.9	7.7
Incr Delay (d2), s/veh	0.4	0.0	0.0	1.3	0.0	0.0	1.9	2.8	0.2	2.8	11.1	0.1
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(95%),veh/ln	8.1	0.0	0.0	5.5	0.0	0.0	0.7	8.6	0.6	3.8	15.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.3	0.0	0.0	21.2	0.0	0.0	29.4	13.5	7.9	22.6	25.0	7.8
LnGrp LOS	B	A	A	C	A	A	C	B	A	C	C	A
Approach Vol, veh/h	157			245			668			1100		
Approach Delay, s/veh	18.3			21.2			13.6			23.8		
Approach LOS	B			C			B			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	35.0			25.0			35.0			25.0		
Change Period (Y+Rc), s	4.8			* 9.3			4.8			* 9.3		
Max Green Setting (Gmax), s	25.2			* 21			25.2			* 21		
Max Q Clear Time (g_c+I1), s	30.8			6.2			28.4			11.8		
Green Ext Time (p_c), s	0.0			0.8			0.0			1.1		

Intersection Summary

HCM 6th Ctrl Delay	19.9
HCM 6th LOS	B

Notes

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

Queues

10: Landale Street & Colfax Avenue

06/21/2024



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	92	36	585	989	42
v/c Ratio	0.33	0.20	0.45	0.77	0.04
Control Delay	20.7	9.0	7.5	6.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.7	9.0	7.5	6.7	0.1
Queue Length 50th (ft)	22	5	95	33	0
Queue Length 95th (ft)	55	22	186	m63	m0
Internal Link Dist (ft)	262		575	593	
Turn Bay Length (ft)		40			80
Base Capacity (vph)	537	182	1292	1292	1104
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.17	0.20	0.45	0.77	0.04

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

10: Landale Street & Colfax Avenue

06/21/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	60	25	33	538	910	39
Future Volume (vph)	60	25	33	538	910	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	9.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.96		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1728		1770	1863	1863	1583
Flt Permitted	0.97		0.14	1.00	1.00	1.00
Satd. Flow (perm)	1728		262	1863	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	65	27	36	585	989	42
RTOR Reduction (vph)	24	0	0	0	0	7
Lane Group Flow (vph)	68	0	36	585	989	35
Turn Type	Perm		Perm	NA	NA	Perm
Protected Phases				6	2	
Permitted Phases	8		6			2
Actuated Green, G (s)	7.2		38.8	38.8	38.8	38.8
Effective Green, g (s)	7.2		38.8	38.8	38.8	38.8
Actuated g/C Ratio	0.12		0.65	0.65	0.65	0.65
Clearance Time (s)	9.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		4.9	4.9	5.3	5.3
Lane Grp Cap (vph)	207		169	1204	1204	1023
v/s Ratio Prot				0.31	c0.53	
v/s Ratio Perm	c0.04		0.14			0.02
v/c Ratio	0.33		0.21	0.49	0.82	0.03
Uniform Delay, d1	24.2		4.3	5.5	8.0	3.8
Progression Factor	1.00		1.00	1.00	0.37	0.02
Incremental Delay, d2	0.9		2.9	1.4	3.3	0.0
Delay (s)	25.1		7.2	6.9	6.2	0.1
Level of Service	C		A	A	A	A
Approach Delay (s)	25.1			6.9	6.0	
Approach LOS	C			A	A	

Intersection Summary

HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	66.2%	ICU Level of Service	C
Analysis Period (min)	15		










c Critical Lane Group

HCM 6th Signalized Intersection Summary

11: Whitsett Avenue & Moorpark Street

06/21/2024












Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	927	232	120	686	71	78	262	82	91	536	67
Future Volume (veh/h)	74	927	232	120	686	71	78	262	82	91	536	67
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	80	1008	252	130	746	77	85	285	89	99	583	73
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	88	850	720	80	758	78	314	1152	353	444	1367	171
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	665	1870	1585	440	1667	172	777	2679	820	1009	3179	397
Grp Volume(v), veh/h	80	1008	252	130	0	823	85	187	187	99	325	331
Grp Sat Flow(s),veh/h/ln	665	1870	1585	440	0	1839	777	1777	1723	1009	1777	1799
Q Serve(g_s), s	1.1	40.9	9.3	0.0	0.0	39.8	7.7	6.0	6.2	6.3	11.5	11.6
Cycle Q Clear(g_c), s	40.9	40.9	9.3	40.9	0.0	39.8	19.3	6.0	6.2	12.5	11.5	11.6
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.48	1.00		0.22
Lane Grp Cap(c), veh/h	88	850	720	80	0	836	314	764	741	444	764	774
V/C Ratio(X)	0.90	1.19	0.35	1.62	0.00	0.98	0.27	0.24	0.25	0.22	0.43	0.43
Avail Cap(c_a), veh/h	88	850	720	80	0	836	314	764	741	444	764	774
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	44.9	24.5	15.9	45.0	0.0	24.2	24.6	16.3	16.4	20.4	17.9	17.9
Incr Delay (d2), s/veh	72.0	95.5	1.3	331.0	0.0	27.6	2.1	0.8	0.8	1.2	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(95%),veh/ln	6.3	55.5	6.2	16.4	0.0	29.8	2.8	4.5	4.5	2.8	8.4	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	117.0	120.0	17.3	376.0	0.0	51.8	26.8	17.1	17.2	21.6	19.6	19.6
LnGrp LOS	F	F	B	F	A	D	C	B	B	C	B	B
Approach Vol, veh/h	1340			953			459			755		
Approach Delay, s/veh	100.5			96.1			18.9			19.9		
Approach LOS	F			F			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	46.0			44.0			46.0			44.0		
Change Period (Y+Rc), s	5.1			5.3			5.1			5.3		
Max Green Setting (Gmax), s	40.9			38.7			40.9			38.7		
Max Q Clear Time (g_c+I1), s	42.9			14.5			42.9			21.3		
Green Ext Time (p_c), s	0.0			4.6			0.0			2.5		
Intersection Summary												
HCM 6th Ctrl Delay	71.3											
HCM 6th LOS	E											

HCM 6th Signalized Intersection Summary

12: Laurel Canyon Boulevard & Moorpark Street

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	330	686	217	237	520	123	113	1131	187	97	1272	261
Future Volume (veh/h)	330	686	217	237	520	123	113	1131	187	97	1272	261
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	359	746	236	258	565	134	123	1229	203	105	1383	284
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	248	726	230	256	520	571	231	899	148	227	863	174
Arrive On Green	0.09	0.27	0.27	0.10	0.28	0.28	0.08	0.29	0.29	0.11	0.39	0.39
Sat Flow, veh/h	1781	2656	840	1781	1870	1585	1781	3055	502	1781	2946	594
Grp Volume(v), veh/h	359	499	483	258	565	134	123	711	721	105	824	843
Grp Sat Flow(s),veh/h/ln	1781	1777	1719	1781	1870	1585	1781	1777	1780	1781	1777	1763
Q Serve(g_s), s	8.5	24.6	24.6	8.9	25.0	5.3	4.2	26.5	26.5	3.5	26.4	26.4
Cycle Q Clear(g_c), s	8.5	24.6	24.6	8.9	25.0	5.3	4.2	26.5	26.5	3.5	26.4	26.4
Prop In Lane	1.00		0.49	1.00		1.00	1.00		0.28	1.00		0.34
Lane Grp Cap(c), veh/h	248	486	470	256	520	571	231	523	524	227	521	517
V/C Ratio(X)	1.45	1.03	1.03	1.01	1.09	0.23	0.53	1.36	1.38	0.46	1.58	1.63
Avail Cap(c_a), veh/h	248	486	470	256	520	571	238	523	524	238	521	517
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	25.4	32.7	32.7	25.0	32.5	20.1	22.6	31.8	31.8	21.8	27.5	27.5
Incr Delay (d2), s/veh	222.1	48.1	48.8	58.1	65.3	0.2	2.1	174.5	180.8	0.1	263.4	284.7
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(95%),veh/ln	29.6	23.6	23.1	12.5	29.0	3.4	3.2	54.4	55.9	1.9	65.7	70.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	247.5	80.8	81.5	83.1	97.8	20.3	24.7	206.3	212.6	22.0	290.9	312.2
LnGrp LOS	F	F	F	F	F	C	C	F	F	C	F	F
Approach Vol, veh/h	1341		957			1555			1772			
Approach Delay, s/veh	125.7		83.0			194.8			285.1			
Approach LOS	F		F			F			F			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.8	31.8	14.0	31.3	12.8	31.9	14.4	30.9				
Change Period (Y+Rc), s	5.3	* 5.4	* 5.5	6.3	* 5.4	* 5.4	* 5.5	6.3				
Max Green Setting (Gmax), s	26	* 26	* 8.5	25.0	* 8	* 26	* 8.9	24.6				
Max Q Clear Time (g_c+I), s	28.4	28.4	10.5	27.0	5.5	28.5	10.9	26.6				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 187.7

HCM 6th LOS F

Notes

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






HCM 6th TWSC

13: Moorpark Street & Radford Avenue

06/21/2024

Intersection

Int Delay, s/veh 1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	60	851	952	44	15	34
Future Vol, veh/h	60	851	952	44	15	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	50
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	65	925	1035	48	16	37

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1083	0	0 1652 542
Stage 1	-	-	- - 1059 -
Stage 2	-	-	- - 593 -
Critical Hdwy	4.14	-	- - 6.84 6.94
Critical Hdwy Stg 1	-	-	- - 5.84 -
Critical Hdwy Stg 2	-	-	- - 5.84 -
Follow-up Hdwy	2.22	-	- - 3.52 3.32
Pot Cap-1 Maneuver	640	-	- - 89 485
Stage 1	-	-	- - 295 -
Stage 2	-	-	- - 515 -
Platoon blocked, %		-	- -
Mov Cap-1 Maneuver	640	-	- - 80 485
Mov Cap-2 Maneuver	-	-	- - 80 -
Stage 1	-	-	- - 265 -
Stage 2	-	-	- - 515 -























Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	27.8
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	640	-	-	-	80	485
HCM Lane V/C Ratio	0.102	-	-	-	0.204	0.076
HCM Control Delay (s)	11.3	-	-	-	61.2	13
HCM Lane LOS	B	-	-	-	F	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.7	0.2

HCM 6th Signalized Intersection Summary

14: Colfax Avenue & Moorpark Street

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	643	127	213	723	169	133	256	182	167	538	120
Future Volume (veh/h)	102	643	127	213	723	169	133	256	182	167	538	120
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		0.97	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	111	699	138	232	786	184	145	278	198	182	585	130
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	224	1277	252	275	849	199	128	387	321	301	669	677
Arrive On Green	0.15	0.87	0.87	0.10	0.10	0.10	0.21	0.21	0.21	0.09	0.36	0.36
Sat Flow, veh/h	1781	2946	581	650	2838	664	733	1870	1555	1781	1870	1568
Grp Volume(v), veh/h	111	421	416	232	492	478	145	278	198	182	585	130
Grp Sat Flow(s),veh/h/ln	1781	1777	1750	650	1777	1725	733	1870	1555	1781	1870	1568
Q Serve(g_s), s	3.6	5.4	5.4	26.9	24.7	24.7	5.9	12.5	10.4	7.0	26.3	4.6
Cycle Q Clear(g_c), s	3.6	5.4	5.4	26.9	24.7	24.7	18.6	12.5	10.4	7.0	26.3	4.6
Prop In Lane	1.00		0.33	1.00		0.39	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	224	770	758	275	532	516	128	387	321	301	669	677
V/C Ratio(X)	0.50	0.55	0.55	0.85	0.93	0.93	1.13	0.72	0.62	0.61	0.87	0.19
Avail Cap(c_a), veh/h	233	770	758	275	532	516	128	387	321	301	669	677
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	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	0.56	0.56	0.56
Uniform Delay (d), s/veh	20.3	3.8	3.8	42.7	39.6	39.6	43.9	33.3	32.5	24.8	27.0	15.9
Incr Delay (d2), s/veh	1.7	2.8	2.8	26.0	24.4	24.9	119.6	11.0	8.6	1.9	9.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.5	3.2	3.1	12.1	21.7	21.2	12.1	10.9	8.1	5.1	17.1	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.0	6.5	6.6	68.8	63.9	64.4	163.5	44.2	41.0	26.7	36.0	16.3
LnGrp LOS	C	A	A	E	E	E	F	D	D	C	D	B
Approach Vol, veh/h	948			1202			621			897		
Approach Delay, s/veh	8.4			65.1			71.1			31.3		
Approach LOS	A			E			E			C		
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	12.1	36.3		41.6		48.4	13.6	28.0				
Change Period (Y+Rc), s	* 5.5	* 9.4		* 9.4		* 9.4	5.6	* 9.4				
Max Green Setting (Gmax), s	* 7	* 27		* 32		* 39	8.0	* 19				
Max Q Clear Time (g_c+I1), s	5.6	28.9		28.3		7.4	9.0	20.6				
Green Ext Time (p_c), s	0.0	0.0		1.5		5.9	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 43.2

HCM 6th LOS D

Notes

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

HCM 6th TWSC
15: Irvine Avenue & Moorpark Street

06/21/2024

Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔			↔	
Traffic Vol, veh/h	64	854	6	17	952	123	2	1	20	9	1	160
Future Vol, veh/h	64	854	6	17	952	123	2	1	20	9	1	160
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	70	928	7	18	1035	134	2	1	22	10	1	174

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1169	0	0	935	0	0	1626	2277	468	1743	2213	585
Stage 1	-	-	-	-	-	-	1072	1072	-	1138	1138	-
Stage 2	-	-	-	-	-	-	554	1205	-	605	1075	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	593	-	-	728	-	-	68	39	542	55	43	454
Stage 1	-	-	-	-	-	-	235	295	-	214	275	-
Stage 2	-	-	-	-	-	-	484	255	-	451	294	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	593	-	-	728	-	-	31	27	542	39	30	454
Mov Cap-2 Maneuver	-	-	-	-	-	-	31	27	-	39	30	-
Stage 1	-	-	-	-	-	-	177	222	-	161	255	-
Stage 2	-	-	-	-	-	-	275	236	-	325	222	-























Approach	EB			WB			NB			SB		
HCM Control Delay, s	2			0.5			30.5			40.9		
HCM LOS							D			E		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	166	593	-	-	728	-	-	276
HCM Lane V/C Ratio	0.151	0.117	-	-	0.025	-	-	0.67
HCM Control Delay (s)	30.5	11.9	1.3	-	10.1	0.4	-	40.9
HCM Lane LOS	D	B	A	-	B	A	-	E
HCM 95th %tile Q(veh)	0.5	0.4	-	-	0.1	-	-	4.4

HCM 6th Signalized Intersection Summary

16: Tujunga Avenue & Moorpark Street

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	172	778	86	105	794	57	75	245	79	168	424	210
Future Volume (veh/h)	172	778	86	105	794	57	75	245	79	168	424	210
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	187	846	93	114	863	62	82	266	86	183	461	228
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	274	1600	176	269	1666	120	212	719	609	345	482	409
Arrive On Green	0.50	0.50	0.50	0.50	0.50	0.50	0.14	0.77	0.77	0.26	0.26	0.26
Sat Flow, veh/h	605	3228	355	597	3362	242	1781	1870	1585	1029	1870	1585
Grp Volume(v), veh/h	187	466	473	114	456	469	82	266	86	183	461	228
Grp Sat Flow(s),veh/h/ln	605	1777	1806	597	1777	1827	1781	1870	1585	1029	1870	1585
Q Serve(g_s), s	27.4	16.1	16.1	14.5	15.7	15.7	2.8	4.1	1.3	14.4	21.9	11.2
Cycle Q Clear(g_c), s	43.0	16.1	16.1	30.7	15.7	15.7	2.8	4.1	1.3	14.4	21.9	11.2
Prop In Lane	1.00		0.20	1.00		0.13	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	274	881	895	269	881	905	212	719	609	345	482	409
V/C Ratio(X)	0.68	0.53	0.53	0.42	0.52	0.52	0.39	0.37	0.14	0.53	0.96	0.56
Avail Cap(c_a), veh/h	274	881	895	269	881	905	230	738	625	345	482	409
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	0.98	0.98	0.98	0.15	0.15	0.15
Uniform Delay (d), s/veh	30.0	15.5	15.5	26.0	15.4	15.4	21.8	6.9	6.5	30.2	32.9	29.0
Incr Delay (d2), s/veh	12.9	2.3	2.2	4.8	2.2	2.1	1.1	0.3	0.1	0.2	8.1	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(95%),veh/ln	8.3	10.7	10.9	4.2	10.5	10.7	2.0	2.4	0.8	4.6	12.6	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.9	17.8	17.7	30.8	17.6	17.5	22.9	7.2	6.7	30.4	41.0	29.2
LnGrp LOS	D	B	B	C	B	B	C	A	A	C	D	C
Approach Vol, veh/h		1126			1039			434			872	
Approach Delay, s/veh		21.9			19.0			10.1			35.7	
Approach LOS		C			B			B			D	
Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		50.0	11.4	28.6		50.0		40.0				
Change Period (Y+Rc), s		* 5.4	* 5.3	* 5.4		* 5.4		* 5.4				
Max Green Setting (Gmax), s		* 44	* 7	* 23		* 44		* 36				
Max Q Clear Time (g_c+I1), s		32.7	4.8	23.9		45.0		6.1				
Green Ext Time (p_c), s		6.6	0.0	0.0		0.0		1.8				

Intersection Summary

HCM 6th Ctrl Delay	23.0
HCM 6th LOS	C

Notes

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

HCM 6th Signalized Intersection Summary

17: Woodbridge Street & Tujunga Avenue

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↑	↔	↔	↔	↔
Traffic Volume (veh/h)	10	8	17	20	9	34	14	343	18	46	563	28
Future Volume (veh/h)	10	8	17	20	9	34	14	343	18	46	563	28
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	11	9	18	22	10	37	15	373	20	50	612	30
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	74	49	65	82	32	71	718	1516	1285	837	1433	70
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.81	0.81	0.81	1.00	1.00	1.00
Sat Flow, veh/h	271	598	782	352	386	854	787	1870	1585	991	1768	87
Grp Volume(v), veh/h	38	0	0	69	0	0	15	373	20	50	0	642
Grp Sat Flow(s),veh/h/ln	1651	0	0	1593	0	0	787	1870	1585	991	0	1855
Q Serve(g_s), s	0.0	0.0	0.0	1.5	0.0	0.0	0.3	4.2	0.2	0.3	0.0	0.0
Cycle Q Clear(g_c), s	1.9	0.0	0.0	3.6	0.0	0.0	0.3	4.2	0.2	4.5	0.0	0.0
Prop In Lane	0.29		0.47	0.32		0.54	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	188	0	0	185	0	0	718	1516	1285	837	0	1503
V/C Ratio(X)	0.20	0.00	0.00	0.37	0.00	0.00	0.02	0.25	0.02	0.06	0.00	0.43
Avail Cap(c_a), veh/h	509	0	0	502	0	0	718	1516	1285	837	0	1503
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.88	0.88	0.88	0.37	0.00	0.37
Uniform Delay (d), s/veh	38.7	0.0	0.0	39.5	0.0	0.0	1.6	2.0	1.6	0.1	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	1.3	0.0	0.0	0.0	0.3	0.0	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	0.0	0.0	2.7	0.0	0.0	0.1	1.6	0.1	0.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.2	0.0	0.0	40.7	0.0	0.0	1.7	2.4	1.7	0.2	0.0	0.3
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	38			69			408			692		
Approach Delay, s/veh	39.2			40.7			2.3			0.3		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	77.5			12.5			77.5			12.5		
Change Period (Y+Rc), s	* 4.5			* 5.1			* 4.5			* 5.1		
Max Green Setting (Gmax), s	* 55			* 26			* 55			* 26		
Max Q Clear Time (g_c+I1), s	6.5			3.9			6.2			5.6		
Green Ext Time (p_c), s	12.0			0.1			6.1			0.3		

Intersection Summary

HCM 6th Ctrl Delay	4.5
HCM 6th LOS	A

Notes

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

Queues

18: Whitsett Avenue & Ventura Boulevard

06/21/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	92	1172	73	33	932	136	72	95	729	284	538
v/c Ratio	0.40	0.74	0.10	0.34	0.86	0.23	0.61	0.26	1.14	0.78	0.57
Control Delay	21.6	26.1	16.4	49.1	52.6	12.5	57.5	33.9	119.8	52.6	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.6	26.1	16.4	49.1	52.6	12.5	57.5	33.9	119.8	52.6	14.9
Queue Length 50th (ft)	33	314	26	16	336	20	42	50	~290	171	191
Queue Length 95th (ft)	64	395	53	m32	m#376	m36	89	91	#443	253	273
Internal Link Dist (ft)		1440			2938			648		1328	
Turn Bay Length (ft)	95		135	145		60	60		220		65
Base Capacity (vph)	258	1592	712	96	1087	593	143	440	639	441	967
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.74	0.10	0.34	0.86	0.23	0.50	0.22	1.14	0.64	0.56

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.




























Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

18: Whitsett Avenue & Ventura Boulevard

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 		 		
Traffic Volume (vph)	85	1078	67	30	857	125	66	85	3	671	261	495
Future Volume (vph)	85	1078	67	30	857	125	66	85	3	671	261	495
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	5.4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1854		3433	1863	1583
Flt Permitted	0.11	1.00	1.00	0.17	1.00	1.00	0.33	1.00		0.95	1.00	1.00
Satd. Flow (perm)	206	3539	1583	312	3539	1583	607	1854		3433	1863	1583
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)	92	1172	73	33	932	136	72	92	3	729	284	538
RTOR Reduction (vph)	0	0	0	0	0	94	0	2	0	0	0	10
Lane Group Flow (vph)	92	1172	73	33	932	42	72	93	0	729	284	528
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Prot	NA	custom
Protected Phases	1	6			2			4		3	8	1 3
Permitted Phases	6		6	2		2	4					8
Actuated Green, G (s)	45.0	45.0	45.0	30.7	30.7	30.7	19.7	19.7		18.6	19.7	52.6
Effective Green, g (s)	45.0	45.0	45.0	30.7	30.7	30.7	19.7	19.7		18.6	19.7	52.6
Actuated g/C Ratio	0.45	0.45	0.45	0.31	0.31	0.31	0.20	0.20		0.19	0.20	0.53
Clearance Time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	
Vehicle Extension (s)	3.0	4.9	4.9	4.7	4.7	4.7	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	231	1592	712	95	1086	485	119	365		638	367	832
v/s Ratio Prot	0.04	c0.33			c0.26			0.05		c0.21	c0.15	0.21
v/s Ratio Perm	0.14		0.05	0.11		0.03	0.12					0.12
v/c Ratio	0.40	0.74	0.10	0.35	0.86	0.09	0.61	0.26		1.14	0.77	0.63
Uniform Delay, d1	19.9	22.6	15.9	26.9	32.6	24.7	36.6	34.0		40.7	38.0	16.9
Progression Factor	1.00	1.00	1.00	1.40	1.41	3.38	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.1	3.1	0.3	6.6	6.1	0.2	8.4	0.4		81.9	9.8	1.6
Delay (s)	21.0	25.7	16.1	44.3	52.0	83.5	45.0	34.3		122.6	47.8	18.4
Level of Service	C	C	B	D	D	F	D	C		F	D	B
Approach Delay (s)		24.9			55.7			38.9			72.8	
Approach LOS		C			E			D			E	
Intersection Summary												
HCM 2000 Control Delay			51.5									HCM 2000 Level of Service D
HCM 2000 Volume to Capacity ratio			0.92									
Actuated Cycle Length (s)			100.0									Sum of lost time (s) 22.1
Intersection Capacity Utilization			81.2%									ICU Level of Service D
Analysis Period (min)			15									
c Critical Lane Group												

Queues

19: Laurel Canyon Boulevard & Ventura Place

06/21/2024



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	58	46	198	12	1143	40	88	1549
v/c Ratio	0.45	0.28	0.65	0.07	0.53	0.04	0.39	0.53
Control Delay	50.4	45.9	19.0	36.0	32.9	1.8	23.7	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0
Total Delay	50.4	45.9	19.0	36.0	33.6	1.8	23.7	15.7
Queue Length 50th (ft)	31	28	10	8	381	0	28	198
Queue Length 95th (ft)	73	61	76	m10	m364	m0	#114	364
Internal Link Dist (ft)	123	395			458			232
Turn Bay Length (ft)			380	105		85	55	
Base Capacity (vph)	133	222	345	177	2167	998	225	2948
Starvation Cap Reductn	0	0	0	0	620	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.21	0.57	0.07	0.74	0.04	0.39	0.53

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

19: Laurel Canyon Boulevard & Ventura Place

06/21/2024













Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	32	13	8	31	11	182	11	1052	37	81	1370	55
Future Volume (vph)	32	13	8	31	11	182	11	1052	37	81	1370	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		9.4			9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.91	
Frpb, ped/bikes		1.00			1.00	0.94	1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes		0.96			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.98			1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.97			0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1704			1796	1484	1770	3539	1518	1762	5056	
Flt Permitted		0.79			0.96	1.00	0.95	1.00	1.00	0.21	1.00	
Satd. Flow (perm)		1384			1796	1484	1770	3539	1518	387	5056	
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)	35	14	9	34	12	198	12	1143	40	88	1489	60
RTOR Reduction (vph)	0	6	0	0	0	165	0	0	16	0	3	0
Lane Group Flow (vph)	0	52	0	0	46	33	12	1143	24	88	1546	0
Confl. Peds. (#/hr)	16					16			16	16		
Turn Type	Perm	NA		Split	NA	Perm	Prot	NA	Perm	Perm	NA	
Protected Phases		3		4	4		1	6			2	
Permitted Phases	3					4			6	2		
Actuated Green, G (s)		7.3			9.3	9.3	2.0	59.3	59.3	52.3	52.3	
Effective Green, g (s)		7.3			9.3	9.3	2.0	59.3	59.3	52.3	52.3	
Actuated g/C Ratio		0.07			0.09	0.09	0.02	0.59	0.59	0.52	0.52	
Clearance Time (s)		9.4			9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	4.8	4.8	3.1	3.1	
Lane Grp Cap (vph)		101			167	138	35	2098	900	202	2644	
v/s Ratio Prot					c0.03		0.01	c0.32			c0.31	
v/s Ratio Perm		c0.04				0.02			0.02	0.23		
v/c Ratio		0.51			0.28	0.24	0.34	0.54	0.03	0.44	0.58	
Uniform Delay, d1		44.6			42.2	42.1	48.4	12.2	8.4	14.7	16.4	
Progression Factor		1.00			1.00	1.00	0.87	2.58	1.00	1.00	1.00	
Incremental Delay, d2		4.3			0.9	0.9	2.5	0.4	0.0	6.7	1.0	
Delay (s)		48.9			43.1	43.0	44.4	32.1	8.4	21.4	17.3	
Level of Service		D			D	D	D	C	A	C	B	
Approach Delay (s)		48.9			43.0			31.4			17.6	
Approach LOS		D			D			C			B	
Intersection Summary												
HCM 2000 Control Delay			25.4									HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio			0.55									
Actuated Cycle Length (s)			100.0							29.1		
Intersection Capacity Utilization			68.7%									ICU Level of Service C
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

20: Laurel Canyon Boulevard & Ventura Boulevard

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	624	499	340	667	63	332	952	201	139	997	198
Future Volume (veh/h)	170	624	499	340	667	63	332	952	201	139	997	198
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	185	678	542	370	725	68	361	1035	218	151	1084	215
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	322	1055	605	312	1112	622	325	993	429	306	974	560
Arrive On Green	0.03	0.10	0.10	0.11	0.31	0.31	0.09	0.28	0.28	0.06	0.18	0.18
Sat Flow, veh/h	1781	3554	1535	1781	3554	1538	3456	3554	1537	3456	3554	1536
Grp Volume(v), veh/h	185	678	542	370	725	68	361	1035	218	151	1084	215
Grp Sat Flow(s),veh/h/ln	1781	1777	1535	1781	1777	1538	1728	1777	1537	1728	1777	1536
Q Serve(g_s), s	7.0	18.4	19.0	10.6	17.6	2.8	9.4	27.9	11.9	4.2	27.4	6.5
Cycle Q Clear(g_c), s	7.0	18.4	19.0	10.6	17.6	2.8	9.4	27.9	11.9	4.2	27.4	6.5
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	322	1055	605	312	1112	622	325	993	429	306	974	560
V/C Ratio(X)	0.57	0.64	0.90	1.18	0.65	0.11	1.11	1.04	0.51	0.49	1.11	0.38
Avail Cap(c_a), veh/h	322	1055	605	312	1112	622	325	993	429	311	974	560
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Upstream Filter(I)	0.33	0.33	0.33	0.87	0.87	0.87	0.61	0.61	0.61	0.84	0.84	0.84
Uniform Delay (d), s/veh	24.4	40.0	20.7	27.9	29.6	18.7	45.3	36.0	30.3	44.9	40.8	10.8
Incr Delay (d2), s/veh	0.8	1.0	7.3	107.6	2.6	0.3	73.2	34.3	1.1	1.0	63.3	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(95%),veh/ln	4.8	11.6	11.5	21.7	11.9	1.8	11.2	22.2	7.1	3.3	29.6	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.2	41.0	28.0	135.5	32.2	19.0	118.5	70.3	31.4	45.9	104.1	12.1
LnGrp LOS	C	D	C	F	C	B	F	F	C	D	F	B
Approach Vol, veh/h	1405			1163			1614			1450		
Approach Delay, s/veh	33.9			64.3			75.8			84.4		
Approach LOS	C			E			E			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	36.0	36.0	15.0	33.0	14.4	37.6	14.5	33.5				
Change Period (Y+Rc), s	5.4	6.3	5.6	5.6	5.6	6.3	5.6	5.6				
Max Green Setting (Gmax), s	29.7	29.7	9.4	27.4	8.8	31.3	9.0	27.8				
Max Q Clear Time (g_c+1/2), s	21.0	21.0	11.4	29.4	9.0	19.6	6.2	29.9				
Green Ext Time (p_c), s	0.0	6.8	0.0	0.0	0.0	4.5	0.1	0.0				

Intersection Summary

HCM 6th Ctrl Delay 65.2

HCM 6th LOS E

Notes

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

Queues

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/21/2024



Lane Group	EBL	EBT	WBL	WBT	WBR2	NBT	NBR	SBL	SBT	SBR2
Lane Group Flow (vph)	171	971	73	1087	138	43	51	82	110	80
v/c Ratio	0.33	0.57	0.66	1.33	0.41	0.15	0.12	0.41	0.67	0.25
Control Delay	10.6	1.3	90.5	197.7	50.8	51.7	0.6	62.7	78.4	1.8
Queue Delay	69.3	2.8	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.9	4.2	90.5	199.3	50.8	51.7	0.6	62.7	78.4	1.8
Queue Length 50th (ft)	96	0	65	~683	108	34	0	70	97	0
Queue Length 95th (ft)	m90	m0	#149	#853	180	71	0	123	161	0
Internal Link Dist (ft)		48		634		86			226	
Turn Bay Length (ft)	90		95		55		30	90		90
Base Capacity (vph)	580	1812	113	818	334	308	420	211	172	327
Starvation Cap Reductn	425	701	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	180	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.10	0.87	0.65	1.70	0.41	0.14	0.12	0.39	0.64	0.24

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	157	877	17	67	892	108	127	30	9	47	75	18
Future Volume (vph)	157	877	17	67	892	108	127	30	9	47	75	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.7		4.9	6.1		6.1		6.9	6.9	7.0	7.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		0.89		1.00	0.91	1.00	0.90
Flpb, ped/bikes	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	0.98		0.85		1.00	0.85	1.00	0.88
Flt Protected	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (prot)	1770	3525		1770	3441		1408		1794	1440	1770	1467
Flt Permitted	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (perm)	1770	3525		1770	3441		1408		1794	1440	1770	1467
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)	171	953	18	73	970	117	138	33	10	51	82	20
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	43	0	0
Lane Group Flow (vph)	171	970	0	73	1087	0	138	0	43	8	82	110
Confl. Peds. (#/hr)	29		16	16		29	29	44		44	44	
Turn Type	Prot	NA		Prot	NA		Perm	Split	NA	Perm	Split	NA
Protected Phases	1 3	3 6		5	2			7	7		8	8
Permitted Phases							2			7		
Actuated Green, G (s)	42.0	67.7		8.8	33.3		33.3		23.0	23.0	16.0	16.0
Effective Green, g (s)	42.0	61.6		8.8	33.3		33.3		23.0	23.0	16.0	16.0
Actuated g/C Ratio	0.30	0.44		0.06	0.24		0.24		0.16	0.16	0.11	0.11
Clearance Time (s)				4.9	6.1		6.1		6.9	6.9	7.0	7.0
Vehicle Extension (s)				3.0	4.8		4.8		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	531	1551		111	818		334		294	236	202	167
v/s Ratio Prot	0.10	c0.28		0.04	c0.32				c0.02		0.05	c0.07
v/s Ratio Perm							0.10			0.01		
v/c Ratio	0.32	0.63		0.66	1.33		0.41		0.15	0.04	0.41	0.66
Uniform Delay, d1	38.0	30.3		64.1	53.4		45.1		50.1	49.2	57.6	59.4
Progression Factor	0.27	0.05		1.00	1.00		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0	0.1		13.2	156.4		3.7		0.2	0.1	1.3	9.0
Delay (s)	10.2	1.4		77.3	209.7		48.8		50.3	49.2	58.9	68.4
Level of Service	B	A		E	F		D		D	D	E	E
Approach Delay (s)		2.8			185.2				49.7			61.8
Approach LOS		A			F				D			E
Intersection Summary												
HCM 2000 Control Delay			94.4			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			0.76									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			31.8			
Intersection Capacity Utilization			83.6%			ICU Level of Service			E			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/21/2024



Movement	SBR	SBR2
Lane Configurations		
Traffic Volume (vph)	83	74
Future Volume (vph)	83	74
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		7.0
Lane Util. Factor		1.00
Frpb, ped/bikes		0.79
Flpb, ped/bikes		1.00
Frt		0.85
Flt Protected		1.00
Satd. Flow (prot)		1253
Flt Permitted		1.00
Satd. Flow (perm)		1253
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	90	80
RTOR Reduction (vph)	0	71
Lane Group Flow (vph)	0	9
Confl. Peds. (#/hr)	44	44
Turn Type		Perm
Protected Phases		
Permitted Phases		8
Actuated Green, G (s)		16.0
Effective Green, g (s)		16.0
Actuated g/C Ratio		0.11
Clearance Time (s)		7.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)		143
v/s Ratio Prot		
v/s Ratio Perm		0.01
v/c Ratio		0.06
Uniform Delay, d1		55.3
Progression Factor		1.00
Incremental Delay, d2		0.2
Delay (s)		55.5
Level of Service		E
Approach Delay (s)		
Approach LOS		
Intersection Summary		

HCM 6th Signalized Intersection Summary

22: Carpenter Avenue & Ventura Boulevard

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	872	110	128	1127	25	69	5	97	11	34	7
Future Volume (veh/h)	21	872	110	128	1127	25	69	5	97	11	34	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	0.91		0.90	0.94		0.90
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	948	120	139	1225	27	75	5	105	12	37	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	203	1914	242	303	2156	48	147	27	162	104	292	293
Arrive On Green	0.61	0.61	0.61	0.20	0.20	0.20	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	444	3150	399	528	3550	78	471	129	787	289	1422	1428
Grp Volume(v), veh/h	23	535	533	139	613	639	185	0	0	49	0	8
Grp Sat Flow(s),veh/h/ln	444	1777	1772	528	1777	1851	1387	0	0	1711	0	1428
Q Serve(g_s), s	3.8	16.9	16.9	24.7	31.1	31.2	9.1	0.0	0.0	0.0	0.0	0.4
Cycle Q Clear(g_c), s	35.0	16.9	16.9	41.6	31.1	31.2	12.0	0.0	0.0	2.1	0.0	0.4
Prop In Lane	1.00		0.22	1.00		0.04	0.41		0.57	0.24		1.00
Lane Grp Cap(c), veh/h	203	1079	1076	303	1079	1124	336	0	0	396	0	293
V/C Ratio(X)	0.11	0.50	0.50	0.46	0.57	0.57	0.55	0.00	0.00	0.12	0.00	0.03
Avail Cap(c_a), veh/h	203	1079	1076	303	1079	1124	470	0	0	560	0	435
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	0.39	0.39	0.39	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.1	11.0	11.0	40.2	28.1	28.1	36.2	0.0	0.0	32.4	0.0	31.7
Incr Delay (d2), s/veh	0.9	1.4	1.4	1.9	0.9	0.8	1.4	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	10.1	10.1	5.6	18.9	19.6	7.6	0.0	0.0	1.8	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.1	12.4	12.4	42.2	29.0	29.0	37.6	0.0	0.0	32.6	0.0	31.8
LnGrp LOS	C	B	B	D	C	C	D	A	A	C	A	C
Approach Vol, veh/h	1091				1391		185				57	
Approach Delay, s/veh	12.7				30.3		37.6				32.4	
Approach LOS	B				C		D				C	
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	70.0		30.0		70.0		30.0					
Change Period (Y+Rc), s	* 9.2		9.5		* 9.2		9.5					
Max Green Setting (Gmax), s	* 51		30.5		* 51		30.5					
Max Q Clear Time (g_c+I1), s	37.0		4.1		43.6		14.0					
Green Ext Time (p_c), s	10.1		0.2		6.5		1.1					

Intersection Summary

HCM 6th Ctrl Delay	23.8
HCM 6th LOS	C

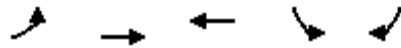
Notes

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

Queues

23: Ventura Boulevard & Colfax Avenue

06/21/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	235	870	1215	441	445
v/c Ratio	0.60	0.42	1.02	0.82	0.44
Control Delay	15.5	8.4	54.8	45.1	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	15.5	8.4	54.8	45.1	3.8
Queue Length 50th (ft)	25	77	~163	255	27
Queue Length 95th (ft)	117	206	#632	355	64
Internal Link Dist (ft)		981	464		
Turn Bay Length (ft)	160			360	360
Base Capacity (vph)	393	2080	1197	553	1016
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.60	0.42	1.02	0.80	0.44

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.



















95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

23: Ventura Boulevard & Colfax Avenue

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	216	800	0	0	867	251	0	0	0	406	0	409
Future Volume (vph)	216	800	0	0	867	251	0	0	0	406	0	409
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.4			5.4					5.4		5.7
Lane Util. Factor	1.00	0.95			0.95					1.00		1.00
Frt	1.00	1.00			0.97					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1770	3539			3420					1770		1583
Flt Permitted	0.10	1.00			1.00					0.95		1.00
Satd. Flow (perm)	183	3539			3420					1770		1583
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)	235	870	0	0	942	273	0	0	0	441	0	445
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	182
Lane Group Flow (vph)	235	870	0	0	1215	0	0	0	0	441	0	263
Turn Type	pm+pt	NA			NA					pm+pt		pm+ov
Protected Phases	5	2			6			3		4		5
Permitted Phases	2						3			7		4
Actuated Green, G (s)	58.8	58.8			35.0					30.4		48.5
Effective Green, g (s)	58.8	58.8			35.0					30.4		48.5
Actuated g/C Ratio	0.59	0.59			0.35					0.30		0.48
Clearance Time (s)	5.7	5.4			5.4					5.4		5.7
Vehicle Extension (s)	3.0	4.3			4.5					3.0		3.0
Lane Grp Cap (vph)	394	2080			1197					538		767
v/s Ratio Prot	c0.11	0.25			c0.36					c0.25		0.06
v/s Ratio Perm	0.24											0.10
v/c Ratio	0.60	0.42			1.02					0.82		0.34
Uniform Delay, d1	21.7	11.3			32.5					32.3		15.9
Progression Factor	0.52	0.65			0.69					1.00		1.00
Incremental Delay, d2	2.2	0.6			28.8					9.5		0.3
Delay (s)	13.5	7.9			51.2					41.7		16.2
Level of Service	B	A			D					D		B
Approach Delay (s)		9.1			51.2			0.0			28.9	
Approach LOS		A			D			A			C	
Intersection Summary												
HCM 2000 Control Delay			30.5									HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio			0.93									
Actuated Cycle Length (s)			100.0							22.8		
Intersection Capacity Utilization			79.0%									ICU Level of Service D
Analysis Period (min)			15									
c Critical Lane Group												

Queues

24: Berry Drive & Ventura Boulevard

06/21/2024



Lane Group	EBT	WBL	WBT	NBT
Lane Group Flow (vph)	2394	47	1229	71
v/c Ratio	0.82	0.61	0.42	0.31
Control Delay	8.9	41.9	3.6	5.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	8.9	41.9	3.6	5.0
Queue Length 50th (ft)	199	12	193	0
Queue Length 95th (ft)	394	m#27	21	10
Internal Link Dist (ft)	342		273	287
Turn Bay Length (ft)		65		
Base Capacity (vph)	2908	77	2933	394
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.82	0.61	0.42	0.18

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.



















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

24: Berry Drive & Ventura Boulevard

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	2076	126	43	1131	0	21	0	44	0	0	0
Future Volume (vph)	0	2076	126	43	1131	0	21	0	44	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0			9.4				
Lane Util. Factor		0.95		1.00	0.95			1.00				
Frt		0.99		1.00	1.00			0.91				
Flt Protected		1.00		0.95	1.00			0.98				
Satd. Flow (prot)		3509		1770	3539			1666				
Flt Permitted		1.00		0.05	1.00			0.98				
Satd. Flow (perm)		3509		93	3539			1666				
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)	0	2257	137	47	1229	0	23	0	48	0	0	0
RTOR Reduction (vph)	0	2	0	0	0	0	0	67	0	0	0	0
Lane Group Flow (vph)	0	2392	0	47	1229	0	0	4	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		6			2		3	3			4	
Permitted Phases	6			2						4		
Actuated Green, G (s)		80.0		80.0	80.0			5.6				
Effective Green, g (s)		80.0		80.0	80.0			5.6				
Actuated g/C Ratio		0.80		0.80	0.80			0.06				
Clearance Time (s)		5.0		5.0	5.0			9.4				
Vehicle Extension (s)		4.9		4.0	4.0			3.0				
Lane Grp Cap (vph)		2807		74	2831			93				
v/s Ratio Prot		c0.68			0.35			c0.00				
v/s Ratio Perm				0.50								
v/c Ratio		0.85		0.64	0.43			0.04				
Uniform Delay, d1		6.3		4.1	3.1			44.7				
Progression Factor		0.89		1.49	1.04			1.00				
Incremental Delay, d2		3.4		27.8	0.4			0.2				
Delay (s)		9.0		33.9	3.6			44.9				
Level of Service		A		C	A			D				
Approach Delay (s)		9.0			4.7			44.9			0.0	
Approach LOS		A			A			D			A	
Intersection Summary												
HCM 2000 Control Delay			8.2			HCM 2000 Level of Service			A			
HCM 2000 Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			23.7			
Intersection Capacity Utilization			79.2%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

25: Ventura Boulevard & Tujunga Avenue

06/21/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	151	1217	1173	279	365
v/c Ratio	0.46	0.51	0.66	0.37	0.58
Control Delay	13.1	14.2	21.8	33.3	24.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.1	14.2	21.8	33.3	24.8
Queue Length 50th (ft)	46	235	277	77	163
Queue Length 95th (ft)	m64	441	423	105	217
Internal Link Dist (ft)		426	233	3083	
Turn Bay Length (ft)	180			100	60
Base Capacity (vph)	353	2366	1766	1012	657
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.43	0.51	0.66	0.28	0.56

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

25: Ventura Boulevard & Tujunga Avenue

06/21/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	139	1120	968	111	257	336
Future Volume (vph)	139	1120	968	111	257	336
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.5	5.5		5.5	5.6
Lane Util. Factor	1.00	0.95	0.95		0.97	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3484		3433	1583
Flt Permitted	0.13	1.00	1.00		0.95	1.00
Satd. Flow (perm)	241	3539	3484		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	151	1217	1052	121	279	365
RTOR Reduction (vph)	0	0	7	0	0	24
Lane Group Flow (vph)	151	1217	1166	0	279	341
Turn Type	pm+pt	NA	NA		Prot	pt+ov
Protected Phases	1	6	2		4	1 7
Permitted Phases	6					4
Actuated Green, G (s)	66.9	66.9	50.5		22.1	38.4
Effective Green, g (s)	66.9	66.9	50.5		22.1	32.9
Actuated g/C Ratio	0.67	0.67	0.50		0.22	0.33
Clearance Time (s)	5.6	5.5	5.5		5.5	
Vehicle Extension (s)	3.0	4.4	4.9		3.0	
Lane Grp Cap (vph)	326	2367	1759		758	520
v/s Ratio Prot	0.05	c0.34	c0.33		0.08	c0.22
v/s Ratio Perm	0.26					
v/c Ratio	0.46	0.51	0.66		0.37	0.66
Uniform Delay, d1	11.1	8.4	18.4		33.0	28.7
Progression Factor	1.43	1.48	1.00		1.00	1.00
Incremental Delay, d2	0.6	0.4	2.0		0.3	3.0
Delay (s)	16.4	12.8	20.4		33.3	31.7
Level of Service	B	B	C		C	C
Approach Delay (s)		13.2	20.4		32.4	
Approach LOS		B	C		C	
Intersection Summary						
HCM 2000 Control Delay			19.7		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.71			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	22.1
Intersection Capacity Utilization			60.8%		ICU Level of Service	B
Analysis Period (min)			15			

c Critical Lane Group

HCM 6th Signalized Intersection Summary

26: Laurel Canyon Boulevard & Maxwellton Road

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Volume (veh/h)	138	0	86	0	0	0	2	1251	0	0	1719	111
Future Volume (veh/h)	138	0	86	0	0	0	2	1251	0	0	1719	111
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.83				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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h	150	0	93				2	1360	0	0	1868	121
Peak Hour Factor	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	0	0	2	2
Cap, veh/h	224	0	139				40	1870	0	0	1921	123
Arrive On Green	0.23	0.00	0.23				0.57	0.57	0.00	0.00	0.57	0.57
Sat Flow, veh/h	969	0	601				0	3385	0	0	3484	217
Grp Volume(v), veh/h	243	0	0				724	638	0	0	969	1020
Grp Sat Flow(s),veh/h/ln	1570	0	0				1683	1617	0	0	1777	1831
Q Serve(g_s), s	12.7	0.0	0.0				1.9	25.4	0.0	0.0	46.8	49.1
Cycle Q Clear(g_c), s	12.7	0.0	0.0				51.0	25.4	0.0	0.0	46.8	49.1
Prop In Lane	0.62		0.38				0.00		0.00	0.00		0.12
Lane Grp Cap(c), veh/h	363	0	0				994	916	0	0	1007	1037
V/C Ratio(X)	0.67	0.00	0.00				0.73	0.70	0.00	0.00	0.96	0.98
Avail Cap(c_a), veh/h	433	0	0				994	916	0	0	1007	1037
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				0.76	0.76	0.00	0.00	0.09	0.09
Uniform Delay (d), s/veh	31.5	0.0	0.0				14.0	14.0	0.0	0.0	18.6	19.1
Incr Delay (d2), s/veh	3.1	0.0	0.0				3.6	3.3	0.0	0.0	3.4	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.8	0.0	0.0				14.7	13.3	0.0	0.0	19.5	21.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.6	0.0	0.0				17.6	17.3	0.0	0.0	22.0	24.4
LnGrp LOS	C	A	A				B	B	A	A	C	C
Approach Vol, veh/h	243						1362				1989	
Approach Delay, s/veh	34.6						17.5				23.3	
Approach LOS	C						B				C	
Timer - Assigned Phs	2		4		6							
Phs Duration (G+Y+Rc), s	60.0		30.0		60.0							
Change Period (Y+Rc), s	9.0		9.2		9.0							
Max Green Setting (Gmax), s	47.0		24.8		47.0							
Max Q Clear Time (g_c+I1), s	51.1		14.7		53.0							
Green Ext Time (p_c), s	0.0		1.1		0.0							
Intersection Summary												
HCM 6th Ctrl Delay			21.8									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary

27: Laurel Canyon Boulevard & Laurel Terrace Drive/Sunshine Terrace Drive

06/21/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↙	↕		↙	↕	
Traffic Volume (veh/h)	18	17	286	107	25	102	66	1268	54	25	1762	21
Future Volume (veh/h)	18	17	286	107	25	102	66	1268	54	25	1762	21
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	20	18	311	116	27	111	72	1378	59	27	1915	23
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	44	29	341	111	29	75	92	2407	103	243	2170	26
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.05	0.69	0.69	0.60	0.60	0.60
Sat Flow, veh/h	57	128	1514	299	128	332	1781	3472	148	372	3596	43
Grp Volume(v), veh/h	349	0	0	254	0	0	72	704	733	27	944	994
Grp Sat Flow(s), veh/h/ln	1699	0	0	759	0	0	1781	1777	1844	372	1777	1863
Q Serve(g_s), s	0.0	0.0	0.0	2.8	0.0	0.0	4.8	24.2	24.3	4.8	54.0	54.4
Cycle Q Clear(g_c), s	24.2	0.0	0.0	27.0	0.0	0.0	4.8	24.2	24.3	18.3	54.0	54.4
Prop In Lane	0.06		0.89	0.46		0.44	1.00		0.08	1.00		0.02
Lane Grp Cap(c), veh/h	414	0	0	214	0	0	92	1232	1278	243	1072	1124
V/C Ratio(X)	0.84	0.00	0.00	1.18	0.00	0.00	0.78	0.57	0.57	0.11	0.88	0.88
Avail Cap(c_a), veh/h	414	0	0	214	0	0	110	1232	1278	243	1072	1124
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.16	0.16	0.16
Uniform Delay (d), s/veh	45.7	0.0	0.0	49.3	0.0	0.0	56.2	9.3	9.4	16.8	20.1	20.2
Incr Delay (d2), s/veh	14.6	0.0	0.0	120.3	0.0	0.0	25.9	1.9	1.9	0.1	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(95%),veh/ln	7.5	0.0	0.0	21.6	0.0	0.0	5.0	13.9	14.4	0.7	23.9	25.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.3	0.0	0.0	169.5	0.0	0.0	82.1	11.3	11.2	16.9	22.0	22.1
LnGrp LOS	E	A	A	F	A	A	F	B	B	B	C	C
Approach Vol, veh/h		349			254			1509			1965	
Approach Delay, s/veh		60.3			169.5			14.6			22.0	
Approach LOS		E			F			B			C	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	10.8	77.2		32.0		88.0		32.0				
Change Period (Y+Rc), s	4.6	4.8		* 5		4.8		* 5				
Max Green Setting (Gmax), s	71.2			* 27		83.2		* 27				
Max Q Clear Time (g_c+I), s	10.8	56.4		26.2		26.3		29.0				
Green Ext Time (p_c), s	0.0	11.6		0.2		14.7		0.0				

Intersection Summary

HCM 6th Ctrl Delay	31.7
HCM 6th LOS	C

Notes

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

Queues

28: Laurel Canyon Boulevard & Fryman Road

06/21/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	285	8	26	1196	2398
v/c Ratio	0.74	0.02	0.32	0.51	1.04
Control Delay	43.8	24.6	21.7	9.5	48.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	43.8	24.6	21.7	9.5	48.7
Queue Length 50th (ft)	152	4	6	162	~783
Queue Length 95th (ft)	217	14	36	263	#1004
Internal Link Dist (ft)				236	183
Turn Bay Length (ft)			145		
Base Capacity (vph)	542	485	82	2339	2300
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.53	0.02	0.32	0.51	1.04








Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

28: Laurel Canyon Boulevard & Fryman Road

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	262	0	7	0	0	0	24	1100	0	0	1877	329
Future Volume (vph)	262	0	7	0	0	0	24	1100	0	0	1877	329
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4		5.4				5.4	5.4			5.4	
Lane Util. Factor	1.00		1.00				1.00	0.95			0.95	
Frt	1.00		0.85				1.00	1.00			0.98	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	3539			3460	
Flt Permitted	0.95		1.00				0.07	1.00			1.00	
Satd. Flow (perm)	1770		1583				125	3539			3460	
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)	285	0	8	0	0	0	26	1196	0	0	2040	358
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	13	0
Lane Group Flow (vph)	285	0	8	0	0	0	26	1196	0	0	2385	0
Turn Type	Perm		Perm				Perm	NA		Perm	NA	
Protected Phases								2			6	
Permitted Phases	8		8				2			6		
Actuated Green, G (s)	19.7		19.7				59.5	59.5			59.5	
Effective Green, g (s)	19.7		19.7				59.5	59.5			59.5	
Actuated g/C Ratio	0.22		0.22				0.66	0.66			0.66	
Clearance Time (s)	5.4		5.4				5.4	5.4			5.4	
Vehicle Extension (s)	3.0		3.0				4.8	4.8			5.1	
Lane Grp Cap (vph)	387		346				82	2339			2287	
v/s Ratio Prot								0.34			c0.69	
v/s Ratio Perm	c0.16		0.01				0.21					
v/c Ratio	0.74		0.02				0.32	0.51			1.04	
Uniform Delay, d1	32.7		27.6				6.5	7.8			15.2	
Progression Factor	1.00		1.00				1.00	1.00			1.00	
Incremental Delay, d2	7.1		0.0				9.9	0.8			31.2	
Delay (s)	39.9		27.6				16.4	8.6			46.5	
Level of Service	D		C				B	A			D	
Approach Delay (s)		39.5			0.0			8.8			46.5	
Approach LOS		D			A			A			D	
Intersection Summary												
HCM 2000 Control Delay			34.2				HCM 2000 Level of Service				C	
HCM 2000 Volume to Capacity ratio			0.97									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			10.8		
Intersection Capacity Utilization			84.7%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th TWSC
29: Laurel Canyon Boulevard & Woodbridge Street

06/21/2024

Intersection												
Int Delay, s/veh	5.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	3	0	18	5	0	54	16	1323	5	144	1644	24
Future Vol, veh/h	3	0	18	5	0	54	16	1323	5	144	1644	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	65	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	20	5	0	59	17	1438	5	157	1787	26

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2867	3591	907	2683	3602	722	1813	0	0	1443	0	0
Stage 1	2114	2114	-	1475	1475	-	-	-	-	-	-	-
Stage 2	753	1477	-	1208	2127	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	8	5	279	10	5	369	335	-	-	466	-	-
Stage 1	52	90	-	132	189	-	-	-	-	-	-	-
Stage 2	368	188	-	194	89	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	5	3	279	7	3	369	335	-	-	466	-	-
Mov Cap-2 Maneuver	5	3	-	7	3	-	-	-	-	-	-	-
Stage 1	49	60	-	125	179	-	-	-	-	-	-	-
Stage 2	294	178	-	120	59	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	253.7		189.9		0.2		1.3	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	335	-	-	32 69	466	-	-
HCM Lane V/C Ratio	0.052	-	-	0.713 0.929	0.336	-	-
HCM Control Delay (s)	16.3	-	-	253.7 189.9	16.6	-	-
HCM Lane LOS	C	-	-	F F	C	-	-
HCM 95th %tile Q(veh)	0.2	-	-	2.4 4.6	1.5	-	-

HCM 6th TWSC
30: Valleyheart Drive (North) & Laurel Canyon Boulevard

06/21/2024

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	2	0	12	7	0	31	20	1315	9	33	1651	8
Future Vol, veh/h	2	0	12	7	0	31	20	1315	9	33	1651	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	40	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	13	8	0	34	22	1429	10	36	1795	9

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2631	3355	902	2448	3354	720	1804	0	0	1439	0	0
Stage 1	1872	1872	-	1478	1478	-	-	-	-	-	-	-
Stage 2	759	1483	-	970	1876	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	12	8	281	16	8	370	338	-	-	468	-	-
Stage 1	74	120	-	132	188	-	-	-	-	-	-	-
Stage 2	365	187	-	272	119	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	10	7	281	14	7	370	338	-	-	468	-	-
Mov Cap-2 Maneuver	10	7	-	14	7	-	-	-	-	-	-	-
Stage 1	69	111	-	123	176	-	-	-	-	-	-	-
Stage 2	310	175	-	239	110	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	87.8		128.6		0.2		0.3	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	338	-	-	58 65	468	-	-
HCM Lane V/C Ratio	0.064	-	-	0.262 0.635	0.077	-	-
HCM Control Delay (s)	16.4	-	-	87.8 128.6	13.3	-	-
HCM Lane LOS	C	-	-	F F	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.9 2.7	0.2	-	-





HCM 6th TWSC

31: Laurel Canyon Boulevard & Valleyheart Drive (South)

06/21/2024

Intersection

Int Delay, s/veh 2.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	107	1242	21	139	1514
Future Vol, veh/h	6	107	1242	21	139	1514
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	35	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	116	1350	23	151	1646

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	2487	687	0
Stage 1	1362	-	-
Stage 2	1125	-	-
Critical Hdwy	6.84	6.94	-
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	-
Pot Cap-1 Maneuver	24	389	-
Stage 1	203	-	-
Stage 2	272	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	17	389	-
Mov Cap-2 Maneuver	17	-	-
Stage 1	203	-	-
Stage 2	189	-	-





Approach	WB	NB	SB
HCM Control Delay, s	59.6	0	1.3
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	180	496
HCM Lane V/C Ratio	-	-	0.682	0.305
HCM Control Delay (s)	-	-	59.6	15.4
HCM Lane LOS	-	-	F	C
HCM 95th %tile Q(veh)	-	-	4.1	1.3

HCM 6th AWSC
32: Radford Avenue & Sarah Street

06/21/2024

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	1	0	3	7	62	2	41	1	131	118	15
Future Vol, veh/h	14	1	0	3	7	62	2	41	1	131	118	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	1	0	3	8	67	2	45	1	142	128	16
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0




Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.1	7.6	7.7	9.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	93%	4%	50%
Vol Thru, %	93%	7%	10%	45%
Vol Right, %	2%	0%	86%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	44	15	72	264
LT Vol	2	14	3	131
Through Vol	41	1	7	118
RT Vol	1	0	62	15
Lane Flow Rate	48	16	78	287
Geometry Grp	1	1	1	1
Degree of Util (X)	0.059	0.022	0.091	0.335
Departure Headway (Hd)	4.437	4.966	4.2	4.201
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	811	724	858	847
Service Time	2.446	2.974	2.203	2.272
HCM Lane V/C Ratio	0.059	0.022	0.091	0.339
HCM Control Delay	7.7	8.1	7.6	9.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.1	0.3	1.5

Intersection

Intersection Delay, s/veh 0

Intersection LOS -

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	0	0	0
HCM LOS	-	-	-

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0
LT Vol	0	0	0
Through Vol	0	0	0
RT Vol	0	0	0
Lane Flow Rate	0	0	0
Geometry Grp	1	1	1
Degree of Util (X)	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0
HCM Control Delay	6.9	6.9	6.9
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

HCM 6th AWSC

54: Radford Avenue & Radford Gate

06/21/2024

Intersection

Intersection Delay, s/veh 0

Intersection LOS -

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

HCM 6th AWSC
55: Alley & Carpenter Gate

06/21/2024

Intersection

Intersection Delay, s/veh 0

Intersection LOS -

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-




Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

HCM 6th TWSC
56: Colfax Avenue & Colfax Gate

06/21/2024

Intersection

Int Delay, s/veh 0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1	1	- 0 - 0
Stage 1	1	-	- - -
Stage 2	0	-	- - -
Critical Hdwy	6.42	6.22	- - -
Critical Hdwy Stg 1	5.42	-	- - -
Critical Hdwy Stg 2	5.42	-	- - -
Follow-up Hdwy	3.518	3.318	- - -
Pot Cap-1 Maneuver	1022	1084	0 - - 0
Stage 1	1022	-	0 - - 0
Stage 2	-	-	0 - - 0
Platoon blocked, %			- -
Mov Cap-1 Maneuver	1022	1084	- - -
Mov Cap-2 Maneuver	1022	-	- - -
Stage 1	1022	-	- - -
Stage 2	-	-	- - -

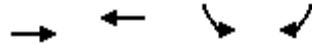
Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

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

Queues

121: Ventura Boulevard & Ventura PI

06/21/2024



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1061	1092	82	35
v/c Ratio	1.09	0.50	0.15	0.12
Control Delay	103.0	15.3	50.9	16.0
Queue Delay	6.2	51.1	0.0	0.0
Total Delay	109.2	66.4	50.9	16.0
Queue Length 50th (ft)	~603	118	33	0
Queue Length 95th (ft)	#742	m47	58	32
Internal Link Dist (ft)	509	48	136	
Turn Bay Length (ft)				40
Base Capacity (vph)	975	2147	669	336
Starvation Cap Reductn	0	1333	0	0
Spillback Cap Reductn	219	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.40	1.34	0.12	0.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

121: Ventura Boulevard & Ventura PI

06/21/2024



























Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	↑
Traffic Volume (vph)	0	976	1005	0	75	32
Future Volume (vph)	0	976	1005	0	75	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.1	6.1		5.7	5.7
Lane Util. Factor		0.95	0.95		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3433	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1061	1092	0	82	35
RTOR Reduction (vph)	0	0	0	0	0	29
Lane Group Flow (vph)	0	1061	1092	0	82	6
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2 4		3	
Permitted Phases						3
Actuated Green, G (s)		38.6	86.2		23.0	23.0
Effective Green, g (s)		38.6	86.2		23.0	23.0
Actuated g/C Ratio		0.28	0.62		0.16	0.16
Clearance Time (s)		6.1			5.7	5.7
Vehicle Extension (s)		4.6			3.0	3.0
Lane Grp Cap (vph)		975	2179		563	260
v/s Ratio Prot		c0.30	c0.31		c0.02	
v/s Ratio Perm						0.00
v/c Ratio		1.09	0.50		0.15	0.02
Uniform Delay, d1		50.7	15.0		50.1	49.1
Progression Factor		1.00	1.01		1.00	1.00
Incremental Delay, d2		55.9	0.0		0.1	0.0
Delay (s)		106.6	15.1		50.2	49.1
Level of Service		F	B		D	D
Approach Delay (s)		106.6	15.1		49.9	
Approach LOS		F	B		D	
Intersection Summary						
HCM 2000 Control Delay			59.6		HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio			0.72			
Actuated Cycle Length (s)			140.0		Sum of lost time (s)	31.8
Intersection Capacity Utilization			44.3%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

1: Riverside Drive & Laurel Canyon Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	356	1096	164	128	573	121	203	874	133	179	920	254
Future Volume (veh/h)	356	1096	164	128	573	121	203	874	133	179	920	254
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	387	1191	178	139	623	132	221	950	145	195	1000	276
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	405	1323	590	257	770	343	249	995	562	217	1035	285
Arrive On Green	0.23	0.37	0.37	0.02	0.07	0.07	0.10	0.28	0.28	0.08	0.26	0.26
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	3554	1585	1781	3980	1097
Grp Volume(v), veh/h	387	1191	178	139	623	132	221	950	145	195	855	421
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1777	1585	1781	1702	1673
Q Serve(g_s), s	25.7	38.0	9.5	4.8	20.7	9.5	10.8	31.5	7.8	9.7	29.8	29.9
Cycle Q Clear(g_c), s	25.7	38.0	9.5	4.8	20.7	9.5	10.8	31.5	7.8	9.7	29.8	29.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.66
Lane Grp Cap(c), veh/h	405	1323	590	257	770	343	249	995	562	217	885	435
V/C Ratio(X)	0.95	0.90	0.30	0.54	0.81	0.38	0.89	0.95	0.26	0.90	0.97	0.97
Avail Cap(c_a), veh/h	405	1323	590	259	770	343	249	995	562	217	885	435
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	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	0.74	0.74	0.74	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.7	35.5	26.6	56.5	53.3	48.1	31.8	42.5	27.5	33.1	43.9	43.9
Incr Delay (d2), s/veh	33.2	10.0	1.3	2.2	9.0	3.2	23.7	15.9	0.8	34.7	23.1	35.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	21.1	24.5	6.7	3.9	16.2	7.6	9.7	21.3	5.5	10.2	21.4	22.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.9	45.6	27.9	58.7	62.2	51.3	55.5	58.3	28.4	67.7	67.0	79.7
LnGrp LOS	E	D	C	E	E	D	E	E	C	E	E	E
Approach Vol, veh/h	1756				894				1316			
Approach Delay, s/veh	51.1				60.1				54.6			
Approach LOS	D				E				D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	37.1	33.2	31.7	15.6	39.5	14.5	50.4				
Change Period (Y+Rc), s	5.6	5.9	5.9	* 5.7	5.6	5.9	5.6	* 5.7				
Max Green Setting (Gmax), s	12.4	31.2	27.3	* 26	10.0	33.6	9.0	* 45				
Max Q Clear Time (g_c+I1), s	12.8	31.9	27.7	22.7	11.7	33.5	6.8	40.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	1.4	0.0	0.1	0.1	3.2				

Intersection Summary

HCM 6th Ctrl Delay	58.7
HCM 6th LOS	E








Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
User approved changes to right turn type.

HCM 6th TWSC

2: Riverside Drive & Radford Avenue

06/24/2024

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	1114	37	41	1124	8	18	2	32	1	0	9
Future Vol, veh/h	13	1114	37	41	1124	8	18	2	32	1	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	105	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	1211	40	45	1222	9	20	2	35	1	0	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1231	0	0	1251	0	0	1940	2560	606	1952	2596	616
Stage 1	-	-	-	-	-	-	1239	1239	-	1317	1317	-
Stage 2	-	-	-	-	-	-	701	1321	-	635	1279	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	562	-	-	552	-	-	39	26	440	38	25	433
Stage 1	-	-	-	-	-	-	186	246	-	166	225	-
Stage 2	-	-	-	-	-	-	395	224	-	433	235	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	562	-	-	552	-	-	35	23	440	30	22	433
Mov Cap-2 Maneuver	-	-	-	-	-	-	35	23	-	30	22	-
Stage 1	-	-	-	-	-	-	181	240	-	162	207	-
Stage 2	-	-	-	-	-	-	355	206	-	385	229	-

























Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.4			129.8			25.7		
HCM LOS							F			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	77	562	-	-	552	-	-	185
HCM Lane V/C Ratio	0.734	0.025	-	-	0.081	-	-	0.059
HCM Control Delay (s)	129.8	11.6	-	-	12.1	-	-	25.7
HCM Lane LOS	F	B	-	-	B	-	-	D
HCM 95th %tile Q(veh)	3.5	0.1	-	-	0.3	-	-	0.2

HCM 6th Signalized Intersection Summary

3: Colfax Avenue & Riverside Drive

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	735	207	199	818	45	167	538	95	33	360	92
Future Volume (veh/h)	170	735	207	199	818	45	167	538	95	33	360	92
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	185	799	225	216	889	49	182	585	103	36	391	100
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	225	1356	605	277	1356	605	386	826	700	380	826	700
Arrive On Green	0.76	0.76	0.76	0.38	0.38	0.38	0.88	0.88	0.88	0.44	0.44	0.44
Sat Flow, veh/h	597	3554	1585	551	3554	1585	906	1870	1585	755	1870	1585
Grp Volume(v), veh/h	185	799	225	216	889	49	182	585	103	36	391	100
Grp Sat Flow(s),veh/h/ln	597	1777	1585	551	1777	1585	906	1870	1585	755	1870	1585
Q Serve(g_s), s	10.5	5.8	2.8	17.1	12.4	1.2	8.3	5.8	0.5	2.0	8.9	2.3
Cycle Q Clear(g_c), s	22.9	5.8	2.8	22.9	12.4	1.2	17.2	5.8	0.5	7.8	8.9	2.3
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	225	1356	605	277	1356	605	386	826	700	380	826	700
V/C Ratio(X)	0.82	0.59	0.37	0.78	0.66	0.08	0.47	0.71	0.15	0.09	0.47	0.14
Avail Cap(c_a), veh/h	225	1356	605	277	1356	605	386	826	700	380	826	700
HCM Platoon Ratio	2.00	2.00	2.00	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	0.91	0.91	0.91	0.52	0.52	0.52	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.6	5.1	4.7	23.8	15.3	11.8	6.0	2.3	2.0	13.5	11.8	10.0
Incr Delay (d2), s/veh	27.7	1.9	1.8	17.8	2.3	0.2	2.1	2.7	0.2	0.5	1.9	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(95%),veh/ln	6.4	2.7	1.7	7.5	7.9	0.7	1.0	2.6	0.3	0.6	6.3	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.2	7.0	6.5	41.6	17.6	12.1	8.1	5.0	2.2	14.0	13.8	10.4
LnGrp LOS	D	A	A	D	B	B	A	A	A	B	B	B
Approach Vol, veh/h		1209			1154			870			527	
Approach Delay, s/veh		12.4			21.8			5.3			13.1	
Approach LOS		B			C			A			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		28.0		32.0		28.0		32.0				
Change Period (Y+Rc), s		* 5.1		* 5.5		* 5.1		* 5.5				
Max Green Setting (Gmax), s		* 23		* 27		* 23		* 27				
Max Q Clear Time (g_c+I1), s		24.9		19.2		24.9		10.9				
Green Ext Time (p_c), s		0.0		3.0		0.0		2.6				
Intersection Summary												
HCM 6th Ctrl Delay				13.8								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Queues

4: Riverside Drive & SR 170 Southbound Off-Ramp

06/24/2024



Lane Group	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	971	7	855	16	265	256	246
v/c Ratio	0.48	0.03	0.42	0.05	0.68	0.53	0.46
Control Delay	11.4	11.0	13.2	0.3	34.1	12.0	6.4
Queue Delay	1.7	0.0	0.4	0.1	2.0	1.3	0.0
Total Delay	13.1	11.0	13.6	0.5	36.1	13.3	6.4
Queue Length 50th (ft)	116	2	253	0	104	27	0
Queue Length 95th (ft)	240	m6	277	0	#188	96	53
Internal Link Dist (ft)	2214		245	105		344	
Turn Bay Length (ft)		25			140		150
Base Capacity (vph)	2028	236	2029	293	428	514	566
Starvation Cap Reductn	0	0	599	0	0	0	0
Spillback Cap Reductn	838	0	0	107	68	114	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.03	0.60	0.09	0.74	0.64	0.43

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.




















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: Riverside Drive & SR 170 Southbound Off-Ramp













06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	887	6	6	787	0	0	0	15	301	7	397
Future Volume (vph)	0	887	6	6	787	0	0	0	15	301	7	397
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Lane Util. Factor		0.95		1.00	0.95			1.00		0.95	0.91	0.95
Frt		1.00		1.00	1.00			0.86		1.00	0.89	0.85
Flt Protected		1.00		0.95	1.00			1.00		0.95	0.99	1.00
Satd. Flow (prot)		3535		1770	3539			1611		1681	1492	1504
Flt Permitted		1.00		0.22	1.00			1.00		0.95	0.99	1.00
Satd. Flow (perm)		3535		412	3539			1611		1681	1492	1504
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)	0	964	7	7	855	0	0	0	16	327	8	432
RTOR Reduction (vph)	0	0	0	0	0	0	0	16	0	0	139	189
Lane Group Flow (vph)	0	971	0	7	855	0	0	0	0	265	117	57
Turn Type		NA		Perm	NA			NA		Split	NA	Perm
Protected Phases		6			2			4		3	3	
Permitted Phases				2			4					3
Actuated Green, G (s)		35.3		35.3	35.3			1.6		16.1	16.1	16.1
Effective Green, g (s)		35.3		35.3	35.3			1.6		16.1	16.1	16.1
Actuated g/C Ratio		0.50		0.50	0.50			0.02		0.23	0.23	0.23
Clearance Time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Vehicle Extension (s)		3.8		2.4	2.4			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1782		207	1784			36		386	343	345
v/s Ratio Prot		c0.27			0.24			c0.00		c0.16	0.08	
v/s Ratio Perm				0.02								0.04
v/c Ratio		0.54		0.03	0.48			0.01		0.69	0.34	0.16
Uniform Delay, d1		11.9		8.7	11.3			33.4		24.6	22.5	21.6
Progression Factor		1.00		1.06	1.31			1.00		1.00	1.00	1.00
Incremental Delay, d2		1.2		0.3	0.8			0.1		5.0	0.6	0.2
Delay (s)		13.1		9.5	15.6			33.5		29.7	23.1	21.8
Level of Service		B		A	B			C		C	C	C
Approach Delay (s)		13.1			15.6			33.5			25.0	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			17.5			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.57									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			59.0%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	NWL	NWR
Lane Group Flow (vph)	253	757	338	258	418	170	35	931	69	607	390	140
v/c Ratio	0.96	1.13	1.14	1.48	0.55	0.50	0.17	1.01	0.45	0.47	0.69	0.59
Control Delay	87.0	125.0	141.8	275.7	51.9	54.0	47.3	82.6	70.9	35.3	61.6	64.2
Queue Delay	0.0	1.9	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0
Total Delay	87.0	126.9	144.0	275.7	51.9	54.0	47.3	82.6	70.9	35.4	65.2	64.2
Queue Length 50th (ft)	194	~435	~390	~271	179	137	26	~517	61	220	174	130
Queue Length 95th (ft)	#340	#590	#620	#453	236	215	62	#708	113	293	222	204
Internal Link Dist (ft)		245			745			2580		383	758	
Turn Bay Length (ft)	140		230	85		110	270		290		215	
Base Capacity (vph)	263	670	297	174	765	342	209	922	152	1292	686	288
Starvation Cap Reductn	0	153	47	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	10	206	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.96	1.46	1.35	1.48	0.55	0.50	0.17	1.01	0.45	0.47	0.81	0.49

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.





















95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024

												
Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	233	503	312	192	18	219	385	156	32	720	116	20
Future Volume (vph)	233	503	312	192	18	219	385	156	32	720	116	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Lane Util. Factor	1.00	0.91	0.91			1.00	0.95	1.00	1.00	0.95		
Frt	1.00	0.96	0.85			1.00	1.00	0.85	1.00	0.98		
Flt Protected	0.95	1.00	1.00			0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1770	3249	1441			1770	3539	1583	1770	3455		
Flt Permitted	0.37	1.00	1.00			0.14	1.00	1.00	0.42	1.00		
Satd. Flow (perm)	692	3249	1441			258	3539	1583	786	3455		
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)	253	547	339	209	20	238	418	170	35	783	126	22
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	253	757	338	0	0	258	418	170	35	931	0	0
Turn Type	pm+pt	NA	Perm		pm+pt	pm+pt	NA	Perm	Perm	NA		
Protected Phases	1	6			5	5	2			8		
Permitted Phases	6		6		2	2		2	8			
Actuated Green, G (s)	36.6	27.5	27.5			38.3	28.9	28.9	37.4	37.4		
Effective Green, g (s)	36.6	27.5	27.5			38.3	28.9	28.9	37.4	37.4		
Actuated g/C Ratio	0.26	0.20	0.20			0.27	0.21	0.21	0.27	0.27		
Clearance Time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Vehicle Extension (s)	3.0	3.9	3.9			3.0	4.6	4.6	4.7	4.7		
Lane Grp Cap (vph)	250	638	283			172	730	326	209	922		
v/s Ratio Prot	0.07	0.23				c0.10	0.12			c0.27		
v/s Ratio Perm	0.20		0.23			c0.31		0.11	0.04			
v/c Ratio	1.01	1.19	1.19			1.50	0.57	0.52	0.17	1.01		
Uniform Delay, d1	49.8	56.2	56.2			46.2	50.0	49.4	39.4	51.3		
Progression Factor	1.02	1.02	1.02			1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2	56.7	97.6	114.0			252.9	3.2	5.9	0.7	32.1		
Delay (s)	107.4	155.1	171.3			299.1	53.2	55.3	40.1	83.4		
Level of Service	F	F	F			F	D	E	D	F		
Approach Delay (s)		150.2					128.6			81.8		
Approach LOS		F					F			F		
Intersection Summary												
HCM 2000 Control Delay			102.3			HCM 2000 Level of Service				F		
HCM 2000 Volume to Capacity ratio			1.10									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			33.0			
Intersection Capacity Utilization			105.1%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024



Movement	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	17	47	459	99	33	313	126	16
Future Volume (vph)	17	47	459	99	33	313	126	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.3			6.6	6.6	
Lane Util. Factor		1.00	0.95			0.97	0.91	
Frt		1.00	0.97			0.99	0.85	
Flt Protected		0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	3445			3429	1441	
Flt Permitted		0.95	1.00			0.95	1.00	
Satd. Flow (perm)		1770	3445			3429	1441	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	51	499	108	36	340	137	17
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	69	607	0	0	390	140	0
Turn Type	Prot	Prot	NA		Prot	Prot	Perm	
Protected Phases	7	7	4		3	3		
Permitted Phases							3	
Actuated Green, G (s)		9.7	53.9			23.0	23.0	
Effective Green, g (s)		9.7	53.9			23.0	23.0	
Actuated g/C Ratio		0.07	0.38			0.16	0.16	
Clearance Time (s)		6.8	6.3			6.6	6.6	
Vehicle Extension (s)		3.0	4.9			4.6	4.6	
Lane Grp Cap (vph)		122	1326			563	236	
v/s Ratio Prot		0.04	c0.18			c0.11		
v/s Ratio Perm							0.10	
v/c Ratio		0.57	0.46			0.69	0.59	
Uniform Delay, d1		63.1	32.1			55.2	54.2	
Progression Factor		1.00	1.00			1.00	1.00	
Incremental Delay, d2		5.9	0.5			4.3	5.4	
Delay (s)		69.0	32.6			59.5	59.6	
Level of Service		E	C			E	E	
Approach Delay (s)			36.4			59.5		
Approach LOS			D			E		
Intersection Summary								

HCM 6th Signalized Intersection Summary

6: Laurel Canyon Boulevard & US 101 Northbound Ramps

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰	↰	↰	↰			↰	↰
Traffic Volume (veh/h)	0	0	0	582	0	576	414	1090	0	1	973	185
Future Volume (veh/h)	0	0	0	582	0	576	414	1090	0	1	973	185
Initial Q (Qb), veh				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
Parking Bus, Adj				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	0	1870	1870	1870
Adj Flow Rate, veh/h				828	0	417	450	1185	0	1	1058	201
Peak Hour Factor				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	0	2	2	2
Cap, veh/h				1064	0	473	538	2094	0	40	1861	594
Arrive On Green				0.30	0.00	0.30	0.05	0.19	0.00	0.37	0.37	0.37
Sat Flow, veh/h				3563	0	1585	3456	3647	0	1	4966	1585
Grp Volume(v), veh/h				828	0	417	450	1185	0	399	660	201
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	1869	1549	1585
Q Serve(g_s), s				19.1	0.0	22.5	11.6	27.2	0.0	0.0	15.3	8.2
Cycle Q Clear(g_c), s				19.1	0.0	22.5	11.6	27.2	0.0	15.2	15.3	8.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1064	0	473	538	2094	0	740	1161	594
V/C Ratio(X)				0.78	0.00	0.88	0.84	0.57	0.00	0.54	0.57	0.34
Avail Cap(c_a), veh/h				1176	0	523	603	2094	0	740	1161	594
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.87	0.87	0.00	0.41	0.41	0.41
Uniform Delay (d), s/veh				28.8	0.0	30.0	41.6	25.8	0.0	22.4	22.4	20.2
Incr Delay (d2), s/veh				3.1	0.0	15.0	8.1	1.0	0.0	1.2	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
%ile BackOfQ(95%),veh/ln				12.6	0.0	15.0	9.7	18.5	0.0	9.3	7.8	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				31.9	0.0	45.0	49.7	26.8	0.0	23.5	23.2	20.8
LnGrp LOS				C	A	D	D	C	A	C	C	C
Approach Vol, veh/h				1245			1635			1260		
Approach Delay, s/veh				36.3			33.1			22.9		
Approach LOS				D			C			C		
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	19.3	38.5		32.2		57.8						
Change Period (Y+Rc), s	5.3	4.8		* 5.3		4.8						
Max Green Setting (Gmax), s	16	29.2		* 30		50.2						
Max Q Clear Time (g_c+M), s	17.3			24.5		29.2						
Green Ext Time (p_c), s	0.4	5.8		2.3		8.8						

Intersection Summary

HCM 6th Ctrl Delay	31.0
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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

HCM 6th Signalized Intersection Summary

7: US 101 Southbound Ramps & Laurel Canyon Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	364	24	543	0	0	0	0	1157	643	300	1224	0
Future Volume (veh/h)	364	24	543	0	0	0	0	1157	643	300	1224	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	273	0	739				0	1258	699	326	1330	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	456	0	812				0	3215	998	381	2237	0
Arrive On Green	0.26	0.00	0.26				0.00	0.63	0.63	1.00	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	5274	1585	436	3647	0
Grp Volume(v), veh/h	273	0	739				0	1258	699	326	1330	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1702	1585	218	1777	0
Q Serve(g_s), s	12.1	0.0	20.4				0.0	10.9	26.3	45.8	0.0	0.0
Cycle Q Clear(g_c), s	12.1	0.0	20.4				0.0	10.9	26.3	56.7	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	456	0	812				0	3215	998	381	2237	0
V/C Ratio(X)	0.60	0.00	0.91				0.00	0.39	0.70	0.85	0.59	0.00
Avail Cap(c_a), veh/h	471	0	838				0	3215	998	381	2237	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.66	0.66	0.00
Uniform Delay (d), s/veh	29.4	0.0	32.5				0.0	8.2	11.0	12.8	0.0	0.0
Incr Delay (d2), s/veh	2.0	0.0	13.7				0.0	0.4	4.1	14.9	0.8	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
%ile BackOfQ(95%),veh/ln	8.8	0.0	13.6				0.0	6.4	13.7	6.6	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.4	0.0	46.2				0.0	8.6	15.1	27.7	0.8	0.0
LnGrp LOS	C	A	D				A	A	B	C	A	A
Approach Vol, veh/h	1012						1957			1656		
Approach Delay, s/veh	42.2						10.9			6.1		
Approach LOS	D						B			A		
Timer - Assigned Phs	2			4			6					
Phs Duration (G+Y+Rc), s	61.8			28.2			61.8					
Change Period (Y+Rc), s	* 5.1			* 5.2			* 5.1					
Max Green Setting (Gmax), s	* 56			* 24			* 56					
Max Q Clear Time (g_c+I1), s	28.3			22.4			58.7					
Green Ext Time (p_c), s	14.5			0.7			0.0					

Intersection Summary

HCM 6th Ctrl Delay	16.0
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

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

Queues

8: Laurel Canyon Boulevard & Landale Street

06/24/2024



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	204	187	58	89	78	1721	67	1648	121
v/c Ratio	0.96	0.68	0.42	0.26	0.32	0.83	0.76	1.01	0.27
Control Delay	94.5	28.2	46.1	1.9	20.5	13.1	63.5	42.8	11.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0
Total Delay	94.5	28.2	46.1	1.9	20.5	13.6	63.5	42.8	11.2
Queue Length 50th (ft)	123	36	31	0	10	416	18	~588	22
Queue Length 95th (ft)	#266	#129	68	0	m8	m86	m#86	#765	m59
Internal Link Dist (ft)		140	232			591		375	
Turn Bay Length (ft)	85			40	155		125		115
Base Capacity (vph)	212	276	171	380	286	2067	88	1639	453
Starvation Cap Reductn	0	0	0	0	0	87	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.68	0.34	0.23	0.27	0.87	0.76	1.01	0.27

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

8: Laurel Canyon Boulevard & Landale Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	224	11	125	33	20	82	72	1563	20	62	1516	111
Future Volume (vph)	224	11	125	33	20	82	72	1563	20	62	1516	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.86			1.00	1.00	1.00	1.00		1.00	1.00	0.62
Flpb, ped/bikes	1.00	1.00			0.88	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.89			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.99			0.97	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1339			1592	1583	1770	3529		1770	3539	979
Flt Permitted	0.95	0.99			0.70	1.00	0.09	1.00		0.10	1.00	1.00
Satd. Flow (perm)	1681	1339			1148	1583	166	3529		189	3539	979
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)	243	12	136	36	22	89	78	1699	22	67	1648	121
RTOR Reduction (vph)	0	107	0	0	0	80	0	1	0	0	0	0
Lane Group Flow (vph)	204	80	0	0	58	9	78	1720	0	67	1648	121
Confl. Peds. (#/hr)			79	79			164		19	19		164
Turn Type	Split	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	3	3			4		1	6			2	
Permitted Phases				4		4	6			2		2
Actuated Green, G (s)	11.4	11.4			8.6	8.6	51.5	51.5		39.4	39.4	39.4
Effective Green, g (s)	11.4	11.4			8.6	8.6	51.5	51.5		39.4	39.4	39.4
Actuated g/C Ratio	0.13	0.13			0.10	0.10	0.57	0.57		0.44	0.44	0.44
Clearance Time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	5.2		4.5	4.5	4.5
Lane Grp Cap (vph)	212	169			109	151	214	2019		82	1549	428
v/s Ratio Prot	c0.12	0.06					0.03	c0.49			c0.47	
v/s Ratio Perm					c0.05	0.01	0.18			0.35		0.12
v/c Ratio	0.96	0.48			0.53	0.06	0.36	0.85		0.82	1.06	0.28
Uniform Delay, d1	39.1	36.5			38.8	37.0	18.3	16.1		22.1	25.3	16.2
Progression Factor	1.00	1.00			1.00	1.00	2.06	0.71		0.55	0.65	0.52
Incremental Delay, d2	50.8	2.1			4.9	0.2	0.1	0.5		47.6	39.5	1.3
Delay (s)	89.9	38.6			43.7	37.2	37.8	11.9		59.8	55.9	9.8
Level of Service	F	D			D	D	D	B		E	E	A
Approach Delay (s)		65.4			39.7			13.0			53.0	
Approach LOS		E			D			B			D	
Intersection Summary												
HCM 2000 Control Delay			36.4		HCM 2000 Level of Service					D		
HCM 2000 Volume to Capacity ratio			0.99									
Actuated Cycle Length (s)			90.0		Sum of lost time (s)					23.9		
Intersection Capacity Utilization			92.1%		ICU Level of Service					F		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

9: Colfax Avenue & Sarah Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↑	↕
Traffic Volume (veh/h)	15	2	6	8	1	34	7	771	20	40	722	16
Future Volume (veh/h)	15	2	6	8	1	34	7	771	20	40	722	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.99	0.98		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	16	2	7	9	1	37	8	838	22	43	785	17
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	152	25	31	86	9	85	443	1301	1099	307	1301	1099
Arrive On Green	0.07	0.07	0.07	0.07	0.07	0.07	0.23	0.23	0.23	0.70	0.70	0.70
Sat Flow, veh/h	775	361	442	208	123	1226	678	1870	1579	643	1870	1579
Grp Volume(v), veh/h	25	0	0	47	0	0	8	838	22	43	785	17
Grp Sat Flow(s),veh/h/ln	1577	0	0	1557	0	0	678	1870	1579	643	1870	1579
Q Serve(g_s), s	0.0	0.0	0.0	0.5	0.0	0.0	0.6	24.3	0.6	3.1	13.2	0.2
Cycle Q Clear(g_c), s	0.8	0.0	0.0	1.7	0.0	0.0	13.8	24.3	0.6	27.4	13.2	0.2
Prop In Lane	0.64		0.28	0.19		0.79	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	208	0	0	179	0	0	443	1301	1099	307	1301	1099
V/C Ratio(X)	0.12	0.00	0.00	0.26	0.00	0.00	0.02	0.64	0.02	0.14	0.60	0.02
Avail Cap(c_a), veh/h	603	0	0	601	0	0	443	1301	1099	307	1301	1099
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.81	0.81	0.81	0.75	0.75	0.75
Uniform Delay (d), s/veh	26.4	0.0	0.0	26.8	0.0	0.0	17.9	16.4	7.3	16.2	4.8	2.8
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.8	0.0	0.0	0.1	2.0	0.0	0.7	1.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	0.0	0.0	1.2	0.0	0.0	0.2	17.6	0.2	0.8	5.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.6	0.0	0.0	27.5	0.0	0.0	18.0	18.4	7.3	16.9	6.4	2.8
LnGrp LOS	C	A	A	C	A	A	B	B	A	B	A	A
Approach Vol, veh/h	25			47			868			845		
Approach Delay, s/veh	26.6			27.5			18.1			6.8		
Approach LOS	C			C			B			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	46.5			13.5			46.5			13.5		
Change Period (Y+Rc), s	4.8			* 9.3			4.8			* 9.3		
Max Green Setting (Gmax), s	25.2			* 21			25.2			* 21		
Max Q Clear Time (g_c+I1), s	26.3			2.8			29.4			3.7		
Green Ext Time (p_c), s	0.0			0.1			0.0			0.2		

Intersection Summary

HCM 6th Ctrl Delay	13.1
HCM 6th LOS	B

Notes

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

Queues

10: Landale Street & Colfax Avenue

06/24/2024



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	48	17	832	799	30
v/c Ratio	0.19	0.04	0.57	0.55	0.02
Control Delay	17.2	4.8	7.9	3.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.2	4.8	7.9	3.6	0.1
Queue Length 50th (ft)	8	2	167	5	0
Queue Length 95th (ft)	33	8	299	6	m0
Internal Link Dist (ft)	262		575	593	
Turn Bay Length (ft)		40			80
Base Capacity (vph)	526	397	1448	1448	1235
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.09	0.04	0.57	0.55	0.02

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

10: Landale Street & Colfax Avenue

06/24/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	24	20	16	765	735	28
Future Volume (vph)	24	20	16	765	735	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	9.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1701		1770	1863	1863	1583
Flt Permitted	0.97		0.27	1.00	1.00	1.00
Satd. Flow (perm)	1701		511	1863	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	26	22	17	832	799	30
RTOR Reduction (vph)	20	0	0	0	0	6
Lane Group Flow (vph)	28	0	17	832	799	24
Turn Type	Perm		Perm	NA	NA	Perm
Protected Phases				6	2	
Permitted Phases	8		6			2
Actuated Green, G (s)	4.9		41.1	41.1	41.1	41.1
Effective Green, g (s)	4.9		41.1	41.1	41.1	41.1
Actuated g/C Ratio	0.08		0.69	0.69	0.69	0.69
Clearance Time (s)	9.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		4.9	4.9	5.3	5.3
Lane Grp Cap (vph)	138		350	1276	1276	1084
v/s Ratio Prot				c0.45	0.43	
v/s Ratio Perm	c0.02		0.03			0.02
v/c Ratio	0.20		0.05	0.65	0.63	0.02
Uniform Delay, d1	25.7		3.1	5.4	5.2	3.0
Progression Factor	1.00		1.00	1.00	0.48	0.05
Incremental Delay, d2	0.7		0.3	2.6	1.6	0.0
Delay (s)	26.4		3.3	8.0	4.1	0.2
Level of Service	C		A	A	A	A
Approach Delay (s)	26.4			7.9	4.0	
Approach LOS	C			A	A	

Intersection Summary

HCM 2000 Control Delay	6.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		










c Critical Lane Group

HCM 6th Signalized Intersection Summary

11: Whitsett Avenue & Moorpark Street

06/24/2024












Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	149	933	106	144	649	95	120	780	150	94	426	130
Future Volume (veh/h)	149	933	106	144	649	95	120	780	150	94	426	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	162	1014	115	157	705	103	130	848	163	102	463	141
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	95	850	720	80	725	106	333	1278	246	193	1156	349
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	675	1870	1585	499	1595	233	816	2973	571	558	2688	813
Grp Volume(v), veh/h	162	1014	115	157	0	808	130	507	504	102	305	299
Grp Sat Flow(s),veh/h/ln	675	1870	1585	499	0	1828	816	1777	1768	558	1777	1724
Q Serve(g_s), s	2.0	40.9	3.8	0.0	0.0	38.9	11.8	20.5	20.5	16.1	10.6	10.8
Cycle Q Clear(g_c), s	40.9	40.9	3.8	40.9	0.0	38.9	22.5	20.5	20.5	36.5	10.6	10.8
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.32	1.00		0.47
Lane Grp Cap(c), veh/h	95	850	720	80	0	831	333	764	760	193	764	741
V/C Ratio(X)	1.70	1.19	0.16	1.96	0.00	0.97	0.39	0.66	0.66	0.53	0.40	0.40
Avail Cap(c_a), veh/h	95	850	720	80	0	831	333	764	760	193	764	741
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	24.5	14.4	45.0	0.0	24.0	25.5	20.5	20.5	35.0	17.6	17.7
Incr Delay (d2), s/veh	356.8	98.4	0.5	475.0	0.0	25.2	3.4	4.5	4.5	10.0	1.6	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(95%),veh/ln	20.7	56.5	2.5	22.1	0.0	28.6	4.5	13.7	13.7	4.7	7.9	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	401.7	122.9	14.9	520.0	0.0	49.2	28.9	25.0	25.0	45.0	19.2	19.3
LnGrp LOS	F	F	B	F	A	D	C	C	C	D	B	B
Approach Vol, veh/h	1291					965		1141		706		
Approach Delay, s/veh	148.3					125.8		25.4		23.0		
Approach LOS	F					F		C		C		
Timer - Assigned Phs	2		4			6		8				
Phs Duration (G+Y+Rc), s	46.0		44.0			46.0		44.0				
Change Period (Y+Rc), s	5.1		5.3			5.1		5.3				
Max Green Setting (Gmax), s	40.9		38.7			40.9		38.7				
Max Q Clear Time (g_c+I1), s	42.9		38.5			42.9		24.5				
Green Ext Time (p_c), s	0.0		0.1			0.0		6.3				
Intersection Summary												
HCM 6th Ctrl Delay	87.3											
HCM 6th LOS	F											

HCM 6th Signalized Intersection Summary

12: Laurel Canyon Boulevard & Moorpark Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	329	647	123	183	516	114	175	1343	214	118	1330	305
Future Volume (veh/h)	329	647	123	183	516	114	175	1343	214	118	1330	305
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	358	703	134	199	561	124	190	1460	233	128	1446	332
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	248	844	161	279	520	575	238	896	141	232	834	186
Arrive On Green	0.09	0.28	0.28	0.09	0.28	0.28	0.09	0.29	0.29	0.11	0.38	0.38
Sat Flow, veh/h	1781	2978	567	1781	1870	1585	1781	3076	484	1781	2886	645
Grp Volume(v), veh/h	358	419	418	199	561	124	190	834	859	128	875	903
Grp Sat Flow(s),veh/h/ln	1781	1777	1768	1781	1870	1585	1781	1777	1783	1781	1777	1754
Q Serve(g_s), s	8.5	19.9	19.9	7.2	25.0	4.9	6.7	26.2	26.2	4.3	26.0	26.0
Cycle Q Clear(g_c), s	8.5	19.9	19.9	7.2	25.0	4.9	6.7	26.2	26.2	4.3	26.0	26.0
Prop In Lane	1.00		0.32	1.00		1.00	1.00		0.27	1.00		0.37
Lane Grp Cap(c), veh/h	248	503	501	279	520	575	238	518	520	232	513	507
V/C Ratio(X)	1.44	0.83	0.83	0.71	1.08	0.22	0.80	1.61	1.65	0.55	1.71	1.78
Avail Cap(c_a), veh/h	248	503	501	279	520	575	238	518	520	238	513	507
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	25.2	30.3	30.3	23.2	32.5	19.8	23.3	31.9	31.9	22.0	27.7	27.7
Incr Delay (d2), s/veh	220.3	11.4	11.5	8.3	62.7	0.2	17.1	283.7	302.4	0.2	318.2	352.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	29.4	14.8	14.8	6.3	28.4	3.2	6.8	79.6	84.3	2.3	77.0	83.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	245.5	41.7	41.8	31.6	95.2	20.0	40.3	315.6	334.2	22.3	345.9	379.9
LnGrp LOS	F	D	D	C	F	B	D	F	F	C	F	F
Approach Vol, veh/h	1195				884		1883				1906	
Approach Delay, s/veh	102.8				70.3		296.3				340.3	
Approach LOS	F				E		F				F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.3	31.4	14.0	31.3	13.1	31.6	13.5	31.8				
Change Period (Y+Rc), s	5.3	* 5.4	* 5.5	6.3	* 5.4	* 5.4	* 5.5	6.3				
Max Green Setting (Gmax), s	8	* 26	* 8.5	25.0	* 8	* 26	* 8	25.5				
Max Q Clear Time (g_c+I1), s	10.7	28.0	10.5	27.0	6.3	28.2	9.2	21.9				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.7				

Intersection Summary

HCM 6th Ctrl Delay 237.1

HCM 6th LOS F

Notes

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






HCM 6th TWSC

13: Moorpark Street & Radford Avenue

06/24/2024

Intersection

Int Delay, s/veh 1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	94	917	882	45	13	56
Future Vol, veh/h	94	917	882	45	13	56
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	50
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	102	997	959	49	14	61

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1008	0	0 1687 504
Stage 1	-	-	- 984 -
Stage 2	-	-	- 703 -
Critical Hdwy	4.14	-	- 6.84 6.94
Critical Hdwy Stg 1	-	-	- 5.84 -
Critical Hdwy Stg 2	-	-	- 5.84 -
Follow-up Hdwy	2.22	-	- 3.52 3.32
Pot Cap-1 Maneuver	683	-	- 85 513
Stage 1	-	-	- 323 -
Stage 2	-	-	- 452 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	683	-	- 72 513
Mov Cap-2 Maneuver	-	-	- 72 -
Stage 1	-	-	- 275 -
Stage 2	-	-	- 452 -























Approach	EB	WB	SB
HCM Control Delay, s	1	0	23.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	683	-	-	-	72	513
HCM Lane V/C Ratio	0.15	-	-	-	0.196	0.119
HCM Control Delay (s)	11.2	-	-	-	66.8	13
HCM Lane LOS	B	-	-	-	F	B
HCM 95th %tile Q(veh)	0.5	-	-	-	0.7	0.4

HCM 6th Signalized Intersection Summary

14: Colfax Avenue & Moorpark Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	653	166	161	614	139	166	411	242	162	469	139
Future Volume (veh/h)	106	653	166	161	614	139	166	411	242	162	469	139
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	0.99		0.95	0.98		0.94	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	115	710	180	175	667	151	180	447	263	176	510	151
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	262	1207	306	264	852	193	169	387	308	238	669	663
Arrive On Green	0.15	0.87	0.87	0.20	0.20	0.20	0.21	0.21	0.21	0.09	0.36	0.36
Sat Flow, veh/h	1781	2786	706	616	2850	644	760	1870	1488	1781	1870	1529
Grp Volume(v), veh/h	115	453	437	175	416	402	180	447	263	176	510	151
Grp Sat Flow(s),veh/h/ln	1781	1777	1715	616	1777	1717	760	1870	1488	1781	1870	1529
Q Serve(g_s), s	3.7	6.2	6.2	25.2	20.0	20.0	10.5	18.6	15.3	6.7	21.7	5.6
Cycle Q Clear(g_c), s	3.7	6.2	6.2	25.2	20.0	20.0	18.6	18.6	15.3	6.7	21.7	5.6
Prop In Lane	1.00		0.41	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	262	770	743	264	531	513	169	387	308	238	669	663
V/C Ratio(X)	0.44	0.59	0.59	0.66	0.78	0.78	1.07	1.16	0.85	0.74	0.76	0.23
Avail Cap(c_a), veh/h	270	770	743	264	531	513	169	387	308	238	669	663
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	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	0.82	0.82	0.82
Uniform Delay (d), s/veh	19.2	3.8	3.8	35.3	33.2	33.2	42.2	35.7	34.4	25.6	25.5	16.2
Incr Delay (d2), s/veh	1.2	3.3	3.4	12.4	11.0	11.4	87.6	95.7	25.0	9.5	6.7	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(95%),veh/ln	2.6	3.5	3.4	8.4	15.8	15.4	12.8	27.4	12.0	6.0	15.1	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.3	7.1	7.2	47.7	44.2	44.7	129.9	131.4	59.4	35.1	32.2	16.8
LnGrp LOS	C	A	A	D	D	D	F	F	E	D	C	B
Approach Vol, veh/h	1005				993				890			
Approach Delay, s/veh	8.7				45.0				109.8			
Approach LOS	A				D				F			
Timer - Assigned Phs	1	2	4			6	7	8				
Phs Duration (G+Y+Rc), s	12.1	36.3	41.6			48.4	13.6	28.0				
Change Period (Y+Rc), s	* 5.5	* 9.4	* 9.4			* 9.4	5.6	* 9.4				
Max Green Setting (Gmax), s	* 7	* 27	* 32			* 39	8.0	* 19				
Max Q Clear Time (g_c+I1), s	5.7	27.2	23.7			8.2	8.7	20.6				
Green Ext Time (p_c), s	0.0	0.0	2.4			6.4	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 47.3

HCM 6th LOS D

Notes

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

HCM 6th TWSC
15: Irvine Avenue & Moorpark Street























06/24/2024

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔			↔	
Traffic Vol, veh/h	6	938	17	16	897	7	5	0	11	0	0	15
Future Vol, veh/h	6	938	17	16	897	7	5	0	11	0	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	1020	18	17	975	8	5	0	12	0	0	16
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	983	0	0	1038	0	0	1565	2060	519	1537	2065	492
Stage 1	-	-	-	-	-	-	1043	1043	-	1013	1013	-
Stage 2	-	-	-	-	-	-	522	1017	-	524	1052	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	698	-	-	665	-	-	75	54	502	79	54	522
Stage 1	-	-	-	-	-	-	245	305	-	256	315	-
Stage 2	-	-	-	-	-	-	506	313	-	504	302	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	698	-	-	665	-	-	68	50	502	72	50	522
Mov Cap-2 Maneuver	-	-	-	-	-	-	68	50	-	72	50	-
Stage 1	-	-	-	-	-	-	239	298	-	250	297	-
Stage 2	-	-	-	-	-	-	463	295	-	480	295	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.5			28.9			12.1		
HCM LOS							D			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	168	698	-	-	665	-	-	522				
HCM Lane V/C Ratio	0.104	0.009	-	-	0.026	-	-	0.031				
HCM Control Delay (s)	28.9	10.2	0.1	-	10.6	0.3	-	12.1				
HCM Lane LOS	D	B	A	-	B	A	-	B				
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.1				

HCM 6th Signalized Intersection Summary

16: Tujunga Avenue & Moorpark Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	240	766	95	100	593	72	94	426	107	102	262	102
Future Volume (veh/h)	240	766	95	100	593	72	94	426	107	102	262	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	261	833	103	109	645	78	102	463	116	111	285	111
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	369	1647	204	315	1652	200	300	678	575	208	434	368
Arrive On Green	0.69	0.69	0.69	0.52	0.52	0.52	0.07	0.36	0.36	0.23	0.23	0.23
Sat Flow, veh/h	730	3183	394	598	3192	386	1781	1870	1585	835	1870	1585
Grp Volume(v), veh/h	261	465	471	109	359	364	102	463	116	111	285	111
Grp Sat Flow(s),veh/h/ln	730	1777	1800	598	1777	1801	1781	1870	1585	835	1870	1585
Q Serve(g_s), s	29.1	11.3	11.3	12.2	11.0	11.0	3.7	18.9	4.5	11.7	12.4	5.2
Cycle Q Clear(g_c), s	40.1	11.3	11.3	23.4	11.0	11.0	3.7	18.9	4.5	18.8	12.4	5.2
Prop In Lane	1.00		0.22	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	369	920	931	315	920	932	300	678	575	208	434	368
V/C Ratio(X)	0.71	0.51	0.51	0.35	0.39	0.39	0.34	0.68	0.20	0.53	0.66	0.30
Avail Cap(c_a), veh/h	369	920	931	315	920	932	311	692	586	209	436	370
HCM Platoon Ratio	1.33	1.33	1.33	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	0.92	0.92	0.92	0.55	0.55	0.55
Uniform Delay (d), s/veh	18.0	8.5	8.5	20.3	13.1	13.1	23.0	24.3	19.7	37.3	31.3	28.5
Incr Delay (d2), s/veh	10.9	2.0	2.0	3.0	1.2	1.2	0.6	2.5	0.2	1.4	2.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.6	6.7	6.8	3.4	7.8	7.9	2.8	12.9	2.9	4.3	8.5	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.9	10.5	10.5	23.3	14.4	14.4	23.6	26.8	19.9	38.7	33.3	28.8
LnGrp LOS	C	B	B	C	B	B	C	C	B	D	C	C
Approach Vol, veh/h	1197			832			681			507		
Approach Delay, s/veh	14.5			15.5			25.1			33.5		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	2		3	4		6		8				
Phs Duration (G+Y+Rc), s	52.0		11.8	26.3		52.0		38.0				
Change Period (Y+Rc), s	* 5.4		* 5.3	* 5.4		* 5.4		* 5.4				
Max Green Setting (Gmax), s	* 46		* 7	* 21		* 46		* 33				
Max Q Clear Time (g_c+I1), s	25.4		5.7	20.8		42.1		20.9				
Green Ext Time (p_c), s	7.9		0.0	0.1		3.0		2.6				
Intersection Summary												
HCM 6th Ctrl Delay	20.0											
HCM 6th LOS	C											
Notes												

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

HCM 6th Signalized Intersection Summary

17: Woodbridge Street & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↑	↔	↔	↔	↔
Traffic Volume (veh/h)	11	8	20	17	10	64	20	573	30	45	380	37
Future Volume (veh/h)	11	8	20	17	10	64	20	573	30	45	380	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	12	9	22	18	11	70	22	623	33	49	413	40
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	75	48	75	64	24	98	837	1509	1279	632	1355	131
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.81	0.81	0.81	1.00	1.00	1.00
Sat Flow, veh/h	278	552	869	189	279	1131	938	1870	1585	777	1679	163
Grp Volume(v), veh/h	43	0	0	99	0	0	22	623	33	49	0	453
Grp Sat Flow(s),veh/h/ln	1699	0	0	1599	0	0	938	1870	1585	777	0	1841
Q Serve(g_s), s	0.0	0.0	0.0	2.8	0.0	0.0	0.4	8.7	0.4	0.7	0.0	0.0
Cycle Q Clear(g_c), s	2.1	0.0	0.0	5.4	0.0	0.0	0.4	8.7	0.4	9.4	0.0	0.0
Prop In Lane	0.28		0.51	0.18		0.71	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	198	0	0	185	0	0	837	1509	1279	632	0	1486
V/C Ratio(X)	0.22	0.00	0.00	0.53	0.00	0.00	0.03	0.41	0.03	0.08	0.00	0.30
Avail Cap(c_a), veh/h	509	0	0	501	0	0	837	1509	1279	632	0	1486
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.61	0.61	0.61	0.73	0.00	0.73
Uniform Delay (d), s/veh	38.5	0.0	0.0	40.0	0.0	0.0	1.7	2.5	1.7	0.6	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	2.4	0.0	0.0	0.0	0.5	0.0	0.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	0.0	0.0	4.1	0.0	0.0	0.1	3.3	0.1	0.1	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.1	0.0	0.0	42.4	0.0	0.0	1.8	3.0	1.7	0.7	0.0	0.4
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	43			99			678			502		
Approach Delay, s/veh	39.1			42.4			2.9			0.4		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	77.1			12.9			77.1			12.9		
Change Period (Y+Rc), s	* 4.5			* 5.1			* 4.5			* 5.1		
Max Green Setting (Gmax), s	* 55			* 26			* 55			* 26		
Max Q Clear Time (g_c+I1), s	11.4			4.1			10.7			7.4		
Green Ext Time (p_c), s	7.6			0.2			11.9			0.5		

Intersection Summary

HCM 6th Ctrl Delay	6.1
HCM 6th LOS	A

Notes

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

Queues

18: Whitsett Avenue & Ventura Boulevard

06/24/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	297	1271	253	41	1272	367	102	219	332	183	252
v/c Ratio	0.77	0.69	0.28	0.35	1.23	0.64	0.62	0.69	0.69	0.58	0.26
Control Delay	38.8	21.4	6.9	27.8	136.5	14.3	53.6	48.8	48.8	44.8	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.8	21.4	6.9	27.8	136.5	14.3	53.6	48.8	48.8	44.8	9.2
Queue Length 50th (ft)	129	307	30	15	-524	76	61	129	104	109	63
Queue Length 95th (ft)	#340	445	85	m24	m#601	m121	109	192	151	164	103
Internal Link Dist (ft)	1429		2938		634		1297				
Turn Bay Length (ft)	95	135		145	60		60	220		65	
Base Capacity (vph)	388	1851	903	118	1031	570	231	438	515	441	947
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.69	0.28	0.35	1.23	0.64	0.44	0.50	0.64	0.41	0.27

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
























Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

18: Whitsett Avenue & Ventura Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	273	1169	233	38	1170	338	94	177	25	305	168	232
Future Volume (vph)	273	1169	233	38	1170	338	94	177	25	305	168	232
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	5.4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1828		3433	1863	1583
Flt Permitted	0.12	1.00	1.00	0.22	1.00	1.00	0.53	1.00		0.95	1.00	1.00
Satd. Flow (perm)	216	3539	1583	407	3539	1583	978	1828		3433	1863	1583
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)	297	1271	253	41	1272	367	102	192	27	332	183	252
RTOR Reduction (vph)	0	0	75	0	0	109	0	6	0	0	0	10
Lane Group Flow (vph)	297	1271	178	41	1272	258	102	213	0	332	183	242
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Prot	NA	custom
Protected Phases	1	6			2			4		3	8	1 3
Permitted Phases	6		6	2		2	4					8
Actuated Green, G (s)	52.3	52.3	52.3	29.1	29.1	29.1	17.0	17.0		14.0	17.0	54.2
Effective Green, g (s)	52.3	52.3	52.3	29.1	29.1	29.1	17.0	17.0		14.0	17.0	54.2
Actuated g/C Ratio	0.52	0.52	0.52	0.29	0.29	0.29	0.17	0.17		0.14	0.17	0.54
Clearance Time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	
Vehicle Extension (s)	3.0	4.9	4.9	4.7	4.7	4.7	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	389	1850	827	118	1029	460	166	310		480	316	857
v/s Ratio Prot	0.14	c0.36			c0.36			c0.12		c0.10	0.10	0.10
v/s Ratio Perm	0.26		0.11	0.10		0.16	0.10					0.05
v/c Ratio	0.76	0.69	0.21	0.35	1.24	0.56	0.61	0.69		0.69	0.58	0.28
Uniform Delay, d1	24.6	17.8	12.8	28.0	35.5	30.0	38.5	39.0		40.9	38.2	12.4
Progression Factor	1.00	1.00	1.00	0.76	0.72	0.61	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	8.6	2.1	0.6	4.8	111.5	3.0	6.6	6.2		4.3	2.6	0.2
Delay (s)	33.2	19.9	13.4	26.1	136.9	21.2	45.1	45.2		45.2	40.8	12.6
Level of Service	C	B	B	C	F	C	D	D		D	D	B
Approach Delay (s)		21.1			108.9			45.2			33.4	
Approach LOS		C			F			D			C	
Intersection Summary												
HCM 2000 Control Delay			57.0									
HCM 2000 Volume to Capacity ratio			0.92									
Actuated Cycle Length (s)			100.0									
Intersection Capacity Utilization			85.4%									
Analysis Period (min)			15									
c Critical Lane Group												

Queues

19: Laurel Canyon Boulevard & Ventura Place

06/24/2024



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	203	83	309	34	1260	37	128	1464
v/c Ratio	1.53	0.38	0.95	0.19	0.66	0.04	0.94	0.65
Control Delay	306.0	45.9	57.8	27.3	24.6	0.6	97.1	23.9
Queue Delay	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0
Total Delay	306.0	45.9	57.8	27.3	27.4	0.6	97.1	23.9
Queue Length 50th (ft)	~194	49	83	19	426	0	~90	281
Queue Length 95th (ft)	#339	97	#251	m21	m460	m0	#207	337
Internal Link Dist (ft)	123	395			458			232
Turn Bay Length (ft)			380	105		85	55	
Base Capacity (vph)	133	224	330	177	1942	930	136	2258
Starvation Cap Reductn	0	0	0	0	545	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.53	0.37	0.94	0.19	0.90	0.04	0.94	0.65

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.


Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

19: Laurel Canyon Boulevard & Ventura Place

06/24/2024













												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↕	↔	↔	↕	↕
Traffic Volume (vph)	117	45	25	46	30	284	31	1159	34	118	1263	84
Future Volume (vph)	117	45	25	46	30	284	31	1159	34	118	1263	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		9.4			9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.91	
Frpb, ped/bikes		1.00			1.00	0.87	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes		0.92			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.98			1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.97			0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1631			1808	1376	1770	3539	1550	1768	5038	
Flt Permitted		0.76			0.97	1.00	0.95	1.00	1.00	0.16	1.00	
Satd. Flow (perm)		1280			1808	1376	1770	3539	1550	305	5038	
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)	127	49	27	50	33	309	34	1260	37	128	1373	91
RTOR Reduction (vph)	0	5	0	0	0	160	0	0	17	0	7	0
Lane Group Flow (vph)	0	198	0	0	83	149	34	1260	20	128	1457	0
Confl. Peds. (#/hr)	49					49			5	5		
Turn Type	Perm	NA		Split	NA	Perm	Prot	NA	Perm	Perm	NA	
Protected Phases		3		4	4		1	6			2	
Permitted Phases	3					4			6	2		
Actuated Green, G (s)		10.2			12.1	12.1	6.0	53.6	53.6	42.6	42.6	
Effective Green, g (s)		10.2			12.1	12.1	6.0	53.6	53.6	42.6	42.6	
Actuated g/C Ratio		0.10			0.12	0.12	0.06	0.54	0.54	0.43	0.43	
Clearance Time (s)		9.4			9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	4.8	4.8	3.1	3.1	
Lane Grp Cap (vph)		130			218	166	106	1896	830	129	2146	
v/s Ratio Prot					0.05		0.02	c0.36			0.29	
v/s Ratio Perm		c0.15				c0.11			0.01	c0.42		
v/c Ratio		1.52			0.38	0.90	0.32	0.66	0.02	0.99	0.68	
Uniform Delay, d1		44.9			40.5	43.3	45.0	16.7	10.9	28.5	23.2	
Progression Factor		1.00			1.00	1.00	0.63	1.42	1.00	1.00	1.00	
Incremental Delay, d2		269.2			1.1	41.3	0.8	0.8	0.0	77.2	1.8	
Delay (s)		314.1			41.6	84.7	29.0	24.6	10.9	105.7	24.9	
Level of Service		F			D	F	C	C	B	F	C	
Approach Delay (s)		314.1			75.5			24.3			31.4	
Approach LOS		F			E			C			C	
Intersection Summary												
HCM 2000 Control Delay		50.0										
HCM 2000 Volume to Capacity ratio		1.04										
Actuated Cycle Length (s)		100.0										
Intersection Capacity Utilization		84.0%										
Analysis Period (min)		15										
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

20: Laurel Canyon Boulevard & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	719	292	223	713	91	508	970	255	227	875	240
Future Volume (veh/h)	213	719	292	223	713	91	508	970	255	227	875	240
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.92	0.99		0.92	1.00		0.97	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	232	782	317	242	775	99	552	1054	277	247	951	261
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	270	974	647	278	974	544	536	1134	490	311	903	523
Arrive On Green	0.17	0.55	0.55	0.09	0.27	0.27	0.16	0.32	0.32	0.03	0.08	0.08
Sat Flow, veh/h	1781	3554	1464	1781	3554	1464	3456	3554	1536	3456	3554	1523
Grp Volume(v), veh/h	232	782	317	242	775	99	552	1054	277	247	951	261
Grp Sat Flow(s),veh/h/ln	1781	1777	1464	1781	1777	1464	1728	1777	1536	1728	1777	1523
Q Serve(g_s), s	8.6	17.8	3.4	8.8	20.2	4.6	15.5	28.7	15.0	7.1	25.4	7.5
Cycle Q Clear(g_c), s	8.6	17.8	3.4	8.8	20.2	4.6	15.5	28.7	15.0	7.1	25.4	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	270	974	647	278	974	544	536	1134	490	311	903	523
V/C Ratio(X)	0.86	0.80	0.49	0.87	0.80	0.18	1.03	0.93	0.57	0.79	1.05	0.50
Avail Cap(c_a), veh/h	270	974	647	278	974	544	536	1134	490	311	903	523
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	0.67	0.67	0.67	0.83	0.83	0.83	0.11	0.11	0.11	0.72	0.72	0.72
Uniform Delay (d), s/veh	26.7	20.4	4.2	28.4	33.7	21.7	42.3	33.0	28.3	47.6	45.8	12.0
Incr Delay (d2), s/veh	16.8	4.8	1.8	21.3	5.6	0.6	21.7	2.0	0.3	9.8	40.8	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(95%),veh/ln	7.7	8.6	2.8	9.3	13.7	2.9	9.8	14.0	6.6	6.2	23.7	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.5	25.2	6.0	49.7	39.3	22.3	63.9	35.0	28.6	57.4	86.6	13.9
LnGrp LOS	D	C	A	D	D	C	F	C	C	E	F	B
Approach Vol, veh/h	1331			1116			1883			1459		
Approach Delay, s/veh	23.8			40.1			42.5			68.7		
Approach LOS	C			D			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.2	33.7	21.1	31.0	14.2	33.7	14.6	37.5				
Change Period (Y+Rc), s	5.4	6.3	5.6	5.6	5.6	6.3	5.6	5.6				
Max Green Setting (Gmax), s	10.8	27.4	15.5	25.4	8.6	27.4	9.0	31.9				
Max Q Clear Time (g_c+T0), s	10.8	19.8	17.5	27.4	10.6	22.2	9.1	30.7				
Green Ext Time (p_c), s	0.0	5.8	0.0	0.0	0.0	2.7	0.0	1.0				

Intersection Summary

HCM 6th Ctrl Delay 44.3

HCM 6th LOS D

Notes

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

Queues

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Lane Group	EBL	EBT	WBL	WBT	WBR2	NBT	NBR	SBL	SBT	SBR2
Lane Group Flow (vph)	214	1319	126	1041	110	70	89	138	183	127
v/c Ratio	0.38	0.77	1.24	1.42	0.38	0.24	0.22	0.66	1.20	1.11
Control Delay	9.9	5.6	217.1	237.6	51.8	53.4	1.3	75.3	186.9	172.0
Queue Delay	73.5	48.9	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	83.4	54.4	217.1	239.7	51.8	53.4	1.3	75.3	186.9	172.0
Queue Length 50th (ft)	126	127	~141	~671	87	56	0	124	~214	~141
Queue Length 95th (ft)	m83	m1	#277	#808	147	105	0	#220	#371	#277
Internal Link Dist (ft)		48		634		66			226	
Turn Bay Length (ft)	90		95		55		30	90		90
Base Capacity (vph)	580	1744	102	732	287	308	405	209	153	114
Starvation Cap Reductn	456	628	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	187	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.73	1.18	1.24	1.91	0.38	0.23	0.22	0.66	1.20	1.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

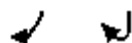
06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	197	1193	20	116	858	99	101	51	14	82	127	22
Future Volume (vph)	197	1193	20	116	858	99	101	51	14	82	127	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.7		4.9	6.1		6.1		6.9	6.9	7.0	7.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.98		0.85		1.00	0.85	1.00	0.83
Flpb, ped/bikes	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	0.98		0.85		1.00	0.85	1.00	0.87
Flt Protected	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (prot)	1770	3524		1770	3430		1344		1792	1352	1770	1341
Flt Permitted	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (perm)	1770	3524		1770	3430		1344		1792	1352	1770	1341
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)	214	1297	22	126	933	108	110	55	15	89	138	24
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	74	0	0
Lane Group Flow (vph)	214	1318	0	126	1041	0	110	0	70	15	138	183
Confl. Peds. (#/hr)	42		32	32		42	42	75		75	75	
Turn Type	Prot	NA		Prot	NA		Perm	Split	NA	Perm	Split	NA
Protected Phases	1 3	3 6		5	2			7	7		8	8
Permitted Phases							2			7		
Actuated Green, G (s)	44.8	67.8		8.1	29.9		29.9		23.0	23.0	16.6	16.6
Effective Green, g (s)	44.8	61.7		8.1	29.9		29.9		23.0	23.0	16.6	16.6
Actuated g/C Ratio	0.32	0.44		0.06	0.21		0.21		0.16	0.16	0.12	0.12
Clearance Time (s)				4.9	6.1		6.1		6.9	6.9	7.0	7.0
Vehicle Extension (s)				3.0	4.8		4.8		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	566	1553		102	732		287		294	222	209	159
v/s Ratio Prot	0.12	c0.37		0.07	c0.30				c0.04		0.08	c0.14
v/s Ratio Perm							0.08			0.01		
v/c Ratio	0.38	0.85		1.24	1.42		0.38		0.24	0.07	0.66	1.15
Uniform Delay, d1	36.8	35.0		66.0	55.0		47.2		50.9	49.4	59.0	61.7
Progression Factor	0.26	0.18		1.00	1.00		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0	0.4		165.2	197.9		3.8		0.4	0.1	7.6	117.7
Delay (s)	9.6	6.6		231.2	253.0		51.0		51.3	49.5	66.6	179.4
Level of Service	A	A		F	F		D		D	D	E	F
Approach Delay (s)		7.0			233.4				50.3			135.3
Approach LOS		A			F				D			F
Intersection Summary												
HCM 2000 Control Delay			110.5			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			0.94									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			31.8			
Intersection Capacity Utilization			93.3%			ICU Level of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Movement	SBR	SBR2
Lane Configurations		
Traffic Volume (vph)	146	117
Future Volume (vph)	146	117
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		7.0
Lane Util. Factor		1.00
Frpb, ped/bikes		0.67
Flpb, ped/bikes		1.00
Frt		0.85
Flt Protected		1.00
Satd. Flow (prot)		1061
Flt Permitted		1.00
Satd. Flow (perm)		1061
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	159	127
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	127
Confl. Peds. (#/hr)	75	75
Turn Type		Perm
Protected Phases		
Permitted Phases		8
Actuated Green, G (s)		16.6
Effective Green, g (s)		16.6
Actuated g/C Ratio		0.12
Clearance Time (s)		7.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)		125
v/s Ratio Prot		
v/s Ratio Perm		0.12
v/c Ratio		1.02
Uniform Delay, d1		61.7
Progression Factor		1.00
Incremental Delay, d2		84.8
Delay (s)		146.5
Level of Service		F
Approach Delay (s)		
Approach LOS		
Intersection Summary		

HCM 6th Signalized Intersection Summary

22: Carpenter Avenue & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	1260	87	212	1112	40	82	14	180	29	17	26
Future Volume (veh/h)	36	1260	87	212	1112	40	82	14	180	29	17	26
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	0.98		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	39	1370	95	230	1209	43	89	15	196	32	18	28
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	191	1964	136	179	2041	73	133	32	224	190	95	356
Arrive On Green	0.58	0.58	0.58	0.19	0.19	0.19	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	444	3363	232	362	3495	124	379	139	977	573	414	1556
Grp Volume(v), veh/h	39	721	744	230	614	638	300	0	0	50	0	28
Grp Sat Flow(s),veh/h/ln	444	1777	1819	362	1777	1843	1495	0	0	986	0	1556
Q Serve(g_s), s	7.0	28.4	28.8	29.6	31.5	31.5	16.0	0.0	0.0	0.0	0.0	1.4
Cycle Q Clear(g_c), s	38.6	28.4	28.8	58.4	31.5	31.5	19.4	0.0	0.0	3.3	0.0	1.4
Prop In Lane	1.00		0.13	1.00		0.07	0.30		0.65	0.64		1.00
Lane Grp Cap(c), veh/h	191	1038	1062	179	1038	1076	389	0	0	285	0	356
V/C Ratio(X)	0.20	0.70	0.70	1.28	0.59	0.59	0.77	0.00	0.00	0.18	0.00	0.08
Avail Cap(c_a), veh/h	191	1038	1062	179	1038	1076	503	0	0	387	0	475
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.61	0.61	0.61	0.09	0.09	0.09	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.3	14.6	14.6	60.7	29.5	29.5	37.2	0.0	0.0	30.8	0.0	30.3
Incr Delay (d2), s/veh	1.5	2.4	2.4	131.5	0.2	0.2	5.4	0.0	0.0	0.3	0.0	0.1
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(95%),veh/ln	1.5	15.2	15.7	15.8	16.8	17.4	12.1	0.0	0.0	1.8	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.8	16.9	17.0	192.2	29.7	29.7	42.6	0.0	0.0	31.0	0.0	30.4
LnGrp LOS	C	B	B	F	C	C	D	A	A	C	A	C
Approach Vol, veh/h	1504			1482			300			78		
Approach Delay, s/veh	17.3			55.0			42.6			30.8		
Approach LOS	B			D			D			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	67.6			32.4			67.6			32.4		
Change Period (Y+Rc), s	* 9.2			9.5			* 9.2			9.5		
Max Green Setting (Gmax), s	* 51			30.5			* 51			30.5		
Max Q Clear Time (g_c+I1), s	40.6			5.3			60.4			21.4		
Green Ext Time (p_c), s	9.2			0.3			0.0			1.3		

Intersection Summary

HCM 6th Ctrl Delay 36.5

HCM 6th LOS D

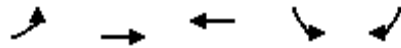
Notes

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

Queues

23: Ventura Boulevard & Colfax Avenue

06/24/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	378	1239	1405	403	339
v/c Ratio	0.68	0.57	1.44	0.82	0.31
Control Delay	18.9	15.8	227.9	47.3	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	18.9	15.8	227.9	47.3	1.8
Queue Length 50th (ft)	179	347	~643	238	0
Queue Length 95th (ft)	m#326	469	#770	325	33
Internal Link Dist (ft)		981	464		
Turn Bay Length (ft)	160			360	360
Base Capacity (vph)	553	2171	975	527	1089
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.68	0.57	1.44	0.76	0.31

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.




















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

23: Ventura Boulevard & Colfax Avenue

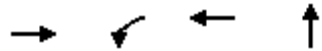
06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	348	1140	0	0	986	306	0	0	0	371	0	312
Future Volume (vph)	348	1140	0	0	986	306	0	0	0	371	0	312
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.4			5.4					5.4		5.7
Lane Util. Factor	1.00	0.95			0.95					1.00		1.00
Frt	1.00	1.00			0.96					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1770	3539			3413					1770		1583
Flt Permitted	0.12	1.00			1.00					0.95		1.00
Satd. Flow (perm)	217	3539			3413					1770		1583
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)	378	1239	0	0	1072	333	0	0	0	403	0	339
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	153
Lane Group Flow (vph)	378	1239	0	0	1405	0	0	0	0	403	0	186
Turn Type	pm+pt	NA			NA					pm+pt		pm+ov
Protected Phases	5	2			6			3		4		5
Permitted Phases	2						3			7		4
Actuated Green, G (s)	61.4	61.4			28.6					27.8		54.9
Effective Green, g (s)	61.4	61.4			28.6					27.8		54.9
Actuated g/C Ratio	0.61	0.61			0.29					0.28		0.55
Clearance Time (s)	5.7	5.4			5.4					5.4		5.7
Vehicle Extension (s)	3.0	4.3			4.5					3.0		3.0
Lane Grp Cap (vph)	554	2172			976					492		869
v/s Ratio Prot	c0.18	0.35			c0.41					c0.23		0.06
v/s Ratio Perm	0.23											0.06
v/c Ratio	0.68	0.57			1.44					0.82		0.21
Uniform Delay, d1	22.4	11.5			35.7					33.7		11.5
Progression Factor	0.59	1.20			0.68					1.00		1.00
Incremental Delay, d2	2.4	0.8			202.8					10.2		0.1
Delay (s)	15.7	14.5			227.1					44.0		11.6
Level of Service	B	B			F					D		B
Approach Delay (s)		14.8			227.1			0.0			29.2	
Approach LOS		B			F			A			C	
Intersection Summary												
HCM 2000 Control Delay	96.9				HCM 2000 Level of Service				F			
HCM 2000 Volume to Capacity ratio	1.07											
Actuated Cycle Length (s)	100.0				Sum of lost time (s)				22.8			
Intersection Capacity Utilization	89.4%				ICU Level of Service				E			
Analysis Period (min)	15											
c Critical Lane Group												

Queues

24: Berry Drive & Ventura Boulevard

06/24/2024



Lane Group	EBT	WBL	WBT	NBT
Lane Group Flow (vph)	1759	58	1625	97
v/c Ratio	0.60	0.36	0.56	0.41
Control Delay	5.7	11.6	4.9	10.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.7	11.6	4.9	10.2
Queue Length 50th (ft)	91	6	118	0
Queue Length 95th (ft)	123	m20	233	32
Internal Link Dist (ft)	342		273	287
Turn Bay Length (ft)		65		
Base Capacity (vph)	2916	162	2921	391
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.60	0.36	0.56	0.25



















Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

24: Berry Drive & Ventura Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1600	18	53	1495	0	18	0	71	0	0	0
Future Volume (vph)	0	1600	18	53	1495	0	18	0	71	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0			9.4				
Lane Util. Factor		0.95		1.00	0.95			1.00				
Frt		1.00		1.00	1.00			0.89				
Flt Protected		1.00		0.95	1.00			0.99				
Satd. Flow (prot)		3533		1770	3539			1646				
Flt Permitted		1.00		0.11	1.00			0.99				
Satd. Flow (perm)		3533		197	3539			1646				
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)	0	1739	20	58	1625	0	20	0	77	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	91	0	0	0	0
Lane Group Flow (vph)	0	1759	0	58	1625	0	0	6	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		6			2		3	3			4	
Permitted Phases	6			2						4		
Actuated Green, G (s)		79.7		79.7	79.7			5.9				
Effective Green, g (s)		79.7		79.7	79.7			5.9				
Actuated g/C Ratio		0.80		0.80	0.80			0.06				
Clearance Time (s)		5.0		5.0	5.0			9.4				
Vehicle Extension (s)		4.9		4.0	4.0			3.0				
Lane Grp Cap (vph)		2815		157	2820			97				
v/s Ratio Prot		c0.50			0.46			c0.00				
v/s Ratio Perm				0.30								
v/c Ratio		0.62		0.37	0.58			0.06				
Uniform Delay, d1		4.1		2.9	3.8			44.4				
Progression Factor		1.16		1.46	1.08			1.00				
Incremental Delay, d2		0.9		5.2	0.7			0.3				
Delay (s)		5.6		9.4	4.8			44.7				
Level of Service		A		A	A			D				
Approach Delay (s)		5.6			5.0			44.7			0.0	
Approach LOS		A			A			D			A	
Intersection Summary												
HCM 2000 Control Delay		6.4			HCM 2000 Level of Service			A				
HCM 2000 Volume to Capacity ratio		0.66										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)			23.7				
Intersection Capacity Utilization		62.6%			ICU Level of Service			B				
Analysis Period (min)		15										
c Critical Lane Group												

Queues

25: Ventura Boulevard & Tujunga Avenue

06/24/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	320	1363	1412	164	217
v/c Ratio	0.73	0.51	0.83	0.34	0.34
Control Delay	47.4	2.5	28.7	40.1	19.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	47.4	2.5	28.7	40.1	19.0
Queue Length 50th (ft)	171	80	387	49	85
Queue Length 95th (ft)	231	70	#643	76	118
Internal Link Dist (ft)		426	233	3083	
Turn Bay Length (ft)	180			100	60
Base Capacity (vph)	437	2653	1698	1012	646
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.73	0.51	0.83	0.16	0.34

Intersection Summary

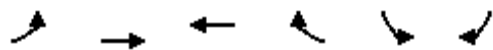
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

25: Ventura Boulevard & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	294	1254	1068	231	151	200
Future Volume (vph)	294	1254	1068	231	151	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.5	5.5		5.5	5.6
Lane Util. Factor	1.00	0.95	0.95		0.97	1.00
Frt	1.00	1.00	0.97		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3445		3433	1583
Flt Permitted	0.07	1.00	1.00		0.95	1.00
Satd. Flow (perm)	137	3539	3445		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	320	1363	1161	251	164	217
RTOR Reduction (vph)	0	0	15	0	0	12
Lane Group Flow (vph)	320	1363	1397	0	164	205
Turn Type	pm+pt	NA	NA		Prot	pt+ov
Protected Phases	1	6	2		4	1 7
Permitted Phases	6					4
Actuated Green, G (s)	75.0	75.0	48.9		14.0	40.0
Effective Green, g (s)	75.0	75.0	48.9		14.0	34.5
Actuated g/C Ratio	0.75	0.75	0.49		0.14	0.34
Clearance Time (s)	5.6	5.5	5.5		5.5	
Vehicle Extension (s)	3.0	4.4	4.9		3.0	
Lane Grp Cap (vph)	437	2654	1684		480	546
v/s Ratio Prot	c0.15	0.39	c0.41		0.05	c0.13
v/s Ratio Perm	0.40					
v/c Ratio	0.73	0.51	0.83		0.34	0.37
Uniform Delay, d1	27.1	5.1	22.0		38.8	24.6
Progression Factor	1.71	0.35	1.00		1.00	1.00
Incremental Delay, d2	5.1	0.6	4.9		0.4	0.4
Delay (s)	51.4	2.3	26.8		39.3	25.1
Level of Service	D	A	C		D	C
Approach Delay (s)		11.7	26.8		31.2	
Approach LOS		B	C		C	
Intersection Summary						
HCM 2000 Control Delay			20.0		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.78			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	22.1
Intersection Capacity Utilization			75.3%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

26: Laurel Canyon Boulevard & Maxwellton Road

06/24/2024









Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Volume (veh/h)	70	0	79	0	0	0	16	1744	0	0	1207	77
Future Volume (veh/h)	70	0	79	0	0	0	16	1744	0	0	1207	77
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93				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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h	76	0	86				17	1896	0	0	1312	84
Peak Hour Factor	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	0	0	2	2
Cap, veh/h	129	0	146				48	2146	0	0	2122	136
Arrive On Green	0.17	0.00	0.17				0.63	0.63	0.00	0.00	0.63	0.63
Sat Flow, veh/h	752	0	851				12	3514	0	0	3484	217
Grp Volume(v), veh/h	162	0	0				1025	888	0	0	686	710
Grp Sat Flow(s),veh/h/ln	1602	0	0				1824	1617	0	0	1777	1830
Q Serve(g_s), s	8.4	0.0	0.0				9.1	41.0	0.0	0.0	21.2	21.3
Cycle Q Clear(g_c), s	8.4	0.0	0.0				42.1	41.0	0.0	0.0	21.2	21.3
Prop In Lane	0.47		0.53				0.02		0.00	0.00		0.12
Lane Grp Cap(c), veh/h	275	0	0				1182	1012	0	0	1112	1146
V/C Ratio(X)	0.59	0.00	0.00				0.87	0.88	0.00	0.00	0.62	0.62
Avail Cap(c_a), veh/h	442	0	0				1182	1012	0	0	1112	1146
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.38	0.38	0.00	0.00	0.28	0.28
Uniform Delay (d), s/veh	34.3	0.0	0.0				14.0	14.0	0.0	0.0	10.3	10.3
Incr Delay (d2), s/veh	2.0	0.0	0.0				3.6	4.5	0.0	0.0	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
%ile BackOfQ(95%),veh/ln	6.1	0.0	0.0				19.3	17.2	0.0	0.0	9.5	9.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.3	0.0	0.0				17.5	18.4	0.0	0.0	11.0	11.0
LnGrp LOS	D	A	A				B	B	A	A	B	B
Approach Vol, veh/h		162						1913			1396	
Approach Delay, s/veh		36.3						17.9			11.0	
Approach LOS		D						B			B	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		65.3		24.7		65.3						
Change Period (Y+Rc), s		9.0		9.2		9.0						
Max Green Setting (Gmax), s		47.0		24.8		47.0						
Max Q Clear Time (g_c+I1), s		23.3		10.4		44.1						
Green Ext Time (p_c), s		18.1		0.8		2.9						
Intersection Summary												
HCM 6th Ctrl Delay			16.0									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary

27: Laurel Canyon Boulevard & Laurel Terrace Drive/Sunshine Terrace Drive

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	21	189	111	38	31	175	1687	214	36	1215	11
Future Volume (veh/h)	18	21	189	111	38	31	175	1687	214	36	1215	11
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	20	23	205	121	41	34	190	1834	233	39	1321	12
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	50	47	306	170	57	37	110	2228	277	115	2167	20
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.06	0.70	0.70	0.60	0.60	0.60
Sat Flow, veh/h	80	215	1407	558	260	172	1781	3181	395	202	3609	33
Grp Volume(v), veh/h	248	0	0	196	0	0	190	1007	1060	39	650	683
Grp Sat Flow(s),veh/h/ln	702	0	0	989	0	0	1781	1777	1799	202	1777	1864
Q Serve(g_s), s	0.0	0.0	0.0	7.8	0.0	0.0	7.4	47.0	51.5	21.0	27.7	27.7
Cycle Q Clear(g_c), s	16.3	0.0	0.0	24.1	0.0	0.0	7.4	47.0	51.5	60.5	27.7	27.7
Prop In Lane	0.08		0.83	0.62		0.17	1.00		0.22	1.00		0.02
Lane Grp Cap(c), veh/h	403	0	0	264	0	0	110	1245	1261	115	1067	1120
V/C Ratio(X)	0.62	0.00	0.00	0.74	0.00	0.00	1.73	0.81	0.84	0.34	0.61	0.61
Avail Cap(c_a), veh/h	415	0	0	274	0	0	110	1245	1261	115	1067	1120
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.68	0.68	0.68
Uniform Delay (d), s/veh	43.2	0.0	0.0	47.1	0.0	0.0	56.3	12.4	13.1	39.5	15.1	15.1
Incr Delay (d2), s/veh	2.6	0.0	0.0	10.1	0.0	0.0	363.5	5.7	6.9	5.4	1.8	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.5	0.0	0.0	10.7	0.0	0.0	23.6	24.9	27.5	2.2	15.5	16.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.8	0.0	0.0	57.2	0.0	0.0	419.8	18.1	20.0	44.9	16.9	16.8
LnGrp LOS	D	A	A	E	A	A	F	B	B	D	B	B
Approach Vol, veh/h	248		196			2257			1372			
Approach Delay, s/veh	45.8		57.2			52.8			17.6			
Approach LOS	D		E			D			B			
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	2.0	76.9	31.1		88.9		31.1					
Change Period (Y+Rc), s	4.6	4.8	* 5		4.8		* 5					
Max Green Setting (Gmax), s	71.2	71.2	* 27		83.2		* 27					
Max Q Clear Time (g_c+I), s	19.4	62.5	18.3		53.5		26.1					
Green Ext Time (p_c), s	0.0	5.8	1.0		21.2		0.1					

Intersection Summary

HCM 6th Ctrl Delay 40.7

HCM 6th LOS D

Notes

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

Queues

28: Laurel Canyon Boulevard & Fryman Road

06/24/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	208	15	14	2062	1662
v/c Ratio	0.67	0.05	0.11	0.83	0.68
Control Delay	44.6	28.6	8.0	14.6	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.6	28.6	8.0	14.6	10.0
Queue Length 50th (ft)	111	7	2	374	235
Queue Length 95th (ft)	170	22	12	#643	390
Internal Link Dist (ft)				236	183
Turn Bay Length (ft)			145		
Base Capacity (vph)	542	485	132	2489	2450
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.38	0.03	0.11	0.83	0.68






















Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

28: Laurel Canyon Boulevard & Fryman Road

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								 			 	
Traffic Volume (vph)	191	0	14	0	0	0	13	1897	0	0	1336	193
Future Volume (vph)	191	0	14	0	0	0	13	1897	0	0	1336	193
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4		5.4				5.4	5.4			5.4	
Lane Util. Factor	1.00		1.00				1.00	0.95			0.95	
Frt	1.00		0.85				1.00	1.00			0.98	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	3539			3472	
Flt Permitted	0.95		1.00				0.10	1.00			1.00	
Satd. Flow (perm)	1770		1583				188	3539			3472	
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)	208	0	15	0	0	0	14	2062	0	0	1452	210
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	9	0
Lane Group Flow (vph)	208	0	15	0	0	0	14	2062	0	0	1653	0
Turn Type	Perm		Perm				Perm	NA		Perm	NA	
Protected Phases								2			6	
Permitted Phases	8		8				2			6		
Actuated Green, G (s)	15.9		15.9				63.3	63.3			63.3	
Effective Green, g (s)	15.9		15.9				63.3	63.3			63.3	
Actuated g/C Ratio	0.18		0.18				0.70	0.70			0.70	
Clearance Time (s)	5.4		5.4				5.4	5.4			5.4	
Vehicle Extension (s)	3.0		3.0				4.8	4.8			5.1	
Lane Grp Cap (vph)	312		279				132	2489			2441	
v/s Ratio Prot								c0.58			0.48	
v/s Ratio Perm	c0.12		0.01				0.07					
v/c Ratio	0.67		0.05				0.11	0.83			0.68	
Uniform Delay, d1	34.6		30.8				4.3	9.5			7.6	
Progression Factor	1.00		1.00				1.00	1.00			1.00	
Incremental Delay, d2	5.3		0.1				1.6	3.3			1.5	
Delay (s)	39.9		30.9				5.9	12.8			9.1	
Level of Service	D		C				A	B			A	
Approach Delay (s)		39.3			0.0			12.8			9.1	
Approach LOS		D			A			B			A	
Intersection Summary												
HCM 2000 Control Delay			12.7				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.80									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			10.8		
Intersection Capacity Utilization			70.9%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th TWSC
29: Laurel Canyon Boulevard & Woodbridge Street

06/24/2024

Intersection												
Int Delay, s/veh	77.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	5	1	36	6	1	111	38	1677	23	71	1628	31
Future Vol, veh/h	5	1	36	6	1	111	38	1677	23	71	1628	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	65	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	1	39	7	1	121	41	1823	25	77	1770	34

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2935	3871	902	2958	3876	924	1804	0	0	1848	0	0
Stage 1	1941	1941	-	1918	1918	-	-	-	-	-	-	-
Stage 2	994	1930	-	1040	1958	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	7	3	281	~ 6	3	271	338	-	-	324	-	-
Stage 1	67	111	-	69	114	-	-	-	-	-	-	-
Stage 2	263	112	-	246	108	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 2	2	281	~ 2	2	271	338	-	-	324	-	-
Mov Cap-2 Maneuver	~ 2	2	-	~ 2	2	-	-	-	-	-	-	-
Stage 1	59	85	-	61	100	-	-	-	-	-	-	-
Stage 2	127	98	-	159	82	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$ 1717.1		\$ 1741.7	0.4	0.8
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	338	-	-	13 30	324	-	-
HCM Lane V/C Ratio	0.122	-	-	3.512 4.275	0.238	-	-
HCM Control Delay (s)	17.1	-	-	\$ 1717.1 \$ 1741.7	19.6	-	-
HCM Lane LOS	C	-	-	F F	C	-	-
HCM 95th %tile Q(veh)	0.4	-	-	6.7 15.4	0.9	-	-

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

HCM 6th TWSC
30: Valleyheart Drive (North) & Laurel Canyon Boulevard

06/24/2024

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	2	0	35	2	0	11	34	1814	55	11	1682	6
Future Vol, veh/h	2	0	35	2	0	11	34	1814	55	11	1682	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	40	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	38	2	0	12	37	1972	60	12	1828	7

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2916	3962	918	3014	3935	1016	1835	0	0	2032	0	0
Stage 1	1856	1856	-	2076	2076	-	-	-	-	-	-	-
Stage 2	1060	2106	-	938	1859	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	7	3	274	6	3	236	328	-	-	275	-	-
Stage 1	76	122	-	55	94	-	-	-	-	-	-	-
Stage 2	239	91	-	284	122	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	6	3	274	5	3	236	328	-	-	275	-	-
Mov Cap-2 Maneuver	6	3	-	5	3	-	-	-	-	-	-	-
Stage 1	67	117	-	49	83	-	-	-	-	-	-	-
Stage 2	201	81	-	234	117	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	88.8		215.1		0.3		0.1	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	328	-	-	80	29	275	-
HCM Lane V/C Ratio	0.113	-	-	0.503	0.487	0.043	-
HCM Control Delay (s)	17.4	-	-	88.8	215.1	18.7	-
HCM Lane LOS	C	-	-	F	F	C	-
HCM 95th %tile Q(veh)	0.4	-	-	2.1	1.6	0.1	-





HCM 6th TWSC

31: Laurel Canyon Boulevard & Valleyheart Drive (South)

06/24/2024

Intersection

Int Delay, s/veh 9.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	131	1760	43	128	1605
Future Vol, veh/h	3	131	1760	43	128	1605
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	35	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	142	1913	47	139	1745

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	3088	980	0
Stage 1	1937	-	-
Stage 2	1151	-	-
Critical Hdwy	6.84	6.94	-
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	-
Pot Cap-1 Maneuver	9	249	-
Stage 1	98	-	-
Stage 2	263	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	5	249	-
Mov Cap-2 Maneuver	5	-	-
Stage 1	98	-	-
Stage 2	138	-	-

Approach	WB	NB	SB
HCM Control Delay, s	224.2	0	2.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	119	293
HCM Lane V/C Ratio	-	-	1.224	0.475
HCM Control Delay (s)	-	-	224.2	27.9
HCM Lane LOS	-	-	F	D
HCM 95th %tile Q(veh)	-	-	9.2	2.4

HCM 6th AWSC

32: Radford Avenue & Sarah Street

06/24/2024

Intersection

Intersection Delay, s/veh 7.4
Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	0	0	7	1	7	1	59	3	8	80	10
Future Vol, veh/h	6	0	0	7	1	7	1	59	3	8	80	10
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	0	0	8	1	8	1	64	3	9	87	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0




Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.6	7.2	7.4	7.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	100%	47%	8%
Vol Thru, %	94%	0%	7%	82%
Vol Right, %	5%	0%	47%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	63	6	15	98
LT Vol	1	6	7	8
Through Vol	59	0	1	80
RT Vol	3	0	7	10
Lane Flow Rate	68	7	16	107
Geometry Grp	1	1	1	1
Degree of Util (X)	0.077	0.008	0.018	0.118
Departure Headway (Hd)	4.028	4.449	4.054	3.98
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	888	795	872	900
Service Time	2.059	2.527	2.13	2.005
HCM Lane V/C Ratio	0.077	0.009	0.018	0.119
HCM Control Delay	7.4	7.6	7.2	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0	0.1	0.4

Intersection

Intersection Delay, s/veh 0

Intersection LOS -

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	0	0	0
HCM LOS	-	-	-

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0
LT Vol	0	0	0
Through Vol	0	0	0
RT Vol	0	0	0
Lane Flow Rate	0	0	0
Geometry Grp	1	1	1
Degree of Util (X)	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0
HCM Control Delay	6.9	6.9	6.9
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

HCM 6th AWSC

54: Radford Avenue & Radford Gate

06/24/2024

Intersection

Intersection Delay, s/veh 0

Intersection LOS -

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

HCM 6th AWSC
55: Alley & Carpenter Gate

06/24/2024

Intersection

Intersection Delay, s/veh 0

Intersection LOS -




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

HCM 6th TWSC
56: Colfax Avenue & Colfax Gate

06/24/2024

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1	1	- 0 - 0
Stage 1	1	-	- - -
Stage 2	0	-	- - -
Critical Hdwy	6.42	6.22	- - -
Critical Hdwy Stg 1	5.42	-	- - -
Critical Hdwy Stg 2	5.42	-	- - -
Follow-up Hdwy	3.518	3.318	- - -
Pot Cap-1 Maneuver	1022	1084	0 - - 0
Stage 1	1022	-	0 - - 0
Stage 2	-	-	0 - - 0
Platoon blocked, %			- -
Mov Cap-1 Maneuver	1022	1084	- - - -
Mov Cap-2 Maneuver	1022	-	- - - -
Stage 1	1022	-	- - - -
Stage 2	-	-	- - - -

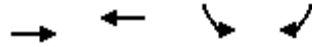
Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

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

Queues

121: Ventura Boulevard & Ventura PI

06/24/2024



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1338	1147	195	27
v/c Ratio	1.48	0.54	0.31	0.09
Control Delay	256.8	16.8	50.4	21.1
Queue Delay	1.7	50.9	0.0	0.0
Total Delay	258.5	67.8	50.4	21.1
Queue Length 50th (ft)	~879	141	78	4
Queue Length 95th (ft)	#1019	m36	116	31
Internal Link Dist (ft)	509	48	136	
Turn Bay Length (ft)				40
Base Capacity (vph)	907	2107	669	326
Starvation Cap Reductn	0	1273	0	0
Spillback Cap Reductn	229	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.97	1.38	0.29	0.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

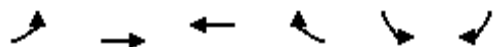
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

121: Ventura Boulevard & Ventura PI

06/24/2024



























Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	↑
Traffic Volume (vph)	0	1231	1055	0	179	25
Future Volume (vph)	0	1231	1055	0	179	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.1	6.1		5.7	5.7
Lane Util. Factor		0.95	0.95		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3433	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1338	1147	0	195	27
RTOR Reduction (vph)	0	0	0	0	0	18
Lane Group Flow (vph)	0	1338	1147	0	195	9
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2 4		3	
Permitted Phases						3
Actuated Green, G (s)		35.9	83.4		25.8	25.8
Effective Green, g (s)		35.9	83.4		25.8	25.8
Actuated g/C Ratio		0.26	0.60		0.18	0.18
Clearance Time (s)		6.1			5.7	5.7
Vehicle Extension (s)		4.6			3.0	3.0
Lane Grp Cap (vph)		907	2108		632	291
v/s Ratio Prot		c0.38	c0.32		c0.06	
v/s Ratio Perm						0.01
v/c Ratio		1.48	0.54		0.31	0.03
Uniform Delay, d1		52.0	16.9		49.4	46.8
Progression Factor		1.00	0.97		1.00	1.00
Incremental Delay, d2		219.8	0.0		0.3	0.0
Delay (s)		271.9	16.4		49.7	46.9
Level of Service		F	B		D	D
Approach Delay (s)		271.9	16.4		49.3	
Approach LOS		F	B		D	
Intersection Summary						
HCM 2000 Control Delay		145.4		HCM 2000 Level of Service		F
HCM 2000 Volume to Capacity ratio		0.88				
Actuated Cycle Length (s)		140.0		Sum of lost time (s)		31.8
Intersection Capacity Utilization		50.5%		ICU Level of Service		A
Analysis Period (min)		15				
c Critical Lane Group						

***Future with Project Conditions (Year 2045)
without Radford Mobility Connector***

HCM 6th Signalized Intersection Summary

1: Riverside Drive & Laurel Canyon Boulevard










06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	284	696	166	176	1083	159	271	929	115	148	1005	355
Future Volume (veh/h)	284	696	166	176	1083	159	271	929	115	148	1005	355
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	309	757	180	191	1177	173	295	1010	125	161	1092	386
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	254	1265	564	259	1016	453	259	1111	614	198	996	352
Arrive On Green	0.14	0.36	0.36	0.02	0.09	0.09	0.11	0.31	0.31	0.07	0.27	0.27
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	3554	1585	1781	3722	1316
Grp Volume(v), veh/h	309	757	180	191	1177	173	295	1010	125	161	999	479
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1777	1585	1781	1702	1634
Q Serve(g_s), s	17.1	20.9	9.9	6.6	34.3	12.3	13.4	32.8	6.3	7.9	32.1	32.1
Cycle Q Clear(g_c), s	17.1	20.9	9.9	6.6	34.3	12.3	13.4	32.8	6.3	7.9	32.1	32.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.81
Lane Grp Cap(c), veh/h	254	1265	564	259	1016	453	259	1111	614	198	911	437
V/C Ratio(X)	1.22	0.60	0.32	0.74	1.16	0.38	1.14	0.91	0.20	0.81	1.10	1.10
Avail Cap(c_a), veh/h	254	1265	564	337	1016	453	259	1111	614	198	911	437
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	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	51.4	31.6	28.1	57.3	54.3	44.4	34.9	39.6	24.4	33.2	44.0	44.0
Incr Delay (d2), s/veh	128.1	2.1	1.5	6.0	82.6	2.4	97.2	11.9	0.7	21.9	59.9	71.9
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(95%),veh/ln	25.2	14.0	7.0	5.7	40.0	9.4	19.4	22.1	4.4	8.0	29.7	30.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	179.6	33.7	29.6	63.3	137.0	46.8	132.1	51.5	25.1	55.2	103.8	115.8
LnGrp LOS	F	C	C	E	F	D	F	D	C	E	F	F
Approach Vol, veh/h	1246		1541				1430		1639			
Approach Delay, s/veh	69.3		117.7				65.8		102.5			
Approach LOS	E		F				E		F			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.0	38.0	23.0	40.0	13.6	43.4	14.6	48.4				
Change Period (Y+Rc), s	5.6	5.9	5.9	* 5.7	5.6	5.9	5.6	* 5.7				
Max Green Setting (Gmax), s	13.4	32.1	17.1	* 34	8.0	37.5	11.7	* 40				
Max Q Clear Time (g_c+I1), s	15.4	34.1	19.1	36.3	9.9	34.8	8.6	22.9				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	1.8	0.2	5.2				
Intersection Summary												
HCM 6th Ctrl Delay	90.5											
HCM 6th LOS	F											
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
User approved changes to right turn type.												

HCM 6th TWSC

2: Riverside Drive & Radford Avenue

06/24/2024

Intersection												
Int Delay, s/veh	105.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	1054	102	87	1166	13	32	7	100	5	11	32
Future Vol, veh/h	26	1054	102	87	1166	13	32	7	100	5	11	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	105	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	1146	111	95	1267	14	35	8	109	5	12	35

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1281	0	0	1257	0	0	2032	2673	573	2097	2777	641
Stage 1	-	-	-	-	-	-	1202	1202	-	1464	1464	-
Stage 2	-	-	-	-	-	-	830	1471	-	633	1313	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	538	-	-	549	-	-	~ 33	22	463	30	19	417
Stage 1	-	-	-	-	-	-	196	256	-	135	191	-
Stage 2	-	-	-	-	-	-	331	190	-	434	226	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	538	-	-	549	-	-	~ 9	17	463	13	15	417
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 9	17	-	13	15	-
Stage 1	-	-	-	-	-	-	186	243	-	128	158	-
Stage 2	-	-	-	-	-	-	232	157	-	305	214	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.9	\$ 1853.6	\$ 403.3
HCM LOS			F	F

























Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	33	538	-	-	549	-	-	40
HCM Lane V/C Ratio	4.578	0.053	-	-	0.172	-	-	1.304
HCM Control Delay (s)	\$ 1853.6	12.1	-	-	12.9	-	-	\$ 403.3
HCM Lane LOS	F	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	17.9	0.2	-	-	0.6	-	-	5.2

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

HCM 6th Signalized Intersection Summary

3: Colfax Avenue & Riverside Drive

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	716	236	287	847	89	138	480	82	92	591	138
Future Volume (veh/h)	118	716	236	287	847	89	138	480	82	92	591	138
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	128	778	257	312	921	97	150	522	89	100	642	150
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	212	1356	605	234	1356	605	223	826	700	418	826	700
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.88	0.88	0.88	0.44	0.44	0.44
Sat Flow, veh/h	554	3554	1585	545	3554	1585	685	1870	1585	810	1870	1585
Grp Volume(v), veh/h	128	778	257	312	921	97	150	522	89	100	642	150
Grp Sat Flow(s),veh/h/ln	554	1777	1585	545	1777	1585	685	1870	1585	810	1870	1585
Q Serve(g_s), s	9.9	10.4	7.2	12.5	13.0	2.4	9.0	4.4	0.4	5.3	17.5	3.5
Cycle Q Clear(g_c), s	22.9	10.4	7.2	22.9	13.0	2.4	26.5	4.4	0.4	9.8	17.5	3.5
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	212	1356	605	234	1356	605	223	826	700	418	826	700
V/C Ratio(X)	0.60	0.57	0.42	1.34	0.68	0.16	0.67	0.63	0.13	0.24	0.78	0.21
Avail Cap(c_a), veh/h	212	1356	605	234	1356	605	223	826	700	418	826	700
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	0.91	0.91	0.91	0.70	0.70	0.70	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	14.7	13.7	27.0	15.5	12.2	13.7	2.2	2.0	13.7	14.2	10.3
Incr Delay (d2), s/veh	12.2	1.8	2.2	175.2	2.5	0.5	10.9	2.6	0.3	1.3	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(95%),veh/ln	4.3	6.8	4.5	23.9	8.2	1.5	3.9	2.4	0.3	1.8	12.2	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.6	16.5	15.9	202.2	18.0	12.7	24.6	4.8	2.2	15.0	21.3	11.0
LnGrp LOS	D	B	B	F	B	B	C	A	A	B	C	B
Approach Vol, veh/h	1163			1330			761			892		
Approach Delay, s/veh	18.8			60.8			8.4			18.9		
Approach LOS	B			E			A			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	28.0			32.0			28.0			32.0		
Change Period (Y+Rc), s	* 5.1			* 5.5			* 5.1			* 5.5		
Max Green Setting (Gmax), s	* 23			* 27			* 23			* 27		
Max Q Clear Time (g_c+I1), s	24.9			28.5			24.9			19.5		
Green Ext Time (p_c), s	0.0			0.0			0.0			3.0		
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.

Queues

4: Riverside Drive & SR 170 Southbound Off-Ramp

06/21/2024



Lane Group	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	947	10	818	33	247	237	229
v/c Ratio	0.49	0.04	0.42	0.12	0.67	0.57	0.45
Control Delay	13.4	13.6	14.1	1.0	34.2	18.1	6.5
Queue Delay	2.3	0.0	0.6	0.4	1.2	1.1	0.0
Total Delay	15.8	13.6	14.6	1.3	35.4	19.1	6.5
Queue Length 50th (ft)	103	3	196	0	100	49	0
Queue Length 95th (ft)	239	m9	m233	0	170	117	51
Internal Link Dist (ft)	2214		245	105		344	
Turn Bay Length (ft)		25			140		150
Base Capacity (vph)	1929	229	1929	266	432	471	556
Starvation Cap Reductn	0	0	671	0	0	0	0
Spillback Cap Reductn	812	0	0	82	62	86	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.04	0.65	0.18	0.67	0.62	0.41


Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: Riverside Drive & SR 170 Southbound Off-Ramp













06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑	↑↑			↑		↑	↑	↑
Traffic Volume (vph)	0	869	2	9	753	0	8	0	22	304	7	345
Future Volume (vph)	0	869	2	9	753	0	8	0	22	304	7	345
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Lane Util. Factor		0.95		1.00	0.95			1.00		0.95	0.91	0.95
Frt		1.00		1.00	1.00			0.90		1.00	0.91	0.85
Flt Protected		1.00		0.95	1.00			0.99		0.95	0.98	1.00
Satd. Flow (prot)		3538		1770	3539			1657		1681	1512	1504
Flt Permitted		1.00		0.23	1.00			0.82		0.95	0.98	1.00
Satd. Flow (perm)		3538		421	3539			1377		1681	1512	1504
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)	0	945	2	10	818	0	9	0	24	330	8	375
RTOR Reduction (vph)	0	0	0	0	0	0	0	31	0	0	87	179
Lane Group Flow (vph)	0	947	0	10	818	0	0	2	0	247	150	50
Turn Type		NA		Perm	NA		Perm	NA		Split	NA	Perm
Protected Phases		6			2			4		3	3	
Permitted Phases				2			4					3
Actuated Green, G (s)		34.5		34.5	34.5			3.2		15.3	15.3	15.3
Effective Green, g (s)		34.5		34.5	34.5			3.2		15.3	15.3	15.3
Actuated g/C Ratio		0.49		0.49	0.49			0.05		0.22	0.22	0.22
Clearance Time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Vehicle Extension (s)		3.8		2.4	2.4			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1743		207	1744			62		367	330	328
v/s Ratio Prot		c0.27			0.23					c0.15	0.10	
v/s Ratio Perm				0.02				c0.00				0.03
v/c Ratio		0.54		0.05	0.47			0.02		0.67	0.46	0.15
Uniform Delay, d1		12.3		9.2	11.7			31.9		25.1	23.7	22.1
Progression Factor		1.00		1.07	1.18			1.00		1.00	1.00	1.00
Incremental Delay, d2		1.2		0.4	0.8			0.2		4.8	1.0	0.2
Delay (s)		13.5		10.2	14.6			32.1		29.9	24.7	22.3
Level of Service		B		B	B			C		C	C	C
Approach Delay (s)		13.5			14.6			32.1			25.7	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			17.6			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.55									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			55.9%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/21/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	NWL	NWR
Lane Group Flow (vph)	226	725	342	274	491	148	27	687	175	1178	275	94
v/c Ratio	0.84	1.03	1.06	1.49	0.60	0.40	0.51	1.10	0.64	0.88	0.62	0.51
Control Delay	60.3	91.6	114.2	275.5	51.3	49.4	86.6	119.7	67.3	48.8	63.6	65.7
Queue Delay	0.0	28.0	17.3	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.3	0.0
Total Delay	60.3	119.6	131.5	275.5	51.3	49.4	86.6	119.7	67.3	49.5	63.9	65.7
Queue Length 50th (ft)	164	~380	~368	~293	211	115	23	~376	151	519	124	89
Queue Length 95th (ft)	#235	#536	#603	#479	272	184	#69	#503	#281	#703	165	150
Internal Link Dist (ft)		245			745			2580		383	758	
Turn Bay Length (ft)	140		230	85		110	270		290		215	
Base Capacity (vph)	269	705	323	184	824	368	53	623	275	1345	686	288
Starvation Cap Reductn	0	175	63	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	34	105	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	1.37	1.32	1.49	0.60	0.40	0.51	1.10	0.64	0.90	0.47	0.33

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.





















95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/21/2024

												
Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	208	348	425	209	14	238	452	136	25	531	81	20
Future Volume (vph)	208	348	425	209	14	238	452	136	25	531	81	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Lane Util. Factor	1.00	0.91	0.91			1.00	0.95	1.00	1.00	0.95		
Frt	1.00	0.93	0.85			1.00	1.00	0.85	1.00	0.98		
Flt Protected	0.95	1.00	1.00			0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1770	3147	1441			1770	3539	1583	1770	3454		
Flt Permitted	0.32	1.00	1.00			0.12	1.00	1.00	0.16	1.00		
Satd. Flow (perm)	597	3147	1441			229	3539	1583	295	3454		
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)	226	378	462	227	15	259	491	148	27	577	88	22
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	226	725	342	0	0	274	491	148	27	687	0	0
Turn Type	pm+pt	NA	Perm		pm+pt	pm+pt	NA	Perm	Perm	NA		
Protected Phases	1	6			5	5	2			8		
Permitted Phases	6		6		2	2		2	8			
Actuated Green, G (s)	41.7	31.4	31.4			43.0	32.6	32.6	25.3	25.3		
Effective Green, g (s)	41.7	31.4	31.4			43.0	32.6	32.6	25.3	25.3		
Actuated g/C Ratio	0.30	0.22	0.22			0.31	0.23	0.23	0.18	0.18		
Clearance Time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Vehicle Extension (s)	3.0	3.9	3.9			3.0	4.6	4.6	4.7	4.7		
Lane Grp Cap (vph)	264	705	323			184	824	368	53	624		
v/s Ratio Prot	0.06	0.23				c0.11	0.14			c0.20		
v/s Ratio Perm	0.19		0.24			c0.35		0.09	0.09			
v/c Ratio	0.86	1.03	1.06			1.49	0.60	0.40	0.51	1.10		
Uniform Delay, d1	43.3	54.3	54.3			41.9	47.8	45.5	51.8	57.4		
Progression Factor	0.97	0.99	0.99			1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2	20.6	39.2	63.3			246.7	3.2	3.3	13.7	66.8		
Delay (s)	62.6	93.2	117.3			288.6	51.0	48.7	65.4	124.2		
Level of Service	E	F	F			F	D	D	E	F		
Approach Delay (s)		94.2					121.9			121.9		
Approach LOS		F					F			F		
Intersection Summary												
HCM 2000 Control Delay	88.1			HCM 2000 Level of Service			F					
HCM 2000 Volume to Capacity ratio	1.17											
Actuated Cycle Length (s)	140.0			Sum of lost time (s)			33.0					
Intersection Capacity Utilization	106.1%			ICU Level of Service			G					
Analysis Period (min)	15											
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/21/2024



Movement	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	18	143	1000	84	43	201	91	5
Future Volume (vph)	18	143	1000	84	43	201	91	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.3			6.6	6.6	
Lane Util. Factor		1.00	0.95			0.97	0.91	
Frt		1.00	0.99			0.99	0.85	
Flt Protected		0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	3498			3429	1441	
Flt Permitted		0.95	1.00			0.95	1.00	
Satd. Flow (perm)		1770	3498			3429	1441	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	155	1087	91	47	218	99	5
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	175	1178	0	0	275	94	0
Turn Type	Prot	Prot	NA		Prot	Prot	Perm	
Protected Phases	7	7	4		3	3		
Permitted Phases							3	
Actuated Green, G (s)		21.8	53.9			18.1	18.1	
Effective Green, g (s)		21.8	53.9			18.1	18.1	
Actuated g/C Ratio		0.16	0.38			0.13	0.13	
Clearance Time (s)		6.8	6.3			6.6	6.6	
Vehicle Extension (s)		3.0	4.9			4.6	4.6	
Lane Grp Cap (vph)		275	1346			443	186	
v/s Ratio Prot		0.10	c0.34			c0.08		
v/s Ratio Perm							0.07	
v/c Ratio		0.64	0.88			0.62	0.51	
Uniform Delay, d1		55.4	39.9			57.7	56.8	
Progression Factor		1.00	1.00			1.00	1.00	
Incremental Delay, d2		4.8	7.2			3.5	3.8	
Delay (s)		60.1	47.1			61.2	60.6	
Level of Service		E	D			E	E	
Approach Delay (s)			48.8			61.1		
Approach LOS			D			E		
Intersection Summary								

HCM 6th Signalized Intersection Summary

6: Laurel Canyon Boulevard & US 101 Northbound Ramps

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰	↰	↰	↰			↰	↰
Traffic Volume (veh/h)	0	0	0	534	2	269	511	671	0	0	1544	397
Future Volume (veh/h)	0	0	0	534	2	269	511	671	0	0	1544	397
Initial Q (Qb), veh				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
Parking Bus, Adj				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		
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				672	0	195	555	729	0	0	1678	432
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				774	0	344	621	2383	0	0	2206	685
Arrive On Green				0.22	0.00	0.22	0.36	1.00	0.00	0.00	0.43	0.43
Sat Flow, veh/h				3563	0	1585	3456	3647	0	0	5274	1585
Grp Volume(v), veh/h				672	0	195	555	729	0	0	1678	432
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	0	1702	1585
Q Serve(g_s), s				16.4	0.0	9.9	13.6	0.0	0.0	0.0	25.0	19.2
Cycle Q Clear(g_c), s				16.4	0.0	9.9	13.6	0.0	0.0	0.0	25.0	19.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				774	0	344	621	2383	0	0	2206	685
V/C Ratio(X)				0.87	0.00	0.57	0.89	0.31	0.00	0.00	0.76	0.63
Avail Cap(c_a), veh/h				859	0	382	687	2383	0	0	2206	685
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.86	0.86	0.00	0.00	0.18	0.18
Uniform Delay (d), s/veh				34.0	0.0	31.4	28.0	0.0	0.0	0.0	21.6	20.0
Incr Delay (d2), s/veh				8.8	0.0	1.6	11.7	0.3	0.0	0.0	0.5	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
%ile BackOfQ(95%),veh/ln				12.1	0.0	6.7	8.8	0.2	0.0	0.0	11.5	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				42.8	0.0	33.0	39.7	0.3	0.0	0.0	22.1	20.8
LnGrp LOS				D	A	C	D	A	A	A	C	C
Approach Vol, veh/h					867			1284			2110	
Approach Delay, s/veh					40.6			17.3			21.8	
Approach LOS					D			B			C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	31.5	43.7		24.8		65.2						
Change Period (Y+Rc), s	5.3	4.8		* 5.3		4.8						
Max Green Setting (Gmax), s	35.0			* 22		58.2						
Max Q Clear Time (g_c+M), s	27.0			18.4		2.0						
Green Ext Time (p_c), s	0.5	6.5		1.2		5.8						

Intersection Summary

HCM 6th Ctrl Delay	24.3
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.














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

HCM 6th Signalized Intersection Summary

7: US 101 Southbound Ramps & Laurel Canyon Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  		  	  	
Traffic Volume (veh/h)	170	11	491	0	0	0	0	1029	598	567	1517	0
Future Volume (veh/h)	170	11	491	0	0	0	0	1029	598	567	1517	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	127	0	604				0	1118	650	616	1649	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	384	0	683				0	2139	664	672	2381	0
Arrive On Green	0.22	0.00	0.22				0.00	0.42	0.42	0.39	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	5274	1585	3456	3647	0
Grp Volume(v), veh/h	127	0	604				0	1118	650	616	1649	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1702	1585	1728	1777	0
Q Serve(g_s), s	5.4	0.0	16.6				0.0	14.7	36.4	15.2	0.0	0.0
Cycle Q Clear(g_c), s	5.4	0.0	16.6				0.0	14.7	36.4	15.2	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	384	0	683				0	2139	664	672	2381	0
V/C Ratio(X)	0.33	0.00	0.88				0.00	0.52	0.98	0.92	0.69	0.00
Avail Cap(c_a), veh/h	416	0	740				0	2139	664	672	2381	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	1.00	0.50	0.50	0.00
Uniform Delay (d), s/veh	29.8	0.0	34.2				0.0	19.5	25.8	26.8	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	11.7				0.0	0.9	30.2	10.1	0.8	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
%ile BackOfQ(95%),veh/ln	0.0	0.0	11.5				0.0	9.5	25.1	8.3	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.3	0.0	45.9				0.0	20.4	55.9	36.9	0.8	0.0
LnGrp LOS	C	A	D				A	C	E	D	A	A
Approach Vol, veh/h	731						1768			2265		
Approach Delay, s/veh	43.2						33.4			10.7		
Approach LOS	D						C			B		
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	32.6	42.8	24.6	65.4								
Change Period (Y+Rc), s	* 5.1	* 5.1	* 5.2	* 5.1								
Max Green Setting (Gmax), s	* 16	* 38	* 21	* 59								
Max Q Clear Time (g_c+M), s	38.4	38.4	18.6	2.0								
Green Ext Time (p_c), s	0.0	0.0	0.8	21.1								

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 computational engine requires equal clearance times for the phases crossing the barrier.

Queues

8: Laurel Canyon Boulevard & Landale Street

06/21/2024



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	170	224	189	73	199	1541	34	1813	285
v/c Ratio	0.81	0.66	0.83	0.20	0.72	0.82	0.41	1.42	0.64
Control Delay	67.3	19.3	67.6	1.2	36.0	10.7	36.2	219.4	28.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.3	19.3	67.6	1.2	36.0	10.7	36.2	219.4	28.9
Queue Length 50th (ft)	100	18	105	0	80	128	15	~747	138
Queue Length 95th (ft)	#211	#100	#217	0	m47	m92	m22	#892	m202
Internal Link Dist (ft)		140	232			591		375	
Turn Bay Length (ft)	85			40	155		125		115
Base Capacity (vph)	212	339	235	380	290	1868	82	1273	446
Starvation Cap Reductn	0	0	0	0	0	4	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.66	0.80	0.19	0.69	0.83	0.41	1.42	0.64

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

8: Laurel Canyon Boulevard & Landale Street

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	174	15	174	28	146	67	183	1385	33	31	1668	262
Future Volume (vph)	174	15	174	28	146	67	183	1385	33	31	1668	262
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.89			1.00	1.00	1.00	1.00		1.00	1.00	0.78
Flpb, ped/bikes	1.00	1.00			0.99	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.87			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1375			1825	1583	1770	3522		1766	3539	1241
Flt Permitted	0.95	1.00			0.89	1.00	0.11	1.00		0.12	1.00	1.00
Satd. Flow (perm)	1681	1375			1641	1583	197	3522		229	3539	1241
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)	189	16	189	30	159	73	199	1505	36	34	1813	285
RTOR Reduction (vph)	0	165	0	0	0	63	0	2	0	0	0	0
Lane Group Flow (vph)	170	59	0	0	189	10	199	1539	0	34	1813	285
Confl. Peds. (#/hr)			49	49			89		12	12		89
Turn Type	Split	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	3	3			4		1	6			2	
Permitted Phases				4		4	6			2		2
Actuated Green, G (s)	11.3	11.3			12.5	12.5	47.7	47.7		32.4	32.4	32.4
Effective Green, g (s)	11.3	11.3			12.5	12.5	47.7	47.7		32.4	32.4	32.4
Actuated g/C Ratio	0.13	0.13			0.14	0.14	0.53	0.53		0.36	0.36	0.36
Clearance Time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	5.2		4.5	4.5	4.5
Lane Grp Cap (vph)	211	172			227	219	277	1866		82	1274	446
v/s Ratio Prot	c0.10	0.04					0.08	c0.44			c0.51	
v/s Ratio Perm					c0.12	0.01	0.30			0.15		0.23
v/c Ratio	0.81	0.34			0.83	0.05	0.72	0.82		0.41	1.42	0.64
Uniform Delay, d1	38.3	36.0			37.7	33.6	18.5	17.7		21.7	28.8	23.9
Progression Factor	1.00	1.00			1.00	1.00	2.19	0.56		1.00	0.92	0.95
Incremental Delay, d2	19.6	1.2			22.2	0.1	0.8	0.4		10.0	193.5	4.6
Delay (s)	57.9	37.1			59.9	33.7	41.3	10.3		31.7	220.1	27.4
Level of Service	E	D			E	C	D	B		C	F	C
Approach Delay (s)		46.1			52.6			13.9			191.3	
Approach LOS		D			D			B			F	
Intersection Summary												
HCM 2000 Control Delay			102.5									F
HCM 2000 Volume to Capacity ratio			1.15									
Actuated Cycle Length (s)			90.0							23.9		
Intersection Capacity Utilization			97.8%									F
ICU Level of Service												
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

9: Colfax Avenue & Sarah Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↑	↕
Traffic Volume (veh/h)	41	92	11	38	18	169	23	547	54	151	918	52
Future Volume (veh/h)	41	92	11	38	18	169	23	547	54	151	918	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.90		0.81	0.86		0.81	1.00		0.93	1.00		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	45	100	12	41	20	184	25	595	59	164	998	57
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	159	311	33	105	52	261	120	942	740	332	942	740
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	314	1191	125	133	198	999	535	1870	1469	777	1870	1469
Grp Volume(v), veh/h	157	0	0	245	0	0	25	595	59	164	998	57
Grp Sat Flow(s), veh/h/ln	1630	0	0	1330	0	0	535	1870	1469	777	1870	1469
Q Serve(g_s), s	0.0	0.0	0.0	3.8	0.0	0.0	0.0	13.9	1.2	11.7	30.2	1.2
Cycle Q Clear(g_c), s	4.2	0.0	0.0	9.8	0.0	0.0	30.2	13.9	1.2	25.6	30.2	1.2
Prop In Lane	0.29		0.08	0.17		0.75	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	503	0	0	417	0	0	120	942	740	332	942	740
V/C Ratio(X)	0.31	0.00	0.00	0.59	0.00	0.00	0.21	0.63	0.08	0.49	1.06	0.08
Avail Cap(c_a), veh/h	628	0	0	525	0	0	120	942	740	332	942	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	0.00	0.00	1.00	0.00	0.00	0.90	0.90	0.90	0.27	0.27	0.27
Uniform Delay (d), s/veh	17.9	0.0	0.0	19.9	0.0	0.0	30.0	10.8	7.7	20.1	14.9	7.7
Incr Delay (d2), s/veh	0.4	0.0	0.0	1.3	0.0	0.0	3.5	2.9	0.2	1.4	33.9	0.1
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(95%),veh/ln	8.1	0.0	0.0	5.5	0.0	0.0	0.8	8.8	0.6	3.2	23.5	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.3	0.0	0.0	21.2	0.0	0.0	33.5	13.7	7.9	21.6	48.8	7.7
LnGrp LOS	B	A	A	C	A	A	C	B	A	C	F	A
Approach Vol, veh/h	157			245			679			1219		
Approach Delay, s/veh	18.3			21.2			14.0			43.2		
Approach LOS	B			C			B			D		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	35.0			25.0			35.0			25.0		
Change Period (Y+Rc), s	4.8			* 9.3			4.8			* 9.3		
Max Green Setting (Gmax), s	25.2			* 21			25.2			* 21		
Max Q Clear Time (g_c+I1), s	32.2			6.2			32.2			11.8		
Green Ext Time (p_c), s	0.0			0.8			0.0			1.1		

Intersection Summary

HCM 6th Ctrl Delay	30.5
HCM 6th LOS	C

Notes

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

Queues

10: Landale Street & Colfax Avenue

06/21/2024



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	92	36	596	1108	42
v/c Ratio	0.33	0.27	0.46	0.86	0.04
Control Delay	20.7	12.8	7.6	9.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.7	12.8	7.6	9.6	0.1
Queue Length 50th (ft)	22	5	98	57	0
Queue Length 95th (ft)	55	28	191	m64	m0
Internal Link Dist (ft)	262		575	593	
Turn Bay Length (ft)		40			80
Base Capacity (vph)	537	133	1292	1292	1103
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.17	0.27	0.46	0.86	0.04

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

10: Landale Street & Colfax Avenue

06/21/2024












Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	60	25	33	548	1019	39
Future Volume (vph)	60	25	33	548	1019	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	9.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.96		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1728		1770	1863	1863	1583
Flt Permitted	0.97		0.10	1.00	1.00	1.00
Satd. Flow (perm)	1728		192	1863	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	65	27	36	596	1108	42
RTOR Reduction (vph)	24	0	0	0	0	6
Lane Group Flow (vph)	68	0	36	596	1108	36
Turn Type	Perm		Perm	NA	NA	Perm
Protected Phases				6	2	
Permitted Phases	8		6			2
Actuated Green, G (s)	7.2		38.8	38.8	38.8	38.8
Effective Green, g (s)	7.2		38.8	38.8	38.8	38.8
Actuated g/C Ratio	0.12		0.65	0.65	0.65	0.65
Clearance Time (s)	9.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		4.9	4.9	5.3	5.3
Lane Grp Cap (vph)	207		124	1204	1204	1023
v/s Ratio Prot				0.32	c0.59	
v/s Ratio Perm	c0.04		0.19			0.02
v/c Ratio	0.33		0.29	0.50	0.92	0.03
Uniform Delay, d1	24.2		4.6	5.5	9.3	3.8
Progression Factor	1.00		1.00	1.00	0.48	0.02
Incremental Delay, d2	0.9		5.8	1.5	4.1	0.0
Delay (s)	25.1		10.4	7.0	8.6	0.1
Level of Service	C		B	A	A	A
Approach Delay (s)	25.1			7.2	8.3	
Approach LOS	C			A	A	
Intersection Summary						
HCM 2000 Control Delay			8.7		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.83			
Actuated Cycle Length (s)			60.0		Sum of lost time (s)	14.0
Intersection Capacity Utilization			72.0%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

11: Whitsett Avenue & Moorpark Street

06/24/2024












Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	963	232	120	694	71	78	266	82	91	551	67
Future Volume (veh/h)	74	963	232	120	694	71	78	266	82	91	551	67
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	80	1047	252	130	754	77	85	289	89	99	599	73
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	83	850	720	80	759	77	308	1156	349	442	1371	167
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	660	1870	1585	424	1669	170	766	2689	812	1005	3189	388
Grp Volume(v), veh/h	80	1047	252	130	0	831	85	189	189	99	333	339
Grp Sat Flow(s),veh/h/ln	660	1870	1585	424	0	1840	766	1777	1724	1005	1777	1801
Q Serve(g_s), s	0.4	40.9	9.3	0.0	0.0	40.5	7.9	6.1	6.3	6.3	11.8	11.9
Cycle Q Clear(g_c), s	40.9	40.9	9.3	40.9	0.0	40.5	19.8	6.1	6.3	12.6	11.8	11.9
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.47	1.00		0.22
Lane Grp Cap(c), veh/h	83	850	720	80	0	836	308	764	741	442	764	774
V/C Ratio(X)	0.96	1.23	0.35	1.62	0.00	0.99	0.28	0.25	0.25	0.22	0.44	0.44
Avail Cap(c_a), veh/h	83	850	720	80	0	836	308	764	741	442	764	774
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	45.0	24.5	15.9	45.0	0.0	24.4	25.0	16.4	16.4	20.5	18.0	18.0
Incr Delay (d2), s/veh	88.2	114.6	1.3	331.0	0.0	29.7	2.2	0.8	0.8	1.2	1.8	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(95%),veh/ln	6.8	62.6	6.2	16.4	0.0	30.7	2.8	4.5	4.6	2.8	8.6	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	133.1	139.1	17.3	376.0	0.0	54.1	27.2	17.1	17.2	21.6	19.8	19.8
LnGrp LOS	F	F	B	F	A	D	C	B	B	C	B	B
Approach Vol, veh/h	1379					961		463		771		
Approach Delay, s/veh	116.5					97.7		19.0		20.0		
Approach LOS	F					F		B		C		
Timer - Assigned Phs	2		4			6		8				
Phs Duration (G+Y+Rc), s	46.0		44.0			46.0		44.0				
Change Period (Y+Rc), s	5.1		5.3			5.1		5.3				
Max Green Setting (Gmax), s	40.9		38.7			40.9		38.7				
Max Q Clear Time (g_c+I1), s	42.9		14.6			42.9		21.8				
Green Ext Time (p_c), s	0.0		4.7			0.0		2.5				
Intersection Summary												
HCM 6th Ctrl Delay	78.0											
HCM 6th LOS	E											

HCM 6th Signalized Intersection Summary

12: Laurel Canyon Boulevard & Moorpark Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	330	686	255	237	520	123	123	1203	187	97	1566	261
Future Volume (veh/h)	330	686	255	237	520	123	123	1203	187	97	1566	261
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	359	746	277	258	565	134	134	1308	203	105	1702	284
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	248	699	259	252	520	571	233	908	140	227	894	145
Arrive On Green	0.09	0.28	0.28	0.13	0.37	0.37	0.09	0.29	0.29	0.08	0.29	0.29
Sat Flow, veh/h	1781	2536	942	1781	1870	1585	1781	3087	475	1781	3061	497
Grp Volume(v), veh/h	359	523	500	258	565	134	134	748	763	105	968	1018
Grp Sat Flow(s),veh/h/ln	1781	1777	1701	1781	1870	1585	1781	1777	1785	1781	1777	1781
Q Serve(g_s), s	8.5	24.8	24.8	8.7	25.0	4.8	4.6	26.5	26.5	3.5	26.3	26.3
Cycle Q Clear(g_c), s	8.5	24.8	24.8	8.7	25.0	4.8	4.6	26.5	26.5	3.5	26.3	26.3
Prop In Lane	1.00		0.55	1.00		1.00	1.00		0.27	1.00		0.28
Lane Grp Cap(c), veh/h	248	490	469	252	520	571	233	523	525	227	519	520
V/C Ratio(X)	1.45	1.07	1.07	1.02	1.09	0.23	0.58	1.43	1.45	0.46	1.86	1.96
Avail Cap(c_a), veh/h	248	490	469	252	520	571	238	523	525	238	519	520
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	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	0.09	0.09	0.09
Uniform Delay (d), s/veh	25.3	32.6	32.6	24.5	28.4	17.4	22.7	31.8	31.8	22.5	31.9	31.9
Incr Delay (d2), s/veh	222.1	59.8	60.8	62.7	65.3	0.2	3.2	205.1	213.9	0.1	389.8	431.9
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(95%),veh/h	29.6	26.3	25.5	12.7	27.5	3.0	3.6	61.6	63.9	2.0	95.7	105.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	247.4	92.4	93.4	87.3	93.7	17.6	25.9	236.9	245.7	22.7	421.7	463.8
LnGrp LOS	F	F	F	F	F	B	C	F	F	C	F	F
Approach Vol, veh/h	1382			957			1645			2091		
Approach Delay, s/veh	133.0			81.3			223.8			422.1		
Approach LOS	F			F			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.0	31.7	14.0	31.3	12.8	31.9	14.2	31.1				
Change Period (Y+Rc), s	5.3	* 5.4	* 5.5	6.3	* 5.4	* 5.4	* 5.5	6.3				
Max Green Setting (Gmax), s	8	* 26	* 8.5	25.0	* 8	* 26	* 8.7	24.8				
Max Q Clear Time (g_c+I), s	10.6	28.3	10.5	27.0	5.5	28.5	10.7	26.8				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 249.0

HCM 6th LOS F

Notes

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






HCM 6th TWSC

13: Moorpark Street & Radford Avenue

06/24/2024

Intersection

Int Delay, s/veh 1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	60	851	952	44	15	34
Future Vol, veh/h	60	851	952	44	15	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	50
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	65	925	1035	48	16	37

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1083	0	0 1652 542
Stage 1	-	-	- 1059 -
Stage 2	-	-	- 593 -
Critical Hdwy	4.14	-	- 6.84 6.94
Critical Hdwy Stg 1	-	-	- 5.84 -
Critical Hdwy Stg 2	-	-	- 5.84 -
Follow-up Hdwy	2.22	-	- 3.52 3.32
Pot Cap-1 Maneuver	640	-	- 89 485
Stage 1	-	-	- 295 -
Stage 2	-	-	- 515 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	640	-	- 80 485
Mov Cap-2 Maneuver	-	-	- 80 -
Stage 1	-	-	- 265 -
Stage 2	-	-	- 515 -























Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	27.8
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	640	-	-	-	80	485
HCM Lane V/C Ratio	0.102	-	-	-	0.204	0.076
HCM Control Delay (s)	11.3	-	-	-	61.2	13
HCM Lane LOS	B	-	-	-	F	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.7	0.2

HCM 6th Signalized Intersection Summary

14: Colfax Avenue & Moorpark Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	643	127	291	723	169	133	266	182	167	647	120
Future Volume (veh/h)	102	643	127	291	723	169	133	266	182	167	647	120
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		0.97	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	111	699	138	316	786	184	145	289	198	182	703	130
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	210	1211	239	260	786	184	84	428	357	318	711	712
Arrive On Green	0.15	0.82	0.82	0.09	0.09	0.09	0.23	0.23	0.23	0.09	0.38	0.38
Sat Flow, veh/h	1781	2945	581	650	2836	664	659	1870	1558	1781	1870	1569
Grp Volume(v), veh/h	111	421	416	316	492	478	145	289	198	182	703	130
Grp Sat Flow(s),veh/h/ln	1781	1777	1750	650	1777	1723	659	1870	1558	1781	1870	1569
Q Serve(g_s), s	3.7	7.2	7.2	24.9	24.9	24.9	0.6	12.7	10.1	6.8	33.6	4.4
Cycle Q Clear(g_c), s	3.7	7.2	7.2	24.9	24.9	24.9	20.6	12.7	10.1	6.8	33.6	4.4
Prop In Lane	1.00		0.33	1.00		0.39	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	210	730	719	260	492	477	84	428	357	318	711	712
V/C Ratio(X)	0.53	0.58	0.58	1.22	1.00	1.00	1.72	0.68	0.56	0.57	0.99	0.18
Avail Cap(c_a), veh/h	219	730	719	260	492	477	84	428	357	318	711	712
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	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	0.40	0.40	0.40
Uniform Delay (d), s/veh	21.1	5.4	5.4	44.7	40.9	40.9	45.0	31.6	30.7	23.3	27.7	14.7
Incr Delay (d2), s/veh	2.2	3.3	3.4	126.9	40.6	41.3	368.2	8.3	6.1	1.0	18.9	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(95%),veh/ln	2.7	4.1	4.0	24.2	24.1	23.6	18.9	10.7	7.7	4.5	22.1	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.3	8.7	8.7	171.6	81.5	82.1	413.2	39.9	36.8	24.3	46.6	14.9
LnGrp LOS	C	A	A	F	F	F	F	D	D	C	D	B
Approach Vol, veh/h		948			1286			632			1015	
Approach Delay, s/veh		10.4			103.9			124.6			38.6	
Approach LOS		B			F			F			D	
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	12.1	34.3		43.6		46.4	13.6	30.0				
Change Period (Y+Rc), s	* 5.5	* 9.4		* 9.4		* 9.4	5.6	* 9.4				
Max Green Setting (Gmax), s	* 7	* 25		* 34		* 37	8.0	* 21				
Max Q Clear Time (g_c+I1), s	5.7	26.9		35.6		9.2	8.8	22.6				
Green Ext Time (p_c), s	0.0	0.0		0.0		5.7	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 67.3

HCM 6th LOS E

Notes

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

HCM 6th TWSC
15: Irvine Avenue & Moorpark Street

06/24/2024

Intersection												
Int Delay, s/veh	5.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔			↔	
Traffic Vol, veh/h	64	852	6	17	1028	123	2	1	20	9	1	160
Future Vol, veh/h	64	852	6	17	1028	123	2	1	20	9	1	160
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	70	926	7	18	1117	134	2	1	22	10	1	174

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1251	0	0	933	0	0	1665	2357	467	1824	2293	626
Stage 1	-	-	-	-	-	-	1070	1070	-	1220	1220	-
Stage 2	-	-	-	-	-	-	595	1287	-	604	1073	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	552	-	-	729	-	-	63	35	542	48	39	427
Stage 1	-	-	-	-	-	-	236	296	-	191	251	-
Stage 2	-	-	-	-	-	-	458	233	-	452	295	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	552	-	-	729	-	-	27	24	542	33	26	427
Mov Cap-2 Maneuver	-	-	-	-	-	-	27	24	-	33	26	-
Stage 1	-	-	-	-	-	-	174	218	-	141	230	-
Stage 2	-	-	-	-	-	-	247	213	-	318	217	-























Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.2			0.5			33.5			52.5		
HCM LOS							D			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	151	552	-	-	729	-	-	248
HCM Lane V/C Ratio	0.166	0.126	-	-	0.025	-	-	0.745
HCM Control Delay (s)	33.5	12.5	1.4	-	10.1	0.4	-	52.5
HCM Lane LOS	D	B	A	-	B	A	-	F
HCM 95th %tile Q(veh)	0.6	0.4	-	-	0.1	-	-	5.3

HCM 6th Signalized Intersection Summary

16: Tujunga Avenue & Moorpark Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	151	798	86	105	870	57	75	284	79	168	426	210
Future Volume (veh/h)	151	798	86	105	870	57	75	284	79	168	426	210
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	164	867	93	114	946	62	82	309	86	183	463	228
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	247	1601	172	286	1674	110	212	721	611	336	484	410
Arrive On Green	0.66	0.66	0.66	0.49	0.49	0.49	0.14	0.77	0.77	0.26	0.26	0.26
Sat Flow, veh/h	559	3237	347	585	3385	222	1781	1870	1585	989	1870	1585
Grp Volume(v), veh/h	164	476	484	114	497	511	82	309	86	183	463	228
Grp Sat Flow(s),veh/h/ln	559	1777	1808	585	1777	1830	1781	1870	1585	989	1870	1585
Q Serve(g_s), s	26.1	12.8	12.8	14.1	17.6	17.6	2.8	5.1	1.3	15.1	21.9	11.2
Cycle Q Clear(g_c), s	43.8	12.8	12.8	26.9	17.6	17.6	2.8	5.1	1.3	15.1	21.9	11.2
Prop In Lane	1.00		0.19	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	247	879	894	286	879	905	212	721	611	336	484	410
V/C Ratio(X)	0.66	0.54	0.54	0.40	0.57	0.57	0.39	0.43	0.14	0.54	0.96	0.56
Avail Cap(c_a), veh/h	247	879	894	286	879	905	230	740	627	336	484	410
HCM Platoon Ratio	1.33	1.33	1.33	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	0.97	0.97	0.97	0.11	0.11	0.11
Uniform Delay (d), s/veh	24.0	10.0	10.0	23.5	16.0	16.0	21.7	6.9	6.5	30.3	32.8	28.9
Incr Delay (d2), s/veh	13.3	2.4	2.4	4.1	2.6	2.6	1.1	0.4	0.1	0.2	6.3	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(95%),veh/ln	6.9	7.7	7.8	3.9	11.6	11.9	2.0	2.8	0.8	4.5	12.1	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.3	12.4	12.3	27.6	18.6	18.5	22.8	7.3	6.6	30.5	39.1	29.1
LnGrp LOS	D	B	B	C	B	B	C	A	A	C	D	C
Approach Vol, veh/h		1124			1122			477			874	
Approach Delay, s/veh		16.0			19.5			9.8			34.7	
Approach LOS		B			B			A			C	
Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		49.9	11.4	28.7		49.9		40.1				
Change Period (Y+Rc), s		* 5.4	* 5.3	* 5.4		* 5.4		* 5.4				
Max Green Setting (Gmax), s		* 44	* 7	* 23		* 44		* 36				
Max Q Clear Time (g_c+I1), s		28.9	4.8	23.9		45.8		7.1				
Green Ext Time (p_c), s		8.7	0.0	0.0		0.0		2.1				
Intersection Summary												
HCM 6th Ctrl Delay			20.8									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary

17: Woodbridge Street & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↑	↔	↔	↔	↔
Traffic Volume (veh/h)	10	8	17	20	9	34	14	382	18	46	565	28
Future Volume (veh/h)	10	8	17	20	9	34	14	382	18	46	565	28
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	11	9	18	22	10	37	15	415	20	50	614	30
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	74	49	65	82	32	71	717	1516	1285	801	1433	70
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.81	0.81	0.81	1.00	1.00	1.00
Sat Flow, veh/h	271	598	782	352	386	854	786	1870	1585	954	1768	86
Grp Volume(v), veh/h	38	0	0	69	0	0	15	415	20	50	0	644
Grp Sat Flow(s),veh/h/ln	1651	0	0	1593	0	0	786	1870	1585	954	0	1855
Q Serve(g_s), s	0.0	0.0	0.0	1.5	0.0	0.0	0.3	4.9	0.2	0.3	0.0	0.0
Cycle Q Clear(g_c), s	1.9	0.0	0.0	3.6	0.0	0.0	0.3	4.9	0.2	5.2	0.0	0.0
Prop In Lane	0.29		0.47	0.32		0.54	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	188	0	0	185	0	0	717	1516	1285	801	0	1503
V/C Ratio(X)	0.20	0.00	0.00	0.37	0.00	0.00	0.02	0.27	0.02	0.06	0.00	0.43
Avail Cap(c_a), veh/h	509	0	0	502	0	0	717	1516	1285	801	0	1503
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.73	0.73	0.73	0.36	0.00	0.36
Uniform Delay (d), s/veh	38.7	0.0	0.0	39.5	0.0	0.0	1.6	2.1	1.6	0.2	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	1.3	0.0	0.0	0.0	0.3	0.0	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	0.0	0.0	2.7	0.0	0.0	0.1	1.8	0.1	0.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.2	0.0	0.0	40.7	0.0	0.0	1.7	2.4	1.7	0.2	0.0	0.3
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	38			69			450			694		
Approach Delay, s/veh	39.2			40.7			2.3			0.3		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	77.5			12.5			77.5			12.5		
Change Period (Y+Rc), s	* 4.5			* 5.1			* 4.5			* 5.1		
Max Green Setting (Gmax), s	* 55			* 26			* 55			* 26		
Max Q Clear Time (g_c+I1), s	7.2			3.9			6.9			5.6		
Green Ext Time (p_c), s	12.1			0.1			7.0			0.3		

Intersection Summary

HCM 6th Ctrl Delay	4.5
HCM 6th LOS	A

Notes

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

Queues

18: Whitsett Avenue & Ventura Boulevard

06/21/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	92	1237	73	33	948	140	72	95	746	284	538
v/c Ratio	0.40	0.78	0.10	0.42	0.87	0.24	0.61	0.26	1.17	0.78	0.57
Control Delay	21.6	27.5	16.4	53.9	52.2	12.1	57.5	33.9	129.4	52.6	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.6	27.5	16.4	53.9	52.2	12.1	57.5	33.9	129.4	52.6	14.9
Queue Length 50th (ft)	33	340	26	17	334	19	42	50	~301	171	191
Queue Length 95th (ft)	64	428	53	m32	m#383	m36	89	91	#456	253	273
Internal Link Dist (ft)		1440			2938			648		1328	
Turn Bay Length (ft)	95		135	145		60	60		220		65
Base Capacity (vph)	258	1592	712	79	1087	593	143	440	639	441	967
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.78	0.10	0.42	0.87	0.24	0.50	0.22	1.17	0.64	0.56

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
























Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

18: Whitsett Avenue & Ventura Boulevard

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	1138	67	30	872	129	66	85	3	686	261	495
Future Volume (vph)	85	1138	67	30	872	129	66	85	3	686	261	495
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	5.4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1854		3433	1863	1583
Flt Permitted	0.11	1.00	1.00	0.14	1.00	1.00	0.33	1.00		0.95	1.00	1.00
Satd. Flow (perm)	206	3539	1583	258	3539	1583	607	1854		3433	1863	1583
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)	92	1237	73	33	948	140	72	92	3	746	284	538
RTOR Reduction (vph)	0	0	0	0	0	97	0	2	0	0	0	10
Lane Group Flow (vph)	92	1237	73	33	948	43	72	93	0	746	284	528
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Prot	NA	custom
Protected Phases	1	6			2			4		3	8	1 3
Permitted Phases	6		6	2		2	4					8
Actuated Green, G (s)	45.0	45.0	45.0	30.7	30.7	30.7	19.7	19.7		18.6	19.7	52.6
Effective Green, g (s)	45.0	45.0	45.0	30.7	30.7	30.7	19.7	19.7		18.6	19.7	52.6
Actuated g/C Ratio	0.45	0.45	0.45	0.31	0.31	0.31	0.20	0.20		0.19	0.20	0.53
Clearance Time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	
Vehicle Extension (s)	3.0	4.9	4.9	4.7	4.7	4.7	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	231	1592	712	79	1086	485	119	365		638	367	832
v/s Ratio Prot	0.04	c0.35			c0.27			0.05		c0.22	c0.15	0.21
v/s Ratio Perm	0.14		0.05	0.13		0.03	0.12					0.12
v/c Ratio	0.40	0.78	0.10	0.42	0.87	0.09	0.61	0.26		1.17	0.77	0.63
Uniform Delay, d1	20.1	23.3	15.9	27.5	32.8	24.7	36.6	34.0		40.7	38.0	16.9
Progression Factor	1.00	1.00	1.00	1.37	1.37	3.05	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.1	3.8	0.3	10.4	6.8	0.2	8.4	0.4		92.3	9.8	1.6
Delay (s)	21.2	27.1	16.1	48.0	51.7	75.6	45.0	34.3		133.0	47.8	18.4
Level of Service	C	C	B	D	D	E	D	C		F	D	B
Approach Delay (s)		26.1			54.6			38.9			78.2	
Approach LOS		C			D			D			E	
Intersection Summary												
HCM 2000 Control Delay			53.3			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			0.94									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)				22.1		
Intersection Capacity Utilization			83.3%			ICU Level of Service				E		
Analysis Period (min)			15									
c Critical Lane Group												

Queues

19: Laurel Canyon Boulevard & Ventura Place

06/21/2024



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	58	46	214	12	1213	40	88	1845
v/c Ratio	0.46	0.27	0.70	0.07	0.56	0.04	0.44	0.63
Control Delay	51.2	45.3	22.5	35.8	33.2	1.9	27.1	17.6
Queue Delay	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0
Total Delay	51.2	45.3	22.5	35.8	34.0	1.9	27.1	17.6
Queue Length 50th (ft)	31	28	20	8	387	0	29	258
Queue Length 95th (ft)	73	61	91	m9	m368	m0	#126	#478
Internal Link Dist (ft)	123	395			458			232
Turn Bay Length (ft)			380	105		85	55	
Base Capacity (vph)	130	222	345	177	2164	997	200	2946
Starvation Cap Reductn	0	0	0	0	588	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.21	0.62	0.07	0.77	0.04	0.44	0.63

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.





















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

19: Laurel Canyon Boulevard & Ventura Place

06/21/2024













												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	13	8	31	11	197	11	1116	37	81	1642	55
Future Volume (vph)	32	13	8	31	11	197	11	1116	37	81	1642	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		9.4			9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.91	
Frpb, ped/bikes		1.00			1.00	0.94	1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes		0.96			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.98			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.97			0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1703			1796	1486	1770	3539	1518	1763	5060	
Flt Permitted		0.79			0.96	1.00	0.95	1.00	1.00	0.19	1.00	
Satd. Flow (perm)		1383			1796	1486	1770	3539	1518	345	5060	
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)	35	14	9	34	12	214	12	1213	40	88	1785	60
RTOR Reduction (vph)	0	7	0	0	0	165	0	0	16	0	3	0
Lane Group Flow (vph)	0	51	0	0	46	49	12	1213	24	88	1842	0
Confl. Peds. (#/hr)	16					16			16	16		
Turn Type	Perm	NA		Split	NA	Perm	Prot	NA	Perm	Perm	NA	
Protected Phases		3		4	4		1	6			2	
Permitted Phases	3					4			6	2		
Actuated Green, G (s)		7.1			9.5	9.5	2.0	59.3	59.3	52.3	52.3	
Effective Green, g (s)		7.1			9.5	9.5	2.0	59.3	59.3	52.3	52.3	
Actuated g/C Ratio		0.07			0.10	0.10	0.02	0.59	0.59	0.52	0.52	
Clearance Time (s)		9.4			9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	4.8	4.8	3.1	3.1	
Lane Grp Cap (vph)		98			170	141	35	2098	900	180	2646	
v/s Ratio Prot					0.03		0.01	c0.34			c0.36	
v/s Ratio Perm		c0.04				c0.03			0.02	0.25		
v/c Ratio		0.53			0.27	0.35	0.34	0.58	0.03	0.49	0.70	
Uniform Delay, d1		44.8			42.0	42.4	48.4	12.6	8.4	15.3	17.9	
Progression Factor		1.00			1.00	1.00	0.87	2.52	1.00	1.00	1.00	
Incremental Delay, d2		5.0			0.9	1.5	1.8	0.4	0.0	9.2	1.5	
Delay (s)		49.8			42.9	43.9	43.6	32.1	8.4	24.5	19.4	
Level of Service		D			D	D	D	C	A	C	B	
Approach Delay (s)		49.8			43.7			31.5			19.7	
Approach LOS		D			D			C			B	
Intersection Summary												
HCM 2000 Control Delay			26.2		HCM 2000 Level of Service					C		
HCM 2000 Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			100.0		Sum of lost time (s)					29.1		
Intersection Capacity Utilization			71.4%		ICU Level of Service					C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

20: Laurel Canyon Boulevard & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	700	499	353	687	127	332	952	253	411	997	198
Future Volume (veh/h)	170	700	499	353	687	127	332	952	253	411	997	198
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	185	761	542	384	747	138	361	1035	275	447	1084	215
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	302	1091	621	285	1141	659	325	938	405	359	974	548
Arrive On Green	0.03	0.10	0.10	0.10	0.32	0.32	0.09	0.26	0.26	0.07	0.18	0.18
Sat Flow, veh/h	1781	3554	1537	1781	3554	1539	3456	3554	1535	3456	3554	1536
Grp Volume(v), veh/h	185	761	542	384	747	138	361	1035	275	447	1084	215
Grp Sat Flow(s),veh/h/ln	1781	1777	1537	1781	1777	1539	1728	1777	1535	1728	1777	1536
Q Serve(g_s), s	7.0	20.7	18.7	9.6	18.1	5.7	9.4	26.4	16.1	10.4	27.4	6.7
Cycle Q Clear(g_c), s	7.0	20.7	18.7	9.6	18.1	5.7	9.4	26.4	16.1	10.4	27.4	6.7
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	302	1091	621	285	1141	659	325	938	405	359	974	548
V/C Ratio(X)	0.61	0.70	0.87	1.35	0.65	0.21	1.11	1.10	0.68	1.24	1.11	0.39
Avail Cap(c_a), veh/h	302	1091	621	285	1141	659	325	938	405	359	974	548
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Upstream Filter(I)	0.26	0.26	0.26	0.81	0.81	0.81	0.56	0.56	0.56	0.74	0.74	0.74
Uniform Delay (d), s/veh	24.3	40.4	20.3	28.0	29.2	18.2	45.3	36.8	33.0	46.5	40.8	11.2
Incr Delay (d2), s/veh	1.0	1.0	4.8	173.8	2.4	0.6	71.7	56.0	3.2	126.1	62.0	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(95%),veh/ln	4.6	12.6	10.6	27.5	11.9	3.7	10.9	25.1	9.2	16.8	28.9	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.2	41.4	25.1	201.8	31.6	18.7	117.0	92.8	36.2	172.7	102.8	12.5
LnGrp LOS	C	D	C	F	C	B	F	F	D	F	F	B
Approach Vol, veh/h	1488		1269				1671			1746		
Approach Delay, s/veh	33.5		81.7				88.7			109.6		
Approach LOS	C		F				F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	35.0	37.0	15.0	33.0	13.6	38.4	16.0	32.0				
Change Period (Y+Rc), s	5.4	6.3	5.6	5.6	5.6	6.3	5.6	5.6				
Max Green Setting (Gmax), s	30.6	30.7	9.4	27.4	8.0	32.1	10.4	26.4				
Max Q Clear Time (g_c+M), s	11.6	22.7	11.4	29.4	9.0	20.1	12.4	28.4				
Green Ext Time (p_c), s	0.0	6.6	0.0	0.0	0.0	5.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 79.9

HCM 6th LOS E

Notes

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

Queues

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/21/2024



Lane Group	EBL	EBT	WBL	WBT	WBR2	NBT	NBR	SBL	SBT	SBR2
Lane Group Flow (vph)	303	1273	73	1187	126	43	51	80	115	97
v/c Ratio	0.54	0.72	0.70	1.49	0.39	0.15	0.12	0.44	0.78	0.31
Control Delay	15.3	6.1	96.7	263.2	50.7	51.7	0.6	66.9	93.9	2.6
Queue Delay	73.3	49.8	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.5	56.0	96.7	265.8	50.7	51.7	0.6	66.9	93.9	2.6
Queue Length 50th (ft)	280	154	67	~814	100	34	0	69	103	0
Queue Length 95th (ft)	m137	m0	#149	#953	167	71	0	126	#201	0
Internal Link Dist (ft)		48		634		86			226	
Turn Bay Length (ft)	90		95		55		30	90		90
Base Capacity (vph)	580	1806	107	798	326	308	420	188	153	315
Starvation Cap Reductn	457	849	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	255	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	2.46	1.33	0.68	2.19	0.39	0.14	0.12	0.43	0.75	0.31

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

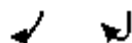
06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	279	1155	17	67	984	108	116	30	9	47	74	18
Future Volume (vph)	279	1155	17	67	984	108	116	30	9	47	74	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.7		4.9	6.1		6.1		6.9	6.9	7.0	7.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		0.89		1.00	0.91	1.00	0.89
Flpb, ped/bikes	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	0.99		0.85		1.00	0.85	1.00	0.88
Flt Protected	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (prot)	1770	3528		1770	3449		1408		1794	1440	1770	1445
Flt Permitted	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (perm)	1770	3528		1770	3449		1408		1794	1440	1770	1445
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)	303	1255	18	73	1070	117	126	33	10	51	80	20
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	43	0	0
Lane Group Flow (vph)	303	1272	0	73	1187	0	126	0	43	8	80	115
Confl. Peds. (#/hr)	29		16	16		29	29	44		44	44	
Turn Type	Prot	NA		Prot	NA		Perm	Split	NA	Perm	Split	NA
Protected Phases	1 3	3 6		5	2			7	7		8	8
Permitted Phases							2			7		
Actuated Green, G (s)	44.5	69.9		8.3	32.5		32.5		23.0	23.0	14.3	14.3
Effective Green, g (s)	44.5	63.8		8.3	32.5		32.5		23.0	23.0	14.3	14.3
Actuated g/C Ratio	0.32	0.46		0.06	0.23		0.23		0.16	0.16	0.10	0.10
Clearance Time (s)				4.9	6.1		6.1		6.9	6.9	7.0	7.0
Vehicle Extension (s)				3.0	4.8		4.8		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	562	1607		104	800		326		294	236	180	147
v/s Ratio Prot	0.17	c0.36		0.04	c0.34				c0.02		0.05	c0.08
v/s Ratio Perm							0.09			0.01		
v/c Ratio	0.54	0.79		0.70	1.48		0.39		0.15	0.04	0.44	0.78
Uniform Delay, d1	39.3	32.4		64.6	53.8		45.3		50.1	49.2	59.1	61.3
Progression Factor	0.37	0.21		1.00	1.00		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.3		19.2	224.4		3.4		0.2	0.1	1.7	23.2
Delay (s)	14.8	7.1		83.9	278.1		48.8		50.3	49.2	60.9	84.5
Level of Service	B	A		F	F		D		D	D	E	F
Approach Delay (s)		8.6			247.1				49.7			69.0
Approach LOS		A			F				D			E
Intersection Summary												
HCM 2000 Control Delay			113.7			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			0.88									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			31.8			
Intersection Capacity Utilization			93.7%			ICU Level of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/21/2024



Movement	SBR	SBR2
Lane Configurations		
Traffic Volume (vph)	87	89
Future Volume (vph)	87	89
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		7.0
Lane Util. Factor		1.00
Frpb, ped/bikes		0.77
Flpb, ped/bikes		1.00
Frt		0.85
Flt Protected		1.00
Satd. Flow (prot)		1217
Flt Permitted		1.00
Satd. Flow (perm)		1217
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	95	97
RTOR Reduction (vph)	0	87
Lane Group Flow (vph)	0	10
Confl. Peds. (#/hr)	44	44
Turn Type		Perm
Protected Phases		
Permitted Phases		8
Actuated Green, G (s)		14.3
Effective Green, g (s)		14.3
Actuated g/C Ratio		0.10
Clearance Time (s)		7.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)		124
v/s Ratio Prot		
v/s Ratio Perm		0.01
v/c Ratio		0.08
Uniform Delay, d1		56.9
Progression Factor		1.00
Incremental Delay, d2		0.3
Delay (s)		57.2
Level of Service		E
Approach Delay (s)		
Approach LOS		
Intersection Summary		

HCM 6th Signalized Intersection Summary

22: Carpenter Avenue & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	299	871	110	128	1116	213	69	31	97	77	43	99
Future Volume (veh/h)	299	871	110	128	1116	213	69	31	97	77	43	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	1.00		0.91	0.95		0.92	0.96		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	325	947	120	139	1213	232	75	34	105	84	47	108
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	274	1353	171	171	1093	206	108	58	113	193	96	348
Arrive On Green	0.15	0.43	0.43	0.03	0.12	0.12	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3139	398	1781	2931	554	247	240	470	558	400	1450
Grp Volume(v), veh/h	325	536	531	139	729	716	214	0	0	131	0	108
Grp Sat Flow(s), veh/h/ln	1781	1777	1760	1781	1777	1707	957	0	0	958	0	1450
Q Serve(g_s), s	15.4	24.6	24.6	7.8	37.3	37.3	10.9	0.0	0.0	0.0	0.0	6.1
Cycle Q Clear(g_c), s	15.4	24.6	24.6	7.8	37.3	37.3	22.7	0.0	0.0	11.8	0.0	6.1
Prop In Lane	1.00		0.23	1.00		0.32	0.35		0.49	0.64		1.00
Lane Grp Cap(c), veh/h	274	766	758	171	663	637	278	0	0	289	0	348
V/C Ratio(X)	1.18	0.70	0.70	0.81	1.10	1.12	0.77	0.00	0.00	0.45	0.00	0.31
Avail Cap(c_a), veh/h	274	766	758	207	663	637	278	0	0	289	0	348
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.67	0.67	0.67	0.13	0.13	0.13	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.3	23.2	23.2	47.5	43.8	43.8	39.0	0.0	0.0	32.9	0.0	31.2
Incr Delay (d2), s/veh	105.4	3.6	3.6	2.8	48.8	58.8	12.3	0.0	0.0	1.1	0.0	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(95%),veh/ln	21.4	14.9	14.8	4.8	32.0	33.4	10.2	0.0	0.0	5.2	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	147.7	26.8	26.8	50.3	92.7	102.6	51.2	0.0	0.0	34.0	0.0	31.7
LnGrp LOS	F	C	C	D	F	F	D	A	A	C	A	C
Approach Vol, veh/h	1392			1584			214			239		
Approach Delay, s/veh	55.0			93.5			51.2			33.0		
Approach LOS	E			F			D			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	34.2	52.3		33.5	20.0	46.5		33.5				
Change Period (Y+Rc), s	4.6	* 9.2		9.5	4.6	* 9.2		9.5				
Max Green Setting (Gmax), s	41	* 41		24.0	15.4	* 37		24.0				
Max Q Clear Time (g_c+I), s	19.8	26.6		13.8	17.4	39.3		24.7				
Green Ext Time (p_c), s	0.1	10.3		0.8	0.0	0.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay 71.0

HCM 6th LOS E

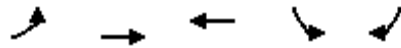
Notes

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

Queues

23: Ventura Boulevard & Colfax Avenue

06/21/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	246	929	1305	450	585
v/c Ratio	0.58	0.45	1.17	0.82	0.56
Control Delay	33.7	6.0	112.9	44.2	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	33.7	6.0	112.9	44.2	6.8
Queue Length 50th (ft)	82	57	~506	259	72
Queue Length 95th (ft)	m129	70	#697	362	144
Internal Link Dist (ft)		981	464		
Turn Bay Length (ft)	160			360	360
Base Capacity (vph)	422	2053	1113	562	1044
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.58	0.45	1.17	0.80	0.56

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.



















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

23: Ventura Boulevard & Colfax Avenue

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	226	855	0	0	914	287	0	0	0	414	0	538
Future Volume (vph)	226	855	0	0	914	287	0	0	0	414	0	538
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.4			5.4					5.4		5.7
Lane Util. Factor	1.00	0.95			0.95					1.00		1.00
Frt	1.00	1.00			0.96					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1770	3539			3412					1770		1583
Flt Permitted	0.10	1.00			1.00					0.95		1.00
Satd. Flow (perm)	195	3539			3412					1770		1583
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)	246	929	0	0	993	312	0	0	0	450	0	585
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	173
Lane Group Flow (vph)	246	929	0	0	1305	0	0	0	0	450	0	412
Turn Type	pm+pt	NA			NA					pm+pt		pm+ov
Protected Phases	5	2			6			3		4		5
Permitted Phases	2						3			7		4
Actuated Green, G (s)	58.0	58.0			32.6					31.2		50.9
Effective Green, g (s)	58.0	58.0			32.6					31.2		50.9
Actuated g/C Ratio	0.58	0.58			0.33					0.31		0.51
Clearance Time (s)	5.7	5.4			5.4					5.4		5.7
Vehicle Extension (s)	3.0	4.3			4.5					3.0		3.0
Lane Grp Cap (vph)	423	2052			1112					552		805
v/s Ratio Prot	c0.11	0.26			c0.38					c0.25		0.10
v/s Ratio Perm	0.22											0.16
v/c Ratio	0.58	0.45			1.17					0.82		0.51
Uniform Delay, d1	20.9	12.0			33.7					31.7		16.3
Progression Factor	1.60	0.43			0.74					1.00		1.00
Incremental Delay, d2	1.5	0.5			87.1					9.0		0.6
Delay (s)	35.1	5.6			111.8					40.8		16.8
Level of Service	D	A			F					D		B
Approach Delay (s)		11.8			111.8			0.0			27.2	
Approach LOS		B			F			A			C	
Intersection Summary												
HCM 2000 Control Delay		53.5			HCM 2000 Level of Service			D				
HCM 2000 Volume to Capacity ratio		0.98										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)			22.8				
Intersection Capacity Utilization		82.5%			ICU Level of Service			E				
Analysis Period (min)		15										
c Critical Lane Group												

Queues

24: Berry Drive & Ventura Boulevard

06/21/2024



Lane Group	EBT	WBL	WBT	NBT
Lane Group Flow (vph)	2463	47	1316	73
v/c Ratio	0.85	0.61	0.45	0.32
Control Delay	10.4	39.0	2.6	5.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	10.4	39.0	2.6	5.5
Queue Length 50th (ft)	373	9	137	0
Queue Length 95th (ft)	520	m19	22	11
Internal Link Dist (ft)	342		273	287
Turn Bay Length (ft)		65		
Base Capacity (vph)	2911	77	2933	394
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.85	0.61	0.45	0.19



















Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

24: Berry Drive & Ventura Boulevard

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	2138	128	43	1211	0	23	0	44	0	0	0
Future Volume (vph)	0	2138	128	43	1211	0	23	0	44	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0			9.4				
Lane Util. Factor		0.95		1.00	0.95			1.00				
Frt		0.99		1.00	1.00			0.91				
Flt Protected		1.00		0.95	1.00			0.98				
Satd. Flow (prot)		3509		1770	3539			1669				
Flt Permitted		1.00		0.05	1.00			0.98				
Satd. Flow (perm)		3509		93	3539			1669				
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)	0	2324	139	47	1316	0	25	0	48	0	0	0
RTOR Reduction (vph)	0	2	0	0	0	0	0	69	0	0	0	0
Lane Group Flow (vph)	0	2461	0	47	1316	0	0	4	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		6			2		3	3			4	
Permitted Phases	6			2						4		
Actuated Green, G (s)		80.0		80.0	80.0			5.6				
Effective Green, g (s)		80.0		80.0	80.0			5.6				
Actuated g/C Ratio		0.80		0.80	0.80			0.06				
Clearance Time (s)		5.0		5.0	5.0			9.4				
Vehicle Extension (s)		4.9		4.0	4.0			3.0				
Lane Grp Cap (vph)		2807		74	2831			93				
v/s Ratio Prot		c0.70			0.37			c0.00				
v/s Ratio Perm				0.50								
v/c Ratio		0.88		0.64	0.46			0.04				
Uniform Delay, d1		6.7		4.1	3.2			44.7				
Progression Factor		0.97		1.33	0.71			1.00				
Incremental Delay, d2		4.1		26.2	0.4			0.2				
Delay (s)		10.6		31.6	2.7			44.9				
Level of Service		B		C	A			D				
Approach Delay (s)		10.6			3.7			44.9			0.0	
Approach LOS		B			A			D			A	
Intersection Summary												
HCM 2000 Control Delay			8.8			HCM 2000 Level of Service			A			
HCM 2000 Volume to Capacity ratio			0.92									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			23.7			
Intersection Capacity Utilization			81.0%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

25: Ventura Boulevard & Tujunga Avenue

06/21/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	196	1239	1256	279	371
v/c Ratio	0.64	0.53	0.73	0.36	0.57
Control Delay	18.4	15.2	24.7	32.8	24.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	18.4	15.2	24.7	32.8	24.5
Queue Length 50th (ft)	69	292	320	76	167
Queue Length 95th (ft)	m89	463	#474	104	224
Internal Link Dist (ft)		426	233	3083	
Turn Bay Length (ft)	180			100	60
Base Capacity (vph)	331	2345	1719	1012	668
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.59	0.53	0.73	0.28	0.56

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

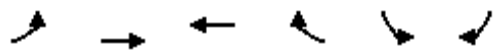
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

25: Ventura Boulevard & Tujunga Avenue

06/21/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	180	1140	1044	111	257	341
Future Volume (vph)	180	1140	1044	111	257	341
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.5	5.5		5.5	5.6
Lane Util. Factor	1.00	0.95	0.95		0.97	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	3539	3488		3433	1583
Flt Permitted	0.10	1.00	1.00		0.95	1.00
Satd. Flow (perm)	189	3539	3488		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	196	1239	1135	121	279	371
RTOR Reduction (vph)	0	0	7	0	0	17
Lane Group Flow (vph)	196	1239	1249	0	279	354
Turn Type	pm+pt	NA	NA		Prot	pt+ov
Protected Phases	1	6	2		4	1 7
Permitted Phases	6					4
Actuated Green, G (s)	66.3	66.3	49.1		22.7	39.8
Effective Green, g (s)	66.3	66.3	49.1		22.7	34.3
Actuated g/C Ratio	0.66	0.66	0.49		0.23	0.34
Clearance Time (s)	5.6	5.5	5.5		5.5	
Vehicle Extension (s)	3.0	4.4	4.9		3.0	
Lane Grp Cap (vph)	308	2346	1712		779	542
v/s Ratio Prot	0.07	c0.35	c0.36		0.08	c0.22
v/s Ratio Perm	0.35					
v/c Ratio	0.64	0.53	0.73		0.36	0.65
Uniform Delay, d1	15.4	8.7	20.2		32.5	27.8
Progression Factor	0.98	1.53	1.00		1.00	1.00
Incremental Delay, d2	2.3	0.4	2.8		0.3	2.8
Delay (s)	17.4	13.8	23.0		32.8	30.6
Level of Service	B	B	C		C	C
Approach Delay (s)		14.3	23.0		31.6	
Approach LOS		B	C		C	
Intersection Summary						
HCM 2000 Control Delay			20.9		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.75			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	22.1
Intersection Capacity Utilization			64.5%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

26: Laurel Canyon Boulevard & Maxwellton Road

06/24/2024









Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		<div>↕</div>						<div>↕↕</div>			<div>↕↕</div>	
Traffic Volume (veh/h)	140	0	86	0	0	0	2	1301	0	0	1730	113
Future Volume (veh/h)	140	0	86	0	0	0	2	1301	0	0	1730	113
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.83				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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h	152	0	93				2	1414	0	0	1880	123
Peak Hour Factor	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	0	0	2	2
Cap, veh/h	226	0	138				40	1852	0	0	1919	124
Arrive On Green	0.23	0.00	0.23				0.57	0.57	0.00	0.00	0.57	0.57
Sat Flow, veh/h	975	0	597				0	3355	0	0	3482	219
Grp Volume(v), veh/h	245	0	0				750	666	0	0	976	1027
Grp Sat Flow(s),veh/h/ln	1572	0	0				1653	1617	0	0	1777	1830
Q Serve(g_s), s	12.8	0.0	0.0				1.1	27.3	0.0	0.0	47.5	49.9
Cycle Q Clear(g_c), s	12.8	0.0	0.0				51.0	27.3	0.0	0.0	47.5	49.9
Prop In Lane	0.62		0.38				0.00		0.00	0.00		0.12
Lane Grp Cap(c), veh/h	364	0	0				976	916	0	0	1006	1037
V/C Ratio(X)	0.67	0.00	0.00				0.77	0.73	0.00	0.00	0.97	0.99
Avail Cap(c_a), veh/h	433	0	0				976	916	0	0	1006	1037
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.72	0.72	0.00	0.00	0.09	0.09
Uniform Delay (d), s/veh	31.5	0.0	0.0				14.4	14.4	0.0	0.0	18.8	19.3
Incr Delay (d2), s/veh	3.2	0.0	0.0				4.2	3.7	0.0	0.0	4.0	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
%ile BackOfQ(95%),veh/ln	8.8	0.0	0.0				15.4	14.0	0.0	0.0	19.9	22.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.7	0.0	0.0				18.6	18.0	0.0	0.0	22.7	25.8
LnGrp LOS	C	A	A				B	B	A	A	C	C
Approach Vol, veh/h		245						1416			2003	
Approach Delay, s/veh		34.7						18.3			24.3	
Approach LOS		C						B			C	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		60.0		30.0		60.0						
Change Period (Y+Rc), s		9.0		9.2		9.0						
Max Green Setting (Gmax), s		47.0		24.8		47.0						
Max Q Clear Time (g_c+I1), s		51.9		14.8		53.0						
Green Ext Time (p_c), s		0.0		1.1		0.0						
Intersection Summary												
HCM 6th Ctrl Delay			22.7									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary

27: Laurel Canyon Boulevard & Laurel Terrace Drive/Sunshine Terrace Drive

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								 			 	
Traffic Volume (veh/h)	18	17	286	115	25	102	66	1318	78	25	1773	21
Future Volume (veh/h)	18	17	286	115	25	102	66	1318	78	25	1773	21
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	20	18	311	125	27	111	72	1433	85	27	1927	23
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	45	29	341	113	26	69	92	2364	140	222	2170	26
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.05	0.69	0.69	0.60	0.60	0.60
Sat Flow, veh/h	57	128	1517	307	114	307	1781	3409	202	344	3597	43
Grp Volume(v), veh/h	349	0	0	263	0	0	72	745	773	27	950	1000
Grp Sat Flow(s),veh/h/ln	702	0	0	727	0	0	1781	1777	1834	344	1777	1863
Q Serve(g_s), s	0.0	0.0	0.0	2.9	0.0	0.0	4.8	26.5	26.8	5.4	54.7	55.2
Cycle Q Clear(g_c), s	24.1	0.0	0.0	27.0	0.0	0.0	4.8	26.5	26.8	21.5	54.7	55.2
Prop In Lane	0.06		0.89	0.48		0.42	1.00		0.11	1.00		0.02
Lane Grp Cap(c), veh/h	415	0	0	208	0	0	92	1232	1272	222	1072	1124
V/C Ratio(X)	0.84	0.00	0.00	1.27	0.00	0.00	0.78	0.60	0.61	0.12	0.89	0.89
Avail Cap(c_a), veh/h	415	0	0	208	0	0	110	1232	1272	222	1072	1124
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.14	0.14	0.14
Uniform Delay (d), s/veh	45.7	0.0	0.0	49.6	0.0	0.0	56.2	9.7	9.8	18.3	20.3	20.4
Incr Delay (d2), s/veh	14.4	0.0	0.0	151.9	0.0	0.0	25.9	2.2	2.2	0.2	1.8	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.5	0.0	0.0	24.1	0.0	0.0	5.0	15.1	15.6	0.8	24.0	25.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.1	0.0	0.0	201.5	0.0	0.0	82.1	11.9	11.9	18.5	22.0	22.1
LnGrp LOS	E	A	A	F	A	A	F	B	B	B	C	C
Approach Vol, veh/h	349		263				1590			1977		
Approach Delay, s/veh	60.1		201.5				15.1			22.0		
Approach LOS	E		F				B			C		
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	10.8	77.2	32.0		88.0		32.0					
Change Period (Y+Rc), s	4.6	4.8	* 5		4.8		* 5					
Max Green Setting (Gmax), s	71.2	71.2	* 27		83.2		* 27					
Max Q Clear Time (g_c+I), s	10.8	57.2	26.1		28.8		29.0					
Green Ext Time (p_c), s	0.0	11.2	0.2		16.3		0.0					

Intersection Summary

HCM 6th Ctrl Delay 33.9

HCM 6th LOS C

Notes

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

Queues

28: Laurel Canyon Boulevard & Fryman Road

06/21/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	285	8	26	1275	2418
v/c Ratio	0.74	0.02	0.32	0.55	1.05
Control Delay	43.8	24.6	21.7	9.9	51.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	43.8	24.6	21.7	9.9	51.7
Queue Length 50th (ft)	152	4	6	179	~796
Queue Length 95th (ft)	217	14	36	290	#1017
Internal Link Dist (ft)				236	183
Turn Bay Length (ft)			145		
Base Capacity (vph)	542	485	82	2339	2300
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.53	0.02	0.32	0.55	1.05








Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

28: Laurel Canyon Boulevard & Fryman Road

06/21/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	262	0	7	0	0	0	24	1173	0	0	1895	329
Future Volume (vph)	262	0	7	0	0	0	24	1173	0	0	1895	329
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4		5.4				5.4	5.4			5.4	
Lane Util. Factor	1.00		1.00				1.00	0.95			0.95	
Frt	1.00		0.85				1.00	1.00			0.98	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	3539			3461	
Flt Permitted	0.95		1.00				0.07	1.00			1.00	
Satd. Flow (perm)	1770		1583				125	3539			3461	
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)	285	0	8	0	0	0	26	1275	0	0	2060	358
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	13	0
Lane Group Flow (vph)	285	0	8	0	0	0	26	1275	0	0	2405	0
Turn Type	Perm		Perm				Perm	NA		Perm	NA	
Protected Phases								2			6	
Permitted Phases	8		8				2			6		
Actuated Green, G (s)	19.7		19.7				59.5	59.5			59.5	
Effective Green, g (s)	19.7		19.7				59.5	59.5			59.5	
Actuated g/C Ratio	0.22		0.22				0.66	0.66			0.66	
Clearance Time (s)	5.4		5.4				5.4	5.4			5.4	
Vehicle Extension (s)	3.0		3.0				4.8	4.8			5.1	
Lane Grp Cap (vph)	387		346				82	2339			2288	
v/s Ratio Prot								0.36			c0.70	
v/s Ratio Perm	c0.16		0.01				0.21					
v/c Ratio	0.74		0.02				0.32	0.55			1.05	
Uniform Delay, d1	32.7		27.6				6.5	8.1			15.2	
Progression Factor	1.00		1.00				1.00	1.00			1.00	
Incremental Delay, d2	7.1		0.0				9.9	0.9			34.0	
Delay (s)	39.9		27.6				16.4	9.0			49.3	
Level of Service	D		C				B	A			D	
Approach Delay (s)		39.5			0.0			9.1			49.3	
Approach LOS		D			A			A			D	
Intersection Summary												
HCM 2000 Control Delay			35.6				HCM 2000 Level of Service				D	
HCM 2000 Volume to Capacity ratio			0.97									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			10.8		
Intersection Capacity Utilization			85.2%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th TWSC
29: Laurel Canyon Boulevard & Woodbridge Street

06/24/2024

Intersection												
Int Delay, s/veh	25.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	3	0	18	5	0	60	16	1400	5	192	1928	24
Future Vol, veh/h	3	0	18	5	0	60	16	1400	5	192	1928	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	65	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	20	5	0	65	17	1522	5	209	2096	26

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	3322	4088	1061	3025	4099	764	2122	0	0	1527	0	0
Stage 1	2527	2527	-	1559	1559	-	-	-	-	-	-	-
Stage 2	795	1561	-	1466	2540	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 3	2	220	6	2	346	253	-	-	432	-	-
Stage 1	28	55	-	117	172	-	-	-	-	-	-	-
Stage 2	347	171	-	134	54	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 1	1	220	~ 3	1	346	253	-	-	432	-	-
Mov Cap-2 Maneuver	~ 1	1	-	~ 3	1	-	-	-	-	-	-	-
Stage 1	26	28	-	109	160	-	-	-	-	-	-	-
Stage 2	263	160	-	63	28	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$ 2034.7		\$ 719.1	0.2	1.9
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	253	-	-	7 35	432	-	-
HCM Lane V/C Ratio	0.069	-	-	3.261 2.019	0.483	-	-
HCM Control Delay (s)	20.3	-	-	\$ 2034.7\$ 719.1	20.9	-	-
HCM Lane LOS	C	-	-	F F	C	-	-
HCM 95th %tile Q(veh)	0.2	-	-	4.1 7.8	2.6	-	-

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

HCM 6th TWSC
30: Valleyheart Drive (North) & Laurel Canyon Boulevard

06/24/2024

Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↙	↕		↙	↕	
Traffic Vol, veh/h	2	0	12	7	0	31	20	1392	9	33	1935	8
Future Vol, veh/h	2	0	12	7	0	31	20	1392	9	33	1935	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	40	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	13	8	0	34	22	1513	10	36	2103	9
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2981	3747	1056	2686	3746	762	2112	0	0	1523	0	0
Stage 1	2180	2180	-	1562	1562	-	-	-	-	-	-	-
Stage 2	801	1567	-	1124	2184	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	6	4	222	10	4	347	256	-	-	434	-	-
Stage 1	47	83	-	117	171	-	-	-	-	-	-	-
Stage 2	344	170	-	219	83	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	5	3	222	8	3	347	256	-	-	434	-	-
Mov Cap-2 Maneuver	5	3	-	8	3	-	-	-	-	-	-	-
Stage 1	43	76	-	107	156	-	-	-	-	-	-	-
Stage 2	284	155	-	189	76	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	203.5		\$ 320.8		0.3		0.2					
HCM LOS	F		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	256	-	-	31 39	434	-	-					
HCM Lane V/C Ratio	0.085	-	-	0.491 1.059	0.083	-	-					
HCM Control Delay (s)	20.4	-	-	203.5\$ 320.8	14	-	-					
HCM Lane LOS	C	-	-	F F	B	-	-					
HCM 95th %tile Q(veh)	0.3	-	-	1.6 4.1	0.3	-	-					
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				





HCM 6th TWSC

31: Laurel Canyon Boulevard & Valleyheart Drive (South)

06/24/2024

Intersection

Int Delay, s/veh 5.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	105	1321	21	151	1786
Future Vol, veh/h	6	105	1321	21	151	1786
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	35	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	114	1436	23	164	1941

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	2747	730	0
Stage 1	1448	-	-
Stage 2	1299	-	-
Critical Hdwy	6.84	6.94	-
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	-
Pot Cap-1 Maneuver	16	365	-
Stage 1	183	-	-
Stage 2	220	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	10	365	-
Mov Cap-2 Maneuver	10	-	-
Stage 1	183	-	-
Stage 2	141	-	-

Approach	WB	NB	SB
HCM Control Delay, s	138.1	0	1.3
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	125	459
HCM Lane V/C Ratio	-	-	0.965	0.358
HCM Control Delay (s)	-	-	138.1	17.1
HCM Lane LOS	-	-	F	C
HCM 95th %tile Q(veh)	-	-	6.5	1.6

HCM 6th AWSC
32: Radford Avenue & Sarah Street

06/24/2024

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	1	0	3	7	62	2	41	1	131	118	15
Future Vol, veh/h	14	1	0	3	7	62	2	41	1	131	118	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	1	0	3	8	67	2	45	1	142	128	16
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0




Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.1	7.6	7.7	9.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	93%	4%	50%
Vol Thru, %	93%	7%	10%	45%
Vol Right, %	2%	0%	86%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	44	15	72	264
LT Vol	2	14	3	131
Through Vol	41	1	7	118
RT Vol	1	0	62	15
Lane Flow Rate	48	16	78	287
Geometry Grp	1	1	1	1
Degree of Util (X)	0.059	0.022	0.091	0.335
Departure Headway (Hd)	4.437	4.966	4.2	4.201
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	811	724	858	847
Service Time	2.446	2.974	2.203	2.272
HCM Lane V/C Ratio	0.059	0.022	0.091	0.339
HCM Control Delay	7.7	8.1	7.6	9.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.1	0.3	1.5

Intersection

Intersection Delay, s/veh 9.5

Intersection LOS A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	56	56	44	177	177	94
Future Vol, veh/h	56	56	44	177	177	94
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	61	61	48	192	192	102
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8.9	8.7	10.4
HCM LOS	A	A	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	50%	65%
Vol Thru, %	20%	0%	35%
Vol Right, %	80%	50%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	221	112	271
LT Vol	0	56	177
Through Vol	44	0	94
RT Vol	177	56	0
Lane Flow Rate	240	122	295
Geometry Grp	1	1	1
Degree of Util (X)	0.273	0.165	0.377
Departure Headway (Hd)	4.086	4.888	4.607
Convergence, Y/N	Yes	Yes	Yes
Cap	879	732	781
Service Time	2.116	2.931	2.637
HCM Lane V/C Ratio	0.273	0.167	0.378
HCM Control Delay	8.7	8.9	10.4
HCM Lane LOS	A	A	B
HCM 95th-tile Q	1.1	0.6	1.8

HCM 6th AWSC

54: Radford Avenue & Radford Gate

06/24/2024

Intersection

Intersection Delay, s/veh14.2

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	44	64	0	0	21	361	150	0	185	1
Future Vol, veh/h	2	0	44	64	0	0	21	361	150	0	185	1
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	48	70	0	0	23	392	163	0	201	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.7	9.8	16.8	9.8
HCM LOS	A	A	C	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	4%	100%	0%
Vol Thru, %	68%	0%	0%	99%
Vol Right, %	28%	96%	0%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	532	46	64	186
LT Vol	21	2	64	0
Through Vol	361	0	0	185
RT Vol	150	44	0	1
Lane Flow Rate	578	50	70	202
Geometry Grp	1	1	1	1
Degree of Util (X)	0.697	0.072	0.114	0.274
Departure Headway (Hd)	4.34	5.199	5.921	4.871
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	833	680	600	734
Service Time	2.383	3.295	4.013	2.932
HCM Lane V/C Ratio	0.694	0.074	0.117	0.275
HCM Control Delay	16.8	8.7	9.8	9.8
HCM Lane LOS	C	A	A	A
HCM 95th-tile Q	5.8	0.2	0.4	1.1

Intersection

Intersection Delay, s/veh16.1

Intersection LOS C




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	0	14	30	51	34	0	23	498	20	0	172	0
Future Vol, veh/h	0	14	30	51	34	0	23	498	20	0	172	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	15	33	55	37	0	25	541	22	0	187	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9	10.1	19.6	9.8
HCM LOS	A	B	C	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	0%	60%	0%
Vol Thru, %	92%	32%	40%	100%
Vol Right, %	4%	68%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	541	44	85	172
LT Vol	23	0	51	0
Through Vol	498	14	34	172
RT Vol	20	30	0	0
Lane Flow Rate	588	48	92	187
Geometry Grp	1	1	1	1
Degree of Util (X)	0.741	0.074	0.154	0.259
Departure Headway (Hd)	4.538	5.565	5.989	4.983
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	788	647	602	712
Service Time	2.604	3.569	3.992	3.072
HCM Lane V/C Ratio	0.746	0.074	0.153	0.263
HCM Control Delay	19.6	9	10.1	9.8
HCM Lane LOS	C	A	B	A
HCM 95th-tile Q	6.8	0.2	0.5	1

HCM 6th TWSC
56: Colfax Avenue & Colfax Gate

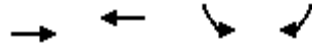
06/24/2024

Intersection						
Int Delay, s/veh	6.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	56	19	59	377	1006	177
Future Vol, veh/h	56	19	59	377	1006	177
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	61	21	64	410	1093	192
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1727	1189	1285	0	-	0
Stage 1	1189	-	-	-	-	-
Stage 2	538	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	97	229	540	-	-	-
Stage 1	289	-	-	-	-	-
Stage 2	585	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	82	229	540	-	-	-
Mov Cap-2 Maneuver	82	-	-	-	-	-
Stage 1	245	-	-	-	-	-
Stage 2	585	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	127.1	1.7		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	540	-	98	-	-	
HCM Lane V/C Ratio	0.119	-	0.832	-	-	
HCM Control Delay (s)	12.6	-	127.1	-	-	
HCM Lane LOS	B	-	F	-	-	
HCM 95th %tile Q(veh)	0.4	-	4.6	-	-	

Queues

121: Ventura Boulevard & Ventura PI

06/21/2024



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1496	1197	82	35
v/c Ratio	1.55	0.57	0.13	0.11
Control Delay	286.8	22.1	47.9	14.8
Queue Delay	1.6	51.2	0.0	0.0
Total Delay	288.4	73.3	47.9	14.8
Queue Length 50th (ft)	~1036	204	31	0
Queue Length 95th (ft)	#1176	m47	56	31
Internal Link Dist (ft)	509	48	136	
Turn Bay Length (ft)				40
Base Capacity (vph)	966	2074	669	336
Starvation Cap Reductn	0	1278	0	0
Spillback Cap Reductn	247	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	2.08	1.50	0.12	0.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

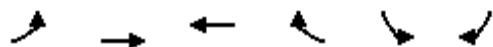
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

121: Ventura Boulevard & Ventura PI

06/21/2024



























Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	↑
Traffic Volume (vph)	0	1376	1101	0	75	32
Future Volume (vph)	0	1376	1101	0	75	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.1	6.1		5.7	5.7
Lane Util. Factor		0.95	0.95		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3433	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1496	1197	0	82	35
RTOR Reduction (vph)	0	0	0	0	0	29
Lane Group Flow (vph)	0	1496	1197	0	82	6
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2 4		3	
Permitted Phases						3
Actuated Green, G (s)		38.3	83.7		25.5	25.5
Effective Green, g (s)		38.3	83.7		25.5	25.5
Actuated g/C Ratio		0.27	0.60		0.18	0.18
Clearance Time (s)		6.1			5.7	5.7
Vehicle Extension (s)		4.6			3.0	3.0
Lane Grp Cap (vph)		968	2115		625	288
v/s Ratio Prot		c0.42	c0.34		c0.02	
v/s Ratio Perm						0.00
v/c Ratio		1.55	0.57		0.13	0.02
Uniform Delay, d1		50.9	17.1		48.0	47.0
Progression Factor		1.00	1.25		1.00	1.00
Incremental Delay, d2		250.6	0.0		0.1	0.0
Delay (s)		301.5	21.5		48.1	47.0
Level of Service		F	C		D	D
Approach Delay (s)		301.5	21.5		47.8	
Approach LOS		F	C		D	
Intersection Summary						
HCM 2000 Control Delay		171.6		HCM 2000 Level of Service		F
HCM 2000 Volume to Capacity ratio		0.90				
Actuated Cycle Length (s)		140.0		Sum of lost time (s)		31.8
Intersection Capacity Utilization		54.5%		ICU Level of Service		A
Analysis Period (min)		15				
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

1: Riverside Drive & Laurel Canyon Boulevard








06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	356	1096	177	131	573	121	236	941	135	179	946	254
Future Volume (veh/h)	356	1096	177	131	573	121	236	941	135	179	946	254
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	387	1191	192	142	623	132	257	1023	147	195	1028	276
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	387	1288	574	257	770	343	268	1048	585	204	1028	276
Arrive On Green	0.22	0.36	0.36	0.02	0.07	0.07	0.12	0.30	0.30	0.08	0.26	0.26
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	3554	1585	1781	4006	1075
Grp Volume(v), veh/h	387	1191	192	142	623	132	257	1023	147	195	873	431
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1777	1585	1781	1702	1677
Q Serve(g_s), s	26.1	38.6	10.5	4.9	20.7	9.5	13.1	34.2	7.7	9.4	30.8	30.8
Cycle Q Clear(g_c), s	26.1	38.6	10.5	4.9	20.7	9.5	13.1	34.2	7.7	9.4	30.8	30.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.64
Lane Grp Cap(c), veh/h	387	1288	574	257	770	343	268	1048	585	204	874	430
V/C Ratio(X)	1.00	0.92	0.33	0.55	0.81	0.38	0.96	0.98	0.25	0.95	1.00	1.00
Avail Cap(c_a), veh/h	387	1288	574	259	770	343	268	1048	585	204	874	430
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	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	0.69	0.69	0.69	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.9	36.7	27.8	56.6	53.3	48.1	33.8	41.9	26.3	34.6	44.6	44.6
Incr Delay (d2), s/veh	45.4	12.6	1.6	2.5	9.0	3.2	35.2	18.0	0.7	49.9	30.3	43.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	22.7	25.3	7.5	4.0	16.2	7.6	12.1	22.9	5.3	11.3	22.9	24.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	92.3	49.3	29.3	59.0	62.2	51.3	68.9	59.9	27.0	84.4	74.9	88.1
LnGrp LOS	F	D	C	E	E	D	E	E	C	F	E	F
Approach Vol, veh/h	1770			897			1427			1499		
Approach Delay, s/veh	56.5			60.1			58.1			80.0		
Approach LOS	E			E			E			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.6	36.7	32.0	31.7	15.0	41.3	14.5	49.2				
Change Period (Y+Rc), s	5.6	5.9	5.9	* 5.7	5.6	5.9	5.6	* 5.7				
Max Green Setting (Gmax), s	14.0	30.8	26.1	* 26	9.4	35.4	9.0	* 43				
Max Q Clear Time (g_c+I1), s	15.1	32.8	28.1	22.7	11.4	36.2	6.9	40.6				
Green Ext Time (p_c), s	0.0	0.0	0.0	1.4	0.0	0.0	0.1	2.0				
Intersection Summary												
HCM 6th Ctrl Delay	63.8											
HCM 6th LOS	E											
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
User approved changes to right turn type.												

HCM 6th TWSC

2: Riverside Drive & Radford Avenue

06/24/2024

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	1114	37	41	1124	8	18	2	32	1	0	9
Future Vol, veh/h	13	1114	37	41	1124	8	18	2	32	1	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	105	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	1211	40	45	1222	9	20	2	35	1	0	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1231	0	0	1251	0	0	1940	2560	606	1952	2596	616
Stage 1	-	-	-	-	-	-	1239	1239	-	1317	1317	-
Stage 2	-	-	-	-	-	-	701	1321	-	635	1279	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	562	-	-	552	-	-	39	26	440	38	25	433
Stage 1	-	-	-	-	-	-	186	246	-	166	225	-
Stage 2	-	-	-	-	-	-	395	224	-	433	235	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	562	-	-	552	-	-	35	23	440	30	22	433
Mov Cap-2 Maneuver	-	-	-	-	-	-	35	23	-	30	22	-
Stage 1	-	-	-	-	-	-	181	240	-	162	207	-
Stage 2	-	-	-	-	-	-	355	206	-	385	229	-

























Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.4			129.8			25.7		
HCM LOS							F			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	77	562	-	-	552	-	-	185
HCM Lane V/C Ratio	0.734	0.025	-	-	0.081	-	-	0.059
HCM Control Delay (s)	129.8	11.6	-	-	12.1	-	-	25.7
HCM Lane LOS	F	B	-	-	B	-	-	D
HCM 95th %tile Q(veh)	3.5	0.1	-	-	0.3	-	-	0.2

HCM 6th Signalized Intersection Summary

3: Colfax Avenue & Riverside Drive

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	735	207	220	818	45	167	571	95	33	373	92
Future Volume (veh/h)	170	735	207	220	818	45	167	571	95	33	373	92
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	185	799	225	239	889	49	182	621	103	36	405	100
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	225	1356	605	277	1356	605	377	826	700	358	826	700
Arrive On Green	0.76	0.76	0.76	0.38	0.38	0.38	0.88	0.88	0.88	0.44	0.44	0.44
Sat Flow, veh/h	597	3554	1585	551	3554	1585	894	1870	1585	730	1870	1585
Grp Volume(v), veh/h	185	799	225	239	889	49	182	621	103	36	405	100
Grp Sat Flow(s),veh/h/ln	597	1777	1585	551	1777	1585	894	1870	1585	730	1870	1585
Q Serve(g_s), s	10.5	5.8	2.8	17.1	12.4	1.2	8.8	6.9	0.5	2.1	9.3	2.3
Cycle Q Clear(g_c), s	22.9	5.8	2.8	22.9	12.4	1.2	18.0	6.9	0.5	9.0	9.3	2.3
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	225	1356	605	277	1356	605	377	826	700	358	826	700
V/C Ratio(X)	0.82	0.59	0.37	0.86	0.66	0.08	0.48	0.75	0.15	0.10	0.49	0.14
Avail Cap(c_a), veh/h	225	1356	605	277	1356	605	377	826	700	358	826	700
HCM Platoon Ratio	2.00	2.00	2.00	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	0.90	0.90	0.90	0.46	0.46	0.46	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.6	5.1	4.7	24.4	15.3	11.8	6.3	2.4	2.0	14.3	11.9	10.0
Incr Delay (d2), s/veh	27.7	1.9	1.8	25.9	2.2	0.2	2.0	3.0	0.2	0.6	2.1	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(95%),veh/ln	6.4	2.7	1.7	8.7	7.9	0.7	1.0	2.8	0.3	0.7	6.6	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.2	7.0	6.5	50.3	17.5	12.1	8.4	5.3	2.2	14.9	14.0	10.4
LnGrp LOS	D	A	A	D	B	B	A	A	A	B	B	B
Approach Vol, veh/h	1209			1177			906			541		
Approach Delay, s/veh	12.4			24.0			5.6			13.4		
Approach LOS	B			C			A			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	28.0			32.0			28.0			32.0		
Change Period (Y+Rc), s	* 5.1			* 5.5			* 5.1			* 5.5		
Max Green Setting (Gmax), s	* 23			* 27			* 23			* 27		
Max Q Clear Time (g_c+I1), s	24.9			20.0			24.9			11.3		
Green Ext Time (p_c), s	0.0			2.9			0.0			2.7		
Intersection Summary												
HCM 6th Ctrl Delay	14.5											
HCM 6th LOS	B											
Notes												

Queues

4: Riverside Drive & SR 170 Southbound Off-Ramp

06/24/2024



Lane Group	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	971	7	855	16	275	260	254
v/c Ratio	0.48	0.03	0.42	0.05	0.70	0.52	0.47
Control Delay	11.7	11.0	12.7	0.3	34.3	10.3	6.3
Queue Delay	1.9	0.0	0.4	0.2	2.1	1.2	0.0
Total Delay	13.5	11.0	13.0	0.5	36.4	11.5	6.3
Queue Length 50th (ft)	117	1	236	0	107	21	0
Queue Length 95th (ft)	247	m6	278	0	190	86	53
Internal Link Dist (ft)	2214		245	105		344	
Turn Bay Length (ft)		25			140		150
Base Capacity (vph)	2015	232	2016	293	441	537	582
Starvation Cap Reductn	0	0	580	0	0	0	0
Spillback Cap Reductn	841	0	0	113	72	122	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.03	0.60	0.09	0.75	0.63	0.44


Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: Riverside Drive & SR 170 Southbound Off-Ramp













06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑	↑↑			↑↓		↑	↑↓	↑
Traffic Volume (vph)	0	887	6	6	787	0	0	0	15	301	7	418
Future Volume (vph)	0	887	6	6	787	0	0	0	15	301	7	418
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Lane Util. Factor		0.95		1.00	0.95			1.00		0.95	0.91	0.95
Frt		1.00		1.00	1.00			0.86		1.00	0.88	0.85
Flt Protected		1.00		0.95	1.00			1.00		0.95	0.99	1.00
Satd. Flow (prot)		3535		1770	3539			1611		1681	1485	1504
Flt Permitted		1.00		0.22	1.00			1.00		0.95	0.99	1.00
Satd. Flow (perm)		3535		409	3539			1611		1681	1485	1504
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)	0	964	7	7	855	0	0	0	16	327	8	454
RTOR Reduction (vph)	0	1	0	0	0	0	0	16	0	0	153	194
Lane Group Flow (vph)	0	971	0	7	855	0	0	0	0	275	107	60
Turn Type		NA		Perm	NA			NA		Split	NA	Perm
Protected Phases		6			2			4		3	3	
Permitted Phases				2			4					3
Actuated Green, G (s)		35.0		35.0	35.0			1.6		16.4	16.4	16.4
Effective Green, g (s)		35.0		35.0	35.0			1.6		16.4	16.4	16.4
Actuated g/C Ratio		0.50		0.50	0.50			0.02		0.23	0.23	0.23
Clearance Time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Vehicle Extension (s)		3.8		2.4	2.4			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1767		204	1769			36		393	347	352
v/s Ratio Prot		c0.27			0.24			c0.00		c0.16	0.07	
v/s Ratio Perm				0.02								0.04
v/c Ratio		0.55		0.03	0.48			0.01		0.70	0.31	0.17
Uniform Delay, d1		12.1		8.9	11.5			33.4		24.5	22.1	21.4
Progression Factor		1.00		1.02	1.22			1.00		1.00	1.00	1.00
Incremental Delay, d2		1.2		0.3	0.8			0.1		5.4	0.5	0.2
Delay (s)		13.3		9.3	14.9			33.5		29.9	22.6	21.6
Level of Service		B		A	B			C		C	C	C
Approach Delay (s)		13.3			14.9			33.5			24.8	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			17.4			HCM 2000 Level of Service			B			
HCM 2000 Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			59.8%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	NWL	NWR
Lane Group Flow (vph)	253	757	338	258	418	170	35	1000	69	607	390	140
v/c Ratio	0.96	1.13	1.14	1.48	0.55	0.50	0.17	1.08	0.45	0.47	0.69	0.59
Control Delay	87.0	124.8	141.6	275.7	51.9	54.0	47.3	102.2	70.9	35.3	61.6	64.2
Queue Delay	0.0	2.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0
Total Delay	87.0	126.8	144.0	275.7	51.9	54.0	47.3	102.2	70.9	35.4	64.9	64.2
Queue Length 50th (ft)	196	~435	~389	~271	179	137	26	~585	61	220	174	130
Queue Length 95th (ft)	#334	#589	#620	#453	236	215	62	#778	113	293	222	204
Internal Link Dist (ft)		245			745			2580		383	758	
Turn Bay Length (ft)	140		230	85		110	270		290		215	
Base Capacity (vph)	263	670	297	174	765	342	209	923	152	1292	686	288
Starvation Cap Reductn	0	162	51	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	14	199	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.96	1.49	1.37	1.48	0.55	0.50	0.17	1.08	0.45	0.47	0.80	0.49

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.





















95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

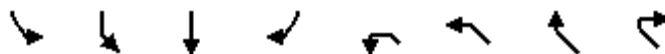
06/24/2024

												
Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	233	503	312	192	18	219	385	156	32	784	116	20
Future Volume (vph)	233	503	312	192	18	219	385	156	32	784	116	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Lane Util. Factor	1.00	0.91	0.91			1.00	0.95	1.00	1.00	0.95		
Frt	1.00	0.96	0.85			1.00	1.00	0.85	1.00	0.98		
Flt Protected	0.95	1.00	1.00			0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1770	3249	1441			1770	3539	1583	1770	3461		
Flt Permitted	0.37	1.00	1.00			0.14	1.00	1.00	0.42	1.00		
Satd. Flow (perm)	692	3249	1441			258	3539	1583	786	3461		
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)	253	547	339	209	20	238	418	170	35	852	126	22
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	253	757	338	0	0	258	418	170	35	1000	0	0
Turn Type	pm+pt	NA	Perm		pm+pt	pm+pt	NA	Perm	Perm	NA		
Protected Phases	1	6			5	5	2			8		
Permitted Phases	6		6		2	2		2	8			
Actuated Green, G (s)	36.6	27.5	27.5			38.3	28.9	28.9	37.4	37.4		
Effective Green, g (s)	36.6	27.5	27.5			38.3	28.9	28.9	37.4	37.4		
Actuated g/C Ratio	0.26	0.20	0.20			0.27	0.21	0.21	0.27	0.27		
Clearance Time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Vehicle Extension (s)	3.0	3.9	3.9			3.0	4.6	4.6	4.7	4.7		
Lane Grp Cap (vph)	250	638	283			172	730	326	209	924		
v/s Ratio Prot	0.07	0.23				c0.10	0.12			c0.29		
v/s Ratio Perm	0.20		0.23			c0.31		0.11	0.04			
v/c Ratio	1.01	1.19	1.19			1.50	0.57	0.52	0.17	1.08		
Uniform Delay, d1	49.8	56.2	56.2			46.2	50.0	49.4	39.4	51.3		
Progression Factor	1.02	1.02	1.01			1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2	56.6	97.6	114.0			252.9	3.2	5.9	0.7	54.4		
Delay (s)	107.3	154.8	171.1			299.1	53.2	55.3	40.1	105.7		
Level of Service	F	F	F			F	D	E	D	F		
Approach Delay (s)		150.0					128.6			103.5		
Approach LOS		F					F			F		
Intersection Summary												
HCM 2000 Control Delay			106.9			HCM 2000 Level of Service				F		
HCM 2000 Volume to Capacity ratio			1.12									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			33.0			
Intersection Capacity Utilization			106.9%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024



Movement	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	17	47	459	99	33	313	126	16
Future Volume (vph)	17	47	459	99	33	313	126	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.3			6.6	6.6	
Lane Util. Factor		1.00	0.95			0.97	0.91	
Frt		1.00	0.97			0.99	0.85	
Flt Protected		0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	3445			3429	1441	
Flt Permitted		0.95	1.00			0.95	1.00	
Satd. Flow (perm)		1770	3445			3429	1441	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	51	499	108	36	340	137	17
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	69	607	0	0	390	140	0
Turn Type	Prot	Prot	NA		Prot	Prot	Perm	
Protected Phases	7	7	4		3	3		
Permitted Phases							3	
Actuated Green, G (s)		9.7	53.9			23.0	23.0	
Effective Green, g (s)		9.7	53.9			23.0	23.0	
Actuated g/C Ratio		0.07	0.38			0.16	0.16	
Clearance Time (s)		6.8	6.3			6.6	6.6	
Vehicle Extension (s)		3.0	4.9			4.6	4.6	
Lane Grp Cap (vph)		122	1326			563	236	
v/s Ratio Prot		0.04	c0.18			c0.11		
v/s Ratio Perm							0.10	
v/c Ratio		0.57	0.46			0.69	0.59	
Uniform Delay, d1		63.1	32.1			55.2	54.2	
Progression Factor		1.00	1.00			1.00	1.00	
Incremental Delay, d2		5.9	0.5			4.3	5.4	
Delay (s)		69.0	32.6			59.5	59.6	
Level of Service		E	C			E	E	
Approach Delay (s)			36.4			59.5		
Approach LOS			D			E		
Intersection Summary								

HCM 6th Signalized Intersection Summary

6: Laurel Canyon Boulevard & US 101 Northbound Ramps

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↖	↖	↖	↖			↖	↖
Traffic Volume (veh/h)	0	0	0	603	0	576	509	1191	0	1	1014	185
Future Volume (veh/h)	0	0	0	603	0	576	509	1191	0	1	1014	185
Initial Q (Qb), veh				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
Parking Bus, Adj				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	0	1870	1870	1870
Adj Flow Rate, veh/h				850	0	417	553	1295	0	1	1102	201
Peak Hour Factor				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	0	2	2	2
Cap, veh/h				1065	0	474	639	2092	0	40	1714	547
Arrive On Green				0.30	0.00	0.30	0.06	0.19	0.00	0.35	0.35	0.35
Sat Flow, veh/h				3563	0	1585	3456	3647	0	1	4966	1585
Grp Volume(v), veh/h				850	0	417	553	1295	0	415	688	201
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	1868	1549	1585
Q Serve(g_s), s				19.8	0.0	22.5	14.3	30.0	0.0	0.0	16.8	8.6
Cycle Q Clear(g_c), s				19.8	0.0	22.5	14.3	30.0	0.0	16.8	16.8	8.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1065	0	474	639	2092	0	685	1069	547
V/C Ratio(X)				0.80	0.00	0.88	0.87	0.62	0.00	0.61	0.64	0.37
Avail Cap(c_a), veh/h				1176	0	523	680	2092	0	685	1069	547
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.83	0.83	0.00	0.36	0.36	0.36
Uniform Delay (d), s/veh				29.0	0.0	30.0	41.1	27.0	0.0	24.8	24.8	22.1
Incr Delay (d2), s/veh				3.6	0.0	14.9	9.3	1.2	0.0	1.4	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
%ile BackOfQ(95%),veh/ln				13.0	0.0	15.0	11.4	20.1	0.0	10.0	8.4	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				32.7	0.0	44.9	50.4	28.2	0.0	26.2	25.9	22.8
LnGrp LOS				C	A	D	D	C	A	C	C	C
Approach Vol, veh/h					1267			1848			1304	
Approach Delay, s/veh					36.7			34.8			25.5	
Approach LOS					D			C			C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	31.9	35.9		32.2		57.8						
Change Period (Y+Rc), s	5.3	4.8		* 5.3		4.8						
Max Green Setting (Gmax), s	18	27.2		* 30		50.2						
Max Q Clear Time (g_c+M0), s	18.8			24.5		32.0						
Green Ext Time (p_c), s	0.4	4.7		2.4		9.0						

Intersection Summary

HCM 6th Ctrl Delay	32.6
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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

HCM 6th Signalized Intersection Summary

7: US 101 Southbound Ramps & Laurel Canyon Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	364	24	574	0	0	0	0	1354	707	300	1286	0
Future Volume (veh/h)	364	24	574	0	0	0	0	1354	707	300	1286	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	273	0	773				0	1472	768	326	1398	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	416	0	740				0	3330	1034	329	2318	0
Arrive On Green	0.23	0.00	0.23				0.00	0.65	0.65	0.44	0.44	0.00
Sat Flow, veh/h	1781	0	3170				0	5274	1585	330	3647	0
Grp Volume(v), veh/h	273	0	773				0	1472	768	326	1398	0
Grp Sat Flow(s), veh/h/ln	1781	0	1585				0	1702	1585	165	1777	0
Q Serve(g_s), s	12.5	0.0	21.0				0.0	12.7	29.4	46.0	27.1	0.0
Cycle Q Clear(g_c), s	12.5	0.0	21.0				0.0	12.7	29.4	58.7	27.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	416	0	740				0	3330	1034	329	2318	0
V/C Ratio(X)	0.66	0.00	1.05				0.00	0.44	0.74	0.99	0.60	0.00
Avail Cap(c_a), veh/h	416	0	740				0	3330	1034	329	2318	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.67	0.67	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.58	0.58	0.00
Uniform Delay (d), s/veh	31.2	0.0	34.5				0.0	7.6	10.6	42.8	16.4	0.0
Incr Delay (d2), s/veh	3.7	0.0	45.4				0.0	0.4	4.8	35.9	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
%ile BackOfQ(95%),veh/ln	9.3	0.0	18.4				0.0	7.2	14.8	8.3	15.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.0	0.0	79.9				0.0	8.1	15.4	78.7	17.1	0.0
LnGrp LOS	C	A	F				A	A	B	E	B	A
Approach Vol, veh/h	1046						2240			1724		
Approach Delay, s/veh	68.2						10.6			28.8		
Approach LOS	E						B			C		
Timer - Assigned Phs	2			4			6					
Phs Duration (G+Y+Rc), s	63.8			26.2			63.8					
Change Period (Y+Rc), s	* 5.1			* 5.2			* 5.1					
Max Green Setting (Gmax), s	* 59			* 21			* 59					
Max Q Clear Time (g_c+I1), s	31.4			23.0			60.7					
Green Ext Time (p_c), s	17.1			0.0			0.0					

Intersection Summary

HCM 6th Ctrl Delay	28.9
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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

Queues

8: Laurel Canyon Boulevard & Landale Street

06/24/2024



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	204	187	58	89	78	2004	67	1750	121
v/c Ratio	0.96	0.68	0.42	0.26	0.32	0.97	0.76	1.07	0.27
Control Delay	94.5	28.2	46.1	1.9	21.3	21.5	60.6	60.6	10.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	8.4	0.0	0.0	0.0
Total Delay	94.5	28.2	46.1	1.9	21.3	29.9	60.6	60.6	10.2
Queue Length 50th (ft)	123	36	31	0	11	~592	24	~666	22
Queue Length 95th (ft)	#266	#129	68	0	m6	m76	m#79	#833	m58
Internal Link Dist (ft)		140	232			591		375	
Turn Bay Length (ft)	85			40	155		125		115
Base Capacity (vph)	212	276	171	380	286	2067	88	1639	453
Starvation Cap Reductn	0	0	0	0	0	87	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.68	0.34	0.23	0.27	1.01	0.76	1.07	0.27

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

8: Laurel Canyon Boulevard & Landale Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	224	11	125	33	20	82	72	1823	20	62	1610	111
Future Volume (vph)	224	11	125	33	20	82	72	1823	20	62	1610	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.86			1.00	1.00	1.00	1.00		1.00	1.00	0.62
Flpb, ped/bikes	1.00	1.00			0.88	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.89			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.99			0.97	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1339			1592	1583	1770	3530		1770	3539	979
Flt Permitted	0.95	0.99			0.70	1.00	0.09	1.00		0.10	1.00	1.00
Satd. Flow (perm)	1681	1339			1148	1583	166	3530		189	3539	979
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)	243	12	136	36	22	89	78	1982	22	67	1750	121
RTOR Reduction (vph)	0	107	0	0	0	80	0	1	0	0	0	0
Lane Group Flow (vph)	204	80	0	0	58	9	78	2003	0	67	1750	121
Confl. Peds. (#/hr)			79	79			164		19	19		164
Turn Type	Split	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	3	3			4		1	6			2	
Permitted Phases				4		4	6			2		2
Actuated Green, G (s)	11.4	11.4			8.6	8.6	51.5	51.5		39.4	39.4	39.4
Effective Green, g (s)	11.4	11.4			8.6	8.6	51.5	51.5		39.4	39.4	39.4
Actuated g/C Ratio	0.13	0.13			0.10	0.10	0.57	0.57		0.44	0.44	0.44
Clearance Time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	5.2		4.5	4.5	4.5
Lane Grp Cap (vph)	212	169			109	151	214	2019		82	1549	428
v/s Ratio Prot	c0.12	0.06					0.03	c0.57			c0.49	
v/s Ratio Perm					c0.05	0.01	0.18			0.35		0.12
v/c Ratio	0.96	0.48			0.53	0.06	0.36	0.99		0.82	1.13	0.28
Uniform Delay, d1	39.1	36.5			38.8	37.0	18.3	19.0		22.1	25.3	16.2
Progression Factor	1.00	1.00			1.00	1.00	2.14	0.91		0.51	0.55	0.47
Incremental Delay, d2	50.8	2.1			4.9	0.2	0.1	4.5		45.3	64.9	1.2
Delay (s)	89.9	38.6			43.7	37.2	39.2	21.9		56.5	78.8	8.9
Level of Service	F	D			D	D	D	C		E	E	A
Approach Delay (s)		65.4			39.7			22.5			73.6	
Approach LOS		E			D			C			E	
Intersection Summary												
HCM 2000 Control Delay			48.5		HCM 2000 Level of Service					D		
HCM 2000 Volume to Capacity ratio			1.05									
Actuated Cycle Length (s)			90.0		Sum of lost time (s)					23.9		
Intersection Capacity Utilization			94.9%		ICU Level of Service					F		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

9: Colfax Avenue & Sarah Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↑	↕
Traffic Volume (veh/h)	15	2	6	8	1	34	7	804	20	40	756	16
Future Volume (veh/h)	15	2	6	8	1	34	7	804	20	40	756	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.99	0.98		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	16	2	7	9	1	37	8	874	22	43	822	17
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	152	25	31	86	9	85	420	1301	1099	288	1301	1099
Arrive On Green	0.07	0.07	0.07	0.07	0.07	0.07	0.23	0.23	0.23	0.70	0.70	0.70
Sat Flow, veh/h	775	361	442	208	123	1226	655	1870	1579	621	1870	1579
Grp Volume(v), veh/h	25	0	0	47	0	0	8	874	22	43	822	17
Grp Sat Flow(s),veh/h/ln	1577	0	0	1557	0	0	655	1870	1579	621	1870	1579
Q Serve(g_s), s	0.0	0.0	0.0	0.5	0.0	0.0	0.6	25.5	0.6	3.3	14.3	0.2
Cycle Q Clear(g_c), s	0.8	0.0	0.0	1.7	0.0	0.0	14.9	25.5	0.6	28.8	14.3	0.2
Prop In Lane	0.64		0.28	0.19		0.79	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	208	0	0	179	0	0	420	1301	1099	288	1301	1099
V/C Ratio(X)	0.12	0.00	0.00	0.26	0.00	0.00	0.02	0.67	0.02	0.15	0.63	0.02
Avail Cap(c_a), veh/h	603	0	0	601	0	0	420	1301	1099	288	1301	1099
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.79	0.79	0.79	0.68	0.68	0.68
Uniform Delay (d), s/veh	26.4	0.0	0.0	26.8	0.0	0.0	18.9	16.9	7.3	17.2	5.0	2.8
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.8	0.0	0.0	0.1	2.2	0.0	0.7	1.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	0.0	0.0	1.2	0.0	0.0	0.2	18.3	0.2	0.9	6.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.6	0.0	0.0	27.5	0.0	0.0	19.0	19.1	7.3	17.9	6.6	2.8
LnGrp LOS	C	A	A	C	A	A	B	B	A	B	A	A
Approach Vol, veh/h	25			47			904			882		
Approach Delay, s/veh	26.6			27.5			18.8			7.0		
Approach LOS	C			C			B			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	46.5			13.5			46.5			13.5		
Change Period (Y+Rc), s	4.8			* 9.3			4.8			* 9.3		
Max Green Setting (Gmax), s	25.2			* 21			25.2			* 21		
Max Q Clear Time (g_c+I1), s	27.5			2.8			30.8			3.7		
Green Ext Time (p_c), s	0.0			0.1			0.0			0.2		

Intersection Summary

HCM 6th Ctrl Delay	13.5
HCM 6th LOS	B

Notes

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

Queues

10: Landale Street & Colfax Avenue

06/24/2024



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	48	17	867	836	30
v/c Ratio	0.19	0.05	0.60	0.58	0.02
Control Delay	17.2	4.8	8.3	4.2	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.2	4.8	8.3	4.2	0.2
Queue Length 50th (ft)	8	2	181	5	1
Queue Length 95th (ft)	33	8	325	405	m0
Internal Link Dist (ft)	262		575	593	
Turn Bay Length (ft)		40			80
Base Capacity (vph)	526	368	1448	1448	1234
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.09	0.05	0.60	0.58	0.02

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

10: Landale Street & Colfax Avenue

06/24/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	24	20	16	798	769	28
Future Volume (vph)	24	20	16	798	769	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	9.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1701		1770	1863	1863	1583
Flt Permitted	0.97		0.25	1.00	1.00	1.00
Satd. Flow (perm)	1701		473	1863	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	26	22	17	867	836	30
RTOR Reduction (vph)	20	0	0	0	0	5
Lane Group Flow (vph)	28	0	17	867	836	25
Turn Type	Perm		Perm	NA	NA	Perm
Protected Phases				6	2	
Permitted Phases	8		6			2
Actuated Green, G (s)	4.9		41.1	41.1	41.1	41.1
Effective Green, g (s)	4.9		41.1	41.1	41.1	41.1
Actuated g/C Ratio	0.08		0.69	0.69	0.69	0.69
Clearance Time (s)	9.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		4.9	4.9	5.3	5.3
Lane Grp Cap (vph)	138		324	1276	1276	1084
v/s Ratio Prot				c0.47	0.45	
v/s Ratio Perm	c0.02		0.04			0.02
v/c Ratio	0.20		0.05	0.68	0.66	0.02
Uniform Delay, d1	25.7		3.1	5.6	5.4	3.0
Progression Factor	1.00		1.00	1.00	0.55	0.06
Incremental Delay, d2	0.7		0.3	2.9	1.8	0.0
Delay (s)	26.4		3.4	8.5	4.8	0.2
Level of Service	C		A	A	A	A
Approach Delay (s)	26.4			8.4	4.6	
Approach LOS	C			A	A	
Intersection Summary						
HCM 2000 Control Delay			7.0	HCM 2000 Level of Service		A
HCM 2000 Volume to Capacity ratio			0.63			
Actuated Cycle Length (s)			60.0	Sum of lost time (s)		14.0
Intersection Capacity Utilization			60.3%	ICU Level of Service		B
Analysis Period (min)			15			










c Critical Lane Group

HCM 6th Signalized Intersection Summary

11: Whitsett Avenue & Moorpark Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	149	943	106	144	680	95	120	793	150	94	430	130
Future Volume (veh/h)	149	943	106	144	680	95	120	793	150	94	430	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	162	1025	115	157	739	103	130	862	163	102	467	141
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	80	850	720	80	730	102	331	1282	242	189	1159	347
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	653	1870	1585	494	1606	224	813	2982	564	550	2694	808
Grp Volume(v), veh/h	162	1025	115	157	0	842	130	514	511	102	307	301
Grp Sat Flow(s),veh/h/ln	653	1870	1585	494	0	1830	813	1777	1769	550	1777	1725
Q Serve(g_s), s	0.0	40.9	3.8	0.0	0.0	40.9	11.8	20.9	20.9	16.4	10.7	10.9
Cycle Q Clear(g_c), s	40.9	40.9	3.8	40.9	0.0	40.9	22.7	20.9	20.9	37.3	10.7	10.9
Prop In Lane	1.00		1.00	1.00		0.12	1.00		0.32	1.00		0.47
Lane Grp Cap(c), veh/h	80	850	720	80	0	832	331	764	761	189	764	742
V/C Ratio(X)	2.02	1.21	0.16	1.96	0.00	1.01	0.39	0.67	0.67	0.54	0.40	0.41
Avail Cap(c_a), veh/h	80	850	720	80	0	832	331	764	761	189	764	742
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.0	24.5	14.4	45.0	0.0	24.6	25.5	20.6	20.6	35.5	17.7	17.7
Incr Delay (d2), s/veh	502.1	103.7	0.5	475.0	0.0	34.3	3.5	4.7	4.7	10.6	1.6	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(95%),veh/ln	28.2	58.6	2.5	22.1	0.0	32.3	4.5	14.0	13.9	4.8	7.9	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	547.1	128.3	14.9	520.0	0.0	58.9	29.0	25.2	25.3	46.1	19.2	19.4
LnGrp LOS	F	F	B	F	A	F	C	C	C	D	B	B
Approach Vol, veh/h												
1302												
Approach Delay, s/veh												
170.4												
Approach LOS												
F												
Timer - Assigned Phs												
2												
4												
6												
8												
Phs Duration (G+Y+Rc), s												
46.0												
44.0												
46.0												
44.0												
Change Period (Y+Rc), s												
5.1												
5.3												
5.1												
5.3												
Max Green Setting (Gmax), s												
40.9												
38.7												
40.9												
38.7												
Max Q Clear Time (g_c+I1), s												
42.9												
39.3												
42.9												
24.7												
Green Ext Time (p_c), s												
0.0												
0.0												
0.0												
6.3												
Intersection Summary												
HCM 6th Ctrl Delay												
95.8												
HCM 6th LOS												
F												

HCM 6th Signalized Intersection Summary

12: Laurel Canyon Boulevard & Moorpark Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	329	647	136	183	516	114	208	1603	214	118	1424	305
Future Volume (veh/h)	329	647	136	183	516	114	208	1603	214	118	1424	305
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	358	703	148	199	561	124	226	1742	233	128	1548	332
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	248	825	174	276	520	575	238	921	120	232	846	176
Arrive On Green	0.09	0.28	0.28	0.09	0.28	0.28	0.09	0.29	0.29	0.11	0.38	0.38
Sat Flow, veh/h	1781	2922	615	1781	1870	1585	1781	3160	413	1781	2929	609
Grp Volume(v), veh/h	358	427	424	199	561	124	226	962	1013	128	920	960
Grp Sat Flow(s),veh/h/ln	1781	1777	1760	1781	1870	1585	1781	1777	1796	1781	1777	1761
Q Serve(g_s), s	8.5	20.5	20.5	7.2	25.0	4.9	8.0	26.2	26.2	4.3	26.0	26.0
Cycle Q Clear(g_c), s	8.5	20.5	20.5	7.2	25.0	4.9	8.0	26.2	26.2	4.3	26.0	26.0
Prop In Lane	1.00		0.35	1.00		1.00	1.00		0.23	1.00		0.35
Lane Grp Cap(c), veh/h	248	501	497	276	520	575	238	518	523	232	513	509
V/C Ratio(X)	1.44	0.85	0.85	0.72	1.08	0.22	0.95	1.86	1.94	0.55	1.79	1.89
Avail Cap(c_a), veh/h	248	501	497	276	520	575	238	518	523	238	513	509
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	25.2	30.5	30.5	23.3	32.5	19.8	24.0	31.9	31.9	22.0	27.7	27.7
Incr Delay (d2), s/veh	220.3	13.3	13.5	8.9	62.7	0.2	44.0	393.6	427.9	0.2	357.0	400.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	29.4	15.4	15.3	6.3	28.4	3.2	10.2	105.6	114.8	2.3	85.6	94.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	245.5	43.8	44.0	32.2	95.2	20.0	68.0	425.5	459.7	22.3	384.7	427.9
LnGrp LOS	F	D	D	C	F	B	E	F	F	C	F	F
Approach Vol, veh/h	1209			884			2201			2008		
Approach Delay, s/veh	103.6			70.5			404.6			382.3		
Approach LOS	F			E			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.3	31.4	14.0	31.3	13.1	31.6	13.6	31.7				
Change Period (Y+Rc), s	5.3	* 5.4	* 5.5	6.3	* 5.4	* 5.4	* 5.5	6.3				
Max Green Setting (Gmax), s	8	* 26	* 8.5	25.0	* 8	* 26	* 8.1	25.4				
Max Q Clear Time (g_c+max), s	28.0	28.0	10.5	27.0	6.3	28.2	9.2	22.5				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5				

Intersection Summary

HCM 6th Ctrl Delay	292.9
HCM 6th LOS	F

Notes

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






HCM 6th TWSC

13: Moorpark Street & Radford Avenue

06/24/2024

Intersection

Int Delay, s/veh 1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	94	917	882	45	13	56
Future Vol, veh/h	94	917	882	45	13	56
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	50
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	102	997	959	49	14	61

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1008	0	0 1687 504
Stage 1	-	-	- 984 -
Stage 2	-	-	- 703 -
Critical Hdwy	4.14	-	- 6.84 6.94
Critical Hdwy Stg 1	-	-	- 5.84 -
Critical Hdwy Stg 2	-	-	- 5.84 -
Follow-up Hdwy	2.22	-	- 3.52 3.32
Pot Cap-1 Maneuver	683	-	- 85 513
Stage 1	-	-	- 323 -
Stage 2	-	-	- 452 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	683	-	- 72 513
Mov Cap-2 Maneuver	-	-	- 72 -
Stage 1	-	-	- 275 -
Stage 2	-	-	- 452 -























Approach	EB	WB	SB
HCM Control Delay, s	1	0	23.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	683	-	-	-	72	513
HCM Lane V/C Ratio	0.15	-	-	-	0.196	0.119
HCM Control Delay (s)	11.2	-	-	-	66.8	13
HCM Lane LOS	B	-	-	-	F	B
HCM 95th %tile Q(veh)	0.5	-	-	-	0.7	0.4

HCM 6th Signalized Intersection Summary

14: Colfax Avenue & Moorpark Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	653	166	189	614	139	166	444	265	162	503	139
Future Volume (veh/h)	106	653	166	189	614	139	166	444	265	162	503	139
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	0.99		0.95	0.99		0.94	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	115	710	180	205	667	151	180	483	288	176	547	151
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	257	1207	306	264	852	193	148	387	308	238	669	663
Arrive On Green	0.15	0.87	0.87	0.10	0.10	0.10	0.21	0.21	0.21	0.09	0.36	0.36
Sat Flow, veh/h	1781	2786	706	616	2850	644	737	1870	1488	1781	1870	1529
Grp Volume(v), veh/h	115	453	437	205	416	402	180	483	288	176	547	151
Grp Sat Flow(s),veh/h/ln	1781	1777	1715	616	1777	1717	737	1870	1488	1781	1870	1529
Q Serve(g_s), s	3.7	6.2	6.2	26.9	20.6	20.6	8.3	18.6	17.1	6.7	23.9	5.6
Cycle Q Clear(g_c), s	3.7	6.2	6.2	26.9	20.6	20.6	18.6	18.6	17.1	6.7	23.9	5.6
Prop In Lane	1.00		0.41	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	257	770	743	264	531	513	148	387	308	238	669	663
V/C Ratio(X)	0.45	0.59	0.59	0.78	0.78	0.78	1.22	1.25	0.94	0.74	0.82	0.23
Avail Cap(c_a), veh/h	265	770	743	264	531	513	148	387	308	238	669	663
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	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	0.79	0.79	0.79
Uniform Delay (d), s/veh	19.3	3.8	3.8	41.9	37.7	37.7	43.1	35.7	35.1	25.6	26.2	16.2
Incr Delay (d2), s/veh	1.2	3.3	3.4	19.7	11.0	11.4	143.5	132.1	37.3	9.2	8.6	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(95%),veh/ln	2.6	3.5	3.4	10.5	16.8	16.5	15.4	33.6	14.1	6.0	16.6	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.6	7.1	7.2	61.7	48.7	49.1	186.6	167.8	72.5	34.8	34.8	16.8
LnGrp LOS	C	A	A	E	D	D	F	F	E	C	C	B
Approach Vol, veh/h	1005				1023				951			
Approach Delay, s/veh	8.7				51.5				142.5			
Approach LOS	A				D				F			
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	12.1	36.3		41.6		48.4	13.6	28.0				
Change Period (Y+Rc), s	* 5.5	* 9.4		* 9.4		* 9.4	5.6	* 9.4				
Max Green Setting (Gmax), s	* 7	* 27		* 32		* 39	8.0	* 19				
Max Q Clear Time (g_c+I1), s	5.7	28.9		25.9		8.2	8.7	20.6				
Green Ext Time (p_c), s	0.0	0.0		2.1		6.4	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 58.3

HCM 6th LOS E

Notes

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

HCM 6th TWSC
15: Irvine Avenue & Moorpark Street

06/24/2024

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔			↔	
Traffic Vol, veh/h	6	960	17	16	923	7	5	0	11	0	0	15
Future Vol, veh/h	6	960	17	16	923	7	5	0	11	0	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	1043	18	17	1003	8	5	0	12	0	0	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1011	0	0	1061	0	0	1602	2111	531	1577	2116	506
Stage 1	-	-	-	-	-	-	1066	1066	-	1041	1041	-
Stage 2	-	-	-	-	-	-	536	1045	-	536	1075	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	681	-	-	652	-	-	71	50	493	74	50	512
Stage 1	-	-	-	-	-	-	237	297	-	246	305	-
Stage 2	-	-	-	-	-	-	496	304	-	496	294	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	681	-	-	652	-	-	64	46	493	68	46	512
Mov Cap-2 Maneuver	-	-	-	-	-	-	64	46	-	68	46	-
Stage 1	-	-	-	-	-	-	231	290	-	240	287	-
Stage 2	-	-	-	-	-	-	451	286	-	472	287	-























Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.5	30.4	12.3
HCM LOS			D	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	159	681	-	-	652	-	-	512
HCM Lane V/C Ratio	0.109	0.01	-	-	0.027	-	-	0.032
HCM Control Delay (s)	30.4	10.3	0.1	-	10.7	0.3	-	12.3
HCM Lane LOS	D	B	A	-	B	A	-	B
HCM 95th %tile Q(veh)	0.4	0	-	-	0.1	-	-	0.1

HCM 6th Signalized Intersection Summary

16: Tujunga Avenue & Moorpark Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	833	95	100	619	72	94	536	107	102	265	102
Future Volume (veh/h)	195	833	95	100	619	72	94	536	107	102	265	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	212	905	103	109	673	78	102	583	116	111	288	111
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	330	1566	178	240	1563	181	334	735	623	168	490	416
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.07	0.39	0.39	0.26	0.26	0.26
Sat Flow, veh/h	712	3215	366	559	3209	372	1781	1870	1585	747	1870	1585
Grp Volume(v), veh/h	212	500	508	109	372	379	102	583	116	111	288	111
Grp Sat Flow(s),veh/h/ln	712	1777	1804	559	1777	1803	1781	1870	1585	747	1870	1585
Q Serve(g_s), s	24.8	18.1	18.1	15.6	12.2	12.3	3.5	24.7	4.3	10.6	12.1	5.0
Cycle Q Clear(g_c), s	37.1	18.1	18.1	33.6	12.2	12.3	3.5	24.7	4.3	23.6	12.1	5.0
Prop In Lane	1.00		0.20	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	330	866	879	240	866	879	334	735	623	168	490	416
V/C Ratio(X)	0.64	0.58	0.58	0.45	0.43	0.43	0.31	0.79	0.19	0.66	0.59	0.27
Avail Cap(c_a), veh/h	330	866	879	240	866	879	345	746	632	168	490	416
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	0.87	0.87	0.87	0.55	0.55	0.55
Uniform Delay (d), s/veh	27.0	16.5	16.5	28.5	15.0	15.0	21.0	24.1	17.9	40.8	29.0	26.3
Incr Delay (d2), s/veh	9.3	2.8	2.8	6.1	1.6	1.5	0.4	5.1	0.1	5.2	1.0	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(95%),veh/ln	8.4	11.9	12.0	4.3	8.6	8.7	2.6	16.4	2.8	4.7	8.2	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.3	19.3	19.2	34.6	16.5	16.5	21.5	29.2	18.0	46.0	30.0	26.5
LnGrp LOS	D	B	B	C	B	B	C	C	B	D	C	C
Approach Vol, veh/h		1220			860			801			510	
Approach Delay, s/veh		22.2			18.8			26.6			32.7	
Approach LOS		C			B			C			C	
Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		49.2	11.8	29.0		49.2		40.8				
Change Period (Y+Rc), s		* 5.4	* 5.3	* 5.4		* 5.4		* 5.4				
Max Green Setting (Gmax), s		* 43	* 7	* 24		* 43		* 36				
Max Q Clear Time (g_c+I1), s		35.6	5.5	25.6		39.1		26.7				
Green Ext Time (p_c), s		4.3	0.0	0.0		3.3		2.8				
Intersection Summary												
HCM 6th Ctrl Delay			24.0									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary

17: Woodbridge Street & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↑	↔	↔	↔	↔
Traffic Volume (veh/h)	11	8	20	17	10	64	20	683	30	45	383	37
Future Volume (veh/h)	11	8	20	17	10	64	20	683	30	45	383	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	12	9	22	18	11	70	22	742	33	49	416	40
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	75	48	75	64	24	98	835	1509	1279	553	1356	130
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.81	0.81	0.81	1.00	1.00	1.00
Sat Flow, veh/h	278	552	869	189	279	1131	935	1870	1585	696	1680	162
Grp Volume(v), veh/h	43	0	0	99	0	0	22	742	33	49	0	456
Grp Sat Flow(s),veh/h/ln	1699	0	0	1599	0	0	935	1870	1585	696	0	1841
Q Serve(g_s), s	0.0	0.0	0.0	2.8	0.0	0.0	0.4	11.4	0.4	1.1	0.0	0.0
Cycle Q Clear(g_c), s	2.1	0.0	0.0	5.4	0.0	0.0	0.4	11.4	0.4	12.5	0.0	0.0
Prop In Lane	0.28		0.51	0.18		0.71	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	198	0	0	185	0	0	835	1509	1279	553	0	1486
V/C Ratio(X)	0.22	0.00	0.00	0.53	0.00	0.00	0.03	0.49	0.03	0.09	0.00	0.31
Avail Cap(c_a), veh/h	509	0	0	501	0	0	835	1509	1279	553	0	1486
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.67	0.67	0.67	0.78	0.00	0.78
Uniform Delay (d), s/veh	38.5	0.0	0.0	40.0	0.0	0.0	1.7	2.8	1.7	1.0	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	2.4	0.0	0.0	0.0	0.8	0.0	0.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	0.0	0.0	4.1	0.0	0.0	0.1	4.4	0.1	0.1	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.1	0.0	0.0	42.4	0.0	0.0	1.8	3.5	1.7	1.2	0.0	0.4
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	43			99			797			505		
Approach Delay, s/veh	39.1			42.4			3.4			0.5		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	77.1			12.9			77.1			12.9		
Change Period (Y+Rc), s	* 4.5			* 5.1			* 4.5			* 5.1		
Max Green Setting (Gmax), s	* 55			* 26			* 55			* 26		
Max Q Clear Time (g_c+I1), s	14.5			4.1			13.4			7.4		
Green Ext Time (p_c), s	7.7			0.2			14.9			0.5		

Intersection Summary

HCM 6th Ctrl Delay	6.1
HCM 6th LOS	A

Notes

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

Queues

18: Whitsett Avenue & Ventura Boulevard

06/24/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	297	1292	253	41	1328	382	102	219	336	183	252
v/c Ratio	0.77	0.70	0.28	0.37	1.29	0.67	0.62	0.69	0.70	0.58	0.26
Control Delay	39.0	21.8	7.0	28.0	160.0	14.5	53.6	48.8	48.9	44.8	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.0	21.8	7.0	28.0	160.0	14.5	53.6	48.8	48.9	44.8	9.2
Queue Length 50th (ft)	129	316	30	15	-563	78	61	129	105	109	63
Queue Length 95th (ft)	#340	456	86	m23	m#624	m117	109	192	152	164	103
Internal Link Dist (ft)	1429		2938		634		1297				
Turn Bay Length (ft)	95	135		145	60		60	220		65	
Base Capacity (vph)	387	1848	901	111	1030	569	231	438	517	441	947
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.70	0.28	0.37	1.29	0.67	0.44	0.50	0.65	0.41	0.27

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
























Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

18: Whitsett Avenue & Ventura Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	273	1189	233	38	1222	351	94	177	25	309	168	232
Future Volume (vph)	273	1189	233	38	1222	351	94	177	25	309	168	232
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	5.4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1828		3433	1863	1583
Flt Permitted	0.12	1.00	1.00	0.21	1.00	1.00	0.53	1.00		0.95	1.00	1.00
Satd. Flow (perm)	216	3539	1583	386	3539	1583	978	1828		3433	1863	1583
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)	297	1292	253	41	1328	382	102	192	27	336	183	252
RTOR Reduction (vph)	0	0	75	0	0	109	0	6	0	0	0	10
Lane Group Flow (vph)	297	1292	178	41	1328	273	102	213	0	336	183	242
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Prot	NA	custom
Protected Phases	1	6			2			4		3	8	1 3
Permitted Phases	6		6	2		2	4					8
Actuated Green, G (s)	52.2	52.2	52.2	29.1	29.1	29.1	17.0	17.0		14.1	17.0	54.2
Effective Green, g (s)	52.2	52.2	52.2	29.1	29.1	29.1	17.0	17.0		14.1	17.0	54.2
Actuated g/C Ratio	0.52	0.52	0.52	0.29	0.29	0.29	0.17	0.17		0.14	0.17	0.54
Clearance Time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	
Vehicle Extension (s)	3.0	4.9	4.9	4.7	4.7	4.7	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	387	1847	826	112	1029	460	166	310		484	316	857
v/s Ratio Prot	0.14	c0.37			c0.38			c0.12		c0.10	0.10	0.10
v/s Ratio Perm	0.26		0.11	0.11		0.17	0.10					0.05
v/c Ratio	0.77	0.70	0.22	0.37	1.29	0.59	0.61	0.69		0.69	0.58	0.28
Uniform Delay, d1	24.7	18.0	12.9	28.1	35.5	30.4	38.5	39.0		40.9	38.2	12.4
Progression Factor	1.00	1.00	1.00	0.75	0.71	0.59	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	8.8	2.2	0.6	5.0	134.9	3.1	6.6	6.2		4.3	2.6	0.2
Delay (s)	33.5	20.2	13.5	26.2	159.9	21.0	45.1	45.2		45.2	40.8	12.6
Level of Service	C	C	B	C	F	C	D	D		D	D	B
Approach Delay (s)		21.4			126.5			45.2			33.5	
Approach LOS		C			F			D			C	
Intersection Summary												
HCM 2000 Control Delay			64.3									
HCM 2000 Volume to Capacity ratio			0.94									
Actuated Cycle Length (s)			100.0									
Intersection Capacity Utilization			87.0%									
Analysis Period (min)			15									
c Critical Lane Group												

Queues

19: Laurel Canyon Boulevard & Ventura Place

06/24/2024



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	203	83	389	34	1443	37	128	1576
v/c Ratio	1.80	0.37	1.18	0.19	0.74	0.04	1.33	0.68
Control Delay	419.6	45.5	129.8	30.6	24.6	0.4	235.4	24.3
Queue Delay	0.0	0.0	0.0	0.0	5.4	0.0	0.0	0.0
Total Delay	419.6	45.5	129.8	30.6	30.0	0.4	235.4	24.3
Queue Length 50th (ft)	~194	49	~189	19	487	0	~115	313
Queue Length 95th (ft)	#339	97	#376	m24	m471	m0	#183	373
Internal Link Dist (ft)	123	395			458			232
Turn Bay Length (ft)			380	105		85	55	
Base Capacity (vph)	113	224	330	177	1942	930	96	2319
Starvation Cap Reductn	0	0	0	0	436	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.80	0.37	1.18	0.19	0.96	0.04	1.33	0.68

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

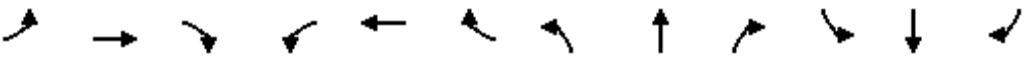
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

19: Laurel Canyon Boulevard & Ventura Place

06/24/2024













												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	117	45	25	46	30	358	31	1328	34	118	1366	84
Future Volume (vph)	117	45	25	46	30	358	31	1328	34	118	1366	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		9.4			9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.91	
Frpb, ped/bikes		1.00			1.00	0.87	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes		0.90			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.98			1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.97			0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1605			1808	1380	1770	3539	1550	1770	5041	
Flt Permitted		0.76			0.97	1.00	0.95	1.00	1.00	0.11	1.00	
Satd. Flow (perm)		1259			1808	1380	1770	3539	1550	211	5041	
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)	127	49	27	50	33	389	34	1443	37	128	1485	91
RTOR Reduction (vph)	0	5	0	0	0	159	0	0	17	0	6	0
Lane Group Flow (vph)	0	198	0	0	83	230	34	1443	20	128	1570	0
Confl. Peds. (#/hr)	49					49			5	5		
Turn Type	Perm	NA		Split	NA	Perm	Prot	NA	Perm	Perm	NA	
Protected Phases		3		4	4		1	6			2	
Permitted Phases	3					4			6	2		
Actuated Green, G (s)		8.6			12.4	12.4	6.0	54.9	54.9	43.9	43.9	
Effective Green, g (s)		8.6			12.4	12.4	6.0	54.9	54.9	43.9	43.9	
Actuated g/C Ratio		0.09			0.12	0.12	0.06	0.55	0.55	0.44	0.44	
Clearance Time (s)		9.4			9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	4.8	4.8	3.1	3.1	
Lane Grp Cap (vph)		108			224	171	106	1942	850	92	2212	
v/s Ratio Prot					0.05		0.02	c0.41			0.31	
v/s Ratio Perm		c0.16				c0.17			0.01	c0.61		
v/c Ratio		1.83			0.37	1.34	0.32	0.74	0.02	1.39	0.71	
Uniform Delay, d1		45.7			40.2	43.8	45.0	17.2	10.3	28.1	22.9	
Progression Factor		1.00			1.00	1.00	0.71	1.34	1.00	1.00	1.00	
Incremental Delay, d2		406.7			1.0	188.0	0.7	1.0	0.0	229.5	2.0	
Delay (s)		452.4			41.3	231.8	32.6	24.1	10.3	257.5	24.8	
Level of Service		F			D	F	C	C	B	F	C	
Approach Delay (s)		452.4			198.3			23.9			42.3	
Approach LOS		F			F			C			D	
Intersection Summary												
HCM 2000 Control Delay		75.5										
HCM 2000 Volume to Capacity ratio		1.40										
Actuated Cycle Length (s)		100.0							29.1			
Intersection Capacity Utilization		93.2%										
Analysis Period (min)		15										
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

20: Laurel Canyon Boulevard & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	745	292	268	780	260	508	970	271	330	875	240
Future Volume (veh/h)	213	745	292	268	780	260	508	970	271	330	875	240
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.93	0.99		0.93	1.00		0.97	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	232	810	317	291	848	283	552	1054	295	359	951	261
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	256	1034	656	283	1034	593	498	1031	444	359	888	514
Arrive On Green	0.17	0.58	0.58	0.09	0.29	0.29	0.14	0.29	0.29	0.03	0.08	0.08
Sat Flow, veh/h	1781	3554	1471	1781	3554	1471	3456	3554	1531	3456	3554	1522
Grp Volume(v), veh/h	232	810	317	291	848	283	552	1054	295	359	951	261
Grp Sat Flow(s),veh/h/ln	1781	1777	1471	1781	1777	1471	1728	1777	1531	1728	1777	1522
Q Serve(g_s), s	8.4	17.5	3.1	8.6	22.2	14.4	14.4	29.0	16.9	10.4	25.0	7.9
Cycle Q Clear(g_c), s	8.4	17.5	3.1	8.6	22.2	14.4	14.4	29.0	16.9	10.4	25.0	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	256	1034	656	283	1034	593	498	1031	444	359	888	514
V/C Ratio(X)	0.91	0.78	0.48	1.03	0.82	0.48	1.11	1.02	0.66	1.00	1.07	0.51
Avail Cap(c_a), veh/h	256	1034	656	283	1034	593	498	1031	444	359	888	514
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	0.65	0.65	0.65	0.67	0.67	0.67	0.09	0.09	0.09	0.68	0.68	0.68
Uniform Delay (d), s/veh	26.5	18.5	3.8	30.7	33.0	22.7	42.8	35.5	31.2	48.3	45.9	12.4
Incr Delay (d2), s/veh	24.3	3.9	1.7	51.7	5.0	1.8	52.3	15.0	0.4	38.8	46.1	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(95%),veh/ln	8.1	8.1	2.6	10.4	14.2	8.1	11.8	16.3	7.3	10.2	24.2	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.7	22.4	5.5	82.4	38.0	24.5	95.1	50.5	31.7	87.1	92.0	14.4
LnGrp LOS	D	C	A	F	D	C	F	F	C	F	F	B
Approach Vol, veh/h	1359			1422			1901			1571		
Approach Delay, s/veh	23.3			44.4			60.5			78.0		
Approach LOS	C			D			E			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	34.0	35.4	20.0	30.6	14.0	35.4	16.0	34.6				
Change Period (Y+Rc), s	5.4	6.3	5.6	5.6	5.6	6.3	5.6	5.6				
Max Green Setting (Gmax), s	30.6	29.1	14.4	25.0	8.4	29.1	10.4	29.0				
Max Q Clear Time (g_c+10), s	19.5	19.5	16.4	27.0	10.4	24.2	12.4	31.0				
Green Ext Time (p_c), s	0.0	7.2	0.0	0.0	0.0	3.1	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 53.2

HCM 6th LOS D

Notes

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

Queues

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Lane Group	EBL	EBT	WBL	WBT	WBR2	NBT	NBR	SBL	SBT	SBR2
Lane Group Flow (vph)	241	1449	126	1317	109	70	89	122	211	208
v/c Ratio	0.42	0.84	1.24	1.79	0.38	0.24	0.22	0.61	1.46	1.89
Control Delay	10.9	8.6	217.1	391.6	51.7	53.4	1.3	73.2	279.1	466.7
Queue Delay	73.3	48.3	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.2	57.0	217.1	395.8	51.7	53.4	1.3	73.2	279.1	466.7
Queue Length 50th (ft)	159	267	~141	~943	86	56	0	108	~268	~294
Queue Length 95th (ft)	m87	m1	#277	#1083	146	105	0	#181	#434	#459
Internal Link Dist (ft)		48		634		66			226	
Turn Bay Length (ft)	90		95		55		30	90		90
Base Capacity (vph)	580	1746	102	737	287	308	405	200	145	110
Starvation Cap Reductn	455	635	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	310	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.93	1.30	1.24	3.08	0.38	0.23	0.22	0.61	1.46	1.89

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

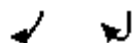
06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	222	1313	20	116	1112	99	100	51	14	82	112	22
Future Volume (vph)	222	1313	20	116	1112	99	100	51	14	82	112	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.7		4.9	6.1		6.1		6.9	6.9	7.0	7.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		0.85		1.00	0.85	1.00	0.82
Flpb, ped/bikes	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	0.99		0.85		1.00	0.85	1.00	0.87
Flt Protected	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (prot)	1770	3525		1770	3452		1344		1792	1352	1770	1320
Flt Permitted	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (perm)	1770	3525		1770	3452		1344		1792	1352	1770	1320
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)	241	1427	22	126	1209	108	109	55	15	89	122	24
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	74	0	0
Lane Group Flow (vph)	241	1448	0	126	1317	0	109	0	70	15	122	211
Confl. Peds. (#/hr)	42		32	32		42	42	75		75	75	
Turn Type	Prot	NA		Prot	NA		Perm	Split	NA	Perm	Split	NA
Protected Phases	1 3	3 6		5	2			7	7		8	8
Permitted Phases							2			7		
Actuated Green, G (s)	45.5	68.5		8.1	29.9		29.9		23.0	23.0	15.9	15.9
Effective Green, g (s)	45.5	62.4		8.1	29.9		29.9		23.0	23.0	15.9	15.9
Actuated g/C Ratio	0.32	0.45		0.06	0.21		0.21		0.16	0.16	0.11	0.11
Clearance Time (s)				4.9	6.1		6.1		6.9	6.9	7.0	7.0
Vehicle Extension (s)				3.0	4.8		4.8		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	575	1571		102	737		287		294	222	201	149
v/s Ratio Prot	0.14	c0.41		0.07	c0.38				c0.04		0.07	0.16
v/s Ratio Perm							0.08			0.01		
v/c Ratio	0.42	0.92		1.24	1.79		0.38		0.24	0.07	0.61	1.42
Uniform Delay, d1	36.9	36.5		66.0	55.0		47.1		50.9	49.4	59.1	62.0
Progression Factor	0.28	0.26		1.00	1.00		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0	1.0		165.2	359.6		3.8		0.4	0.1	5.1	221.9
Delay (s)	10.6	10.5		231.2	414.6		50.9		51.3	49.5	64.2	284.0
Level of Service	B	B		F	F		D		D	D	E	F
Approach Delay (s)		10.5			374.2				50.3			293.4
Approach LOS		B			F				D			F
Intersection Summary												
HCM 2000 Control Delay			194.1			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			1.16									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			31.8			
Intersection Capacity Utilization			103.4%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Movement	SBR	SBR2
Lane Configurations		
Traffic Volume (vph)	172	191
Future Volume (vph)	172	191
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		7.0
Lane Util. Factor		1.00
Frpb, ped/bikes		0.66
Flpb, ped/bikes		1.00
Frt		0.85
Flt Protected		1.00
Satd. Flow (prot)		1039
Flt Permitted		1.00
Satd. Flow (perm)		1039
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	187	208
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	208
Confl. Peds. (#/hr)	75	75
Turn Type		Perm
Protected Phases		
Permitted Phases		8
Actuated Green, G (s)		15.9
Effective Green, g (s)		15.9
Actuated g/C Ratio		0.11
Clearance Time (s)		7.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)		118
v/s Ratio Prot		
v/s Ratio Perm		c0.20
v/c Ratio		1.76
Uniform Delay, d1		62.0
Progression Factor		1.00
Incremental Delay, d2		375.4
Delay (s)		437.5
Level of Service		F
Approach Delay (s)		
Approach LOS		
Intersection Summary		

HCM 6th Signalized Intersection Summary

22: Carpenter Avenue & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	1245	87	212	1111	126	82	26	180	200	40	280
Future Volume (veh/h)	156	1245	87	212	1111	126	82	26	180	200	40	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	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	170	1353	95	230	1208	137	89	28	196	217	43	304
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	194	1275	89	232	1283	145	46	23	38	208	28	401
Arrive On Green	0.11	0.38	0.38	0.04	0.13	0.13	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1781	3355	235	1781	3198	361	0	88	147	551	109	1559
Grp Volume(v), veh/h	170	714	734	230	669	676	313	0	0	260	0	304
Grp Sat Flow(s), veh/h/ln	1781	1777	1813	1781	1777	1783	234	0	0	661	0	1559
Q Serve(g_s), s	9.4	38.0	38.0	12.9	37.3	37.6	0.0	0.0	0.0	0.0	0.0	18.0
Cycle Q Clear(g_c), s	9.4	38.0	38.0	12.9	37.3	37.6	25.7	0.0	0.0	25.7	0.0	18.0
Prop In Lane	1.00		0.13	1.00		0.20	0.28		0.63	0.83		1.00
Lane Grp Cap(c), veh/h	194	675	689	232	713	715	106	0	0	236	0	401
V/C Ratio(X)	0.88	1.06	1.07	0.99	0.94	0.95	2.94	0.00	0.00	1.10	0.00	0.76
Avail Cap(c_a), veh/h	194	675	689	232	713	715	106	0	0	236	0	401
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.52	0.52	0.52	0.09	0.09	0.09	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.9	31.0	31.0	47.8	42.2	42.3	36.5	0.0	0.0	40.7	0.0	34.3
Incr Delay (d2), s/veh	20.1	41.7	44.2	16.1	3.1	3.4	897.9	0.0	0.0	88.8	0.0	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(95%),veh/ln	7.8	30.1	31.4	8.5	20.4	20.6	50.4	0.0	0.0	18.3	0.0	12.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.0	72.7	75.2	63.9	45.3	45.7	934.3	0.0	0.0	129.5	0.0	42.5
LnGrp LOS	E	F	F	E	D	D	F	A	A	F	A	D
Approach Vol, veh/h	1618			1575			313			564		
Approach Delay, s/veh	72.9			48.2			934.3			82.6		
Approach LOS	E			D			F			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	47.2		35.2	15.5	49.3		35.2				
Change Period (Y+Rc), s	4.6	* 9.2		9.5	4.6	* 9.2		9.5				
Max Green Setting (Gmax), s	38			25.7	10.9	* 40		25.7				
Max Q Clear Time (g_c+M), s	40.0			27.7	11.4	39.6		27.7				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.5		0.0				

Intersection Summary

HCM 6th Ctrl Delay 131.0

HCM 6th LOS F

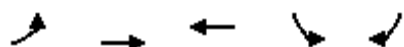
Notes

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

Queues

23: Ventura Boulevard & Colfax Avenue

06/24/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	387	1400	1440	437	405
v/c Ratio	0.76	0.67	1.48	0.82	0.37
Control Delay	17.5	10.2	243.4	45.3	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.5	10.2	243.4	45.3	2.7
Queue Length 50th (ft)	114	316	~656	253	13
Queue Length 95th (ft)	m166	m448	#796	352	52
Internal Link Dist (ft)		981	464		
Turn Bay Length (ft)	160			360	360
Base Capacity (vph)	511	2089	975	549	1093
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.76	0.67	1.48	0.80	0.37

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.



















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

23: Ventura Boulevard & Colfax Avenue

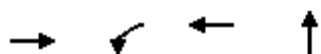
06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	356	1288	0	0	1009	316	0	0	0	402	0	373
Future Volume (vph)	356	1288	0	0	1009	316	0	0	0	402	0	373
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.4			5.4					5.4		5.7
Lane Util. Factor	1.00	0.95			0.95					1.00		1.00
Frt	1.00	1.00			0.96					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1770	3539			3413					1770		1583
Flt Permitted	0.12	1.00			1.00					0.95		1.00
Satd. Flow (perm)	217	3539			3413					1770		1583
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)	387	1400	0	0	1097	343	0	0	0	437	0	405
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	158
Lane Group Flow (vph)	387	1400	0	0	1440	0	0	0	0	437	0	247
Turn Type	pm+pt	NA			NA					pm+pt		pm+ov
Protected Phases	5	2			6			3		4		5
Permitted Phases	2						3			7		4
Actuated Green, G (s)	59.0	59.0			28.6					30.2		54.9
Effective Green, g (s)	59.0	59.0			28.6					30.2		54.9
Actuated g/C Ratio	0.59	0.59			0.29					0.30		0.55
Clearance Time (s)	5.7	5.4			5.4					5.4		5.7
Vehicle Extension (s)	3.0	4.3			4.5					3.0		3.0
Lane Grp Cap (vph)	511	2088			976					534		869
v/s Ratio Prot	c0.19	0.40			c0.42					c0.25		0.07
v/s Ratio Perm	0.26											0.09
v/c Ratio	0.76	0.67			1.48					0.82		0.28
Uniform Delay, d1	24.5	13.9			35.7					32.4		12.1
Progression Factor	0.52	0.64			0.67					1.00		1.00
Incremental Delay, d2	2.1	0.5			218.6					9.5		0.2
Delay (s)	14.7	9.5			242.7					41.8		12.2
Level of Service	B	A			F					D		B
Approach Delay (s)		10.6			242.7			0.0			27.6	
Approach LOS		B			F			A			C	
Intersection Summary												
HCM 2000 Control Delay			96.3									F
HCM 2000 Volume to Capacity ratio			1.11									
Actuated Cycle Length (s)			100.0							22.8		
Intersection Capacity Utilization			92.6%							F		
ICU Level of Service												
Analysis Period (min)			15									
c Critical Lane Group												

Queues

24: Berry Drive & Ventura Boulevard

06/24/2024



Lane Group	EBT	WBL	WBT	NBT
Lane Group Flow (vph)	1955	58	1659	100
v/c Ratio	0.67	0.49	0.57	0.43
Control Delay	5.3	23.8	7.2	10.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.3	23.8	7.2	10.9
Queue Length 50th (ft)	104	13	203	0
Queue Length 95th (ft)	136	m20	m213	34
Internal Link Dist (ft)	342		273	287
Turn Bay Length (ft)		65		
Base Capacity (vph)	2914	119	2919	391
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.67	0.49	0.57	0.26



















Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

24: Berry Drive & Ventura Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1778	20	53	1526	0	21	0	71	0	0	0
Future Volume (vph)	0	1778	20	53	1526	0	21	0	71	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0			9.4				
Lane Util. Factor		0.95		1.00	0.95			1.00				
Frt		1.00		1.00	1.00			0.90				
Flt Protected		1.00		0.95	1.00			0.99				
Satd. Flow (prot)		3533		1770	3539			1650				
Flt Permitted		1.00		0.08	1.00			0.99				
Satd. Flow (perm)		3533		146	3539			1650				
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)	0	1933	22	58	1659	0	23	0	77	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	94	0	0	0	0
Lane Group Flow (vph)	0	1955	0	58	1659	0	0	6	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		6			2		3	3			4	
Permitted Phases	6			2						4		
Actuated Green, G (s)		79.6		79.6	79.6			6.0				
Effective Green, g (s)		79.6		79.6	79.6			6.0				
Actuated g/C Ratio		0.80		0.80	0.80			0.06				
Clearance Time (s)		5.0		5.0	5.0			9.4				
Vehicle Extension (s)		4.9		4.0	4.0			3.0				
Lane Grp Cap (vph)		2812		116	2817			99				
v/s Ratio Prot		c0.55			0.47			c0.00				
v/s Ratio Perm				0.40								
v/c Ratio		0.70		0.50	0.59			0.06				
Uniform Delay, d1		4.7		3.5	3.9			44.3				
Progression Factor		0.90		2.06	1.65			1.00				
Incremental Delay, d2		1.1		8.8	0.5			0.3				
Delay (s)		5.3		15.9	7.0			44.6				
Level of Service		A		B	A			D				
Approach Delay (s)		5.3			7.3			44.6			0.0	
Approach LOS		A			A			D			A	
Intersection Summary												
HCM 2000 Control Delay			7.2									A
HCM 2000 Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			100.0								23.7	
Intersection Capacity Utilization			67.6%									C
Analysis Period (min)			15									
c Critical Lane Group												

Queues

25: Ventura Boulevard & Tujunga Avenue

06/24/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	441	1436	1440	164	223
v/c Ratio	0.68	0.54	1.09	0.36	0.27
Control Delay	35.3	3.3	83.3	41.0	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	35.3	3.3	83.3	41.0	14.1
Queue Length 50th (ft)	206	84	~519	50	75
Queue Length 95th (ft)	296	126	#697	76	116
Internal Link Dist (ft)		426	233	3083	
Turn Bay Length (ft)	180			100	60
Base Capacity (vph)	644	2678	1322	1012	814
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.68	0.54	1.09	0.16	0.27

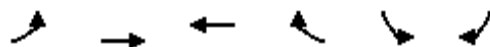
Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

25: Ventura Boulevard & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	406	1321	1094	231	151	205
Future Volume (vph)	406	1321	1094	231	151	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.5	5.5		5.5	5.6
Lane Util. Factor	1.00	0.95	0.95		0.97	1.00
Frt	1.00	1.00	0.97		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3447		3433	1583
Flt Permitted	0.09	1.00	1.00		0.95	1.00
Satd. Flow (perm)	171	3539	3447		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	441	1436	1189	251	164	223
RTOR Reduction (vph)	0	0	17	0	0	7
Lane Group Flow (vph)	441	1436	1423	0	164	216
Turn Type	pm+pt	NA	NA		Prot	pt+ov
Protected Phases	1	6	2		4	1 7
Permitted Phases	6					4
Actuated Green, G (s)	75.7	75.7	37.9		13.3	51.0
Effective Green, g (s)	75.7	75.7	37.9		13.3	45.5
Actuated g/C Ratio	0.76	0.76	0.38		0.13	0.46
Clearance Time (s)	5.6	5.5	5.5		5.5	
Vehicle Extension (s)	3.0	4.4	4.9		3.0	
Lane Grp Cap (vph)	644	2679	1306		456	720
v/s Ratio Prot	c0.22	0.41	c0.41		c0.05	0.14
v/s Ratio Perm	0.30					
v/c Ratio	0.68	0.54	1.09		0.36	0.30
Uniform Delay, d1	22.8	5.0	31.1		39.5	17.2
Progression Factor	1.48	0.51	1.00		1.00	1.00
Incremental Delay, d2	2.3	0.6	52.9		0.5	0.2
Delay (s)	36.0	3.1	84.0		40.0	17.4
Level of Service	D	A	F		D	B
Approach Delay (s)		10.8	84.0		27.0	
Approach LOS		B	F		C	
Intersection Summary						
HCM 2000 Control Delay			41.0		HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.88			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	22.1
Intersection Capacity Utilization			82.3%		ICU Level of Service	E
Analysis Period (min)			15			
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

26: Laurel Canyon Boulevard & Maxwellton Road

06/24/2024









Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Volume (veh/h)	73	0	79	0	0	0	16	1758	0	0	1250	79
Future Volume (veh/h)	73	0	79	0	0	0	16	1758	0	0	1250	79
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93				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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h	79	0	86				17	1911	0	0	1359	86
Peak Hour Factor	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	0	0	2	2
Cap, veh/h	133	0	145				48	2141	0	0	2120	134
Arrive On Green	0.17	0.00	0.17				0.62	0.62	0.00	0.00	0.62	0.62
Sat Flow, veh/h	769	0	837				12	3512	0	0	3487	214
Grp Volume(v), veh/h	165	0	0				1034	894	0	0	710	735
Grp Sat Flow(s),veh/h/ln	1606	0	0				1822	1617	0	0	1777	1831
Q Serve(g_s), s	8.5	0.0	0.0				10.3	41.8	0.0	0.0	22.5	22.7
Cycle Q Clear(g_c), s	8.5	0.0	0.0				43.2	41.8	0.0	0.0	22.5	22.7
Prop In Lane	0.48		0.52				0.02		0.00	0.00		0.12
Lane Grp Cap(c), veh/h	278	0	0				1179	1010	0	0	1110	1144
V/C Ratio(X)	0.59	0.00	0.00				0.88	0.88	0.00	0.00	0.64	0.64
Avail Cap(c_a), veh/h	442	0	0				1179	1010	0	0	1110	1144
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.38	0.38	0.00	0.00	0.18	0.18
Uniform Delay (d), s/veh	34.3	0.0	0.0				14.2	14.2	0.0	0.0	10.5	10.6
Incr Delay (d2), s/veh	2.0	0.0	0.0				3.9	4.8	0.0	0.0	0.5	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
%ile BackOfQ(95%),veh/ln	6.2	0.0	0.0				19.8	17.6	0.0	0.0	9.5	9.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.3	0.0	0.0				18.1	18.9	0.0	0.0	11.1	11.1
LnGrp LOS	D	A	A				B	B	A	A	B	B
Approach Vol, veh/h		165						1928			1445	
Approach Delay, s/veh		36.3						18.5			11.1	
Approach LOS		D						B			B	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		65.2		24.8		65.2						
Change Period (Y+Rc), s		9.0		9.2		9.0						
Max Green Setting (Gmax), s		47.0		24.8		47.0						
Max Q Clear Time (g_c+I1), s		24.7		10.5		45.2						
Green Ext Time (p_c), s		17.8		0.8		1.8						
Intersection Summary												
HCM 6th Ctrl Delay			16.3									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary

27: Laurel Canyon Boulevard & Laurel Terrace Drive/Sunshine Terrace Drive

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								 			 	
Traffic Volume (veh/h)	18	21	189	133	38	31	175	1701	224	36	1258	11
Future Volume (veh/h)	18	21	189	133	38	31	175	1701	224	36	1258	11
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	20	23	205	145	41	34	190	1849	243	39	1367	12
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	51	49	320	183	46	33	110	2196	282	107	2142	19
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.06	0.69	0.69	0.59	0.59	0.59
Sat Flow, veh/h	81	218	1424	594	206	146	1781	3167	407	197	3610	32
Grp Volume(v), veh/h	248	0	0	220	0	0	190	1019	1073	39	673	706
Grp Sat Flow(s),veh/h/ln	723	0	0	946	0	0	1781	1777	1797	197	1777	1865
Q Serve(g_s), s	0.0	0.0	0.0	10.8	0.0	0.0	7.4	49.5	54.5	22.6	29.7	29.8
Cycle Q Clear(g_c), s	16.2	0.0	0.0	27.0	0.0	0.0	7.4	49.5	54.5	65.1	29.7	29.8
Prop In Lane	0.08		0.83	0.66		0.15	1.00		0.23	1.00		0.02
Lane Grp Cap(c), veh/h	420	0	0	263	0	0	110	1232	1246	107	1054	1106
V/C Ratio(X)	0.59	0.00	0.00	0.84	0.00	0.00	1.73	0.83	0.86	0.36	0.64	0.64
Avail Cap(c_a), veh/h	420	0	0	263	0	0	110	1232	1246	107	1054	1106
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(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.65	0.65	0.65
Uniform Delay (d), s/veh	42.5	0.0	0.0	48.7	0.0	0.0	56.3	13.2	14.0	43.3	16.0	16.0
Incr Delay (d2), s/veh	2.2	0.0	0.0	20.6	0.0	0.0	363.5	6.5	7.9	6.1	1.9	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(95%),veh/ln	11.3	0.0	0.0	12.9	0.0	0.0	23.6	26.5	29.4	2.3	16.4	17.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.6	0.0	0.0	69.2	0.0	0.0	419.8	19.7	21.9	49.5	17.9	17.8
LnGrp LOS	D	A	A	E	A	A	F	B	C	D	B	B
Approach Vol, veh/h	248		220			2282			1418			
Approach Delay, s/veh	44.6		69.2			54.1			18.7			
Approach LOS	D		E			D			B			
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	2.0	76.0	32.0		88.0		32.0					
Change Period (Y+Rc), s	4.6	4.8	* 5		4.8		* 5					
Max Green Setting (Gmax), s	71.2	71.2	* 27		83.2		* 27					
Max Q Clear Time (g_c+I), s	19.4	67.1	18.2		56.5		29.0					
Green Ext Time (p_c), s	0.0	3.1	1.0		19.9		0.0					

Intersection Summary

HCM 6th Ctrl Delay 42.3

HCM 6th LOS D

Notes

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

Queues

28: Laurel Canyon Boulevard & Fryman Road

06/24/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	208	15	14	2087	1733
v/c Ratio	0.67	0.05	0.12	0.84	0.71
Control Delay	44.6	28.6	8.7	15.0	10.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.6	28.6	8.7	15.0	10.6
Queue Length 50th (ft)	111	7	2	385	256
Queue Length 95th (ft)	170	22	12	#685	423
Internal Link Dist (ft)				236	183
Turn Bay Length (ft)			145		
Base Capacity (vph)	542	485	116	2489	2453
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.38	0.03	0.12	0.84	0.71





















Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

28: Laurel Canyon Boulevard & Fryman Road

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								 			 	
Traffic Volume (vph)	191	0	14	0	0	0	13	1920	0	0	1401	193
Future Volume (vph)	191	0	14	0	0	0	13	1920	0	0	1401	193
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4		5.4				5.4	5.4			5.4	
Lane Util. Factor	1.00		1.00				1.00	0.95			0.95	
Frt	1.00		0.85				1.00	1.00			0.98	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	3539			3475	
Flt Permitted	0.95		1.00				0.09	1.00			1.00	
Satd. Flow (perm)	1770		1583				166	3539			3475	
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)	208	0	15	0	0	0	14	2087	0	0	1523	210
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	8	0
Lane Group Flow (vph)	208	0	15	0	0	0	14	2087	0	0	1725	0
Turn Type	Perm		Perm				Perm	NA		Perm	NA	
Protected Phases								2			6	
Permitted Phases	8		8				2			6		
Actuated Green, G (s)	15.9		15.9				63.3	63.3			63.3	
Effective Green, g (s)	15.9		15.9				63.3	63.3			63.3	
Actuated g/C Ratio	0.18		0.18				0.70	0.70			0.70	
Clearance Time (s)	5.4		5.4				5.4	5.4			5.4	
Vehicle Extension (s)	3.0		3.0				4.8	4.8			5.1	
Lane Grp Cap (vph)	312		279				116	2489			2444	
v/s Ratio Prot								c0.59			0.50	
v/s Ratio Perm	c0.12		0.01				0.08					
v/c Ratio	0.67		0.05				0.12	0.84			0.71	
Uniform Delay, d1	34.6		30.8				4.3	9.7			7.9	
Progression Factor	1.00		1.00				1.00	1.00			1.00	
Incremental Delay, d2	5.3		0.1				2.1	3.6			1.7	
Delay (s)	39.9		30.9				6.4	13.2			9.6	
Level of Service	D		C				A	B			A	
Approach Delay (s)		39.3			0.0			13.2			9.6	
Approach LOS		D			A			B			A	
Intersection Summary												
HCM 2000 Control Delay			13.1				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.80									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			10.8		
Intersection Capacity Utilization			71.5%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th TWSC
29: Laurel Canyon Boulevard & Woodbridge Street

06/24/2024

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	5	1	36	6	1	152	38	1930	23	78	1728	31
Future Vol, veh/h	5	1	36	6	1	152	38	1930	23	78	1728	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	65	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	1	39	7	1	165	41	2098	25	85	1878	34

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	3197	4270	956	3303	4275	1062	1912	0	0	2123	0	0
Stage 1	2065	2065	-	2193	2193	-	-	-	-	-	-	-
Stage 2	1132	2205	-	1110	2082	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 4	2	258	~ 3	2	220	306	-	-	253	-	-
Stage 1	56	96	-	46	82	-	-	-	-	-	-	-
Stage 2	216	81	-	223	94	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	-	~ 1	258	-	~ 1	220	306	-	-	253	-	-
Mov Cap-2 Maneuver	-	~ 1	-	-	~ 1	-	-	-	-	-	-	-
Stage 1	48	64	-	40	71	-	-	-	-	-	-	-
Stage 2	46	70	-	123	62	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			0.4	1.1
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	306	-	-	-	253	-	-
HCM Lane V/C Ratio	0.135	-	-	-	0.335	-	-
HCM Control Delay (s)	18.6	-	-	-	26.2	-	-
HCM Lane LOS	C	-	-	-	D	-	-
HCM 95th %tile Q(veh)	0.5	-	-	-	1.4	-	-

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

HCM 6th TWSC
30: Valleyheart Drive (North) & Laurel Canyon Boulevard

06/24/2024

Intersection												
Int Delay, s/veh	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	2	0	35	2	0	11	34	2067	55	11	1782	6
Future Vol, veh/h	2	0	35	2	0	11	34	2067	55	11	1782	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	40	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	38	2	0	12	37	2247	60	12	1937	7

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	3163	4346	972	3344	4319	1154	1944	0	0	2307	0	0
Stage 1	1965	1965	-	2351	2351	-	-	-	-	-	-	-
Stage 2	1198	2381	-	993	1968	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	4	2	252	3	2	190	298	-	-	214	-	-
Stage 1	65	107	-	37	68	-	-	-	-	-	-	-
Stage 2	197	66	-	263	107	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	3	2	252	~ 2	2	190	298	-	-	214	-	-
Mov Cap-2 Maneuver	3	2	-	~ 2	2	-	-	-	-	-	-	-
Stage 1	57	101	-	32	60	-	-	-	-	-	-	-
Stage 2	162	58	-	211	101	-	-	-	-	-	-	-





Approach	EB	WB	NB	SB
HCM Control Delay, s	232.7	\$ 745.6	0.3	0.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	298	-	-	46 12	214	-	-
HCM Lane V/C Ratio	0.124	-	-	0.874 1.178	0.056	-	-
HCM Control Delay (s)	18.8	-	-	232.7\$ 745.6	22.8	-	-
HCM Lane LOS	C	-	-	F F	C	-	-
HCM 95th %tile Q(veh)	0.4	-	-	3.5 2.4	0.2	-	-

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

Intersection

Int Delay, s/veh 28.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	140	2004	43	124	1708
Future Vol, veh/h	3	140	2004	43	124	1708
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	35	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	152	2178	47	135	1857

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	3401	1113	0
Stage 1	2202	-	-
Stage 2	1199	-	-
Critical Hdwy	6.84	6.94	-
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	-
Pot Cap-1 Maneuver	6	203	-
Stage 1	70	-	-
Stage 2	248	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	~ 2	203	-
Mov Cap-2 Maneuver	~ 2	-	-
Stage 1	70	-	-
Stage 2	103	-	-

Approach	WB	NB	SB
HCM Control Delay, s\$	770.4	0	2.7
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	65	231
HCM Lane V/C Ratio	-	-	2.391	0.583
HCM Control Delay (s)	-	-	\$ 770.4	40.3
HCM Lane LOS	-	-	F	E
HCM 95th %tile Q(veh)	-	-	15.2	3.3

Notes

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

HCM 6th AWSC

32: Radford Avenue & Sarah Street

06/24/2024

Intersection

Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	0	0	7	1	7	1	59	3	8	80	10
Future Vol, veh/h	6	0	0	7	1	7	1	59	3	8	80	10
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	0	0	8	1	8	1	64	3	9	87	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0




Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.6	7.2	7.4	7.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	100%	47%	8%
Vol Thru, %	94%	0%	7%	82%
Vol Right, %	5%	0%	47%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	63	6	15	98
LT Vol	1	6	7	8
Through Vol	59	0	1	80
RT Vol	3	0	7	10
Lane Flow Rate	68	7	16	107
Geometry Grp	1	1	1	1
Degree of Util (X)	0.077	0.008	0.018	0.118
Departure Headway (Hd)	4.028	4.449	4.054	3.98
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	888	795	872	900
Service Time	2.059	2.527	2.13	2.005
HCM Lane V/C Ratio	0.077	0.009	0.018	0.119
HCM Control Delay	7.4	7.6	7.2	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0	0.1	0.4

Intersection

Intersection Delay, s/veh10.2

Intersection LOS B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	163	163	78	73	73	57
Future Vol, veh/h	163	163	78	73	73	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	177	177	85	79	79	62
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	11	9	9.4
HCM LOS	B	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	50%	56%
Vol Thru, %	52%	0%	44%
Vol Right, %	48%	50%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	151	326	130
LT Vol	0	163	73
Through Vol	78	0	57
RT Vol	73	163	0
Lane Flow Rate	164	354	141
Geometry Grp	1	1	1
Degree of Util (X)	0.212	0.44	0.199
Departure Headway (Hd)	4.659	4.467	5.076
Convergence, Y/N	Yes	Yes	Yes
Cap	766	804	704
Service Time	2.712	2.507	3.132
HCM Lane V/C Ratio	0.214	0.44	0.2
HCM Control Delay	9	11	9.4
HCM Lane LOS	A	B	A
HCM 95th-tile Q	0.8	2.3	0.7

HCM 6th AWSC

54: Radford Avenue & Radford Gate

06/24/2024

Intersection

Intersection Delay, s/veh14.7

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	0	52	131	0	0	59	253	83	0	372	5
Future Vol, veh/h	9	0	52	131	0	0	59	253	83	0	372	5
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	0	57	142	0	0	64	275	90	0	404	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0





Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach RightNB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.7	11.6	15.7	15.5
HCM LOS	A	B	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	15%	100%	0%
Vol Thru, %	64%	0%	0%	99%
Vol Right, %	21%	85%	0%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	395	61	131	377
LT Vol	59	9	131	0
Through Vol	253	0	0	372
RT Vol	83	52	0	5
Lane Flow Rate	429	66	142	410
Geometry Grp	1	1	1	1
Degree of Util (X)	0.606	0.109	0.252	0.591
Departure Headway (Hd)	5.085	5.901	6.366	5.189
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	708	604	562	693
Service Time	3.126	3.968	4.423	3.231
HCM Lane V/C Ratio	0.606	0.109	0.253	0.592
HCM Control Delay	15.7	9.7	11.6	15.5
HCM Lane LOS	C	A	B	C
HCM 95th-tile Q	4.1	0.4	1	3.9

Intersection

Intersection Delay, s/veh13.4

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	38	41	9	24	0	59	224	14	0	452	0
Future Vol, veh/h	0	38	41	9	24	0	59	224	14	0	452	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	41	45	10	26	0	64	243	15	0	491	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0




Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.5	9.5	11.6	15.5
HCM LOS	A	A	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	20%	0%	27%	0%
Vol Thru, %	75%	48%	73%	100%
Vol Right, %	5%	52%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	297	79	33	452
LT Vol	59	0	9	0
Through Vol	224	38	24	452
RT Vol	14	41	0	0
Lane Flow Rate	323	86	36	491
Geometry Grp	1	1	1	1
Degree of Util (X)	0.433	0.134	0.061	0.633
Departure Headway (Hd)	4.829	5.611	6.095	4.641
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	739	642	591	771
Service Time	2.908	3.613	4.1	2.712
HCM Lane V/C Ratio	0.437	0.134	0.061	0.637
HCM Control Delay	11.6	9.5	9.5	15.5
HCM Lane LOS	B	A	A	C
HCM 95th-tile Q	2.2	0.5	0.2	4.6

HCM 6th TWSC

56: Colfax Avenue & Colfax Gate

06/24/2024

Intersection						
Int Delay, s/veh	52.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	163	54	24	693	674	73
Future Vol, veh/h	163	54	24	693	674	73
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	177	59	26	753	733	79

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1578	773	812	0	-	0
Stage 1	773	-	-	-	-	-
Stage 2	805	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	~ 120	399	814	-	-	-
Stage 1	455	-	-	-	-	-
Stage 2	440	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 113	399	814	-	-	-
Mov Cap-2 Maneuver	~ 113	-	-	-	-	-
Stage 1	430	-	-	-	-	-
Stage 2	440	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	\$ 404	0.3	0
HCM LOS	F		

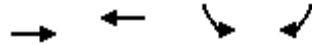
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	814	-	138	-	-
HCM Lane V/C Ratio	0.032	-	1.709	-	-
HCM Control Delay (s)	9.6	-	\$ 404	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0.1	-	17.3	-	-

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

Queues

121: Ventura Boulevard & Ventura PI

06/24/2024



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1496	1451	195	27
v/c Ratio	1.65	0.69	0.30	0.09
Control Delay	330.6	30.0	49.9	21.0
Queue Delay	2.1	50.6	0.0	0.0
Total Delay	332.7	80.7	49.9	21.0
Queue Length 50th (ft)	~1036	285	78	4
Queue Length 95th (ft)	#1176	m36	116	31
Internal Link Dist (ft)	509	48	136	
Turn Bay Length (ft)				40
Base Capacity (vph)	907	2091	669	326
Starvation Cap Reductn	0	1252	0	0
Spillback Cap Reductn	263	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	2.32	1.73	0.29	0.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

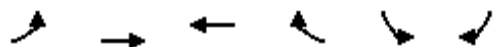
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

121: Ventura Boulevard & Ventura PI

06/24/2024



























Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	↑
Traffic Volume (vph)	0	1376	1335	0	179	25
Future Volume (vph)	0	1376	1335	0	179	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.1	6.1		5.7	5.7
Lane Util. Factor		0.95	0.95		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3433	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1496	1451	0	195	27
RTOR Reduction (vph)	0	0	0	0	0	18
Lane Group Flow (vph)	0	1496	1451	0	195	9
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2 4		3	
Permitted Phases						3
Actuated Green, G (s)		35.9	82.7		26.5	26.5
Effective Green, g (s)		35.9	82.7		26.5	26.5
Actuated g/C Ratio		0.26	0.59		0.19	0.19
Clearance Time (s)		6.1			5.7	5.7
Vehicle Extension (s)		4.6			3.0	3.0
Lane Grp Cap (vph)		907	2090		649	299
v/s Ratio Prot		c0.42	c0.41		c0.06	
v/s Ratio Perm						0.01
v/c Ratio		1.65	0.69		0.30	0.03
Uniform Delay, d1		52.0	19.9		48.8	46.3
Progression Factor		1.00	1.47		1.00	1.00
Incremental Delay, d2		297.2	0.1		0.3	0.0
Delay (s)		349.2	29.3		49.0	46.3
Level of Service		F	C		D	D
Approach Delay (s)		349.2	29.3		48.7	
Approach LOS		F	C		D	
Intersection Summary						
HCM 2000 Control Delay		181.7		HCM 2000 Level of Service		F
HCM 2000 Volume to Capacity ratio		1.03				
Actuated Cycle Length (s)		140.0		Sum of lost time (s)		31.8
Intersection Capacity Utilization		54.5%		ICU Level of Service		A
Analysis Period (min)		15				
c Critical Lane Group						

***Future with Project Conditions (Year 2045)
with Radford Mobility Connector***

HCM 6th Signalized Intersection Summary

1: Riverside Drive & Laurel Canyon Boulevard








06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	284	696	166	176	1083	159	271	929	115	148	1005	355
Future Volume (veh/h)	284	696	166	176	1083	159	271	929	115	148	1005	355
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	309	757	180	191	1177	173	295	1010	125	161	1092	386
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	254	1265	564	259	1016	453	259	1111	614	198	996	352
Arrive On Green	0.14	0.36	0.36	0.02	0.09	0.09	0.11	0.31	0.31	0.07	0.27	0.27
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	3554	1585	1781	3722	1316
Grp Volume(v), veh/h	309	757	180	191	1177	173	295	1010	125	161	999	479
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1777	1585	1781	1702	1634
Q Serve(g_s), s	17.1	20.9	9.9	6.6	34.3	12.3	13.4	32.8	6.3	7.9	32.1	32.1
Cycle Q Clear(g_c), s	17.1	20.9	9.9	6.6	34.3	12.3	13.4	32.8	6.3	7.9	32.1	32.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.81
Lane Grp Cap(c), veh/h	254	1265	564	259	1016	453	259	1111	614	198	911	437
V/C Ratio(X)	1.22	0.60	0.32	0.74	1.16	0.38	1.14	0.91	0.20	0.81	1.10	1.10
Avail Cap(c_a), veh/h	254	1265	564	337	1016	453	259	1111	614	198	911	437
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	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	51.4	31.6	28.1	57.3	54.3	44.4	34.9	39.6	24.4	33.2	44.0	44.0
Incr Delay (d2), s/veh	128.1	2.1	1.5	6.0	82.6	2.4	97.2	11.9	0.7	21.9	59.9	71.9
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(95%),veh/ln	25.2	14.0	7.0	5.7	40.0	9.4	19.4	22.1	4.4	8.0	29.7	30.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	179.6	33.7	29.6	63.3	137.0	46.8	132.1	51.5	25.1	55.2	103.8	115.8
LnGrp LOS	F	C	C	E	F	D	F	D	C	E	F	F
Approach Vol, veh/h		1246			1541			1430			1639	
Approach Delay, s/veh		69.3			117.7			65.8			102.5	
Approach LOS		E			F			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.0	38.0	23.0	40.0	13.6	43.4	14.6	48.4				
Change Period (Y+Rc), s	5.6	5.9	5.9	* 5.7	5.6	5.9	5.6	* 5.7				
Max Green Setting (Gmax), s	13.4	32.1	17.1	* 34	8.0	37.5	11.7	* 40				
Max Q Clear Time (g_c+I1), s	15.4	34.1	19.1	36.3	9.9	34.8	8.6	22.9				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	1.8	0.2	5.2				
Intersection Summary												
HCM 6th Ctrl Delay			90.5									
HCM 6th LOS			F									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
User approved changes to right turn type.												

HCM 6th TWSC

2: Riverside Drive & Radford Avenue

06/24/2024

Intersection												
Int Delay, s/veh	105.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	1054	102	87	1166	13	32	7	100	5	11	32
Future Vol, veh/h	26	1054	102	87	1166	13	32	7	100	5	11	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	105	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	1146	111	95	1267	14	35	8	109	5	12	35

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1281	0	0	1257	0	0	2032	2673	573	2097	2777	641
Stage 1	-	-	-	-	-	-	1202	1202	-	1464	1464	-
Stage 2	-	-	-	-	-	-	830	1471	-	633	1313	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	538	-	-	549	-	-	~ 33	22	463	30	19	417
Stage 1	-	-	-	-	-	-	196	256	-	135	191	-
Stage 2	-	-	-	-	-	-	331	190	-	434	226	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	538	-	-	549	-	-	~ 9	17	463	13	15	417
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 9	17	-	13	15	-
Stage 1	-	-	-	-	-	-	186	243	-	128	158	-
Stage 2	-	-	-	-	-	-	232	157	-	305	214	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.9	\$ 1853.6	\$ 403.3
HCM LOS			F	F

























Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	33	538	-	-	549	-	-	40
HCM Lane V/C Ratio	4.578	0.053	-	-	0.172	-	-	1.304
HCM Control Delay (s)	\$ 1853.6	12.1	-	-	12.9	-	-	\$ 403.3
HCM Lane LOS	F	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	17.9	0.2	-	-	0.6	-	-	5.2

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

HCM 6th Signalized Intersection Summary

3: Colfax Avenue & Riverside Drive

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	716	236	287	847	89	138	480	82	92	591	138
Future Volume (veh/h)	118	716	236	287	847	89	138	480	82	92	591	138
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	128	778	257	312	921	97	150	522	89	100	642	150
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	212	1356	605	234	1356	605	223	826	700	418	826	700
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.88	0.88	0.88	0.44	0.44	0.44
Sat Flow, veh/h	554	3554	1585	545	3554	1585	685	1870	1585	810	1870	1585
Grp Volume(v), veh/h	128	778	257	312	921	97	150	522	89	100	642	150
Grp Sat Flow(s),veh/h/ln	554	1777	1585	545	1777	1585	685	1870	1585	810	1870	1585
Q Serve(g_s), s	9.9	10.4	7.2	12.5	13.0	2.4	9.0	4.4	0.4	5.3	17.5	3.5
Cycle Q Clear(g_c), s	22.9	10.4	7.2	22.9	13.0	2.4	26.5	4.4	0.4	9.8	17.5	3.5
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	212	1356	605	234	1356	605	223	826	700	418	826	700
V/C Ratio(X)	0.60	0.57	0.42	1.34	0.68	0.16	0.67	0.63	0.13	0.24	0.78	0.21
Avail Cap(c_a), veh/h	212	1356	605	234	1356	605	223	826	700	418	826	700
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	0.91	0.91	0.91	0.70	0.70	0.70	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	14.7	13.7	27.0	15.5	12.2	13.7	2.2	2.0	13.7	14.2	10.3
Incr Delay (d2), s/veh	12.2	1.8	2.2	175.2	2.5	0.5	10.9	2.6	0.3	1.3	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(95%),veh/ln	4.3	6.8	4.5	23.9	8.2	1.5	3.9	2.4	0.3	1.8	12.2	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.6	16.5	15.9	202.2	18.0	12.7	24.6	4.8	2.2	15.0	21.3	11.0
LnGrp LOS	D	B	B	F	B	B	C	A	A	B	C	B
Approach Vol, veh/h	1163			1330				761			892	
Approach Delay, s/veh	18.8			60.8				8.4			18.9	
Approach LOS	B			E				A			B	
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	28.0			32.0			28.0			32.0		
Change Period (Y+Rc), s	* 5.1			* 5.5			* 5.1			* 5.5		
Max Green Setting (Gmax), s	* 23			* 27			* 23			* 27		
Max Q Clear Time (g_c+I1), s	24.9			28.5			24.9			19.5		
Green Ext Time (p_c), s	0.0			0.0			0.0			3.0		
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.

Queues

4: Riverside Drive & SR 170 Southbound Off-Ramp

06/24/2024



Lane Group	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	947	10	818	33	247	237	229
v/c Ratio	0.49	0.04	0.42	0.12	0.67	0.57	0.45
Control Delay	13.4	13.6	14.1	1.0	34.2	18.1	6.5
Queue Delay	2.3	0.0	0.6	0.4	1.2	1.1	0.0
Total Delay	15.8	13.6	14.6	1.3	35.4	19.1	6.5
Queue Length 50th (ft)	103	3	196	0	100	49	0
Queue Length 95th (ft)	239	m9	m233	0	170	117	51
Internal Link Dist (ft)	2214		245	105		344	
Turn Bay Length (ft)		25			140		150
Base Capacity (vph)	1929	229	1929	266	432	471	556
Starvation Cap Reductn	0	0	671	0	0	0	0
Spillback Cap Reductn	812	0	0	82	62	86	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.04	0.65	0.18	0.67	0.62	0.41

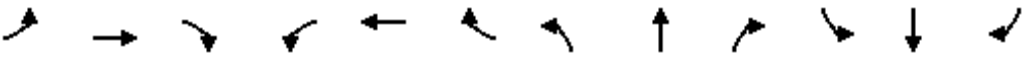
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: Riverside Drive & SR 170 Southbound Off-Ramp













06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑	↑↑			↑		↑	↑	↑
Traffic Volume (vph)	0	869	2	9	753	0	8	0	22	304	7	345
Future Volume (vph)	0	869	2	9	753	0	8	0	22	304	7	345
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Lane Util. Factor		0.95		1.00	0.95			1.00		0.95	0.91	0.95
Frt		1.00		1.00	1.00			0.90		1.00	0.91	0.85
Flt Protected		1.00		0.95	1.00			0.99		0.95	0.98	1.00
Satd. Flow (prot)		3538		1770	3539			1657		1681	1512	1504
Flt Permitted		1.00		0.23	1.00			0.82		0.95	0.98	1.00
Satd. Flow (perm)		3538		421	3539			1377		1681	1512	1504
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)	0	945	2	10	818	0	9	0	24	330	8	375
RTOR Reduction (vph)	0	0	0	0	0	0	0	31	0	0	87	179
Lane Group Flow (vph)	0	947	0	10	818	0	0	2	0	247	150	50
Turn Type		NA		Perm	NA		Perm	NA		Split	NA	Perm
Protected Phases		6			2			4		3	3	
Permitted Phases				2			4					3
Actuated Green, G (s)		34.5		34.5	34.5			3.2		15.3	15.3	15.3
Effective Green, g (s)		34.5		34.5	34.5			3.2		15.3	15.3	15.3
Actuated g/C Ratio		0.49		0.49	0.49			0.05		0.22	0.22	0.22
Clearance Time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Vehicle Extension (s)		3.8		2.4	2.4			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1743		207	1744			62		367	330	328
v/s Ratio Prot		c0.27			0.23					c0.15	0.10	
v/s Ratio Perm				0.02				c0.00				0.03
v/c Ratio		0.54		0.05	0.47			0.02		0.67	0.46	0.15
Uniform Delay, d1		12.3		9.2	11.7			31.9		25.1	23.7	22.1
Progression Factor		1.00		1.07	1.18			1.00		1.00	1.00	1.00
Incremental Delay, d2		1.2		0.4	0.8			0.2		4.8	1.0	0.2
Delay (s)		13.5		10.2	14.6			32.1		29.9	24.7	22.3
Level of Service		B		B	B			C		C	C	C
Approach Delay (s)		13.5			14.6			32.1			25.7	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			17.6			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.55									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			55.9%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	NWL	NWR
Lane Group Flow (vph)	226	725	342	274	491	148	27	687	175	1178	275	94
v/c Ratio	0.84	1.03	1.06	1.49	0.60	0.40	0.51	1.10	0.64	0.88	0.62	0.51
Control Delay	60.3	91.6	114.2	275.5	51.3	49.4	86.6	119.7	67.3	48.8	63.6	65.7
Queue Delay	0.0	28.0	17.3	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.3	0.0
Total Delay	60.3	119.6	131.5	275.5	51.3	49.4	86.6	119.7	67.3	49.5	63.9	65.7
Queue Length 50th (ft)	164	~380	~368	~293	211	115	23	~376	151	519	124	89
Queue Length 95th (ft)	#235	#536	#603	#479	272	184	#69	#503	#281	#703	165	150
Internal Link Dist (ft)		245			745			2580		383	758	
Turn Bay Length (ft)	140		230	85		110	270		290		215	
Base Capacity (vph)	269	705	323	184	824	368	53	623	275	1345	686	288
Starvation Cap Reductn	0	175	63	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	34	105	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	1.37	1.32	1.49	0.60	0.40	0.51	1.10	0.64	0.90	0.47	0.33

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.





















95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024

												
Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	208	348	425	209	14	238	452	136	25	531	81	20
Future Volume (vph)	208	348	425	209	14	238	452	136	25	531	81	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Lane Util. Factor	1.00	0.91	0.91			1.00	0.95	1.00	1.00	0.95		
Frt	1.00	0.93	0.85			1.00	1.00	0.85	1.00	0.98		
Flt Protected	0.95	1.00	1.00			0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1770	3147	1441			1770	3539	1583	1770	3454		
Flt Permitted	0.32	1.00	1.00			0.12	1.00	1.00	0.16	1.00		
Satd. Flow (perm)	597	3147	1441			229	3539	1583	295	3454		
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)	226	378	462	227	15	259	491	148	27	577	88	22
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	226	725	342	0	0	274	491	148	27	687	0	0
Turn Type	pm+pt	NA	Perm		pm+pt	pm+pt	NA	Perm	Perm	NA		
Protected Phases	1	6			5	5	2			8		
Permitted Phases	6		6		2	2		2	8			
Actuated Green, G (s)	41.7	31.4	31.4			43.0	32.6	32.6	25.3	25.3		
Effective Green, g (s)	41.7	31.4	31.4			43.0	32.6	32.6	25.3	25.3		
Actuated g/C Ratio	0.30	0.22	0.22			0.31	0.23	0.23	0.18	0.18		
Clearance Time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Vehicle Extension (s)	3.0	3.9	3.9			3.0	4.6	4.6	4.7	4.7		
Lane Grp Cap (vph)	264	705	323			184	824	368	53	624		
v/s Ratio Prot	0.06	0.23				c0.11	0.14			c0.20		
v/s Ratio Perm	0.19		0.24			c0.35		0.09	0.09			
v/c Ratio	0.86	1.03	1.06			1.49	0.60	0.40	0.51	1.10		
Uniform Delay, d1	43.3	54.3	54.3			41.9	47.8	45.5	51.8	57.4		
Progression Factor	0.97	0.99	0.99			1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2	20.6	39.2	63.3			246.7	3.2	3.3	13.7	66.8		
Delay (s)	62.6	93.2	117.3			288.6	51.0	48.7	65.4	124.2		
Level of Service	E	F	F			F	D	D	E	F		
Approach Delay (s)		94.2					121.9			121.9		
Approach LOS		F					F			F		
Intersection Summary												
HCM 2000 Control Delay			88.1			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			1.17									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			33.0			
Intersection Capacity Utilization			106.1%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024



Movement	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	18	143	1000	84	43	201	91	5
Future Volume (vph)	18	143	1000	84	43	201	91	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.3			6.6	6.6	
Lane Util. Factor		1.00	0.95			0.97	0.91	
Frt		1.00	0.99			0.99	0.85	
Flt Protected		0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	3498			3429	1441	
Flt Permitted		0.95	1.00			0.95	1.00	
Satd. Flow (perm)		1770	3498			3429	1441	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	155	1087	91	47	218	99	5
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	175	1178	0	0	275	94	0
Turn Type	Prot	Prot	NA		Prot	Prot	Perm	
Protected Phases	7	7	4		3	3		
Permitted Phases							3	
Actuated Green, G (s)		21.8	53.9			18.1	18.1	
Effective Green, g (s)		21.8	53.9			18.1	18.1	
Actuated g/C Ratio		0.16	0.38			0.13	0.13	
Clearance Time (s)		6.8	6.3			6.6	6.6	
Vehicle Extension (s)		3.0	4.9			4.6	4.6	
Lane Grp Cap (vph)		275	1346			443	186	
v/s Ratio Prot		0.10	c0.34			c0.08		
v/s Ratio Perm							0.07	
v/c Ratio		0.64	0.88			0.62	0.51	
Uniform Delay, d1		55.4	39.9			57.7	56.8	
Progression Factor		1.00	1.00			1.00	1.00	
Incremental Delay, d2		4.8	7.2			3.5	3.8	
Delay (s)		60.1	47.1			61.2	60.6	
Level of Service		E	D			E	E	
Approach Delay (s)			48.8			61.1		
Approach LOS			D			E		
Intersection Summary								

HCM 6th Signalized Intersection Summary

6: Laurel Canyon Boulevard & US 101 Northbound Ramps

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰	↰	↰	↰			↰	↰
Traffic Volume (veh/h)	0	0	0	534	2	269	511	671	0	0	1544	397
Future Volume (veh/h)	0	0	0	534	2	269	511	671	0	0	1544	397
Initial Q (Qb), veh				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
Parking Bus, Adj				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		
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				672	0	195	555	729	0	0	1678	432
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				774	0	344	621	2383	0	0	2206	685
Arrive On Green				0.22	0.00	0.22	0.36	1.00	0.00	0.00	0.43	0.43
Sat Flow, veh/h				3563	0	1585	3456	3647	0	0	5274	1585
Grp Volume(v), veh/h				672	0	195	555	729	0	0	1678	432
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	0	1702	1585
Q Serve(g_s), s				16.4	0.0	9.9	13.6	0.0	0.0	0.0	25.0	19.2
Cycle Q Clear(g_c), s				16.4	0.0	9.9	13.6	0.0	0.0	0.0	25.0	19.2
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				774	0	344	621	2383	0	0	2206	685
V/C Ratio(X)				0.87	0.00	0.57	0.89	0.31	0.00	0.00	0.76	0.63
Avail Cap(c_a), veh/h				859	0	382	687	2383	0	0	2206	685
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.86	0.86	0.00	0.00	0.18	0.18
Uniform Delay (d), s/veh				34.0	0.0	31.4	28.0	0.0	0.0	0.0	21.6	20.0
Incr Delay (d2), s/veh				8.8	0.0	1.6	11.7	0.3	0.0	0.0	0.5	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
%ile BackOfQ(95%),veh/ln				12.1	0.0	6.7	8.8	0.2	0.0	0.0	11.5	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				42.8	0.0	33.0	39.7	0.3	0.0	0.0	22.1	20.8
LnGrp LOS				D	A	C	D	A	A	A	C	C
Approach Vol, veh/h					867			1284			2110	
Approach Delay, s/veh					40.6			17.3			21.8	
Approach LOS					D			B			C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	31.5	43.7		24.8		65.2						
Change Period (Y+Rc), s	5.3	4.8		* 5.3		4.8						
Max Green Setting (Gmax), s	35.0			* 22		58.2						
Max Q Clear Time (g_c+M), s	27.0			18.4		2.0						
Green Ext Time (p_c), s	0.5	6.5		1.2		5.8						

Intersection Summary

HCM 6th Ctrl Delay	24.3
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.












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

HCM 6th Signalized Intersection Summary

7: US 101 Southbound Ramps & Laurel Canyon Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  		 	 	
Traffic Volume (veh/h)	170	11	491	0	0	0	0	1029	598	567	1517	0
Future Volume (veh/h)	170	11	491	0	0	0	0	1029	598	567	1517	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	127	0	604				0	1118	650	616	1649	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	384	0	683				0	2139	664	672	2381	0
Arrive On Green	0.22	0.00	0.22				0.00	0.42	0.42	0.39	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	5274	1585	3456	3647	0
Grp Volume(v), veh/h	127	0	604				0	1118	650	616	1649	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1702	1585	1728	1777	0
Q Serve(g_s), s	5.4	0.0	16.6				0.0	14.7	36.4	15.2	0.0	0.0
Cycle Q Clear(g_c), s	5.4	0.0	16.6				0.0	14.7	36.4	15.2	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	384	0	683				0	2139	664	672	2381	0
V/C Ratio(X)	0.33	0.00	0.88				0.00	0.52	0.98	0.92	0.69	0.00
Avail Cap(c_a), veh/h	416	0	740				0	2139	664	672	2381	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.50	0.50	0.00
Uniform Delay (d), s/veh	29.8	0.0	34.2				0.0	19.5	25.8	26.8	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	11.7				0.0	0.9	30.2	10.1	0.8	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
%ile BackOfQ(95%),veh/ln	0.0	0.0	11.5				0.0	9.5	25.1	8.3	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.3	0.0	45.9				0.0	20.4	55.9	36.9	0.8	0.0
LnGrp LOS	C	A	D				A	C	E	D	A	A
Approach Vol, veh/h	731						1768			2265		
Approach Delay, s/veh	43.2						33.4			10.7		
Approach LOS	D						C			B		
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	32.6	42.8	24.6	65.4								
Change Period (Y+Rc), s	* 5.1	* 5.1	* 5.2	* 5.1								
Max Green Setting (Gmax), s	16	* 38	* 21	* 59								
Max Q Clear Time (g_c+M), s	38.4	38.4	18.6	2.0								
Green Ext Time (p_c), s	0.0	0.0	0.8	21.1								

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 computational engine requires equal clearance times for the phases crossing the barrier.

Queues

8: Laurel Canyon Boulevard & Landale Street

06/24/2024



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	170	224	189	73	199	1541	34	1813	285
v/c Ratio	0.81	0.66	0.83	0.20	0.72	0.82	0.41	1.42	0.64
Control Delay	67.3	19.3	67.6	1.2	35.8	11.2	36.2	219.4	28.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.3	19.3	67.6	1.2	35.8	11.2	36.2	219.4	28.9
Queue Length 50th (ft)	100	18	105	0	79	134	15	~747	138
Queue Length 95th (ft)	#211	#100	#217	0	m52	m104	m22	#892	m202
Internal Link Dist (ft)		140	232			591		375	
Turn Bay Length (ft)	85			40	155		125		115
Base Capacity (vph)	212	339	235	380	290	1868	82	1273	446
Starvation Cap Reductn	0	0	0	0	0	4	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.66	0.80	0.19	0.69	0.83	0.41	1.42	0.64

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

8: Laurel Canyon Boulevard & Landale Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	174	15	174	28	146	67	183	1385	33	31	1668	262
Future Volume (vph)	174	15	174	28	146	67	183	1385	33	31	1668	262
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.89			1.00	1.00	1.00	1.00		1.00	1.00	0.78
Flpb, ped/bikes	1.00	1.00			0.99	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.87			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1375			1825	1583	1770	3522		1766	3539	1241
Flt Permitted	0.95	1.00			0.89	1.00	0.11	1.00		0.12	1.00	1.00
Satd. Flow (perm)	1681	1375			1641	1583	197	3522		229	3539	1241
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)	189	16	189	30	159	73	199	1505	36	34	1813	285
RTOR Reduction (vph)	0	165	0	0	0	63	0	2	0	0	0	0
Lane Group Flow (vph)	170	59	0	0	189	10	199	1539	0	34	1813	285
Confl. Peds. (#/hr)			49	49			89		12	12		89
Turn Type	Split	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	3	3			4		1	6			2	
Permitted Phases				4		4	6			2		2
Actuated Green, G (s)	11.3	11.3			12.5	12.5	47.7	47.7		32.4	32.4	32.4
Effective Green, g (s)	11.3	11.3			12.5	12.5	47.7	47.7		32.4	32.4	32.4
Actuated g/C Ratio	0.13	0.13			0.14	0.14	0.53	0.53		0.36	0.36	0.36
Clearance Time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	5.2		4.5	4.5	4.5
Lane Grp Cap (vph)	211	172			227	219	277	1866		82	1274	446
v/s Ratio Prot	c0.10	0.04					0.08	c0.44			c0.51	
v/s Ratio Perm					c0.12	0.01	0.30			0.15		0.23
v/c Ratio	0.81	0.34			0.83	0.05	0.72	0.82		0.41	1.42	0.64
Uniform Delay, d1	38.3	36.0			37.7	33.6	18.5	17.7		21.7	28.8	23.9
Progression Factor	1.00	1.00			1.00	1.00	2.17	0.59		1.00	0.92	0.95
Incremental Delay, d2	19.6	1.2			22.2	0.1	0.8	0.4		10.0	193.5	4.6
Delay (s)	57.9	37.1			59.9	33.7	41.0	10.8		31.7	220.1	27.4
Level of Service	E	D			E	C	D	B		C	F	C
Approach Delay (s)		46.1			52.6			14.3			191.3	
Approach LOS		D			D			B			F	
Intersection Summary												
HCM 2000 Control Delay			102.6									F
HCM 2000 Volume to Capacity ratio			1.15									
Actuated Cycle Length (s)			90.0							23.9		
Intersection Capacity Utilization			97.8%									F
ICU Level of Service												
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

9: Colfax Avenue & Sarah Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↙	↑	↘	↙	↑	↘
Traffic Volume (veh/h)	41	92	11	38	18	169	23	547	54	151	918	52
Future Volume (veh/h)	41	92	11	38	18	169	23	547	54	151	918	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.90		0.81	0.86		0.81	1.00		0.93	1.00		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	45	100	12	41	20	184	25	595	59	164	998	57
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	159	311	33	105	52	261	120	942	740	332	942	740
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.50	0.50	0.50	0.50	0.50	0.50
Sat Flow, veh/h	314	1191	125	133	198	999	535	1870	1469	777	1870	1469
Grp Volume(v), veh/h	157	0	0	245	0	0	25	595	59	164	998	57
Grp Sat Flow(s),veh/h/ln	1630	0	0	1330	0	0	535	1870	1469	777	1870	1469
Q Serve(g_s), s	0.0	0.0	0.0	3.8	0.0	0.0	0.0	13.9	1.2	11.7	30.2	1.2
Cycle Q Clear(g_c), s	4.2	0.0	0.0	9.8	0.0	0.0	30.2	13.9	1.2	25.6	30.2	1.2
Prop In Lane	0.29		0.08	0.17		0.75	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	503	0	0	417	0	0	120	942	740	332	942	740
V/C Ratio(X)	0.31	0.00	0.00	0.59	0.00	0.00	0.21	0.63	0.08	0.49	1.06	0.08
Avail Cap(c_a), veh/h	628	0	0	525	0	0	120	942	740	332	942	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	0.00	0.00	1.00	0.00	0.00	0.90	0.90	0.90	0.27	0.27	0.27
Uniform Delay (d), s/veh	17.9	0.0	0.0	19.9	0.0	0.0	30.0	10.8	7.7	20.1	14.9	7.7
Incr Delay (d2), s/veh	0.4	0.0	0.0	1.3	0.0	0.0	3.5	2.9	0.2	1.4	33.9	0.1
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(95%),veh/ln	8.1	0.0	0.0	5.5	0.0	0.0	0.8	8.8	0.6	3.2	23.5	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.3	0.0	0.0	21.2	0.0	0.0	33.5	13.7	7.9	21.6	48.8	7.7
LnGrp LOS	B	A	A	C	A	A	C	B	A	C	F	A
Approach Vol, veh/h	157		245			679			1219			
Approach Delay, s/veh	18.3		21.2			14.0			43.2			
Approach LOS	B		C			B			D			
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	35.0		25.0		35.0		25.0					
Change Period (Y+Rc), s	4.8		* 9.3		4.8		* 9.3					
Max Green Setting (Gmax), s	25.2		* 21		25.2		* 21					
Max Q Clear Time (g_c+I1), s	32.2		6.2		32.2		11.8					
Green Ext Time (p_c), s	0.0		0.8		0.0		1.1					
Intersection Summary												
HCM 6th Ctrl Delay			30.5									
HCM 6th LOS			C									
Notes												

Queues

10: Landale Street & Colfax Avenue

06/24/2024



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	92	36	596	1108	42
v/c Ratio	0.33	0.27	0.46	0.86	0.04
Control Delay	20.7	12.8	7.6	9.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.7	12.8	7.6	9.6	0.1
Queue Length 50th (ft)	22	5	98	57	0
Queue Length 95th (ft)	55	28	191	m64	m0
Internal Link Dist (ft)	262		575	593	
Turn Bay Length (ft)		40			80
Base Capacity (vph)	537	133	1292	1292	1103
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.17	0.27	0.46	0.86	0.04

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

10: Landale Street & Colfax Avenue

06/24/2024












Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	60	25	33	548	1019	39
Future Volume (vph)	60	25	33	548	1019	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	9.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.96		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1728		1770	1863	1863	1583
Flt Permitted	0.97		0.10	1.00	1.00	1.00
Satd. Flow (perm)	1728		192	1863	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	65	27	36	596	1108	42
RTOR Reduction (vph)	24	0	0	0	0	6
Lane Group Flow (vph)	68	0	36	596	1108	36
Turn Type	Perm		Perm	NA	NA	Perm
Protected Phases				6	2	
Permitted Phases	8		6			2
Actuated Green, G (s)	7.2		38.8	38.8	38.8	38.8
Effective Green, g (s)	7.2		38.8	38.8	38.8	38.8
Actuated g/C Ratio	0.12		0.65	0.65	0.65	0.65
Clearance Time (s)	9.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		4.9	4.9	5.3	5.3
Lane Grp Cap (vph)	207		124	1204	1204	1023
v/s Ratio Prot				0.32	c0.59	
v/s Ratio Perm	c0.04		0.19			0.02
v/c Ratio	0.33		0.29	0.50	0.92	0.03
Uniform Delay, d1	24.2		4.6	5.5	9.3	3.8
Progression Factor	1.00		1.00	1.00	0.48	0.02
Incremental Delay, d2	0.9		5.8	1.5	4.1	0.0
Delay (s)	25.1		10.4	7.0	8.6	0.1
Level of Service	C		B	A	A	A
Approach Delay (s)	25.1			7.2	8.3	
Approach LOS	C			A	A	
Intersection Summary						
HCM 2000 Control Delay			8.7		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.83			
Actuated Cycle Length (s)			60.0		Sum of lost time (s)	14.0
Intersection Capacity Utilization			72.0%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

11: Whitsett Avenue & Moorpark Street

06/24/2024












Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	963	232	120	694	71	78	266	82	91	551	67
Future Volume (veh/h)	74	963	232	120	694	71	78	266	82	91	551	67
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	80	1047	252	130	754	77	85	289	89	99	599	73
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	83	850	720	80	759	77	308	1156	349	442	1371	167
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	660	1870	1585	424	1669	170	766	2689	812	1005	3189	388
Grp Volume(v), veh/h	80	1047	252	130	0	831	85	189	189	99	333	339
Grp Sat Flow(s),veh/h/ln	660	1870	1585	424	0	1840	766	1777	1724	1005	1777	1801
Q Serve(g_s), s	0.4	40.9	9.3	0.0	0.0	40.5	7.9	6.1	6.3	6.3	11.8	11.9
Cycle Q Clear(g_c), s	40.9	40.9	9.3	40.9	0.0	40.5	19.8	6.1	6.3	12.6	11.8	11.9
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.47	1.00		0.22
Lane Grp Cap(c), veh/h	83	850	720	80	0	836	308	764	741	442	764	774
V/C Ratio(X)	0.96	1.23	0.35	1.62	0.00	0.99	0.28	0.25	0.25	0.22	0.44	0.44
Avail Cap(c_a), veh/h	83	850	720	80	0	836	308	764	741	442	764	774
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	45.0	24.5	15.9	45.0	0.0	24.4	25.0	16.4	16.4	20.5	18.0	18.0
Incr Delay (d2), s/veh	88.2	114.6	1.3	331.0	0.0	29.7	2.2	0.8	0.8	1.2	1.8	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(95%),veh/ln	6.8	62.6	6.2	16.4	0.0	30.7	2.8	4.5	4.6	2.8	8.6	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	133.1	139.1	17.3	376.0	0.0	54.1	27.2	17.1	17.2	21.6	19.8	19.8
LnGrp LOS	F	F	B	F	A	D	C	B	B	C	B	B
Approach Vol, veh/h	1379					961		463		771		
Approach Delay, s/veh	116.5					97.7		19.0		20.0		
Approach LOS	F					F		B		C		
Timer - Assigned Phs	2		4			6		8				
Phs Duration (G+Y+Rc), s	46.0		44.0			46.0		44.0				
Change Period (Y+Rc), s	5.1		5.3			5.1		5.3				
Max Green Setting (Gmax), s	40.9		38.7			40.9		38.7				
Max Q Clear Time (g_c+I1), s	42.9		14.6			42.9		21.8				
Green Ext Time (p_c), s	0.0		4.7			0.0		2.5				
Intersection Summary												
HCM 6th Ctrl Delay	78.0											
HCM 6th LOS	E											

HCM 6th Signalized Intersection Summary

12: Laurel Canyon Boulevard & Moorpark Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	330	686	255	237	520	161	123	1165	187	215	1448	261
Future Volume (veh/h)	330	686	255	237	520	161	123	1165	187	215	1448	261
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	359	746	277	258	565	175	134	1266	203	234	1574	284
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	248	699	259	252	520	581	233	884	141	238	882	155
Arrive On Green	0.09	0.28	0.28	0.03	0.09	0.09	0.09	0.29	0.29	0.12	0.39	0.39
Sat Flow, veh/h	1781	2536	942	1781	1870	1585	1781	3070	489	1781	3020	531
Grp Volume(v), veh/h	359	523	500	258	565	175	134	729	740	234	909	949
Grp Sat Flow(s),veh/h/ln	1781	1777	1701	1781	1870	1585	1781	1777	1782	1781	1777	1775
Q Serve(g_s), s	8.5	24.8	24.8	8.7	25.0	8.2	4.6	25.9	25.9	8.0	26.3	26.3
Cycle Q Clear(g_c), s	8.5	24.8	24.8	8.7	25.0	8.2	4.6	25.9	25.9	8.0	26.3	26.3
Prop In Lane	1.00		0.55	1.00		1.00	1.00		0.27	1.00		0.30
Lane Grp Cap(c), veh/h	248	490	469	252	520	581	233	511	513	238	519	518
V/C Ratio(X)	1.45	1.07	1.07	1.02	1.09	0.30	0.58	1.43	1.44	0.98	1.75	1.83
Avail Cap(c_a), veh/h	248	490	469	252	520	581	238	511	513	238	519	518
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(l)	1.00	1.00	1.00	0.93	0.93	0.93	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	25.3	32.6	32.6	26.2	40.9	26.0	22.8	32.0	32.1	24.3	27.5	27.5
Incr Delay (d2), s/veh	222.1	59.8	60.8	60.7	64.0	0.3	3.2	202.6	210.2	13.5	339.5	374.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	29.6	26.3	25.5	12.9	30.5	5.9	3.6	59.7	61.6	5.1	82.6	90.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	247.4	92.4	93.4	86.9	104.9	26.2	26.1	234.6	242.2	37.8	367.0	401.9
LnGrp LOS	F	F	F	F	F	C	C	F	F	D	F	F
Approach Vol, veh/h	1382			998			1603			2092		
Approach Delay, s/veh	133.0			86.5			220.7			346.0		
Approach LOS	F			F			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.0	31.7	14.0	31.3	13.4	31.3	14.2	31.1				
Change Period (Y+Rc), s	5.3	* 5.4	* 5.5	6.3	* 5.4	* 5.4	* 5.5	6.3				
Max Green Setting (Gmax), s	8	* 26	* 8.5	25.0	* 8	* 26	* 8.7	24.8				
Max Q Clear Time (g_c+I), s	10.6	28.3	10.5	27.0	10.0	27.9	10.7	26.8				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 221.8

HCM 6th LOS F

Notes









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

HCM 6th Signalized Intersection Summary

13: Moorpark Street & Radford Avenue

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	851	118	118	952	44	38	0	38	15	0	34
Future Volume (veh/h)	60	851	118	118	952	44	38	0	38	15	0	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No				No				No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	0	1870	1870	0	1870
Adj Flow Rate, veh/h	65	925	128	128	1035	48	41	0	41	16	0	37
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	0	2	2	0	2
Cap, veh/h	432	2117	293	157	2839	132	105	0	0	105	0	0
Arrive On Green	0.90	0.90	0.90	0.18	1.00	1.00	0.06	0.00	0.00	0.06	0.00	0.00
Sat Flow, veh/h	521	3135	434	1781	3458	160	1781	41		1781	16	
Grp Volume(v), veh/h	65	524	529	128	532	551	41	43.1		16	40.9	
Grp Sat Flow(s),veh/h/ln	521	1777	1792	1781	1777	1841	1781	D		1781	D	
Q Serve(g_s), s	1.4	4.5	4.5	6.2	0.0	0.0	2.0			0.8		
Cycle Q Clear(g_c), s	1.4	4.5	4.5	6.2	0.0	0.0	2.0			0.8		
Prop In Lane	1.00		0.24	1.00		0.09	1.00			1.00		
Lane Grp Cap(c), veh/h	432	1200	1210	157	1459	1512	105			105		
V/C Ratio(X)	0.15	0.44	0.44	0.82	0.36	0.36	0.39			0.15		
Avail Cap(c_a), veh/h	432	1200	1210	190	1459	1512	416			139		
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00			1.00		
Upstream Filter(I)	0.09	0.09	0.09	0.10	0.10	0.10	1.00			1.00		
Uniform Delay (d), s/veh	1.6	1.7	1.7	36.4	0.0	0.0	40.8			40.2		
Incr Delay (d2), s/veh	0.1	0.1	0.1	2.4	0.1	0.1	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		
%ile BackOfQ(95%),veh/ln	0.2	1.4	1.4	3.4	0.1	0.1	1.7			0.6		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1.6	1.8	1.8	38.8	0.1	0.1	43.1			40.9		
LnGrp LOS	A	A	A	D	A	A	D			D		
Approach Vol, veh/h	1118				1211							
Approach Delay, s/veh	1.8				4.2							
Approach LOS	A				A							
Timer - Assigned Phs	1	3		4	5			8				
Phs Duration (G+Y+Rc), s	10.7	13.1		66.2	10.7			79.3				
Change Period (Y+Rc), s	5.4	* 5.2		* 5.4	5.4			5.4				
Max Green Setting (Gmax), s	7.8	* 9.6		* 31	21.0			45.8				
Max Q Clear Time (g_c+I), s	12.8			8.2	6.5	4.0			2.0			
Green Ext Time (p_c), s	0.0			0.0	8.4	0.1			8.7			
Intersection Summary												
HCM 6th Ctrl Delay			4.0									
HCM 6th LOS			A									
Notes												

HCM 6th Signalized Intersection Summary

14: Colfax Avenue & Moorpark Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	681	127	232	782	169	133	266	164	167	588	179
Future Volume (veh/h)	102	681	127	232	782	169	133	266	164	167	588	179
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		0.97	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	111	740	138	252	850	184	145	289	178	182	639	195
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	210	1257	234	260	831	180	107	407	339	307	690	694
Arrive On Green	0.15	0.84	0.84	0.10	0.10	0.10	0.22	0.22	0.22	0.09	0.37	0.37
Sat Flow, veh/h	1781	2977	555	626	2885	624	658	1870	1557	1781	1870	1568
Grp Volume(v), veh/h	111	442	436	252	523	511	145	289	178	182	639	195
Grp Sat Flow(s),veh/h/ln	1781	1777	1755	626	1777	1733	658	1870	1557	1781	1870	1568
Q Serve(g_s), s	3.6	6.9	6.9	25.9	25.9	25.9	3.7	12.9	9.1	6.9	29.5	7.1
Cycle Q Clear(g_c), s	3.6	6.9	6.9	25.9	25.9	25.9	19.6	12.9	9.1	6.9	29.5	7.1
Prop In Lane	1.00		0.32	1.00		0.36	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	210	750	741	260	512	499	107	407	339	307	690	694
V/C Ratio(X)	0.53	0.59	0.59	0.97	1.02	1.02	1.35	0.71	0.53	0.59	0.93	0.28
Avail Cap(c_a), veh/h	219	750	741	260	512	499	107	407	339	307	690	694
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00	0.40	0.40	0.40
Uniform Delay (d), s/veh	20.8	4.6	4.6	44.4	40.7	40.7	44.5	32.6	31.1	24.1	27.2	16.0
Incr Delay (d2), s/veh	1.9	2.9	2.9	48.2	45.5	46.1	207.8	10.0	5.7	1.2	10.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.6	3.7	3.6	14.6	26.2	25.7	15.1	11.0	6.9	4.6	18.2	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.6	7.5	7.5	92.6	86.2	86.8	252.3	42.6	36.8	25.3	37.3	16.4
LnGrp LOS	C	A	A	F	F	F	F	D	D	C	D	B
Approach Vol, veh/h	989			1286			612			1016		
Approach Delay, s/veh	9.2			87.7			90.6			31.1		
Approach LOS	A			F			F			C		
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	32.1	35.3		42.6		47.4	13.6	29.0				
Change Period (Y+Rc), s	5.5	* 9.4		* 9.4		* 9.4	5.6	* 9.4				
Max Green Setting (Gmax), s	3	* 26		* 33		* 38	8.0	* 20				
Max Q Clear Time (g_c+I),s	17.6	27.9		31.5		8.9	8.9	21.6				
Green Ext Time (p_c), s	0.0	0.0		0.9		6.2	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	53.5
HCM 6th LOS	D

Notes

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

HCM 6th TWSC
15: Irvine Avenue & Moorpark Street

06/24/2024

Intersection												
Int Delay, s/veh	5.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔			↔	
Traffic Vol, veh/h	64	871	6	17	1028	123	2	1	20	9	1	160
Future Vol, veh/h	64	871	6	17	1028	123	2	1	20	9	1	160
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	70	947	7	18	1117	134	2	1	22	10	1	174

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1251	0	0	954	0	0	1686	2378	477	1834	2314	626
Stage 1	-	-	-	-	-	-	1091	1091	-	1220	1220	-
Stage 2	-	-	-	-	-	-	595	1287	-	614	1094	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	552	-	-	716	-	-	61	34	534	47	37	427
Stage 1	-	-	-	-	-	-	229	289	-	191	251	-
Stage 2	-	-	-	-	-	-	458	233	-	446	288	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	552	-	-	716	-	-	26	23	534	32	25	427
Mov Cap-2 Maneuver	-	-	-	-	-	-	26	23	-	32	25	-
Stage 1	-	-	-	-	-	-	167	211	-	139	229	-
Stage 2	-	-	-	-	-	-	247	213	-	311	210	-























Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.2			0.5			34.7			54.6		
HCM LOS							D			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	146	552	-	-	716	-	-	244
HCM Lane V/C Ratio	0.171	0.126	-	-	0.026	-	-	0.757
HCM Control Delay (s)	34.7	12.5	1.5	-	10.2	0.4	-	54.6
HCM Lane LOS	D	B	A	-	B	A	-	F
HCM 95th %tile Q(veh)	0.6	0.4	-	-	0.1	-	-	5.4

HCM 6th Signalized Intersection Summary

16: Tujunga Avenue & Moorpark Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	798	86	105	870	57	75	266	79	168	426	210
Future Volume (veh/h)	170	798	86	105	870	57	75	266	79	168	426	210
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	185	867	93	114	946	62	82	289	86	183	463	228
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	257	1644	176	298	1719	113	201	696	590	327	459	389
Arrive On Green	0.68	0.68	0.68	0.51	0.51	0.51	0.14	0.74	0.74	0.25	0.25	0.25
Sat Flow, veh/h	559	3237	347	585	3385	222	1781	1870	1585	1008	1870	1585
Grp Volume(v), veh/h	185	476	484	114	497	511	82	289	86	183	463	228
Grp Sat Flow(s),veh/h/ln	559	1777	1808	585	1777	1830	1781	1870	1585	1008	1870	1585
Q Serve(g_s), s	28.5	12.2	12.2	13.7	17.2	17.2	2.8	5.1	1.4	15.1	22.1	11.4
Cycle Q Clear(g_c), s	45.7	12.2	12.2	25.8	17.2	17.2	2.8	5.1	1.4	15.1	22.1	11.4
Prop In Lane	1.00		0.19	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	257	902	918	298	902	929	201	696	590	327	459	389
V/C Ratio(X)	0.72	0.53	0.53	0.38	0.55	0.55	0.41	0.42	0.15	0.56	1.01	0.59
Avail Cap(c_a), veh/h	257	902	918	298	902	929	219	715	606	327	459	389
HCM Platoon Ratio	1.33	1.33	1.33	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	0.98	0.98	0.98	0.11	0.11	0.11
Uniform Delay (d), s/veh	23.8	9.2	9.2	22.0	15.1	15.1	22.3	7.9	7.4	31.3	34.0	29.9
Incr Delay (d2), s/veh	15.9	2.2	2.2	3.7	2.4	2.3	1.3	0.4	0.1	0.2	15.9	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(95%),veh/ln	8.0	7.3	7.4	3.8	11.3	11.5	2.1	3.0	0.8	4.6	13.5	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.7	11.4	11.3	25.7	17.5	17.5	23.6	8.3	7.5	31.5	49.9	30.2
LnGrp LOS	D	B	B	C	B	B	C	A	A	C	F	C
Approach Vol, veh/h	1145			1122			457			874		
Approach Delay, s/veh	15.9			18.3			10.9			40.9		
Approach LOS	B			B			B			D		
Timer - Assigned Phs	2			3			4			6		
Phs Duration (G+Y+Rc), s	51.1			11.4			27.5			51.1		
Change Period (Y+Rc), s	* 5.4			* 5.3			* 5.4			* 5.4		
Max Green Setting (Gmax), s	* 45			* 7			* 22			* 45		
Max Q Clear Time (g_c+I1), s	27.8			4.8			24.1			47.7		
Green Ext Time (p_c), s	9.6			0.0			0.0			0.0		
Intersection Summary												
HCM 6th Ctrl Delay	22.1											
HCM 6th LOS	C											
Notes												

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

HCM 6th Signalized Intersection Summary

17: Woodbridge Street & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↑	↔	↔	↔	↔
Traffic Volume (veh/h)	10	8	17	20	9	34	14	364	18	46	565	28
Future Volume (veh/h)	10	8	17	20	9	34	14	364	18	46	565	28
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	11	9	18	22	10	37	15	396	20	50	614	30
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	74	49	65	82	32	71	717	1516	1285	817	1433	70
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.81	0.81	0.81	1.00	1.00	1.00
Sat Flow, veh/h	271	598	782	352	386	854	786	1870	1585	970	1768	86
Grp Volume(v), veh/h	38	0	0	69	0	0	15	396	20	50	0	644
Grp Sat Flow(s),veh/h/ln	1651	0	0	1593	0	0	786	1870	1585	970	0	1855
Q Serve(g_s), s	0.0	0.0	0.0	1.5	0.0	0.0	0.3	4.6	0.2	0.3	0.0	0.0
Cycle Q Clear(g_c), s	1.9	0.0	0.0	3.6	0.0	0.0	0.3	4.6	0.2	4.9	0.0	0.0
Prop In Lane	0.29		0.47	0.32		0.54	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	188	0	0	185	0	0	717	1516	1285	817	0	1503
V/C Ratio(X)	0.20	0.00	0.00	0.37	0.00	0.00	0.02	0.26	0.02	0.06	0.00	0.43
Avail Cap(c_a), veh/h	509	0	0	502	0	0	717	1516	1285	817	0	1503
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.78	0.78	0.78	0.36	0.00	0.36
Uniform Delay (d), s/veh	38.7	0.0	0.0	39.5	0.0	0.0	1.6	2.0	1.6	0.2	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	1.3	0.0	0.0	0.0	0.3	0.0	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	0.0	0.0	2.7	0.0	0.0	0.1	1.7	0.1	0.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.2	0.0	0.0	40.7	0.0	0.0	1.7	2.4	1.7	0.2	0.0	0.3
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	38			69			431			694		
Approach Delay, s/veh	39.2			40.7			2.3			0.3		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	77.5			12.5			77.5			12.5		
Change Period (Y+Rc), s	* 4.5			* 5.1			* 4.5			* 5.1		
Max Green Setting (Gmax), s	* 55			* 26			* 55			* 26		
Max Q Clear Time (g_c+I1), s	6.9			3.9			6.6			5.6		
Green Ext Time (p_c), s	12.1			0.1			6.6			0.3		

Intersection Summary

HCM 6th Ctrl Delay	4.5
HCM 6th LOS	A

Notes

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

Queues

18: Whitsett Avenue & Ventura Boulevard

06/24/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	92	1237	73	33	948	140	72	95	746	284	538
v/c Ratio	0.40	0.78	0.10	0.42	0.87	0.24	0.61	0.26	1.17	0.78	0.57
Control Delay	21.6	27.5	16.4	54.7	53.1	12.7	57.5	33.9	129.4	52.6	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.6	27.5	16.4	54.7	53.1	12.7	57.5	33.9	129.4	52.6	14.9
Queue Length 50th (ft)	33	340	26	17	340	21	42	50	~301	171	191
Queue Length 95th (ft)	64	428	53	m32	m#388	m37	89	91	#456	253	273
Internal Link Dist (ft)		1440			2938			648		1328	
Turn Bay Length (ft)	95		135	145		60	60		220		65
Base Capacity (vph)	258	1592	712	79	1087	593	143	440	639	441	967
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.78	0.10	0.42	0.87	0.24	0.50	0.22	1.17	0.64	0.56

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
























Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

18: Whitsett Avenue & Ventura Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	1138	67	30	872	129	66	85	3	686	261	495
Future Volume (vph)	85	1138	67	30	872	129	66	85	3	686	261	495
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	5.4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1854		3433	1863	1583
Flt Permitted	0.11	1.00	1.00	0.14	1.00	1.00	0.33	1.00		0.95	1.00	1.00
Satd. Flow (perm)	206	3539	1583	258	3539	1583	607	1854		3433	1863	1583
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)	92	1237	73	33	948	140	72	92	3	746	284	538
RTOR Reduction (vph)	0	0	0	0	0	97	0	2	0	0	0	10
Lane Group Flow (vph)	92	1237	73	33	948	43	72	93	0	746	284	528
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Prot	NA	custom
Protected Phases	1	6			2			4		3	8	1 3
Permitted Phases	6		6	2		2	4					8
Actuated Green, G (s)	45.0	45.0	45.0	30.7	30.7	30.7	19.7	19.7		18.6	19.7	52.6
Effective Green, g (s)	45.0	45.0	45.0	30.7	30.7	30.7	19.7	19.7		18.6	19.7	52.6
Actuated g/C Ratio	0.45	0.45	0.45	0.31	0.31	0.31	0.20	0.20		0.19	0.20	0.53
Clearance Time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	
Vehicle Extension (s)	3.0	4.9	4.9	4.7	4.7	4.7	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	231	1592	712	79	1086	485	119	365		638	367	832
v/s Ratio Prot	0.04	c0.35			c0.27			0.05		c0.22	c0.15	0.21
v/s Ratio Perm	0.14		0.05	0.13		0.03	0.12					0.12
v/c Ratio	0.40	0.78	0.10	0.42	0.87	0.09	0.61	0.26		1.17	0.77	0.63
Uniform Delay, d1	20.1	23.3	15.9	27.5	32.8	24.7	36.6	34.0		40.7	38.0	16.9
Progression Factor	1.00	1.00	1.00	1.39	1.40	3.21	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.1	3.8	0.3	10.3	6.7	0.2	8.4	0.4		92.3	9.8	1.6
Delay (s)	21.2	27.1	16.1	48.7	52.6	79.5	45.0	34.3		133.0	47.8	18.4
Level of Service	C	C	B	D	D	E	D	C		F	D	B
Approach Delay (s)		26.1			55.9			38.9			78.2	
Approach LOS		C			E			D			E	
Intersection Summary												
HCM 2000 Control Delay			53.6									HCM 2000 Level of Service D
HCM 2000 Volume to Capacity ratio			0.94									
Actuated Cycle Length (s)			100.0							22.1		
Intersection Capacity Utilization			83.3%									ICU Level of Service E
Analysis Period (min)			15									
c Critical Lane Group												

Queues

19: Laurel Canyon Boulevard & Ventura Place

06/24/2024



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	58	46	214	12	1192	40	88	1781
v/c Ratio	0.46	0.27	0.70	0.07	0.55	0.04	0.42	0.60
Control Delay	51.2	45.3	22.5	35.4	33.0	2.0	26.0	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0
Total Delay	51.2	45.3	22.5	35.4	33.8	2.0	26.0	17.2
Queue Length 50th (ft)	31	28	20	8	382	0	28	244
Queue Length 95th (ft)	73	61	91	m9	m361	m0	#122	445
Internal Link Dist (ft)	123	395			458			232
Turn Bay Length (ft)			380	105		85	55	
Base Capacity (vph)	130	222	345	177	2164	997	208	2946
Starvation Cap Reductn	0	0	0	0	596	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.21	0.62	0.07	0.76	0.04	0.42	0.60

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.





















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

19: Laurel Canyon Boulevard & Ventura Place

06/24/2024













												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	13	8	31	11	197	11	1097	37	81	1583	55
Future Volume (vph)	32	13	8	31	11	197	11	1097	37	81	1583	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		9.4			9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.91	
Frpb, ped/bikes		1.00			1.00	0.94	1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes		0.96			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.98			1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.97			0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1703			1796	1486	1770	3539	1518	1763	5060	
Flt Permitted		0.79			0.96	1.00	0.95	1.00	1.00	0.19	1.00	
Satd. Flow (perm)		1383			1796	1486	1770	3539	1518	358	5060	
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)	35	14	9	34	12	214	12	1192	40	88	1721	60
RTOR Reduction (vph)	0	7	0	0	0	165	0	0	16	0	3	0
Lane Group Flow (vph)	0	51	0	0	46	49	12	1192	24	88	1778	0
Confl. Peds. (#/hr)	16					16			16	16		
Turn Type	Perm	NA		Split	NA	Perm	Prot	NA	Perm	Perm	NA	
Protected Phases		3		4	4		1	6			2	
Permitted Phases	3					4			6	2		
Actuated Green, G (s)		7.1			9.5	9.5	2.0	59.3	59.3	52.3	52.3	
Effective Green, g (s)		7.1			9.5	9.5	2.0	59.3	59.3	52.3	52.3	
Actuated g/C Ratio		0.07			0.10	0.10	0.02	0.59	0.59	0.52	0.52	
Clearance Time (s)		9.4			9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	4.8	4.8	3.1	3.1	
Lane Grp Cap (vph)		98			170	141	35	2098	900	187	2646	
v/s Ratio Prot					0.03		0.01	c0.34			c0.35	
v/s Ratio Perm		c0.04				c0.03			0.02	0.25		
v/c Ratio		0.53			0.27	0.35	0.34	0.57	0.03	0.47	0.67	
Uniform Delay, d1		44.8			42.0	42.4	48.4	12.5	8.4	15.1	17.5	
Progression Factor		1.00			1.00	1.00	0.85	2.53	1.00	1.00	1.00	
Incremental Delay, d2		5.0			0.9	1.5	1.7	0.3	0.0	8.3	1.4	
Delay (s)		49.8			42.9	43.9	43.0	32.0	8.4	23.4	18.9	
Level of Service		D			D	D	D	C	A	C	B	
Approach Delay (s)		49.8			43.7			31.3			19.1	
Approach LOS		D			D			C			B	
Intersection Summary												
HCM 2000 Control Delay			25.9		HCM 2000 Level of Service					C		
HCM 2000 Volume to Capacity ratio			0.63									
Actuated Cycle Length (s)			100.0		Sum of lost time (s)					29.1		
Intersection Capacity Utilization			70.9%		ICU Level of Service					C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

20: Laurel Canyon Boulevard & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	700	499	353	687	108	332	952	253	352	997	198
Future Volume (veh/h)	170	700	499	353	687	108	332	952	253	352	997	198
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	185	761	542	384	747	117	361	1035	275	383	1084	215
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	310	1055	605	298	1119	649	325	938	405	359	974	557
Arrive On Green	0.03	0.10	0.10	0.11	0.32	0.32	0.09	0.26	0.26	0.07	0.18	0.18
Sat Flow, veh/h	1781	3554	1535	1781	3554	1538	3456	3554	1535	3456	3554	1536
Grp Volume(v), veh/h	185	761	542	384	747	117	361	1035	275	383	1084	215
Grp Sat Flow(s),veh/h/ln	1781	3554	1535	1781	3554	1538	3456	3554	1535	3456	3554	1536
Q Serve(g_s), s	7.1	20.8	19.0	10.6	18.2	4.8	9.4	26.4	16.1	10.4	27.4	6.6
Cycle Q Clear(g_c), s	7.1	20.8	19.0	10.6	18.2	4.8	9.4	26.4	16.1	10.4	27.4	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	310	1055	605	298	1119	649	325	938	405	359	974	557
V/C Ratio(X)	0.60	0.72	0.90	1.29	0.67	0.18	1.11	1.10	0.68	1.07	1.11	0.39
Avail Cap(c_a), veh/h	310	1055	605	298	1119	649	325	938	405	359	974	557
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Upstream Filter(I)	0.26	0.26	0.26	0.82	0.82	0.82	0.56	0.56	0.56	0.76	0.76	0.76
Uniform Delay (d), s/veh	24.6	41.1	20.7	27.3	29.7	18.3	45.3	36.8	33.0	46.5	40.8	10.9
Incr Delay (d2), s/veh	0.8	1.1	5.9	148.4	2.6	0.5	71.7	56.0	3.2	60.0	62.3	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(95%),veh/ln	4.6	12.6	10.9	25.7	12.1	3.1	10.9	25.1	9.2	11.8	29.0	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.4	42.2	26.6	175.7	32.3	18.8	117.0	92.8	36.2	106.5	103.1	12.1
LnGrp LOS	C	D	C	F	C	B	F	F	D	F	F	B
Approach Vol, veh/h	1488		1248				1671			1682		
Approach Delay, s/veh	34.4		75.1				88.7			92.2		
Approach LOS	C		E				F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	36.0	36.0	15.0	33.0	14.2	37.8	16.0	32.0				
Change Period (Y+Rc), s	5.4	6.3	5.6	5.6	5.6	6.3	5.6	5.6				
Max Green Setting (Gmax), s	29.7	29.7	9.4	27.4	8.6	31.5	10.4	26.4				
Max Q Clear Time (g_c+M2), s	22.8	22.8	11.4	29.4	9.1	20.2	12.4	28.4				
Green Ext Time (p_c), s	0.0	5.7	0.0	0.0	0.0	4.7	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 73.6

HCM 6th LOS E

Notes

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

Queues

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Lane Group	EBL	EBT	WBL	WBT	WBR2	NBT	NBR	SBL	SBT	SBR2
Lane Group Flow (vph)	303	1209	73	1166	126	43	51	80	115	97
v/c Ratio	0.55	0.69	0.70	1.46	0.39	0.15	0.12	0.44	0.77	0.31
Control Delay	15.2	5.0	96.7	252.2	50.7	51.7	0.6	66.4	92.1	2.6
Queue Delay	71.3	49.9	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.6	54.9	96.7	254.6	50.7	51.7	0.6	66.4	92.1	2.6
Queue Length 50th (ft)	279	122	67	~793	100	34	0	68	102	0
Queue Length 95th (ft)	m146	m0	#149	#932	167	71	0	126	#201	0
Internal Link Dist (ft)		48		634		86			226	
Turn Bay Length (ft)	90		95		55		30	90		90
Base Capacity (vph)	580	1806	107	798	326	308	420	191	155	316
Starvation Cap Reductn	445	840	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	245	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	2.24	1.25	0.68	2.11	0.39	0.14	0.12	0.42	0.74	0.31

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

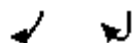
06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	279	1096	17	67	965	108	116	30	9	47	74	18
Future Volume (vph)	279	1096	17	67	965	108	116	30	9	47	74	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.7		4.9	6.1		6.1		6.9	6.9	7.0	7.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		0.89		1.00	0.91	1.00	0.89
Flpb, ped/bikes	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	0.98		0.85		1.00	0.85	1.00	0.88
Flt Protected	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (prot)	1770	3528		1770	3447		1408		1794	1440	1770	1447
Flt Permitted	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (perm)	1770	3528		1770	3447		1408		1794	1440	1770	1447
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)	303	1191	18	73	1049	117	126	33	10	51	80	20
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	43	0	0
Lane Group Flow (vph)	303	1208	0	73	1166	0	126	0	43	8	80	115
Confl. Peds. (#/hr)	29		16	16		29	29	44		44	44	
Turn Type	Prot	NA		Prot	NA		Perm	Split	NA	Perm	Split	NA
Protected Phases	1 3	3 6		5	2			7	7		8	8
Permitted Phases							2			7		
Actuated Green, G (s)	44.3	69.7		8.3	32.5		32.5		23.0	23.0	14.5	14.5
Effective Green, g (s)	44.3	63.6		8.3	32.5		32.5		23.0	23.0	14.5	14.5
Actuated g/C Ratio	0.32	0.45		0.06	0.23		0.23		0.16	0.16	0.10	0.10
Clearance Time (s)				4.9	6.1		6.1		6.9	6.9	7.0	7.0
Vehicle Extension (s)				3.0	4.8		4.8		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	560	1602		104	800		326		294	236	183	149
v/s Ratio Prot	0.17	c0.34		0.04	c0.34				c0.02		0.05	c0.08
v/s Ratio Perm							0.09			0.01		
v/c Ratio	0.54	0.75		0.70	1.46		0.39		0.15	0.04	0.44	0.77
Uniform Delay, d1	39.5	31.7		64.6	53.8		45.3		50.1	49.2	58.9	61.1
Progression Factor	0.37	0.18		1.00	1.00		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.2		19.2	212.8		3.4		0.2	0.1	1.7	21.5
Delay (s)	14.8	5.8		83.9	266.6		48.8		50.3	49.2	60.6	82.7
Level of Service	B	A		F	F		D		D	D	E	F
Approach Delay (s)		7.6			236.7				49.7			68.1
Approach LOS		A			F				D			E
Intersection Summary												
HCM 2000 Control Delay			110.0			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			0.86									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			31.8			
Intersection Capacity Utilization			93.2%			ICU Level of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Movement	SBR	SBR2
Lane Configurations		
Traffic Volume (vph)	87	89
Future Volume (vph)	87	89
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		7.0
Lane Util. Factor		1.00
Frpb, ped/bikes		0.77
Flpb, ped/bikes		1.00
Frt		0.85
Flt Protected		1.00
Satd. Flow (prot)		1222
Flt Permitted		1.00
Satd. Flow (perm)		1222
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	95	97
RTOR Reduction (vph)	0	87
Lane Group Flow (vph)	0	10
Confl. Peds. (#/hr)	44	44
Turn Type		Perm
Protected Phases		
Permitted Phases		8
Actuated Green, G (s)		14.5
Effective Green, g (s)		14.5
Actuated g/C Ratio		0.10
Clearance Time (s)		7.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)		126
v/s Ratio Prot		
v/s Ratio Perm		0.01
v/c Ratio		0.08
Uniform Delay, d1		56.7
Progression Factor		1.00
Incremental Delay, d2		0.3
Delay (s)		57.0
Level of Service		E
Approach Delay (s)		
Approach LOS		
Intersection Summary		

HCM 6th Signalized Intersection Summary

22: Carpenter Avenue & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	240	871	110	128	1116	154	69	31	97	58	43	80
Future Volume (veh/h)	240	871	110	128	1116	154	69	31	97	58	43	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.92	0.94		0.91	0.96		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	261	947	120	139	1213	167	75	34	105	63	47	87
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	264	1388	176	171	1210	165	120	63	129	186	125	330
Arrive On Green	0.15	0.44	0.44	0.03	0.13	0.13	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1781	3140	398	1781	3101	424	310	274	563	567	545	1444
Grp Volume(v), veh/h	261	536	531	139	692	688	214	0	0	110	0	87
Grp Sat Flow(s), veh/h/ln	1781	1777	1761	1781	1777	1748	1147	0	0	1112	0	1444
Q Serve(g_s), s	14.6	24.1	24.1	7.8	38.9	39.0	10.5	0.0	0.0	0.0	0.0	4.9
Cycle Q Clear(g_c), s	14.6	24.1	24.1	7.8	38.9	39.0	18.7	0.0	0.0	8.3	0.0	4.9
Prop In Lane	1.00		0.23	1.00		0.24	0.35		0.49	0.57		1.00
Lane Grp Cap(c), veh/h	264	786	779	171	693	682	311	0	0	311	0	330
V/C Ratio(X)	0.99	0.68	0.68	0.81	1.00	1.01	0.69	0.00	0.00	0.35	0.00	0.26
Avail Cap(c_a), veh/h	264	786	779	207	693	682	327	0	0	327	0	346
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.71	0.14	0.14	0.14	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.5	22.3	22.3	47.5	43.5	43.6	37.6	0.0	0.0	32.5	0.0	31.6
Incr Delay (d2), s/veh	43.9	3.4	3.4	3.0	12.3	15.2	5.6	0.0	0.0	0.7	0.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	13.8	14.7	14.6	4.9	23.6	24.0	9.4	0.0	0.0	4.2	0.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	86.4	25.7	25.7	50.5	55.8	58.8	43.3	0.0	0.0	33.2	0.0	32.1
LnGrp LOS	F	C	C	D	E	F	D	A	A	C	A	C
Approach Vol, veh/h	1328			1519			214			197		
Approach Delay, s/veh	37.6			56.7			43.3			32.7		
Approach LOS	D			E			D			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.2	53.4		32.4	19.4	48.2		32.4				
Change Period (Y+Rc), s	4.6	* 9.2		9.5	4.6	* 9.2		9.5				
Max Green Setting (Gmax), s	1.6	* 41		24.0	14.8	* 38		24.0				
Max Q Clear Time (g_c+I), s	19.8	26.1		10.3	16.6	41.0		20.7				
Green Ext Time (p_c), s	0.1	10.6		0.8	0.0	0.0		0.4				

Intersection Summary

HCM 6th Ctrl Delay 46.6

HCM 6th LOS D

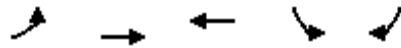
Notes

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

Queues

23: Ventura Boulevard & Colfax Avenue

06/24/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	246	909	1305	450	521
v/c Ratio	0.58	0.44	1.17	0.82	0.50
Control Delay	33.2	5.5	112.7	44.2	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	33.2	5.5	112.7	44.2	5.2
Queue Length 50th (ft)	80	51	~506	259	49
Queue Length 95th (ft)	m136	63	#698	362	104
Internal Link Dist (ft)		981	464		
Turn Bay Length (ft)	160			360	360
Base Capacity (vph)	422	2053	1113	562	1044
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.58	0.44	1.17	0.80	0.50

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.




















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

23: Ventura Boulevard & Colfax Avenue

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	226	836	0	0	914	287	0	0	0	414	0	479
Future Volume (vph)	226	836	0	0	914	287	0	0	0	414	0	479
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.4			5.4					5.4		5.7
Lane Util. Factor	1.00	0.95			0.95					1.00		1.00
Frt	1.00	1.00			0.96					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1770	3539			3412					1770		1583
Flt Permitted	0.10	1.00			1.00					0.95		1.00
Satd. Flow (perm)	195	3539			3412					1770		1583
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)	246	909	0	0	993	312	0	0	0	450	0	521
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	173
Lane Group Flow (vph)	246	909	0	0	1305	0	0	0	0	450	0	348
Turn Type	pm+pt	NA			NA					pm+pt		pm+ov
Protected Phases	5	2			6			3		4		5
Permitted Phases	2						3			7		4
Actuated Green, G (s)	58.0	58.0			32.6					31.2		50.9
Effective Green, g (s)	58.0	58.0			32.6					31.2		50.9
Actuated g/C Ratio	0.58	0.58			0.33					0.31		0.51
Clearance Time (s)	5.7	5.4			5.4					5.4		5.7
Vehicle Extension (s)	3.0	4.3			4.5					3.0		3.0
Lane Grp Cap (vph)	423	2052			1112					552		805
v/s Ratio Prot	c0.11	0.26			c0.38					c0.25		0.08
v/s Ratio Perm	0.22											0.13
v/c Ratio	0.58	0.44			1.17					0.82		0.43
Uniform Delay, d1	20.9	11.9			33.7					31.7		15.5
Progression Factor	1.57	0.40			0.73					1.00		1.00
Incremental Delay, d2	1.6	0.5			87.1					9.0		0.4
Delay (s)	34.4	5.2			111.6					40.8		15.8
Level of Service	C	A			F					D		B
Approach Delay (s)		11.4			111.6			0.0			27.4	
Approach LOS		B			F			A			C	
Intersection Summary												
HCM 2000 Control Delay		54.0			HCM 2000 Level of Service			D				
HCM 2000 Volume to Capacity ratio		0.98										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)			22.8				
Intersection Capacity Utilization		82.5%			ICU Level of Service			E				
Analysis Period (min)		15										
c Critical Lane Group												

Queues

24: Berry Drive & Ventura Boulevard

06/24/2024



Lane Group	EBT	WBL	WBT	NBT
Lane Group Flow (vph)	2442	47	1316	73
v/c Ratio	0.84	0.61	0.45	0.32
Control Delay	10.1	39.5	2.8	5.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	10.1	39.5	2.8	5.5
Queue Length 50th (ft)	357	10	177	0
Queue Length 95th (ft)	510	m19	21	11
Internal Link Dist (ft)	342		273	287
Turn Bay Length (ft)		65		
Base Capacity (vph)	2908	77	2933	394
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.84	0.61	0.45	0.19



















Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

24: Berry Drive & Ventura Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	2119	128	43	1211	0	23	0	44	0	0	0
Future Volume (vph)	0	2119	128	43	1211	0	23	0	44	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0			9.4				
Lane Util. Factor		0.95		1.00	0.95			1.00				
Frt		0.99		1.00	1.00			0.91				
Flt Protected		1.00		0.95	1.00			0.98				
Satd. Flow (prot)		3509		1770	3539			1669				
Flt Permitted		1.00		0.05	1.00			0.98				
Satd. Flow (perm)		3509		93	3539			1669				
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)	0	2303	139	47	1316	0	25	0	48	0	0	0
RTOR Reduction (vph)	0	2	0	0	0	0	0	69	0	0	0	0
Lane Group Flow (vph)	0	2440	0	47	1316	0	0	4	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		6			2		3	3			4	
Permitted Phases	6			2						4		
Actuated Green, G (s)		80.0		80.0	80.0			5.6				
Effective Green, g (s)		80.0		80.0	80.0			5.6				
Actuated g/C Ratio		0.80		0.80	0.80			0.06				
Clearance Time (s)		5.0		5.0	5.0			9.4				
Vehicle Extension (s)		4.9		4.0	4.0			3.0				
Lane Grp Cap (vph)		2807		74	2831			93				
v/s Ratio Prot		c0.70			0.37			c0.00				
v/s Ratio Perm				0.50								
v/c Ratio		0.87		0.64	0.46			0.04				
Uniform Delay, d1		6.6		4.1	3.2			44.7				
Progression Factor		0.97		1.36	0.77			1.00				
Incremental Delay, d2		3.9		26.3	0.4			0.2				
Delay (s)		10.2		31.8	2.9			44.9				
Level of Service		B		C	A			D				
Approach Delay (s)		10.2			3.9			44.9			0.0	
Approach LOS		B			A			D			A	
Intersection Summary												
HCM 2000 Control Delay			8.6			HCM 2000 Level of Service			A			
HCM 2000 Volume to Capacity ratio			0.91									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			23.7			
Intersection Capacity Utilization			80.5%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

25: Ventura Boulevard & Tujunga Avenue

06/24/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	176	1239	1256	279	371
v/c Ratio	0.58	0.53	0.72	0.36	0.58
Control Delay	16.8	15.4	24.1	32.7	25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	16.8	15.4	24.1	32.7	25.0
Queue Length 50th (ft)	61	295	313	76	170
Queue Length 95th (ft)	m78	464	468	104	226
Internal Link Dist (ft)		426	233	3083	
Turn Bay Length (ft)	180			100	60
Base Capacity (vph)	324	2342	1736	1012	661
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.54	0.53	0.72	0.28	0.56

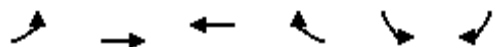
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

25: Ventura Boulevard & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	162	1140	1044	111	257	341
Future Volume (vph)	162	1140	1044	111	257	341
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.5	5.5		5.5	5.6
Lane Util. Factor	1.00	0.95	0.95		0.97	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	3539	3488		3433	1583
Flt Permitted	0.10	1.00	1.00		0.95	1.00
Satd. Flow (perm)	194	3539	3488		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	176	1239	1135	121	279	371
RTOR Reduction (vph)	0	0	7	0	0	18
Lane Group Flow (vph)	176	1239	1249	0	279	353
Turn Type	pm+pt	NA	NA		Prot	pt+ov
Protected Phases	1	6	2		4	1 7
Permitted Phases	6					4
Actuated Green, G (s)	66.2	66.2	49.6		22.8	39.3
Effective Green, g (s)	66.2	66.2	49.6		22.8	33.8
Actuated g/C Ratio	0.66	0.66	0.50		0.23	0.34
Clearance Time (s)	5.6	5.5	5.5		5.5	
Vehicle Extension (s)	3.0	4.4	4.9		3.0	
Lane Grp Cap (vph)	301	2342	1730		782	535
v/s Ratio Prot	0.06	c0.35	c0.36		0.08	c0.22
v/s Ratio Perm	0.32					
v/c Ratio	0.58	0.53	0.72		0.36	0.66
Uniform Delay, d1	13.8	8.8	19.8		32.4	28.2
Progression Factor	1.07	1.53	1.00		1.00	1.00
Incremental Delay, d2	1.6	0.5	2.6		0.3	3.0
Delay (s)	16.3	13.9	22.4		32.7	31.3
Level of Service	B	B	C		C	C
Approach Delay (s)		14.2	22.4		31.9	
Approach LOS		B	C		C	
Intersection Summary						
HCM 2000 Control Delay			20.8		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.75			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	22.1
Intersection Capacity Utilization			63.5%		ICU Level of Service	B
Analysis Period (min)			15			

c Critical Lane Group

HCM 6th Signalized Intersection Summary

26: Laurel Canyon Boulevard & Maxwellton Road

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		<div>↕</div>						<div>↕↕</div>			<div>↕↕</div>	
Traffic Volume (veh/h)	140	0	86	0	0	0	2	1301	0	0	1730	113
Future Volume (veh/h)	140	0	86	0	0	0	2	1301	0	0	1730	113
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.83				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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h	152	0	93				2	1414	0	0	1880	123
Peak Hour Factor	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	0	0	2	2
Cap, veh/h	226	0	138				40	1852	0	0	1919	124
Arrive On Green	0.23	0.00	0.23				0.57	0.57	0.00	0.00	0.57	0.57
Sat Flow, veh/h	975	0	597				0	3355	0	0	3482	219
Grp Volume(v), veh/h	245	0	0				750	666	0	0	976	1027
Grp Sat Flow(s),veh/h/ln	1572	0	0				1653	1617	0	0	1777	1830
Q Serve(g_s), s	12.8	0.0	0.0				1.1	27.3	0.0	0.0	47.5	49.9
Cycle Q Clear(g_c), s	12.8	0.0	0.0				51.0	27.3	0.0	0.0	47.5	49.9
Prop In Lane	0.62		0.38				0.00		0.00	0.00		0.12
Lane Grp Cap(c), veh/h	364	0	0				976	916	0	0	1006	1037
V/C Ratio(X)	0.67	0.00	0.00				0.77	0.73	0.00	0.00	0.97	0.99
Avail Cap(c_a), veh/h	433	0	0				976	916	0	0	1006	1037
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.72	0.72	0.00	0.00	0.09	0.09
Uniform Delay (d), s/veh	31.5	0.0	0.0				14.4	14.4	0.0	0.0	18.8	19.3
Incr Delay (d2), s/veh	3.2	0.0	0.0				4.2	3.7	0.0	0.0	4.0	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
%ile BackOfQ(95%),veh/ln	8.8	0.0	0.0				15.4	14.0	0.0	0.0	19.9	22.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.7	0.0	0.0				18.6	18.0	0.0	0.0	22.7	25.8
LnGrp LOS	C	A	A				B	B	A	A	C	C
Approach Vol, veh/h		245						1416			2003	
Approach Delay, s/veh		34.7						18.3			24.3	
Approach LOS		C						B			C	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		60.0		30.0		60.0						
Change Period (Y+Rc), s		9.0		9.2		9.0						
Max Green Setting (Gmax), s		47.0		24.8		47.0						
Max Q Clear Time (g_c+I1), s		51.9		14.8		53.0						
Green Ext Time (p_c), s		0.0		1.1		0.0						
Intersection Summary												
HCM 6th Ctrl Delay			22.7									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary

27: Laurel Canyon Boulevard & Laurel Terrace Drive/Sunshine Terrace Drive

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↔		↔	↔	
Traffic Volume (veh/h)	18	17	286	115	25	102	66	1318	78	25	1773	21
Future Volume (veh/h)	18	17	286	115	25	102	66	1318	78	25	1773	21
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	20	18	311	125	27	111	72	1433	85	27	1927	23
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	45	29	341	113	26	69	92	2364	140	222	2170	26
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.05	0.69	0.69	0.60	0.60	0.60
Sat Flow, veh/h	57	128	1517	307	114	307	1781	3409	202	344	3597	43
Grp Volume(v), veh/h	349	0	0	263	0	0	72	745	773	27	950	1000
Grp Sat Flow(s), veh/h/ln	702	0	0	727	0	0	1781	1777	1834	344	1777	1863
Q Serve(g_s), s	0.0	0.0	0.0	2.9	0.0	0.0	4.8	26.5	26.8	5.4	54.7	55.2
Cycle Q Clear(g_c), s	24.1	0.0	0.0	27.0	0.0	0.0	4.8	26.5	26.8	21.5	54.7	55.2
Prop In Lane	0.06		0.89	0.48		0.42	1.00		0.11	1.00		0.02
Lane Grp Cap(c), veh/h	415	0	0	208	0	0	92	1232	1272	222	1072	1124
V/C Ratio(X)	0.84	0.00	0.00	1.27	0.00	0.00	0.78	0.60	0.61	0.12	0.89	0.89
Avail Cap(c_a), veh/h	415	0	0	208	0	0	110	1232	1272	222	1072	1124
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.14	0.14	0.14
Uniform Delay (d), s/veh	45.7	0.0	0.0	49.6	0.0	0.0	56.2	9.7	9.8	18.3	20.3	20.4
Incr Delay (d2), s/veh	14.4	0.0	0.0	151.9	0.0	0.0	25.9	2.2	2.2	0.2	1.8	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.5	0.0	0.0	24.1	0.0	0.0	5.0	15.1	15.6	0.8	24.0	25.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.1	0.0	0.0	201.5	0.0	0.0	82.1	11.9	11.9	18.5	22.0	22.1
LnGrp LOS	E	A	A	F	A	A	F	B	B	B	C	C
Approach Vol, veh/h		349			263			1590			1977	
Approach Delay, s/veh		60.1			201.5			15.1			22.0	
Approach LOS		E			F			B			C	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	10.8	77.2		32.0		88.0		32.0				
Change Period (Y+Rc), s	4.6	4.8		* 5		4.8		* 5				
Max Green Setting (Gmax), s	71.2			* 27		83.2		* 27				
Max Q Clear Time (g_c+I), s	10.8	57.2		26.1		28.8		29.0				
Green Ext Time (p_c), s	0.0	11.2		0.2		16.3		0.0				

Intersection Summary

HCM 6th Ctrl Delay 33.9

HCM 6th LOS C

Notes

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

Queues

28: Laurel Canyon Boulevard & Fryman Road

06/24/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	285	8	26	1275	2418
v/c Ratio	0.74	0.02	0.32	0.55	1.05
Control Delay	43.8	24.6	21.7	9.9	51.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	43.8	24.6	21.7	9.9	51.7
Queue Length 50th (ft)	152	4	6	179	~796
Queue Length 95th (ft)	217	14	36	290	#1017
Internal Link Dist (ft)				236	183
Turn Bay Length (ft)			145		
Base Capacity (vph)	542	485	82	2339	2300
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.53	0.02	0.32	0.55	1.05






















Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

28: Laurel Canyon Boulevard & Fryman Road

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								 			 	
Traffic Volume (vph)	262	0	7	0	0	0	24	1173	0	0	1895	329
Future Volume (vph)	262	0	7	0	0	0	24	1173	0	0	1895	329
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4		5.4				5.4	5.4			5.4	
Lane Util. Factor	1.00		1.00				1.00	0.95			0.95	
Frt	1.00		0.85				1.00	1.00			0.98	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	3539			3461	
Flt Permitted	0.95		1.00				0.07	1.00			1.00	
Satd. Flow (perm)	1770		1583				125	3539			3461	
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)	285	0	8	0	0	0	26	1275	0	0	2060	358
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	13	0
Lane Group Flow (vph)	285	0	8	0	0	0	26	1275	0	0	2405	0
Turn Type	Perm		Perm				Perm	NA		Perm	NA	
Protected Phases								2			6	
Permitted Phases	8		8				2			6		
Actuated Green, G (s)	19.7		19.7				59.5	59.5			59.5	
Effective Green, g (s)	19.7		19.7				59.5	59.5			59.5	
Actuated g/C Ratio	0.22		0.22				0.66	0.66			0.66	
Clearance Time (s)	5.4		5.4				5.4	5.4			5.4	
Vehicle Extension (s)	3.0		3.0				4.8	4.8			5.1	
Lane Grp Cap (vph)	387		346				82	2339			2288	
v/s Ratio Prot								0.36			c0.70	
v/s Ratio Perm	c0.16		0.01				0.21					
v/c Ratio	0.74		0.02				0.32	0.55			1.05	
Uniform Delay, d1	32.7		27.6				6.5	8.1			15.2	
Progression Factor	1.00		1.00				1.00	1.00			1.00	
Incremental Delay, d2	7.1		0.0				9.9	0.9			34.0	
Delay (s)	39.9		27.6				16.4	9.0			49.3	
Level of Service	D		C				B	A			D	
Approach Delay (s)		39.5			0.0			9.1			49.3	
Approach LOS		D			A			A			D	
Intersection Summary												
HCM 2000 Control Delay			35.6				HCM 2000 Level of Service				D	
HCM 2000 Volume to Capacity ratio			0.97									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			10.8		
Intersection Capacity Utilization			85.2%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th TWSC
29: Laurel Canyon Boulevard & Woodbridge Street

06/24/2024

Intersection												
Int Delay, s/veh	8.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	3	0	18	5	0	41	16	1381	5	133	1869	24
Future Vol, veh/h	3	0	18	5	0	41	16	1381	5	133	1869	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	65	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	20	5	0	45	17	1501	5	145	2032	26

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	3120	3875	1029	2844	3886	753	2058	0	0	1506	0	0
Stage 1	2335	2335	-	1538	1538	-	-	-	-	-	-	-
Stage 2	785	1540	-	1306	2348	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	5	3	231	8	3	352	268	-	-	441	-	-
Stage 1	37	69	-	121	176	-	-	-	-	-	-	-
Stage 2	352	175	-	169	68	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 3	2	231	~ 5	2	352	268	-	-	441	-	-
Mov Cap-2 Maneuver	~ 3	2	-	~ 5	2	-	-	-	-	-	-	-
Stage 1	35	46	-	113	165	-	-	-	-	-	-	-
Stage 2	288	164	-	104	46	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	\$ 563		\$ 367.2		0.2		1.1	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	268	-	-	19	41	441	-
HCM Lane V/C Ratio	0.065	-	-	1.201	1.22	0.328	-
HCM Control Delay (s)	19.4	-	-	\$ 563	\$ 367.2	17.1	-
HCM Lane LOS	C	-	-	F	F	C	-
HCM 95th %tile Q(veh)	0.2	-	-	3.2	4.9	1.4	-

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

HCM 6th TWSC
30: Valleyheart Drive (North) & Laurel Canyon Boulevard

06/24/2024

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↙	↕		↙	↕	
Traffic Vol, veh/h	2	0	12	7	0	31	20	1373	9	33	1876	8
Future Vol, veh/h	2	0	12	7	0	31	20	1373	9	33	1876	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	40	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	13	8	0	34	22	1492	10	36	2039	9





Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2906	3662	1024	2633	3661	751	2048	0	0	1502	0	0
Stage 1	2116	2116	-	1541	1541	-	-	-	-	-	-	-
Stage 2	790	1546	-	1092	2120	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	7	5	233	11	5	353	271	-	-	442	-	-
Stage 1	52	90	-	120	175	-	-	-	-	-	-	-
Stage 2	350	174	-	229	90	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	6	4	233	9	4	353	271	-	-	442	-	-
Mov Cap-2 Maneuver	6	4	-	9	4	-	-	-	-	-	-	-
Stage 1	48	83	-	110	161	-	-	-	-	-	-	-
Stage 2	291	160	-	199	83	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	164.6		259.5		0.3		0.2	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	271	-	-	36 44	442	-	-
HCM Lane V/C Ratio	0.08	-	-	0.423 0.939	0.081	-	-
HCM Control Delay (s)	19.4	-	-	164.6 259.5	13.9	-	-
HCM Lane LOS	C	-	-	F F	B	-	-
HCM 95th %tile Q(veh)	0.3	-	-	1.4 3.8	0.3	-	-

Intersection

Int Delay, s/veh 4.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	105	1302	21	151	1727
Future Vol, veh/h	6	105	1302	21	151	1727
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	35	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	114	1415	23	164	1877

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	2694	719	0
Stage 1	1427	-	-
Stage 2	1267	-	-
Critical Hdwy	6.84	6.94	-
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	-
Pot Cap-1 Maneuver	17	371	-
Stage 1	187	-	-
Stage 2	228	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	11	371	-
Mov Cap-2 Maneuver	11	-	-
Stage 1	187	-	-
Stage 2	148	-	-

Approach	WB	NB	SB
HCM Control Delay, s	116.2	0	1.3
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	134	468
HCM Lane V/C Ratio	-	-	0.9	0.351
HCM Control Delay (s)	-	-	116.2	16.8
HCM Lane LOS	-	-	F	C
HCM 95th %tile Q(veh)	-	-	5.9	1.6

HCM 6th AWSC
32: Radford Avenue & Sarah Street

06/24/2024

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	1	0	3	7	62	2	41	1	131	118	15
Future Vol, veh/h	14	1	0	3	7	62	2	41	1	131	118	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	1	0	3	8	67	2	45	1	142	128	16
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.1	7.6	7.7	9.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	93%	4%	50%
Vol Thru, %	93%	7%	10%	45%
Vol Right, %	2%	0%	86%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	44	15	72	264
LT Vol	2	14	3	131
Through Vol	41	1	7	118
RT Vol	1	0	62	15
Lane Flow Rate	48	16	78	287
Geometry Grp	1	1	1	1
Degree of Util (X)	0.059	0.022	0.091	0.335
Departure Headway (Hd)	4.437	4.966	4.2	4.201
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	811	724	858	847
Service Time	2.446	2.974	2.203	2.272
HCM Lane V/C Ratio	0.059	0.022	0.091	0.339
HCM Control Delay	7.7	8.1	7.6	9.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.1	0.3	1.5

HCM 6th AWSC




51: Radford Avenue & Moorpark Gate

06/24/2024

Intersection

Intersection Delay, s/veh 8.9

Intersection LOS A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	75	0	0	236	0
Future Vol, veh/h	0	75	0	0	236	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	82	0	0	257	0
Number of Lanes	1	0	2	0	0	1




Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left NB			WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	7.3	0	9.4
HCM LOS	A	-	A

Lane	NBLn1	NBLn2	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	100%
Vol Thru, %	100%	100%	0%	0%
Vol Right, %	0%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	75	236
LT Vol	0	0	0	236
Through Vol	0	0	0	0
RT Vol	0	0	75	0
Lane Flow Rate	0	0	82	257
Geometry Grp	5	5	2	4a
Degree of Util (X)	0	0	0.089	0.312
Departure Headway (Hd)	4.812	3.072	3.944	4.376
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	914	821
Service Time	2.599	0.857	1.944	2.409
HCM Lane V/C Ratio	0	0	0.09	0.313
HCM Control Delay	7.6	5.9	7.3	9.4
HCM Lane LOS	N	N	A	A
HCM 95th-tile Q	0	0	0.3	1.3

Intersection

Intersection Delay, s/veh 8.8

Intersection LOS A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	56	38	44	177	118	94
Future Vol, veh/h	56	38	44	177	118	94
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	61	41	48	192	128	102
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8.6	8.4	9.4
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	60%	56%
Vol Thru, %	20%	0%	44%
Vol Right, %	80%	40%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	221	94	212
LT Vol	0	56	118
Through Vol	44	0	94
RT Vol	177	38	0
Lane Flow Rate	240	102	230
Geometry Grp	1	1	1
Degree of Util (X)	0.264	0.136	0.29
Departure Headway (Hd)	3.958	4.808	4.528
Convergence, Y/N	Yes	Yes	Yes
Cap	908	745	795
Service Time	1.978	2.84	2.549
HCM Lane V/C Ratio	0.264	0.137	0.289
HCM Control Delay	8.4	8.6	9.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.1	0.5	1.2

HCM 6th AWSC

54: Radford Avenue & Radford Gate

06/24/2024

Intersection

Intersection Delay, s/veh14.2

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	0	44	64	0	0	21	361	150	0	185	1
Future Vol, veh/h	2	0	44	64	0	0	21	361	150	0	185	1
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	48	70	0	0	23	392	163	0	201	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.7	9.8	16.8	9.8
HCM LOS	A	A	C	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	4%	100%	0%
Vol Thru, %	68%	0%	0%	99%
Vol Right, %	28%	96%	0%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	532	46	64	186
LT Vol	21	2	64	0
Through Vol	361	0	0	185
RT Vol	150	44	0	1
Lane Flow Rate	578	50	70	202
Geometry Grp	1	1	1	1
Degree of Util (X)	0.697	0.072	0.114	0.274
Departure Headway (Hd)	4.34	5.199	5.921	4.871
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	833	680	600	734
Service Time	2.383	3.295	4.013	2.932
HCM Lane V/C Ratio	0.694	0.074	0.117	0.275
HCM Control Delay	16.8	8.7	9.8	9.8
HCM Lane LOS	C	A	A	A
HCM 95th-tile Q	5.8	0.2	0.4	1.1

Intersection

Intersection Delay, s/veh11.7

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	14	30	51	34	0	23	380	20	0	135	0
Future Vol, veh/h	0	14	30	51	34	0	23	380	20	0	135	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	15	33	55	37	0	25	413	22	0	147	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.5	9.5	13.3	9
HCM LOS	A	A	B	A




Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	0%	60%	0%
Vol Thru, %	90%	32%	40%	100%
Vol Right, %	5%	68%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	423	44	85	135
LT Vol	23	0	51	0
Through Vol	380	14	34	135
RT Vol	20	30	0	0
Lane Flow Rate	460	48	92	147
Geometry Grp	1	1	1	1
Degree of Util (X)	0.57	0.067	0.141	0.196
Departure Headway (Hd)	4.46	5.046	5.496	4.812
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	805	704	649	743
Service Time	2.5	3.123	3.566	2.867
HCM Lane V/C Ratio	0.571	0.068	0.142	0.198
HCM Control Delay	13.3	8.5	9.5	9
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	3.7	0.2	0.5	0.7

HCM 6th TWSC
56: Colfax Avenue & Colfax Gate

06/24/2024

Intersection

Int Delay, s/veh 2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	38	19	59	377	947	118
Future Vol, veh/h	38	19	59	377	947	118
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	41	21	64	410	1029	128

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1631	1093	1157
Stage 1	1093	-	-
Stage 2	538	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	112	261	604
Stage 1	321	-	-
Stage 2	585	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	97	261	604
Mov Cap-2 Maneuver	97	-	-
Stage 1	277	-	-
Stage 2	585	-	-

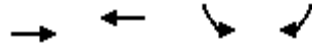
Approach	EB	NB	SB
HCM Control Delay, s	60.8	1.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	604	-	123	-	-
HCM Lane V/C Ratio	0.106	-	0.504	-	-
HCM Control Delay (s)	11.7	-	60.8	-	-
HCM Lane LOS	B	-	F	-	-
HCM 95th %tile Q(veh)	0.4	-	2.3	-	-

Queues

121: Ventura Boulevard & Ventura PI

06/24/2024



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1432	1176	82	35
v/c Ratio	1.48	0.55	0.13	0.11
Control Delay	258.8	21.1	48.1	14.8
Queue Delay	1.6	51.2	0.0	0.0
Total Delay	260.4	72.4	48.1	14.8
Queue Length 50th (ft)	~973	193	32	0
Queue Length 95th (ft)	#1113	m45	56	31
Internal Link Dist (ft)	509	48	136	
Turn Bay Length (ft)				40
Base Capacity (vph)	966	2079	669	336
Starvation Cap Reductn	0	1290	0	0
Spillback Cap Reductn	247	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.99	1.49	0.12	0.10

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

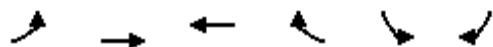
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

121: Ventura Boulevard & Ventura PI

06/24/2024



























Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	↑
Traffic Volume (vph)	0	1317	1082	0	75	32
Future Volume (vph)	0	1317	1082	0	75	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.1	6.1		5.7	5.7
Lane Util. Factor		0.95	0.95		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3433	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1432	1176	0	82	35
RTOR Reduction (vph)	0	0	0	0	0	29
Lane Group Flow (vph)	0	1432	1176	0	82	6
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2 4		3	
Permitted Phases						3
Actuated Green, G (s)		38.3	83.9		25.3	25.3
Effective Green, g (s)		38.3	83.9		25.3	25.3
Actuated g/C Ratio		0.27	0.60		0.18	0.18
Clearance Time (s)		6.1			5.7	5.7
Vehicle Extension (s)		4.6			3.0	3.0
Lane Grp Cap (vph)		968	2120		620	286
v/s Ratio Prot		c0.40	c0.33		c0.02	
v/s Ratio Perm						0.00
v/c Ratio		1.48	0.55		0.13	0.02
Uniform Delay, d1		50.9	16.8		48.1	47.2
Progression Factor		1.00	1.22		1.00	1.00
Incremental Delay, d2		221.3	0.0		0.1	0.0
Delay (s)		272.1	20.5		48.2	47.2
Level of Service		F	C		D	D
Approach Delay (s)		272.1	20.5		47.9	
Approach LOS		F	C		D	
Intersection Summary						
HCM 2000 Control Delay		153.9		HCM 2000 Level of Service		F
HCM 2000 Volume to Capacity ratio		0.87				
Actuated Cycle Length (s)		140.0		Sum of lost time (s)		31.8
Intersection Capacity Utilization		52.9%		ICU Level of Service		A
Analysis Period (min)		15				
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

1: Riverside Drive & Laurel Canyon Boulevard








06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	356	1096	177	131	573	121	236	941	135	179	946	254
Future Volume (veh/h)	356	1096	177	131	573	121	236	941	135	179	946	254
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	387	1191	192	142	623	132	257	1023	147	195	1028	276
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	387	1288	574	257	770	343	268	1048	585	204	1028	276
Arrive On Green	0.22	0.36	0.36	0.02	0.07	0.07	0.12	0.30	0.30	0.08	0.26	0.26
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	3554	1585	1781	4006	1075
Grp Volume(v), veh/h	387	1191	192	142	623	132	257	1023	147	195	873	431
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1777	1585	1781	1702	1677
Q Serve(g_s), s	26.1	38.6	10.5	4.9	20.7	9.5	13.1	34.2	7.7	9.4	30.8	30.8
Cycle Q Clear(g_c), s	26.1	38.6	10.5	4.9	20.7	9.5	13.1	34.2	7.7	9.4	30.8	30.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.64
Lane Grp Cap(c), veh/h	387	1288	574	257	770	343	268	1048	585	204	874	430
V/C Ratio(X)	1.00	0.92	0.33	0.55	0.81	0.38	0.96	0.98	0.25	0.95	1.00	1.00
Avail Cap(c_a), veh/h	387	1288	574	259	770	343	268	1048	585	204	874	430
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	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	0.69	0.69	0.69	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.9	36.7	27.8	56.6	53.3	48.1	33.8	41.9	26.3	34.6	44.6	44.6
Incr Delay (d2), s/veh	45.4	12.6	1.6	2.5	9.0	3.2	35.2	18.0	0.7	49.9	30.3	43.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	22.7	25.3	7.5	4.0	16.2	7.6	12.1	22.9	5.3	11.3	22.9	24.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	92.3	49.3	29.3	59.0	62.2	51.3	68.9	59.9	27.0	84.4	74.9	88.1
LnGrp LOS	F	D	C	E	E	D	E	E	C	F	E	F
Approach Vol, veh/h	1770			897			1427			1499		
Approach Delay, s/veh	56.5			60.1			58.1			80.0		
Approach LOS	E			E			E			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.6	36.7	32.0	31.7	15.0	41.3	14.5	49.2				
Change Period (Y+Rc), s	5.6	5.9	5.9	* 5.7	5.6	5.9	5.6	* 5.7				
Max Green Setting (Gmax), s	14.0	30.8	26.1	* 26	9.4	35.4	9.0	* 43				
Max Q Clear Time (g_c+I1), s	15.1	32.8	28.1	22.7	11.4	36.2	6.9	40.6				
Green Ext Time (p_c), s	0.0	0.0	0.0	1.4	0.0	0.0	0.1	2.0				
Intersection Summary												
HCM 6th Ctrl Delay	63.8											
HCM 6th LOS	E											
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
User approved changes to right turn type.												

HCM 6th TWSC

2: Riverside Drive & Radford Avenue

06/24/2024

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	1114	37	41	1124	8	18	2	32	1	0	9
Future Vol, veh/h	13	1114	37	41	1124	8	18	2	32	1	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	105	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	1211	40	45	1222	9	20	2	35	1	0	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1231	0	0	1251	0	0	1940	2560	606	1952	2596	616
Stage 1	-	-	-	-	-	-	1239	1239	-	1317	1317	-
Stage 2	-	-	-	-	-	-	701	1321	-	635	1279	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	562	-	-	552	-	-	39	26	440	38	25	433
Stage 1	-	-	-	-	-	-	186	246	-	166	225	-
Stage 2	-	-	-	-	-	-	395	224	-	433	235	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	562	-	-	552	-	-	35	23	440	30	22	433
Mov Cap-2 Maneuver	-	-	-	-	-	-	35	23	-	30	22	-
Stage 1	-	-	-	-	-	-	181	240	-	162	207	-
Stage 2	-	-	-	-	-	-	355	206	-	385	229	-

























Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.4			129.8			25.7		
HCM LOS							F			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	77	562	-	-	552	-	-	185
HCM Lane V/C Ratio	0.734	0.025	-	-	0.081	-	-	0.059
HCM Control Delay (s)	129.8	11.6	-	-	12.1	-	-	25.7
HCM Lane LOS	F	B	-	-	B	-	-	D
HCM 95th %tile Q(veh)	3.5	0.1	-	-	0.3	-	-	0.2

HCM 6th Signalized Intersection Summary

3: Colfax Avenue & Riverside Drive

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	735	207	220	818	45	167	571	95	33	373	92
Future Volume (veh/h)	170	735	207	220	818	45	167	571	95	33	373	92
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	185	799	225	239	889	49	182	621	103	36	405	100
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	225	1356	605	277	1356	605	377	826	700	358	826	700
Arrive On Green	0.76	0.76	0.76	0.38	0.38	0.38	0.88	0.88	0.88	0.44	0.44	0.44
Sat Flow, veh/h	597	3554	1585	551	3554	1585	894	1870	1585	730	1870	1585
Grp Volume(v), veh/h	185	799	225	239	889	49	182	621	103	36	405	100
Grp Sat Flow(s),veh/h/ln	597	1777	1585	551	1777	1585	894	1870	1585	730	1870	1585
Q Serve(g_s), s	10.5	5.8	2.8	17.1	12.4	1.2	8.8	6.9	0.5	2.1	9.3	2.3
Cycle Q Clear(g_c), s	22.9	5.8	2.8	22.9	12.4	1.2	18.0	6.9	0.5	9.0	9.3	2.3
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	225	1356	605	277	1356	605	377	826	700	358	826	700
V/C Ratio(X)	0.82	0.59	0.37	0.86	0.66	0.08	0.48	0.75	0.15	0.10	0.49	0.14
Avail Cap(c_a), veh/h	225	1356	605	277	1356	605	377	826	700	358	826	700
HCM Platoon Ratio	2.00	2.00	2.00	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	0.90	0.90	0.90	0.46	0.46	0.46	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.6	5.1	4.7	24.4	15.3	11.8	6.3	2.4	2.0	14.3	11.9	10.0
Incr Delay (d2), s/veh	27.7	1.9	1.8	25.9	2.2	0.2	2.0	3.0	0.2	0.6	2.1	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(95%),veh/ln	6.4	2.7	1.7	8.7	7.9	0.7	1.0	2.8	0.3	0.7	6.6	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.2	7.0	6.5	50.3	17.5	12.1	8.4	5.3	2.2	14.9	14.0	10.4
LnGrp LOS	D	A	A	D	B	B	A	A	A	B	B	B
Approach Vol, veh/h	1209			1177			906			541		
Approach Delay, s/veh	12.4			24.0			5.6			13.4		
Approach LOS	B			C			A			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	28.0			32.0			28.0			32.0		
Change Period (Y+Rc), s	* 5.1			* 5.5			* 5.1			* 5.5		
Max Green Setting (Gmax), s	* 23			* 27			* 23			* 27		
Max Q Clear Time (g_c+I1), s	24.9			20.0			24.9			11.3		
Green Ext Time (p_c), s	0.0			2.9			0.0			2.7		
Intersection Summary												
HCM 6th Ctrl Delay	14.5											
HCM 6th LOS	B											
Notes												

Queues

4: Riverside Drive & SR 170 Southbound Off-Ramp

06/24/2024



Lane Group	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	971	7	855	16	275	260	254
v/c Ratio	0.48	0.03	0.42	0.05	0.70	0.52	0.47
Control Delay	11.7	11.0	12.7	0.3	34.3	10.3	6.3
Queue Delay	1.9	0.0	0.4	0.2	2.1	1.2	0.0
Total Delay	13.5	11.0	13.0	0.5	36.4	11.5	6.3
Queue Length 50th (ft)	117	1	236	0	107	21	0
Queue Length 95th (ft)	247	m6	278	0	190	86	53
Internal Link Dist (ft)	2214		245	105		344	
Turn Bay Length (ft)		25			140		150
Base Capacity (vph)	2015	232	2016	293	441	537	582
Starvation Cap Reductn	0	0	580	0	0	0	0
Spillback Cap Reductn	841	0	0	113	72	122	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.03	0.60	0.09	0.75	0.63	0.44

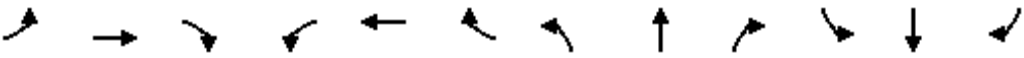
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: Riverside Drive & SR 170 Southbound Off-Ramp

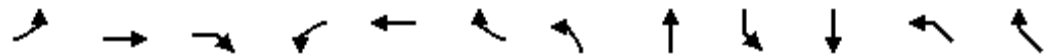
06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑	↑↑			↑↓		↑	↑↓	↑
Traffic Volume (vph)	0	887	6	6	787	0	0	0	15	301	7	418
Future Volume (vph)	0	887	6	6	787	0	0	0	15	301	7	418
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Lane Util. Factor		0.95		1.00	0.95			1.00		0.95	0.91	0.95
Frt		1.00		1.00	1.00			0.86		1.00	0.88	0.85
Flt Protected		1.00		0.95	1.00			1.00		0.95	0.99	1.00
Satd. Flow (prot)		3535		1770	3539			1611		1681	1485	1504
Flt Permitted		1.00		0.22	1.00			1.00		0.95	0.99	1.00
Satd. Flow (perm)		3535		409	3539			1611		1681	1485	1504
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)	0	964	7	7	855	0	0	0	16	327	8	454
RTOR Reduction (vph)	0	1	0	0	0	0	0	16	0	0	153	194
Lane Group Flow (vph)	0	971	0	7	855	0	0	0	0	275	107	60
Turn Type		NA		Perm	NA			NA		Split	NA	Perm
Protected Phases		6			2			4		3	3	
Permitted Phases				2			4					3
Actuated Green, G (s)		35.0		35.0	35.0			1.6		16.4	16.4	16.4
Effective Green, g (s)		35.0		35.0	35.0			1.6		16.4	16.4	16.4
Actuated g/C Ratio		0.50		0.50	0.50			0.02		0.23	0.23	0.23
Clearance Time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Vehicle Extension (s)		3.8		2.4	2.4			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1767		204	1769			36		393	347	352
v/s Ratio Prot		c0.27			0.24			c0.00		c0.16	0.07	
v/s Ratio Perm				0.02								0.04
v/c Ratio		0.55		0.03	0.48			0.01		0.70	0.31	0.17
Uniform Delay, d1		12.1		8.9	11.5			33.4		24.5	22.1	21.4
Progression Factor		1.00		1.02	1.22			1.00		1.00	1.00	1.00
Incremental Delay, d2		1.2		0.3	0.8			0.1		5.4	0.5	0.2
Delay (s)		13.3		9.3	14.9			33.5		29.9	22.6	21.6
Level of Service		B		A	B			C		C	C	C
Approach Delay (s)		13.3			14.9			33.5			24.8	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			17.4			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			59.8%			ICU Level of Service				B		
Analysis Period (min)			15									
c Critical Lane Group												

Queues

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	NWL	NWR
Lane Group Flow (vph)	253	757	338	258	418	170	35	1000	69	607	390	140
v/c Ratio	0.96	1.13	1.14	1.48	0.55	0.50	0.17	1.08	0.45	0.47	0.69	0.59
Control Delay	87.0	124.8	141.6	275.7	51.9	54.0	47.3	102.2	70.9	35.3	61.6	64.2
Queue Delay	0.0	2.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0
Total Delay	87.0	126.8	144.0	275.7	51.9	54.0	47.3	102.2	70.9	35.4	64.9	64.2
Queue Length 50th (ft)	196	~435	~389	~271	179	137	26	~585	61	220	174	130
Queue Length 95th (ft)	#334	#589	#620	#453	236	215	62	#778	113	293	222	204
Internal Link Dist (ft)		245			745			2580		383	758	
Turn Bay Length (ft)	140		230	85		110	270		290		215	
Base Capacity (vph)	263	670	297	174	765	342	209	923	152	1292	686	288
Starvation Cap Reductn	0	162	51	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	14	199	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.96	1.49	1.37	1.48	0.55	0.50	0.17	1.08	0.45	0.47	0.80	0.49

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.





















95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

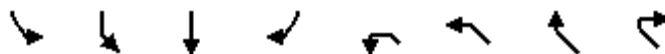
06/24/2024

												
Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	233	503	312	192	18	219	385	156	32	784	116	20
Future Volume (vph)	233	503	312	192	18	219	385	156	32	784	116	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Lane Util. Factor	1.00	0.91	0.91			1.00	0.95	1.00	1.00	0.95		
Frt	1.00	0.96	0.85			1.00	1.00	0.85	1.00	0.98		
Flt Protected	0.95	1.00	1.00			0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1770	3249	1441			1770	3539	1583	1770	3461		
Flt Permitted	0.37	1.00	1.00			0.14	1.00	1.00	0.42	1.00		
Satd. Flow (perm)	692	3249	1441			258	3539	1583	786	3461		
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)	253	547	339	209	20	238	418	170	35	852	126	22
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	253	757	338	0	0	258	418	170	35	1000	0	0
Turn Type	pm+pt	NA	Perm		pm+pt	pm+pt	NA	Perm	Perm	NA		
Protected Phases	1	6			5	5	2			8		
Permitted Phases	6		6		2	2		2	8			
Actuated Green, G (s)	36.6	27.5	27.5			38.3	28.9	28.9	37.4	37.4		
Effective Green, g (s)	36.6	27.5	27.5			38.3	28.9	28.9	37.4	37.4		
Actuated g/C Ratio	0.26	0.20	0.20			0.27	0.21	0.21	0.27	0.27		
Clearance Time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Vehicle Extension (s)	3.0	3.9	3.9			3.0	4.6	4.6	4.7	4.7		
Lane Grp Cap (vph)	250	638	283			172	730	326	209	924		
v/s Ratio Prot	0.07	0.23				c0.10	0.12			c0.29		
v/s Ratio Perm	0.20		0.23			c0.31		0.11	0.04			
v/c Ratio	1.01	1.19	1.19			1.50	0.57	0.52	0.17	1.08		
Uniform Delay, d1	49.8	56.2	56.2			46.2	50.0	49.4	39.4	51.3		
Progression Factor	1.02	1.02	1.01			1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2	56.6	97.6	114.0			252.9	3.2	5.9	0.7	54.4		
Delay (s)	107.3	154.8	171.1			299.1	53.2	55.3	40.1	105.7		
Level of Service	F	F	F			F	D	E	D	F		
Approach Delay (s)		150.0					128.6			103.5		
Approach LOS		F					F			F		
Intersection Summary												
HCM 2000 Control Delay			106.9			HCM 2000 Level of Service				F		
HCM 2000 Volume to Capacity ratio			1.12									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			33.0			
Intersection Capacity Utilization			106.9%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024



Movement	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	17	47	459	99	33	313	126	16
Future Volume (vph)	17	47	459	99	33	313	126	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.3			6.6	6.6	
Lane Util. Factor		1.00	0.95			0.97	0.91	
Frt		1.00	0.97			0.99	0.85	
Flt Protected		0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	3445			3429	1441	
Flt Permitted		0.95	1.00			0.95	1.00	
Satd. Flow (perm)		1770	3445			3429	1441	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	51	499	108	36	340	137	17
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	69	607	0	0	390	140	0
Turn Type	Prot	Prot	NA		Prot	Prot	Perm	
Protected Phases	7	7	4		3	3		
Permitted Phases							3	
Actuated Green, G (s)		9.7	53.9			23.0	23.0	
Effective Green, g (s)		9.7	53.9			23.0	23.0	
Actuated g/C Ratio		0.07	0.38			0.16	0.16	
Clearance Time (s)		6.8	6.3			6.6	6.6	
Vehicle Extension (s)		3.0	4.9			4.6	4.6	
Lane Grp Cap (vph)		122	1326			563	236	
v/s Ratio Prot		0.04	c0.18			c0.11		
v/s Ratio Perm							0.10	
v/c Ratio		0.57	0.46			0.69	0.59	
Uniform Delay, d1		63.1	32.1			55.2	54.2	
Progression Factor		1.00	1.00			1.00	1.00	
Incremental Delay, d2		5.9	0.5			4.3	5.4	
Delay (s)		69.0	32.6			59.5	59.6	
Level of Service		E	C			E	E	
Approach Delay (s)			36.4			59.5		
Approach LOS			D			E		
Intersection Summary								

HCM 6th Signalized Intersection Summary

6: Laurel Canyon Boulevard & US 101 Northbound Ramps

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰	↰	↰	↰			↰	↰
Traffic Volume (veh/h)	0	0	0	603	0	576	509	1191	0	1	1014	185
Future Volume (veh/h)	0	0	0	603	0	576	509	1191	0	1	1014	185
Initial Q (Qb), veh				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
Parking Bus, Adj				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	0	1870	1870	1870
Adj Flow Rate, veh/h				850	0	417	553	1295	0	1	1102	201
Peak Hour Factor				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	0	2	2	2
Cap, veh/h				1065	0	474	639	2092	0	40	1714	547
Arrive On Green				0.30	0.00	0.30	0.06	0.19	0.00	0.35	0.35	0.35
Sat Flow, veh/h				3563	0	1585	3456	3647	0	1	4966	1585
Grp Volume(v), veh/h				850	0	417	553	1295	0	415	688	201
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	1868	1549	1585
Q Serve(g_s), s				19.8	0.0	22.5	14.3	30.0	0.0	0.0	16.8	8.6
Cycle Q Clear(g_c), s				19.8	0.0	22.5	14.3	30.0	0.0	16.8	16.8	8.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1065	0	474	639	2092	0	685	1069	547
V/C Ratio(X)				0.80	0.00	0.88	0.87	0.62	0.00	0.61	0.64	0.37
Avail Cap(c_a), veh/h				1176	0	523	680	2092	0	685	1069	547
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.81	0.81	0.00	0.36	0.36	0.36
Uniform Delay (d), s/veh				29.0	0.0	30.0	41.1	27.0	0.0	24.8	24.8	22.1
Incr Delay (d2), s/veh				3.6	0.0	14.9	9.1	1.1	0.0	1.4	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
%ile BackOfQ(95%),veh/ln				13.0	0.0	15.0	11.4	20.0	0.0	10.0	8.4	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				32.7	0.0	44.9	50.2	28.1	0.0	26.2	25.9	22.8
LnGrp LOS				C	A	D	D	C	A	C	C	C
Approach Vol, veh/h					1267			1848			1304	
Approach Delay, s/veh					36.7			34.7			25.5	
Approach LOS					D			C			C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	31.9	35.9		32.2		57.8						
Change Period (Y+Rc), s	5.3	4.8		* 5.3		4.8						
Max Green Setting (Gmax), s	30	27.2		* 30		50.2						
Max Q Clear Time (g_c+M0), s	18.8	18.8		24.5		32.0						
Green Ext Time (p_c), s	0.4	4.7		2.4		9.0						

Intersection Summary

HCM 6th Ctrl Delay	32.6
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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

HCM 6th Signalized Intersection Summary

7: US 101 Southbound Ramps & Laurel Canyon Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	364	24	574	0	0	0	1	1353	707	300	1286	0
Future Volume (veh/h)	364	24	574	0	0	0	1	1353	707	300	1286	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	273	0	773				1	1471	768	326	1398	0
Peak Hour Factor	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	0
Cap, veh/h	416	0	740				40	3239	1034	327	2318	0
Arrive On Green	0.23	0.00	0.23				0.65	0.65	0.65	0.44	0.44	0.00
Sat Flow, veh/h	1781	0	3170				0	4967	1585	330	3647	0
Grp Volume(v), veh/h	273	0	773				554	918	768	326	1398	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				1869	1549	1585	165	1777	0
Q Serve(g_s), s	12.5	0.0	21.0				0.0	13.2	29.4	45.5	27.1	0.0
Cycle Q Clear(g_c), s	12.5	0.0	21.0				13.2	13.2	29.4	58.7	27.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	416	0	740				1259	2020	1034	327	2318	0
V/C Ratio(X)	0.66	0.00	1.05				0.44	0.45	0.74	1.00	0.60	0.00
Avail Cap(c_a), veh/h	416	0	740				1259	2020	1034	327	2318	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	0.67	0.67	1.00
Upstream Filter(I)	1.00	0.00	1.00				1.00	1.00	1.00	0.58	0.58	0.00
Uniform Delay (d), s/veh	31.2	0.0	34.5				7.7	7.7	10.6	43.0	16.4	0.0
Incr Delay (d2), s/veh	3.7	0.0	45.4				1.1	0.7	4.8	37.2	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
%ile BackOfQ(95%),veh/ln	9.3	0.0	18.4				8.4	6.9	14.8	8.3	15.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.0	0.0	79.9				8.9	8.5	15.4	80.3	17.1	0.0
LnGrp LOS	C	A	F				A	A	B	F	B	A
Approach Vol, veh/h	1046						2240			1724		
Approach Delay, s/veh	68.2						10.9			29.1		
Approach LOS	E						B			C		
Timer - Assigned Phs	2			4			6					
Phs Duration (G+Y+Rc), s	63.8			26.2			63.8					
Change Period (Y+Rc), s	* 5.1			* 5.2			* 5.1					
Max Green Setting (Gmax), s	* 59			* 21			* 59					
Max Q Clear Time (g_c+I1), s	31.4			23.0			60.7					
Green Ext Time (p_c), s	16.4			0.0			0.0					

Intersection Summary

HCM 6th Ctrl Delay	29.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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

Queues

8: Laurel Canyon Boulevard & Landale Street

06/24/2024



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	204	187	58	89	78	2004	67	1750	121
v/c Ratio	0.96	0.68	0.42	0.26	0.32	0.97	0.76	1.07	0.27
Control Delay	94.5	28.2	46.1	1.9	20.0	19.9	60.6	60.6	10.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	8.2	0.0	0.0	0.0
Total Delay	94.5	28.2	46.1	1.9	20.0	28.1	60.6	60.6	10.2
Queue Length 50th (ft)	123	36	31	0	12	~257	24	~666	22
Queue Length 95th (ft)	#266	#129	68	0	m9	m107	m#79	#833	m58
Internal Link Dist (ft)		140	232			591		375	
Turn Bay Length (ft)	85			40	155		125		115
Base Capacity (vph)	212	276	171	380	286	2067	88	1639	453
Starvation Cap Reductn	0	0	0	0	0	86	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.68	0.34	0.23	0.27	1.01	0.76	1.07	0.27

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

8: Laurel Canyon Boulevard & Landale Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	224	11	125	33	20	82	72	1823	20	62	1610	111
Future Volume (vph)	224	11	125	33	20	82	72	1823	20	62	1610	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.86			1.00	1.00	1.00	1.00		1.00	1.00	0.62
Flpb, ped/bikes	1.00	1.00			0.88	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.89			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.99			0.97	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1339			1592	1583	1770	3530		1770	3539	979
Flt Permitted	0.95	0.99			0.70	1.00	0.09	1.00		0.10	1.00	1.00
Satd. Flow (perm)	1681	1339			1148	1583	166	3530		189	3539	979
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)	243	12	136	36	22	89	78	1982	22	67	1750	121
RTOR Reduction (vph)	0	107	0	0	0	80	0	1	0	0	0	0
Lane Group Flow (vph)	204	80	0	0	58	9	78	2003	0	67	1750	121
Confl. Peds. (#/hr)			79	79			164		19	19		164
Turn Type	Split	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	3	3			4		1	6			2	
Permitted Phases				4		4	6			2		2
Actuated Green, G (s)	11.4	11.4			8.6	8.6	51.5	51.5		39.4	39.4	39.4
Effective Green, g (s)	11.4	11.4			8.6	8.6	51.5	51.5		39.4	39.4	39.4
Actuated g/C Ratio	0.13	0.13			0.10	0.10	0.57	0.57		0.44	0.44	0.44
Clearance Time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	5.2		4.5	4.5	4.5
Lane Grp Cap (vph)	212	169			109	151	214	2019		82	1549	428
v/s Ratio Prot	c0.12	0.06					0.03	c0.57			c0.49	
v/s Ratio Perm					c0.05	0.01	0.18			0.35		0.12
v/c Ratio	0.96	0.48			0.53	0.06	0.36	0.99		0.82	1.13	0.28
Uniform Delay, d1	39.1	36.5			38.8	37.0	18.3	19.0		22.1	25.3	16.2
Progression Factor	1.00	1.00			1.00	1.00	2.01	0.81		0.51	0.55	0.47
Incremental Delay, d2	50.8	2.1			4.9	0.2	0.1	4.5		45.3	64.9	1.2
Delay (s)	89.9	38.6			43.7	37.2	36.8	19.9		56.5	78.8	8.9
Level of Service	F	D			D	D	D	B		E	E	A
Approach Delay (s)		65.4			39.7			20.6			73.6	
Approach LOS		E			D			C			E	
Intersection Summary												
HCM 2000 Control Delay			47.6		HCM 2000 Level of Service					D		
HCM 2000 Volume to Capacity ratio			1.05									
Actuated Cycle Length (s)			90.0		Sum of lost time (s)					23.9		
Intersection Capacity Utilization			94.9%		ICU Level of Service					F		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

9: Colfax Avenue & Sarah Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↑	↕
Traffic Volume (veh/h)	15	2	6	8	1	34	7	804	20	40	756	16
Future Volume (veh/h)	15	2	6	8	1	34	7	804	20	40	756	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.99	0.98		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	16	2	7	9	1	37	8	874	22	43	822	17
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	152	25	31	86	9	85	420	1301	1099	288	1301	1099
Arrive On Green	0.07	0.07	0.07	0.07	0.07	0.07	0.23	0.23	0.23	0.70	0.70	0.70
Sat Flow, veh/h	775	361	442	208	123	1226	655	1870	1579	621	1870	1579
Grp Volume(v), veh/h	25	0	0	47	0	0	8	874	22	43	822	17
Grp Sat Flow(s),veh/h/ln	1577	0	0	1557	0	0	655	1870	1579	621	1870	1579
Q Serve(g_s), s	0.0	0.0	0.0	0.5	0.0	0.0	0.6	25.5	0.6	3.3	14.3	0.2
Cycle Q Clear(g_c), s	0.8	0.0	0.0	1.7	0.0	0.0	14.9	25.5	0.6	28.8	14.3	0.2
Prop In Lane	0.64		0.28	0.19		0.79	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	208	0	0	179	0	0	420	1301	1099	288	1301	1099
V/C Ratio(X)	0.12	0.00	0.00	0.26	0.00	0.00	0.02	0.67	0.02	0.15	0.63	0.02
Avail Cap(c_a), veh/h	603	0	0	601	0	0	420	1301	1099	288	1301	1099
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.79	0.79	0.79	0.68	0.68	0.68
Uniform Delay (d), s/veh	26.4	0.0	0.0	26.8	0.0	0.0	18.9	16.9	7.3	17.2	5.0	2.8
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.8	0.0	0.0	0.1	2.2	0.0	0.7	1.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	0.0	0.0	1.2	0.0	0.0	0.2	18.3	0.2	0.9	6.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.6	0.0	0.0	27.5	0.0	0.0	19.0	19.1	7.3	17.9	6.6	2.8
LnGrp LOS	C	A	A	C	A	A	B	B	A	B	A	A
Approach Vol, veh/h	25			47			904			882		
Approach Delay, s/veh	26.6			27.5			18.8			7.0		
Approach LOS	C			C			B			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	46.5			13.5			46.5			13.5		
Change Period (Y+Rc), s	4.8			* 9.3			4.8			* 9.3		
Max Green Setting (Gmax), s	25.2			* 21			25.2			* 21		
Max Q Clear Time (g_c+I1), s	27.5			2.8			30.8			3.7		
Green Ext Time (p_c), s	0.0			0.1			0.0			0.2		

Intersection Summary

HCM 6th Ctrl Delay	13.5
HCM 6th LOS	B

Notes

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

Queues

10: Landale Street & Colfax Avenue

06/24/2024



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	48	17	867	836	30
v/c Ratio	0.19	0.05	0.60	0.58	0.02
Control Delay	17.2	4.8	8.3	4.2	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.2	4.8	8.3	4.2	0.2
Queue Length 50th (ft)	8	2	181	5	1
Queue Length 95th (ft)	33	8	325	405	m0
Internal Link Dist (ft)	262		575	593	
Turn Bay Length (ft)		40			80
Base Capacity (vph)	526	368	1448	1448	1234
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.09	0.05	0.60	0.58	0.02

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

10: Landale Street & Colfax Avenue

06/24/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		W	W	W	W
Traffic Volume (vph)	24	20	16	798	769	28
Future Volume (vph)	24	20	16	798	769	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	9.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1701		1770	1863	1863	1583
Flt Permitted	0.97		0.25	1.00	1.00	1.00
Satd. Flow (perm)	1701		473	1863	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	26	22	17	867	836	30
RTOR Reduction (vph)	20	0	0	0	0	5
Lane Group Flow (vph)	28	0	17	867	836	25
Turn Type	Perm		Perm	NA	NA	Perm
Protected Phases				6	2	
Permitted Phases	8		6			2
Actuated Green, G (s)	4.9		41.1	41.1	41.1	41.1
Effective Green, g (s)	4.9		41.1	41.1	41.1	41.1
Actuated g/C Ratio	0.08		0.69	0.69	0.69	0.69
Clearance Time (s)	9.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		4.9	4.9	5.3	5.3
Lane Grp Cap (vph)	138		324	1276	1276	1084
v/s Ratio Prot				c0.47	0.45	
v/s Ratio Perm	c0.02		0.04			0.02
v/c Ratio	0.20		0.05	0.68	0.66	0.02
Uniform Delay, d1	25.7		3.1	5.6	5.4	3.0
Progression Factor	1.00		1.00	1.00	0.55	0.06
Incremental Delay, d2	0.7		0.3	2.9	1.8	0.0
Delay (s)	26.4		3.4	8.5	4.8	0.2
Level of Service	C		A	A	A	A
Approach Delay (s)	26.4			8.4	4.6	
Approach LOS	C			A	A	
Intersection Summary						
HCM 2000 Control Delay			7.0		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.63			
Actuated Cycle Length (s)			60.0		Sum of lost time (s)	14.0
Intersection Capacity Utilization			60.3%		ICU Level of Service	B
Analysis Period (min)			15			










c Critical Lane Group

HCM 6th Signalized Intersection Summary

11: Whitsett Avenue & Moorpark Street

06/24/2024












Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	149	943	106	144	680	95	120	793	150	94	430	130
Future Volume (veh/h)	149	943	106	144	680	95	120	793	150	94	430	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	162	1025	115	157	739	103	130	862	163	102	467	141
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	80	850	720	80	730	102	331	1282	242	189	1159	347
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	653	1870	1585	494	1606	224	813	2982	564	550	2694	808
Grp Volume(v), veh/h	162	1025	115	157	0	842	130	514	511	102	307	301
Grp Sat Flow(s),veh/h/ln	653	1870	1585	494	0	1830	813	1777	1769	550	1777	1725
Q Serve(g_s), s	0.0	40.9	3.8	0.0	0.0	40.9	11.8	20.9	20.9	16.4	10.7	10.9
Cycle Q Clear(g_c), s	40.9	40.9	3.8	40.9	0.0	40.9	22.7	20.9	20.9	37.3	10.7	10.9
Prop In Lane	1.00		1.00	1.00		0.12	1.00		0.32	1.00		0.47
Lane Grp Cap(c), veh/h	80	850	720	80	0	832	331	764	761	189	764	742
V/C Ratio(X)	2.02	1.21	0.16	1.96	0.00	1.01	0.39	0.67	0.67	0.54	0.40	0.41
Avail Cap(c_a), veh/h	80	850	720	80	0	832	331	764	761	189	764	742
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.0	24.5	14.4	45.0	0.0	24.6	25.5	20.6	20.6	35.5	17.7	17.7
Incr Delay (d2), s/veh	502.1	103.7	0.5	475.0	0.0	34.3	3.5	4.7	4.7	10.6	1.6	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(95%),veh/ln	28.2	58.6	2.5	22.1	0.0	32.3	4.5	14.0	13.9	4.8	7.9	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	547.1	128.3	14.9	520.0	0.0	58.9	29.0	25.2	25.3	46.1	19.2	19.4
LnGrp LOS	F	F	B	F	A	F	C	C	C	D	B	B
Approach Vol, veh/h	1302					999		1155		710		
Approach Delay, s/veh	170.4					131.3		25.7		23.2		
Approach LOS	F					F		C		C		
Timer - Assigned Phs	2		4			6		8				
Phs Duration (G+Y+Rc), s	46.0		44.0			46.0		44.0				
Change Period (Y+Rc), s	5.1		5.3			5.1		5.3				
Max Green Setting (Gmax), s	40.9		38.7			40.9		38.7				
Max Q Clear Time (g_c+I1), s	42.9		39.3			42.9		24.7				
Green Ext Time (p_c), s	0.0		0.0			0.0		6.3				
Intersection Summary												
HCM 6th Ctrl Delay	95.8											
HCM 6th LOS	F											

HCM 6th Signalized Intersection Summary

12: Laurel Canyon Boulevard & Moorpark Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	329	647	136	183	516	223	208	1495	214	167	1375	305
Future Volume (veh/h)	329	647	136	183	516	223	208	1495	214	167	1375	305
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	358	703	148	199	561	242	226	1625	233	182	1495	332
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	248	825	174	276	520	581	238	900	127	238	840	181
Arrive On Green	0.09	0.28	0.28	0.03	0.09	0.09	0.09	0.29	0.29	0.12	0.38	0.38
Sat Flow, veh/h	1781	2922	615	1781	1870	1585	1781	3128	440	1781	2907	627
Grp Volume(v), veh/h	358	427	424	199	561	242	226	909	949	182	897	930
Grp Sat Flow(s),veh/h/ln	1781	1777	1760	1781	1870	1585	1781	1777	1791	1781	1777	1757
Q Serve(g_s), s	8.5	20.5	20.5	7.0	25.0	11.5	8.0	25.9	25.9	6.4	26.0	26.0
Cycle Q Clear(g_c), s	8.5	20.5	20.5	7.0	25.0	11.5	8.0	25.9	25.9	6.4	26.0	26.0
Prop In Lane	1.00		0.35	1.00		1.00	1.00		0.25	1.00		0.36
Lane Grp Cap(c), veh/h	248	501	497	276	520	581	238	511	515	238	513	508
V/C Ratio(X)	1.44	0.85	0.85	0.72	1.08	0.42	0.95	1.78	1.84	0.76	1.75	1.83
Avail Cap(c_a), veh/h	248	501	497	276	520	581	238	511	515	238	513	508
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	0.90	0.90	0.90	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	25.2	30.5	30.5	24.8	40.9	27.3	24.1	32.0	32.0	22.5	27.7	27.7
Incr Delay (d2), s/veh	220.3	13.3	13.5	8.1	60.8	0.4	44.0	357.6	386.2	1.4	336.9	375.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	29.4	15.4	15.3	6.6	29.7	8.3	10.2	95.8	103.3	3.3	81.1	88.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	245.5	43.8	44.0	32.9	101.7	27.7	68.1	389.6	418.3	23.8	364.6	402.9
LnGrp LOS	F	D	D	C	F	C	E	F	F	C	F	F
Approach Vol, veh/h	1209				1002		2084				2009	
Approach Delay, s/veh	103.6				70.2		367.8				351.5	
Approach LOS	F				E		F				F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.3	31.4	14.0	31.3	13.4	31.3	13.6	31.7				
Change Period (Y+Rc), s	5.3	* 5.4	* 5.5	6.3	* 5.4	* 5.4	* 5.5	6.3				
Max Green Setting (Gmax), s	8	* 26	* 8.5	25.0	* 8	* 26	* 8.1	25.4				
Max Q Clear Time (g_c+max), s	28.0	10.5	10.5	27.0	8.4	27.9	9.0	22.5				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5				

Intersection Summary

HCM 6th Ctrl Delay 264.6

HCM 6th LOS F

Notes









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

HCM 6th Signalized Intersection Summary

13: Moorpark Street & Radford Avenue

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	917	49	51	882	45	109	0	109	13	0	56
Future Volume (veh/h)	94	917	49	51	882	45	109	0	109	13	0	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No				No				No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	0	1870	1870	0	1870
Adj Flow Rate, veh/h	102	997	53	55	959	49	118	0	118	14	0	61
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	0	2	2	0	2
Cap, veh/h	460	2331	124	104	2735	140	151	0	0	151	0	0
Arrive On Green	1.00	1.00	1.00	0.12	1.00	1.00	0.08	0.00	0.00	0.08	0.00	0.00
Sat Flow, veh/h	559	3432	182	1781	3440	176	1781	118		1781	14	
Grp Volume(v), veh/h	102	516	534	55	495	513	118	48.8		14	38.2	
Grp Sat Flow(s),veh/h/ln	559	1777	1838	1781	1777	1839	1781	D		1781	D	
Q Serve(g_s), s	0.0	0.0	0.0	2.6	0.0	0.0	5.8			0.7		
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.6	0.0	0.0	5.8			0.7		
Prop In Lane	1.00		0.10	1.00		0.10	1.00			1.00		
Lane Grp Cap(c), veh/h	460	1207	1248	104	1413	1462	151			151		
V/C Ratio(X)	0.22	0.43	0.43	0.53	0.35	0.35	0.78			0.09		
Avail Cap(c_a), veh/h	460	1207	1248	139	1413	1462	416			151		
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00			1.00		
Upstream Filter(I)	0.43	0.43	0.43	0.53	0.53	0.53	1.00			1.00		
Uniform Delay (d), s/veh	0.0	0.0	0.0	38.6	0.0	0.0	40.4			38.0		
Incr Delay (d2), s/veh	0.5	0.5	0.5	2.2	0.4	0.4	8.4			0.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		
%ile BackOfQ(95%),veh/ln	0.1	0.3	0.3	2.1	0.3	0.3	5.2			0.5		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.5	0.5	0.5	40.8	0.4	0.4	48.8			38.2		
LnGrp LOS	A	A	A	D	A	A	D			D		
Approach Vol, veh/h	1152				1063							
Approach Delay, s/veh	0.5				2.5							
Approach LOS	A				A							
Timer - Assigned Phs	1	3		4	5			8				
Phs Duration (G+Y+Rc), s	3.0		10.4		66.5	13.0			77.0			
Change Period (Y+Rc), s	5.4		* 5.2		* 5.4	5.4			5.4			
Max Green Setting (Gmax), s	7.0		* 7		* 34	21.0			45.8			
Max Q Clear Time (g_c+I_T), s	12.5				4.6	2.0	7.8			2.0		
Green Ext Time (p_c), s	0.0				0.0	9.4	0.2			7.8		
Intersection Summary												
HCM 6th Ctrl Delay			4.0									
HCM 6th LOS			A									
Notes												

HCM 6th Signalized Intersection Summary

14: Colfax Avenue & Moorpark Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	762	166	165	638	139	166	444	211	162	478	163
Future Volume (veh/h)	106	762	166	165	638	139	166	444	211	162	478	163
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	0.99		0.95	0.99		0.94	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	115	828	180	179	693	151	180	483	229	176	520	177
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	247	1217	265	239	826	180	173	407	325	238	690	681
Arrive On Green	0.15	0.84	0.84	0.19	0.19	0.19	0.22	0.22	0.22	0.09	0.37	0.37
Sat Flow, veh/h	1781	2882	627	552	2872	625	737	1870	1493	1781	1870	1531
Grp Volume(v), veh/h	115	510	498	179	429	415	180	483	229	176	520	177
Grp Sat Flow(s), veh/h/ln	1781	1777	1732	552	1777	1720	737	1870	1493	1781	1870	1531
Q Serve(g_s), s	3.8	9.5	9.5	25.9	20.9	20.9	11.3	19.6	12.8	6.6	21.9	6.6
Cycle Q Clear(g_c), s	3.8	9.5	9.5	25.9	20.9	20.9	19.6	19.6	12.8	6.6	21.9	6.6
Prop In Lane	1.00		0.36	1.00		0.36	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	247	750	731	239	511	495	173	407	325	238	690	681
V/C Ratio(X)	0.47	0.68	0.68	0.75	0.84	0.84	1.04	1.19	0.70	0.74	0.75	0.26
Avail Cap(c_a), veh/h	254	750	731	239	511	495	173	407	325	238	690	681
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.80	0.80	0.80	1.00	1.00	1.00	1.00	1.00	1.00	0.79	0.79	0.79
Uniform Delay (d), s/veh	20.0	4.8	4.8	37.8	34.3	34.3	42.0	35.2	32.5	25.1	24.8	15.8
Incr Delay (d2), s/veh	1.1	4.0	4.1	19.2	15.1	15.6	79.9	105.9	12.1	9.2	6.0	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(95%), veh/ln	2.6	4.5	4.5	9.2	16.9	16.6	12.4	30.6	9.4	5.9	14.9	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	21.1	8.8	8.9	57.0	49.4	50.0	121.9	141.1	44.6	34.3	30.8	16.6
LnGrp LOS	C	A	A	E	D	D	F	F	D	C	C	B
Approach Vol, veh/h	1123			1023			892			873		
Approach Delay, s/veh	10.1			51.0			112.4			28.6		
Approach LOS	B			D			F			C		
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	32.1	35.3		42.6		47.4	13.6	29.0				
Change Period (Y+Rc), s	5.5	* 9.4		* 9.4		* 9.4	5.6	* 9.4				
Max Green Setting (Gmax), s	* 26			* 33		* 38	8.0	* 20				
Max Q Clear Time (g_c+I), s	27.9			23.9		11.5	8.6	21.6				
Green Ext Time (p_c), s	0.0	0.0		2.7		7.3	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	48.3
HCM 6th LOS	D

Notes

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

HCM 6th TWSC
15: Irvine Avenue & Moorpark Street























06/24/2024

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕↕				↕↕			↕			↕	
Traffic Vol, veh/h	6	1014	17	16	923	7	5	0	11	0	0	15
Future Vol, veh/h	6	1014	17	16	923	7	5	0	11	0	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	1102	18	17	1003	8	5	0	12	0	0	16
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1011	0	0	1120	0	0	1661	2170	560	1606	2175	506
Stage 1	-	-	-	-	-	-	1125	1125	-	1041	1041	-
Stage 2	-	-	-	-	-	-	536	1045	-	565	1134	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	681	-	-	619	-	-	64	46	472	70	46	512
Stage 1	-	-	-	-	-	-	218	278	-	246	305	-
Stage 2	-	-	-	-	-	-	496	304	-	477	276	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	681	-	-	619	-	-	58	42	472	64	42	512
Mov Cap-2 Maneuver	-	-	-	-	-	-	58	42	-	64	42	-
Stage 1	-	-	-	-	-	-	212	270	-	239	286	-
Stage 2	-	-	-	-	-	-	450	285	-	452	269	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.5			33			12.3		
HCM LOS							D			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	146	681	-	-	619	-	-	512				
HCM Lane V/C Ratio	0.119	0.01	-	-	0.028	-	-	0.032				
HCM Control Delay (s)	33	10.3	0.1	-	11	0.3	-	12.3				
HCM Lane LOS	D	B	A	-	B	A	-	B				
HCM 95th %tile Q(veh)	0.4	0	-	-	0.1	-	-	0.1				

HCM 6th Signalized Intersection Summary

16: Tujunga Avenue & Moorpark Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	249	833	95	100	619	72	94	482	107	102	265	102
Future Volume (veh/h)	249	833	95	100	619	72	94	482	107	102	265	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	271	905	103	109	673	78	102	524	116	111	288	111
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	356	1659	189	290	1656	192	300	681	577	172	436	370
Arrive On Green	0.69	0.69	0.69	0.52	0.52	0.52	0.07	0.36	0.36	0.23	0.23	0.23
Sat Flow, veh/h	712	3215	366	559	3209	372	1781	1870	1585	789	1870	1585
Grp Volume(v), veh/h	271	500	508	109	372	379	102	524	116	111	288	111
Grp Sat Flow(s),veh/h/ln	712	1777	1804	559	1777	1803	1781	1870	1585	789	1870	1585
Q Serve(g_s), s	33.7	12.7	12.7	13.6	11.5	11.6	3.7	22.3	4.5	10.5	12.6	5.2
Cycle Q Clear(g_c), s	45.2	12.7	12.7	26.3	11.5	11.6	3.7	22.3	4.5	21.0	12.6	5.2
Prop In Lane	1.00		0.20	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	356	917	931	290	917	931	300	681	577	172	436	370
V/C Ratio(X)	0.76	0.55	0.55	0.38	0.41	0.41	0.34	0.77	0.20	0.65	0.66	0.30
Avail Cap(c_a), veh/h	356	917	931	290	917	931	311	692	586	172	436	370
HCM Platoon Ratio	1.33	1.33	1.33	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	0.90	0.90	0.90	0.55	0.55	0.55
Uniform Delay (d), s/veh	19.6	8.8	8.8	21.8	13.3	13.3	22.9	25.3	19.6	40.7	31.3	28.4
Incr Delay (d2), s/veh	14.3	2.3	2.3	3.7	1.3	1.3	0.6	4.7	0.2	4.6	2.0	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(95%),veh/ln	9.8	7.5	7.6	3.6	8.1	8.2	2.8	15.2	2.9	4.6	8.6	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.9	11.1	11.1	25.5	14.7	14.7	23.5	30.0	19.8	45.2	33.3	28.7
LnGrp LOS	C	B	B	C	B	B	C	C	B	D	C	C
Approach Vol, veh/h	1279			860			742			510		
Approach Delay, s/veh	16.0			16.0			27.5			34.9		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	2		3	4		6		8				
Phs Duration (G+Y+Rc), s	51.8		11.8	26.4		51.8		38.2				
Change Period (Y+Rc), s	* 5.4		* 5.3	* 5.4		* 5.4		* 5.4				
Max Green Setting (Gmax), s	* 46		* 7	* 21		* 46		* 33				
Max Q Clear Time (g_c+I1), s	28.3		5.7	23.0		47.2		24.3				
Green Ext Time (p_c), s	7.6		0.0	0.0		0.0		2.5				
Intersection Summary												
HCM 6th Ctrl Delay	21.4											
HCM 6th LOS	C											
Notes												

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

HCM 6th Signalized Intersection Summary

17: Woodbridge Street & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↕	
Traffic Volume (veh/h)	11	8	20	17	10	64	20	629	30	45	383	37
Future Volume (veh/h)	11	8	20	17	10	64	20	629	30	45	383	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	12	9	22	18	11	70	22	684	33	49	416	40
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	75	48	75	64	24	98	835	1509	1279	591	1356	130
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.81	0.81	0.81	1.00	1.00	1.00
Sat Flow, veh/h	278	552	869	189	279	1131	935	1870	1585	734	1680	162
Grp Volume(v), veh/h	43	0	0	99	0	0	22	684	33	49	0	456
Grp Sat Flow(s), veh/h/ln	1699	0	0	1599	0	0	935	1870	1585	734	0	1841
Q Serve(g_s), s	0.0	0.0	0.0	2.8	0.0	0.0	0.4	10.0	0.4	0.9	0.0	0.0
Cycle Q Clear(g_c), s	2.1	0.0	0.0	5.4	0.0	0.0	0.4	10.0	0.4	10.9	0.0	0.0
Prop In Lane	0.28		0.51	0.18		0.71	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	198	0	0	185	0	0	835	1509	1279	591	0	1486
V/C Ratio(X)	0.22	0.00	0.00	0.53	0.00	0.00	0.03	0.45	0.03	0.08	0.00	0.31
Avail Cap(c_a), veh/h	509	0	0	501	0	0	835	1509	1279	591	0	1486
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.67	0.67	0.67	0.73	0.00	0.73
Uniform Delay (d), s/veh	38.5	0.0	0.0	40.0	0.0	0.0	1.7	2.6	1.7	0.8	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	2.4	0.0	0.0	0.0	0.7	0.0	0.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	0.0	0.0	4.1	0.0	0.0	0.1	3.8	0.1	0.1	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.1	0.0	0.0	42.4	0.0	0.0	1.8	3.3	1.7	1.0	0.0	0.4
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	43			99			739			505		
Approach Delay, s/veh	39.1			42.4			3.2			0.4		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	77.1			12.9			77.1			12.9		
Change Period (Y+Rc), s	* 4.5			* 5.1			* 4.5			* 5.1		
Max Green Setting (Gmax), s	* 55			* 26			* 55			* 26		
Max Q Clear Time (g_c+I1), s	12.9			4.1			12.0			7.4		
Green Ext Time (p_c), s	7.7			0.2			13.4			0.5		

Intersection Summary

HCM 6th Ctrl Delay	6.1
HCM 6th LOS	A

Notes

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

Queues

18: Whitsett Avenue & Ventura Boulevard

06/24/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	297	1292	253	41	1328	382	102	219	336	183	252
v/c Ratio	0.77	0.70	0.28	0.37	1.29	0.67	0.62	0.69	0.70	0.58	0.26
Control Delay	39.0	21.8	7.0	28.0	160.0	14.5	53.6	48.8	48.9	44.8	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.0	21.8	7.0	28.0	160.0	14.5	53.6	48.8	48.9	44.8	9.2
Queue Length 50th (ft)	129	316	30	15	-563	78	61	129	105	109	63
Queue Length 95th (ft)	#340	456	86	m23	m#624	m117	109	192	152	164	103
Internal Link Dist (ft)	1429			2938			634			1297	
Turn Bay Length (ft)	95		135	145		60	60		220		65
Base Capacity (vph)	387	1848	901	111	1030	569	231	438	517	441	947
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.70	0.28	0.37	1.29	0.67	0.44	0.50	0.65	0.41	0.27

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
























Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

18: Whitsett Avenue & Ventura Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	273	1189	233	38	1222	351	94	177	25	309	168	232
Future Volume (vph)	273	1189	233	38	1222	351	94	177	25	309	168	232
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	5.4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1828		3433	1863	1583
Flt Permitted	0.12	1.00	1.00	0.21	1.00	1.00	0.53	1.00		0.95	1.00	1.00
Satd. Flow (perm)	216	3539	1583	386	3539	1583	978	1828		3433	1863	1583
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)	297	1292	253	41	1328	382	102	192	27	336	183	252
RTOR Reduction (vph)	0	0	75	0	0	109	0	6	0	0	0	10
Lane Group Flow (vph)	297	1292	178	41	1328	273	102	213	0	336	183	242
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Prot	NA	custom
Protected Phases	1	6			2			4		3	8	1 3
Permitted Phases	6		6	2		2	4					8
Actuated Green, G (s)	52.2	52.2	52.2	29.1	29.1	29.1	17.0	17.0		14.1	17.0	54.2
Effective Green, g (s)	52.2	52.2	52.2	29.1	29.1	29.1	17.0	17.0		14.1	17.0	54.2
Actuated g/C Ratio	0.52	0.52	0.52	0.29	0.29	0.29	0.17	0.17		0.14	0.17	0.54
Clearance Time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	
Vehicle Extension (s)	3.0	4.9	4.9	4.7	4.7	4.7	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	387	1847	826	112	1029	460	166	310		484	316	857
v/s Ratio Prot	0.14	c0.37			c0.38			c0.12		c0.10	0.10	0.10
v/s Ratio Perm	0.26		0.11	0.11		0.17	0.10					0.05
v/c Ratio	0.77	0.70	0.22	0.37	1.29	0.59	0.61	0.69		0.69	0.58	0.28
Uniform Delay, d1	24.7	18.0	12.9	28.1	35.5	30.4	38.5	39.0		40.9	38.2	12.4
Progression Factor	1.00	1.00	1.00	0.75	0.71	0.59	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	8.8	2.2	0.6	5.0	134.9	3.1	6.6	6.2		4.3	2.6	0.2
Delay (s)	33.5	20.2	13.5	26.2	159.9	21.0	45.1	45.2		45.2	40.8	12.6
Level of Service	C	C	B	C	F	C	D	D		D	D	B
Approach Delay (s)		21.4			126.5			45.2			33.5	
Approach LOS		C			F			D			C	
Intersection Summary												
HCM 2000 Control Delay			64.3									
HCM 2000 Volume to Capacity ratio			0.94									
Actuated Cycle Length (s)			100.0									
Intersection Capacity Utilization			87.0%									
Analysis Period (min)			15									
c Critical Lane Group												

Queues

19: Laurel Canyon Boulevard & Ventura Place

06/24/2024



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	203	83	389	34	1385	37	128	1550
v/c Ratio	1.80	0.37	1.18	0.19	0.71	0.04	1.16	0.67
Control Delay	419.6	45.5	129.8	29.6	24.8	0.5	166.9	24.0
Queue Delay	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0
Total Delay	419.6	45.5	129.8	29.6	29.1	0.5	166.9	24.0
Queue Length 50th (ft)	~194	49	~189	18	467	0	~106	305
Queue Length 95th (ft)	#339	97	#376	m23	m468	m0	#224	365
Internal Link Dist (ft)	123	395			458			232
Turn Bay Length (ft)			380	105		85	55	
Base Capacity (vph)	113	224	330	177	1942	930	110	2319
Starvation Cap Reductn	0	0	0	0	472	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.80	0.37	1.18	0.19	0.94	0.04	1.16	0.67

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.


















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

19: Laurel Canyon Boulevard & Ventura Place

06/24/2024













													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	117	45	25	46	30	358	31	1274	34	118	1342	84	
Future Volume (vph)	117	45	25	46	30	358	31	1274	34	118	1342	84	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		9.4				9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Lane Util. Factor		1.00				1.00	1.00	1.00	0.95	1.00	1.00	0.91	
Frbp, ped/bikes		1.00				1.00	0.87	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes		0.90				1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.98				1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.97				0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1605				1808	1380	1770	3539	1550	1768	5041	
Flt Permitted		0.76				0.97	1.00	0.95	1.00	1.00	0.13	1.00	
Satd. Flow (perm)		1259				1808	1380	1770	3539	1550	242	5041	
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)	127	49	27	50	33	389	34	1385	37	128	1459	91	
RTOR Reduction (vph)	0	5	0	0	0	159	0	0	17	0	6	0	
Lane Group Flow (vph)	0	198	0	0	83	230	34	1385	20	128	1544	0	
Confl. Peds. (#/hr)	49						49		5		5		
Turn Type	Perm	NA		Split		NA	Perm	Prot	NA	Perm	Perm	NA	
Protected Phases	3		4		4	1		6		2			
Permitted Phases	3						4		6		2		
Actuated Green, G (s)	8.6						12.4	12.4	6.0	54.9	54.9	43.9	43.9
Effective Green, g (s)	8.6						12.4	12.4	6.0	54.9	54.9	43.9	43.9
Actuated g/C Ratio	0.09						0.12	0.12	0.06	0.55	0.55	0.44	0.44
Clearance Time (s)	9.4						9.6	9.6	5.0	5.1	5.1	5.1	5.1
Vehicle Extension (s)	3.0						3.0	3.0	3.0	4.8	4.8	3.1	3.1
Lane Grp Cap (vph)	108						224	171	106	1942	850	106	2212
v/s Ratio Prot					0.05		0.02		c0.39		0.31		
v/s Ratio Perm	c0.16						c0.17		0.01		c0.53		
v/c Ratio	1.83						0.37	1.34	0.32	0.71	0.02	1.21	0.70
Uniform Delay, d1	45.7						40.2	43.8	45.0	16.7	10.3	28.1	22.7
Progression Factor	1.00						1.00	1.00	0.68	1.40	1.00	1.00	1.00
Incremental Delay, d2	406.7						1.0	188.0	0.7	0.9	0.0	153.5	1.9
Delay (s)	452.4						41.3	231.8	31.5	24.3	10.3	181.6	24.5
Level of Service	F						D	F	C	C	B	F	C
Approach Delay (s)	452.4						198.3			24.1		36.5	
Approach LOS	F						F			C		D	
Intersection Summary													
HCM 2000 Control Delay	74.0			HCM 2000 Level of Service					E				
HCM 2000 Volume to Capacity ratio	1.29												
Actuated Cycle Length (s)	100.0			Sum of lost time (s)					29.1				
Intersection Capacity Utilization	91.7%			ICU Level of Service					F				
Analysis Period (min)	15												
c Critical Lane Group													

HCM 6th Signalized Intersection Summary

20: Laurel Canyon Boulevard & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	745	292	268	780	206	508	970	271	306	875	240
Future Volume (veh/h)	213	745	292	268	780	206	508	970	271	306	875	240
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.93	0.99		0.93	1.00		0.97	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	232	810	317	291	848	224	552	1054	295	333	951	261
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	258	1034	656	283	1034	583	498	1052	453	339	888	514
Arrive On Green	0.17	0.58	0.58	0.09	0.29	0.29	0.14	0.30	0.30	0.03	0.08	0.08
Sat Flow, veh/h	1781	3554	1471	1781	3554	1471	3456	3554	1532	3456	3554	1522
Grp Volume(v), veh/h	232	810	317	291	848	224	552	1054	295	333	951	261
Grp Sat Flow(s),veh/h/ln	1781	1777	1471	1781	1777	1471	1728	1777	1532	1728	1777	1522
Q Serve(g_s), s	8.4	17.5	3.1	8.6	22.2	11.0	14.4	29.6	16.8	9.6	25.0	7.9
Cycle Q Clear(g_c), s	8.4	17.5	3.1	8.6	22.2	11.0	14.4	29.6	16.8	9.6	25.0	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	258	1034	656	283	1034	583	498	1052	453	339	888	514
V/C Ratio(X)	0.90	0.78	0.48	1.03	0.82	0.38	1.11	1.00	0.65	0.98	1.07	0.51
Avail Cap(c_a), veh/h	258	1034	656	283	1034	583	498	1052	453	339	888	514
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	0.65	0.65	0.65	0.71	0.71	0.71	0.09	0.09	0.09	0.69	0.69	0.69
Uniform Delay (d), s/veh	26.5	18.5	3.8	30.7	33.0	22.0	42.8	35.2	30.7	48.3	45.9	12.4
Incr Delay (d2), s/veh	23.0	3.9	1.7	53.0	5.3	1.4	52.3	8.8	0.4	36.2	46.3	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.0	8.1	2.6	10.6	14.4	6.6	11.8	15.4	7.3	9.4	24.2	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.4	22.4	5.5	83.7	38.3	23.4	95.1	44.0	31.1	84.5	92.1	14.4
LnGrp LOS	D	C	A	F	D	C	F	F	C	F	F	B
Approach Vol, veh/h	1359			1363			1901			1545		
Approach Delay, s/veh	23.1			45.5			56.8			77.3		
Approach LOS	C			D			E			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	34.0	35.4	20.0	30.6	14.0	35.4	15.4	35.2				
Change Period (Y+Rc), s	5.4	6.3	5.6	5.6	5.6	6.3	5.6	5.6				
Max Green Setting (Gmax), s	30.6	29.1	14.4	25.0	8.4	29.1	9.8	29.6				
Max Q Clear Time (g_c+T0), s	19.5	19.5	16.4	27.0	10.4	24.2	11.6	31.6				
Green Ext Time (p_c), s	0.0	7.2	0.0	0.0	0.0	3.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 52.0

HCM 6th LOS D

Notes

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

Queues

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Lane Group	EBL	EBT	WBL	WBT	WBR2	NBT	NBR	SBL	SBT	SBR2
Lane Group Flow (vph)	241	1423	126	1258	109	70	89	122	211	208
v/c Ratio	0.42	0.83	1.24	1.71	0.38	0.24	0.22	0.61	1.45	1.89
Control Delay	10.9	7.9	217.1	358.3	51.7	53.4	1.3	73.1	277.5	465.2
Queue Delay	72.9	48.5	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	83.8	56.4	217.1	362.1	51.7	53.4	1.3	73.1	277.5	465.2
Queue Length 50th (ft)	158	254	~141	~884	86	56	0	108	~268	~294
Queue Length 95th (ft)	m89	m1	#277	#1025	146	105	0	#181	#434	#459
Internal Link Dist (ft)		48		634		66			226	
Turn Bay Length (ft)	90		95		55		30	90		90
Base Capacity (vph)	580	1746	102	736	287	308	405	201	146	110
Starvation Cap Reductn	453	637	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	288	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.90	1.28	1.24	2.81	0.38	0.23	0.22	0.61	1.45	1.89

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

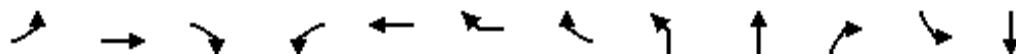
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	222	1289	20	116	1058	99	100	51	14	82	112	22
Future Volume (vph)	222	1289	20	116	1058	99	100	51	14	82	112	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.7		4.9	6.1		6.1		6.9	6.9	7.0	7.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		0.85		1.00	0.85	1.00	0.82
Flpb, ped/bikes	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	0.99		0.85		1.00	0.85	1.00	0.87
Flt Protected	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (prot)	1770	3525		1770	3448		1344		1792	1352	1770	1322
Flt Permitted	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (perm)	1770	3525		1770	3448		1344		1792	1352	1770	1322
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)	241	1401	22	126	1150	108	109	55	15	89	122	24
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	74	0	0
Lane Group Flow (vph)	241	1422	0	126	1258	0	109	0	70	15	122	211
Confl. Peds. (#/hr)	42		32	32		42	42	75		75	75	
Turn Type	Prot	NA		Prot	NA		Perm	Split	NA	Perm	Split	NA
Protected Phases	1 3	3 6		5	2			7	7		8	8
Permitted Phases							2			7		
Actuated Green, G (s)	45.4	68.4		8.1	29.9		29.9		23.0	23.0	16.0	16.0
Effective Green, g (s)	45.4	62.3		8.1	29.9		29.9		23.0	23.0	16.0	16.0
Actuated g/C Ratio	0.32	0.44		0.06	0.21		0.21		0.16	0.16	0.11	0.11
Clearance Time (s)				4.9	6.1		6.1		6.9	6.9	7.0	7.0
Vehicle Extension (s)				3.0	4.8		4.8		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	573	1568		102	736		287		294	222	202	151
v/s Ratio Prot	0.14	c0.40		0.07	c0.36				c0.04		0.07	0.16
v/s Ratio Perm							0.08			0.01		
v/c Ratio	0.42	0.91		1.24	1.71		0.38		0.24	0.07	0.60	1.40
Uniform Delay, d1	37.0	36.1		66.0	55.0		47.1		50.9	49.4	59.0	62.0
Progression Factor	0.28	0.24		1.00	1.00		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0	0.8		165.2	324.9		3.8		0.4	0.1	5.0	213.9
Delay (s)	10.5	9.6		231.2	380.0		50.9		51.3	49.5	64.0	275.9
Level of Service	B	A		F	F		D		D	D	E	F
Approach Delay (s)		9.7			343.4				50.3			287.7
Approach LOS		A			F				D			F

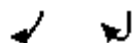
Intersection Summary

HCM 2000 Control Delay	179.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	31.8
Intersection Capacity Utilization	101.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Movement	SBR	SBR2
Lane Configurations		
Traffic Volume (vph)	172	191
Future Volume (vph)	172	191
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		7.0
Lane Util. Factor		1.00
Frpb, ped/bikes		0.66
Flpb, ped/bikes		1.00
Frt		0.85
Flt Protected		1.00
Satd. Flow (prot)		1043
Flt Permitted		1.00
Satd. Flow (perm)		1043
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	187	208
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	208
Confl. Peds. (#/hr)	75	75
Turn Type		Perm
Protected Phases		
Permitted Phases		8
Actuated Green, G (s)		16.0
Effective Green, g (s)		16.0
Actuated g/C Ratio		0.11
Clearance Time (s)		7.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)		119
v/s Ratio Prot		
v/s Ratio Perm		c0.20
v/c Ratio		1.75
Uniform Delay, d1		62.0
Progression Factor		1.00
Incremental Delay, d2		368.8
Delay (s)		430.8
Level of Service		F
Approach Delay (s)		
Approach LOS		
Intersection Summary		

HCM 6th Signalized Intersection Summary

22: Carpenter Avenue & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	1245	87	212	1111	101	82	26	180	145	40	226
Future Volume (veh/h)	132	1245	87	212	1111	101	82	26	180	145	40	226
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	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	143	1353	95	230	1208	110	89	28	196	158	43	246
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	171	1315	92	239	1410	128	46	20	34	196	36	375
Arrive On Green	0.10	0.39	0.39	0.04	0.14	0.14	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3355	235	1781	3279	298	0	84	141	548	149	1557
Grp Volume(v), veh/h	143	714	734	230	653	665	313	0	0	201	0	246
Grp Sat Flow(s),veh/h/ln	1781	1777	1813	1781	1777	1800	226	0	0	697	0	1557
Q Serve(g_s), s	7.9	39.2	39.2	12.9	35.9	36.1	0.0	0.0	0.0	0.0	0.0	14.2
Cycle Q Clear(g_c), s	7.9	39.2	39.2	12.9	35.9	36.1	24.1	0.0	0.0	24.1	0.0	14.2
Prop In Lane	1.00		0.13	1.00		0.17	0.28		0.63	0.79		1.00
Lane Grp Cap(c), veh/h	171	697	711	239	764	774	101	0	0	232	0	375
V/C Ratio(X)	0.84	1.03	1.03	0.96	0.85	0.86	3.11	0.00	0.00	0.87	0.00	0.66
Avail Cap(c_a), veh/h	171	697	711	239	764	774	101	0	0	232	0	375
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.54	0.54	0.54	0.09	0.09	0.09	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.4	30.4	30.4	47.5	39.9	39.9	37.9	0.0	0.0	39.9	0.0	34.2
Incr Delay (d2), s/veh	17.4	31.6	33.6	10.4	1.2	1.3	975.7	0.0	0.0	27.2	0.0	4.1
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(95%),veh/ln	6.7	28.1	29.2	8.1	19.3	19.6	51.1	0.0	0.0	11.1	0.0	9.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.9	62.0	64.0	57.9	41.1	41.2	1013.5	0.0	0.0	67.1	0.0	38.3
LnGrp LOS	E	F	F	E	D	D	F	A	A	E	A	D
Approach Vol, veh/h	1591			1548			313			447		
Approach Delay, s/veh	62.9			43.6			1013.5			51.2		
Approach LOS	E			D			F			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	48.0	48.4		33.6	14.2	52.2		33.6				
Change Period (Y+Rc), s	4.6	* 9.2		9.5	4.6	* 9.2		9.5				
Max Green Setting (Gmax), s	43.4	* 39		24.1	9.6	* 43		24.1				
Max Q Clear Time (g_c+M), s	41.2	41.2		26.1	9.9	38.1		26.1				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	4.4		0.0				

Intersection Summary

HCM 6th Ctrl Delay 130.2

HCM 6th LOS F

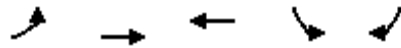
Notes

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

Queues

23: Ventura Boulevard & Colfax Avenue

06/24/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	387	1340	1440	437	379
v/c Ratio	0.76	0.64	1.48	0.82	0.35
Control Delay	16.0	7.7	242.6	45.3	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	7.7	242.6	45.3	2.3
Queue Length 50th (ft)	99	215	~658	253	7
Queue Length 95th (ft)	m143	m411	#796	352	43
Internal Link Dist (ft)		981	464		
Turn Bay Length (ft)	160			360	360
Base Capacity (vph)	511	2089	975	549	1093
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.76	0.64	1.48	0.80	0.35

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.



















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

23: Ventura Boulevard & Colfax Avenue

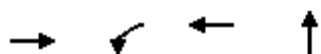
06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	356	1233	0	0	1009	316	0	0	0	402	0	349
Future Volume (vph)	356	1233	0	0	1009	316	0	0	0	402	0	349
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.4			5.4					5.4		5.7
Lane Util. Factor	1.00	0.95			0.95					1.00		1.00
Frt	1.00	1.00			0.96					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1770	3539			3413					1770		1583
Flt Permitted	0.12	1.00			1.00					0.95		1.00
Satd. Flow (perm)	217	3539			3413					1770		1583
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)	387	1340	0	0	1097	343	0	0	0	437	0	379
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	158
Lane Group Flow (vph)	387	1340	0	0	1440	0	0	0	0	437	0	221
Turn Type	pm+pt	NA			NA					pm+pt		pm+ov
Protected Phases	5	2			6			3		4		5
Permitted Phases	2						3			7		4
Actuated Green, G (s)	59.0	59.0			28.6					30.2		54.9
Effective Green, g (s)	59.0	59.0			28.6					30.2		54.9
Actuated g/C Ratio	0.59	0.59			0.29					0.30		0.55
Clearance Time (s)	5.7	5.4			5.4					5.4		5.7
Vehicle Extension (s)	3.0	4.3			4.5					3.0		3.0
Lane Grp Cap (vph)	511	2088			976					534		869
v/s Ratio Prot	c0.19	0.38			c0.42					c0.25		0.06
v/s Ratio Perm	0.26											0.08
v/c Ratio	0.76	0.64			1.48					0.82		0.25
Uniform Delay, d1	24.5	13.5			35.7					32.4		11.8
Progression Factor	0.48	0.50			0.63					1.00		1.00
Incremental Delay, d2	1.6	0.4			218.6					9.5		0.2
Delay (s)	13.3	7.1			240.9					41.8		12.0
Level of Service	B	A			F					D		B
Approach Delay (s)		8.5			240.9			0.0			28.0	
Approach LOS		A			F			A			C	
Intersection Summary												
HCM 2000 Control Delay		96.5			HCM 2000 Level of Service			F				
HCM 2000 Volume to Capacity ratio		1.11										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)			22.8				
Intersection Capacity Utilization		92.6%			ICU Level of Service			F				
Analysis Period (min)		15										
c Critical Lane Group												

Queues

24: Berry Drive & Ventura Boulevard

06/24/2024



Lane Group	EBT	WBL	WBT	NBT
Lane Group Flow (vph)	1896	58	1659	100
v/c Ratio	0.65	0.44	0.57	0.43
Control Delay	5.3	18.6	5.8	10.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.3	18.6	5.8	10.9
Queue Length 50th (ft)	104	11	176	0
Queue Length 95th (ft)	136	m19	m226	34
Internal Link Dist (ft)	342		273	287
Turn Bay Length (ft)		65		
Base Capacity (vph)	2914	131	2919	391
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.65	0.44	0.57	0.26



















Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

24: Berry Drive & Ventura Boulevard

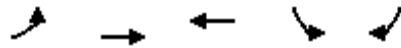
06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1724	20	53	1526	0	21	0	71	0	0	0
Future Volume (vph)	0	1724	20	53	1526	0	21	0	71	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0			9.4				
Lane Util. Factor		0.95		1.00	0.95			1.00				
Frt		1.00		1.00	1.00			0.90				
Flt Protected		1.00		0.95	1.00			0.99				
Satd. Flow (prot)		3533		1770	3539			1650				
Flt Permitted		1.00		0.09	1.00			0.99				
Satd. Flow (perm)		3533		160	3539			1650				
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)	0	1874	22	58	1659	0	23	0	77	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	94	0	0	0	0
Lane Group Flow (vph)	0	1896	0	58	1659	0	0	6	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		6			2		3	3			4	
Permitted Phases	6			2						4		
Actuated Green, G (s)		79.6		79.6	79.6			6.0				
Effective Green, g (s)		79.6		79.6	79.6			6.0				
Actuated g/C Ratio		0.80		0.80	0.80			0.06				
Clearance Time (s)		5.0		5.0	5.0			9.4				
Vehicle Extension (s)		4.9		4.0	4.0			3.0				
Lane Grp Cap (vph)		2812		127	2817			99				
v/s Ratio Prot		c0.54			0.47			c0.00				
v/s Ratio Perm				0.36								
v/c Ratio		0.67		0.46	0.59			0.06				
Uniform Delay, d1		4.5		3.3	3.9			44.3				
Progression Factor		0.93		1.77	1.29			1.00				
Incremental Delay, d2		1.0		7.9	0.6			0.3				
Delay (s)		5.2		13.7	5.7			44.6				
Level of Service		A		B	A			D				
Approach Delay (s)		5.2			5.9			44.6			0.0	
Approach LOS		A			A			D			A	
Intersection Summary												
HCM 2000 Control Delay		6.6			HCM 2000 Level of Service			A				
HCM 2000 Volume to Capacity ratio		0.71										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)			23.7				
Intersection Capacity Utilization		66.1%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

Queues

25: Ventura Boulevard & Tujunga Avenue

06/24/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	382	1436	1440	164	223
v/c Ratio	0.69	0.54	0.97	0.35	0.30
Control Delay	40.1	3.2	47.1	40.4	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	40.1	3.2	47.1	40.4	16.2
Queue Length 50th (ft)	188	88	447	49	80
Queue Length 95th (ft)	269	112	#672	76	121
Internal Link Dist (ft)		426	233	3083	
Turn Bay Length (ft)	180			100	60
Base Capacity (vph)	557	2664	1477	1012	744
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.69	0.54	0.97	0.16	0.30

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

25: Ventura Boulevard & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	351	1321	1094	231	151	205
Future Volume (vph)	351	1321	1094	231	151	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.5	5.5		5.5	5.6
Lane Util. Factor	1.00	0.95	0.95		0.97	1.00
Frt	1.00	1.00	0.97		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3447		3433	1583
Flt Permitted	0.08	1.00	1.00		0.95	1.00
Satd. Flow (perm)	155	3539	3447		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	382	1436	1189	251	164	223
RTOR Reduction (vph)	0	0	17	0	0	9
Lane Group Flow (vph)	382	1436	1423	0	164	214
Turn Type	pm+pt	NA	NA		Prot	pt+ov
Protected Phases	1	6	2		4	1 7
Permitted Phases	6					4
Actuated Green, G (s)	75.3	75.3	42.4		13.7	46.5
Effective Green, g (s)	75.3	75.3	42.4		13.7	41.0
Actuated g/C Ratio	0.75	0.75	0.42		0.14	0.41
Clearance Time (s)	5.6	5.5	5.5		5.5	
Vehicle Extension (s)	3.0	4.4	4.9		3.0	
Lane Grp Cap (vph)	557	2664	1461		470	649
v/s Ratio Prot	c0.19	0.41	c0.41		c0.05	0.13
v/s Ratio Perm	0.33					
v/c Ratio	0.69	0.54	0.97		0.35	0.33
Uniform Delay, d1	24.9	5.1	28.3		39.1	20.1
Progression Factor	1.59	0.46	1.00		1.00	1.00
Incremental Delay, d2	2.7	0.6	18.1		0.5	0.3
Delay (s)	42.4	3.0	46.4		39.6	20.4
Level of Service	D	A	D		D	C
Approach Delay (s)		11.2	46.4		28.5	
Approach LOS		B	D		C	
Intersection Summary						
HCM 2000 Control Delay			27.0		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.83			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	22.1
Intersection Capacity Utilization			79.2%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

26: Laurel Canyon Boulevard & Maxwellton Road

06/24/2024









Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Volume (veh/h)	73	0	79	0	0	0	16	1758	0	0	1250	79
Future Volume (veh/h)	73	0	79	0	0	0	16	1758	0	0	1250	79
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93				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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h	79	0	86				17	1911	0	0	1359	86
Peak Hour Factor	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	0	0	2	2
Cap, veh/h	133	0	145				48	2141	0	0	2120	134
Arrive On Green	0.17	0.00	0.17				0.62	0.62	0.00	0.00	0.62	0.62
Sat Flow, veh/h	769	0	837				12	3512	0	0	3487	214
Grp Volume(v), veh/h	165	0	0				1034	894	0	0	710	735
Grp Sat Flow(s),veh/h/ln	1606	0	0				1822	1617	0	0	1777	1831
Q Serve(g_s), s	8.5	0.0	0.0				10.3	41.8	0.0	0.0	22.5	22.7
Cycle Q Clear(g_c), s	8.5	0.0	0.0				43.2	41.8	0.0	0.0	22.5	22.7
Prop In Lane	0.48		0.52				0.02		0.00	0.00		0.12
Lane Grp Cap(c), veh/h	278	0	0				1179	1010	0	0	1110	1144
V/C Ratio(X)	0.59	0.00	0.00				0.88	0.88	0.00	0.00	0.64	0.64
Avail Cap(c_a), veh/h	442	0	0				1179	1010	0	0	1110	1144
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.38	0.38	0.00	0.00	0.18	0.18
Uniform Delay (d), s/veh	34.3	0.0	0.0				14.2	14.2	0.0	0.0	10.5	10.6
Incr Delay (d2), s/veh	2.0	0.0	0.0				3.9	4.8	0.0	0.0	0.5	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
%ile BackOfQ(95%),veh/ln	6.2	0.0	0.0				19.8	17.6	0.0	0.0	9.5	9.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.3	0.0	0.0				18.1	18.9	0.0	0.0	11.1	11.1
LnGrp LOS	D	A	A				B	B	A	A	B	B
Approach Vol, veh/h		165						1928			1445	
Approach Delay, s/veh		36.3						18.5			11.1	
Approach LOS		D						B			B	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		65.2		24.8		65.2						
Change Period (Y+Rc), s		9.0		9.2		9.0						
Max Green Setting (Gmax), s		47.0		24.8		47.0						
Max Q Clear Time (g_c+I1), s		24.7		10.5		45.2						
Green Ext Time (p_c), s		17.8		0.8		1.8						
Intersection Summary												
HCM 6th Ctrl Delay			16.3									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary

27: Laurel Canyon Boulevard & Laurel Terrace Drive/Sunshine Terrace Drive

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								 			 	
Traffic Volume (veh/h)	18	21	189	133	38	31	175	1701	224	36	1258	11
Future Volume (veh/h)	18	21	189	133	38	31	175	1701	224	36	1258	11
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	20	23	205	145	41	34	190	1849	243	39	1367	12
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	51	49	320	183	46	33	110	2196	282	107	2142	19
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.06	0.69	0.69	0.59	0.59	0.59
Sat Flow, veh/h	81	218	1424	594	206	146	1781	3167	407	197	3610	32
Grp Volume(v), veh/h	248	0	0	220	0	0	190	1019	1073	39	673	706
Grp Sat Flow(s),veh/h/ln	723	0	0	946	0	0	1781	1777	1797	197	1777	1865
Q Serve(g_s), s	0.0	0.0	0.0	10.8	0.0	0.0	7.4	49.5	54.5	22.6	29.7	29.8
Cycle Q Clear(g_c), s	16.2	0.0	0.0	27.0	0.0	0.0	7.4	49.5	54.5	65.1	29.7	29.8
Prop In Lane	0.08		0.83	0.66		0.15	1.00		0.23	1.00		0.02
Lane Grp Cap(c), veh/h	420	0	0	263	0	0	110	1232	1246	107	1054	1106
V/C Ratio(X)	0.59	0.00	0.00	0.84	0.00	0.00	1.73	0.83	0.86	0.36	0.64	0.64
Avail Cap(c_a), veh/h	420	0	0	263	0	0	110	1232	1246	107	1054	1106
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.65	0.65	0.65
Uniform Delay (d), s/veh	42.5	0.0	0.0	48.7	0.0	0.0	56.3	13.2	14.0	43.3	16.0	16.0
Incr Delay (d2), s/veh	2.2	0.0	0.0	20.6	0.0	0.0	363.5	6.5	7.9	6.1	1.9	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(95%),veh/ln	11.3	0.0	0.0	12.9	0.0	0.0	23.6	26.5	29.4	2.3	16.4	17.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.6	0.0	0.0	69.2	0.0	0.0	419.8	19.7	21.9	49.5	17.9	17.8
LnGrp LOS	D	A	A	E	A	A	F	B	C	D	B	B
Approach Vol, veh/h	248		220			2282			1418			
Approach Delay, s/veh	44.6		69.2			54.1			18.7			
Approach LOS	D		E			D			B			
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	2.0	76.0	32.0		88.0		32.0					
Change Period (Y+Rc), s	4.6	4.8	* 5		4.8		* 5					
Max Green Setting (Gmax), s	71.2	71.2	* 27		83.2		* 27					
Max Q Clear Time (g_c+I), s	19.4	67.1	18.2		56.5		29.0					
Green Ext Time (p_c), s	0.0	3.1	1.0		19.9		0.0					

Intersection Summary

HCM 6th Ctrl Delay 42.3

HCM 6th LOS D

Notes

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

Queues

28: Laurel Canyon Boulevard & Fryman Road

06/24/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	208	15	14	2087	1733
v/c Ratio	0.67	0.05	0.12	0.84	0.71
Control Delay	44.6	28.6	8.7	15.0	10.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.6	28.6	8.7	15.0	10.6
Queue Length 50th (ft)	111	7	2	385	256
Queue Length 95th (ft)	170	22	12	#685	423
Internal Link Dist (ft)				236	183
Turn Bay Length (ft)			145		
Base Capacity (vph)	542	485	116	2489	2453
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.38	0.03	0.12	0.84	0.71






















Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

28: Laurel Canyon Boulevard & Fryman Road

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								 			 	
Traffic Volume (vph)	191	0	14	0	0	0	13	1920	0	0	1401	193
Future Volume (vph)	191	0	14	0	0	0	13	1920	0	0	1401	193
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4		5.4				5.4	5.4			5.4	
Lane Util. Factor	1.00		1.00				1.00	0.95			0.95	
Frt	1.00		0.85				1.00	1.00			0.98	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	3539			3475	
Flt Permitted	0.95		1.00				0.09	1.00			1.00	
Satd. Flow (perm)	1770		1583				166	3539			3475	
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)	208	0	15	0	0	0	14	2087	0	0	1523	210
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	8	0
Lane Group Flow (vph)	208	0	15	0	0	0	14	2087	0	0	1725	0
Turn Type	Perm		Perm				Perm	NA		Perm	NA	
Protected Phases								2			6	
Permitted Phases	8		8				2			6		
Actuated Green, G (s)	15.9		15.9				63.3	63.3			63.3	
Effective Green, g (s)	15.9		15.9				63.3	63.3			63.3	
Actuated g/C Ratio	0.18		0.18				0.70	0.70			0.70	
Clearance Time (s)	5.4		5.4				5.4	5.4			5.4	
Vehicle Extension (s)	3.0		3.0				4.8	4.8			5.1	
Lane Grp Cap (vph)	312		279				116	2489			2444	
v/s Ratio Prot								c0.59			0.50	
v/s Ratio Perm	c0.12		0.01				0.08					
v/c Ratio	0.67		0.05				0.12	0.84			0.71	
Uniform Delay, d1	34.6		30.8				4.3	9.7			7.9	
Progression Factor	1.00		1.00				1.00	1.00			1.00	
Incremental Delay, d2	5.3		0.1				2.1	3.6			1.7	
Delay (s)	39.9		30.9				6.4	13.2			9.6	
Level of Service	D		C				A	B			A	
Approach Delay (s)		39.3			0.0			13.2			9.6	
Approach LOS		D			A			B			A	
Intersection Summary												
HCM 2000 Control Delay			13.1				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.80									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			10.8		
Intersection Capacity Utilization			71.5%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th TWSC
29: Laurel Canyon Boulevard & Woodbridge Street

06/24/2024

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	5	1	36	6	1	97	38	1876	23	53	1703	31
Future Vol, veh/h	5	1	36	6	1	97	38	1876	23	53	1703	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	65	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	1	39	7	1	105	41	2039	25	58	1851	34

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	3086	4130	943	3176	4135	1032	1885	0	0	2064	0	0
Stage 1	1984	1984	-	2134	2134	-	-	-	-	-	-	-
Stage 2	1102	2146	-	1042	2001	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 5	2	264	~ 4	2	230	314	-	-	267	-	-
Stage 1	63	105	-	50	88	-	-	-	-	-	-	-
Stage 2	226	87	-	246	103	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	~ 1	264	-	~ 1	230	314	-	-	267	-	-
Mov Cap-2 Maneuver	-	~ 1	-	-	~ 1	-	-	-	-	-	-	-
Stage 1	55	82	-	43	76	-	-	-	-	-	-	-
Stage 2	105	76	-	162	81	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			0.4	0.7
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	314	-	-	-	267	-	-
HCM Lane V/C Ratio	0.132	-	-	-	0.216	-	-
HCM Control Delay (s)	18.2	-	-	-	22.2	-	-
HCM Lane LOS	C	-	-	-	C	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-	0.8	-	-

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

HCM 6th TWSC
30: Valleyheart Drive (North) & Laurel Canyon Boulevard

06/24/2024

Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	2	0	35	2	0	11	34	2013	55	11	1757	6
Future Vol, veh/h	2	0	35	2	0	11	34	2013	55	11	1757	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	40	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	38	2	0	12	37	2188	60	12	1910	7

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	3106	4260	959	3271	4233	1124	1917	0	0	2248	0	0
Stage 1	1938	1938	-	2292	2292	-	-	-	-	-	-	-
Stage 2	1168	2322	-	979	1941	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	5	2	257	4	2	200	305	-	-	226	-	-
Stage 1	67	111	-	40	73	-	-	-	-	-	-	-
Stage 2	206	70	-	268	111	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	4	2	257	3	2	200	305	-	-	226	-	-
Mov Cap-2 Maneuver	4	2	-	3	2	-	-	-	-	-	-	-
Stage 1	59	105	-	35	64	-	-	-	-	-	-	-
Stage 2	170	62	-	216	105	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	153.4		\$ 426.8		0.3		0.1	
HCM LOS	F		F					





Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	305	-	-	58 18	226	-	-
HCM Lane V/C Ratio	0.121	-	-	0.693 0.785	0.053	-	-
HCM Control Delay (s)	18.4	-	-	153.4\$ 426.8	21.8	-	-
HCM Lane LOS	C	-	-	F F	C	-	-
HCM 95th %tile Q(veh)	0.4	-	-	2.9 2.1	0.2	-	-

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

HCM 6th TWSC

31: Laurel Canyon Boulevard & Valleyheart Drive (South)

06/24/2024

Intersection						
Int Delay, s/veh	18.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	140	1949	43	124	1684
Future Vol, veh/h	3	140	1949	43	124	1684
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	35	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	152	2118	47	135	1830
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	3327	1083	0	0	2165	0
Stage 1	2142	-	-	-	-	-
Stage 2	1185	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	6	213	-	-	244	-
Stage 1	76	-	-	-	-	-
Stage 2	253	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 3	213	-	-	244	-
Mov Cap-2 Maneuver	~ 3	-	-	-	-	-
Stage 1	76	-	-	-	-	-
Stage 2	113	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s\$	487.5	0		2.5		
HCM LOS	F					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	86	244	-	
HCM Lane V/C Ratio	-	-	1.807	0.552	-	
HCM Control Delay (s)	-	-\$	487.5	36.6	-	
HCM Lane LOS	-	-	F	E	-	
HCM 95th %tile Q(veh)	-	-	13.1	3	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

HCM 6th AWSC
32: Radford Avenue & Sarah Street

06/24/2024

Intersection

Intersection Delay, s/veh 7.4
Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	0	0	7	1	7	1	59	3	8	80	10
Future Vol, veh/h	6	0	0	7	1	7	1	59	3	8	80	10
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	0	0	8	1	8	1	64	3	9	87	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.6	7.2	7.4	7.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	100%	47%	8%
Vol Thru, %	94%	0%	7%	82%
Vol Right, %	5%	0%	47%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	63	6	15	98
LT Vol	1	6	7	8
Through Vol	59	0	1	80
RT Vol	3	0	7	10
Lane Flow Rate	68	7	16	107
Geometry Grp	1	1	1	1
Degree of Util (X)	0.077	0.008	0.018	0.118
Departure Headway (Hd)	4.028	4.449	4.054	3.98
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	888	795	872	900
Service Time	2.059	2.527	2.13	2.005
HCM Lane V/C Ratio	0.077	0.009	0.018	0.119
HCM Control Delay	7.4	7.6	7.2	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0	0.1	0.4

HCM 6th AWSC




51: Radford Avenue & Moorpark Gate

06/24/2024

Intersection

Intersection Delay, s/veh 7.9

Intersection LOS A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	217	0	0	98	0
Future Vol, veh/h	0	217	0	0	98	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	236	0	0	107	0
Number of Lanes	1	0	2	0	0	1




Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left NB			WB
Conflicting Lanes Left	2	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	7.7	0	8.4
HCM LOS	A	-	A

Lane	NBLn1	NBLn2	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	100%
Vol Thru, %	100%	100%	0%	0%
Vol Right, %	0%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	217	98
LT Vol	0	0	0	98
Through Vol	0	0	0	0
RT Vol	0	0	217	0
Lane Flow Rate	0	0	236	107
Geometry Grp	5	5	2	4a
Degree of Util (X)	0	0	0.231	0.138
Departure Headway (Hd)	5.016	3.346	3.52	4.648
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	1002	769
Service Time	2.79	1.046	1.604	2.689
HCM Lane V/C Ratio	0	0	0.236	0.139
HCM Control Delay	7.8	6	7.7	8.4
HCM Lane LOS	N	N	A	A
HCM 95th-tile Q	0	0	0.9	0.5

Intersection

Intersection Delay, s/veh 9.5

Intersection LOS A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	163	109	78	73	49	57
Future Vol, veh/h	163	109	78	73	49	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	177	118	85	79	53	62
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	10.1	8.7	8.9
HCM LOS	B	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	60%	46%
Vol Thru, %	52%	0%	54%
Vol Right, %	48%	40%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	151	272	106
LT Vol	0	163	49
Through Vol	78	0	57
RT Vol	73	109	0
Lane Flow Rate	164	296	115
Geometry Grp	1	1	1
Degree of Util (X)	0.204	0.367	0.157
Departure Headway (Hd)	4.483	4.465	4.912
Convergence, Y/N	Yes	Yes	Yes
Cap	799	804	728
Service Time	2.521	2.496	2.953
HCM Lane V/C Ratio	0.205	0.368	0.158
HCM Control Delay	8.7	10.1	8.9
HCM Lane LOS	A	B	A
HCM 95th-tile Q	0.8	1.7	0.6

HCM 6th AWSC

54: Radford Avenue & Radford Gate

06/24/2024

Intersection

Intersection Delay, s/veh14.7

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	0	52	131	0	0	59	253	83	0	372	5
Future Vol, veh/h	9	0	52	131	0	0	59	253	83	0	372	5
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	0	57	142	0	0	64	275	90	0	404	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.7	11.6	15.7	15.5
HCM LOS	A	B	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	15%	100%	0%
Vol Thru, %	64%	0%	0%	99%
Vol Right, %	21%	85%	0%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	395	61	131	377
LT Vol	59	9	131	0
Through Vol	253	0	0	372
RT Vol	83	52	0	5
Lane Flow Rate	429	66	142	410
Geometry Grp	1	1	1	1
Degree of Util (X)	0.606	0.109	0.252	0.591
Departure Headway (Hd)	5.085	5.901	6.366	5.189
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	708	604	562	693
Service Time	3.126	3.968	4.423	3.231
HCM Lane V/C Ratio	0.606	0.109	0.253	0.592
HCM Control Delay	15.7	9.7	11.6	15.5
HCM Lane LOS	C	A	B	C
HCM 95th-tile Q	4.1	0.4	1	3.9

Intersection

Intersection Delay, s/veh10.7

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	38	41	9	24	0	59	175	14	0	344	0
Future Vol, veh/h	0	38	41	9	24	0	59	175	14	0	344	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	41	45	10	26	0	64	190	15	0	374	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.9	9	10.2	11.7
HCM LOS	A	A	B	B




Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	24%	0%	27%	0%
Vol Thru, %	71%	48%	73%	100%
Vol Right, %	6%	52%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	248	79	33	344
LT Vol	59	0	9	0
Through Vol	175	38	24	344
RT Vol	14	41	0	0
Lane Flow Rate	270	86	36	374
Geometry Grp	1	1	1	1
Degree of Util (X)	0.35	0.122	0.056	0.473
Departure Headway (Hd)	4.677	5.121	5.574	4.555
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	766	695	637	789
Service Time	2.726	3.193	3.653	2.599
HCM Lane V/C Ratio	0.352	0.124	0.057	0.474
HCM Control Delay	10.2	8.9	9	11.7
HCM Lane LOS	B	A	A	B
HCM 95th-tile Q	1.6	0.4	0.2	2.6

HCM 6th TWSC
56: Colfax Avenue & Colfax Gate

06/24/2024

Intersection

Int Delay, s/veh 17.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	109	54	24	693	650	49
Future Vol, veh/h	109	54	24	693	650	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	118	59	26	753	707	53

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1539	734	760
Stage 1	734	-	-
Stage 2	805	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	127	420	852
Stage 1	475	-	-
Stage 2	440	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	120	420	852
Mov Cap-2 Maneuver	120	-	-
Stage 1	450	-	-
Stage 2	440	-	-

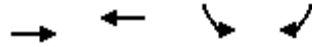
Approach	EB	NB	SB
HCM Control Delay, s	168.6	0.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	852	-	157	-	-
HCM Lane V/C Ratio	0.031	-	1.128	-	-
HCM Control Delay (s)	9.4	-	168.6	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0.1	-	9.5	-	-

Queues

121: Ventura Boulevard & Ventura PI

06/24/2024



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1470	1392	195	27
v/c Ratio	1.62	0.67	0.30	0.09
Control Delay	318.4	27.4	50.0	21.0
Queue Delay	1.9	50.7	0.0	0.0
Total Delay	320.3	78.1	50.0	21.0
Queue Length 50th (ft)	~1010	254	78	4
Queue Length 95th (ft)	#1151	m36	116	31
Internal Link Dist (ft)	509	48	136	
Turn Bay Length (ft)				40
Base Capacity (vph)	907	2092	669	326
Starvation Cap Reductn	0	1256	0	0
Spillback Cap Reductn	251	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	2.24	1.67	0.29	0.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

121: Ventura Boulevard & Ventura PI

06/24/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	↑
Traffic Volume (vph)	0	1352	1281	0	179	25
Future Volume (vph)	0	1352	1281	0	179	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.1	6.1		5.7	5.7
Lane Util. Factor		0.95	0.95		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3433	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1470	1392	0	195	27
RTOR Reduction (vph)	0	0	0	0	0	18
Lane Group Flow (vph)	0	1470	1392	0	195	9
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2 4		3	
Permitted Phases						3
Actuated Green, G (s)		35.9	82.8		26.4	26.4
Effective Green, g (s)		35.9	82.8		26.4	26.4
Actuated g/C Ratio		0.26	0.59		0.19	0.19
Clearance Time (s)		6.1			5.7	5.7
Vehicle Extension (s)		4.6			3.0	3.0
Lane Grp Cap (vph)		907	2093		647	298
v/s Ratio Prot		c0.42	c0.39		c0.06	
v/s Ratio Perm						0.01
v/c Ratio		1.62	0.67		0.30	0.03
Uniform Delay, d1		52.0	19.3		48.9	46.4
Progression Factor		1.00	1.38		1.00	1.00
Incremental Delay, d2		284.4	0.1		0.3	0.0
Delay (s)		336.5	26.6		49.1	46.4
Level of Service		F	C		D	D
Approach Delay (s)		336.5	26.6		48.8	
Approach LOS		F	C		D	
Intersection Summary						
HCM 2000 Control Delay		175.9		HCM 2000 Level of Service		F
HCM 2000 Volume to Capacity ratio		1.00				
Actuated Cycle Length (s)		140.0		Sum of lost time (s)		31.8
Intersection Capacity Utilization		53.9%		ICU Level of Service		A
Analysis Period (min)		15				
c Critical Lane Group						

Appendix G



Signal Warrant Analysis

Traffic Signal Warrants Worksheet

DATE 5/2/24 PREPARER GTC REVIEWER _____

MAJOR ST: Moorpark Street

MINOR ST: Radford Avenue

Critical Approach Speed	} 	or	Speed Limit	} 
Speed limit or critical speed on major street traffic > 40 mph.....	<input type="checkbox"/>	} RURAL (R)		<input checked="" type="checkbox"/> URBAN (U)
In built up area of isolated community of < 10,000 population.....	<input type="checkbox"/>			

Eight-Hour Vehicular Volume



N/A	<input type="checkbox"/>
SATISFIED YES	<input checked="" type="checkbox"/>
NO	<input type="checkbox"/>

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

- Condition A or Condition B or combination of 80% of both parts A and B must be satisfied.
- A 6-hour Manual Count may be used in a determination that this warrant is not met. However, supplement manual counts should be taken during separate hours for a determination that this warrant is met.
- In applying each condition, the major street and minor street volumes shall be for the same hours. On the minor street, the higher volume does not need to be the same approach during each of the hours.
- The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count.
- Figure 4C-103(CA) should be used for new intersections, significantly reconstructed intersections, where near-term land development will result in increased volumes, or where it is not reasonable to use current traffic volumes.
- Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. This site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles. Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one-lane approach with only the traffic volume in the through/left-turn lane considered.
- At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher volume of the major-street left-turn volumes plus the higher volume minor-street approach as the "minor street" volume and both approaches of the major street minus the higher of the major-street left-turn volume as "major street" volume. In these cases, engineering judgment should be used to determine if left-turn phasing is necessary to accommodate the high volume of left-turn traffic.

WARRANT 1 Eight-Hour Vehicular Volume (continued)

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

Condition A

Minimum Vehicle Volume

					SATISFIED	YES	NO
					100%	<input type="checkbox"/>	<input type="checkbox"/>
					80%	<input type="checkbox"/>	<input type="checkbox"/>

MINIMUM REQUIREMENTS (80% SHOW IN BRACKETS)					RIGHT TURN REDUCTION APPLICATION MINOR STREET (If Yes, fill in percentage)			
	U	R	U	R				
APPROACH LANES	1		2 or More					
Both Approach Major Street	500 (400)	350 (280)	600 (480)	420 (336)	8:00	15:00	16:00	17:00
Highest Approach Minor Street	150 (120)	105 (84)	200 (160)	140 (112)	1811	1878	1671	1768

Condition B

Interruption of Continuous Traffic

					SATISFIED	YES	NO
					100%	<input type="checkbox"/>	<input type="checkbox"/>
					80%	<input type="checkbox"/>	<input type="checkbox"/>

MINIMUM REQUIREMENTS (80% SHOW IN BRACKETS)					RIGHT TURN REDUCTION APPLICATION MINOR STREET (If Yes, fill in percentage)			
	U	R	U	R				
APPROACH LANES	1		2 or More					
Both Approach Major Street	750 (600)	525 (420)	900 (720)	630 (504)				
Highest Approach Minor Street	75 (60)	53 (42)	100 (80)	70 (56)				

COMBINATION OF A & B

			SATISFIED	YES	NO
			<input type="checkbox"/>	<input type="checkbox"/>	

REQUIREMENT	CONDITION	✓	FULFILLED	
			YES	NO
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME		<input type="checkbox"/>	<input type="checkbox"/>
	AND B. INTERRUPTION OF CONTINUOUS TRAFFIC		<input type="checkbox"/>	<input type="checkbox"/>
AND AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCOVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			<input type="checkbox"/>	<input type="checkbox"/>

Eight-Hour Vehicular Volume WARRANT 1 (continued)

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

Projected Volumes

Satisfied

YES

NO

☒

☐

☒

☐

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)
Based on Estimated Average Daily Traffic - see Note*

URBAN <input checked="" type="checkbox"/>	RURAL <input type="checkbox"/>	Minimum Requirements Estimated Average Daily Traffic			
CONDITION A - Minimum Vehicular Volume Satisfied <input checked="" type="checkbox"/> Not Satisfied <input type="checkbox"/>		Vehicles Per Day On Major Street (Total of Both Approaches)		Vehicles Per Day On Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
Major Street	Minor Street				
1.....	1.....	8,000	5,600	2,400	1,680
2 or More.....	1.....	9,600	6,720	2,400	1,680
2 or More.....	2 or More.....	9,600	6,720	3,200	2,240
1.....	2 or More.....	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic Satisfied <input checked="" type="checkbox"/> Not Satisfied <input type="checkbox"/>		Vehicles Per Day On Major Street (Total of Both Approaches)		Vehicles Per Day On Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
Minor Street	Minor Street				
1.....	1.....	12,000	8,400	1,200	850
2 or More.....	1.....	14,400	10,080	1,200	850
2 or More.....	2 or More.....	14,400	10,080	1,600	1,120
1.....	2 or More.....	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B Satisfied <input checked="" type="checkbox"/> Not Satisfied <input type="checkbox"/> <u>No one condition satisfied</u> , but following conditions fulfilled 80% or more..... A B		2 CONDITIONS 80%		2 CONDITIONS 80%	

* **Note:** To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes

Major Street (Moorpark Street): PM Peak Hour = 10% of ADT
ADT = 1,878 (@ 15:00 PM) / 10% = 18,780
Minor Street (Radford Avenue / Moorpark Gate): ADT = 20% x Daily Trip Gen
= 20% x 16,435 = 3,287

Four-Hour Vehicular Volume

WARRANT

2

N/A ☐
SATISFIED YES ☒

NO ☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

- a. Record hourly vehicle volumes for the highest four hours of an average day.
- b. In applying each condition, the major street and minor street volumes shall be for the same hours. On the minor street, the higher volume does not need to be the same approach during each of the hours.
- c. The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count.
- d. Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. This site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles. Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one-lane approach with only the traffic volume in the through/left-turn lane considered.
- e. At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher volume of the major-street left-turn volumes plus the higher volume minor-street approach as the "minor street" volume and both approaches of the major street minus the higher of the major-street left-turn volume as "major street" volume. In these cases, engineering judgment should be used to determine if left-turn phasing is necessary to accommodate the high volume of left-turn traffic.

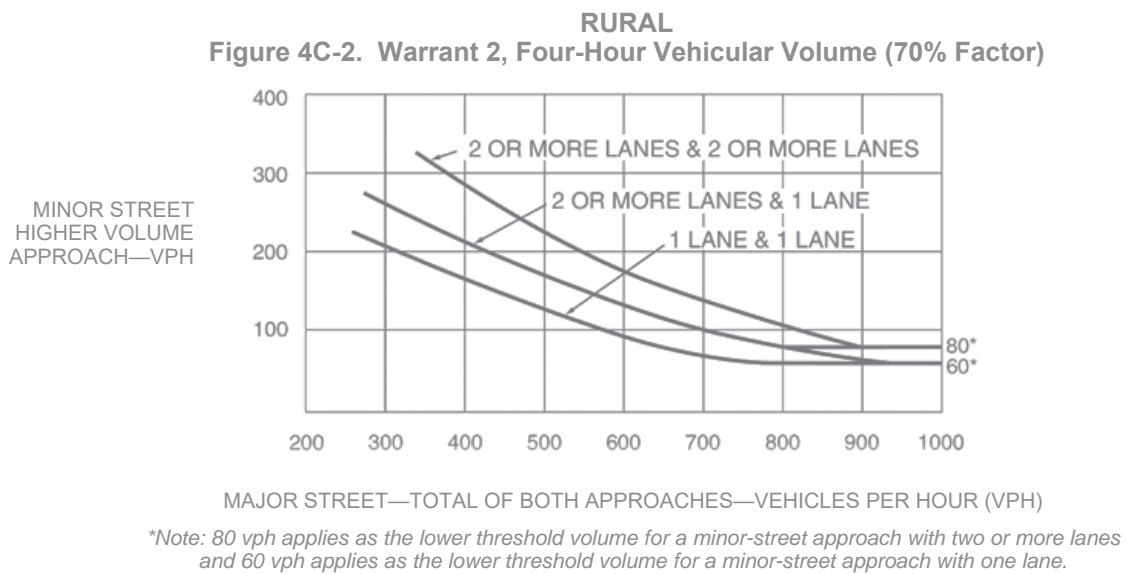
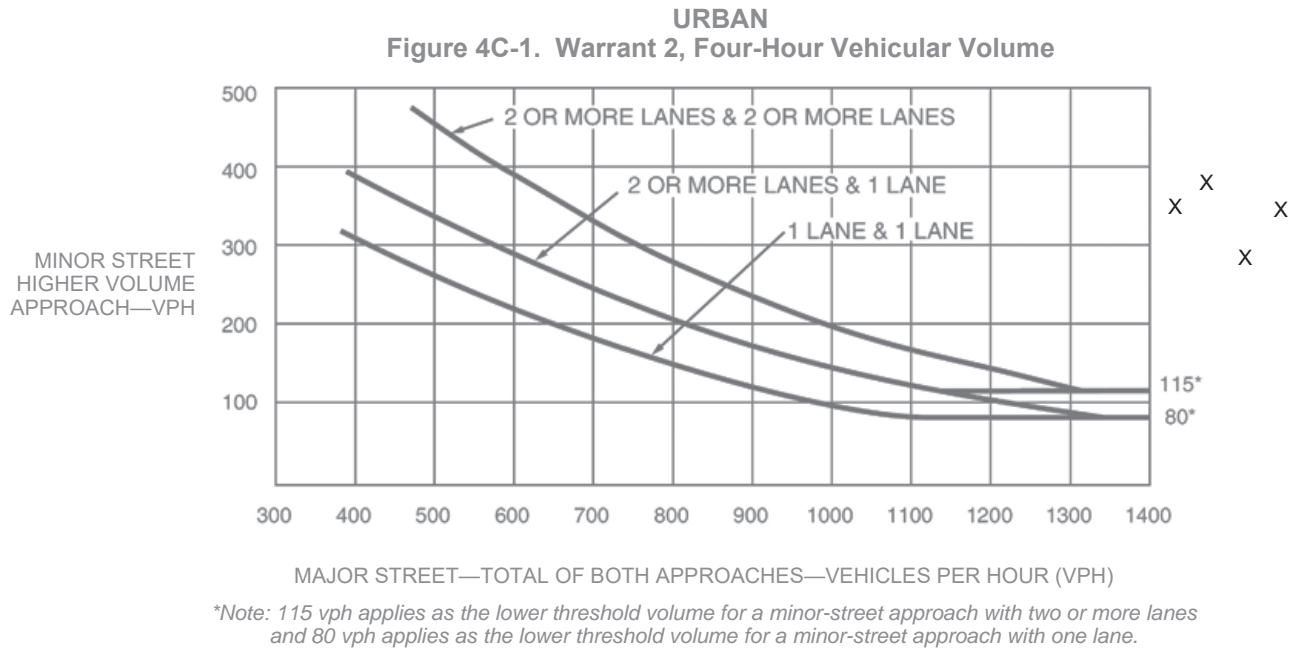
APPROACH LANES			Hours						
	One	2 or More	8:00	15:00	16:00	17:00		YES	NO
Both Approaches - Major Street		X	1595	1732	1525	1622	RIGHT TURN REDUCTION APPLICATION MINOR STREET (If Yes, fill in percentage)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Higher Approach - Minor Street	X		372	311	324	286		_____ %	
* All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)								<input checked="" type="checkbox"/>	<input type="checkbox"/>
<u>OR</u> , All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)								<input type="checkbox"/>	<input type="checkbox"/>

Four-Hour Vehicular Volume

WARRANT
2

(continued)

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★



Peak Hour

WARRANT
3

N/A ☒

SATISFIED YES ☐

NO ☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

- a. Part A or Part B must be satisfied.
- b. This signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.
- c. In applying each condition, the major street and minor street volumes shall be for the same hours.
- d. The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count.
- e. Estimated Peak Hour Volumes may be used for new intersections, significantly reconstructed intersections, or where near-term land development will result in increased volumes.
- f. Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. This site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles. Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one-lane approach with only the traffic volume in the through/left-turn lane considered.
- g. At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher volume of the major-street left-turn volumes plus the higher volume minor-street approach as the "minor street" volume and both approaches of the major street minus the higher of the major-street left-turn volume as "major street" volume. In these cases, engineering judgment should be used to determine if left-turn phasing is necessary to accommodate the high volume of left-turn traffic.

Unusual facility per Note b.

YES <input type="checkbox"/>	NO <input type="checkbox"/>
------------------------------	-----------------------------

Name _____

PART A

All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

	SATISFIED	YES	NO
		<input type="checkbox"/>	<input type="checkbox"/>
	YES	NO	N/A
1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; <u>AND</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; <u>AND</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

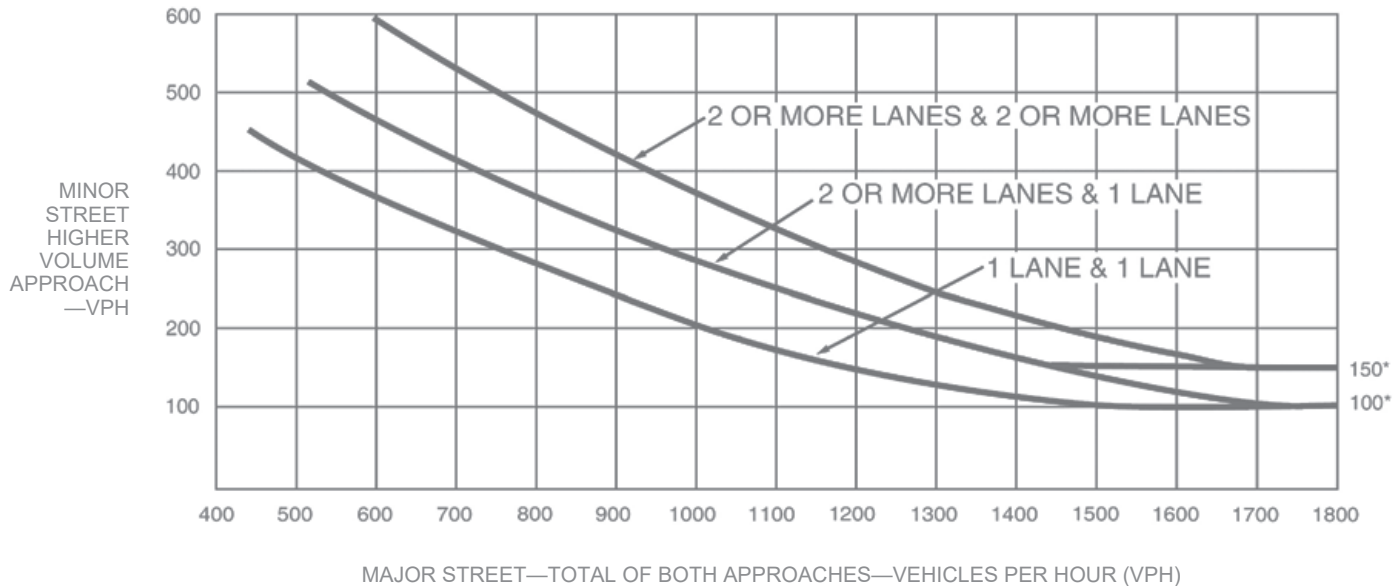
PART B

				SATISFIED	YES	NO
					<input type="checkbox"/>	<input type="checkbox"/>
APPROACH LANES	One	2 or More	Hour			
Both Approaches - Major Street						
Higher Approach - Minor Street						
				RIGHT TURN REDUCTION APPLICATION MINOR STREET (If Yes, fill in percentage) _____%		
				YES	NO	
The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)				<input type="checkbox"/>	<input type="checkbox"/>	
<u>OR</u> , The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)				<input type="checkbox"/>	<input type="checkbox"/>	

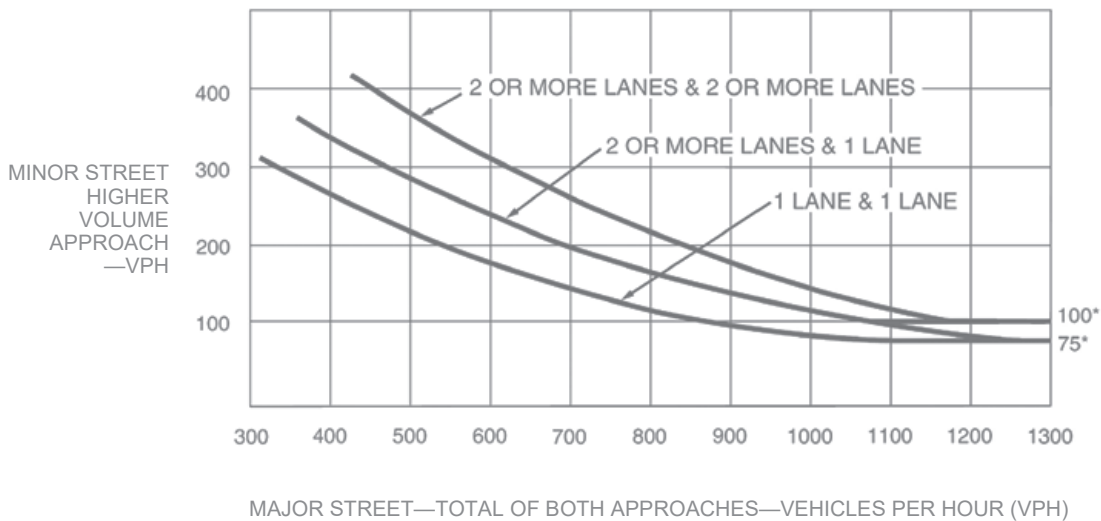
Peak Hour **WARRANT 3** (continued)

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

URBAN
Figure 4C-3. Warrant 3, Peak Hour



RURAL
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



Pedestrian Volume

WARRANT
4

N/A

☒

SATISFIED

YES

☐

NO

☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

- a. Parts 1 and 2 shall be satisfied.
- b. The pedestrian volume criterion may be reduced by as much as 50% if the 15th percentile speed of the pedestrians is less than 3.5 feet/second.
- c. Estimated pedestrian volumes may be used where nearby, near-term land use development has been approved for construction.
- d. In applying each condition, the total vehicles per hour on the major street (on both approaches) and the total pedestrians per hour crossing the major street shall be for the same hours.
- e. The Pedestrian Volume signal warrants shall not be applied at locations where the distance to the nearest traffic control signal or STOP sign controlling the street that pedestrians desire to cross is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.
- f. Traffic control signal may not be needed at the study location if adjacent coordinated traffic control signals consistently provide gaps of adequate length for pedestrians to cross the street.
- g. If it is considered at a non-intersection crossing, the traffic control signal should be installed at least 100 feet from side streets or driveways that are controlled by STOP or YIELD signs. If the traffic control signal is installed at a non-intersection crossing, at least one of the signal faces should be over the traveled way for each approach, parking and other sight obstructions should be prohibited for at least 100 feet in advance of and at least 20 feet beyond the crosswalk or site accommodations should be made through curb extensions or other techniques to provide adequate sight distance, and the installation should include suitable standard signs and pavement markings.
- h. Bicycles may be counted as pedestrians.
- i. Pedestrian Hybrid Beacons may be considered instead of a traffic signal if a device is recommended based upon pedestrian needs

PART 1 (A or B must be satisfied)

A. FOUR-HOUR PEDESTRIAN VOLUMES

	Hours			
Vehicles per hour on major street for 4 hours				
Pedestrians crossing major street per hour for highest 4 hours				

(FIGURE 4C-5 OR 4C-6 SATISFIED)

SATISFIED	YES	NO
100%	<input type="checkbox"/>	<input type="checkbox"/>
80%	<input type="checkbox"/>	<input type="checkbox"/>
50%	<input type="checkbox"/>	<input type="checkbox"/>

15% WALKING RATE _____ fps

B. ONE HOUR PEDESTRIAN VOLUMES

	Hour
Vehicles per hour on major street for 1 hour	
Pedestrians crossing major street per hour for highest 1 hour	0

(FIGURE 4C-7 or 4C-8 SATISFIED)

SATISFIED	YES	NO
100%	<input type="checkbox"/>	<input type="checkbox"/>
80%	<input type="checkbox"/>	<input type="checkbox"/>
50%	<input type="checkbox"/>	<input type="checkbox"/>

15% WALKING RATE _____ fps

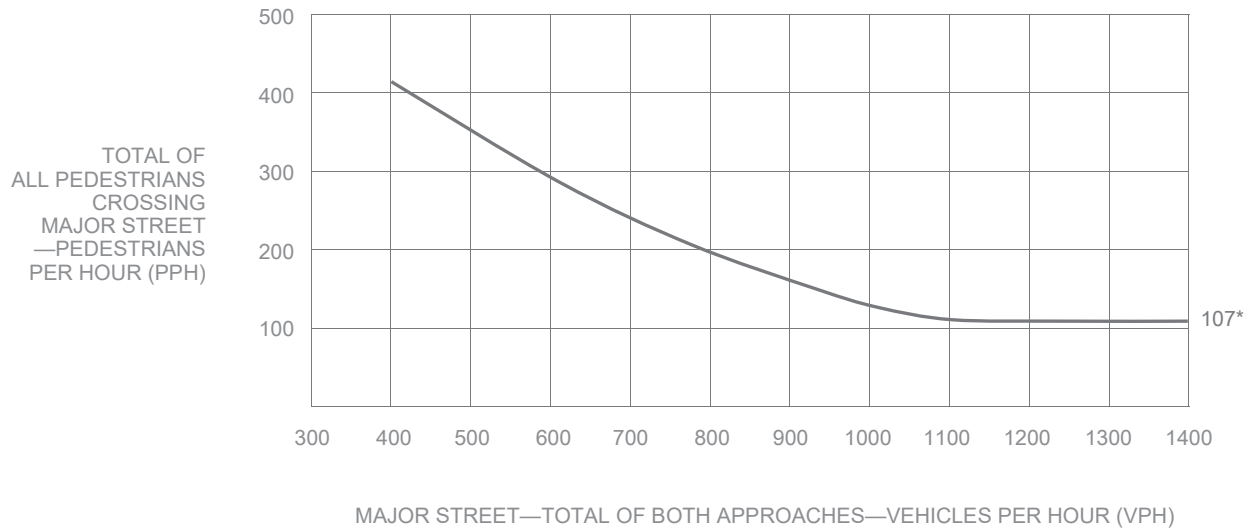
PART 2

	SATISFIED	YES	NO
		<input type="checkbox"/>	<input type="checkbox"/>
<u>AND</u> , The distance to the nearest traffic signal along the major street is greater than 300 ft	<input type="checkbox"/>	<input type="checkbox"/>	
<u>OR</u> , The proposed traffic signal will not restrict progressive traffic flow along the major street	<input type="checkbox"/>	<input type="checkbox"/>	

WARRANT 4 **Pedestrian Volume** (continued)

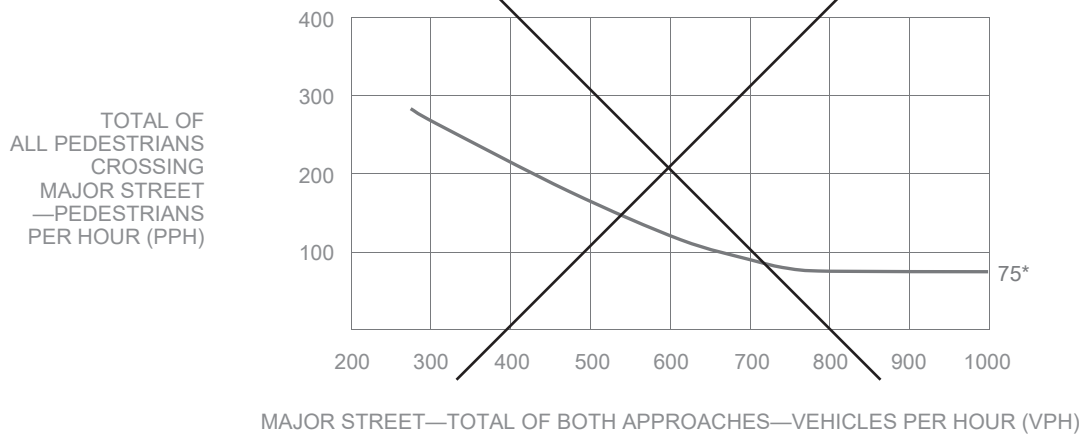
★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

SPEED ≤ 35 MPH
Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume



* Note: 107 pph applies as the lower threshold volume

SPEED > 35 MPH
Figure 4C-6. Warrant 4, Pedestrian Four-Hour Volume (70% Factor)



* Note: 75 pph applies as the lower threshold volume

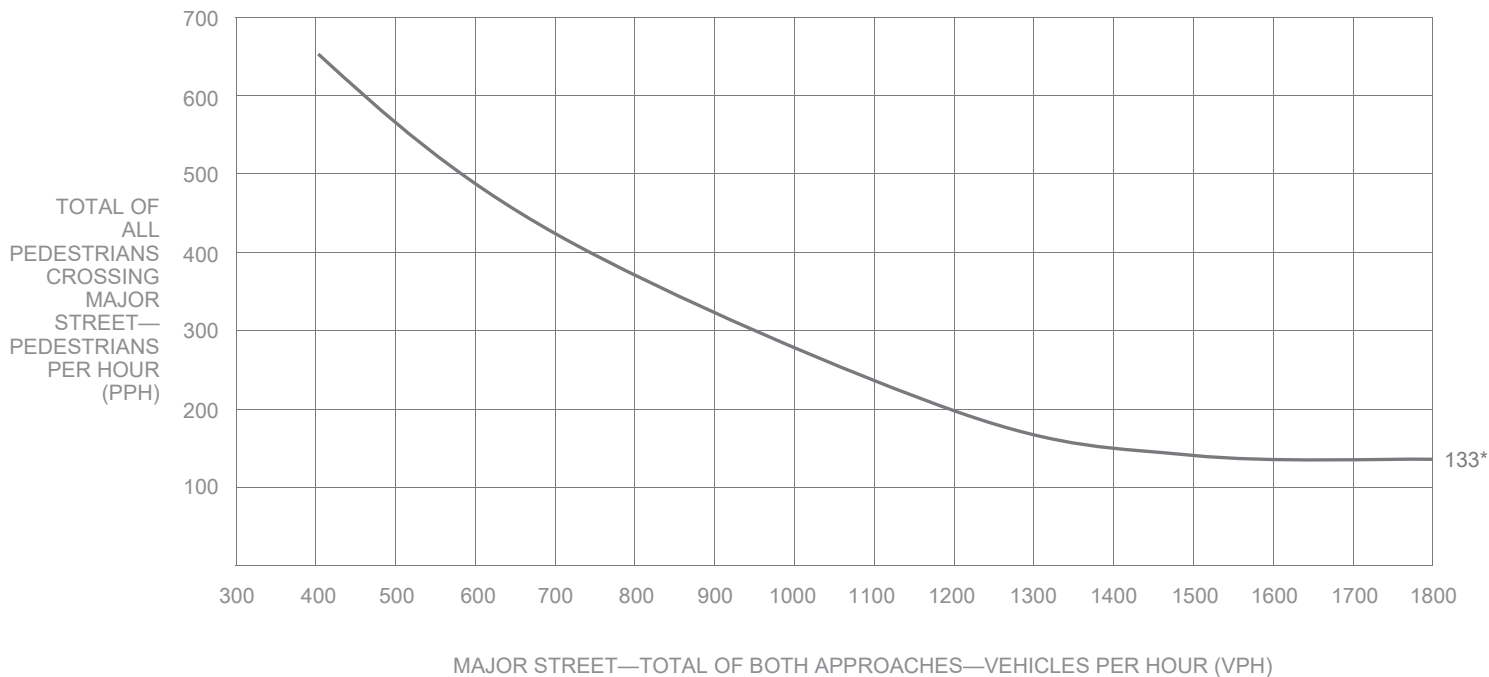
Pedestrian Volume

WARRANT
4

(continued)

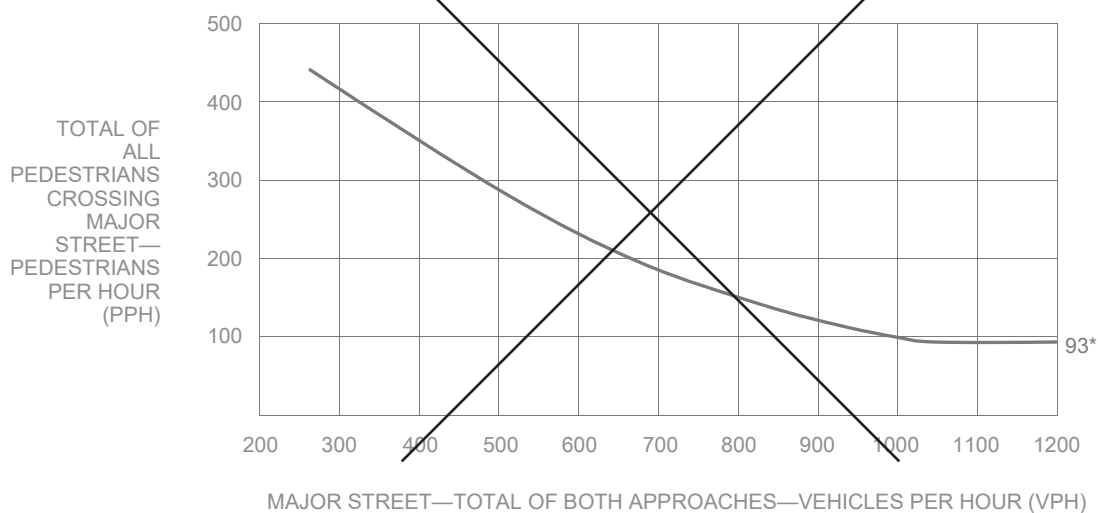
★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

SPEED ≤ 35 MPH
Figure 4C-7. Warrant 4, Pedestrian Peak Hour



* Note: 133 pph applies as the lower threshold volume

SPEED > 35 MPH
Figure 4C-8. Warrant 4, Pedestrian Peak Hour (70% Factor)



* Note: 93 pph applies as the lower threshold volume

School Crossing

WARRANT
5

N/A ☒

SATISFIED YES ☐

NO ☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

- a. Part A and Part B shall be satisfied.
- b. For purposes of this warrant, schoolchildren include elementary through high school students.
- c. Estimated schoolchildren volumes may be used where a new school or expanded school has been approved for construction.
- d. The need for a traffic control signal shall be considered when an engineering study of the frequency and adequacy of gaps in the vehicular traffic stream as related to the number and size of groups of schoolchildren at an established school crossing across the major street shows that the number of adequate gaps in the traffic stream during the period when the schoolchildren are using the crossing is less than the number of minutes in the same period and there are a minimum of 20 schoolchildren during the highest crossing hour.
- e. The School Crossing signal warrant shall not be applied at locations where the distance to the nearest traffic control signal along the major street is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.
- f. Non-intersectional schoolchildren crosswalk locations may be signalized when justified.
- g. Pedestrian Hybrid Beacons may be considered instead of a traffic signal if a device is recommended based upon pedestrian needs

PART A

				SATISFIED	YES	NO
					<input type="checkbox"/>	<input type="checkbox"/>
Hour						
Gap / Minutes and # of Children				YES	NO	
Gaps vs Minutes	Minutes Children Using Crossing		Gaps < Minutes AND Children ≥ 20/hr	<input type="checkbox"/>	<input type="checkbox"/>	
	Number of Adequate Gaps			<input type="checkbox"/>	<input type="checkbox"/>	
School Age Pedestrians Crossing Street / hr						
AND , Consideration has been given to less restrictive remedial measures				<input type="checkbox"/>	<input type="checkbox"/>	

PART B

		SATISFIED	YES	NO
			<input type="checkbox"/>	<input type="checkbox"/>
		YES	NO	
The distance to the nearest traffic signal along the major street is greater than 300 ft		<input type="checkbox"/>	<input type="checkbox"/>	
OR , The proposed traffic signal will not restrict progressive movement of traffic		<input type="checkbox"/>	<input type="checkbox"/>	

Coordinated Signal System

WARRANT
6

N/A ☒

SATISFIED YES ☐

NO ☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

- a. The Coordinated Signal System signal warrant should not be applied where the resultant spacing of traffic control signals would be less than 1,000 feet.
- b. All Parts must be satisfied.

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNAL	YES	NO
≥ 1000 ft	N _____ ft, S _____ ft, E _____ ft, W _____ ft	<input type="checkbox"/>	<input type="checkbox"/>
On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning.		<input type="checkbox"/>	<input type="checkbox"/>
OR , On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.		<input type="checkbox"/>	<input type="checkbox"/>

Crash Experience Warrant

N/A ☒SATISFIED YES ☐NO ☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

- All Parts must be satisfied.
- For locations that involve other agencies, crash data from other involved jurisdictions should be obtained.

		YES	NO
Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency		<input type="checkbox"/>	<input type="checkbox"/>
REQUIREMENTS	Number of crashes reported within a 12-month period susceptible to correction by a traffic signal:	<input type="checkbox"/>	<input type="checkbox"/>
5 OR MORE	Indicate Date(s):		
REQUIREMENTS	CONDITIONS	<input checked="" type="checkbox"/>	
ONE CONDITION SATISFIED 80%	Warrant 1, Condition A - Minimum Vehicular Volume		
	OR, Warrant 1, Condition B - Interruption of Continuous Traffic	<input type="checkbox"/>	<input type="checkbox"/>
	OR, Warrant 4, Pedestrian Volume Condition - Ped Vol ≥ 80% for ped volumes per Figures 4C-5 to 4C-8		

Roadway Network

N/A ☒SATISFIED YES ☐NO ☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

- Existing traffic volumes with an ambient growth rate of 1% (or other LADOT approved ambient growth rate) may be used if projected volumes are not available.
- All Parts must be satisfied.

MINIMUM VOLUME REQUIREMENTS	ENTERING VOLUMES - ALL APPROACHES	✓	FULL FILLED	
			YES	NO
1000 Veh / Hr	During Typical Weekday Peak Hour _____ Veh/Hr AND has 5-year projected traffic volumes that meet one or more of Warrants 1,2, and 3 during an average weekday.		<input type="checkbox"/>	<input type="checkbox"/>
	OR During Each of Any 5 Hrs. of a Saturday or Sunday _____ Veh / Hr			
CHARACTERISTICS OF MAJOR ROUTES	MAJOR ROUTE A	MAJOR ROUTE B	YES NO	
Highway System Serving as Principal Network for Through Traffic				
Rural or Suburban Highway Outside Of, Entering, or Traversing a City				
Appears as Major Route on an Official Plan				
Any Major Route Characteristics Met, Both Streets			<input type="checkbox"/>	<input type="checkbox"/>

Intersection Near a Grade Crossing



N/A
☒

SATISFIED
YES
☐

NO
☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

- a. Both Parts A and B shall be satisfied.
- b. This Warrant shall only be applied after review and approval by the LADOT Railroad Crossing and Safety Section (RCOSS), subject to CPUC General Order approval.
- c. This Warrant does not apply for Pre-Signals and/or Queue-Cutter signals, as an alternative application of Pre-Signals (See 2012 CA MUTCD, Sec 8C.09). Pre-Signals shall only be applied after review and approval by RCOSS, subject to CPUC General Order approval.

	FULFILLED	
	YES	NO
PART A A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach. Track Center Line to Limit Line _____ ft	<input type="checkbox"/>	<input type="checkbox"/>
PART B There is one minor street approach lane at the track crossing - During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-9. Major Street - Total of both approaches: _____ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): _____ VPH X AF (Use Tables 4C-2, 3, & 4 below to calculate AF) = _____ VPH	<input type="checkbox"/>	<input type="checkbox"/>
OR, There are two or more minor street approach lanes at the track crossing - During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-10. Major Street - Total of both approaches: _____ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): _____ VPH X AF (Use Tables 4C-2, 3, & 4 below to calculate AF) = _____ VPH		

The minor street approach volume may be multiplied by up to three following adjustment factors (AF) as described in Section 4C-10.

1. Number of Rail Traffic per Day _____ Adjustment factor from Table 4C-2 _____
2. Percentage of High-Occupancy Buses on Minor Street Approach _____ Adjustment factor from Table 4C-3 _____
3. Percentage of Tractor-Trailer Trucks on Minor Street Approach _____ Adjustment factor from Table 4C-4 _____

NOTE: If no data is available or known, then use AF = 1 (no adjustment)

**Table 4C-2. Warrant 9,
Adjustment Factor for
Daily Frequency of Rail Traffic**

Rail Traffic per Day	Adjustment Factor
1	0.67
2	0.91
3 to 5	1.00
6 to 8	1.18
9 to 11	1.25
12 or more	1.33

**Table 4C-3. Warrant 9,
Adjustment Factor for
Percentage of High-Occupancy Buses**

% of High-Occupancy Buses * on Minor-Street Approach	Adjustment Factor
0 %	1.00
2 %	1.09
4 %	1.19
6 % or more	1.32

* A high-occupancy bus is defined as a bus occupied by at least 20 people

Intersection Near a Grade Crossing

WARRANT 9

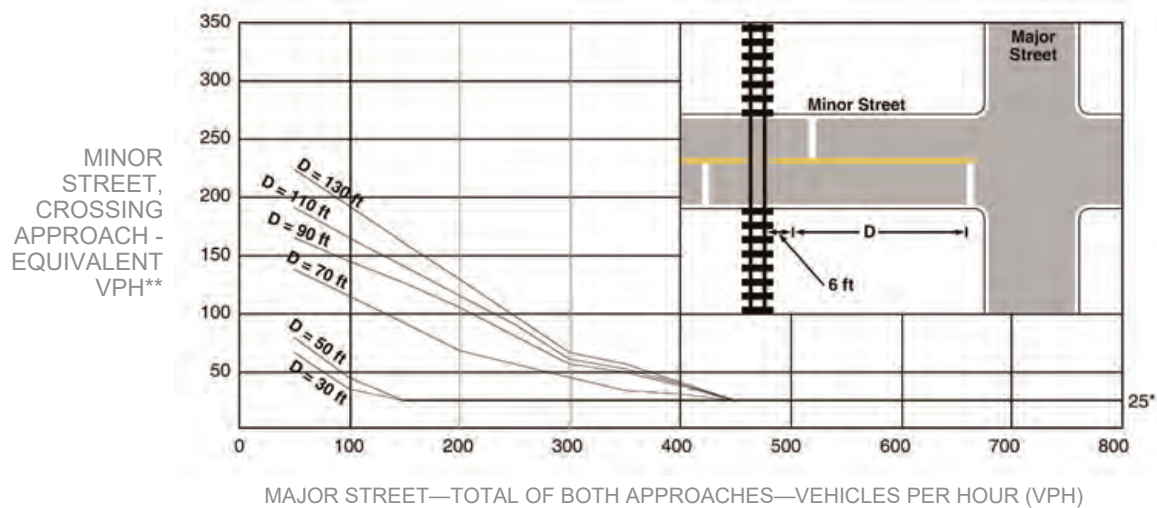
(continued)

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

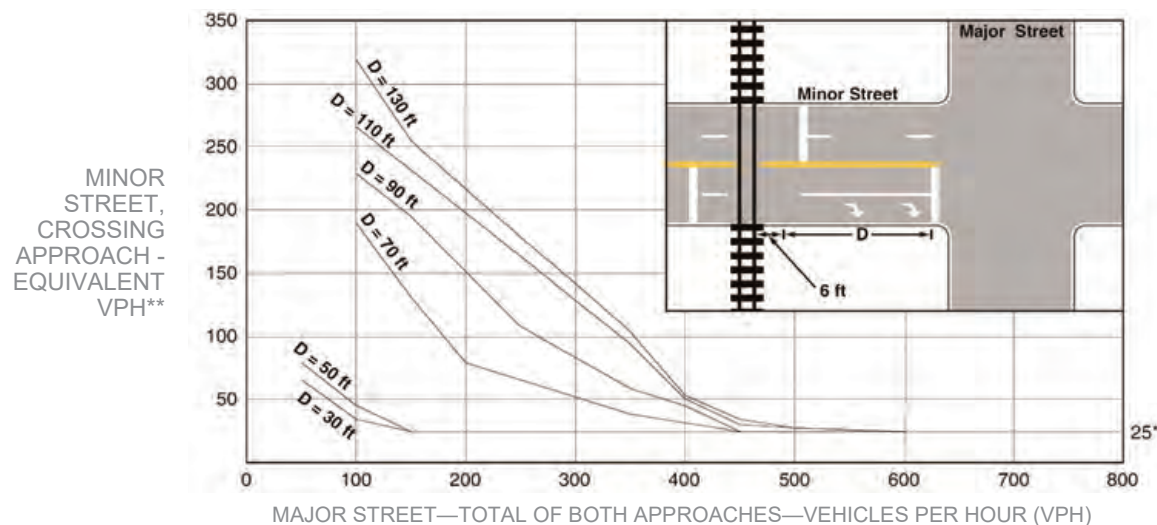
**Table 4C-4. Warrant 9,
Adjustment Factor for Percentage of Tractor-Trailer Trucks**

% of Tractor-Trailer Trucks on Minor-Street Approach	Adjustment Factor	
	D less than 70 feet	D of 70 feet or more
0% to 2.5%	0.50	0.50
2.6% to 7.5%	0.75	0.75
7.6% to 12.5%	1.00	1.00
12.6% to 17.5%	2.30	1.15
17.6% to 22.5%	2.70	1.35
22.6% to 27.5%	3.28	1.64
More than 27.5%	4.18	2.09

**Figure 4C-9. Warrant 9, Intersection Near a Grade Crossing
(One Approach Lane at the Track Crossing)**



**Figure 4C-10. Warrant 9, Intersection Near a Grade Crossing
(Two or More Approach Lanes at the Track Crossing)**



* 25 vph applies as the lower threshold volume

** VPH after applying the adjustment factors in Tables 4C-2, 4C-3, and/or 4C-4, if appropriate

The next two warrants are not included in the MUTCD (CA) standard warrants, but are added as optional warrants that an engineer may use with discretion to justify a traffic signal for special conditions where other traffic control devices could be considered, but where a traffic signal might be more appropriate

Bicycles

WARRANT
10

N/A ☒
 SATISFIED YES ☐
 NO ☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

- a. Part A and Part B shall be satisfied
- b. Per MUTCD (CA) Section 4C.01.15: "For signal warrant analysis, bicyclists may be counted as either vehicles or pedestrians."
- c. When performing a signal warrant analysis, bicyclists riding in the street with other vehicular traffic are usually counted as vehicles, and bicyclists who are clearly using pedestrian facilities are usually counted as pedestrians; however for this bicycle specific warrant, bicyclists are counted as bicyclists, regardless of where they are riding.
- d. Bicycle signal faces should be considered for use when this warrant is satisfied, with the final determination made during the signal design process. Refer to MUTCD (CA) Section 4D.104 (CA).
- e. Estimated peak hour bicycle volumes may be used for new intersections, significantly reconstructed intersections, or where new bicycle facilities or near-term land development are proposed which will result in increased bicycle volumes.

PART A and B must be satisfied

SATISFIED	YES	NO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PART A (1 or 2 below must be satisfied)

	SATISFIED	YES	NO
1. Location meets the Department's guidelines for a marked crosswalk with Pedestrian Hybrid Beacons, where pedestrian units are replaced with bicyclists; AND the minor street is designated as part of the Neighborhood Enhanced Network in the Mobility Plan 2035 Element of the City's General Plan.	<input type="checkbox"/>		<input type="checkbox"/>
2. The intersection features a two-way bicycle or pedestrian path or trail within the median or alongside one of the roadways.	<input type="checkbox"/>		<input type="checkbox"/>

PART B (1, 2, or 3 below must be satisfied)

PART B (1, 2, or 3 below must be satisfied)		SATISFIED	YES	NO
1. Signal would be part of a corridor or area project to improve bicycle connectivity.*			<input type="checkbox"/>	<input type="checkbox"/>
2. Signal is associated with a development project.*			<input type="checkbox"/>	<input type="checkbox"/>
3. There have been at least 3 correctable collisions involving bicyclists in the last 1 year, 2 per year for the last 2 years, or 5 in the last 3 years of available data. Specify dates of correctable bicycle collisions:			<input type="checkbox"/>	<input type="checkbox"/>
Period Dates		Dates of Correctable Bicycle Collisions		
1 year				
2 year				
3 year				

*The authority for a traffic signal justified using Part B.1 or B.2 shall be automatically rescinded three years after the date of approval if funding for construction of the traffic signal is not secured or project plans are not actively being reviewed for approval.

Pedestrian Activated Yellow Flashing Beacons



N/A ☒

SATISFIED YES ☐
 NO ☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

- a. All Parts shall be satisfied.
- b. This warrant should be applied when Pedestrian Activated Yellow Flashing Beacons are recommended within 600 feet BOTH upstream and downstream of existing traffic signals.

PART A

	YES	NO
Location meets the guidelines for the installation of Pedestrian Activated Yellow Flashing Beacons as described in the LADOT Marked Crosswalk Guidelines.	<input type="checkbox"/>	<input type="checkbox"/>

PART B

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNALS	YES	NO
≤ 600 ft	N _____ ft, S _____ ft, E _____ ft, W _____ ft	<input type="checkbox"/>	<input type="checkbox"/>



Traffic Signal Warrants Worksheet

SR#

DATE 5/2/24 PREPARER GTC REVIEWER _____

MAJOR ST: Moorpark Street

MINOR ST: Radford Avenue

Critical Approach Speed	} 	or	Speed Limit	} 
Speed limit or critical speed on major street traffic > 40 mph.....	<input type="checkbox"/>	} RURAL (R)		<input checked="" type="checkbox"/> URBAN (U)
In built up area of isolated community of < 10,000 population.....	<input type="checkbox"/>			

Eight-Hour Vehicular Volume



N/A	<input type="checkbox"/>
SATISFIED YES	<input checked="" type="checkbox"/>
NO	<input type="checkbox"/>

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

- Condition A or Condition B or combination of 80% of both parts A and B must be satisfied.
- A 6-hour Manual Count may be used in a determination that this warrant is not met. However, supplement manual counts should be taken during separate hours for a determination that this warrant is met.
- In applying each condition, the major street and minor street volumes shall be for the same hours. On the minor street, the higher volume does not need to be the same approach during each of the hours.
- The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count.
- Figure 4C-103(CA) should be used for new intersections, significantly reconstructed intersections, where near-term land development will result in increased volumes, or where it is not reasonable to use current traffic volumes.
- Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. This site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles. Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one-lane approach with only the traffic volume in the through/left-turn lane considered.
- At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher volume of the major-street left-turn volumes plus the higher volume minor-street approach as the "minor street" volume and both approaches of the major street minus the higher of the major-street left-turn volume as "major street" volume. In these cases, engineering judgment should be used to determine if left-turn phasing is necessary to accommodate the high volume of left-turn traffic.

Eight-Hour Vehicular Volume



(continued)

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

Condition A

Minimum Vehicle Volume

					SATISFIED	YES	NO
					100%	<input type="checkbox"/>	<input type="checkbox"/>
					80%	<input type="checkbox"/>	<input type="checkbox"/>
					RIGHT TURN REDUCTION APPLICATION MINOR STREET (If Yes, fill in percentage) <input type="checkbox"/> ____%		
					<input checked="" type="checkbox"/>		
MINIMUM REQUIREMENTS (80% SHOW IN BRACKETS)							
	U	R	U	R			
APPROACH LANES	1		2 or More		Hours		
					8:00	15:00	16:00
					17:00		
Both Approach Major Street	500 (400)	350 (280)	600 (480)	420 (336)	2025	2038	1813
Highest Approach Minor Street	150 (120)	105 (84)	200 (160)	140 (112)	194	218	218

Condition B

Interruption of Continuous Traffic

					SATISFIED	YES	NO
					100%	<input type="checkbox"/>	<input type="checkbox"/>
					80%	<input type="checkbox"/>	<input type="checkbox"/>
					RIGHT TURN REDUCTION APPLICATION MINOR STREET (If Yes, fill in percentage) <input type="checkbox"/> ____%		
					<input type="checkbox"/>		
MINIMUM REQUIREMENTS (80% SHOW IN BRACKETS)							
	U	R	U	R			
APPROACH LANES	1		2 or More		Hours		
Both Approach Major Street	750 (600)	525 (420)	900 (720)	630 (504)			
Highest Approach Minor Street	75 (60)	53 (42)	100 (80)	70 (56)			

COMBINATION OF A & B

			SATISFIED	YES	NO
			<input type="checkbox"/>	<input type="checkbox"/>	
REQUIREMENT	CONDITION	✓	FULFILLED	YES	NO
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME				
	AND				
	B. INTERRUPTION OF CONTINUOUS TRAFFIC				
	AND				
AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCOVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS					

Eight-Hour Vehicular Volume WARRANT 1 (continued)

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

Projected Volumes

Satisfied

YES

NO

☒

☐

☒

☐

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)
Based on Estimated Average Daily Traffic - see Note*

URBAN <input checked="" type="checkbox"/>	RURAL <input type="checkbox"/>	Minimum Requirements Estimated Average Daily Traffic			
CONDITION A - Minimum Vehicular Volume Satisfied <input checked="" type="checkbox"/> Not Satisfied <input type="checkbox"/>		Vehicles Per Day On Major Street (Total of Both Approaches)		Vehicles Per Day On Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
Major Street	Minor Street				
1.....	1.....	8,000	5,600	2,400	1,680
2 or More.....	1.....	9,600	6,720	2,400	1,680
2 or More.....	2 or More.....	9,600	6,720	3,200	2,240
1.....	2 or More.....	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic Satisfied <input checked="" type="checkbox"/> Not Satisfied <input type="checkbox"/>		Vehicles Per Day On Major Street (Total of Both Approaches)		Vehicles Per Day On Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
Minor Street	Minor Street				
1.....	1.....	12,000	8,400	1,200	850
2 or More.....	1.....	14,400	10,080	1,200	850
2 or More.....	2 or More.....	14,400	10,080	1,600	1,120
1.....	2 or More.....	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B Satisfied <input checked="" type="checkbox"/> Not Satisfied <input type="checkbox"/> No one condition satisfied, but following conditions fulfilled 80% or more..... A B		2 CONDITIONS 80%		2 CONDITIONS 80%	

* **Note:** To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes

Major Street (Moorpark Street): PM Peak Hour = 10% of ADT
 ADT = 2,038 (@ 15:00 PM) / 10% = 20,380
 Minor Street (Radford Avenue / Moorpark Gate): ADT = 20% x Daily Trip Gen
 = 20% x 16,435 = 3,287

Four-Hour Vehicular Volume

WARRANT

2

N/A ☐

SATISFIED YES ☒

NO ☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

- a. Record hourly vehicle volumes for the highest four hours of an average day.
- b. In applying each condition, the major street and minor street volumes shall be for the same hours. On the minor street, the higher volume does not need to be the same approach during each of the hours.
- c. The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count.
- d. Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. This site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles. Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one-lane approach with only the traffic volume in the through/left-turn lane considered.
- e. At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher volume of the major-street left-turn volumes plus the higher volume minor-street approach as the "minor street" volume and both approaches of the major street minus the higher of the major-street left-turn volume as "major street" volume. In these cases, engineering judgment should be used to determine if left-turn phasing is necessary to accommodate the high volume of left-turn traffic.

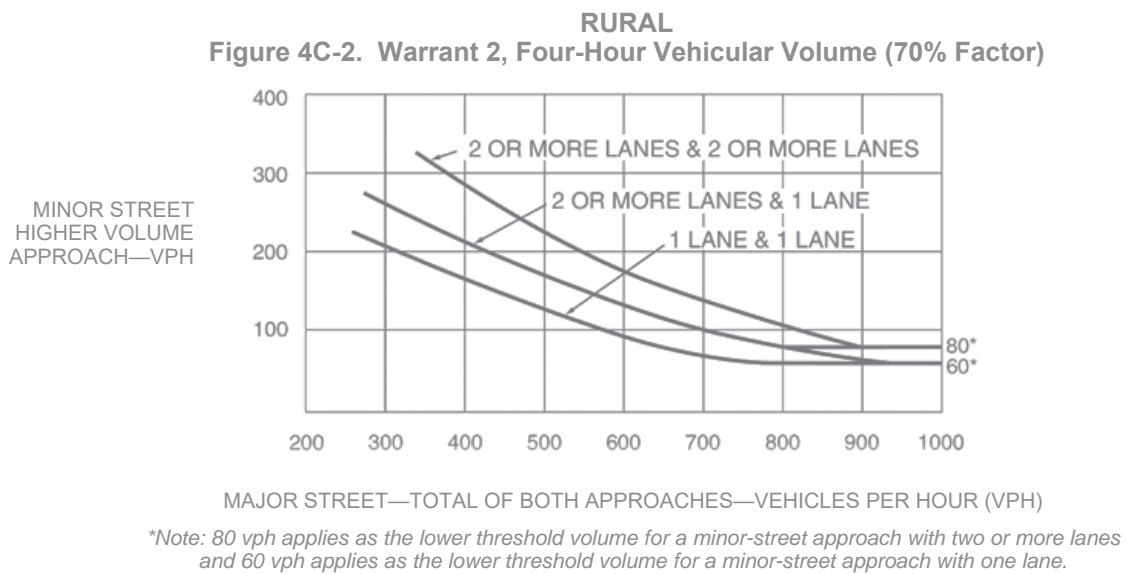
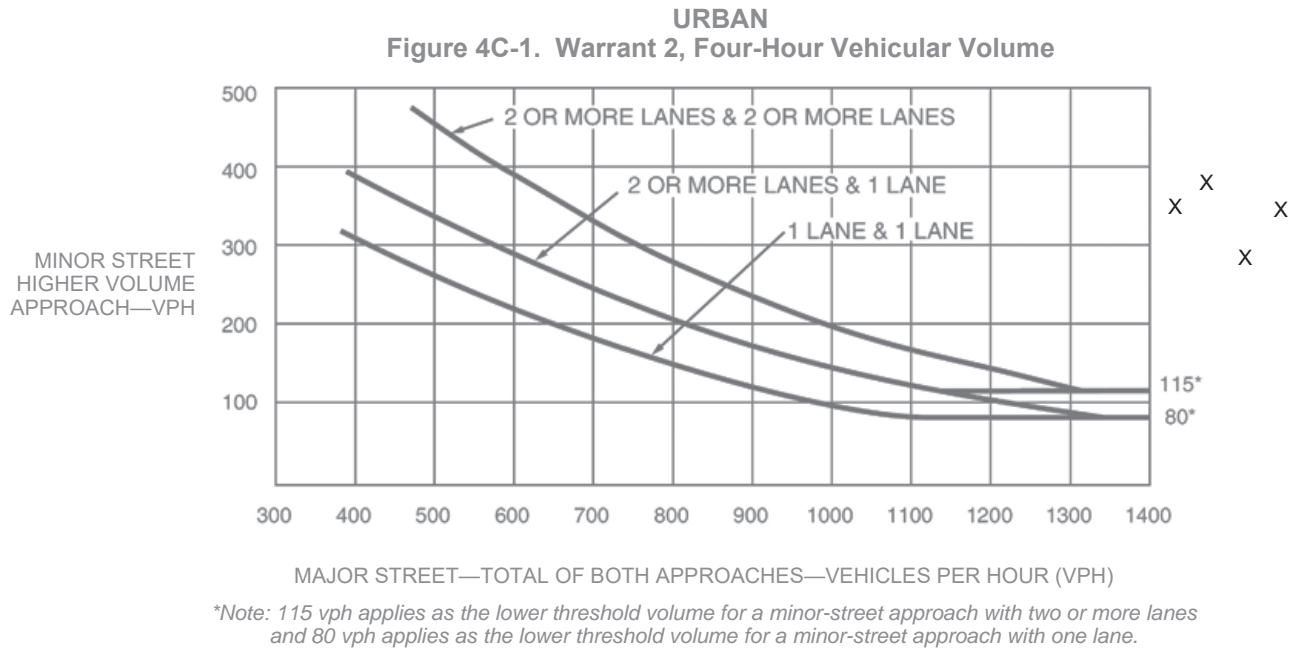
APPROACH LANES	One	2 or More	Hours					YES	NO
			8:00	15:00	16:00	17:00			
Both Approaches - Major Street		X	1595	1732	1525	1622	RIGHT TURN REDUCTION APPLICATION MINOR STREET (If Yes, fill in percentage)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Higher Approach - Minor Street	X		372	311	324	286		_____ %	
* All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)								<input checked="" type="checkbox"/>	<input type="checkbox"/>
<u>OR</u> , All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)								<input type="checkbox"/>	<input type="checkbox"/>

Four-Hour Vehicular Volume

WARRANT 2

(continued)

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★



Peak Hour

WARRANT
3

N/A

☒

SATISFIED

YES

☐

NO

☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

- a. Part A or Part B must be satisfied.
- b. This signal warrant shall be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.
- c. In applying each condition, the major street and minor street volumes shall be for the same hours.
- d. The study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count.
- e. Estimated Peak Hour Volumes may be used for new intersections, significantly reconstructed intersections, or where near-term land development will result in increased volumes.
- f. Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. This site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles. Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one-lane approach with only the traffic volume in the through/left-turn lane considered.
- g. At an intersection with a high volume of left-turn traffic from the major street, the signal warrant analysis may be performed in a manner that considers the higher volume of the major-street left-turn volumes plus the higher volume minor-street approach as the "minor street" volume and both approaches of the major street minus the higher of the major-street left-turn volume as "major street" volume. In these cases, engineering judgment should be used to determine if left-turn phasing is necessary to accommodate the high volume of left-turn traffic.

Unusual facility per Note b.

YES

☐

NO

☐

Name _____

PART A

All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

	YES	NO	N/A
1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; <u>AND</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; <u>AND</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PART B

				SATISFIED	YES	NO
					<input type="checkbox"/>	<input type="checkbox"/>

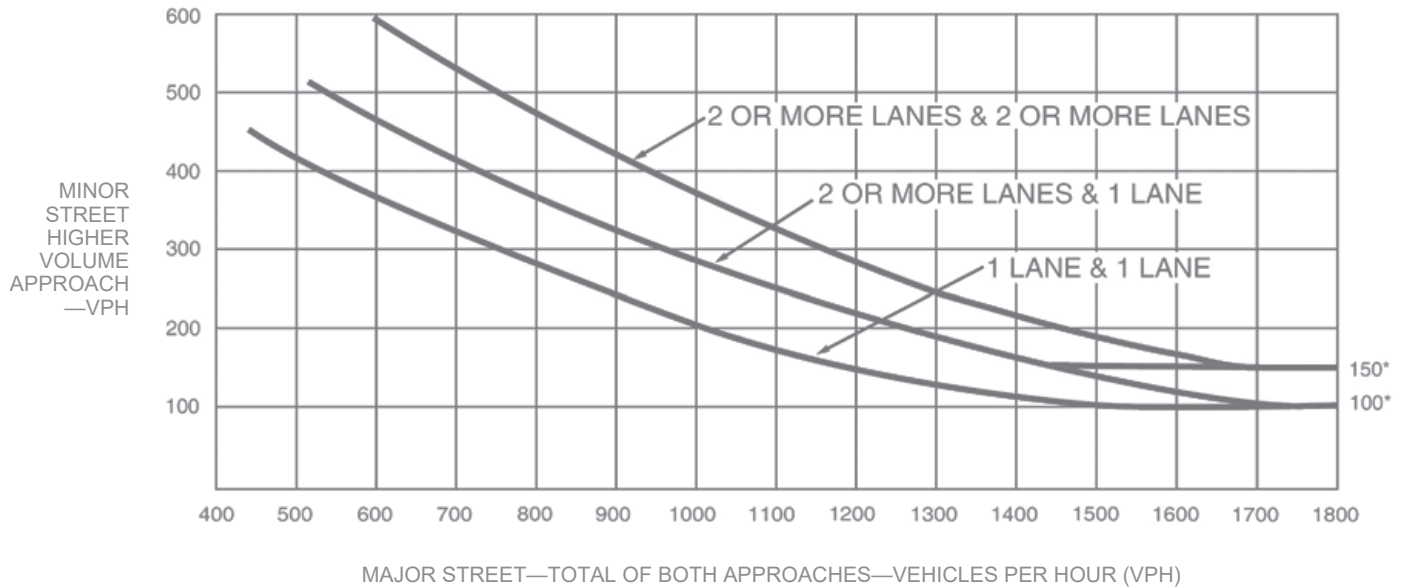
APPROACH LANES	One	2 or More	Hour	
Both Approaches - Major Street	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RIGHT TURN REDUCTION APPLICATION MINOR STREET (If Yes, fill in percentage) _____%
Higher Approach - Minor Street	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS) <u>OR</u> , The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	YES	NO
	<input type="checkbox"/>	<input type="checkbox"/>

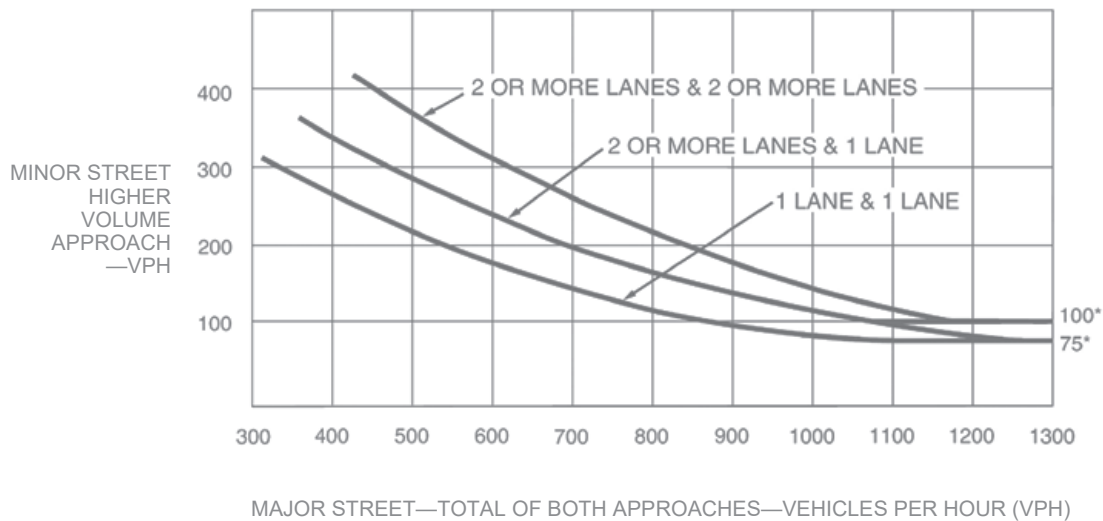
Peak Hour **WARRANT 3** (continued)

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

URBAN
Figure 4C-3. Warrant 3, Peak Hour



RURAL
Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



Pedestrian Volume



N/A ☒

SATISFIED YES ☐

NO ☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

- Parts 1 and 2 shall be satisfied.
- The pedestrian volume criterion may be reduced by as much as 50% if the 15th percentile speed of the pedestrians is less than 3.5 feet/second.
- Estimated pedestrian volumes may be used where nearby, near-term land use development has been approved for construction.
- In applying each condition, the total vehicles per hour on the major street (on both approaches) and the total pedestrians per hour crossing the major street shall be for the same hours.
- The Pedestrian Volume signal warrants shall not be applied at locations where the distance to the nearest traffic control signal or STOP sign controlling the street that pedestrians desire to cross is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.
- Traffic control signal may not be needed at the study location if adjacent coordinated traffic control signals consistently provide gaps of adequate length for pedestrians to cross the street.
- If it is considered at a non-intersection crossing, the traffic control signal should be installed at least 100 feet from side streets or driveways that are controlled by STOP or YIELD signs. If the traffic control signal is installed at a non-intersection crossing, at least one of the signal faces should be over the traveled way for each approach, parking and other sight obstructions should be prohibited for at least 100 feet in advance of and at least 20 feet beyond the crosswalk or site accommodations should be made through curb extensions or other techniques to provide adequate sight distance, and the installation should include suitable standard signs and pavement markings.
- Bicycles may be counted as pedestrians.
- Pedestrian Hybrid Beacons may be considered instead of a traffic signal if a device is recommended based upon pedestrian needs

PART 1 (A or B must be satisfied)

SATISFIED YES NO
☐ ☐

A. FOUR-HOUR PEDESTRIAN VOLUMES

	Hours			
Vehicles per hour on major street for 4 hours				
Pedestrians crossing major street per hour for highest 4 hours				

(FIGURE 4C-5 OR 4C-6 SATISFIED)

SATISFIED	YES	NO
100%	<input type="checkbox"/>	<input type="checkbox"/>
80%	<input type="checkbox"/>	<input type="checkbox"/>
50%	<input type="checkbox"/>	<input type="checkbox"/>

15% WALKING RATE _____ fps

B. ONE HOUR PEDESTRIAN VOLUMES

	Hour
Vehicles per hour on major street for 1 hour	
Pedestrians crossing major street per hour for highest 1 hour	0

(FIGURE 4C-7 or 4C-8 SATISFIED)

SATISFIED	YES	NO
100%	<input type="checkbox"/>	<input type="checkbox"/>
80%	<input type="checkbox"/>	<input type="checkbox"/>
50%	<input type="checkbox"/>	<input type="checkbox"/>

15% WALKING RATE _____ fps

PART 2

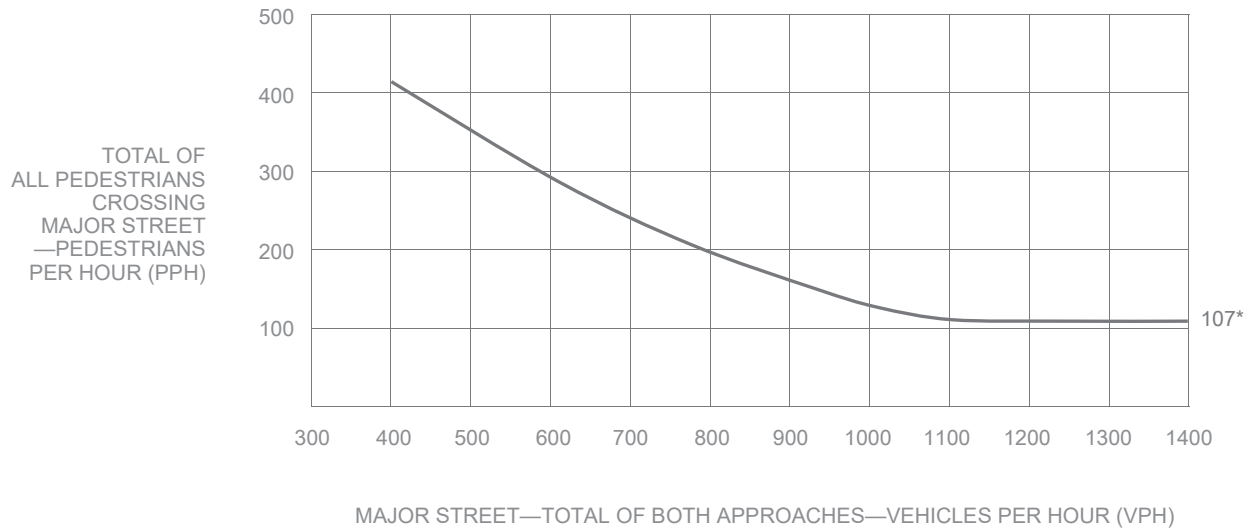
SATISFIED YES NO
☐ ☐

	YES	NO
<u>AND</u> , The distance to the nearest traffic signal along the major street is greater than 300 ft	<input type="checkbox"/>	<input type="checkbox"/>
<u>OR</u> , The proposed traffic signal will not restrict progressive traffic flow along the major street	<input type="checkbox"/>	<input type="checkbox"/>

WARRANT 4 **Pedestrian Volume** (continued)

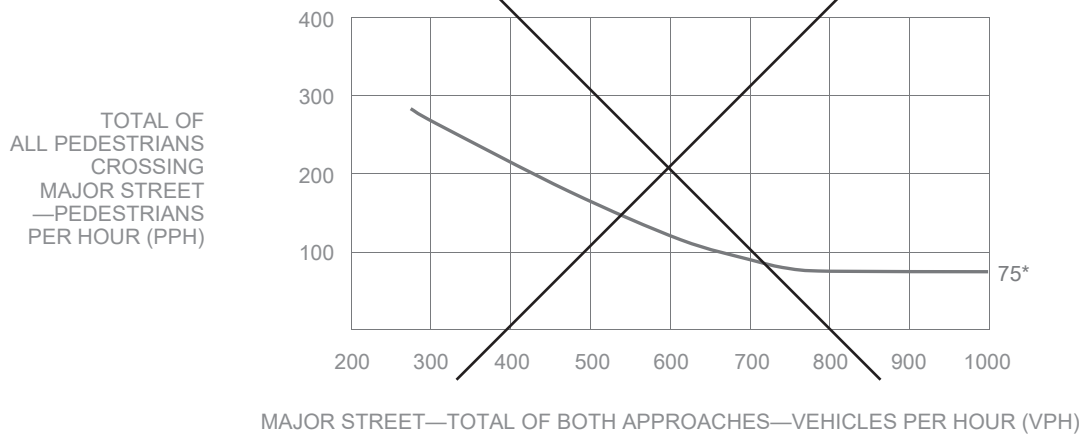
★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

SPEED ≤ 35 MPH
Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume



* Note: 107 pph applies as the lower threshold volume

SPEED > 35 MPH
Figure 4C-6. Warrant 4, Pedestrian Four-Hour Volume (70% Factor)

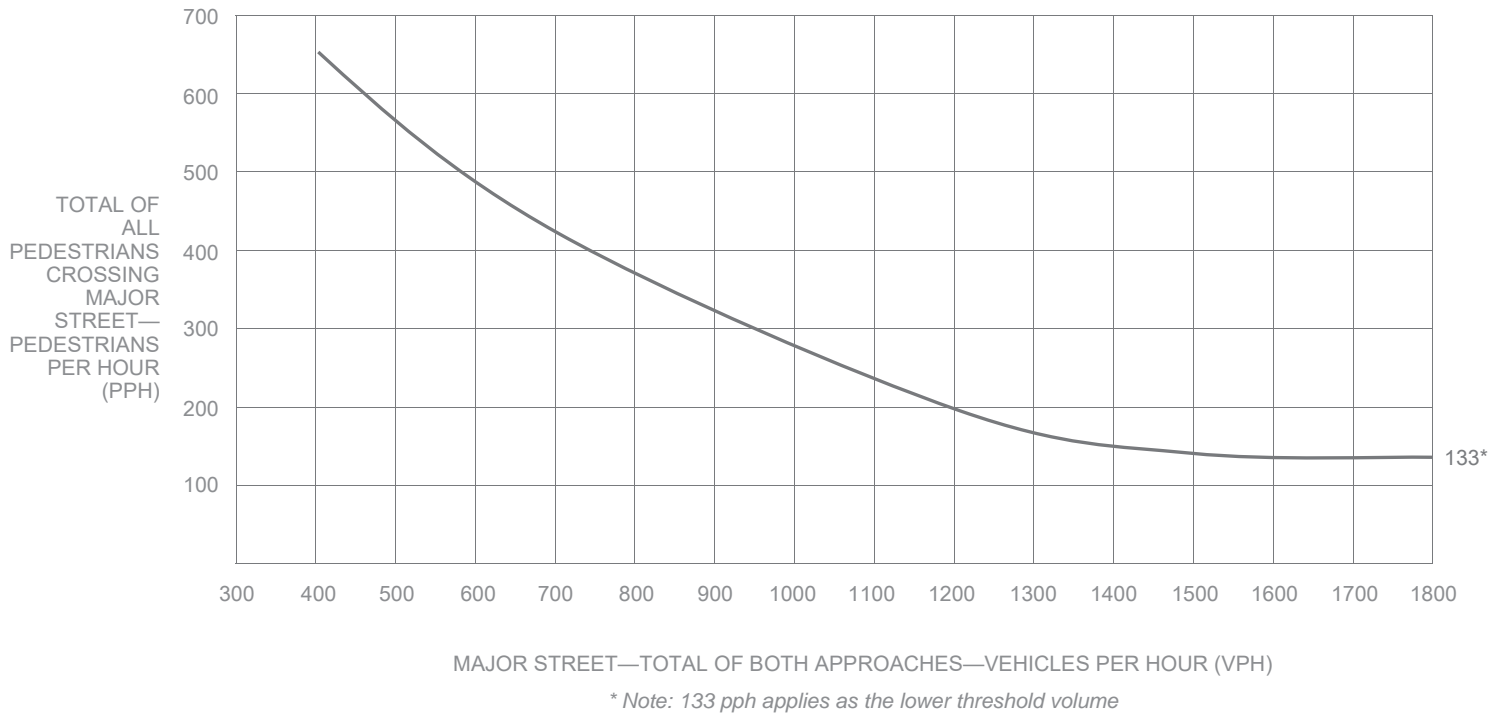


* Note: 75 pph applies as the lower threshold volume

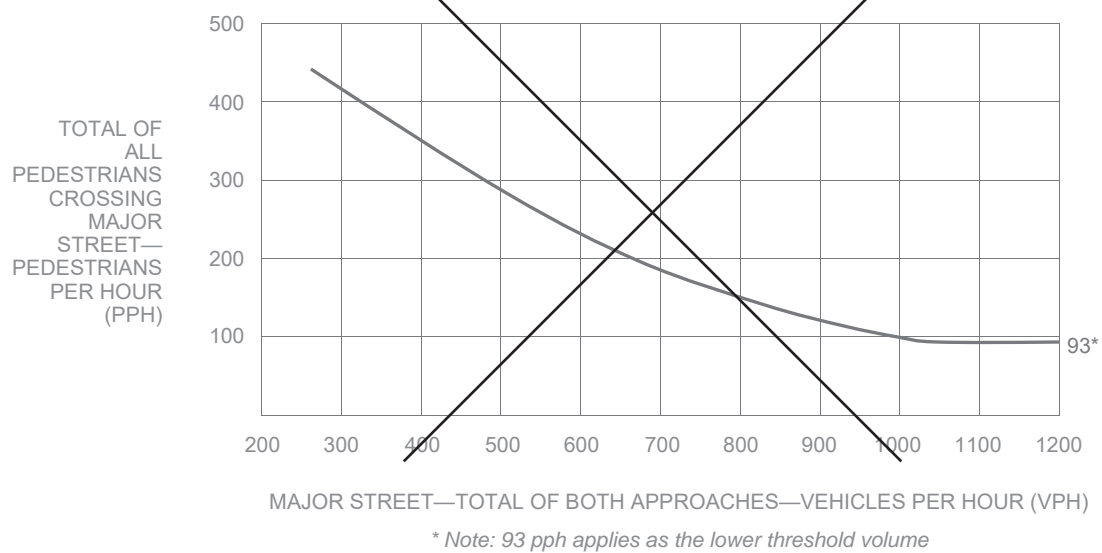
Pedestrian Volume WARRANT 4 (continued)

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

SPEED ≤ 35 MPH
Figure 4C-7. Warrant 4, Pedestrian Peak Hour



SPEED > 35 MPH
Figure 4C-8. Warrant 4, Pedestrian Peak Hour (70% Factor)



School Crossing

WARRANT
5

N/A ☒

SATISFIED YES ☐

NO ☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

- a. Part A and Part B shall be satisfied.
- b. For purposes of this warrant, schoolchildren include elementary through high school students.
- c. Estimated schoolchildren volumes may be used where a new school or expanded school has been approved for construction.
- d. The need for a traffic control signal shall be considered when an engineering study of the frequency and adequacy of gaps in the vehicular traffic stream as related to the number and size of groups of schoolchildren at an established school crossing across the major street shows that the number of adequate gaps in the traffic stream during the period when the schoolchildren are using the crossing is less than the number of minutes in the same period and there are a minimum of 20 schoolchildren during the highest crossing hour.
- e. The School Crossing signal warrant shall not be applied at locations where the distance to the nearest traffic control signal along the major street is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.
- f. Non-intersectional schoolchildren crosswalk locations may be signalized when justified.
- g. Pedestrian Hybrid Beacons may be considered instead of a traffic signal if a device is recommended based upon pedestrian needs

PART A

				SATISFIED	YES	NO
					<input type="checkbox"/>	<input type="checkbox"/>
Hour						
Gap / Minutes and # of Children				YES	NO	
Gaps vs Minutes	Minutes Children Using Crossing		Gaps < Minutes AND Children ≥ 20/hr	<input type="checkbox"/>	<input type="checkbox"/>	
	Number of Adequate Gaps			<input type="checkbox"/>	<input type="checkbox"/>	
School Age Pedestrians Crossing Street / hr						
AND , Consideration has been given to less restrictive remedial measures				<input type="checkbox"/>	<input type="checkbox"/>	

PART B

	SATISFIED	YES	NO
		<input type="checkbox"/>	<input type="checkbox"/>
	YES	NO	
The distance to the nearest traffic signal along the major street is greater than 300 ft	<input type="checkbox"/>	<input type="checkbox"/>	
OR , The proposed traffic signal will not restrict progressive movement of traffic	<input type="checkbox"/>	<input type="checkbox"/>	

Coordinated Signal System

WARRANT
6

N/A ☒

SATISFIED YES ☐

NO ☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

- a. The Coordinated Signal System signal warrant should not be applied where the resultant spacing of traffic control signals would be less than 1,000 feet.
- b. All Parts must be satisfied.

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNAL	YES	NO
≥ 1000 ft	N _____ ft, S _____ ft, E _____ ft, W _____ ft	<input type="checkbox"/>	<input type="checkbox"/>
On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning.		<input type="checkbox"/>	<input type="checkbox"/>
OR , On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.		<input type="checkbox"/>	<input type="checkbox"/>

Crash Experience Warrant

N/A ☒SATISFIED YES ☐NO ☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

- All Parts must be satisfied.
- For locations that involve other agencies, crash data from other involved jurisdictions should be obtained.

		YES	NO
Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency		<input type="checkbox"/>	<input type="checkbox"/>
REQUIREMENTS	Number of crashes reported within a 12-month period susceptible to correction by a traffic signal:	<input type="checkbox"/>	<input type="checkbox"/>
5 OR MORE	Indicate Date(s):		
REQUIREMENTS	CONDITIONS	<input checked="" type="checkbox"/>	
ONE CONDITION SATISFIED 80%	Warrant 1, Condition A - Minimum Vehicular Volume		
	OR, Warrant 1, Condition B - Interruption of Continuous Traffic	<input type="checkbox"/>	<input type="checkbox"/>
	OR, Warrant 4, Pedestrian Volume Condition - Ped Vol ≥ 80% for ped volumes per Figures 4C-5 to 4C-8		

Roadway Network

N/A ☒SATISFIED YES ☐NO ☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

- Existing traffic volumes with an ambient growth rate of 1% (or other LADOT approved ambient growth rate) may be used if projected volumes are not available.
- All Parts must be satisfied.

MINIMUM VOLUME REQUIREMENTS	ENTERING VOLUMES - ALL APPROACHES	✓	FULL FILLED	
			YES	NO
1000 Veh / Hr	During Typical Weekday Peak Hour _____ Veh/Hr AND has 5-year projected traffic volumes that meet one or more of Warrants 1,2, and 3 during an average weekday.		<input type="checkbox"/>	<input type="checkbox"/>
	OR During Each of Any 5 Hrs. of a Saturday or Sunday _____ Veh / Hr			
CHARACTERISTICS OF MAJOR ROUTES	MAJOR ROUTE A	MAJOR ROUTE B	YES NO	
Highway System Serving as Principal Network for Through Traffic				
Rural or Suburban Highway Outside Of, Entering, or Traversing a City				
Appears as Major Route on an Official Plan				
Any Major Route Characteristics Met, Both Streets			<input type="checkbox"/>	<input type="checkbox"/>

Intersection Near a Grade Crossing



N/A
☒

SATISFIED
YES
☐

NO
☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

- a. Both Parts A and B shall be satisfied.
- b. This Warrant shall only be applied after review and approval by the LADOT Railroad Crossing and Safety Section (RCOSS), subject to CPUC General Order approval.
- c. This Warrant does not apply for Pre-Signals and/or Queue-Cutter signals, as an alternative application of Pre-Signals (See 2012 CA MUTCD, Sec 8C.09). Pre-Signals shall only be applied after review and approval by RCOSS, subject to CPUC General Order approval.

	FULFILLED	
	YES	NO
PART A A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach. Track Center Line to Limit Line _____ ft	<input type="checkbox"/>	<input type="checkbox"/>
PART B There is one minor street approach lane at the track crossing - During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-9. Major Street - Total of both approaches: _____ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): _____ VPH X AF (Use Tables 4C-2, 3, & 4 below to calculate AF) = _____ VPH	<input type="checkbox"/>	<input type="checkbox"/>
OR, There are two or more minor street approach lanes at the track crossing - During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-10. Major Street - Total of both approaches: _____ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): _____ VPH X AF (Use Tables 4C-2, 3, & 4 below to calculate AF) = _____ VPH		

The minor street approach volume may be multiplied by up to three following adjustment factors (AF) as described in Section 4C-10.

1. Number of Rail Traffic per Day _____ Adjustment factor from Table 4C-2 _____
2. Percentage of High-Occupancy Buses on Minor Street Approach _____ Adjustment factor from Table 4C-3 _____
3. Percentage of Tractor-Trailer Trucks on Minor Street Approach _____ Adjustment factor from Table 4C-4 _____

NOTE: If no data is available or known, then use AF = 1 (no adjustment)

**Table 4C-2. Warrant 9,
Adjustment Factor for
Daily Frequency of Rail Traffic**

Rail Traffic per Day	Adjustment Factor
1	0.67
2	0.91
3 to 5	1.00
6 to 8	1.18
9 to 11	1.25
12 or more	1.33

**Table 4C-3. Warrant 9,
Adjustment Factor for
Percentage of High-Occupancy Buses**

% of High-Occupancy Buses * on Minor-Street Approach	Adjustment Factor
0 %	1.00
2 %	1.09
4 %	1.19
6 % or more	1.32

* A high-occupancy bus is defined as a bus occupied by at least 20 people

Intersection Near a Grade Crossing

WARRANT 9

(continued)

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

Table 4C-4. Warrant 9, Adjustment Factor for Percentage of Tractor-Trailer Trucks

% of Tractor-Trailer Trucks on Minor-Street Approach	Adjustment Factor	
	D less than 70 feet	D of 70 feet or more
0% to 2.5%	0.50	0.50
2.6% to 7.5%	0.75	0.75
7.6% to 12.5%	1.00	1.00
12.6% to 17.5%	2.30	1.15
17.6% to 22.5%	2.70	1.35
22.6% to 27.5%	3.28	1.64
More than 27.5%	4.18	2.09

Figure 4C-9. Warrant 9, Intersection Near a Grade Crossing (One Approach Lane at the Track Crossing)

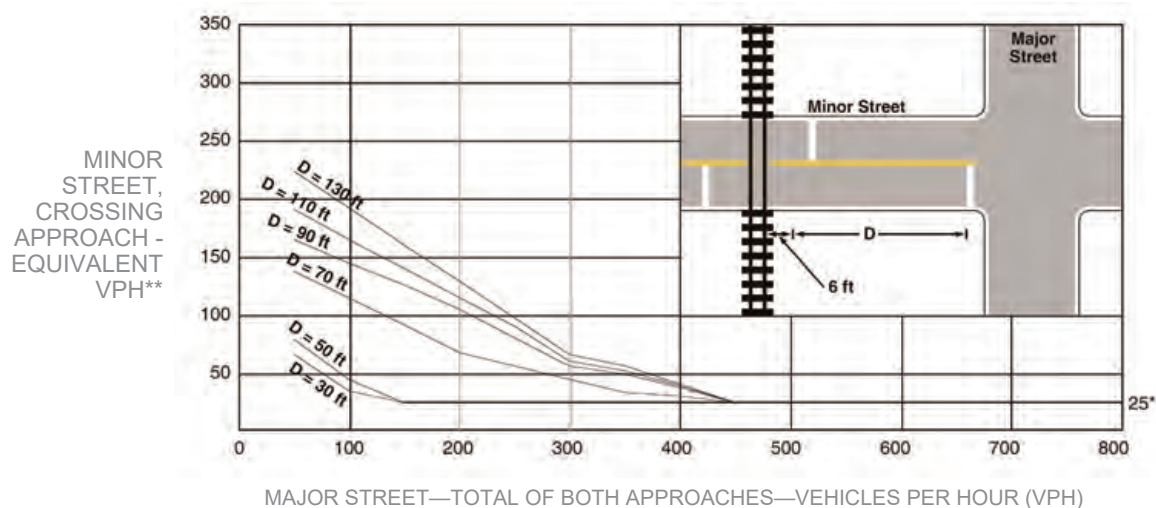
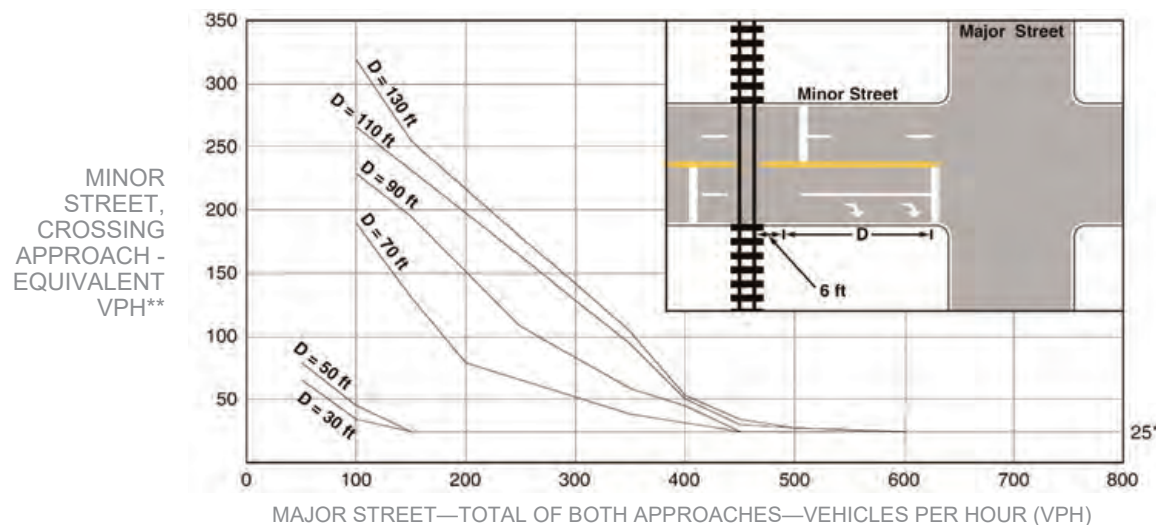


Figure 4C-10. Warrant 9, Intersection Near a Grade Crossing (Two or More Approach Lanes at the Track Crossing)



* 25 vph applies as the lower threshold volume

** VPH after applying the adjustment factors in Tables 4C-2, 4C-3, and/or 4C-4, if appropriate

The next two warrants are not included in the MUTCD (CA) standard warrants, but are added as optional warrants that an engineer may use with discretion to justify a traffic signal for special conditions where other traffic control devices could be considered, but where a traffic signal might be more appropriate

Bicycles

WARRANT

10

N/A ☒

SATISFIED

YES ☐

NO ☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

- a. Part A and Part B shall be satisfied
- b. Per MUTCD (CA) Section 4C.01.15: "For signal warrant analysis, bicyclists may be counted as either vehicles or pedestrians."
- c. When performing a signal warrant analysis, bicyclists riding in the street with other vehicular traffic are usually counted as vehicles, and bicyclists who are clearly using pedestrian facilities are usually counted as pedestrians; however for this bicycle specific warrant, bicyclists are counted as bicyclists, regardless of where they are riding.
- d. Bicycle signal faces should be considered for use when this warrant is satisfied, with the final determination made during the signal design process. Refer to MUTCD (CA) Section 4D.104 (CA).
- e. Estimated peak hour bicycle volumes may be used for new intersections, significantly reconstructed intersections, or where new bicycle facilities or near-term land development are proposed which will result in increased bicycle volumes.

PART A and B must be satisfied

SATISFIED	YES	NO
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PART A (1 or 2 below must be satisfied)

	SATISFIED	YES	NO
1. Location meets the Department's guidelines for a marked crosswalk with Pedestrian Hybrid Beacons, where pedestrian units are replaced with bicyclists; AND the minor street is designated as part of the Neighborhood Enhanced Network in the Mobility Plan 2035 Element of the City's General Plan.	<input type="checkbox"/>		<input type="checkbox"/>
2. The intersection features a two-way bicycle or pedestrian path or trail within the median or alongside one of the roadways.	<input type="checkbox"/>		<input type="checkbox"/>

PART B (1, 2, or 3 below must be satisfied)

PART B (1, 2, or 3 below must be satisfied)		SATISFIED	YES	NO
1. Signal would be part of a corridor or area project to improve bicycle connectivity.*			<input type="checkbox"/>	<input type="checkbox"/>
2. Signal is associated with a development project.*			<input type="checkbox"/>	<input type="checkbox"/>
3. There have been at least 3 correctable collisions involving bicyclists in the last 1 year, 2 per year for the last 2 years, or 5 in the last 3 years of available data. Specify dates of correctable bicycle collisions:			<input type="checkbox"/>	<input type="checkbox"/>
Period Dates		Dates of Correctable Bicycle Collisions		
1 year				
2 year				
3 year				

*The authority for a traffic signal justified using Part B.1 or B.2 shall be automatically rescinded three years after the date of approval if funding for construction of the traffic signal is not secured or project plans are not actively being reviewed for approval.

Pedestrian Activated Yellow Flashing Beacons



N/A ☒

SATISFIED YES ☐
 NO ☐

★ The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal ★

- a. All Parts shall be satisfied.
- b. This warrant should be applied when Pedestrian Activated Yellow Flashing Beacons are recommended within 600 feet BOTH upstream and downstream of existing traffic signals.

PART A

	YES	NO
Location meets the guidelines for the installation of Pedestrian Activated Yellow Flashing Beacons as described in the LADOT Marked Crosswalk Guidelines.	<input type="checkbox"/>	<input type="checkbox"/>

PART B

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNALS	YES	NO
≤ 600 ft	N _____ ft, S _____ ft, E _____ ft, W _____ ft	<input type="checkbox"/>	<input type="checkbox"/>

Appendix H

Neighborhood Mobility Planning

APPENDIX H NEIGHBORHOOD MOBILITY PLANNING

NEIGHBORHOOD TRAFFIC MANAGEMENT TOOLBOX

This Appendix presents the Neighborhood Traffic Management Toolbox that was discussed during the Radford Studio Center meetings with the four adjacent neighborhoods.

Pages H-4 to H-8 of this Appendix present the Toolbox strategies that are most commonly used to address traffic safety issues within a neighborhood. Sketches of the strategies are shown on pages H-9 to H-11 while page H-12 discusses the potential effectiveness of each physical and operational strategy in addressing volume reduction (cut-through traffic), speed, directional flow, noise, safety, and emergency vehicle response time. These tools and sketches have frequently been used in the development of Neighborhood Traffic Management Plans (NTMPs) in Los Angeles and are familiar to the Los Angeles Department of Transportation (LADOT).

These tools were used in the early meetings with the four neighborhoods to identify potential solutions to traffic issues.

NEIGHBORHOOD INPUT

At each of the early neighborhood meetings, comments were recorded and summarized that related to transportation issues and concerns within each neighborhood. Meeting attendees also offered suggestions and solutions to address these concerns.

The discussion at each meeting was summarized so that the planning of the detailed NTMPs can be accelerated. The Project Applicant has proactively and voluntarily initiated the NTMP effort early to allow the detailed plans to be prepared more quickly than the typical LADOT process.

This Appendix includes a summary of the comments and ideas heard during the early meetings.

October 2023 Meeting Feedback

Pages H-13 to H-17 summarize the comments heard during the series of neighborhood meetings conducted in October 2023.

These meetings introduced the Radford Studio Center proposed project, discussed the LADOT procedures for conducting a neighborhood traffic management study, identified transportation issues and concerns, and offered the neighbors an opportunity to suggest strategies and actions for addressing those concerns.

Neighborhood Maps

Neighborhood input was collected at each of the October 2023 meetings to identify existing problem locations and to discuss potential solutions. While some of the problems discussed were not necessarily location-specific (e.g., reduce speeding in the neighborhood, reduce the amount of traffic in the neighborhood), other locations and suggestions were very specific. Illustrations of

the identified issues and neighbor ideas for solutions are shown on pages H-18 to H-22 of this Appendix.

Both the written summaries and the graphical depiction of problems and suggestions were presented to the neighbors in a communitywide meeting held in May 2024.

May 2024 Meeting Feedback

A communitywide meeting was held at Radford Studio Center on May 28, 2024 to report on the neighborhood feedback and ideas collected during the previous eight months of neighborhood meetings. A total of 41 neighbors attended the meeting to review the previous comments and offer additional input.

Pages H-23 to H-28 summarize the comments heard during the May 2024 meeting.

This information and feedback are provided to establish a record of the neighbors' issues, questions, concerns, and suggestions as to how to deal with traffic, safety, and parking in their neighborhoods.

NEXT STEPS

If the Radford Studio Center project is approved, the Applicant will utilize the information provided in this Appendix to begin the process of continuing working with the neighborhoods to prepare a detailed NTMP for each of the four neighborhoods surrounding the Project Site. The LADOT Assessment Letter recommends that the Applicant be responsible for managing and directing an NTMP effort within each neighborhood to prepare a detailed NTMP for each area. Those NTMP plans would be considered by LADOT and the Council Office. If supported by each neighborhood, implementation priorities will be established.

It should be emphasized that the ideas and potential solutions presented to date in this Appendix do not represent final recommendations at this point in the process, as additional technical studies and consensus building is required pursuant to LADOT policies and procedures. Further data collection, traffic volume counts, and/or speed surveys may be required by LADOT as part of the NTMP process. Such plans are ultimately approved by LADOT and the Council Office and evaluated by the neighborhood to determine the level of support for the NTMP measures.


The purpose of recording the summary of feedback is to provide the neighborhoods with a starting point for the detailed planning efforts in each neighborhood. Accordingly, the Applicant has captured summaries of the issues, ideas, and suggestions heard during the months of neighborhood meetings. It should be noted some of the ideas/suggestions may not be feasible and some ideas may not be supported by a majority of the neighbors. In fact, some of the ideas may even conflict with one another. Nevertheless, the Applicant is committed to:

- continuing to work with the neighborhoods to develop detailed NTMPs, providing up to \$125,000 per neighborhood to the effort, and
- working with LADOT and the Council Office to move the plans toward implementation.

The goal of the NTMP effort is to identify the specific strategies that would be the most effective at addressing the issues identified by the neighbors and to develop a consensus plan with the neighbors for the consideration of each neighborhood.




City of Los Angeles Department of Transportation **NEIGHBORHOOD TRAFFIC MANAGEMENT TOOLS**

¹These are only rough cost estimates, and should not be used to formulate detailed budgets. Actual costs can vary greatly from the rough cost estimates, depending on street conditions, extent of landscaping, NTM goals, inflation, etc.

Neighborhood Traffic Measures / (Rough Cost ¹)	Depiction	Pros	Cons	Considerations
EDGE LINES (\$1,000 or more for each 1,000 ft.)	n/a	<ul style="list-style-type: none"> • Reduces side-swipe collisions. • May reduce vehicular speeds. • May facilitate traffic entering and exiting driveways, if there is a parking or shoulder area. • Inexpensive. 	<ul style="list-style-type: none"> • May raise aesthetics concerns. 	<ul style="list-style-type: none"> • 18-ft min. lane width if on-street parking is provided. • Must have adequate lane width for each direction of traffic.
LANE STRIPING— Such as two-way left-turn lane, centerline, etc. (\$1,000 to \$2,000 per 1,000 ft)	n/a	<ul style="list-style-type: none"> • May reduce vehicular speeds. • May reduce collisions. • Inexpensive. 	<ul style="list-style-type: none"> • May raise aesthetics concerns 	<ul style="list-style-type: none"> • Requires adequate roadway width to accommodate the existing or desired roadway usage (for traffic, parking, etc.) based on LADOT standards.
STOP SIGN PATTERN (Less than \$3,000 per intersection)	n/a	<ul style="list-style-type: none"> • May reduce vehicular speeds, esp. at intersections. • Increases opportunity for pedestrian crossings. • May discourage cut-through traffic. • Inexpensive 	<ul style="list-style-type: none"> • Drivers may speed up between stop signs. • Will increase noise and emissions at stop signs. • May require police enforcement. 	<ul style="list-style-type: none"> • Must meet LADOT stop sign warrants.
SPEED HUMPS (\$6,000 for three units)		<ul style="list-style-type: none"> • Slows traffic, esp. at midblock locations. • Self-enforcing. • Minimum maintenance. • More cost-effective than other traffic calming roadway features. 	<ul style="list-style-type: none"> • May increase emergency service response time slightly. • May increase traffic noise in the vicinity of the hump. • May raise aesthetics concerns. 	<ul style="list-style-type: none"> • Must meet justification and feasibility criteria. • Requires petition signed by at least 75% of households per block. • Higher cost for longer blocks.




City of Los Angeles Department of Transportation **NEIGHBORHOOD TRAFFIC MANAGEMENT TOOLS**

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Neighborhood Traffic Measures / (Rough Cost ¹)	Depiction	Pros	Cons	Considerations
SPEED TRAILERS (\$15,000 per trailer)		<ul style="list-style-type: none"> • Slows traffic by educating drivers. • More cost-effective than the fixed speed display sign. • Allows for placement at multiple locations. 	<ul style="list-style-type: none"> • May lose effectiveness over time, if periodic police enforcement is not provided. • May raise aesthetics concerns. 	<ul style="list-style-type: none"> • Requires staffing resources to move around. • LAPD only has a limited number of these trailers. • Requires adequate shoulder or curb lane width for placement.
SPEED FEEDBACK SIGNS (\$30,000 per sign, incl. 500 ft trench for power drop & new pole if a/c powered)		<ul style="list-style-type: none"> • Slows traffic by educating drivers. 	<ul style="list-style-type: none"> • May lose effectiveness over time, if periodic police enforcement is not provided. • May raise aesthetics concerns. • Expensive. 	<ul style="list-style-type: none"> • Must meet justification and feasibility criteria. • A/C powered sign is expensive to install. • Most effective with periodic police enforcement. • Solar powered sign can operate for a maximum of 12 hours/day, and for a shorter duration if daily sun exposure is less than optimum.
TRAFFIC CIRCLES (\$100,000 to \$150,000 or more, depending on size, extent of decorative treatments, and street conditions)		<ul style="list-style-type: none"> • Slows traffic, esp. at intersections. • Reduces collisions at intersection. • Landscaping enhances residential setting. 	<ul style="list-style-type: none"> • Drivers have to learn to go around it. • May impede left turns by very large vehicles (buses, trailers, etc.). • May increase emergency service response time slightly. • May require removal of on-street parking. • Residents will have to maintain landscaping. • Very expensive. 	<ul style="list-style-type: none"> • Must meet justification and feasibility requirements. • Requires petition signed by at least 67% of households from each block adjacent to the intersection. • Higher cost for larger intersections. • Requires commitment from neighborhood to maintain landscaping.

City of Los Angeles Department of Transportation **NEIGHBORHOOD TRAFFIC MANAGEMENT TOOLS**

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Neighborhood Traffic Measures / (Rough Cost ¹)	Depiction	Pros	Cons	Considerations
RAISED MEDIAN ISLANDS (\$30,000 + \$100 per sq. ft.)		<ul style="list-style-type: none"> • May slow traffic by narrowing traffic lanes and creating a visual break in the roadway. • Landscaping enhances residential setting. 	<ul style="list-style-type: none"> • May require removal of on-street parking spaces. • May restrict driveway access, resulting in u-turns. • Residents will have to maintain landscaping. • Very expensive. 	<ul style="list-style-type: none"> • There may be objections from residents affected by parking and driveway access restrictions. • Requires commitment from neighborhood to maintain landscaping.
CURB EXTENSIONS / BUMPOUTS (\$50,000 or more per corner)		<ul style="list-style-type: none"> • May slow traffic by narrowing traffic lanes. • Shortens pedestrian crossing distance if located at intersections. • Landscaping enhances residential setting. 	<ul style="list-style-type: none"> • May require removal of on-street parking spaces. • At driveways, may impact driveway access. • Residents will have to maintain landscaping. • Very expensive. 	<ul style="list-style-type: none"> • There may be objections from residents affected by parking restrictions. • Extent of driveway, gutter & curb work increases costs. • Requires commitment from neighborhood to maintain landscaping.
TURN RESTRICTION SIGNS (\$500 for each access point)		<ul style="list-style-type: none"> • Reduces cut-through traffic volume. • May limit restrictions to problem hours. • No effect on response time for emergency service providers when compared to physical barriers. • Inexpensive. 	<ul style="list-style-type: none"> • May cause drivers to use other neighborhood streets. • Will increase travel time for local residents as well. • Not self-enforcing; requires police enforcement. 	<ul style="list-style-type: none"> • Must be verified by LADOT that there is a demonstrated cut-through problem. • Requires support of residents in the affected area (at least two-thirds in support). • Must address potential diversion of traffic to other neighborhood streets if restriction affects access to high volume streets (esp. collector streets).


City of Los Angeles Department of Transportation
NEIGHBORHOOD TRAFFIC MANAGEMENT TOOLS

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Neighborhood Traffic Measures / (Rough Cost ¹)	Depiction	Pros	Cons	Considerations
SIGNAL TIMING METERING— To reduce green time for targeted traffic flows	n/a	<ul style="list-style-type: none"> • May reduce traffic volume, by discouraging some drivers from using the cut-thru route, once they perceive better time saving and convenience on adjacent highways and freeways. • Delay may create conditions that result in slower speeds. 	<ul style="list-style-type: none"> • May cause drivers to use other neighborhood streets. • Excessive delay may cause long queue lengths over a longer period of time (to clear out). Residents may perceive the long queues to be undesirable as well (noise, emissions). • Residents are subjected to delays, too, while leaving or returning home. • May make driveway access across long queues difficult. • Depending on the signal timing scheme, may cause inconvenience to non-participating residents immediately adjacent to the NTM project area. • Expensive if traffic signal hardware changes are needed. 	<ul style="list-style-type: none"> • Must be verified by LADOT that there is a demonstrated cut-through problem. • Requires support of residents in the affected area (at least two-thirds in support). • Must address potential diversion of traffic to other neighborhood streets if restriction affects access to high volume streets (esp. collector streets). • May be most effective if there are signal timing and striping changes that facilitate movements leading to the arterials.

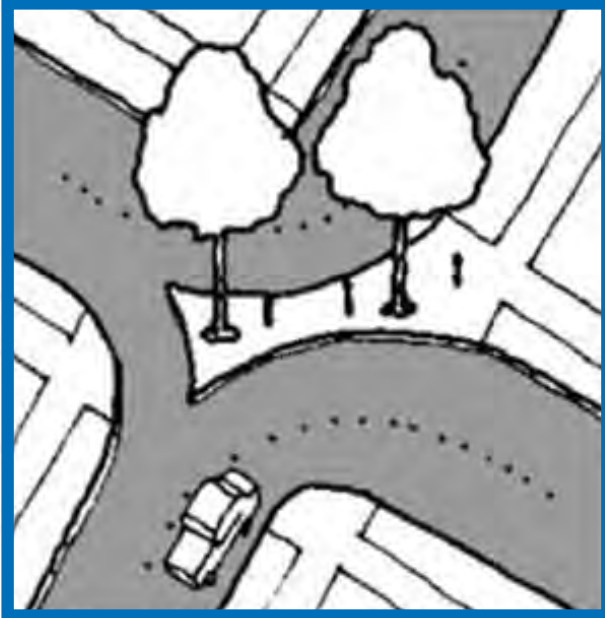
City of Los Angeles Department of Transportation NEIGHBORHOOD TRAFFIC MANAGEMENT TOOLS

¹These are only rough cost estimates, and should not be used to formulate detailed budgets. Actual costs can vary greatly from the rough cost estimates, depending on street conditions, extent of landscaping, NTM goals, inflation, etc.

Neighborhood Traffic Measures / (Rough Cost ¹)	Depiction	Pros	Cons	Considerations
<p>BARRIERS-- Such as half street closures, diagonal diverters, etc.</p> <p>(\$50,000 to \$100,000 and more for each access point, depending on street conditions and extent of landscaping)</p>	 <p>One type of barriers: Half Street Closure</p>	<ul style="list-style-type: none"> • Reduces cut-through traffic volume. • Self-enforcing. • Landscaping enhances residential setting. 	<ul style="list-style-type: none"> • May cause drivers to use other neighborhood streets. • Will increase travel time for local residents as well. • Some drivers may go around the barrier. • Very expensive. 	<ul style="list-style-type: none"> • Must be verified by LADOT that there is a demonstrated cut-through problem. • Requires support of residents in the affected area (at least two-thirds in support). • Must maintain emergency or routine street access for service providers, including but not limited to the Fire Department and the Bureau of Sanitation. • Must address potential diversion of traffic to other neighborhood streets if restriction affects access to high volume streets (esp. collector streets). • Extent of gutter & curb work increases costs. • Requires commitment from neighborhood to maintain landscaping.

TRAFFIC CONTROL TOOLBOX

Diversion

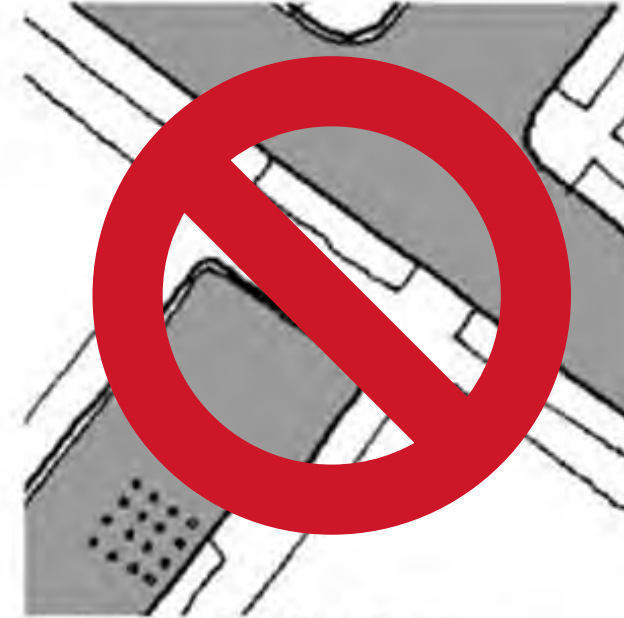


P. Diverter - Truncated Diverter

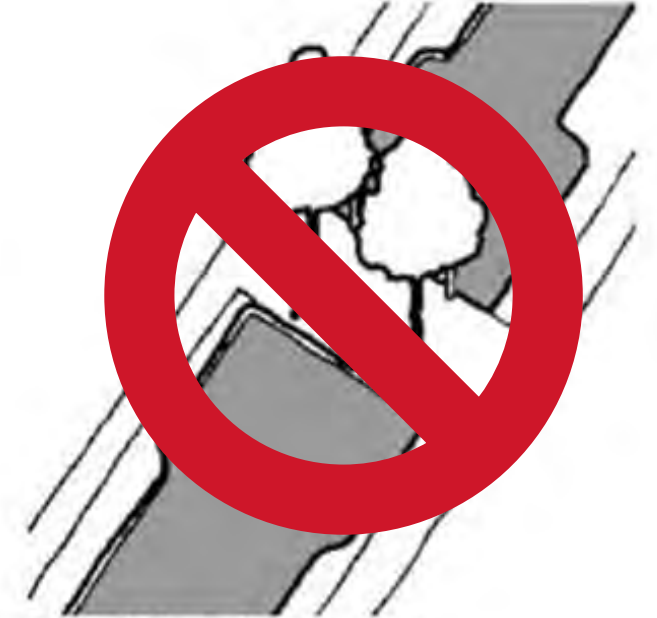
Diversion



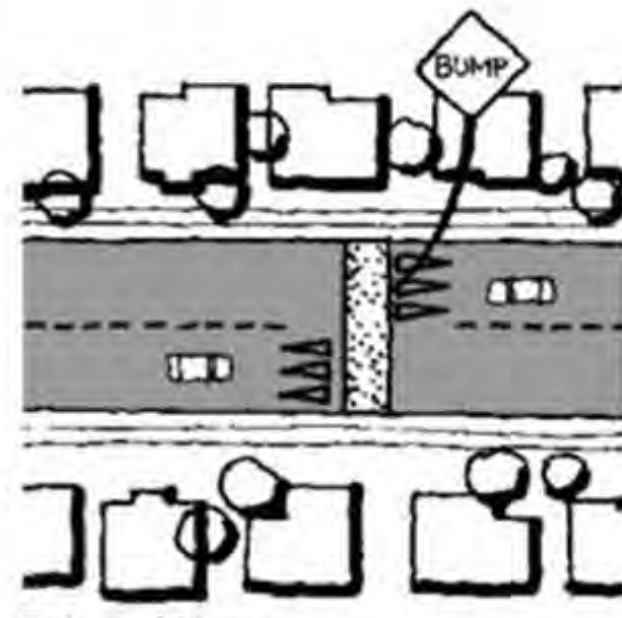
Q. Diverter - Forced Turn



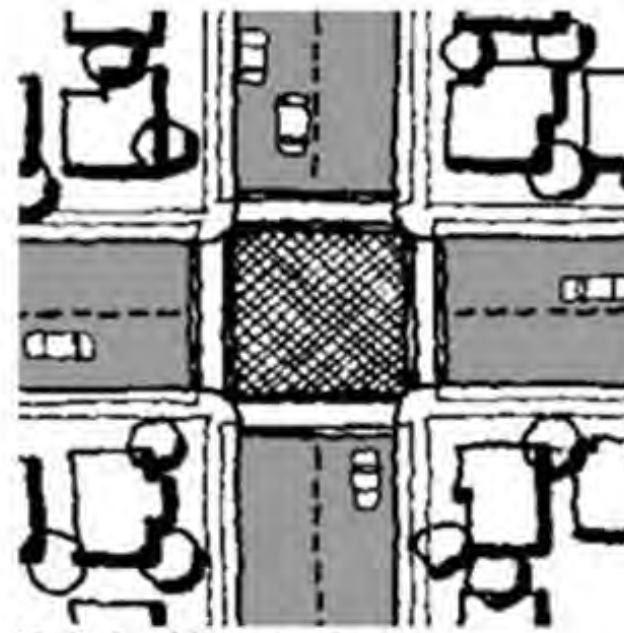
R. Intersection Cul-de-sac



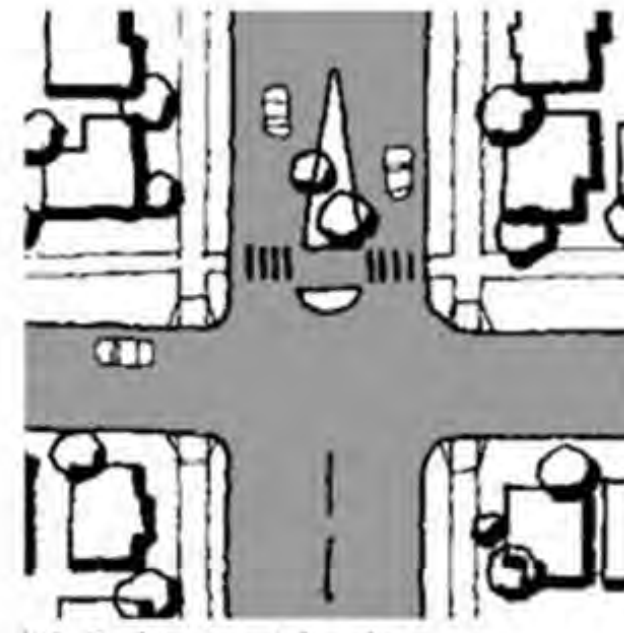
S. Midblock Cul-de-sac



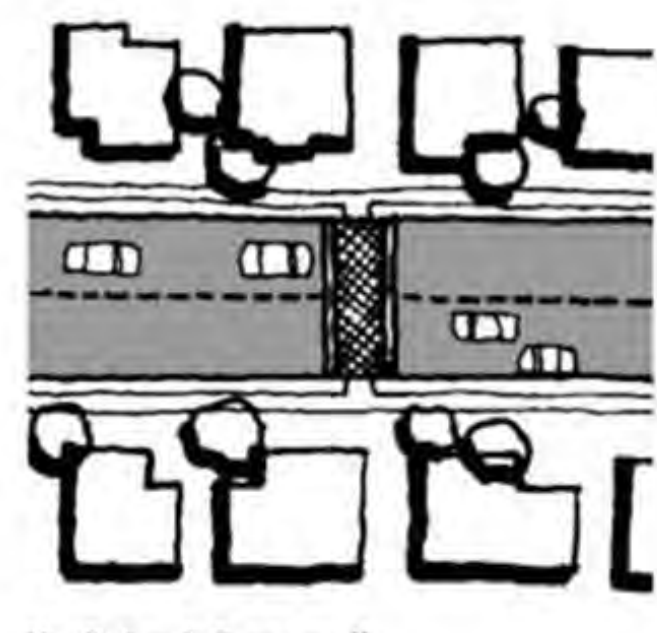
T. Speed Hump



V. Raised Intersection



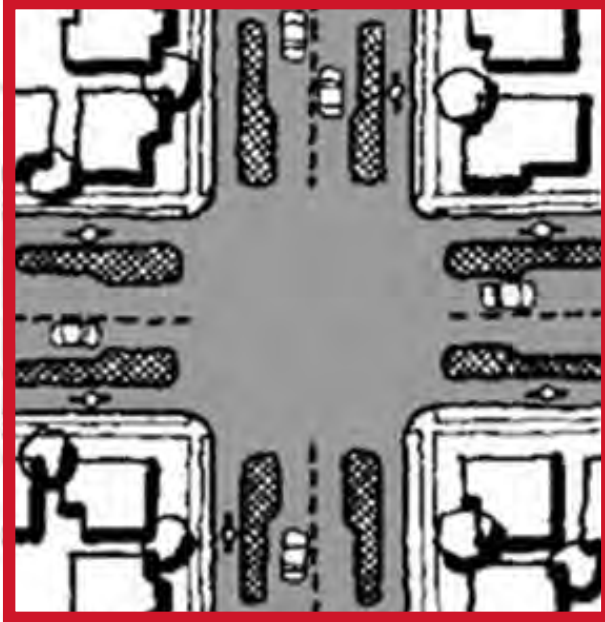
W. Pedestrian Island



X. Raised Crosswalk

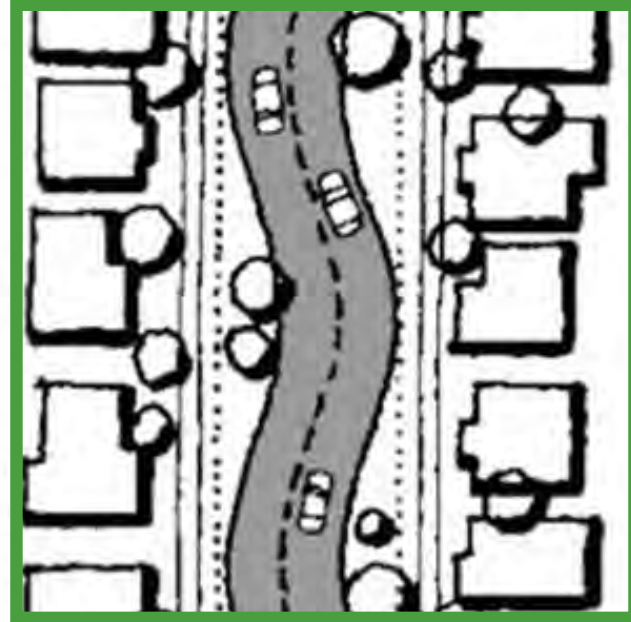
TRAFFIC CONTROL TOOLBOX

Physical Constraint



I. Choker

Expensive



J. Curvilinear Street

Diversion



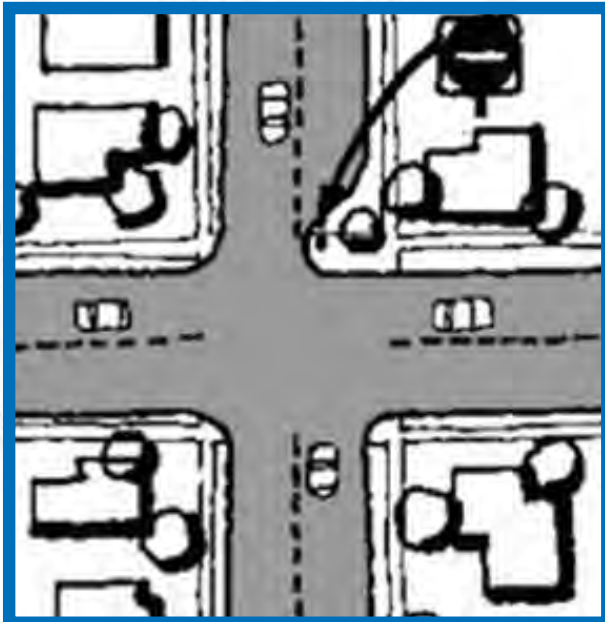
K. Realigned Intersection

Diversion



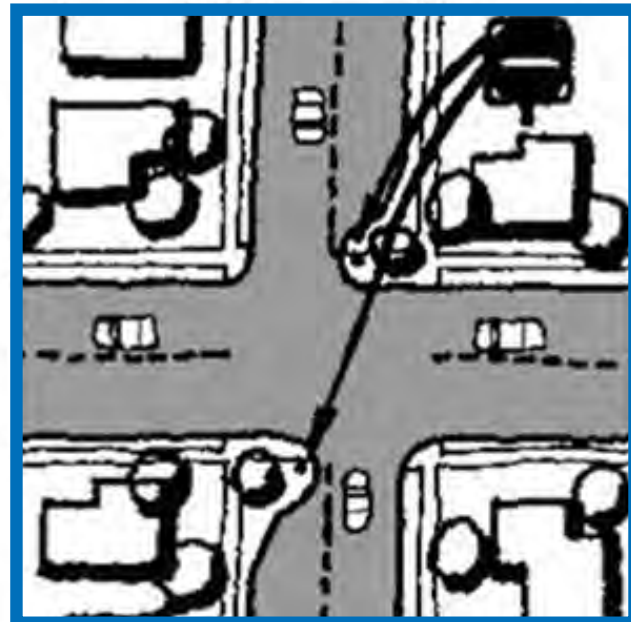
L. Restricted Movement Barrier

Diversion



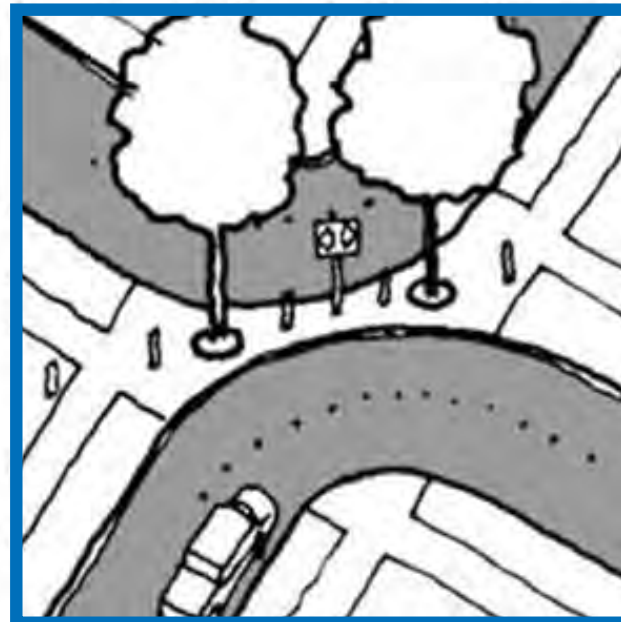
M. Entrance Barrier

Diversion



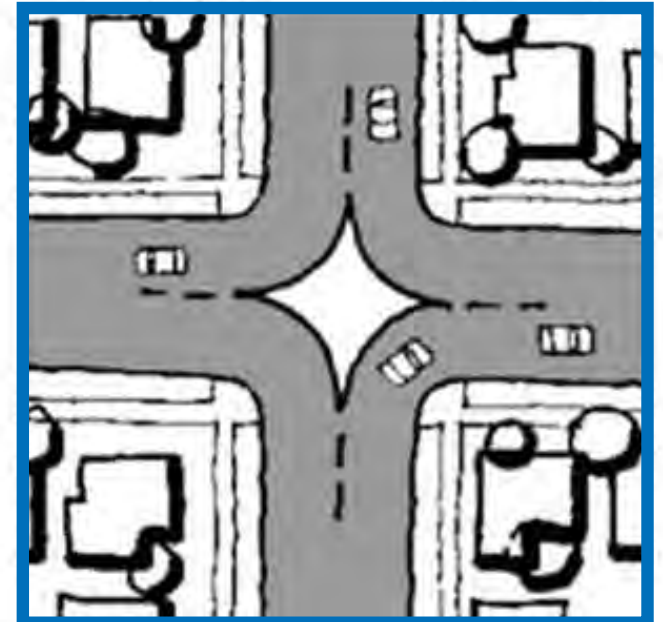
M. Entrance Barrier

Diversion



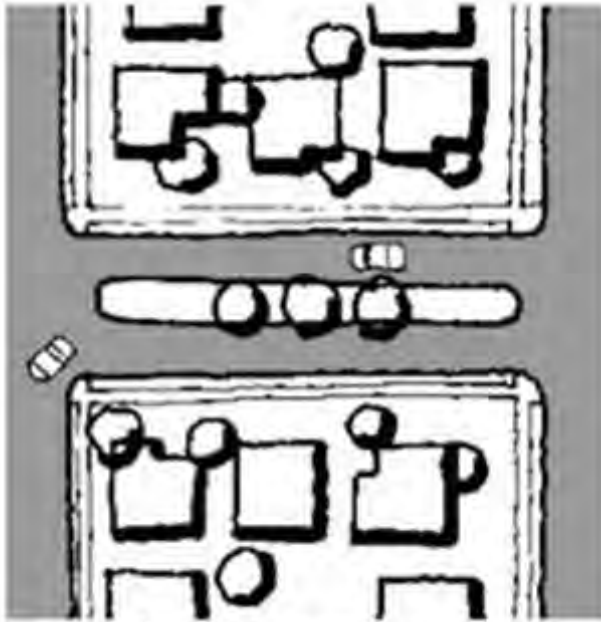
N. Diverter - Diagonal

Diversion

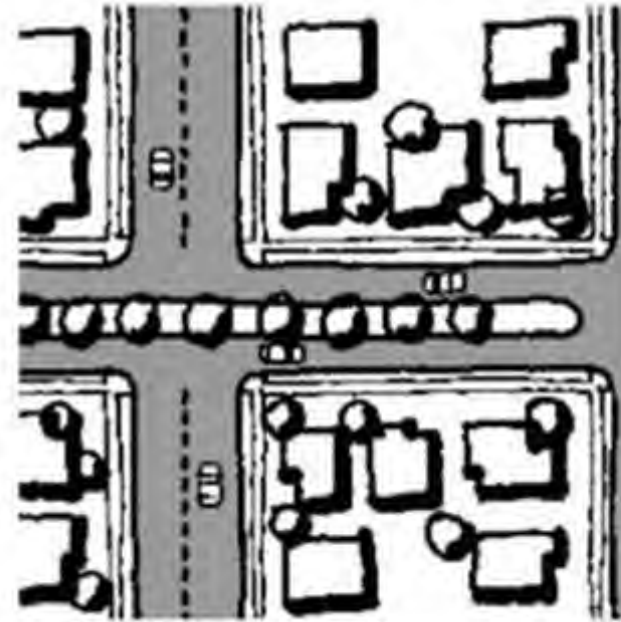


O. Diverter - Star

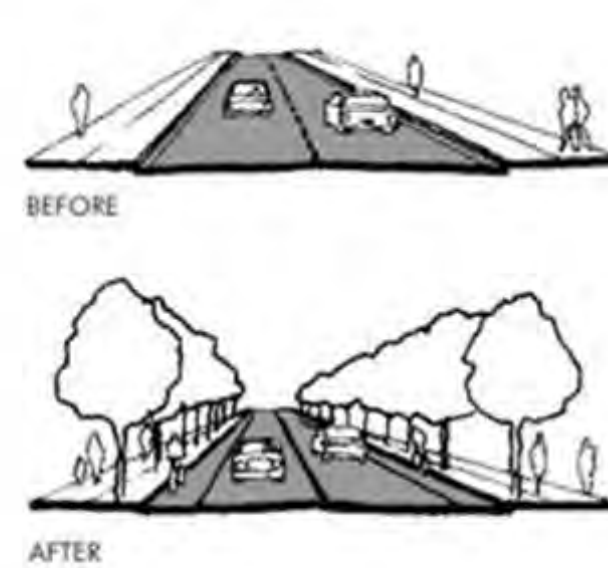
TRAFFIC CONTROL TOOLBOX



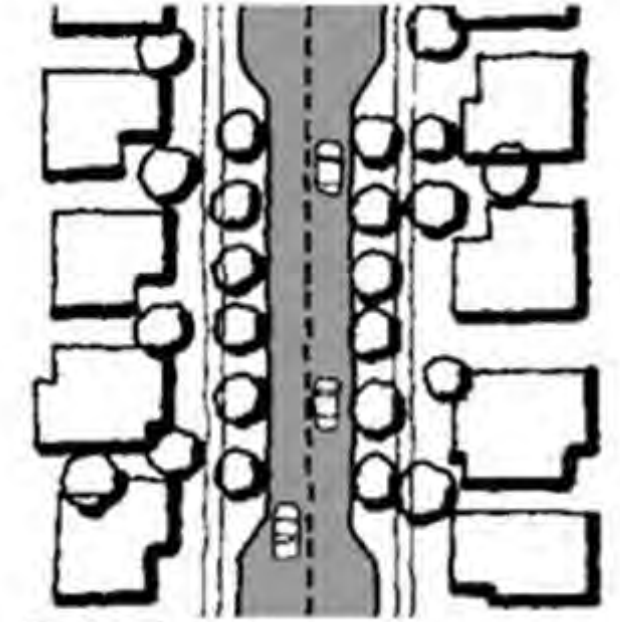
A. Roadway Narrowing -
Center Median



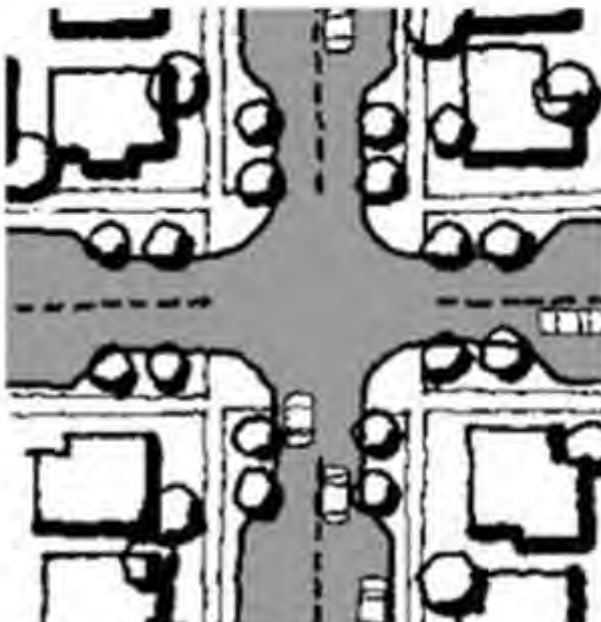
A. Roadway Narrowing -
Center Median



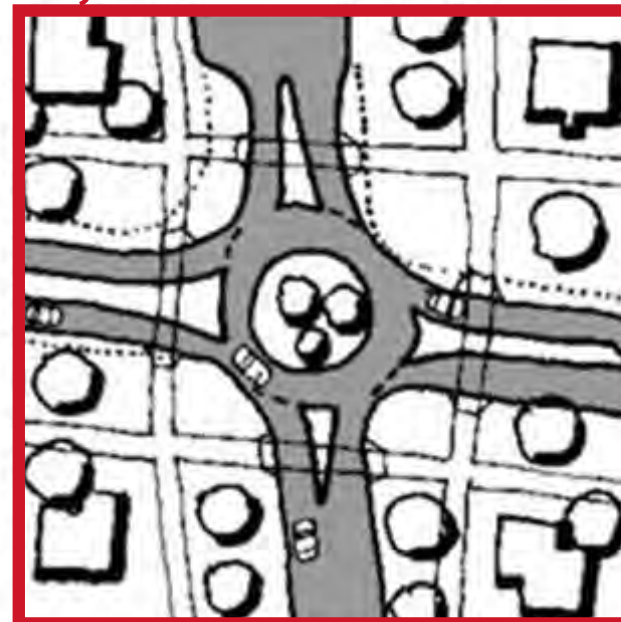
B. Roadway Narrowing -
Reduced Lane Width



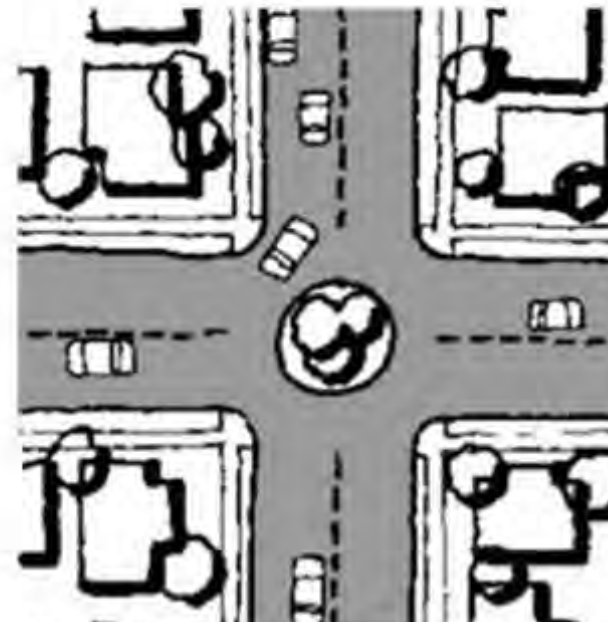
D. Roadway Narrowing -
Midblock Neckdown



E. Roadway Narrowing -
Corner Curb Extension



F. Roundabout



G. Traffic Circle



H. Gateway / Entry Island

Physical Constraint

TRAFFIC CONTROL TOOLBOX

PHYSICAL DEVICE / ACTION		USE	EFFECTIVENESS						COST	
		A = Arterial C = Collector L = Local	Volume Reduction	Speed Reduction	Directional Control	Noise	Safety	Emergency Response Time	Implementation	Maintenance
A	Roadway Narrowing - Center Median	All	Yes	Yes	Yes	Decrease	Increase	No Effect	High	Low
B	Roadway Narrowing - Reduced Lane Width	All	Possible	No	No	Decrease	Possible Increase	No Effect	Low-Mod	Low
C	Roadway Narrowing - Reduced Number of Lanes	A	Possible	No	No	Decrease	Possible Decrease	Possible Increase	Low-Mod	Low
D	Roadway Narrowing - Midblock Neckdown	All	No	Yes	Yes	Decrease	Increase	Possible Increase	Mod-High	Mod
E	Roadway Narrowing - Corner Curb Extention	All	No	No	No	Decrease	Increase	No Effect	Mod-High	Mod
F	Roundabout	A,C	No	No	No	Decrease	Possible Increase	No Effect	High	High
G	Traffic Circle	C,L	No	No	No	Decrease	Possible Increase	Increase	High	High
H	Gateway / Entry Island	C,L	Likely	No	No	Decrease	Increase	No Effect	Low-Mod	Mod
I	Choker	All	No	No	No	No Effect	Possible Increase	No Effect	Mod	Low-Mod
J	Curvilinear Street	C,L	Possible	No	No	Possible Decrease	Possible Decrease	Increase	High	High
K	Realigned Intersection	C,L	Yes	Yes	Yes	Decrease	Increase	Increase	High	Mod
L	Restricted Movement Barrier	C,L	Yes	Yes	Yes	Decrease	Increase	Possible Increase	Mod	Low-Mod
M	Entrance Barrier	C,L	Yes	Yes	Yes	Decrease	Increase	Increase	Mod-High	Low-Mod
N	Diverter - Diagonal	C,L	Yes	Yes	Yes	Decrease	Increase	Increase	Mod-High	Low-Mod
O	Diverter - Star	C,L	Yes	Yes	Yes	Decrease	Increase	Increase	Mod-High	Low-Mod
P	Diverter - Truncated Diverter	C,L	Yes	Yes	Yes	Decrease	Increase	Increase	Mod-High	Low-Mod
Q	Diverter - Forced Turn	C,L	Yes	Yes	Yes	Decrease	Increase	Increase	Mod-High	Low-Mod
R	Intersection Cul-de-sac	L	Yes	Yes	Yes	Decrease	Increase	Increase	Mod-High	Low-Mod
S	Midblock Cul-de-sac	L	Yes	Yes	Yes	Decrease	Increase	Increase	Mod-High	Low-Mod
T	Speed Hump	C,L	Likely	No	No	Increase	Increase	Increase	Low-Mod	Low
U	Speed Table	C,L	Likely	No	No	Increase	Increase	Increase	Mod-High	Low-Mod
V	Raised Intersection	C,L	Unlikely	No	No	Increase	Increase	Increase	High	Mod
W	Pedestrian Island	A,C	Unlikely	No	No	Possible Decrease	Increase	Increase	Mod-High	Low-Mod
X	Raised Crosswalk	C,L	Unlikely	No	No	Increase	Increase	Increase	Mod-High	Low

OPERATIONAL DEVICE / ACTION		USE	EFFECTIVENESS						COST	
		A = Arterial C = Collector L = Local	Volume Reduction	Speed Reduction	Directional Control	Noise	Safety	Emergency Response Time	Implementation	Maintenance
AA	Crosswalk Strobelights	All	Unlikely	Possible	No	Possible Increase	Increase	No Effect	Mod-High	Mod
BB	Pedestrian Signal	All	Unlikely	Possile	No	Possible Increase	Increase	No Effect	Mod	Mod
CC	Traffic Signal	A,C	Unlikely	Likely	No	Possible Increase	Possible Increase	No Effect	Mod-High	Mod
DD	All Way STOP	C,L	Mixed	Mixed	No	Increase	Possible Increase	Increase	Low	Low
EE	Turn Prohibition	All	Yes	Likely	Yes	No Effect	Increase	No Effect	Low	Mod-High
FF	Speed Limit	All	No	Likely	No	No Effect	Mixed	No Effect	Low	Mod-High
GG	Police Enforcement	All	No	Likely	No	No Effect	Temporary Increase	No Effect	Mod-High	Mod-High
HH	Photo Radar	All	No	Yes	No	No Effect	Temporary Increase	No Effect	Mod-High	Mod-High
II	Red Light Run Camera	All	No	Likely	No	No Effect	Increase	No Effect	Mod-High	Mod-High
JJ	Speed Trailer	All	No	Yes	No	No Effect	Temporary Increase	No Effect	Mod-High	Mod-High
KK	One-way Street	All	No	No	Yes	No Effect	Increase	No Effect	Mod-High	Low

Neighborhood Feedback

Neighborhood	Mobility Related Issues (Direct Comments)	Suggestions to Resolve the Issues (Direct Comments)	Additional Comments
10/10/23 Radford Neighborhood	1. People speeding down Woodridge and through alleys 2. Weird bad stoplights/signage at Ventura/Radford and Ventura Place 3. Blind turns with alleys	1. Between Laurel and Radford on Woodbridge, four way stops at every intersections 2. Better signs/traffic patterns with right turns at Ventura/Laurel 3. <u>Mirrors at weird/sharp alley turns</u>	There's a light at Ventura Place & Laurel
	1. Increased traffic on Woodbridge St 2. Increased traffic into the Grove neighborhood 3. Limiting the number of gates into Radford	Lived here for 30 years and it's terrible now. Will never work with expansion. The Grove should be closed off to the studio. Woodbridge is closed now because of the sewer construction and it's been great and we have had to work around it. <u>We are now used to it</u>	
	1. Traffic into neighborhood/Grove 2. Traffic on Woodbridge 3. Concerned w/ traffic count now that Woodbridge closed	1. No right turn signs do not work now!!! Can not rely on them to work in the future. 2. Need to direct traffic from Ventura entrance, Colfax entrance, and the Radford gate entrance south 3. <u>No cut through on Woodbridge!!</u>	
	1. Parking 2. Speeding	1. Reconfigure stop signs 2. Speed bumps 3. <u>Consider more parking spaces on lot</u>	Exiting studio from Lot C is problematic (bad intersections). Install something at Woodbridge going on Laurel Canyon
	1. Traffic flow in/out at studio 2. Speeding	1. Need stoplight at Radford Ave and Hoffman St 2. Need more studio exits to main streets 3. <u>Signs - Please Slow Down</u>	
	1. Traffic 2. Speeding 3. <u>Parking</u>	1. Speed humps 2. Better signage	
	1. Parking for audience, TJs, Ventura employees 2. Employees racing down Radford 3. <u>Planters @ Radford</u>		
	1. Hoffman Street: Late night trucks/studio traffic (very noisy!) 2. Studio employees using street to cut through - always speeding!	1. One way streets 2. Speed bumps 3. Enforced "no turn" signs	
	1. I am concerned about increased traffic on Radford and other local streets between Riverside and Moorpark 2. Cut through traffic on Radford from Moorpark to Riverside, Colfax, Laurel, Moorpark, Radford	1. No throughs at Radford & Moorpark - physical barriers 2. Mirror community at Victory & Sepulveda, Network of turn restrictions 3. <u>Traffic diversion - not traffic calming</u>	

Neighborhood Feedback

Neighborhood	Mobility Related Issues (Direct Comments)	Suggestions to Resolve the Issues (Direct Comments)	Additional Comments
10/16/2023 Ventura Neighborhood	1. Congestion on Ventura Blvd between Laurel Canyon and Colfax - rush hour and traffic light coordination 2. Carpenter Avenue as a cut through / school congestion 3. Interim traffic patterns	1. Don't solve Carpenter School parking issues 2. Use badges for permanent employees to designate entrance gate 3. Need to see interim traffic patterns	
	1. Potential worsening of gridlock on Ventura, eastbound in the morning. This encourages/triggers cut through traffic for Silver Triangle area, south of Moorpark, north of Riverside, between Whitsett & Laurel Canyon 2. Do we suffer backup to Laurel / Ventura, which blocks N/S access on Laurel 3. Is there a way to improve traffic flow to Trader Joe's parking lot?	1. Open Carpenter gate after drop off 2. Remote parking for audiences, shuttled in by tram 3. Human traffic monitoring to mitigate shortcuts	
	Carpenter & Ventura exit & entrance!	Communicate with Carpenter Ave. Elementary	
	1. Who will enforce the traffic laws 2. Street parking		
	1. Carpenter School parking & drop-off/pick-up	1. Radford parking lot sharing. Allow for parents to use the closest parking lots so parents can walk their children to school 2. Carpenter School parking - Morning drop-off - Marking certain street parking spots designated for a particular amount of time for school parking	
	1. Two stop signs on Valleyheart at Guerin & Hoffman are not effective		Two speed humps on Laurel Terrace Dr have been removed
	1. Lack of parking 2. Turn lane for CVS going north		
	1. Shortage of street parking 2. Parking lot for patrons on Ventura 3. Elevated ped walkway Laurel / Ventura 4. Colfax Gate 5. Left turn into CVS from Laurel Canyon or stopping at left-turn altogether 6. More signals to break up traffic volume going west 7. No parking during rush hour along Ventura		
	1. Construction on/at Carpenter 2. Staging - Early AM 3. Issues on connecting to Metro 4. Alley? Improvements/maintenance 5. Drop-off/Pick-up at Carpenter Elementary 6. Counting at gates? 7. Remove audience 8. Alley access westbound from Colfax 9. Enforcement of no left-turn at Carpenter & Sunshine Terrace 10. Traffic control officer 11. Ventura - synced? 12. O. Street		
	1. Hoffman Street used for parking by actors to studio, trucks all hours of the day, speeding 2. Move public/visitor parking to major arterials 3. Maintain retail uses along Ventura		

Neighborhood Feedback

Neighborhood	Mobility Related Issues (Direct Comments)	Suggestions to Resolve the Issues (Direct Comments)	Additional Comments
10/24/2023 Moorpark Neighborhood	1. Backup of traffic/left-turn queue into the Moorpark gate down Moorpark even continued traffic coming east on Moorpark. I am in the Studio Village complex & turn left onto Moorpark from Morella Avenue (entrance to Studio Village). It is difficult to turn left onto Moorpark from Morella, so I am very concerned about being able to do so once the new gate/bridge is functional. I am hoping this is something that can be looked into. 2. Separately, I'm also concerned about construction noise (I work from home) 8 times	1. I'm not sure honestly - maybe looking into timing of the light? Distance from Radford to Moorpark making sure it can't back up all the way? 2. Maybe not allowing cars to turn left into the lot from Moorpark? 3. Maybe looking into a light or stop sign at Moorpark & Morella?	
	1. Concerned about the large amount of increased traffic going through the neighborhood from Laurel Canyon to Radford (and vice versa) namely calming through on Woodbridge and on Valley Heart (north of the wash). 2. Concerned about people coming to the studio (employees, visitors, audience, auditions, etc.) who would take up already crowded parking in the neighborhood. 3. Also concerned about traffic cutting through the alleyways in our neighborhood which is very dangerous	1. I think we should have four-way stop signs and add crosswalks painted on every intersection on both Woodbridge & Valley Heart between Laurel Canyon and Radford. 2. Can we limit parking on the neighborhood streets to residents with parking permits? (Woodbridge, Gentry, Ben, Agnes Streets) 3. Not sure how to address alleyway issue - possible signage for "Resident Access Only"?	
	1. Parking 2. Safety	1.No resolution to more cars & access	Multi-use walkways, spaces, that allow community access
	1. Concerned there will be no parking problem on Moorpark. Now is it very easy to park. 2. Will bridge affect auto traffic on Moorpark?	1. Want no changes on Moorpark 2. Need traffic light on Moorpark & Morella	
	1. Not yet evident (traffic) 2. Haul route may be problem if use existing gates	1. Follow through w/ future mobility studies for Phase II, Phase III and Phase IV 2. Build Radford Bridge & use as haul route	
	1. Radford - Grade improve mobility for pedestrians and bikes 2. Improve flow of pedestrians & bikes from Laurel Canyon to LA River (not Tuiunga Wash)	1. Make designated pedestrian bridge down from street level to bike lane 2. Must get through on LA River also	
			I live where Radford dead ends to the south of the wash. I'm concerned about the aesthetics when you build the road through. I understand that traffic will not be able to drive thru, but it's still going to drastically change the look and feel when I walk out my front door. Right now, a large stand of trees blocks (in a good way) the view/noise from Moorpark. Ideally you would plant a stand of trees like a parkway across the road instead of simple bollards. Something to maintain the privacy and some of the seclusion of that dead end. Of all the neighborhoods being affected by the aesthetics of the change our little quiet dead end will be especially impacted.
	1. Traffic lights cause more backup traffic. Rather, put in a traffic circle instead of traffic lights. 2. Chain link fence is better than any other fence. You cannot graffiti a chain link fence	1. Traffic circles - no traffic lights	
	1. Turning left LCB to MP 2. Turning left from MP to Colfax (westbound)	1. Always give left arrow (right now takes 3 cars to trigger) 2. Lengthen left turn lane, gets backed up w/ straight driving, can't get into left lane 3. Left arrow @ MP/Colfax	Studio entrance on Moorpark. Main Entrance. Concerned about traffic & getting in/out on left turn. Especially w/ new light & traffic building up to turn left into studio (westbound on MP)

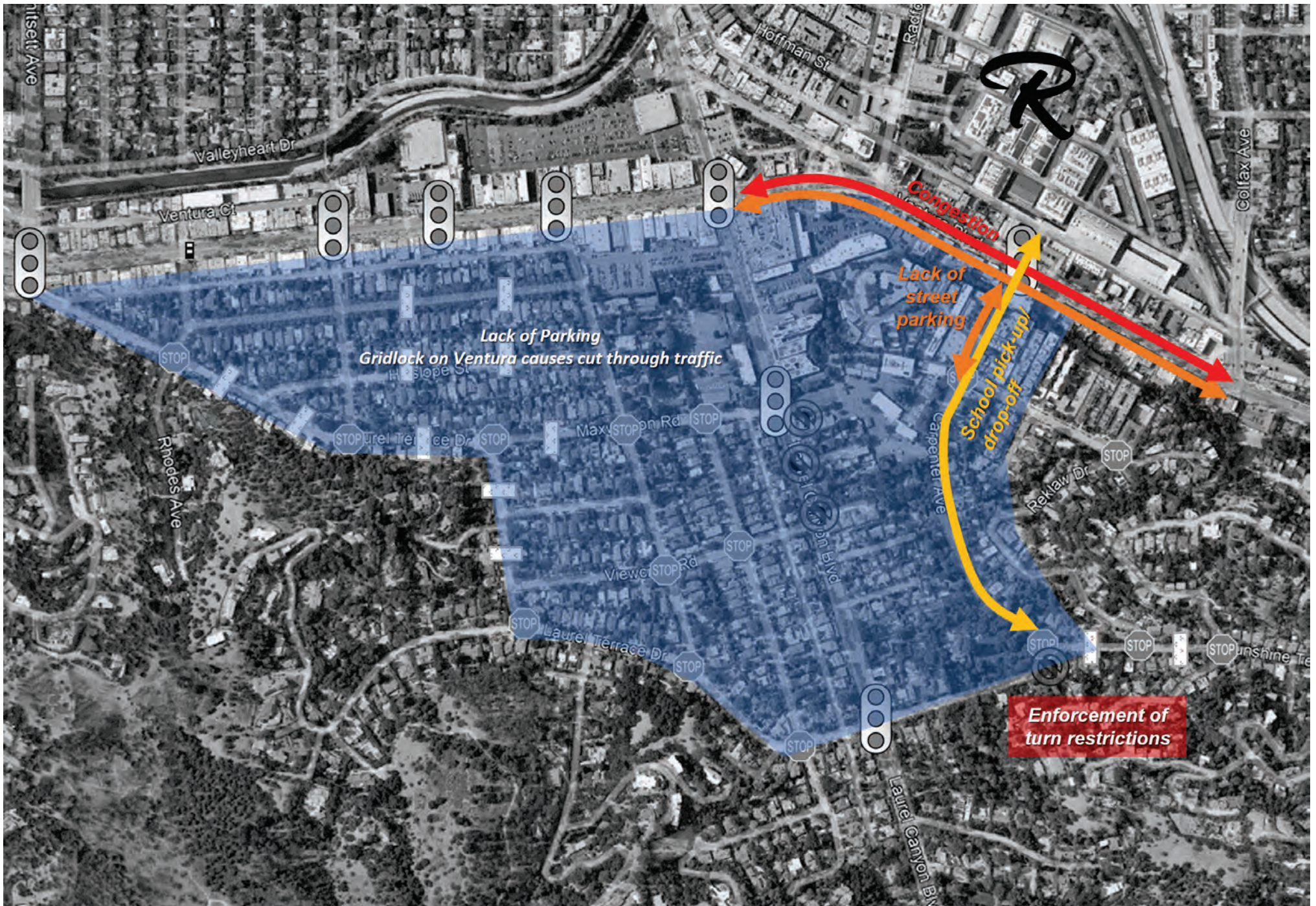
Neighborhood Feedback

Neighborhood	Mobility Related Issues (Direct Comments)	Suggestions to Resolve the Issues (Direct Comments)	Additional Comments
<p>10/17/2023 Lendale Square</p>	<p>1. Traffic on Radford and Moorpark 2. Traffic at Laurel Canyon & Moorpark 3. Parking & Homeless camping at bike path</p>	<p>1. Right & left-turn only from bridge 2. Lines on road to ensure traffic cannot enter Radford...Blockade on Moorpark</p>	
	<p>1. Is bridge going to have 24-hour security guard? 2. During construction all trucks shall be staged and or parking on studio site and not on any residential streets 3. Land movement and construction issues for all residential at or near Moorpark 4. What is the time frame of all construction and production that is going on within the property, and what are the construction hours? 5. Does any employee need to pay for parking? 6. Of the new 8070 jobs, why only 6k new parking spots? 7. Are all employees allowed to park on the property, and what is the penalty if found parking outside the studio lot and parking within any neighborhood within close proximity to the studio? 8. Is the Studio/Hackman Capital planning on installing a 4-way light at Radford and Moorpark?</p>	<p>Option A. To Have No Bridge at all. a. Why have the bridge which is going to bring more traffic onto Moorpark both East and West bound? b. To NOT BUILD the bridge and ONLY have traffic/ Staff utilize Radford Ave. heading south off of Ventura Blvd. for any and all foot and car traffic. Option B. If going to continue with the Bridge Construction Lendale Square Association Community, here are the following needs of the community: a. Block the following streets off to Moorpark access: i. Carpenter and Moorpark (see photo # 1) ii. Morella and Moorpark (see photo# 1) iii. Simpson and Moorpark (see photo# 1) b. Create a Right Hand turn ONLY heading SOUTH from Radford on to Moorpark and block any and all access heading North from Moorpark (see photo # 2) c. No Left-hand turn lane onto Moorpark heading west bound onto Radford d. Stop Signs being installed on both Intersections from Radford to Laurel Canyon i. Lendale and Gentry ii. Lendale and Ben e. Lendale Square currently has NO sidewalks throughout the neighborhood, Walter Reed Middle School and Campbell Hall Episcopal school on either side f. Provide FLOCK Safety Camera's at all entrances into Lendale Square Community: f-1. Camera License Plate Reading Locations at: (If Streets are blocked from #1 ask) i. Laurel Cyn and Lendale ii. Colfax and Lendale iii. Colfax and Sarah iv. Radford and Sarah v. Radford and Moorpark f-2. Camera license Plate Reading Locations at: (If Streets are NOT Blocked/ Dead END) i. Laurel Cyn and Lendale ii. Colfax and Lendale iii. Colfax and Sarah iv. Radford and Sarah v. Radford and Moorpark vi. Carpenter and Moorpark vii. Morella and Moorpark viii. Simpson and Moorpark f-3. Cost is \$2500 a camera per year with a one-time \$650 installation set up g. Adopt the median on the 4500 Block on Radford and Sarah under the 101 Freeway i. Radford Studios pays for the maintenance and upkeep on the already approved median</p>	

Neighborhood Feedback

Neighborhood	Mobility Related Issues (Direct Comments)	Suggestions to Resolve the Issues (Direct Comments)	Additional Comments
10/25/2023 Colfax Neighborhood	Gate C trucks sometimes insist on turning left exiting. It's not allowed, but they continue to do this.	Gate C could be enter only.	Re Mobility, need plan if traffic exceeds a specific level, certain mitigation measures will be done / built to accommodate project traffic.
	1. Pedestrian & bike safety 2. Safe access to trail 3. Safe ped xing on midblock Colfax	1. Ped access to trail on Colfax 2. Ped xing @ all intersections @ Colfax 3. Protected bike lane, wider sidewalk	Other solutions to connect to transit, especially bus stops on Colfax
	1. Cut thru/lost drivers 2. Maps showing Kelsey & Dilling going thru to Colfax 3. Parking/parking/parking	1. Acama light at Colfax 2. Signs to mark "Not a Thru Street" 3. Buy two lot at Carpenter/Ventura for parking lot	
	1. Speeding on Moorpark between Laurel & Colfax 2. I'm concerned about the future problems / traffic which will create more noise on Moorpark Ave to new gate going in there	Speed bumps	
	1. Increased traffic/addition of traffic signals 2. Left turn signal into Colfax gate 3. Gate C production vehicles	Studio security patrol bike path	
	1. Only 3000 parking spaces for 4000 new cars. Despite mandates to encourage other methods of commuting, most/all people will still drive. 2. Increased traffic @ Carpenter/Ventura/Alley w/ proposed new gate.	1. Build enough parking! If you can't go high enough w/ structures, build another one or if you don't want to lose space, go down underground. 2. Don't create the Carpenter Gate.	
	1. Parking on Colfax Avenue. We need to ensure that parking for Studio City Village residents isn't hindered. 2. Marking sure Colfax parking structure does not increase traffic on Colfax if opened to the public.	1. Include a message on your drive ons that no studio guest or employees should park on Colfax 2. Include language to employees and guests on drive on or guest passes requesting for guests not to park on Colfax.	
	Speed - traffic signals required		
	1. Colfax speeding 2. Need parking permits	1. Signs that track speed 2. Check main entrance 3. Or Radford parking for valet (restaurants)	
	1. Speed on Colfax 2. Visibility on Colfax 3. Parking on Colfax	1. Light at Acama! Yes! 2. Restricted parking 3. More red curbs on each side of driveways	
	1. Speeding on Colfax 2. Parking on Colfax 3. Pedestrian crossing on Colfax		
	1. Speed on Colfax 2. Parking spaces	1. Reroute traffic 2. Parking structures available to restaurants & public 3. Traffic signal(s)	
	1. We need a "No Through Street to Ventura Boulevard" sign at corner Dilling & Troost 2. Also at Dilling & Beck Street and at Kelsey Street & Beck Street	1. Need a "No Through Street to Ventura Blvd" sign at Kelsey Street & Dilling Street at Troost 2. Change truck entrance to Radford/Moorpark St entrance 3. Bollards on Colfax to be double the height (at Chiquita & Colfax)	Traffic speeds on Colfax & Moorpark St around the subject property
	1. "No Through St to Ventura" on Troost towards Kelsey. Cars speeding through when confused. 2. Better lanes on Colfax bridge 3. Curve @ Colfax & Chiquita St	1. "No Through St to Ventura" signs 2. Specific turning lane for Radford 3. "Curve Ahead" sign or "Slow Down"	Bollards @ Colfax and Chiquita are knocked down every month - maybe a cement wall / something would help.
	1. Traffic during rush hour on Moorpark 2. Speeding on Colfax	1. Traffic light - maybe solved by the light on the Moorpark entrance. 2. Speed monitoring device which displays the speed of the cars	
	1. Parking 2. Speeding	1. East, accessible, low cost parking structure 2. Speed bumps on Colfax	
	1. Vendor parking in neighborhood	1. Need at least one more traffic signal on Colfax between Moorpark & Ventura	











**RADFORD STUDIOS CENTER
COMBINED NEIGHBORHOOD MEETING #2 SUMMARY
5/28/24**

Attendees:

- 41, from throughout the area.

General Comments

- Residents appreciative of smaller group discussions related to traffic/mobility solutions
- Positive reaction to Project refinements to address concerns heard
- Further information requested on the LA River Master Plan project regarding safety
- Want to see examples of other successful TDMs at other development

Participants from the Radford (The Grove) Neighborhood

- **Gate Usage**
 - Can the Studio do a better job at enforcing the existing No Left Turn and No Right Turn restrictions? If these turn restrictions were enforced, the impact on the Radford neighborhood would be dramatically reduced.
 - Can the Studio place personnel at the entrances along Radford Ave to enforce current turn restrictions?
 - Several neighbors feel that if the current turn restrictions along Radford Ave driveways were indeed enforced, the neighborhood effects would be eliminated.
 - Would turn restrictions along Radford Ave and along Laurel Canyon Blvd be more effective and easier to enforce if the turn restrictions were limited to certain hours of the day?
 - Can the studio gates be restricted to only serving certain user groups at each gate?
 - Can the gates be operated only during certain hours of the day?
- **Moorpark Bridge**
 - Several neighbors liked the idea of the Moorpark Bridge
 - The proposal to block access along Radford Ave was appreciated. Several neighbors were willing to give up access to the bridge in return for eliminating more cut-through traffic on Radford Ave
 - Some asked if the Moorpark bridge could be accelerated on the development schedule
- **Carpenter Gate**
 - General support for Carpenter Gate
 - Concern that the new Carpenter Gate would increase traffic volumes along the alley north of Ventura Blvd
 - Some neighbors asked if the alley north of Ventura Blvd could be closed at Radford Ave or at Colfax Ave to prevent through traffic from using it

- **North Neighborhood Section (North of LA River)**
 - Can the north neighborhood be completely cut off from Radford Ave by closing Woodbridge St & Radford Ave and N Valleyheart Dr & Radford Ave? All neighborhood traffic would use Laurel Canyon Blvd, but no connections between Studio and Laurel Canyon Blvd would be permitted through the north neighborhood.
 - Support for a new traffic signal at Woodbridge & Laurel Canyon Blvd only if Woodbridge was closed at Radford Ave.
 - Would a new signal at Woodbridge & Laurel Canyon Blvd create even more delay on the two streets?
 - The N-S Alleys in this neighborhood are being used as alternate routes to Laurel Canyon Blvd and to Moorpark St.
 - Speeds in the alleys are too high and the volumes are more than they should be.
 - Should the N-S alleys be cut off from Moorpark completely?
 - Neighbors asked that truck weight limits be more strictly enforced along Woodbridge St.
- **South Neighborhood Section (South of LA River)**
 - Less support for closing S Valleyheart Dr, Guerin St, Hoffman St, and E-W Alley at Radford Ave because the neighbors wanted to retain their access to Ventura Blvd
 - Concerns that the traffic signals discussed at N and S Valleyheart Dr and Laurel Canyon Blvd are too close together and will add congestion to Laurel Canyon Blvd
 - The perception is that Hoffman St is the street most affected by studio traffic, followed by S Valleyheart Dr
- **Residential Permit Parking**
 - Many neighbors were surprised that anyone suggested or supported neighborhood residential parking permits.
 - The north neighborhood residents felt that the parking problems were more related to the apartments along Moorpark St than to Studio overflow parking.
 - The south neighborhood residents felt that the predominance of apartments would make a permit parking system difficult to enforce.

Participants from the Ventura Neighborhood

The primary concerns raised by the **Ventura** neighbors continued to revolve around Enforcement, Parking Demand, and School Queuing, as summarized below.

- **Ventura Boulevard**

- Congestion on Ventura Boulevard between Whitsett Avenue and Colfax Avenue related to (A) commuter demand along both the Ventura Boulevard corridor and the Laurel Canyon corridor, (B) the number of available commercial parking spaces along the corridor are not enough to accommodate the demand for the adjacent businesses, especially with the significant increase in the number of restaurants and the pressure from high demand destinations such as Trader Joe's, and (C) the Carpenter Community Charter school drop-off/pick-up queuing and utilization of commercial parking facilities along Ventura Boulevard.
 - Solutions discussed included having Radford Studios consider (1) exploring shared parking opportunities within the studio site for the adjacent businesses and (2) working directly with the Carpenter Community Charter school to help manage/reduce the drop-off/pick-up queuing demand.
- Congestion on the adjacent Ventura Boulevard alleys due to illegal Uber/Lyft staging and valet parking resulting from the lack of enforcement of the No Parking signage.
 - Solutions discussed included having Radford Studios consider working directly with the adjacent business owners and/or council office to help introduce regular and effective enforcement of the No Parking signage along the Ventura Boulevard corridor and adjacent alleys

- **Carpenter Avenue**

- Congestion on both Carpenter Avenue between Ventura Boulevard and Laurel Canyon Boulevard and Reklaw Drive/Laurelwood Drive between Carpenter Avenue and Sunshine Terrace related to (A) the Carpenter Community Charter school drop-off/pick-up queuing and utilization of commercial parking facilities along Ventura Boulevard and (B) cut-through traffic from the Laurel Canyon corridor due to the lack of enforcement of the No Left-Turn signage on Sunshine Terrace.
 - Solutions discussed included having Radford Studios consider (1) working directly with the Carpenter Community Charter school to help manage/reduce the drop-off/pick-up queuing demand and (2) working with the adjacent homeowners and/or council office to help introduce regular and effective enforcement of the No Left-Turn signage on Sunshine Terrace.

- **General:** One or two additional renderings to help visualize and contextualize the publicly accessible commercial elements of the Project at the new Carpenter Gate would also be appreciated.

Participants from the Moorpark/Landale Square Neighborhood

General Comments:

- Landale Square representatives provided a written list of suggested measures which include the following:
 - A study of no Moorpark Bridge, or of the Bridge is studied, to block off several streets along Moorpark (Carpenter & Moorpark, Morella & Moorpark, and Simpson & Moorpark)
 - A series of stop signs and turn restrictions, such as (1) Right-turn only lane heading south from Radford onto Moorpark and the blocking of access heading north from Radford across Moorpark, and (2) a No Left turn onto Moorpark from northbound Radford.
 - Installation of several FLOCK cameras and license plate readers at the entrances into the Landale Square Community.
 - A median for the 4500 block of Radford under the US 101 freeway.

Discussions:

- Several neighbors requested traffic counts be taken when local schools are in session and they shared concerns about existing traffic and parking associated with Campbell Hall and other school traffic and parking.
- Speeding along Moorpark
- Cut through traffic issues
- Agreed with “no through traffic” at the new signal proposed at the Moorpark Bridge
 - However, want to maintain current access that they have with the “T” intersection, such as left and right-turns in and out
- Many expressed concern with safety, particularly with the new bridge

Issues/Suggestions to Resolve Issues:

- Parking encroachment on some blocks (studio and school), but not necessarily throughout the entire neighborhood
- Permit parking has mixed support
- Consider looking at measures at Riverside (e.g., Riverside & Radford), where cut-through traffic comes into the neighborhood
 - Curb extensions, pavement markings/treatments
- Added Stop Signs at Landale & Gentry and Landale & Ben
 - These were removed by LADOT over the last decade
- Look at signal timing at Landale & Laurel and Landale & Colfax
 - Consider left-turn phasing
- Address school circulation issues with the 2 local schools
- If every roadway intersection with Moorpark is cul-de-sac or blocked off
 - How will we get into the neighborhood?
 - Won't this increase traffic and impact the Landale Street neighbors more?
 - What other options?
- Do not add the new “No-Right-turn” sign on Moorpark from Radford

- Explore other options at the boundary of the neighborhood
- Increase security particularly as to the effects of homeless and the Bridge
- Queuing along Laurel Canyon
- Some of the neighbors stated that the Moorpark Bridge may be ok so long as it would not affect neighborhood access
- Some neighbors questioned the timing of Moorpark Bridge whether it is too far into the future and may never get built
- Construction noise
- Increase in neighborhood cut-through traffic

Participants from the Colfax Neighborhood

- **Alleyway improvements**
 - Improve the alley to a “real” street
 - Alley must be improved north of Ventura from Colfax and Carpenter
- **Studio Parking**
 - Convert or provide off-site parking nearby, such as at the Vons and either shuttle people to the site or they can walk
- **Congestion**
 - Southbound on Laurel Canyon to turn left onto Ventura
- **Safety**
 - Footbridge near Jinky’s (Colfax & Ventura) has posed many safety issues
 - Close off by fence or wall the Colfax under bridge area
- **Colfax Gate**
 - Look into the use of Colfax, especially for truck uses; trucks cannot be only going on to Ventura
 - The Colfax exit for studios is too close to intersection and alley; Trucks hold up traffic and drivers get testy and block through traffic to get to turn left or right
- **Traffic Calming Measures**
 - Speed bumps on Colfax
- **Parking Restrictions**
 - General restricted parking not needed; not needed east of Beck
- **Traffic Signals**
 - Two new traffic signals at Carpenter and Radford at Moorpark
 - No new signal at Moorpark & Carpenter, but need one at Moorpark & Radford
 - Signal at Colfax at Acama and Valley Spring (New signal at Acama may need to be at Valley Spring due to curvature at Acama)
- **Other Mobility**
 - Electric bike, motorcycles, bicycles to run on top of the LA River through the Lot
 - Bike lane needs to travel through the Lot, a direct course over the River (can be caged in)

Appendix I

























Construction Analysis Worksheets

***Existing with Project Construction Conditions
Peak Truck Activity***

HCM 6th Signalized Intersection Summary

1: Riverside Drive & Laurel Canyon Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	247	594	111	151	930	138	227	765	98	129	782	309
Future Volume (veh/h)	247	594	111	151	930	138	227	765	98	129	782	309
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	268	646	121	164	1011	150	247	832	107	140	850	336
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	180	1029	459	258	927	413	300	1349	720	291	1264	497
Arrive On Green	0.10	0.29	0.29	0.02	0.09	0.09	0.09	0.38	0.38	0.07	0.35	0.35
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	3554	1585	1781	3602	1417
Grp Volume(v), veh/h	268	646	121	164	1011	150	247	832	107	140	803	383
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1777	1585	1781	1702	1615
Q Serve(g_s), s	12.1	18.9	7.0	5.6	31.3	10.7	10.7	22.8	4.7	6.0	24.1	24.2
Cycle Q Clear(g_c), s	12.1	18.9	7.0	5.6	31.3	10.7	10.7	22.8	4.7	6.0	24.1	24.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.88
Lane Grp Cap(c), veh/h	180	1029	459	258	927	413	300	1349	720	291	1194	567
V/C Ratio(X)	1.49	0.63	0.26	0.64	1.09	0.36	0.82	0.62	0.15	0.48	0.67	0.68
Avail Cap(c_a), veh/h	180	1029	459	357	927	413	300	1349	720	328	1194	567
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	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	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.0	37.0	32.8	56.9	54.8	45.4	26.2	30.2	19.2	24.2	33.1	33.1
Incr Delay (d2), s/veh	248.5	2.9	1.4	2.6	57.4	2.5	16.4	2.1	0.4	1.2	3.0	6.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	28.1	13.2	0.3	4.7	31.6	8.3	9.6	15.0	3.2	4.6	15.3	15.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	302.5	39.9	34.2	59.5	112.3	47.9	42.6	32.2	19.6	25.4	36.1	39.5
LnGrp LOS	F	D	C	E	F	D	D	C	B	C	D	D
Approach Vol, veh/h	1035				1325				1186			
Approach Delay, s/veh	107.2				98.4				33.3			
Approach LOS	F				F				C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	48.0	18.0	37.0	13.6	51.4	14.6	40.4				
Change Period (Y+Rc), s	5.6	5.9	5.9	* 5.7	5.6	5.9	5.6	* 5.7				
Max Green Setting (Gmax), s	11.4	42.1	12.1	* 31	10.4	43.1	12.4	* 31				
Max Q Clear Time (g_c+I1), s	12.7	26.2	14.1	33.3	8.0	24.8	7.6	20.9				
Green Ext Time (p_c), s	0.0	7.0	0.0	0.0	0.1	5.8	0.2	3.3				

Intersection Summary

HCM 6th Ctrl Delay 67.4

HCM 6th LOS E

Notes








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

User approved changes to right turn type.

HCM 6th TWSC

2: Riverside Drive & Radford Avenue

06/24/2024

Intersection												
Int Delay, s/veh	17.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	906	89	76	1002	11	28	6	87	4	10	28
Future Vol, veh/h	23	906	89	76	1002	11	28	6	87	4	10	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	105	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	985	97	83	1089	12	30	7	95	4	11	30

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1101	0	0	1082	0	0	1751	2302	493	1807	2393	551
Stage 1	-	-	-	-	-	-	1035	1035	-	1261	1261	-
Stage 2	-	-	-	-	-	-	716	1267	-	546	1132	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	630	-	-	640	-	-	55	38	522	50	33	478
Stage 1	-	-	-	-	-	-	248	307	-	180	240	-
Stage 2	-	-	-	-	-	-	387	238	-	490	276	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	630	-	-	640	-	-	32	32	522	30	28	478
Mov Cap-2 Maneuver	-	-	-	-	-	-	32	32	-	30	28	-
Stage 1	-	-	-	-	-	-	238	295	-	173	209	-
Stage 2	-	-	-	-	-	-	299	207	-	377	265	-

























Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.8			286.4			107		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	98	630	-	-	640	-	-	76
HCM Lane V/C Ratio	1.342	0.04	-	-	0.129	-	-	0.601
HCM Control Delay (s)	286.4	10.9	-	-	11.5	-	-	107
HCM Lane LOS	F	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	9.4	0.1	-	-	0.4	-	-	2.7

HCM 6th Signalized Intersection Summary

3: Colfax Avenue & Riverside Drive

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	612	205	188	725	77	120	409	71	80	481	120
Future Volume (veh/h)	103	612	205	188	725	77	120	409	71	80	481	120
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	112	665	223	204	788	84	130	445	77	87	523	130
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	251	1356	605	259	1356	605	295	826	700	462	826	700
Arrive On Green	0.26	0.26	0.26	0.38	0.38	0.38	0.88	0.88	0.88	0.44	0.44	0.44
Sat Flow, veh/h	635	3554	1585	626	3554	1585	779	1870	1585	880	1870	1585
Grp Volume(v), veh/h	112	665	223	204	788	84	130	445	77	87	523	130
Grp Sat Flow(s),veh/h/ln	635	1777	1585	626	1777	1585	779	1870	1585	880	1870	1585
Q Serve(g_s), s	10.3	9.6	6.9	13.3	10.6	2.1	8.3	3.2	0.4	4.0	13.0	3.0
Cycle Q Clear(g_c), s	20.9	9.6	6.9	22.9	10.6	2.1	21.3	3.2	0.4	7.2	13.0	3.0
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	251	1356	605	259	1356	605	295	826	700	462	826	700
V/C Ratio(X)	0.45	0.49	0.37	0.79	0.58	0.14	0.44	0.54	0.11	0.19	0.63	0.19
Avail Cap(c_a), veh/h	251	1356	605	259	1356	605	295	826	700	462	826	700
HCM Platoon Ratio	0.67	0.67	0.67	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	0.94	0.94	0.94	0.83	0.83	0.83	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	17.4	16.4	25.4	14.7	12.1	8.6	2.1	2.0	12.4	13.0	10.2
Incr Delay (d2), s/veh	5.7	1.3	1.7	20.0	1.7	0.5	3.9	2.1	0.3	0.9	3.7	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(95%),veh/ln	3.5	6.9	4.6	7.4	6.9	1.2	1.6	2.0	0.3	1.4	9.1	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.4	18.6	18.1	45.4	16.5	12.6	12.5	4.2	2.2	13.3	16.7	10.8
LnGrp LOS	C	B	B	D	B	B	B	A	A	B	B	B
Approach Vol, veh/h	1000			1076			652			740		
Approach Delay, s/veh	20.1			21.6			5.6			15.2		
Approach LOS	C			C			A			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	28.0			32.0			28.0			32.0		
Change Period (Y+Rc), s	* 5.1			* 5.5			* 5.1			* 5.5		
Max Green Setting (Gmax), s	* 23			* 27			* 23			* 27		
Max Q Clear Time (g_c+I1), s	22.9			23.3			24.9			15.0		
Green Ext Time (p_c), s	0.0			1.2			0.0			3.3		
Intersection Summary												
HCM 6th Ctrl Delay	16.8											
HCM 6th LOS	B											
Notes												

Queues

4: Riverside Drive & SR 170 Southbound Off-Ramp

06/24/2024



Lane Group	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	812	9	699	29	187	183	171
v/c Ratio	0.40	0.03	0.35	0.11	0.57	0.52	0.40
Control Delay	11.9	13.0	11.6	0.8	31.5	20.5	6.8
Queue Delay	0.3	0.0	0.4	0.1	0.1	0.2	0.0
Total Delay	12.2	13.0	12.0	0.9	31.6	20.7	6.8
Queue Length 50th (ft)	72	3	122	0	76	48	0
Queue Length 95th (ft)	203	m9	193	0	126	101	44
Internal Link Dist (ft)	2214		245	105		344	
Turn Bay Length (ft)		25			140		150
Base Capacity (vph)	2010	307	2010	286	456	464	532
Starvation Cap Reductn	0	0	777	0	0	0	0
Spillback Cap Reductn	583	0	0	57	26	38	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.03	0.57	0.13	0.43	0.43	0.32


Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: Riverside Drive & SR 170 Southbound Off-Ramp













06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑	↑↑			↑		↑	↑	↑
Traffic Volume (vph)	0	745	2	8	643	0	7	0	19	253	6	238
Future Volume (vph)	0	745	2	8	643	0	7	0	19	253	6	238
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Lane Util. Factor		0.95		1.00	0.95			1.00		0.95	0.91	0.95
Frt		1.00		1.00	1.00			0.90		1.00	0.93	0.85
Flt Protected		1.00		0.95	1.00			0.99		0.95	0.98	1.00
Satd. Flow (prot)		3538		1770	3539			1658		1681	1536	1504
Flt Permitted		1.00		0.29	1.00			0.84		0.95	0.98	1.00
Satd. Flow (perm)		3538		542	3539			1409		1681	1536	1504
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)	0	810	2	9	699	0	8	0	21	275	7	259
RTOR Reduction (vph)	0	0	0	0	0	0	0	28	0	0	52	138
Lane Group Flow (vph)	0	812	0	9	699	0	0	1	0	187	131	33
Turn Type		NA		Perm	NA		Perm	NA		Split	NA	Perm
Protected Phases		6			2			4		3	3	
Permitted Phases				2			4					3
Actuated Green, G (s)		36.1		36.1	36.1			3.2		13.7	13.7	13.7
Effective Green, g (s)		36.1		36.1	36.1			3.2		13.7	13.7	13.7
Actuated g/C Ratio		0.52		0.52	0.52			0.05		0.20	0.20	0.20
Clearance Time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Vehicle Extension (s)		3.8		2.4	2.4			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1824		279	1825			64		328	300	294
v/s Ratio Prot		c0.23			0.20					c0.11	0.09	
v/s Ratio Perm				0.02				c0.00				0.02
v/c Ratio		0.45		0.03	0.38			0.02		0.57	0.44	0.11
Uniform Delay, d1		10.7		8.3	10.2			31.9		25.5	24.8	23.2
Progression Factor		1.00		1.05	1.08			1.00		1.00	1.00	1.00
Incremental Delay, d2		0.8		0.2	0.5			0.1		2.4	1.0	0.2
Delay (s)		11.4		9.0	11.6			32.0		27.9	25.8	23.3
Level of Service		B		A	B			C		C	C	C
Approach Delay (s)		11.4			11.5			32.0			25.7	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			15.5			HCM 2000 Level of Service			B			
HCM 2000 Volume to Capacity ratio			0.45									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			48.4%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	NWL	NWR
Lane Group Flow (vph)	197	607	298	225	414	115	24	568	152	1025	239	81
v/c Ratio	0.62	0.93dr	0.96	0.97	0.49	0.30	0.29	0.84	0.63	0.77	0.58	0.47
Control Delay	41.9	69.3	93.8	90.4	48.8	47.5	58.8	66.0	69.2	42.5	63.8	65.9
Queue Delay	0.0	48.1	42.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.9	117.4	135.8	90.4	48.8	47.5	58.8	66.0	69.2	42.5	63.8	65.9
Queue Length 50th (ft)	141	290	285	~181	176	88	18	258	132	410	108	76
Queue Length 95th (ft)	167	#417	#516	#355	232	148	51	#370	211	524	147	132
Internal Link Dist (ft)		245			745			2580		383	758	
Turn Bay Length (ft)	140		230	85		110	270		290		215	
Base Capacity (vph)	320	678	311	233	851	380	84	680	242	1334	695	292
Starvation Cap Reductn	0	138	49	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	1.12	1.14	0.97	0.49	0.30	0.29	0.84	0.63	0.77	0.34	0.28

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.





















Queue shown is maximum after two cycles.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024

												
Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	181	281	370	182	12	195	381	106	22	447	59	17
Future Volume (vph)	181	281	370	182	12	195	381	106	22	447	59	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Lane Util. Factor	1.00	0.91	0.91			1.00	0.95	1.00	1.00	0.95		
Frt	1.00	0.93	0.85			1.00	1.00	0.85	1.00	0.98		
Flt Protected	0.95	1.00	1.00			0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1770	3137	1441			1770	3539	1583	1770	3463		
Flt Permitted	0.43	1.00	1.00			0.15	1.00	1.00	0.23	1.00		
Satd. Flow (perm)	804	3137	1441			277	3539	1583	430	3463		
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)	197	305	402	198	13	212	414	115	24	486	64	18
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	197	607	298	0	0	225	414	115	24	568	0	0
Turn Type	pm+pt	NA	Perm		pm+pt	pm+pt	NA	Perm	Perm	NA		
Protected Phases	1	6			5	5	2			8		
Permitted Phases	6		6		2	2		2	8			
Actuated Green, G (s)	41.5	30.4	30.4			47.0	33.7	33.7	27.4	27.4		
Effective Green, g (s)	41.5	30.4	30.4			47.0	33.7	33.7	27.4	27.4		
Actuated g/C Ratio	0.30	0.22	0.22			0.34	0.24	0.24	0.20	0.20		
Clearance Time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Vehicle Extension (s)	3.0	3.9	3.9			3.0	4.6	4.6	4.7	4.7		
Lane Grp Cap (vph)	314	681	312			234	851	381	84	677		
v/s Ratio Prot	0.05	0.19				c0.09	0.12			0.16		
v/s Ratio Perm	0.14		0.21			c0.23		0.07	0.06			
v/c Ratio	0.63	0.93dr	0.96			0.96	0.49	0.30	0.29	0.84		
Uniform Delay, d1	39.6	53.2	54.1			38.1	45.7	43.5	48.0	54.2		
Progression Factor	0.96	1.00	1.00			1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2	3.6	15.4	39.1			47.8	2.0	2.0	3.5	9.8		
Delay (s)	41.7	68.6	93.2			85.9	47.7	45.5	51.5	64.0		
Level of Service	D	E	F			F	D	D	D	E		
Approach Delay (s)		70.4					58.8			63.5		
Approach LOS		E					E			E		
Intersection Summary												
HCM 2000 Control Delay			58.5			HCM 2000 Level of Service				E		
HCM 2000 Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			33.0			
Intersection Capacity Utilization			96.9%			ICU Level of Service			F			
Analysis Period (min)			15									
dr Defacto Right Lane. Recode with 1 though lane as a right lane.												
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024



Movement	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	16	124	870	73	37	175	79	4
Future Volume (vph)	16	124	870	73	37	175	79	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.3			6.6	6.6	
Lane Util. Factor		1.00	0.95			0.97	0.91	
Frt		1.00	0.99			0.99	0.85	
Flt Protected		0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	3498			3428	1441	
Flt Permitted		0.95	1.00			0.95	1.00	
Satd. Flow (perm)		1770	3498			3428	1441	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	135	946	79	40	190	86	4
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	152	1025	0	0	239	81	0
Turn Type	Prot	Prot	NA		Prot	Prot	Perm	
Protected Phases	7	7	4		3	3		
Permitted Phases							3	
Actuated Green, G (s)		19.2	53.4			16.7	16.7	
Effective Green, g (s)		19.2	53.4			16.7	16.7	
Actuated g/C Ratio		0.14	0.38			0.12	0.12	
Clearance Time (s)		6.8	6.3			6.6	6.6	
Vehicle Extension (s)		3.0	4.9			4.6	4.6	
Lane Grp Cap (vph)		242	1334			408	171	
v/s Ratio Prot		0.09	c0.29			c0.07		
v/s Ratio Perm							0.06	
v/c Ratio		0.63	0.77			0.59	0.47	
Uniform Delay, d1		57.0	37.9			58.4	57.5	
Progression Factor		1.00	1.00			1.00	1.00	
Incremental Delay, d2		5.0	3.2			3.0	3.7	
Delay (s)		62.1	41.1			61.4	61.2	
Level of Service		E	D			E	E	
Approach Delay (s)			43.8			61.3		
Approach LOS			D			E		
Intersection Summary								

HCM 6th Signalized Intersection Summary

6: Laurel Canyon Boulevard & US 101 Northbound Ramps

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰	↰	↰	↰			↰	↰
Traffic Volume (veh/h)	0	0	0	395	2	234	594	530	0	0	1216	345
Future Volume (veh/h)	0	0	0	395	2	234	594	530	0	0	1216	345
Initial Q (Qb), veh				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
Parking Bus, Adj				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		
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				509	0	170	646	576	0	0	1322	375
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				625	0	278	739	2532	0	0	2246	697
Arrive On Green				0.18	0.00	0.18	0.36	1.00	0.00	0.00	0.44	0.44
Sat Flow, veh/h				3563	0	1585	3456	3647	0	0	5274	1585
Grp Volume(v), veh/h				509	0	170	646	576	0	0	1322	375
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	0	1702	1585
Q Serve(g_s), s				12.4	0.0	8.9	15.7	0.0	0.0	0.0	17.6	15.6
Cycle Q Clear(g_c), s				12.4	0.0	8.9	15.7	0.0	0.0	0.0	17.6	15.6
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				625	0	278	739	2532	0	0	2246	697
V/C Ratio(X)				0.81	0.00	0.61	0.87	0.23	0.00	0.00	0.59	0.54
Avail Cap(c_a), veh/h				819	0	365	948	2532	0	0	2246	697
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.75	0.75	0.00	0.00	0.75	0.75
Uniform Delay (d), s/veh				35.7	0.0	34.3	27.8	0.0	0.0	0.0	19.1	18.5
Incr Delay (d2), s/veh				4.9	0.0	2.2	5.8	0.2	0.0	0.0	0.9	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
%ile BackOfQ(95%),veh/ln				9.3	0.0	6.1	9.2	0.1	0.0	0.0	10.3	9.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				40.6	0.0	36.5	33.6	0.2	0.0	0.0	19.9	20.7
LnGrp LOS				D	A	D	C	A	A	A	B	C
Approach Vol, veh/h					679			1222			1697	
Approach Delay, s/veh					39.5			17.8			20.1	
Approach LOS					D			B			C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	34.5	44.4		21.1		68.9						
Change Period (Y+Rc), s	5.3	4.8		* 5.3		4.8						
Max Green Setting (Gmax), s	25	29.2		* 21		59.2						
Max Q Clear Time (g_c+M), s	25	19.6		14.4		2.0						
Green Ext Time (p_c), s	1.5	6.5		1.4		4.3						

Intersection Summary

HCM 6th Ctrl Delay	23.0
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.








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

HCM 6th Signalized Intersection Summary

7: US 101 Southbound Ramps & Laurel Canyon Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	10	686	0	0	0	0	990	491	493	1123	0
Future Volume (veh/h)	148	10	686	0	0	0	0	990	491	493	1123	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	111	0	807				0	1076	534	536	1221	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	431	0	768				0	1640	509	918	2286	0
Arrive On Green	0.24	0.00	0.24				0.00	0.32	0.32	0.53	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	5274	1585	3456	3647	0
Grp Volume(v), veh/h	111	0	807				0	1076	534	536	1221	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1702	1585	1728	1777	0
Q Serve(g_s), s	4.5	0.0	21.8				0.0	16.3	28.9	9.5	0.0	0.0
Cycle Q Clear(g_c), s	4.5	0.0	21.8				0.0	16.3	28.9	9.5	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	431	0	768				0	1640	509	918	2286	0
V/C Ratio(X)	0.26	0.00	1.05				0.00	0.66	1.05	0.58	0.53	0.00
Avail Cap(c_a), veh/h	431	0	768				0	1640	509	922	2286	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.69	0.69	0.00
Uniform Delay (d), s/veh	27.6	0.0	34.1				0.0	26.3	30.5	17.7	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	46.7				0.0	2.1	53.4	0.7	0.6	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
%ile BackOfQ(95%),veh/ln	8.3	0.0	19.2				0.0	10.8	25.7	5.3	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.9	0.0	80.8				0.0	28.3	83.9	18.4	0.6	0.0
LnGrp LOS	C	A	F				A	C	F	B	A	A
Approach Vol, veh/h	918						1610			1757		
Approach Delay, s/veh	74.4						46.8			6.0		
Approach LOS	E						D			A		
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	29.0	34.0	27.0	63.0								
Change Period (Y+Rc), s	5.1	* 5.1	* 5.2	* 5.1								
Max Green Setting (Gmax), s	24	* 29	* 22	* 58								
Max Q Clear Time (g_c+M), s	30.9	30.9	23.8	2.0								
Green Ext Time (p_c), s	1.6	0.0	0.0	12.3								

Intersection Summary

HCM 6th Ctrl Delay 36.0

HCM 6th LOS D

Notes

User approved volume balancing among the lanes for turning movement.

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

Queues

8: Laurel Canyon Boulevard & Landale Street

06/24/2024



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	148	194	164	63	173	1414	29	1645	248
v/c Ratio	0.70	0.61	0.75	0.17	0.64	0.75	0.30	1.26	0.54
Control Delay	56.9	18.3	58.7	1.0	34.2	10.0	27.4	149.7	25.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.9	18.3	58.7	1.0	34.2	10.0	27.4	149.7	25.8
Queue Length 50th (ft)	86	16	90	0	66	113	11	~637	112
Queue Length 95th (ft)	#177	87	#177	0	m45	m85	m19	m#788	m165
Internal Link Dist (ft)		140	232			591		375	
Turn Bay Length (ft)	85			40	155		125		115
Base Capacity (vph)	212	317	237	380	290	1889	96	1306	458
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.61	0.69	0.17	0.60	0.75	0.30	1.26	0.54

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.











Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

8: Laurel Canyon Boulevard & Landale Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	151	13	151	24	127	58	159	1271	29	27	1513	228
Future Volume (vph)	151	13	151	24	127	58	159	1271	29	27	1513	228
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.89			1.00	1.00	1.00	1.00		1.00	1.00	0.78
Flpb, ped/bikes	1.00	1.00			0.99	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.87			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1374			1823	1583	1770	3523		1763	3539	1241
Flt Permitted	0.95	1.00			0.90	1.00	0.10	1.00		0.14	1.00	1.00
Satd. Flow (perm)	1681	1374			1655	1583	193	3523		259	3539	1241
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)	164	14	164	26	138	63	173	1382	32	29	1645	248
RTOR Reduction (vph)	0	143	0	0	0	55	0	2	0	0	0	0
Lane Group Flow (vph)	148	51	0	0	164	8	173	1412	0	29	1645	248
Confl. Peds. (#/hr)			49	49			89		12	12		89
Turn Type	Split	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	3	3			4		1	6			2	
Permitted Phases				4		4	6			2		2
Actuated Green, G (s)	11.3	11.3			12.0	12.0	48.2	48.2		33.2	33.2	33.2
Effective Green, g (s)	11.3	11.3			12.0	12.0	48.2	48.2		33.2	33.2	33.2
Actuated g/C Ratio	0.13	0.13			0.13	0.13	0.54	0.54		0.37	0.37	0.37
Clearance Time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	5.2		4.5	4.5	4.5
Lane Grp Cap (vph)	211	172			220	211	271	1886		95	1305	457
v/s Ratio Prot	c0.09	0.04					0.07	c0.40			c0.46	
v/s Ratio Perm					c0.10	0.01	0.27			0.11		0.20
v/c Ratio	0.70	0.29			0.75	0.04	0.64	0.75		0.31	1.26	0.54
Uniform Delay, d1	37.7	35.7			37.5	34.0	18.1	16.2		20.2	28.4	22.4
Progression Factor	1.00	1.00			1.00	1.00	2.26	0.58		0.89	1.01	0.93
Incremental Delay, d2	10.1	1.0			12.8	0.1	0.5	0.3		6.0	122.0	3.4
Delay (s)	47.8	36.7			50.4	34.1	41.4	9.6		24.0	150.6	24.3
Level of Service	D	D			D	C	D	A		C	F	C
Approach Delay (s)		41.5			45.8			13.1			132.4	
Approach LOS		D			D			B			F	
Intersection Summary												
HCM 2000 Control Delay			73.5									E
HCM 2000 Volume to Capacity ratio			1.03									
Actuated Cycle Length (s)			90.0							23.9		
Intersection Capacity Utilization			89.6%									E
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

9: Colfax Avenue & Sarah Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↑	↕
Traffic Volume (veh/h)	36	80	10	33	16	147	20	447	47	131	684	45
Future Volume (veh/h)	36	80	10	33	16	147	20	447	47	131	684	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.89		0.81	0.85		0.81	1.00		0.93	0.98		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	39	87	11	36	17	160	22	486	51	142	743	49
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	156	303	33	102	50	248	230	964	758	453	964	758
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.69	0.69	0.69	0.35	0.35	0.35
Sat Flow, veh/h	315	1215	134	129	200	992	685	1870	1471	853	1870	1471
Grp Volume(v), veh/h	137	0	0	213	0	0	22	486	51	142	743	49
Grp Sat Flow(s),veh/h/ln	1664	0	0	1320	0	0	685	1870	1471	853	1870	1471
Q Serve(g_s), s	0.0	0.0	0.0	2.4	0.0	0.0	1.6	7.5	0.7	8.3	21.3	1.3
Cycle Q Clear(g_c), s	3.7	0.0	0.0	8.4	0.0	0.0	22.8	7.5	0.7	15.8	21.3	1.3
Prop In Lane	0.28		0.08	0.17		0.75	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	492	0	0	400	0	0	230	964	758	453	964	758
V/C Ratio(X)	0.28	0.00	0.00	0.53	0.00	0.00	0.10	0.50	0.07	0.31	0.77	0.06
Avail Cap(c_a), veh/h	635	0	0	521	0	0	230	964	758	453	964	758
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	0.67	0.67	0.67
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.95	0.95	0.95	0.76	0.76	0.76
Uniform Delay (d), s/veh	18.3	0.0	0.0	20.0	0.0	0.0	16.9	5.8	4.7	17.8	16.5	10.0
Incr Delay (d2), s/veh	0.3	0.0	0.0	1.1	0.0	0.0	0.8	1.8	0.2	1.4	4.6	0.1
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(95%),veh/ln	2.7	0.0	0.0	4.7	0.0	0.0	0.5	4.3	0.4	3.2	14.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.6	0.0	0.0	21.1	0.0	0.0	17.7	7.5	4.8	19.2	21.1	10.1
LnGrp LOS	B	A	A	C	A	A	B	A	A	B	C	B
Approach Vol, veh/h	137			213			559			934		
Approach Delay, s/veh	18.6			21.1			7.7			20.2		
Approach LOS	B			C			A			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	35.7			24.3			35.7			24.3		
Change Period (Y+Rc), s	4.8			* 9.3			4.8			* 9.3		
Max Green Setting (Gmax), s	25.2			* 21			25.2			* 21		
Max Q Clear Time (g_c+I1), s	24.8			5.7			23.3			10.4		
Green Ext Time (p_c), s	0.1			0.6			1.1			1.1		

Intersection Summary

HCM 6th Ctrl Delay	16.4
HCM 6th LOS	B

Notes

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

Queues

10: Landale Street & Colfax Avenue

06/24/2024



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	81	32	487	839	37
v/c Ratio	0.30	0.09	0.34	0.59	0.03
Control Delay	20.4	5.6	5.5	2.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.4	5.6	5.5	2.9	0.1
Queue Length 50th (ft)	19	4	73	29	0
Queue Length 95th (ft)	51	15	140	36	m0
Internal Link Dist (ft)	262		575	593	
Turn Bay Length (ft)		40			80
Base Capacity (vph)	534	354	1434	1434	1223
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.15	0.09	0.34	0.59	0.03

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

10: Landale Street & Colfax Avenue

06/24/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	52	22	29	448	772	34
Future Volume (vph)	52	22	29	448	772	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	9.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.96		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1727		1770	1863	1863	1583
Flt Permitted	0.97		0.25	1.00	1.00	1.00
Satd. Flow (perm)	1727		461	1863	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	57	24	32	487	839	37
RTOR Reduction (vph)	22	0	0	0	0	7
Lane Group Flow (vph)	59	0	32	487	839	30
Turn Type	Perm		Perm	NA	NA	Perm
Protected Phases				6	2	
Permitted Phases	8		6			2
Actuated Green, G (s)	5.4		40.6	40.6	40.6	40.6
Effective Green, g (s)	5.4		40.6	40.6	40.6	40.6
Actuated g/C Ratio	0.09		0.68	0.68	0.68	0.68
Clearance Time (s)	9.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		4.9	4.9	5.3	5.3
Lane Grp Cap (vph)	155		311	1260	1260	1071
v/s Ratio Prot				0.26	c0.45	
v/s Ratio Perm	c0.03		0.07			0.02
v/c Ratio	0.38		0.10	0.39	0.67	0.03
Uniform Delay, d1	25.7		3.4	4.2	5.7	3.2
Progression Factor	1.00		1.00	1.00	0.27	0.02
Incremental Delay, d2	1.6		0.7	0.9	1.9	0.0
Delay (s)	27.3		4.0	5.1	3.5	0.1
Level of Service	C		A	A	A	A
Approach Delay (s)	27.3			5.1	3.4	
Approach LOS	C			A	A	
Intersection Summary						
HCM 2000 Control Delay			5.3	HCM 2000 Level of Service		A
HCM 2000 Volume to Capacity ratio			0.63			
Actuated Cycle Length (s)			60.0	Sum of lost time (s)		14.0
Intersection Capacity Utilization			59.0%	ICU Level of Service		B
Analysis Period (min)			15			










c Critical Lane Group

HCM 6th Signalized Intersection Summary

11: Whitsett Avenue & Moorpark Street

06/24/2024












Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	780	210	106	571	62	56	227	68	79	467	58
Future Volume (veh/h)	64	780	210	106	571	62	56	227	68	79	467	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	70	848	228	115	621	67	61	247	74	86	508	63
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	177	850	720	81	754	81	350	1166	341	473	1369	169
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	755	1870	1585	524	1659	179	841	2711	794	1059	3183	393
Grp Volume(v), veh/h	70	848	228	115	0	688	61	160	161	86	283	288
Grp Sat Flow(s),veh/h/ln	755	1870	1585	524	0	1838	841	1777	1727	1059	1777	1800
Q Serve(g_s), s	8.0	40.7	8.2	0.2	0.0	29.4	4.8	5.1	5.3	5.0	9.7	9.8
Cycle Q Clear(g_c), s	37.4	40.7	8.2	40.9	0.0	29.4	14.6	5.1	5.3	10.3	9.7	9.8
Prop In Lane	1.00		1.00	1.00		0.10	1.00		0.46	1.00		0.22
Lane Grp Cap(c), veh/h	177	850	720	81	0	835	350	764	743	473	764	774
V/C Ratio(X)	0.40	1.00	0.32	1.42	0.00	0.82	0.17	0.21	0.22	0.18	0.37	0.37
Avail Cap(c_a), veh/h	177	850	720	81	0	835	350	764	743	473	764	774
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(l)	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	37.7	24.5	15.6	45.0	0.0	21.4	22.4	16.1	16.1	19.4	17.4	17.4
Incr Delay (d2), s/veh	6.5	30.3	1.2	246.4	0.0	9.0	1.1	0.6	0.7	0.8	1.4	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(95%),veh/ln	8.2	31.4	5.5	13.2	0.0	19.7	1.8	3.8	3.8	2.3	7.3	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.2	54.8	16.8	291.4	0.0	30.4	23.4	16.7	16.8	20.2	18.8	18.8
LnGrp LOS	D	D	B	F	A	C	C	B	B	C	B	B
Approach Vol, veh/h	1146					803		382		657		
Approach Delay, s/veh	46.6					67.8		17.8		19.0		
Approach LOS	D					E		B		B		
Timer - Assigned Phs	2		4			6		8				
Phs Duration (G+Y+Rc), s	46.0		44.0			46.0		44.0				
Change Period (Y+Rc), s	5.1		5.3			5.1		5.3				
Max Green Setting (Gmax), s	40.9		38.7			40.9		38.7				
Max Q Clear Time (g_c+I1), s	42.9		12.3			42.7		16.6				
Green Ext Time (p_c), s	0.0		3.9			0.0		2.2				
Intersection Summary												
HCM 6th Ctrl Delay	42.5											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary

12: Laurel Canyon Boulevard & Moorpark Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	284	571	189	206	426	107	98	1116	163	84	1422	229
Future Volume (veh/h)	284	571	189	206	426	107	98	1116	163	84	1422	229
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	309	621	205	224	463	116	107	1213	177	91	1546	249
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	294	704	232	295	502	552	227	920	134	222	902	143
Arrive On Green	0.11	0.27	0.27	0.14	0.36	0.36	0.08	0.30	0.30	0.11	0.39	0.39
Sat Flow, veh/h	1781	2626	866	1781	1870	1585	1781	3114	452	1781	3074	486
Grp Volume(v), veh/h	309	420	406	224	463	116	107	690	700	91	881	914
Grp Sat Flow(s),veh/h/ln	1781	1777	1715	1781	1870	1585	1781	1777	1789	1781	1777	1783
Q Serve(g_s), s	9.5	20.4	20.4	8.2	21.4	4.2	3.6	26.6	26.6	3.0	26.4	26.4
Cycle Q Clear(g_c), s	9.5	20.4	20.4	8.2	21.4	4.2	3.6	26.6	26.6	3.0	26.4	26.4
Prop In Lane	1.00		0.50	1.00		1.00	1.00		0.25	1.00		0.27
Lane Grp Cap(c), veh/h	294	477	460	295	502	552	227	525	528	222	521	523
V/C Ratio(X)	1.05	0.88	0.88	0.76	0.92	0.21	0.47	1.31	1.32	0.41	1.69	1.75
Avail Cap(c_a), veh/h	294	507	490	295	534	579	252	525	528	250	521	523
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	26.4	31.6	31.6	22.3	28.1	18.0	22.5	31.7	31.7	21.9	27.4	27.4
Incr Delay (d2), s/veh	66.8	15.8	16.5	10.8	21.1	0.2	1.5	154.6	159.0	0.1	310.8	337.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	15.3	15.7	15.4	7.1	16.7	2.6	2.7	49.9	51.2	1.7	76.5	82.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	93.2	47.4	48.1	33.1	49.2	18.2	24.0	186.3	190.7	22.0	338.2	364.4
LnGrp LOS	F	D	D	C	D	B	C	F	F	C	F	F
Approach Vol, veh/h	1135			803			1497			1886		
Approach Delay, s/veh	60.1			40.2			176.8			335.6		
Approach LOS	E			D			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.7	31.8	15.0	30.4	12.6	32.0	15.0	30.4				
Change Period (Y+Rc), s	5.3	* 5.4	* 5.5	6.3	* 5.4	* 5.4	* 5.5	6.3				
Max Green Setting (Gmax), s	10.7	* 24	* 9.5	25.7	* 8.6	* 24	* 9.5	25.7				
Max Q Clear Time (g_c+I), s	17.6	28.4	11.5	23.4	5.0	28.6	10.2	22.4				
Green Ext Time (p_c), s	0.1	0.0	0.0	0.8	0.1	0.0	0.0	1.6				

Intersection Summary

HCM 6th Ctrl Delay 187.6

HCM 6th LOS F

Notes

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






HCM 6th TWSC

13: Moorpark Street & Radford Avenue

06/24/2024

Intersection

Int Delay, s/veh 0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	52	714	802	38	13	30
Future Vol, veh/h	52	714	802	38	13	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	50
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	57	776	872	41	14	33

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	913	0	0 1395 457
Stage 1	-	-	- 893 -
Stage 2	-	-	- 502 -
Critical Hdwy	4.14	-	- 6.84 6.94
Critical Hdwy Stg 1	-	-	- 5.84 -
Critical Hdwy Stg 2	-	-	- 5.84 -
Follow-up Hdwy	2.22	-	- 3.52 3.32
Pot Cap-1 Maneuver	742	-	- 132 551
Stage 1	-	-	- 360 -
Stage 2	-	-	- 573 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	742	-	- 122 551
Mov Cap-2 Maneuver	-	-	- 122 -
Stage 1	-	-	- 332 -
Stage 2	-	-	- 573 -

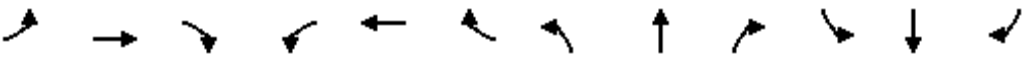










Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	19.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	742	-	-	-	122	551
HCM Lane V/C Ratio	0.076	-	-	-	0.116	0.059
HCM Control Delay (s)	10.3	-	-	-	38.3	11.9
HCM Lane LOS	B	-	-	-	E	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.4	0.2

HCM 6th Signalized Intersection Summary

14: Colfax Avenue & Moorpark Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	559	84	159	629	147	90	203	132	145	448	104
Future Volume (veh/h)	89	559	84	159	629	147	90	203	132	145	448	104
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		0.96	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	97	608	91	173	684	160	98	221	143	158	487	113
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	1222	182	274	747	175	229	460	384	382	740	733
Arrive On Green	0.14	0.79	0.79	0.09	0.09	0.09	0.25	0.25	0.25	0.09	0.40	0.40
Sat Flow, veh/h	1781	3089	461	737	2836	663	815	1870	1560	1781	1870	1569
Grp Volume(v), veh/h	97	349	350	173	428	416	98	221	143	158	487	113
Grp Sat Flow(s),veh/h/ln	1781	1777	1774	737	1777	1722	815	1870	1560	1781	1870	1569
Q Serve(g_s), s	3.3	6.1	6.1	20.9	21.5	21.6	10.1	9.1	6.8	5.6	19.2	3.7
Cycle Q Clear(g_c), s	3.3	6.1	6.1	20.9	21.5	21.6	15.8	9.1	6.8	5.6	19.2	3.7
Prop In Lane	1.00		0.26	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	222	703	702	274	468	454	229	460	384	382	740	733
V/C Ratio(X)	0.44	0.50	0.50	0.63	0.91	0.92	0.43	0.48	0.37	0.41	0.66	0.15
Avail Cap(c_a), veh/h	264	703	702	274	468	454	229	460	384	393	740	733
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	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	0.78	0.78	0.78
Uniform Delay (d), s/veh	21.4	6.3	6.3	39.8	40.1	40.1	34.2	29.0	28.2	21.3	22.2	13.8
Incr Delay (d2), s/veh	1.4	2.5	2.5	10.6	25.0	25.7	5.8	3.6	2.8	0.6	3.6	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(95%),veh/ln	2.3	3.7	3.7	8.5	19.4	19.0	4.1	7.8	5.0	4.2	12.9	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.7	8.8	8.8	50.4	65.1	65.8	39.9	32.6	30.9	21.9	25.8	14.2
LnGrp LOS	C	A	A	D	E	E	D	C	C	C	C	B
Approach Vol, veh/h	796			1017			462			758		
Approach Delay, s/veh	10.5			62.9			33.6			23.2		
Approach LOS	B			E			C			C		
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	11.9	33.1		45.0		45.0	13.4	31.6				
Change Period (Y+Rc), s	* 5.5	* 9.4		* 9.4		* 9.4	5.6	* 9.4				
Max Green Setting (Gmax), s	* 8.5	* 22		* 36		* 36	8.4	* 22				
Max Q Clear Time (g_c+I1), s	5.3	23.6		21.2		8.1	7.6	17.8				
Green Ext Time (p_c), s	0.1	0.0		2.9		4.5	0.0	0.9				

Intersection Summary

HCM 6th Ctrl Delay 34.8

HCM 6th LOS C

Notes

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

HCM 6th TWSC
15: Irvine Avenue & Moorpark Street























06/24/2024

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕↕			↕↕			↕			↕		
Traffic Vol, veh/h	56	717	5	15	802	107	2	1	17	8	1	139
Future Vol, veh/h	56	717	5	15	802	107	2	1	17	8	1	139
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	61	779	5	16	872	116	2	1	18	9	1	151
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	988	0	0	784	0	0	1373	1924	392	1474	1868	494
Stage 1	-	-	-	-	-	-	904	904	-	962	962	-
Stage 2	-	-	-	-	-	-	469	1020	-	512	906	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	695	-	-	830	-	-	105	66	607	88	72	521
Stage 1	-	-	-	-	-	-	298	354	-	275	332	-
Stage 2	-	-	-	-	-	-	544	312	-	513	353	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	695	-	-	830	-	-	63	53	607	72	58	521
Mov Cap-2 Maneuver	-	-	-	-	-	-	63	53	-	72	58	-
Stage 1	-	-	-	-	-	-	252	299	-	232	317	-
Stage 2	-	-	-	-	-	-	368	298	-	418	298	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.4			0.3			20.5			21.6		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	254	695	-	-	830	-	-	375				
HCM Lane V/C Ratio	0.086	0.088	-	-	0.02	-	-	0.429				
HCM Control Delay (s)	20.5	10.7	0.7	-	9.4	0.2	-	21.6				
HCM Lane LOS	C	B	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.3	0.3	-	-	0.1	-	-	2.1				

HCM 6th Signalized Intersection Summary

16: Tujunga Avenue & Moorpark Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	651	75	91	665	50	65	202	69	146	357	183
Future Volume (veh/h)	150	651	75	91	665	50	65	202	69	146	357	183
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	163	708	82	99	723	54	71	220	75	159	388	199
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	344	1648	191	338	1722	129	213	685	581	298	452	383
Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.51	0.13	0.73	0.73	0.24	0.24	0.24
Sat Flow, veh/h	694	3209	371	686	3352	250	1781	1870	1585	1084	1870	1585
Grp Volume(v), veh/h	163	392	398	99	383	394	71	220	75	159	388	199
Grp Sat Flow(s),veh/h/ln	694	1777	1804	686	1777	1825	1781	1870	1585	1084	1870	1585
Q Serve(g_s), s	17.1	12.4	12.4	9.5	12.0	12.0	0.0	3.7	1.3	12.4	17.9	9.8
Cycle Q Clear(g_c), s	29.2	12.4	12.4	21.9	12.0	12.0	0.0	3.7	1.3	16.1	17.9	9.8
Prop In Lane	1.00		0.21	1.00		0.14	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	344	913	926	338	913	937	213	685	581	298	452	383
V/C Ratio(X)	0.47	0.43	0.43	0.29	0.42	0.42	0.33	0.32	0.13	0.53	0.86	0.52
Avail Cap(c_a), veh/h	344	913	926	338	913	937	270	698	592	344	532	451
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	0.99	0.99	0.99	0.49	0.49	0.49
Uniform Delay (d), s/veh	22.6	13.7	13.7	20.5	13.6	13.6	36.4	8.1	7.8	33.7	32.6	29.6
Incr Delay (d2), s/veh	4.6	1.5	1.5	2.2	1.4	1.4	0.9	0.3	0.1	0.7	6.2	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(95%),veh/ln	5.6	8.6	8.7	3.0	8.4	8.5	2.5	2.3	0.8	5.3	11.9	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.3	15.1	15.1	22.7	15.0	15.0	37.3	8.4	7.9	34.4	38.8	30.1
LnGrp LOS	C	B	B	C	B	B	D	A	A	C	D	C
Approach Vol, veh/h	953			876			366			746		
Approach Delay, s/veh	17.2			15.8			13.9			35.6		
Approach LOS	B			B			B			D		
Timer - Assigned Phs	2		3	4		6		8				
Phs Duration (G+Y+Rc), s	51.6		11.2	27.2		51.6		38.4				
Change Period (Y+Rc), s	* 5.4		* 5.4	* 5.4		* 5.4		* 5.4				
Max Green Setting (Gmax), s	* 40		* 8.7	* 26		* 40		* 34				
Max Q Clear Time (g_c+I1), s	23.9		2.0	19.9		31.2		5.7				
Green Ext Time (p_c), s	7.0		0.1	1.9		5.1		1.5				
Intersection Summary												
HCM 6th Ctrl Delay	21.0											
HCM 6th LOS	C											
Notes												

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

HCM 6th Signalized Intersection Summary

17: Woodbridge Street & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↕	
Traffic Volume (veh/h)	9	7	15	17	8	30	12	287	16	40	478	24
Future Volume (veh/h)	9	7	15	17	8	30	12	287	16	40	478	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	10	8	16	18	9	33	13	312	17	43	520	26
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	73	48	62	78	32	71	780	1520	1289	895	1436	72
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.81	0.81	0.81	1.00	1.00	1.00
Sat Flow, veh/h	267	599	769	318	402	881	861	1870	1585	1051	1766	88
Grp Volume(v), veh/h	34	0	0	60	0	0	13	312	17	43	0	546
Grp Sat Flow(s),veh/h/ln	1635	0	0	1601	0	0	861	1870	1585	1051	0	1854
Q Serve(g_s), s	0.0	0.0	0.0	0.8	0.0	0.0	0.3	3.4	0.2	0.2	0.0	0.0
Cycle Q Clear(g_c), s	1.7	0.0	0.0	3.1	0.0	0.0	0.3	3.4	0.2	3.5	0.0	0.0
Prop In Lane	0.29		0.47	0.30		0.55	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	183	0	0	181	0	0	780	1520	1289	895	0	1508
V/C Ratio(X)	0.19	0.00	0.00	0.33	0.00	0.00	0.02	0.21	0.01	0.05	0.00	0.36
Avail Cap(c_a), veh/h	508	0	0	503	0	0	780	1520	1289	895	0	1508
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.97	0.97	0.97	0.62	0.00	0.62
Uniform Delay (d), s/veh	38.8	0.0	0.0	39.5	0.0	0.0	1.6	1.9	1.6	0.1	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	1.1	0.0	0.0	0.0	0.3	0.0	0.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.3	0.0	0.0	2.4	0.0	0.0	0.1	1.3	0.1	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.3	0.0	0.0	40.5	0.0	0.0	1.6	2.2	1.6	0.1	0.0	0.4
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	34			60			342			589		
Approach Delay, s/veh	39.3			40.5			2.1			0.4		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	77.7			12.3			77.7			12.3		
Change Period (Y+Rc), s	* 4.5			* 5.1			* 4.5			* 5.1		
Max Green Setting (Gmax), s	* 55			* 26			* 55			* 26		
Max Q Clear Time (g_c+I1), s	5.5			3.7			5.4			5.1		
Green Ext Time (p_c), s	9.5			0.1			5.0			0.2		

Intersection Summary

HCM 6th Ctrl Delay	4.6
HCM 6th LOS	A

Notes

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

Queues

18: Whitsett Avenue & Ventura Boulevard

06/24/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	83	988	63	28	782	120	62	83	634	247	464
v/c Ratio	0.34	0.64	0.09	0.20	0.73	0.21	0.48	0.25	0.87	0.73	0.49
Control Delay	20.3	23.9	16.3	40.0	47.3	11.6	48.0	34.4	54.5	50.9	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.3	23.9	16.3	40.0	47.3	11.6	48.0	34.4	54.5	50.9	12.9
Queue Length 50th (ft)	30	245	22	13	284	17	36	44	206	149	152
Queue Length 95th (ft)	59	312	47	m22	346	m38	75	82	#374	220	218
Internal Link Dist (ft)	1440			2938			648			1328	
Turn Bay Length (ft)	95		135	145		60	60		220		65
Base Capacity (vph)	275	1592	712	142	1077	588	168	440	727	441	987
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.62	0.09	0.20	0.73	0.20	0.37	0.19	0.87	0.56	0.47

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.




























Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

18: Whitsett Avenue & Ventura Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 		 		
Traffic Volume (vph)	76	909	58	26	719	110	57	74	3	583	227	427
Future Volume (vph)	76	909	58	26	719	110	57	74	3	583	227	427
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	5.4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1853		3433	1863	1583
Flt Permitted	0.14	1.00	1.00	0.25	1.00	1.00	0.38	1.00		0.95	1.00	1.00
Satd. Flow (perm)	268	3539	1583	469	3539	1583	712	1853		3433	1863	1583
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)	83	988	63	28	782	120	62	80	3	634	247	464
RTOR Reduction (vph)	0	0	0	0	0	84	0	2	0	0	0	13
Lane Group Flow (vph)	83	988	63	28	782	36	62	81	0	634	247	451
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Prot	NA	custom
Protected Phases	1	6			2			4		3	8	1 3
Permitted Phases	6		6	2		2	4					8
Actuated Green, G (s)	43.9	43.9	43.9	30.1	30.1	30.1	18.2	18.2		21.2	18.2	53.2
Effective Green, g (s)	43.9	43.9	43.9	30.1	30.1	30.1	18.2	18.2		21.2	18.2	53.2
Actuated g/C Ratio	0.44	0.44	0.44	0.30	0.30	0.30	0.18	0.18		0.21	0.18	0.53
Clearance Time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	
Vehicle Extension (s)	3.0	4.9	4.9	4.7	4.7	4.7	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	243	1553	694	141	1065	476	129	337		727	339	842
v/s Ratio Prot	0.03	c0.28			c0.22			0.04		c0.18	c0.13	0.19
v/s Ratio Perm	0.12		0.04	0.06		0.02	0.09					0.10
v/c Ratio	0.34	0.64	0.09	0.20	0.73	0.08	0.48	0.24		0.87	0.73	0.54
Uniform Delay, d1	19.1	21.8	16.4	26.0	31.4	25.0	36.7	35.0		38.1	38.6	15.3
Progression Factor	1.00	1.00	1.00	1.37	1.38	4.95	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.8	2.0	0.3	2.5	3.6	0.2	2.8	0.4		11.2	7.6	0.7
Delay (s)	19.9	23.8	16.6	38.0	46.8	123.9	39.5	35.4		49.3	46.2	16.0
Level of Service	B	C	B	D	D	F	D	D		D	D	B
Approach Delay (s)		23.1			56.5			37.1			37.2	
Approach LOS		C			E			D			D	
Intersection Summary												
HCM 2000 Control Delay			37.8									D
HCM 2000 Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			100.0							22.1		
Intersection Capacity Utilization			74.0%									D
Analysis Period (min)			15									
c Critical Lane Group												

Queues

19: Laurel Canyon Boulevard & Ventura Place

06/24/2024



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	50	40	159	11	1147	35	76	1690
v/c Ratio	0.38	0.26	0.54	0.06	0.52	0.03	0.33	0.57
Control Delay	45.9	46.5	11.6	32.6	29.7	0.4	21.4	16.1
Queue Delay	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0
Total Delay	45.9	46.5	11.6	32.6	30.3	0.4	21.4	16.1
Queue Length 50th (ft)	26	24	0	7	357	0	23	221
Queue Length 95th (ft)	63	56	44	m11	433	m0	88	412
Internal Link Dist (ft)	123	395			458			232
Turn Bay Length (ft)			380	105		85	55	
Base Capacity (vph)	135	222	345	177	2186	1005	227	2976
Starvation Cap Reductn	0	0	0	0	559	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.18	0.46	0.06	0.70	0.03	0.33	0.57






















Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

19: Laurel Canyon Boulevard & Ventura Place

06/24/2024













												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	11	7	27	10	146	10	1055	32	70	1507	48
Future Volume (vph)	28	11	7	27	10	146	10	1055	32	70	1507	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		9.4			9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.91	
Frpb, ped/bikes		1.00			1.00	0.93	1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes		0.96			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.98			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.97			0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1703			1798	1479	1770	3539	1518	1762	5062	
Flt Permitted		0.79			0.97	1.00	0.95	1.00	1.00	0.21	1.00	
Satd. Flow (perm)		1391			1798	1479	1770	3539	1518	388	5062	
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)	30	12	8	29	11	159	11	1147	35	76	1638	52
RTOR Reduction (vph)	0	7	0	0	0	145	0	0	14	0	2	0
Lane Group Flow (vph)	0	43	0	0	40	14	11	1147	21	76	1688	0
Confl. Peds. (#/hr)	16					16			16	16		
Turn Type	Perm	NA		Split	NA	Perm	Prot	NA	Perm	Perm	NA	
Protected Phases		3		4	4		1	6			2	
Permitted Phases	3					4			6	2		
Actuated Green, G (s)		7.3			8.7	8.7	2.0	59.9	59.9	52.9	52.9	
Effective Green, g (s)		7.3			8.7	8.7	2.0	59.9	59.9	52.9	52.9	
Actuated g/C Ratio		0.07			0.09	0.09	0.02	0.60	0.60	0.53	0.53	
Clearance Time (s)		9.4			9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	4.8	4.8	3.1	3.1	
Lane Grp Cap (vph)		101			156	128	35	2119	909	205	2677	
v/s Ratio Prot					c0.02		0.01	c0.32			c0.33	
v/s Ratio Perm		c0.03				0.01			0.01	0.20		
v/c Ratio		0.42			0.26	0.11	0.31	0.54	0.02	0.37	0.63	
Uniform Delay, d1		44.3			42.6	42.1	48.3	11.9	8.2	13.8	16.6	
Progression Factor		1.00			1.00	1.00	0.78	2.38	1.00	1.00	1.00	
Incremental Delay, d2		2.8			0.9	0.4	3.5	0.7	0.0	5.1	1.1	
Delay (s)		47.2			43.5	42.4	41.3	29.0	8.2	18.9	17.8	
Level of Service		D			D	D	D	C	A	B	B	
Approach Delay (s)		47.2			42.7			28.5			17.8	
Approach LOS		D			D			C			B	
Intersection Summary												
HCM 2000 Control Delay			23.8		HCM 2000 Level of Service				C			
HCM 2000 Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			100.0		Sum of lost time (s)				29.1			
Intersection Capacity Utilization			66.5%		ICU Level of Service				C			
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

20: Laurel Canyon Boulevard & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	513	434	286	554	194	289	828	168	436	867	172
Future Volume (veh/h)	148	513	434	286	554	194	289	828	168	436	867	172
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	0.99		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	161	558	472	311	602	211	314	900	183	474	942	187
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	308	1031	610	284	1003	597	359	1069	464	359	1069	593
Arrive On Green	0.03	0.10	0.10	0.08	0.28	0.28	0.10	0.30	0.30	0.03	0.10	0.10
Sat Flow, veh/h	1781	3554	1534	1781	3554	1533	3456	3554	1541	3456	3554	1541
Grp Volume(v), veh/h	161	558	472	311	602	211	314	900	183	474	942	187
Grp Sat Flow(s),veh/h/ln	1781	1777	1534	1781	1777	1533	1728	1777	1541	1728	1777	1541
Q Serve(g_s), s	6.3	15.0	13.8	7.6	14.6	9.8	9.0	23.7	9.4	10.4	26.2	5.6
Cycle Q Clear(g_c), s	6.3	15.0	13.8	7.6	14.6	9.8	9.0	23.7	9.4	10.4	26.2	5.6
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	308	1031	610	284	1003	597	359	1069	464	359	1069	593
V/C Ratio(X)	0.52	0.54	0.77	1.10	0.60	0.35	0.87	0.84	0.39	1.32	0.88	0.32
Avail Cap(c_a), veh/h	312	1031	610	284	1003	597	359	1080	468	359	1080	598
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	0.61	0.61	0.61	0.86	0.86	0.86	0.77	0.77	0.77	0.80	0.80	0.80
Uniform Delay (d), s/veh	25.1	38.9	18.7	32.8	31.0	21.8	44.2	32.7	27.7	48.3	43.3	10.9
Incr Delay (d2), s/veh	0.9	1.2	5.8	77.7	2.3	1.4	16.6	5.2	0.8	158.5	8.2	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(95%),veh/ln	5.0	10.7	9.6	14.5	10.3	6.5	7.7	15.3	6.2	19.8	19.0	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.0	40.1	24.5	110.6	33.3	23.3	60.7	37.9	28.5	206.8	51.4	11.7
LnGrp LOS	C	D	C	F	C	C	E	D	C	F	D	B
Approach Vol, veh/h	1191			1124			1397			1603		
Approach Delay, s/veh	32.0			52.8			41.8			92.7		
Approach LOS	C			D			D			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.0	35.3	16.0	35.7	13.8	34.5	16.0	35.7				
Change Period (Y+Rc), s	5.4	6.3	5.6	5.6	5.6	6.3	5.6	5.6				
Max Green Setting (G_max), s	7.6	28.7	10.4	30.4	8.4	27.7	10.4	30.4				
Max Q Clear Time (g_c+19.6)	17.0	17.0	11.0	28.2	8.3	16.6	12.4	25.7				
Green Ext Time (p_c), s	0.0	7.8	0.0	1.9	0.0	4.1	0.0	3.5				

Intersection Summary

HCM 6th Ctrl Delay 57.3

HCM 6th LOS E

Notes

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

Queues

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Lane Group	EBL	EBT	WBL	WBT	WBR2	NBT	NBR	SBL	SBT	SBR2
Lane Group Flow (vph)	505	792	63	882	113	37	45	65	267	62
v/c Ratio	0.88	0.44	0.64	1.20	0.38	0.13	0.11	0.33	1.75	0.19
Control Delay	25.7	0.2	91.9	150.6	51.4	51.3	0.5	63.0	395.0	1.4
Queue Delay	59.3	37.4	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.0	37.6	91.9	151.3	51.4	51.3	0.5	63.0	395.0	1.4
Queue Length 50th (ft)	489	0	57	~512	89	29	0	56	~363	0
Queue Length 95th (ft)	m399	m0	#122	#646	151	64	0	105	#544	0
Internal Link Dist (ft)		48		634		86			226	
Turn Bay Length (ft)	90		95		55		30	90		90
Base Capacity (vph)	580	1810	102	733	300	309	420	195	153	319
Starvation Cap Reductn	375	1065	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	82	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	2.46	1.06	0.62	1.35	0.38	0.12	0.11	0.33	1.75	0.19

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

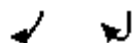
06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	465	714	15	58	721	90	104	26	8	41	60	16
Future Volume (vph)	465	714	15	58	721	90	104	26	8	41	60	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.7		4.9	6.1		6.1		6.9	6.9	7.0	7.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		0.89		1.00	0.91	1.00	0.88
Flpb, ped/bikes	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	0.98		0.85		1.00	0.85	1.00	0.86
Flt Protected	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (prot)	1770	3524		1770	3438		1408		1795	1440	1770	1408
Flt Permitted	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (perm)	1770	3524		1770	3438		1408		1795	1440	1770	1408
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)	505	776	16	63	784	98	113	28	9	45	65	17
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	38	0	0
Lane Group Flow (vph)	505	791	0	63	882	0	113	0	37	7	65	267
Confl. Peds. (#/hr)	29		16	16		29	29	44		44	44	
Turn Type	Prot	NA		Prot	NA		Perm	Split	NA	Perm	Split	NA
Protected Phases	1 3	3 6		5	2			7	7		8	8
Permitted Phases							2			7		
Actuated Green, G (s)	46.9	70.5		6.5	28.9		28.9		23.0	23.0	15.5	15.5
Effective Green, g (s)	46.9	64.4		6.5	28.9		28.9		23.0	23.0	15.5	15.5
Actuated g/C Ratio	0.33	0.46		0.05	0.21		0.21		0.16	0.16	0.11	0.11
Clearance Time (s)				4.9	6.1		6.1		6.9	6.9	7.0	7.0
Vehicle Extension (s)				3.0	4.8		4.8		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	592	1621		82	709		290		294	236	195	155
v/s Ratio Prot	c0.29	0.22		0.04	c0.26				c0.02		0.04	c0.19
v/s Ratio Perm							0.08			0.01		
v/c Ratio	0.85	0.49		0.77	1.24		0.39		0.13	0.03	0.33	1.72
Uniform Delay, d1	43.3	26.3		66.0	55.5		47.9		49.9	49.1	57.5	62.2
Progression Factor	0.51	0.01		1.00	1.00		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	1.2	0.0		34.2	121.5		3.9		0.2	0.1	1.0	350.8
Delay (s)	23.2	0.2		100.2	177.0		51.8		50.1	49.2	58.5	413.1
Level of Service	C	A		F	F		D		D	D	E	F
Approach Delay (s)		9.1			159.1				49.6			298.4
Approach LOS		A			F				D			F
Intersection Summary												
HCM 2000 Control Delay			106.6			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			0.97									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			31.8			
Intersection Capacity Utilization			95.1%			ICU Level of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Movement	SBR	SBR2
Lane Configurations		
Traffic Volume (vph)	230	57
Future Volume (vph)	230	57
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		7.0
Lane Util. Factor		1.00
Frpb, ped/bikes		0.79
Flpb, ped/bikes		1.00
Frt		0.85
Flt Protected		1.00
Satd. Flow (prot)		1243
Flt Permitted		1.00
Satd. Flow (perm)		1243
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	250	62
RTOR Reduction (vph)	0	55
Lane Group Flow (vph)	0	7
Confl. Peds. (#/hr)	44	44
Turn Type		Perm
Protected Phases		
Permitted Phases		8
Actuated Green, G (s)		15.5
Effective Green, g (s)		15.5
Actuated g/C Ratio		0.11
Clearance Time (s)		7.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)		137
v/s Ratio Prot		
v/s Ratio Perm		0.01
v/c Ratio		0.05
Uniform Delay, d1		55.7
Progression Factor		1.00
Incremental Delay, d2		0.2
Delay (s)		55.8
Level of Service		E
Approach Delay (s)		
Approach LOS		
Intersection Summary		

HCM 6th Signalized Intersection Summary

22: Carpenter Avenue & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	704	96	111	915	22	60	4	84	10	30	6
Future Volume (veh/h)	18	704	96	111	915	22	60	4	84	10	30	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	0.91		0.90	0.93		0.90
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	20	765	104	121	995	24	65	4	91	11	33	7
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	276	1918	261	383	2178	53	143	26	156	104	284	281
Arrive On Green	0.62	0.62	0.62	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	553	3119	424	634	3541	85	468	129	787	300	1435	1422
Grp Volume(v), veh/h	20	436	433	121	499	520	160	0	0	44	0	7
Grp Sat Flow(s),veh/h/ln	553	1777	1766	634	1777	1849	1384	0	0	1735	0	1422
Q Serve(g_s), s	2.4	12.5	12.5	17.1	24.7	24.7	7.3	0.0	0.0	0.0	0.0	0.4
Cycle Q Clear(g_c), s	27.1	12.5	12.5	29.6	24.7	24.7	10.2	0.0	0.0	1.9	0.0	0.4
Prop In Lane	1.00		0.24	1.00		0.05	0.41		0.57	0.25		1.00
Lane Grp Cap(c), veh/h	276	1093	1086	383	1093	1137	325	0	0	388	0	281
V/C Ratio(X)	0.07	0.40	0.40	0.32	0.46	0.46	0.49	0.00	0.00	0.11	0.00	0.02
Avail Cap(c_a), veh/h	276	1093	1086	383	1093	1137	469	0	0	565	0	434
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	0.84	0.84	0.84	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.7	9.8	9.8	32.7	25.2	25.2	36.1	0.0	0.0	32.9	0.0	32.3
Incr Delay (d2), s/veh	0.5	1.0	1.0	1.8	1.2	1.1	1.2	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	8.1	8.0	5.5	17.2	17.7	6.6	0.0	0.0	1.6	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.2	10.8	10.8	34.5	26.3	26.3	37.3	0.0	0.0	33.1	0.0	32.4
LnGrp LOS	C	B	B	C	C	C	D	A	A	C	A	C
Approach Vol, veh/h	889			1140			160			51		
Approach Delay, s/veh	11.0			27.2			37.3			33.0		
Approach LOS	B			C			D			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	70.7			29.3			70.7			29.3		
Change Period (Y+Rc), s	* 9.2			9.5			* 9.2			9.5		
Max Green Setting (Gmax), s	* 51			30.5			* 51			30.5		
Max Q Clear Time (g_c+I1), s	29.1			3.9			31.6			12.2		
Green Ext Time (p_c), s	11.8			0.2			13.5			0.9		

Intersection Summary

HCM 6th Ctrl Delay	21.6
HCM 6th LOS	C

Notes

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

Queues

23: Ventura Boulevard & Colfax Avenue

06/24/2024





















Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	204	697	908	304	387
v/c Ratio	0.47	0.29	0.55	0.78	0.45
Control Delay	7.0	4.8	14.2	49.8	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	7.0	4.8	14.2	49.8	3.7
Queue Length 50th (ft)	8	13	132	183	7
Queue Length 95th (ft)	25	36	147	254	50
Internal Link Dist (ft)		981	464		
Turn Bay Length (ft)	160			360	360
Base Capacity (vph)	435	2371	1659	494	863
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.47	0.29	0.55	0.62	0.45
Intersection Summary					

HCM Signalized Intersection Capacity Analysis

23: Ventura Boulevard & Colfax Avenue

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	188	641	0	0	689	146	0	0	0	280	0	356
Future Volume (vph)	188	641	0	0	689	146	0	0	0	280	0	356
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.4			5.4					5.4		5.7
Lane Util. Factor	1.00	0.95			0.95					1.00		1.00
Frt	1.00	1.00			0.97					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1770	3539			3446					1770		1583
Flt Permitted	0.20	1.00			1.00					0.95		1.00
Satd. Flow (perm)	378	3539			3446					1770		1583
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)	204	697	0	0	749	159	0	0	0	304	0	387
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	238
Lane Group Flow (vph)	204	697	0	0	908	0	0	0	0	304	0	149
Turn Type	pm+pt	NA			NA					pm+pt		pm+ov
Protected Phases	5	2			6			3		4		5
Permitted Phases	2						3			7		4
Actuated Green, G (s)	67.0	67.0			48.1					22.2		35.4
Effective Green, g (s)	67.0	67.0			48.1					22.2		35.4
Actuated g/C Ratio	0.67	0.67			0.48					0.22		0.35
Clearance Time (s)	5.7	5.4			5.4					5.4		5.7
Vehicle Extension (s)	3.0	4.3			4.5					3.0		3.0
Lane Grp Cap (vph)	437	2371			1657					392		560
v/s Ratio Prot	c0.06	0.20			c0.26					c0.17		0.04
v/s Ratio Perm	0.25											0.06
v/c Ratio	0.47	0.29			0.55					0.78		0.27
Uniform Delay, d1	8.9	6.8			18.3					36.6		23.0
Progression Factor	0.49	0.60			0.64					1.00		1.00
Incremental Delay, d2	0.7	0.3			1.3					9.3		0.3
Delay (s)	5.2	4.3			13.0					45.8		23.3
Level of Service	A	A			B					D		C
Approach Delay (s)		4.5			13.0			0.0			33.2	
Approach LOS		A			B			A			C	
Intersection Summary												
HCM 2000 Control Delay	15.5				HCM 2000 Level of Service				B			
HCM 2000 Volume to Capacity ratio	0.65											
Actuated Cycle Length (s)	100.0				Sum of lost time (s)				22.8			
Intersection Capacity Utilization	62.2%				ICU Level of Service				B			
Analysis Period (min)	15											
c Critical Lane Group												

Queues

24: Berry Drive & Ventura Boulevard

06/24/2024



Lane Group	EBT	WBL	WBT	NBT
Lane Group Flow (vph)	1947	40	935	61
v/c Ratio	0.67	0.33	0.32	0.26
Control Delay	4.3	14.4	4.7	2.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.3	14.4	4.7	2.8
Queue Length 50th (ft)	130	13	158	0
Queue Length 95th (ft)	175	m20	17	1
Internal Link Dist (ft)	342		273	287
Turn Bay Length (ft)		65		
Base Capacity (vph)	2908	123	2933	394
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.67	0.33	0.32	0.15



















Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

24: Berry Drive & Ventura Boulevard

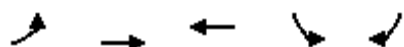
06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1681	110	37	860	0	18	0	38	0	0	0
Future Volume (vph)	0	1681	110	37	860	0	18	0	38	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0			9.4				
Lane Util. Factor		0.95		1.00	0.95			1.00				
Frt		0.99		1.00	1.00			0.91				
Flt Protected		1.00		0.95	1.00			0.98				
Satd. Flow (prot)		3506		1770	3539			1666				
Flt Permitted		1.00		0.08	1.00			0.98				
Satd. Flow (perm)		3506		150	3539			1666				
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)	0	1827	120	40	935	0	20	0	41	0	0	0
RTOR Reduction (vph)	0	2	0	0	0	0	0	58	0	0	0	0
Lane Group Flow (vph)	0	1945	0	40	935	0	0	3	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		6			2		3	3			4	
Permitted Phases	6			2						4		
Actuated Green, G (s)		80.0		80.0	80.0			5.6				
Effective Green, g (s)		80.0		80.0	80.0			5.6				
Actuated g/C Ratio		0.80		0.80	0.80			0.06				
Clearance Time (s)		5.0		5.0	5.0			9.4				
Vehicle Extension (s)		4.9		4.0	4.0			3.0				
Lane Grp Cap (vph)		2804		120	2831			93				
v/s Ratio Prot		c0.55			0.26			c0.00				
v/s Ratio Perm				0.27								
v/c Ratio		0.69		0.33	0.33			0.04				
Uniform Delay, d1		4.5		2.7	2.7			44.6				
Progression Factor		0.67		1.90	1.64			1.00				
Incremental Delay, d2		1.4		6.5	0.3			0.2				
Delay (s)		4.4		11.7	4.7			44.8				
Level of Service		A		B	A			D				
Approach Delay (s)		4.4			5.0			44.8			0.0	
Approach LOS		A			A			D			A	
Intersection Summary												
HCM 2000 Control Delay			5.4			HCM 2000 Level of Service			A			
HCM 2000 Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			23.7			
Intersection Capacity Utilization			67.8%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

25: Ventura Boulevard & Tujunga Avenue

06/24/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	132	913	884	243	317
v/c Ratio	0.30	0.37	0.46	0.39	0.54
Control Delay	9.1	9.4	15.3	36.4	23.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	9.1	9.4	15.3	36.4	23.3
Queue Length 50th (ft)	30	154	162	71	128
Queue Length 95th (ft)	m64	236	263	95	181
Internal Link Dist (ft)		426	233	3083	
Turn Bay Length (ft)	180			100	60
Base Capacity (vph)	450	2499	1915	1218	588
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.29	0.37	0.46	0.20	0.54

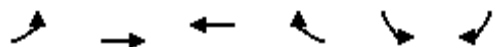
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

25: Ventura Boulevard & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	121	840	717	97	224	292
Future Volume (vph)	121	840	717	97	224	292
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.5	5.5		5.5	5.6
Lane Util. Factor	1.00	0.95	0.95		0.97	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3476		3433	1583
Flt Permitted	0.24	1.00	1.00		0.95	1.00
Satd. Flow (perm)	442	3539	3476		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	132	913	779	105	243	317
RTOR Reduction (vph)	0	0	8	0	0	49
Lane Group Flow (vph)	132	913	876	0	243	268
Turn Type	pm+pt	NA	NA		Prot	pt+ov
Protected Phases	1	6	2		4	1 7
Permitted Phases	6					4
Actuated Green, G (s)	70.6	70.6	54.8		18.4	34.1
Effective Green, g (s)	70.6	70.6	54.8		18.4	28.6
Actuated g/C Ratio	0.71	0.71	0.55		0.18	0.29
Clearance Time (s)	5.6	5.5	5.5		5.5	
Vehicle Extension (s)	3.0	4.4	4.9		3.0	
Lane Grp Cap (vph)	447	2498	1904		631	452
v/s Ratio Prot	0.03	0.26	c0.25		0.07	c0.17
v/s Ratio Perm	0.18					
v/c Ratio	0.30	0.37	0.46		0.39	0.59
Uniform Delay, d1	6.3	5.8	13.7		35.8	30.7
Progression Factor	1.36	1.38	1.00		1.00	1.00
Incremental Delay, d2	0.3	0.3	0.8		0.4	2.1
Delay (s)	8.8	8.3	14.5		36.2	32.8
Level of Service	A	A	B		D	C
Approach Delay (s)		8.4	14.5		34.3	
Approach LOS		A	B		C	
Intersection Summary						
HCM 2000 Control Delay			16.4		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.54			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	22.1
Intersection Capacity Utilization			53.4%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

26: Laurel Canyon Boulevard & Maxwellton Road

06/24/2024









Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		<div>↕</div>						<div>↕↕</div>			<div>↕↕</div>	
Traffic Volume (veh/h)	120	0	75	0	0	0	2	1081	0	0	1486	97
Future Volume (veh/h)	120	0	75	0	0	0	2	1081	0	0	1486	97
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.83				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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h	130	0	82				2	1175	0	0	1615	105
Peak Hour Factor	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	0	0	2	2
Cap, veh/h	218	0	138				41	1987	0	0	1934	125
Arrive On Green	0.23	0.00	0.23				0.57	0.57	0.00	0.00	0.57	0.57
Sat Flow, veh/h	960	0	605				1	3567	0	0	3482	219
Grp Volume(v), veh/h	212	0	0				631	546	0	0	842	878
Grp Sat Flow(s),veh/h/ln	1565	0	0				1866	1617	0	0	1777	1831
Q Serve(g_s), s	10.9	0.0	0.0				0.0	19.7	0.0	0.0	34.8	35.6
Cycle Q Clear(g_c), s	10.9	0.0	0.0				19.7	19.7	0.0	0.0	34.8	35.6
Prop In Lane	0.61		0.39				0.00		0.00	0.00		0.12
Lane Grp Cap(c), veh/h	356	0	0				1105	923	0	0	1014	1045
V/C Ratio(X)	0.60	0.00	0.00				0.57	0.59	0.00	0.00	0.83	0.84
Avail Cap(c_a), veh/h	431	0	0				1105	923	0	0	1014	1045
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.83	0.83	0.00	0.00	0.37	0.37
Uniform Delay (d), s/veh	31.1	0.0	0.0				12.5	12.5	0.0	0.0	15.8	15.9
Incr Delay (d2), s/veh	1.6	0.0	0.0				1.8	2.3	0.0	0.0	3.1	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.6	0.0	0.0				12.0	10.8	0.0	0.0	16.7	17.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.7	0.0	0.0				14.3	14.9	0.0	0.0	18.9	19.2
LnGrp LOS	C	A	A				B	B	A	A	B	B
Approach Vol, veh/h		212						1177			1720	
Approach Delay, s/veh		32.7						14.6			19.0	
Approach LOS		C						B			B	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		60.4		29.6		60.4						
Change Period (Y+Rc), s		9.0		9.2		9.0						
Max Green Setting (Gmax), s		47.0		24.8		47.0						
Max Q Clear Time (g_c+I1), s		37.6		12.9		21.7						
Green Ext Time (p_c), s		8.8		1.0		16.3						
Intersection Summary												
HCM 6th Ctrl Delay			18.3									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary

27: Laurel Canyon Boulevard & Laurel Terrace Drive/Sunshine Terrace Drive

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	15	249	93	22	89	57	1096	47	22	1523	18
Future Volume (veh/h)	16	15	249	93	22	89	57	1096	47	22	1523	18
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	17	16	271	101	24	97	62	1191	51	24	1655	20
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	43	30	340	126	38	93	80	2407	103	299	2195	26
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.04	0.69	0.69	0.61	0.61	0.61
Sat Flow, veh/h	52	132	1512	364	168	413	1781	3472	149	448	3596	43
Grp Volume(v), veh/h	304	0	0	222	0	0	62	609	633	24	817	858
Grp Sat Flow(s),veh/h/ln	1696	0	0	945	0	0	1781	1777	1844	448	1777	1863
Q Serve(g_s), s	0.0	0.0	0.0	6.3	0.0	0.0	4.1	19.2	19.2	3.2	39.8	40.0
Cycle Q Clear(g_c), s	20.7	0.0	0.0	27.0	0.0	0.0	4.1	19.2	19.2	12.4	39.8	40.0
Prop In Lane	0.06		0.89	0.45		0.44	1.00		0.08	1.00		0.02
Lane Grp Cap(c), veh/h	413	0	0	256	0	0	80	1232	1278	299	1084	1137
V/C Ratio(X)	0.74	0.00	0.00	0.87	0.00	0.00	0.78	0.49	0.50	0.08	0.75	0.75
Avail Cap(c_a), veh/h	413	0	0	256	0	0	110	1232	1278	299	1084	1137
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(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.44	0.44	0.44
Uniform Delay (d), s/veh	44.3	0.0	0.0	47.5	0.0	0.0	56.7	8.6	8.6	13.8	16.9	16.9
Incr Delay (d2), s/veh	6.7	0.0	0.0	25.3	0.0	0.0	20.8	1.4	1.4	0.2	2.2	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(95%),veh/ln	11.4	0.0	0.0	13.3	0.0	0.0	4.2	11.5	11.8	0.6	19.9	20.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.0	0.0	0.0	72.8	0.0	0.0	77.5	10.0	10.0	14.1	19.1	19.0
LnGrp LOS	D	A	A	E	A	A	E	B	A	B	B	B
Approach Vol, veh/h	304		222				1304			1699		
Approach Delay, s/veh	51.0		72.8				13.2			19.0		
Approach LOS	D		E				B			B		
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	30.0	78.0	32.0		88.0		32.0					
Change Period (Y+Rc), s	4.6	4.8	* 5		4.8		* 5					
Max Green Setting (Gmax), s	71.2		* 27		83.2		* 27					
Max Q Clear Time (g_c+I1), s	42.0		22.7		21.2		29.0					
Green Ext Time (p_c), s	0.0	15.8	0.8		11.3		0.0					

Intersection Summary

HCM 6th Ctrl Delay 23.0

HCM 6th LOS C

Notes

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

Queues

28: Laurel Canyon Boulevard & Fryman Road

06/24/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	248	7	23	1033	2075
v/c Ratio	0.71	0.02	0.28	0.43	0.88
Control Delay	44.2	26.0	18.6	7.7	18.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.2	26.0	18.6	7.7	18.0
Queue Length 50th (ft)	132	3	5	121	420
Queue Length 95th (ft)	195	14	29	200	#771
Internal Link Dist (ft)				236	183
Turn Bay Length (ft)			145		
Base Capacity (vph)	542	485	82	2412	2370
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.46	0.01	0.28	0.43	0.88








Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

28: Laurel Canyon Boulevard & Fryman Road

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	228	0	6	0	0	0	21	950	0	0	1623	286
Future Volume (vph)	228	0	6	0	0	0	21	950	0	0	1623	286
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4		5.4				5.4	5.4			5.4	
Lane Util. Factor	1.00		1.00				1.00	0.95			0.95	
Frt	1.00		0.85				1.00	1.00			0.98	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	3539			3460	
Flt Permitted	0.95		1.00				0.07	1.00			1.00	
Satd. Flow (perm)	1770		1583				122	3539			3460	
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)	248	0	7	0	0	0	23	1033	0	0	1764	311
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	12	0
Lane Group Flow (vph)	248	0	7	0	0	0	23	1033	0	0	2063	0
Turn Type	Perm		Perm				Perm	NA		Perm	NA	
Protected Phases								2			6	
Permitted Phases	8		8				2			6		
Actuated Green, G (s)	17.9		17.9				61.3	61.3			61.3	
Effective Green, g (s)	17.9		17.9				61.3	61.3			61.3	
Actuated g/C Ratio	0.20		0.20				0.68	0.68			0.68	
Clearance Time (s)	5.4		5.4				5.4	5.4			5.4	
Vehicle Extension (s)	3.0		3.0				4.8	4.8			5.1	
Lane Grp Cap (vph)	352		314				83	2410			2356	
v/s Ratio Prot								0.29			c0.60	
v/s Ratio Perm	c0.14		0.00				0.19					
v/c Ratio	0.70		0.02				0.28	0.43			0.88	
Uniform Delay, d1	33.6		29.0				5.6	6.5			11.3	
Progression Factor	1.00		1.00				1.00	1.00			1.00	
Incremental Delay, d2	6.3		0.0				8.1	0.6			4.9	
Delay (s)	39.9		29.0				13.8	7.0			16.3	
Level of Service	D		C				B	A			B	
Approach Delay (s)		39.6			0.0			7.2			16.3	
Approach LOS		D			A			A			B	
Intersection Summary												
HCM 2000 Control Delay			15.2				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			10.8		
Intersection Capacity Utilization			74.4%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th TWSC
29: Laurel Canyon Boulevard & Woodbridge Street

06/24/2024

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↙	↕		↙	↕	
Traffic Vol, veh/h	3	0	16	4	0	47	14	1283	4	125	1746	21
Future Vol, veh/h	3	0	16	4	0	47	14	1283	4	125	1746	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	65	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	17	4	0	51	15	1395	4	136	1898	23

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2910	3611	961	2648	3620	700	1921	0	0	1399	0	0
Stage 1	2182	2182	-	1427	1427	-	-	-	-	-	-	-
Stage 2	728	1429	-	1221	2193	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	7	5	256	11	5	382	304	-	-	484	-	-
Stage 1	47	83	-	142	199	-	-	-	-	-	-	-
Stage 2	381	199	-	191	82	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	5	3	256	8	3	382	304	-	-	484	-	-
Mov Cap-2 Maneuver	5	3	-	8	3	-	-	-	-	-	-	-
Stage 1	45	60	-	135	189	-	-	-	-	-	-	-
Stage 2	314	189	-	128	59	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	274.1		112.6		0.2		1	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	304	-	-	29 82	484	-	-
HCM Lane V/C Ratio	0.05	-	-	0.712 0.676	0.281	-	-
HCM Control Delay (s)	17.5	-	-	274.1 112.6	15.3	-	-
HCM Lane LOS	C	-	-	F F	C	-	-
HCM 95th %tile Q(veh)	0.2	-	-	2.3 3.2	1.1	-	-

HCM 6th TWSC
30: Valleyheart Drive (North) & Laurel Canyon Boulevard

06/24/2024

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↱	↕↱		↱	↕↱	
Traffic Vol, veh/h	2	0	10	6	0	27	13	1276	8	29	1752	7
Future Vol, veh/h	2	0	10	6	0	27	13	1276	8	29	1752	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	40	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	11	7	0	29	14	1387	9	32	1904	8
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2694	3396	956	2436	3396	698	1912	0	0	1396	0	0
Stage 1	1972	1972	-	1420	1420	-	-	-	-	-	-	-
Stage 2	722	1424	-	1016	1976	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	10	7	258	16	7	383	306	-	-	486	-	-
Stage 1	64	107	-	143	201	-	-	-	-	-	-	-
Stage 2	384	200	-	255	106	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	8	6	258	14	6	383	306	-	-	486	-	-
Mov Cap-2 Maneuver	8	6	-	14	6	-	-	-	-	-	-	-
Stage 1	61	100	-	136	192	-	-	-	-	-	-	-
Stage 2	338	191	-	228	99	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	125.4		111.4		0.2		0.2					
HCM LOS	F		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	306	-	-	42	66	486	-	-				
HCM Lane V/C Ratio	0.046	-	-	0.311	0.543	0.065	-	-				
HCM Control Delay (s)	17.3	-	-	125.4	111.4	12.9	-	-				
HCM Lane LOS	C	-	-	F	F	B	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	1	2.2	0.2	-	-				





HCM 6th TWSC

31: Laurel Canyon Boulevard & Valleyheart Drive (South)

06/24/2024

Intersection

Int Delay, s/veh 1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	93	1208	18	121	1632
Future Vol, veh/h	5	93	1208	18	121	1632
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	35	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	101	1313	20	132	1774

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	2474	667	0
Stage 1	1323	-	-
Stage 2	1151	-	-
Critical Hdwy	6.84	6.94	-
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	-
Pot Cap-1 Maneuver	25	401	-
Stage 1	213	-	-
Stage 2	263	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	19	401	-
Mov Cap-2 Maneuver	19	-	-
Stage 1	213	-	-
Stage 2	195	-	-

Approach	WB	NB	SB
HCM Control Delay, s	42.5	0	1
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	198	513
HCM Lane V/C Ratio	-	-	0.538	0.256
HCM Control Delay (s)	-	-	42.5	14.4
HCM Lane LOS	-	-	E	B
HCM 95th %tile Q(veh)	-	-	2.8	1

HCM 6th AWSC
32: Radford Avenue & Sarah Street

06/24/2024

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	12	1	0	3	6	54	2	36	1	114	103	13
Future Vol, veh/h	12	1	0	3	6	54	2	36	1	114	103	13
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	1	0	3	7	59	2	39	1	124	112	14
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0




Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8	7.4	7.6	9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	92%	5%	50%
Vol Thru, %	92%	8%	10%	45%
Vol Right, %	3%	0%	86%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	39	13	63	230
LT Vol	2	12	3	114
Through Vol	36	1	6	103
RT Vol	1	0	54	13
Lane Flow Rate	42	14	68	250
Geometry Grp	1	1	1	1
Degree of Util (X)	0.051	0.019	0.078	0.29
Departure Headway (Hd)	4.372	4.851	4.101	4.177
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	824	742	879	855
Service Time	2.372	2.856	2.103	2.233
HCM Lane V/C Ratio	0.051	0.019	0.077	0.292
HCM Control Delay	7.6	8	7.4	9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.1	0.3	1.2

Intersection

Intersection Delay, s/veh 0

Intersection LOS -

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	0	0	0
HCM LOS	-	-	-

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0
LT Vol	0	0	0
Through Vol	0	0	0
RT Vol	0	0	0
Lane Flow Rate	0	0	0
Geometry Grp	1	1	1
Degree of Util (X)	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0
HCM Control Delay	6.9	6.9	6.9
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

HCM 6th AWSC

54: Radford Avenue & Radford Gate

06/24/2024

Intersection

Intersection Delay, s/veh 0

Intersection LOS -

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

Intersection

Intersection Delay, s/veh 0

Intersection LOS -




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

HCM 6th TWSC
56: Colfax Avenue & Colfax Gate

06/24/2024

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1	1	0
Stage 1	1	-	-
Stage 2	0	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	1022	1084	0
Stage 1	1022	-	0
Stage 2	-	-	0
Platoon blocked, %			-
Mov Cap-1 Maneuver	1022	1084	-
Mov Cap-2 Maneuver	1022	-	-
Stage 1	1022	-	-
Stage 2	-	-	-

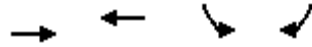
Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

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

Queues

121: Ventura Boulevard & Ventura PI

06/24/2024



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1228	1062	70	30
v/c Ratio	1.26	0.51	0.11	0.09
Control Delay	167.7	8.0	47.0	15.7
Queue Delay	1.7	51.2	0.0	0.0
Total Delay	169.5	59.2	47.0	15.7
Queue Length 50th (ft)	~770	55	27	0
Queue Length 95th (ft)	#909	m30	50	29
Internal Link Dist (ft)	509	48	136	
Turn Bay Length (ft)				40
Base Capacity (vph)	973	2081	669	332
Starvation Cap Reductn	0	1273	0	0
Spillback Cap Reductn	261	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.72	1.31	0.10	0.09

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

121: Ventura Boulevard & Ventura PI

06/24/2024



























Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	↑
Traffic Volume (vph)	0	1130	977	0	64	28
Future Volume (vph)	0	1130	977	0	64	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.1	6.1		5.7	5.7
Lane Util. Factor		0.95	0.95		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3433	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1228	1062	0	70	30
RTOR Reduction (vph)	0	0	0	0	0	24
Lane Group Flow (vph)	0	1228	1062	0	70	6
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2 4		3	
Permitted Phases						3
Actuated Green, G (s)		37.5	81.3		26.9	26.9
Effective Green, g (s)		37.5	81.3		26.9	26.9
Actuated g/C Ratio		0.27	0.58		0.19	0.19
Clearance Time (s)		6.1			5.7	5.7
Vehicle Extension (s)		4.6			3.0	3.0
Lane Grp Cap (vph)		947	2055		659	304
v/s Ratio Prot		c0.35	c0.30		c0.02	
v/s Ratio Perm						0.00
v/c Ratio		1.30	0.52		0.11	0.02
Uniform Delay, d1		51.2	17.6		46.6	45.9
Progression Factor		1.00	0.46		1.00	1.00
Incremental Delay, d2		141.4	0.0		0.1	0.0
Delay (s)		192.6	8.1		46.7	45.9
Level of Service		F	A		D	D
Approach Delay (s)		192.6	8.1		46.5	
Approach LOS		F	A		D	
Intersection Summary						
HCM 2000 Control Delay		104.5		HCM 2000 Level of Service		F
HCM 2000 Volume to Capacity ratio		0.77				
Actuated Cycle Length (s)		140.0		Sum of lost time (s)		31.8
Intersection Capacity Utilization		47.7%		ICU Level of Service		A
Analysis Period (min)		15				
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

1: Riverside Drive & Laurel Canyon Boulevard








06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	310	939	143	111	484	105	177	738	116	156	767	221
Future Volume (veh/h)	310	939	143	111	484	105	177	738	116	156	767	221
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	337	1021	155	121	526	114	192	802	126	170	834	240
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	180	1032	460	255	927	413	309	1314	703	308	1427	408
Arrive On Green	0.10	0.29	0.29	0.02	0.09	0.09	0.08	0.37	0.37	0.08	0.36	0.36
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	3554	1585	1781	3944	1128
Grp Volume(v), veh/h	337	1021	155	121	526	114	192	802	126	170	719	355
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1777	1585	1781	1702	1667
Q Serve(g_s), s	12.1	34.3	9.2	4.1	17.1	8.1	8.0	22.0	5.8	7.1	20.5	20.7
Cycle Q Clear(g_c), s	12.1	34.3	9.2	4.1	17.1	8.1	8.0	22.0	5.8	7.1	20.5	20.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.68
Lane Grp Cap(c), veh/h	180	1032	460	255	927	413	309	1314	703	308	1231	603
V/C Ratio(X)	1.88	0.99	0.34	0.48	0.57	0.28	0.62	0.61	0.18	0.55	0.58	0.59
Avail Cap(c_a), veh/h	180	1032	460	357	927	413	329	1314	703	326	1231	603
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	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	54.0	42.4	33.5	56.3	48.3	44.2	23.5	30.8	20.2	23.5	31.0	31.0
Incr Delay (d2), s/veh	414.7	25.5	2.0	1.4	2.5	1.6	2.8	1.8	0.5	1.8	2.0	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(95%),veh/ln	41.2	25.2	6.7	3.4	13.2	6.3	6.4	14.3	3.9	5.5	13.3	13.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	468.7	67.9	35.4	57.6	50.8	45.9	26.2	32.6	20.7	25.3	33.0	35.2
LnGrp LOS	F	E	D	E	D	D	C	C	C	C	C	D
Approach Vol, veh/h		1513			761			1120			1244	
Approach Delay, s/veh		153.8			51.2			30.2			32.6	
Approach LOS		F			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.7	49.3	18.0	37.0	14.7	50.3	14.4	40.6				
Change Period (Y+Rc), s	5.6	5.9	5.9	* 5.7	5.6	5.9	5.6	* 5.7				
Max Green Setting (Gmax), s	11.4	42.1	12.1	* 31	10.4	43.1	12.4	* 31				
Max Q Clear Time (g_c+I1), s	10.0	22.7	14.1	19.1	9.1	24.0	6.1	36.3				
Green Ext Time (p_c), s	0.1	6.8	0.0	2.9	0.1	5.7	0.2	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			74.6									
HCM 6th LOS			E									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
User approved changes to right turn type.												

HCM 6th TWSC

2: Riverside Drive & Radford Avenue

06/24/2024

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	954	32	36	963	7	16	2	28	1	0	8
Future Vol, veh/h	11	954	32	36	963	7	16	2	28	1	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	105	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	1037	35	39	1047	8	17	2	30	1	0	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1055	0	0	1072	0	0	1663	2194	519	1673	2225	528
Stage 1	-	-	-	-	-	-	1061	1061	-	1129	1129	-
Stage 2	-	-	-	-	-	-	602	1133	-	544	1096	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	656	-	-	646	-	-	64	45	502	62	43	495
Stage 1	-	-	-	-	-	-	239	299	-	217	277	-
Stage 2	-	-	-	-	-	-	453	276	-	491	287	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	656	-	-	646	-	-	59	42	502	53	40	495
Mov Cap-2 Maneuver	-	-	-	-	-	-	59	42	-	53	40	-
Stage 1	-	-	-	-	-	-	235	294	-	213	260	-
Stage 2	-	-	-	-	-	-	418	259	-	449	282	-

























Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.4	53	19.6
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	123	656	-	-	646	-	-	257
HCM Lane V/C Ratio	0.407	0.018	-	-	0.061	-	-	0.038
HCM Control Delay (s)	53	10.6	-	-	10.9	-	-	19.6
HCM Lane LOS	F	B	-	-	B	-	-	C
HCM 95th %tile Q(veh)	1.7	0.1	-	-	0.2	-	-	0.1

HCM 6th Signalized Intersection Summary

3: Colfax Avenue & Riverside Drive

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	625	180	173	697	39	145	468	83	29	313	80
Future Volume (veh/h)	148	625	180	173	697	39	145	468	83	29	313	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	161	679	196	188	758	42	158	509	90	32	340	87
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	265	1356	605	258	1356	605	425	826	700	425	826	700
Arrive On Green	0.26	0.26	0.26	0.38	0.38	0.38	0.88	0.88	0.88	0.44	0.44	0.44
Sat Flow, veh/h	680	3554	1585	634	3554	1585	961	1870	1585	820	1870	1585
Grp Volume(v), veh/h	161	679	196	188	758	42	158	509	90	32	340	87
Grp Sat Flow(s),veh/h/ln	680	1777	1585	634	1777	1585	961	1870	1585	820	1870	1585
Q Serve(g_s), s	12.8	9.8	6.0	13.1	10.1	1.0	5.4	4.2	0.4	1.5	7.4	1.9
Cycle Q Clear(g_c), s	22.9	9.8	6.0	22.9	10.1	1.0	12.8	4.2	0.4	5.7	7.4	1.9
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	265	1356	605	258	1356	605	425	826	700	425	826	700
V/C Ratio(X)	0.61	0.50	0.32	0.73	0.56	0.07	0.37	0.62	0.13	0.08	0.41	0.12
Avail Cap(c_a), veh/h	265	1356	605	258	1356	605	425	826	700	425	826	700
HCM Platoon Ratio	0.67	0.67	0.67	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	0.94	0.94	0.94	0.69	0.69	0.69	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.0	17.4	16.0	25.2	14.6	11.8	4.7	2.2	2.0	12.3	11.4	9.9
Incr Delay (d2), s/veh	9.9	1.3	1.4	15.5	1.6	0.2	1.7	2.4	0.3	0.3	1.5	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(95%),veh/ln	5.5	7.1	3.9	6.5	6.6	0.6	0.9	2.2	0.3	0.5	5.2	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.9	18.8	17.5	40.7	16.1	12.0	6.4	4.6	2.2	12.7	12.9	10.3
LnGrp LOS	D	B	B	D	B	B	A	A	A	B	B	B
Approach Vol, veh/h	1036			988			757			459		
Approach Delay, s/veh	21.5			20.6			4.7			12.4		
Approach LOS	C			C			A			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	28.0			32.0			28.0			32.0		
Change Period (Y+Rc), s	* 5.1			* 5.5			* 5.1			* 5.5		
Max Green Setting (Gmax), s	* 23			* 27			* 23			* 27		
Max Q Clear Time (g_c+I1), s	24.9			14.8			24.9			9.4		
Green Ext Time (p_c), s	0.0			3.4			0.0			2.2		
Intersection Summary												
HCM 6th Ctrl Delay	16.0											
HCM 6th LOS	B											
Notes												

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

Queues

4: Riverside Drive & SR 170 Southbound Off-Ramp

06/24/2024



Lane Group	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	828	5	728	14	225	215	210
v/c Ratio	0.40	0.02	0.35	0.04	0.61	0.47	0.43
Control Delay	10.6	9.4	9.6	0.2	31.4	10.2	6.3
Queue Delay	0.5	0.0	0.3	0.1	0.3	0.4	0.0
Total Delay	11.0	9.4	9.9	0.3	31.7	10.6	6.3
Queue Length 50th (ft)	83	1	73	0	90	18	0
Queue Length 95th (ft)	207	m5	210	0	151	72	48
Internal Link Dist (ft)	2214		245	105		344	
Turn Bay Length (ft)		25			140		150
Base Capacity (vph)	2070	309	2071	343	457	524	562
Starvation Cap Reductn	0	0	688	0	0	0	0
Spillback Cap Reductn	715	0	0	74	32	71	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.02	0.53	0.05	0.53	0.47	0.37

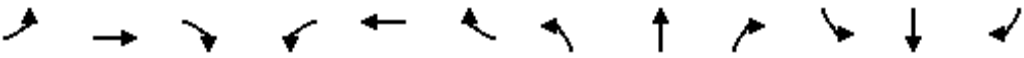
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: Riverside Drive & SR 170 Southbound Off-Ramp













06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑	↑↑			↑↓		↑	↑↓	↑
Traffic Volume (vph)	0	757	5	5	670	0	0	0	13	247	6	345
Future Volume (vph)	0	757	5	5	670	0	0	0	13	247	6	345
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Lane Util. Factor		0.95		1.00	0.95			1.00		0.95	0.91	0.95
Frt		1.00		1.00	1.00			0.86		1.00	0.88	0.85
Flt Protected		1.00		0.95	1.00			1.00		0.95	0.99	1.00
Satd. Flow (prot)		3536		1770	3539			1611		1681	1485	1504
Flt Permitted		1.00		0.28	1.00			1.00		0.95	0.99	1.00
Satd. Flow (perm)		3536		529	3539			1611		1681	1485	1504
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)	0	823	5	5	728	0	0	0	14	268	7	375
RTOR Reduction (vph)	0	0	0	0	0	0	0	14	0	0	129	164
Lane Group Flow (vph)	0	828	0	5	728	0	0	0	0	225	86	46
Turn Type		NA		Perm	NA			NA		Split	NA	Perm
Protected Phases		6			2			4		3	3	
Permitted Phases				2			4					3
Actuated Green, G (s)		36.1		36.1	36.1			1.6		15.3	15.3	15.3
Effective Green, g (s)		36.1		36.1	36.1			1.6		15.3	15.3	15.3
Actuated g/C Ratio		0.52		0.52	0.52			0.02		0.22	0.22	0.22
Clearance Time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Vehicle Extension (s)		3.8		2.4	2.4			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1823		272	1825			36		367	324	328
v/s Ratio Prot		c0.23			0.21			c0.00		c0.13	0.06	
v/s Ratio Perm				0.01								0.03
v/c Ratio		0.45		0.02	0.40			0.01		0.61	0.27	0.14
Uniform Delay, d1		10.7		8.3	10.3			33.4		24.7	22.7	22.0
Progression Factor		1.00		0.86	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2		0.8		0.1	0.6			0.1		3.0	0.4	0.2
Delay (s)		11.5		7.3	11.0			33.5		27.7	23.1	22.2
Level of Service		B		A	B			C		C	C	C
Approach Delay (s)		11.5			10.9			33.5			24.4	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			15.2			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.49									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			53.6%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	NWL	NWR
Lane Group Flow (vph)	221	635	285	208	348	132	30	791	61	527	340	123
v/c Ratio	0.69	0.91	0.92	1.11	0.44	0.38	0.13	0.87	0.39	0.41	0.66	0.57
Control Delay	48.4	71.8	87.4	135.6	49.0	49.8	47.4	61.1	68.1	34.5	62.0	64.9
Queue Delay	0.0	47.8	48.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.4	119.6	135.4	135.6	49.0	49.8	47.4	61.1	68.1	34.5	62.0	64.9
Queue Length 50th (ft)	160	308	276	~161	144	103	22	375	54	185	153	116
Queue Length 95th (ft)	185	#436	#483	#328	195	168	56	#601	101	255	195	183
Internal Link Dist (ft)		245			745			2580		383	758	
Turn Bay Length (ft)	140		230	85		110	270		290		215	
Base Capacity (vph)	321	700	311	187	791	353	223	912	157	1285	695	292
Starvation Cap Reductn	0	171	55	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	1.20	1.11	1.11	0.44	0.37	0.13	0.87	0.39	0.41	0.49	0.42

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.






















95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024

												
Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	203	408	271	167	16	176	320	121	28	626	86	17
Future Volume (vph)	203	408	271	167	16	176	320	121	28	626	86	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Lane Util. Factor	1.00	0.91	0.91			1.00	0.95	1.00	1.00	0.95		
Frt	1.00	0.95	0.85			1.00	1.00	0.85	1.00	0.98		
Flt Protected	0.95	1.00	1.00			0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1770	3236	1441			1770	3539	1583	1770	3465		
Flt Permitted	0.45	1.00	1.00			0.13	1.00	1.00	0.46	1.00		
Satd. Flow (perm)	843	3236	1441			251	3539	1583	850	3465		
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)	221	443	295	182	17	191	348	132	30	680	93	18
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	221	635	285	0	0	208	348	132	30	791	0	0
Turn Type	pm+pt	NA	Perm		pm+pt	pm+pt	NA	Perm	Perm	NA		
Protected Phases	1	6			5	5	2			8		
Permitted Phases	6		6		2	2		2	8			
Actuated Green, G (s)	39.2	28.7	28.7			40.1	29.7	29.7	36.9	36.9		
Effective Green, g (s)	39.2	28.7	28.7			40.1	29.7	29.7	36.9	36.9		
Actuated g/C Ratio	0.28	0.20	0.20			0.29	0.21	0.21	0.26	0.26		
Clearance Time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Vehicle Extension (s)	3.0	3.9	3.9			3.0	4.6	4.6	4.7	4.7		
Lane Grp Cap (vph)	305	663	295			184	750	335	224	913		
v/s Ratio Prot	0.05	0.20				c0.08	0.10			c0.23		
v/s Ratio Perm	0.15		0.20			c0.24		0.08	0.04			
v/c Ratio	0.72	0.96	0.97			1.13	0.46	0.39	0.13	0.87		
Uniform Delay, d1	43.1	55.1	55.2			43.8	48.2	47.4	39.4	49.2		
Progression Factor	1.00	1.01	1.01			1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2	7.7	24.9	42.7			105.8	2.1	3.5	0.5	9.3		
Delay (s)	50.9	80.6	98.5			149.6	50.3	50.9	39.9	58.5		
Level of Service	D	F	F			F	D	D	D	E		
Approach Delay (s)		79.3					80.4			57.8		
Approach LOS		E					F			E		
Intersection Summary												
HCM 2000 Control Delay			65.3			HCM 2000 Level of Service			E			
HCM 2000 Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			33.0			
Intersection Capacity Utilization			94.3%			ICU Level of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024



Movement	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	15	41	399	86	29	272	110	14
Future Volume (vph)	15	41	399	86	29	272	110	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.3			6.6	6.6	
Lane Util. Factor		1.00	0.95			0.97	0.91	
Frt		1.00	0.97			0.99	0.85	
Flt Protected		0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	3446			3429	1441	
Flt Permitted		0.95	1.00			0.95	1.00	
Satd. Flow (perm)		1770	3446			3429	1441	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	45	434	93	32	296	120	15
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	61	527	0	0	340	123	0
Turn Type	Prot	Prot	NA		Prot	Prot	Perm	
Protected Phases	7	7	4		3	3		
Permitted Phases							3	
Actuated Green, G (s)		9.9	53.6			21.1	21.1	
Effective Green, g (s)		9.9	53.6			21.1	21.1	
Actuated g/C Ratio		0.07	0.38			0.15	0.15	
Clearance Time (s)		6.8	6.3			6.6	6.6	
Vehicle Extension (s)		3.0	4.9			4.6	4.6	
Lane Grp Cap (vph)		125	1319			516	217	
v/s Ratio Prot		0.03	c0.15			c0.10		
v/s Ratio Perm							0.09	
v/c Ratio		0.49	0.40			0.66	0.57	
Uniform Delay, d1		62.6	31.5			56.1	55.2	
Progression Factor		1.00	1.00			1.00	1.00	
Incremental Delay, d2		3.0	0.4			3.8	4.9	
Delay (s)		65.6	31.9			59.8	60.1	
Level of Service		E	C			E	E	
Approach Delay (s)			35.4			59.9		
Approach LOS			D			E		
Intersection Summary								

HCM 6th Signalized Intersection Summary

6: Laurel Canyon Boulevard & US 101 Northbound Ramps

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↶	↷	↶	↶	↶			↶	↶
Traffic Volume (veh/h)	0	0	0	472	0	501	712	926	0	1	813	161
Future Volume (veh/h)	0	0	0	472	0	501	712	926	0	1	813	161
Initial Q (Qb), veh				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
Parking Bus, Adj				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		
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	1870	1870	1870
Adj Flow Rate, veh/h				688	0	358	774	1007	0	1	884	175
Peak Hour Factor				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	0	2	2	2
Cap, veh/h				819	0	365	910	2338	0	40	1666	532
Arrive On Green				0.23	0.00	0.23	0.09	0.22	0.00	0.34	0.34	0.34
Sat Flow, veh/h				3563	0	1585	3456	3647	0	1	4966	1585
Grp Volume(v), veh/h				688	0	358	774	1007	0	333	552	175
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	1869	1549	1585
Q Serve(g_s), s				16.6	0.0	20.2	19.9	22.0	0.0	0.0	13.0	7.4
Cycle Q Clear(g_c), s				16.6	0.0	20.2	19.9	22.0	0.0	13.0	13.0	7.4
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				819	0	365	910	2338	0	667	1039	532
V/C Ratio(X)				0.84	0.00	0.98	0.85	0.43	0.00	0.50	0.53	0.33
Avail Cap(c_a), veh/h				819	0	365	1102	2338	0	667	1039	532
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.84	0.84	0.00	0.82	0.82	0.82
Uniform Delay (d), s/veh				33.1	0.0	34.5	39.3	20.7	0.0	24.2	24.2	22.3
Incr Delay (d2), s/veh				7.8	0.0	42.2	4.7	0.5	0.0	2.2	1.6	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
%ile BackOfQ(95%),veh/ln				12.1	0.0	17.1	14.4	15.3	0.0	9.5	8.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				40.8	0.0	76.6	44.0	21.2	0.0	26.4	25.8	23.7
LnGrp LOS				D	A	E	D	C	A	C	C	C
Approach Vol, veh/h					1046			1781			1060	
Approach Delay, s/veh					53.1			31.1			25.6	
Approach LOS					D			C			C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	29.0	35.0		26.0		64.0						
Change Period (Y+Rc), s	5.3	4.8		* 5.3		4.8						
Max Green Setting (Gmax), s	25.2			* 21		59.2						
Max Q Clear Time (g_c+R), s	15.0			22.2		24.0						
Green Ext Time (p_c), s	1.8	4.4		0.0		8.5						

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 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

7: US 101 Southbound Ramps & Laurel Canyon Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	317	21	642	0	0	0	1	1335	532	261	998	0
Future Volume (veh/h)	317	21	642	0	0	0	1	1335	532	261	998	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	238	0	828				1	1451	578	284	1085	0
Peak Hour Factor	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	0
Cap, veh/h	431	0	768				40	3195	1020	361	2286	0
Arrive On Green	0.24	0.00	0.24				0.64	0.64	0.64	1.00	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	4967	1585	406	3647	0
Grp Volume(v), veh/h	238	0	828				547	905	578	284	1085	0
Grp Sat Flow(s), veh/h/ln	1781	0	1585				1870	1549	1585	203	1777	0
Q Serve(g_s), s	10.5	0.0	21.8				0.0	13.3	18.4	44.6	0.0	0.0
Cycle Q Clear(g_c), s	10.5	0.0	21.8				13.3	13.3	18.4	57.9	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	431	0	768				1243	1993	1020	361	2286	0
V/C Ratio(X)	0.55	0.00	1.08				0.44	0.45	0.57	0.79	0.47	0.00
Avail Cap(c_a), veh/h	431	0	768				1243	1993	1020	361	2286	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				1.00	1.00	1.00	0.66	0.66	0.00
Uniform Delay (d), s/veh	29.8	0.0	34.1				8.1	8.1	9.0	13.1	0.0	0.0
Incr Delay (d2), s/veh	1.5	0.0	55.7				1.1	0.7	2.3	10.8	0.5	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
%ile BackOfQ(95%),veh/ln	7.8	0.0	20.7				8.5	7.1	9.9	5.9	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.3	0.0	89.8				9.2	8.8	11.3	24.0	0.5	0.0
LnGrp LOS	C	A	F				A	A	B	C	A	A
Approach Vol, veh/h	1066						2030			1369		
Approach Delay, s/veh	76.7						9.6			5.3		
Approach LOS	E						A			A		
Timer - Assigned Phs	2			4			6					
Phs Duration (G+Y+Rc), s	63.0			27.0			63.0					
Change Period (Y+Rc), s	* 5.1			* 5.2			* 5.1					
Max Green Setting (Gmax), s	* 34			* 22			* 58					
Max Q Clear Time (g_c+I1), s	20.4			23.8			59.9					
Green Ext Time (p_c), s	9.3			0.0			0.0					

Intersection Summary

HCM 6th Ctrl Delay 24.3

HCM 6th LOS C

Notes

User approved volume balancing among the lanes for turning movement.

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

Queues

8: Laurel Canyon Boulevard & Landale Street

06/24/2024



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	178	163	50	77	68	1825	59	1546	105
v/c Ratio	0.84	0.60	0.37	0.23	0.28	0.88	0.69	0.93	0.23
Control Delay	72.5	22.7	44.5	1.6	20.3	18.4	54.8	30.9	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0
Total Delay	72.5	22.7	44.5	1.6	20.3	19.6	54.8	30.9	10.7
Queue Length 50th (ft)	105	25	27	0	7	410	24	~528	23
Queue Length 95th (ft)	#224	91	61	0	m5	m73	m#86	#730	m49
Internal Link Dist (ft)		140	232			591		375	
Turn Bay Length (ft)	85			40	155		125		115
Base Capacity (vph)	212	272	172	380	286	2083	86	1656	458
Starvation Cap Reductn	0	0	0	0	0	102	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.60	0.29	0.20	0.24	0.92	0.69	0.93	0.23

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

8: Laurel Canyon Boulevard & Landale Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	10	109	29	17	71	63	1662	17	54	1422	97
Future Volume (vph)	195	10	109	29	17	71	63	1662	17	54	1422	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.86			1.00	1.00	1.00	1.00		1.00	1.00	0.62
Flpb, ped/bikes	1.00	1.00			0.87	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.89			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.99			0.97	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1339			1568	1583	1770	3531		1770	3539	979
Flt Permitted	0.95	0.99			0.71	1.00	0.09	1.00		0.10	1.00	1.00
Satd. Flow (perm)	1681	1339			1144	1583	164	3531		187	3539	979
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)	212	11	118	32	18	77	68	1807	18	59	1546	105
RTOR Reduction (vph)	0	103	0	0	0	70	0	1	0	0	0	0
Lane Group Flow (vph)	178	60	0	0	50	7	68	1824	0	59	1546	105
Confl. Peds. (#/hr)			79	79			164		19	19		164
Turn Type	Split	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	3	3			4		1	6			2	
Permitted Phases				4		4	6			2		2
Actuated Green, G (s)	11.3	11.3			8.3	8.3	51.9	51.9		39.9	39.9	39.9
Effective Green, g (s)	11.3	11.3			8.3	8.3	51.9	51.9		39.9	39.9	39.9
Actuated g/C Ratio	0.13	0.13			0.09	0.09	0.58	0.58		0.44	0.44	0.44
Clearance Time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	5.2		4.5	4.5	4.5
Lane Grp Cap (vph)	211	168			105	145	212	2036		82	1568	434
v/s Ratio Prot	c0.11	0.04					0.02	c0.52			c0.44	
v/s Ratio Perm					c0.04	0.00	0.16			0.32		0.11
v/c Ratio	0.84	0.36			0.48	0.05	0.32	0.90		0.72	0.99	0.24
Uniform Delay, d1	38.5	36.0			38.8	37.3	18.1	16.7		20.5	24.8	15.6
Progression Factor	1.00	1.00			1.00	1.00	2.07	0.98		0.63	0.73	0.52
Incremental Delay, d2	25.2	1.3			3.4	0.1	0.1	0.7		34.9	17.2	1.0
Delay (s)	63.7	37.3			42.2	37.4	37.5	17.0		47.8	35.3	9.2
Level of Service	E	D			D	D	D	B		D	D	A
Approach Delay (s)		51.1			39.3			17.8			34.1	
Approach LOS		D			D			B			C	
Intersection Summary												
HCM 2000 Control Delay			28.1									
HCM 2000 Volume to Capacity ratio			0.93									
Actuated Cycle Length (s)			90.0									
Intersection Capacity Utilization			80.3%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

9: Colfax Avenue & Sarah Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↑	↔	↔	↑	↔
Traffic Volume (veh/h)	13	2	5	7	1	30	6	654	17	35	604	14
Future Volume (veh/h)	13	2	5	7	1	30	6	654	17	35	604	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.99	0.98		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	14	2	5	8	1	33	7	711	18	38	657	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	153	25	24	85	8	79	469	1310	1106	386	1310	1106
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.06	0.23	0.23	0.23	0.47	0.47	0.47
Sat Flow, veh/h	817	381	374	213	121	1222	766	1870	1579	726	1870	1579
Grp Volume(v), veh/h	21	0	0	42	0	0	7	711	18	38	657	15
Grp Sat Flow(s),veh/h/ln	1573	0	0	1556	0	0	766	1870	1579	726	1870	1579
Q Serve(g_s), s	0.0	0.0	0.0	0.5	0.0	0.0	0.5	20.1	0.5	2.5	14.6	0.3
Cycle Q Clear(g_c), s	0.7	0.0	0.0	1.5	0.0	0.0	15.1	20.1	0.5	22.5	14.6	0.3
Prop In Lane	0.67		0.24	0.19		0.79	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	202	0	0	172	0	0	469	1310	1106	386	1310	1106
V/C Ratio(X)	0.10	0.00	0.00	0.24	0.00	0.00	0.01	0.54	0.02	0.10	0.50	0.01
Avail Cap(c_a), veh/h	604	0	0	601	0	0	469	1310	1106	386	1310	1106
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	0.67	0.67	0.67
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.91	0.91	0.91	0.87	0.87	0.87
Uniform Delay (d), s/veh	26.5	0.0	0.0	26.9	0.0	0.0	19.0	14.6	7.1	18.6	8.7	4.9
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.7	0.0	0.0	0.1	1.5	0.0	0.4	1.2	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(95%),veh/ln	0.5	0.0	0.0	1.1	0.0	0.0	0.2	15.1	0.2	0.8	10.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.8	0.0	0.0	27.7	0.0	0.0	19.0	16.1	7.1	19.0	9.9	4.9
LnGrp LOS	C	A	A	C	A	A	B	B	A	B	A	A
Approach Vol, veh/h		21			42			736			710	
Approach Delay, s/veh		26.8			27.7			15.9			10.2	
Approach LOS		C			C			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		46.8		13.2		46.8		13.2				
Change Period (Y+Rc), s		4.8		* 9.3		4.8		* 9.3				
Max Green Setting (Gmax), s		25.2		* 21		25.2		* 21				
Max Q Clear Time (g_c+I1), s		22.1		2.7		24.5		3.5				
Green Ext Time (p_c), s		1.4		0.0		0.3		0.1				

Intersection Summary

HCM 6th Ctrl Delay	13.7
HCM 6th LOS	B

Notes

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

Queues

10: Landale Street & Colfax Avenue

06/24/2024



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	41	15	705	668	26
v/c Ratio	0.17	0.03	0.44	0.42	0.02
Control Delay	17.7	3.9	4.9	2.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.7	3.9	4.9	2.1	0.1
Queue Length 50th (ft)	7	0	0	0	0
Queue Length 95th (ft)	31	7	216	5	m0
Internal Link Dist (ft)	262		575	593	
Turn Bay Length (ft)		40			80
Base Capacity (vph)	524	572	1587	1587	1351
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.08	0.03	0.44	0.42	0.02

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

10: Landale Street & Colfax Avenue

06/24/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	21	17	14	649	615	24
Future Volume (vph)	21	17	14	649	615	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	9.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1705		1770	1863	1863	1583
Flt Permitted	0.97		0.36	1.00	1.00	1.00
Satd. Flow (perm)	1705		672	1863	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	23	18	15	705	668	26
RTOR Reduction (vph)	17	0	0	0	0	5
Lane Group Flow (vph)	24	0	15	705	668	21
Turn Type	Perm		Perm	NA	NA	Perm
Protected Phases				6	2	
Permitted Phases	8		6			2
Actuated Green, G (s)	3.3		42.7	42.7	42.7	42.7
Effective Green, g (s)	3.3		42.7	42.7	42.7	42.7
Actuated g/C Ratio	0.05		0.71	0.71	0.71	0.71
Clearance Time (s)	9.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		4.9	4.9	5.3	5.3
Lane Grp Cap (vph)	93		478	1325	1325	1126
v/s Ratio Prot				c0.38	0.36	
v/s Ratio Perm	c0.01		0.02			0.01
v/c Ratio	0.26		0.03	0.53	0.50	0.02
Uniform Delay, d1	27.2		2.6	4.0	3.9	2.5
Progression Factor	1.00		1.00	1.00	0.40	0.05
Incremental Delay, d2	1.5		0.1	1.5	1.1	0.0
Delay (s)	28.7		2.7	5.5	2.7	0.2
Level of Service	C		A	A	A	A
Approach Delay (s)	28.7			5.5	2.6	
Approach LOS	C			A	A	
Intersection Summary						
HCM 2000 Control Delay			4.8	HCM 2000 Level of Service		A
HCM 2000 Volume to Capacity ratio			0.51			
Actuated Cycle Length (s)			60.0	Sum of lost time (s)		14.0
Intersection Capacity Utilization			52.5%	ICU Level of Service		A
Analysis Period (min)			15			

c Critical Lane Group

HCM 6th Signalized Intersection Summary

11: Whitsett Avenue & Moorpark Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	779	80	122	542	83	106	674	131	82	360	113
Future Volume (veh/h)	130	779	80	122	542	83	106	674	131	82	360	113
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	141	847	87	133	589	90	115	733	142	89	391	123
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	180	850	720	82	720	110	373	1277	247	234	1147	357
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	761	1870	1585	599	1585	242	887	2969	575	634	2668	829
Grp Volume(v), veh/h	141	847	87	133	0	679	115	439	436	89	259	255
Grp Sat Flow(s),veh/h/ln	761	1870	1585	599	0	1827	887	1777	1767	634	1777	1721
Q Serve(g_s), s	11.9	40.6	2.9	0.3	0.0	29.0	9.0	16.8	16.8	11.1	8.7	8.9
Cycle Q Clear(g_c), s	40.9	40.6	2.9	40.9	0.0	29.0	17.9	16.8	16.8	28.0	8.7	8.9
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.33	1.00		0.48
Lane Grp Cap(c), veh/h	180	850	720	82	0	830	373	764	760	234	764	740
V/C Ratio(X)	0.78	1.00	0.12	1.63	0.00	0.82	0.31	0.57	0.57	0.38	0.34	0.34
Avail Cap(c_a), veh/h	180	850	720	82	0	830	373	764	760	234	764	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.8	24.5	14.2	45.0	0.0	21.3	23.2	19.4	19.4	30.0	17.1	17.2
Incr Delay (d2), s/veh	27.9	30.0	0.3	330.9	0.0	8.8	2.1	3.1	3.1	4.6	1.2	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.0	31.3	1.9	16.7	0.0	19.4	3.6	11.5	11.5	3.5	6.5	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.7	54.5	14.5	375.9	0.0	30.1	25.3	22.5	22.6	34.6	18.3	18.4
LnGrp LOS	E	D	B	F	A	C	C	C	C	C	B	B
Approach Vol, veh/h	1075			812			990			603		
Approach Delay, s/veh	53.1			86.7			22.9			20.8		
Approach LOS	D			F			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	46.0			44.0			46.0			44.0		
Change Period (Y+Rc), s	5.1			5.3			5.1			5.3		
Max Green Setting (Gmax), s	40.9			38.7			40.9			38.7		
Max Q Clear Time (g_c+I1), s	42.9			30.0			42.9			19.9		
Green Ext Time (p_c), s	0.0			2.5			0.0			6.0		

Intersection Summary










HCM 6th Ctrl Delay	46.8
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary

12: Laurel Canyon Boulevard & Moorpark Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	287	530	107	159	426	99	152	1466	186	103	1253	262
Future Volume (veh/h)	287	530	107	159	426	99	152	1466	186	103	1253	262
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	312	576	116	173	463	108	165	1593	202	112	1362	285
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	293	841	169	325	505	560	236	921	115	229	842	173
Arrive On Green	0.11	0.29	0.29	0.09	0.27	0.27	0.09	0.29	0.29	0.11	0.38	0.38
Sat Flow, veh/h	1781	2949	592	1781	1870	1585	1781	3179	397	1781	2935	604
Grp Volume(v), veh/h	312	346	346	173	463	108	165	880	915	112	815	832
Grp Sat Flow(s),veh/h/ln	1781	1777	1764	1781	1870	1585	1781	1777	1799	1781	1777	1762
Q Serve(g_s), s	9.5	15.6	15.7	6.2	21.6	4.3	5.7	26.1	26.1	3.8	25.8	25.8
Cycle Q Clear(g_c), s	9.5	15.6	15.7	6.2	21.6	4.3	5.7	26.1	26.1	3.8	25.8	25.8
Prop In Lane	1.00		0.34	1.00		1.00	1.00		0.22	1.00		0.34
Lane Grp Cap(c), veh/h	293	507	503	325	505	560	236	515	521	229	510	506
V/C Ratio(X)	1.06	0.68	0.69	0.53	0.92	0.19	0.70	1.71	1.76	0.49	1.60	1.65
Avail Cap(c_a), veh/h	293	507	504	351	534	585	252	515	521	250	510	506
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.24	0.24	0.24
Uniform Delay (d), s/veh	26.3	28.6	28.6	21.9	31.9	20.2	23.1	32.0	32.0	22.0	27.8	27.8
Incr Delay (d2), s/veh	70.6	3.8	3.9	1.4	20.2	0.2	7.7	326.8	348.0	0.4	271.9	292.4
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(95%),veh/ln	15.7	11.2	11.2	4.6	17.9	2.8	5.0	89.3	95.4	2.5	68.3	72.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	96.8	32.3	32.5	23.2	52.0	20.3	30.8	358.8	380.0	22.4	299.7	320.3
LnGrp LOS	F	C	C	C	D	C	C	F	F	C	F	F
Approach Vol, veh/h	1004			744			1960			1759		
Approach Delay, s/veh	52.4			40.7			341.1			291.8		
Approach LOS	D			D			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.2	31.2	15.0	30.6	12.9	31.5	13.6	32.0				
Change Period (Y+Rc), s	5.3	* 5.4	* 5.5	6.3	* 5.4	* 5.4	* 5.5	6.3				
Max Green Setting (Gmax), s	30.7	* 24	* 9.5	25.7	* 8.6	* 24	* 9.5	25.7				
Max Q Clear Time (g_c+I1), s	27.8	11.5	11.5	23.6	5.8	28.1	8.2	17.7				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.1	0.0	0.1	2.6				

Intersection Summary

HCM 6th Ctrl Delay 231.3

HCM 6th LOS F

Notes

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






HCM 6th TWSC

13: Moorpark Street & Radford Avenue

06/24/2024

Intersection

Int Delay, s/veh 1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	82	765	745	39	11	49
Future Vol, veh/h	82	765	745	39	11	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	50
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	89	832	810	42	12	53

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	852	0	0 1425 426
Stage 1	-	-	- 831 -
Stage 2	-	-	- 594 -
Critical Hdwy	4.14	-	- 6.84 6.94
Critical Hdwy Stg 1	-	-	- 5.84 -
Critical Hdwy Stg 2	-	-	- 5.84 -
Follow-up Hdwy	2.22	-	- 3.52 3.32
Pot Cap-1 Maneuver	783	-	- 126 577
Stage 1	-	-	- 388 -
Stage 2	-	-	- 514 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	783	-	- 112 577
Mov Cap-2 Maneuver	-	-	- 112 -
Stage 1	-	-	- 344 -
Stage 2	-	-	- 514 -























Approach	EB	WB	SB
HCM Control Delay, s	1	0	17.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	783	-	-	-	112	577
HCM Lane V/C Ratio	0.114	-	-	-	0.107	0.092
HCM Control Delay (s)	10.2	-	-	-	40.9	11.9
HCM Lane LOS	B	-	-	-	E	B
HCM 95th %tile Q(veh)	0.4	-	-	-	0.3	0.3

HCM 6th Signalized Intersection Summary

14: Colfax Avenue & Moorpark Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	568	111	107	534	121	122	341	188	141	384	121
Future Volume (veh/h)	92	568	111	107	534	121	122	341	188	141	384	121
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	0.98		0.95	0.98		0.95	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	100	617	121	116	580	132	133	371	204	153	417	132
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	253	1164	228	266	748	170	267	461	371	285	740	720
Arrive On Green	0.14	0.79	0.79	0.09	0.09	0.09	0.25	0.25	0.25	0.09	0.40	0.40
Sat Flow, veh/h	1781	2943	576	706	2844	645	840	1870	1504	1781	1870	1535
Grp Volume(v), veh/h	100	372	366	116	362	350	133	371	204	153	417	132
Grp Sat Flow(s),veh/h/ln	1781	1777	1742	706	1777	1712	840	1870	1504	1781	1870	1535
Q Serve(g_s), s	3.4	6.8	6.8	14.3	17.9	18.0	13.2	16.8	10.6	5.4	15.6	4.5
Cycle Q Clear(g_c), s	3.4	6.8	6.8	14.3	17.9	18.0	15.4	16.8	10.6	5.4	15.6	4.5
Prop In Lane	1.00		0.33	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	253	703	689	266	467	450	267	461	371	285	740	720
V/C Ratio(X)	0.39	0.53	0.53	0.44	0.77	0.78	0.50	0.81	0.55	0.54	0.56	0.18
Avail Cap(c_a), veh/h	294	703	689	266	467	450	267	461	371	296	740	720
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	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	0.91	0.91	0.91
Uniform Delay (d), s/veh	20.6	6.4	6.4	36.8	38.5	38.5	32.4	31.9	29.6	22.8	21.2	14.0
Incr Delay (d2), s/veh	1.0	2.8	2.9	5.1	11.8	12.5	6.5	13.9	5.8	1.6	2.8	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(95%),veh/ln	2.4	4.0	3.9	5.5	15.2	14.9	5.5	14.0	7.7	4.1	11.1	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.5	9.2	9.3	41.9	50.3	51.0	38.9	45.8	35.4	24.4	24.0	14.5
LnGrp LOS	C	A	A	D	D	D	D	D	D	C	C	B
Approach Vol, veh/h		838			828			708			702	
Approach Delay, s/veh		10.7			49.4			41.5			22.3	
Approach LOS		B			D			D			C	
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	11.9	33.1		45.0		45.0	13.4	31.6				
Change Period (Y+Rc), s	* 5.5	* 9.4		* 9.4		* 9.4	5.6	* 9.4				
Max Green Setting (Gmax), s	* 8.5	* 22		* 36		* 36	8.4	* 22				
Max Q Clear Time (g_c+I1), s	5.4	20.0		17.6		8.8	7.4	18.8				
Green Ext Time (p_c), s	0.1	0.8		2.8		4.9	0.0	1.1				

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.

HCM 6th TWSC
15: Irvine Avenue & Moorpark Street























06/24/2024

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕↕				↕↕			↕			↕	
Traffic Vol, veh/h	5	793	15	14	747	6	4	0	10	0	0	13
Future Vol, veh/h	5	793	15	14	747	6	4	0	10	0	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	862	16	15	812	7	4	0	11	0	0	14
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	819	0	0	878	0	0	1316	1729	439	1287	1734	410
Stage 1	-	-	-	-	-	-	880	880	-	846	846	-
Stage 2	-	-	-	-	-	-	436	849	-	441	888	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	805	-	-	765	-	-	115	87	566	121	87	591
Stage 1	-	-	-	-	-	-	308	363	-	323	377	-
Stage 2	-	-	-	-	-	-	569	375	-	565	360	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	805	-	-	765	-	-	108	83	566	114	83	591
Mov Cap-2 Maneuver	-	-	-	-	-	-	108	83	-	114	83	-
Stage 1	-	-	-	-	-	-	304	359	-	319	363	-
Stage 2	-	-	-	-	-	-	535	362	-	547	356	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.4			19.9			11.2		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	256	805	-	-	765	-	-	591				
HCM Lane V/C Ratio	0.059	0.007	-	-	0.02	-	-	0.024				
HCM Control Delay (s)	19.9	9.5	0.1	-	9.8	0.2	-	11.2				
HCM Lane LOS	C	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.1				

HCM 6th Signalized Intersection Summary

16: Tujunga Avenue & Moorpark Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	209	644	83	87	483	63	82	356	93	89	213	89
Future Volume (veh/h)	209	644	83	87	483	63	82	356	93	89	213	89
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	227	700	90	95	525	68	89	387	101	97	232	97
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	470	1776	228	379	1775	229	284	597	506	209	357	303
Arrive On Green	0.56	0.56	0.56	0.56	0.56	0.56	0.07	0.32	0.32	0.19	0.19	0.19
Sat Flow, veh/h	824	3167	407	686	3165	409	1781	1870	1585	908	1870	1585
Grp Volume(v), veh/h	227	392	398	95	294	299	89	387	101	97	232	97
Grp Sat Flow(s),veh/h/ln	824	1777	1797	686	1777	1797	1781	1870	1585	908	1870	1585
Q Serve(g_s), s	18.0	11.2	11.2	8.2	7.8	7.9	3.4	16.0	4.2	9.2	10.3	4.7
Cycle Q Clear(g_c), s	25.9	11.2	11.2	19.4	7.8	7.9	3.4	16.0	4.2	13.7	10.3	4.7
Prop In Lane	1.00		0.23	1.00		0.23	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	470	996	1008	379	996	1007	284	597	506	209	357	303
V/C Ratio(X)	0.48	0.39	0.39	0.25	0.30	0.30	0.31	0.65	0.20	0.46	0.65	0.32
Avail Cap(c_a), veh/h	470	996	1008	379	996	1007	333	698	592	294	532	451
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	0.95	0.95	0.95	0.76	0.76	0.76
Uniform Delay (d), s/veh	17.3	11.1	11.2	16.6	10.4	10.4	25.3	26.3	22.3	37.1	33.6	31.4
Incr Delay (d2), s/veh	3.5	1.2	1.2	1.6	0.8	0.8	0.6	1.6	0.2	1.2	1.5	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(95%),veh/ln	6.5	7.7	7.8	2.5	5.4	5.5	2.6	11.3	2.7	3.7	7.8	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.8	12.3	12.3	18.2	11.2	11.2	25.9	27.9	22.4	38.3	35.1	31.8
LnGrp LOS	C	B	B	B	B	B	C	C	C	D	D	C
Approach Vol, veh/h	1017			688			577			426		
Approach Delay, s/veh	14.2			12.1			26.6			35.1		
Approach LOS	B			B			C			D		
Timer - Assigned Phs	2		3	4		6	8					
Phs Duration (G+Y+Rc), s	55.9		11.5	22.6		55.9	34.1					
Change Period (Y+Rc), s	* 5.4		* 5.3	* 5.4		* 5.4	* 5.4					
Max Green Setting (Gmax), s	* 40		* 8.7	* 26		* 40	* 34					
Max Q Clear Time (g_c+I1), s	21.4		5.4	15.7		27.9	18.0					
Green Ext Time (p_c), s	5.9		0.0	1.5		6.8	2.3					
Intersection Summary												
HCM 6th Ctrl Delay			19.6									
HCM 6th LOS			B									
Notes												

HCM 6th Signalized Intersection Summary

17: Woodbridge Street & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↕	
Traffic Volume (veh/h)	10	7	17	15	9	56	17	484	26	39	316	32
Future Volume (veh/h)	10	7	17	15	9	56	17	484	26	39	316	32
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	11	8	18	16	10	61	18	526	28	42	343	35
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	76	49	69	63	25	95	892	1512	1281	707	1350	138
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.81	0.81	0.81	1.00	1.00	1.00
Sat Flow, veh/h	283	578	815	186	293	1124	1005	1870	1585	854	1669	170
Grp Volume(v), veh/h	37	0	0	87	0	0	18	526	28	42	0	378
Grp Sat Flow(s),veh/h/ln	1676	0	0	1603	0	0	1005	1870	1585	854	0	1840
Q Serve(g_s), s	0.0	0.0	0.0	2.0	0.0	0.0	0.3	6.7	0.3	0.4	0.0	0.0
Cycle Q Clear(g_c), s	1.8	0.0	0.0	4.7	0.0	0.0	0.3	6.7	0.3	7.2	0.0	0.0
Prop In Lane	0.30		0.49	0.18		0.70	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	194	0	0	183	0	0	892	1512	1281	707	0	1487
V/C Ratio(X)	0.19	0.00	0.00	0.47	0.00	0.00	0.02	0.35	0.02	0.06	0.00	0.25
Avail Cap(c_a), veh/h	508	0	0	502	0	0	892	1512	1281	707	0	1487
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.84	0.84	0.84	0.84	0.00	0.84
Uniform Delay (d), s/veh	38.5	0.0	0.0	39.8	0.0	0.0	1.7	2.3	1.7	0.3	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	1.9	0.0	0.0	0.0	0.5	0.0	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	0.0	0.0	3.5	0.0	0.0	0.1	2.6	0.1	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.0	0.0	0.0	41.7	0.0	0.0	1.7	2.8	1.7	0.5	0.0	0.3
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	37			87			572			420		
Approach Delay, s/veh	39.0			41.7			2.7			0.4		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	77.3			12.7			77.3			12.7		
Change Period (Y+Rc), s	* 4.5			* 5.1			* 4.5			* 5.1		
Max Green Setting (Gmax), s	* 55			* 26			* 55			* 26		
Max Q Clear Time (g_c+I1), s	9.2			3.8			8.7			6.7		
Green Ext Time (p_c), s	6.1			0.1			9.4			0.4		

Intersection Summary

HCM 6th Ctrl Delay	6.1
HCM 6th LOS	A

Notes

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

Queues

18: Whitsett Avenue & Ventura Boulevard

06/24/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	250	1054	221	36	1052	318	89	191	288	159	209
v/c Ratio	0.76	0.55	0.24	0.21	0.86	0.49	0.55	0.67	0.62	0.56	0.24
Control Delay	38.6	17.5	5.0	19.9	28.4	8.6	50.6	49.4	46.4	45.9	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.6	17.5	5.0	19.9	28.4	8.6	50.6	49.4	46.4	45.9	10.1
Queue Length 50th (ft)	100	217	15	14	240	63	53	112	90	95	53
Queue Length 95th (ft)	#279	340	62	m21	m#422	m88	98	173	127	150	84
Internal Link Dist (ft)	1429			2938			634			1297	
Turn Bay Length (ft)	95		135	145		60	60		220		65
Base Capacity (vph)	329	1923	936	175	1221	646	253	438	523	441	857
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.55	0.24	0.21	0.86	0.49	0.35	0.44	0.55	0.36	0.24

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.




























Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

18: Whitsett Avenue & Ventura Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 		 		
Traffic Volume (vph)	230	970	203	33	968	293	82	154	22	265	146	192
Future Volume (vph)	230	970	203	33	968	293	82	154	22	265	146	192
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	5.4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1828		3433	1863	1583
Flt Permitted	0.10	1.00	1.00	0.27	1.00	1.00	0.57	1.00		0.95	1.00	1.00
Satd. Flow (perm)	187	3539	1583	506	3539	1583	1070	1828		3433	1863	1583
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)	250	1054	221	36	1052	318	89	167	24	288	159	209
RTOR Reduction (vph)	0	0	76	0	0	101	0	6	0	0	0	11
Lane Group Flow (vph)	250	1054	145	36	1052	217	89	185	0	288	159	198
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Prot	NA	custom
Protected Phases	1	6			2			4		3	8	1 3
Permitted Phases	6		6	2		2	4					8
Actuated Green, G (s)	54.4	54.4	54.4	34.5	34.5	34.5	15.3	15.3		13.6	15.3	48.8
Effective Green, g (s)	54.4	54.4	54.4	34.5	34.5	34.5	15.3	15.3		13.6	15.3	48.8
Actuated g/C Ratio	0.54	0.54	0.54	0.34	0.34	0.34	0.15	0.15		0.14	0.15	0.49
Clearance Time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	
Vehicle Extension (s)	3.0	4.9	4.9	4.7	4.7	4.7	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	331	1925	861	174	1220	546	163	279		466	285	772
v/s Ratio Prot	c0.11	0.30			c0.30			c0.10		c0.08	0.09	0.09
v/s Ratio Perm	0.30		0.09	0.07		0.14	0.08					0.04
v/c Ratio	0.76	0.55	0.17	0.21	0.86	0.40	0.55	0.66		0.62	0.56	0.26
Uniform Delay, d1	24.0	14.8	11.4	23.1	30.5	24.9	39.1	39.9		40.7	39.2	15.0
Progression Factor	1.00	1.00	1.00	0.65	0.64	0.47	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.4	1.1	0.4	1.8	5.7	1.5	3.7	5.8		2.4	2.4	0.2
Delay (s)	33.4	15.9	11.9	16.9	25.3	13.0	42.8	45.7		43.2	41.6	15.2
Level of Service	C	B	B	B	C	B	D	D		D	D	B
Approach Delay (s)		18.2			22.3			44.8			33.9	
Approach LOS		B			C			D			C	
Intersection Summary												
HCM 2000 Control Delay	24.3			HCM 2000 Level of Service					C			
HCM 2000 Volume to Capacity ratio	0.76											
Actuated Cycle Length (s)	100.0			Sum of lost time (s)					22.1			
Intersection Capacity Utilization	74.9%			ICU Level of Service					D			
Analysis Period (min)	15											
c Critical Lane Group												

Queues

19: Laurel Canyon Boulevard & Ventura Place

06/24/2024



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	177	71	238	29	1438	33	93	1378
v/c Ratio	1.26	0.38	0.78	0.16	0.74	0.04	0.95	0.59
Control Delay	199.6	47.4	30.7	34.0	22.5	0.0	113.7	22.5
Queue Delay	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0
Total Delay	199.6	47.4	30.7	34.0	25.0	0.0	113.7	22.5
Queue Length 50th (ft)	~142	43	34	17	405	0	~67	258
Queue Length 95th (ft)	#294	85	#138	m22	480	m0	#169	311
Internal Link Dist (ft)	123	395			458			232
Turn Bay Length (ft)			380	105		85	55	
Base Capacity (vph)	141	224	330	177	1942	930	98	2319
Starvation Cap Reductn	0	0	0	0	367	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.26	0.32	0.72	0.16	0.91	0.04	0.95	0.59

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.


















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

19: Laurel Canyon Boulevard & Ventura Place

06/24/2024













												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	102	39	22	40	26	219	27	1323	30	86	1195	73
Future Volume (vph)	102	39	22	40	26	219	27	1323	30	86	1195	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		9.4				9.6	9.6	5.0	5.1	5.1	5.1	5.1
Lane Util. Factor		1.00				1.00	1.00	1.00	0.95	1.00	1.00	0.91
Frbp, ped/bikes		1.00				1.00	0.85	1.00	1.00	0.98	1.00	1.00
Flpb, ped/bikes		0.92				1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98				1.00	0.85	1.00	1.00	0.85	1.00	0.99
Flt Protected		0.97				0.97	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)		1635				1808	1343	1770	3539	1550	1770	5042
Flt Permitted		0.77				0.97	1.00	0.95	1.00	1.00	0.11	1.00
Satd. Flow (perm)		1294				1808	1343	1770	3539	1550	214	5042
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)	111	42	24	43	28	238	29	1438	33	93	1299	79
RTOR Reduction (vph)	0	5	0	0	0	163	0	0	15	0	6	0
Lane Group Flow (vph)	0	172	0	0	71	75	29	1438	18	93	1372	0
Confl. Peds. (#/hr)	49						49		5		5	
Turn Type	Perm	NA		Split		NA	Perm	Prot	NA	Perm	Perm	NA
Protected Phases	3		4		4	1		6		2		
Permitted Phases	3							4		6		2
Actuated Green, G (s)	10.7				10.3	10.3	6.0	54.9	54.9	43.9	43.9	
Effective Green, g (s)	10.7				10.3	10.3	6.0	54.9	54.9	43.9	43.9	
Actuated g/C Ratio	0.11				0.10	0.10	0.06	0.55	0.55	0.44	0.44	
Clearance Time (s)	9.4				9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Vehicle Extension (s)	3.0				3.0	3.0	3.0	4.8	4.8	3.1	3.1	
Lane Grp Cap (vph)	138				186	138	106	1942	850	93	2213	
v/s Ratio Prot					0.04		0.02	c0.41	0.27			
v/s Ratio Perm	c0.13							c0.06		0.01	c0.44	
v/c Ratio	1.24				0.38	0.54	0.27	0.74	0.02	1.00	0.62	
Uniform Delay, d1	44.6				41.9	42.6	44.9	17.1	10.3	28.1	21.6	
Progression Factor	1.00				1.00	1.00	0.79	1.19	1.00	1.00	1.00	
Incremental Delay, d2	156.4				1.3	4.3	0.9	1.6	0.0	93.3	1.3	
Delay (s)	201.0				43.2	46.9	36.2	22.1	10.3	121.4	22.9	
Level of Service	F				D	D	D	C	B	F	C	
Approach Delay (s)	201.0				46.0	22.1					29.2	
Approach LOS	F				D	C					C	
Intersection Summary												
HCM 2000 Control Delay			36.4		HCM 2000 Level of Service					D		
HCM 2000 Volume to Capacity ratio			0.97									
Actuated Cycle Length (s)			100.0		Sum of lost time (s)					29.1		
Intersection Capacity Utilization			83.2%		ICU Level of Service					E		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

20: Laurel Canyon Boulevard & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	181	586	251	172	586	398	435	844	196	304	761	199
Future Volume (veh/h)	181	586	251	172	586	398	435	844	196	304	761	199
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.93	0.98		0.93	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	197	637	273	187	637	433	473	917	213	330	827	216
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	289	1052	605	317	1016	585	369	1048	452	359	1038	581
Arrive On Green	0.17	0.59	0.59	0.08	0.29	0.29	0.11	0.30	0.30	0.03	0.10	0.10
Sat Flow, veh/h	1781	3554	1473	1781	3554	1469	3456	3554	1532	3456	3554	1531
Grp Volume(v), veh/h	197	637	273	187	637	433	473	917	213	330	827	216
Grp Sat Flow(s),veh/h/ln	1781	1777	1473	1781	1777	1469	1728	1777	1532	1728	1777	1531
Q Serve(g_s), s	8.1	11.4	2.2	7.5	15.6	25.5	10.7	24.5	11.4	9.5	22.8	6.6
Cycle Q Clear(g_c), s	8.1	11.4	2.2	7.5	15.6	25.5	10.7	24.5	11.4	9.5	22.8	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	289	1052	605	317	1016	585	369	1048	452	359	1038	581
V/C Ratio(X)	0.68	0.61	0.45	0.59	0.63	0.74	1.28	0.87	0.47	0.92	0.80	0.37
Avail Cap(c_a), veh/h	289	1052	605	317	1016	585	369	1080	466	359	1080	599
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	0.80	0.80	0.80	0.77	0.77	0.77	0.44	0.44	0.44	0.77	0.77	0.77
Uniform Delay (d), s/veh	22.0	16.7	4.5	23.5	31.1	26.4	44.7	33.5	28.9	47.9	42.3	11.3
Incr Delay (d2), s/veh	5.1	2.1	1.9	2.2	2.3	6.4	135.3	4.1	0.7	23.2	4.5	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(95%),veh/ln	5.9	6.5	2.7	5.8	10.6	14.0	16.7	14.3	6.4	8.8	16.3	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.1	18.8	6.4	25.7	33.3	32.8	180.0	37.5	29.5	71.0	46.8	12.4
LnGrp LOS	C	B	A	C	C	C	F	D	C	E	D	B
Approach Vol, veh/h	1107			1257			1603			1373		
Approach Delay, s/veh	17.2			32.0			78.5			47.2		
Approach LOS	B			C			E			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	33.0	35.9	16.3	34.8	14.0	34.9	16.0	35.1				
Change Period (Y+Rc), s	5.4	6.3	5.6	5.6	5.6	6.3	5.6	5.6				
Max Green Setting (Gmax), s	7.6	28.7	10.4	30.4	8.4	27.7	10.4	30.4				
Max Q Clear Time (g_c+I), s	19.5	13.4	12.7	24.8	10.1	27.5	11.5	26.5				
Green Ext Time (p_c), s	0.0	8.9	0.0	4.4	0.0	0.1	0.0	3.0				

Intersection Summary

HCM 6th Ctrl Delay 46.8

HCM 6th LOS D

Notes

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

Queues

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Lane Group	EBL	EBT	WBL	WBT	WBR2	NBT	NBR	SBL	SBT	SBR2
Lane Group Flow (vph)	327	1048	110	825	85	61	77	108	511	92
v/c Ratio	0.59	0.62	1.08	1.13	0.30	0.21	0.19	0.51	3.43	0.79
Control Delay	14.1	1.7	171.5	122.6	49.6	52.8	1.1	67.5	1127.7	100.7
Queue Delay	66.4	50.1	0.0	0.2	0.0	0.0	0.0	0.0	3.1	0.0
Total Delay	80.5	51.9	171.5	122.8	49.6	52.8	1.1	67.5	1130.8	100.7
Queue Length 50th (ft)	284	13	~111	~455	66	49	0	95	~836	84
Queue Length 95th (ft)	m191	m1	#238	#588	118	93	0	161	#1064	#194
Internal Link Dist (ft)		48		634		66			226	
Turn Bay Length (ft)	90		95		55		30	90		90
Base Capacity (vph)	580	1744	102	733	287	308	405	213	149	117
Starvation Cap Reductn	405	799	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	24	0	0	0	0	22	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.87	1.11	1.08	1.16	0.30	0.20	0.19	0.51	4.02	0.79

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	301	948	17	101	684	75	78	44	12	71	99	19
Future Volume (vph)	301	948	17	101	684	75	78	44	12	71	99	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.7		4.9	6.1		6.1		6.9	6.9	7.0	7.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.98		0.85		1.00	0.85	1.00	0.81
Flpb, ped/bikes	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	0.99		0.85		1.00	0.85	1.00	0.86
Flt Protected	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (prot)	1770	3523		1770	3434		1344		1792	1352	1770	1297
Flt Permitted	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (perm)	1770	3523		1770	3434		1344		1792	1352	1770	1297
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)	327	1030	18	110	743	82	85	48	13	77	108	21
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	64	0	0
Lane Group Flow (vph)	327	1047	0	110	825	0	85	0	61	13	108	511
Confl. Peds. (#/hr)	42		32	32		42	42	75		75	75	
Turn Type	Prot	NA		Prot	NA		Perm	Split	NA	Perm	Split	NA
Protected Phases	1 3	3 6		5	2			7	7		8	8
Permitted Phases							2			7		
Actuated Green, G (s)	44.5	67.5		8.1	29.9		29.9		23.0	23.0	16.9	16.9
Effective Green, g (s)	44.5	61.4		8.1	29.9		29.9		23.0	23.0	16.9	16.9
Actuated g/C Ratio	0.32	0.44		0.06	0.21		0.21		0.16	0.16	0.12	0.12
Clearance Time (s)				4.9	6.1		6.1		6.9	6.9	7.0	7.0
Vehicle Extension (s)				3.0	4.8		4.8		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	562	1545		102	733		287		294	222	213	156
v/s Ratio Prot	0.18	c0.30		0.06	c0.24				c0.03		0.06	c0.39
v/s Ratio Perm							0.06			0.01		
v/c Ratio	0.58	0.68		1.08	1.13		0.30		0.21	0.06	0.51	3.28
Uniform Delay, d1	40.0	31.4		66.0	55.0		46.2		50.6	49.4	57.6	61.5
Progression Factor	0.34	0.06		1.00	1.00		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1		111.9	73.4		2.6		0.4	0.1	1.9	1040.4
Delay (s)	13.7	2.0		177.8	128.5		48.8		51.0	49.5	59.5	1101.9
Level of Service	B	A		F	F		D		D	D	E	F
Approach Delay (s)		4.7			127.2				50.1			810.9
Approach LOS		A			F				D			F
Intersection Summary												
HCM 2000 Control Delay			221.8			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			1.12									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			31.8			
Intersection Capacity Utilization			95.3%			ICU Level of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Movement	SBR	SBR2
Lane Configurations		
Traffic Volume (vph)	451	85
Future Volume (vph)	451	85
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		7.0
Lane Util. Factor		1.00
Frpb, ped/bikes		0.68
Flpb, ped/bikes		1.00
Frt		0.85
Flt Protected		1.00
Satd. Flow (prot)		1070
Flt Permitted		1.00
Satd. Flow (perm)		1070
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	490	92
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	92
Confl. Peds. (#/hr)	75	75
Turn Type		Perm
Protected Phases		
Permitted Phases		8
Actuated Green, G (s)		16.9
Effective Green, g (s)		16.9
Actuated g/C Ratio		0.12
Clearance Time (s)		7.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)		129
v/s Ratio Prot		
v/s Ratio Perm		0.09
v/c Ratio		0.71
Uniform Delay, d1		59.2
Progression Factor		1.00
Incremental Delay, d2		17.0
Delay (s)		76.2
Level of Service		E
Approach Delay (s)		
Approach LOS		
Intersection Summary		

HCM 6th Signalized Intersection Summary

22: Carpenter Avenue & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	980	76	184	884	35	71	12	157	25	15	23
Future Volume (veh/h)	31	980	76	184	884	35	71	12	157	25	15	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.98		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	34	1065	83	200	961	38	77	13	171	27	16	25
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	278	2026	158	280	2116	84	123	31	204	182	95	318
Arrive On Green	0.61	0.61	0.61	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	564	3331	259	490	3479	138	374	150	995	601	464	1553
Grp Volume(v), veh/h	34	568	580	200	491	508	261	0	0	43	0	25
Grp Sat Flow(s),veh/h/ln	564	1777	1813	490	1777	1840	1519	0	0	1066	0	1553
Q Serve(g_s), s	4.1	18.4	18.4	40.6	24.3	24.3	13.3	0.0	0.0	0.0	0.0	1.3
Cycle Q Clear(g_c), s	28.4	18.4	18.4	59.0	24.3	24.3	16.4	0.0	0.0	2.6	0.0	1.3
Prop In Lane	1.00		0.14	1.00		0.07	0.30		0.66	0.63		1.00
Lane Grp Cap(c), veh/h	278	1081	1103	280	1081	1119	358	0	0	277	0	318
V/C Ratio(X)	0.12	0.53	0.53	0.72	0.45	0.45	0.73	0.00	0.00	0.16	0.00	0.08
Avail Cap(c_a), veh/h	278	1081	1103	280	1081	1119	508	0	0	415	0	474
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.79	0.79	0.79	0.55	0.55	0.55	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.4	11.3	11.3	48.4	25.4	25.4	38.0	0.0	0.0	32.5	0.0	32.1
Incr Delay (d2), s/veh	0.7	1.4	1.4	8.4	0.8	0.7	3.2	0.0	0.0	0.3	0.0	0.1
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(95%),veh/ln	0	10.8	10.9	8.9	15.8	16.3	10.6	0.0	0.0	1.6	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.1	12.7	12.7	56.8	26.1	26.1	41.2	0.0	0.0	32.7	0.0	32.2
LnGrp LOS	C	B	B	E	C	C	D	A	A	C	A	C
Approach Vol, veh/h	1182			1199			261			68		
Approach Delay, s/veh	13.0			31.2			41.2			32.5		
Approach LOS	B			C			D			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	70.0			30.0			70.0			30.0		
Change Period (Y+Rc), s	* 9.2			9.5			* 9.2			9.5		
Max Green Setting (Gmax), s	* 51			30.5			* 51			30.5		
Max Q Clear Time (g_c+I1), s	30.4			4.6			61.0			18.4		
Green Ext Time (p_c), s	14.6			0.3			0.0			1.3		

Intersection Summary

HCM 6th Ctrl Delay	24.3
HCM 6th LOS	C



















Notes

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

HCM Signalized Intersection Capacity Analysis

23: Ventura Boulevard & Colfax Avenue

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	303	875	0	0	774	205	0	0	0	233	0	271
Future Volume (vph)	303	875	0	0	774	205	0	0	0	233	0	271
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.4			5.4					5.4		5.7
Lane Util. Factor	1.00	0.95			0.95					1.00		1.00
Frt	1.00	1.00			0.97					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1770	3539			3428					1770		1583
Flt Permitted	0.10	1.00			1.00					0.95		1.00
Satd. Flow (perm)	186	3539			3428					1770		1583
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)	329	951	0	0	841	223	0	0	0	253	0	295
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	150
Lane Group Flow (vph)	329	951	0	0	1064	0	0	0	0	253	0	145
Turn Type	pm+pt	NA			NA					pm+pt		pm+ov
Protected Phases	5	2			6			3		4		5
Permitted Phases	2						3			7		4
Actuated Green, G (s)	69.8	69.8			34.4					19.4		49.1
Effective Green, g (s)	69.8	69.8			34.4					19.4		49.1
Actuated g/C Ratio	0.70	0.70			0.34					0.19		0.49
Clearance Time (s)	5.7	5.4			5.4					5.4		5.7
Vehicle Extension (s)	3.0	4.3			4.5					3.0		3.0
Lane Grp Cap (vph)	600	2470			1179					343		777
v/s Ratio Prot	c0.16	0.27			c0.31					c0.14		0.06
v/s Ratio Perm	0.22											0.04
v/c Ratio	0.55	0.39			0.90					0.74		0.19
Uniform Delay, d1	19.3	6.2			31.2					37.9		14.3
Progression Factor	0.55	1.28			0.78					1.00		1.00
Incremental Delay, d2	0.9	0.4			10.4					8.0		0.1
Delay (s)	11.5	8.4			34.9					45.9		14.4
Level of Service	B	A			C					D		B
Approach Delay (s)		9.2			34.9			0.0			29.0	
Approach LOS		A			C			A			C	
Intersection Summary												
HCM 2000 Control Delay		22.4			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		0.80										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)			22.8				
Intersection Capacity Utilization		70.2%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

Queues

24: Berry Drive & Ventura Boulevard

06/24/2024



Lane Group	EBT	WBL	WBT	NBT
Lane Group Flow (vph)	1358	50	1292	84
v/c Ratio	0.46	0.18	0.44	0.37
Control Delay	5.5	3.7	2.8	7.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.5	3.7	2.8	7.6
Queue Length 50th (ft)	335	6	88	0
Queue Length 95th (ft)	68	m9	97	21
Internal Link Dist (ft)	342		273	287
Turn Bay Length (ft)		65		
Base Capacity (vph)	2924	277	2930	390
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.46	0.18	0.44	0.22



















Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

24: Berry Drive & Ventura Boulevard

06/24/2024

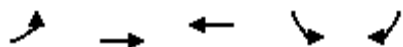
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1234	16	46	1189	0	16	0	62	0	0	0
Future Volume (vph)	0	1234	16	46	1189	0	16	0	62	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0			9.4				
Lane Util. Factor		0.95		1.00	0.95			1.00				
Frt		1.00		1.00	1.00			0.89				
Flt Protected		1.00		0.95	1.00			0.99				
Satd. Flow (prot)		3533		1770	3539			1646				
Flt Permitted		1.00		0.18	1.00			0.99				
Satd. Flow (perm)		3533		334	3539			1646				
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)	0	1341	17	50	1292	0	17	0	67	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	79	0	0	0	0
Lane Group Flow (vph)	0	1358	0	50	1292	0	0	5	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		6			2		3	3			4	
Permitted Phases	6			2						4		
Actuated Green, G (s)		79.9		79.9	79.9			5.7				
Effective Green, g (s)		79.9		79.9	79.9			5.7				
Actuated g/C Ratio		0.80		0.80	0.80			0.06				
Clearance Time (s)		5.0		5.0	5.0			9.4				
Vehicle Extension (s)		4.9		4.0	4.0			3.0				
Lane Grp Cap (vph)		2822		266	2827			93				
v/s Ratio Prot		c0.38			0.37			c0.00				
v/s Ratio Perm				0.15								
v/c Ratio		0.48		0.19	0.46			0.05				
Uniform Delay, d1		3.3		2.4	3.2			44.6				
Progression Factor		1.51		0.78	0.74			1.00				
Incremental Delay, d2		0.6		1.4	0.5			0.2				
Delay (s)		5.5		3.3	2.9			44.8				
Level of Service		A		A	A			D				
Approach Delay (s)		5.5			2.9			44.8			0.0	
Approach LOS		A			A			D			A	
Intersection Summary												
HCM 2000 Control Delay			5.4			HCM 2000 Level of Service			A			
HCM 2000 Volume to Capacity ratio			0.51									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			23.7			
Intersection Capacity Utilization			56.1%			ICU Level of Service			B			
Analysis Period (min)			15									

c Critical Lane Group

Queues

25: Ventura Boulevard & Tujunga Avenue

06/24/2024

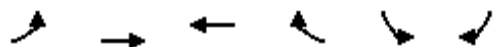


Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	278	990	1072	142	189
v/c Ratio	0.53	0.36	0.61	0.34	0.30
Control Delay	25.1	2.0	19.1	42.0	16.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.1	2.0	19.1	42.0	16.4
Queue Length 50th (ft)	65	24	228	43	60
Queue Length 95th (ft)	159	66	337	70	103
Internal Link Dist (ft)		426	233	3083	
Turn Bay Length (ft)	180			100	60
Base Capacity (vph)	528	2719	1762	1218	633
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.53	0.36	0.61	0.12	0.30
Intersection Summary					

HCM Signalized Intersection Capacity Analysis

25: Ventura Boulevard & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	256	911	786	201	131	174
Future Volume (vph)	256	911	786	201	131	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.5	5.5		5.5	5.6
Lane Util. Factor	1.00	0.95	0.95		0.97	1.00
Frt	1.00	1.00	0.97		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3431		3433	1583
Flt Permitted	0.16	1.00	1.00		0.95	1.00
Satd. Flow (perm)	299	3539	3431		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	278	990	854	218	142	189
RTOR Reduction (vph)	0	0	18	0	0	34
Lane Group Flow (vph)	278	990	1054	0	142	155
Turn Type	pm+pt	NA	NA		Prot	pt+ov
Protected Phases	1	6	2		4	1 7
Permitted Phases	6					4
Actuated Green, G (s)	76.9	76.9	50.9		12.1	38.0
Effective Green, g (s)	76.9	76.9	50.9		12.1	32.5
Actuated g/C Ratio	0.77	0.77	0.51		0.12	0.32
Clearance Time (s)	5.6	5.5	5.5		5.5	
Vehicle Extension (s)	3.0	4.4	4.9		3.0	
Lane Grp Cap (vph)	530	2721	1746		415	514
v/s Ratio Prot	c0.11	0.28	c0.31		c0.04	0.10
v/s Ratio Perm	0.30					
v/c Ratio	0.52	0.36	0.60		0.34	0.30
Uniform Delay, d1	8.9	3.7	17.4		40.3	25.2
Progression Factor	3.19	0.41	1.00		1.00	1.00
Incremental Delay, d2	0.9	0.3	1.6		0.5	0.3
Delay (s)	29.3	1.9	19.0		40.8	25.6
Level of Service	C	A	B		D	C
Approach Delay (s)		7.9	19.0		32.1	
Approach LOS		A	B		C	
Intersection Summary						
HCM 2000 Control Delay			15.3		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.59			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	22.1
Intersection Capacity Utilization			64.5%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

HCM 6th Signalized Intersection Summary 26: Laurel Canyon Boulevard & Maxwellton Road

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕↕			↕↕	
Traffic Volume (veh/h)	61	0	69	0	0	0	14	1484	0	0	1025	67
Future Volume (veh/h)	61	0	69	0	0	0	14	1484	0	0	1025	67
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92				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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h	66	0	75				15	1613	0	0	1114	73
Peak Hour Factor	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	0	0	2	2
Cap, veh/h	122	0	139				48	2183	0	0	2148	141
Arrive On Green	0.16	0.00	0.16				0.63	0.63	0.00	0.00	0.63	0.63
Sat Flow, veh/h	748	0	850				12	3525	0	0	3478	222
Grp Volume(v), veh/h	141	0	0				869	759	0	0	585	602
Grp Sat Flow(s),veh/h/ln	1598	0	0				1835	1617	0	0	1777	1829
Q Serve(g_s), s	7.3	0.0	0.0				0.0	29.1	0.0	0.0	16.1	16.2
Cycle Q Clear(g_c), s	7.3	0.0	0.0				28.6	29.1	0.0	0.0	16.1	16.2
Prop In Lane	0.47		0.53				0.02		0.00	0.00		0.12
Lane Grp Cap(c), veh/h	261	0	0				1205	1026	0	0	1127	1161
V/C Ratio(X)	0.54	0.00	0.00				0.72	0.74	0.00	0.00	0.52	0.52
Avail Cap(c_a), veh/h	440	0	0				1205	1026	0	0	1127	1161
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.64	0.64	0.00	0.00	0.67	0.67
Uniform Delay (d), s/veh	34.6	0.0	0.0				11.2	11.3	0.0	0.0	9.0	9.0
Incr Delay (d2), s/veh	1.7	0.0	0.0				2.4	3.1	0.0	0.0	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
%ile BackOfQ(95%),veh/ln	5.3	0.0	0.0				14.9	13.5	0.0	0.0	8.8	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.3	0.0	0.0				13.7	14.4	0.0	0.0	10.1	10.1
LnGrp LOS	D	A	A				B	B	A	A	B	B
Approach Vol, veh/h	141						1628			1187		
Approach Delay, s/veh	36.3						14.0			10.1		
Approach LOS	D						B			B		
Timer - Assigned Phs	2			4			6					
Phs Duration (G+Y+Rc), s	66.1			23.9			66.1					
Change Period (Y+Rc), s	9.0			9.2			9.0					
Max Green Setting (Gmax), s	47.0			24.8			47.0					
Max Q Clear Time (g_c+I1), s	18.2			9.3			31.1					
Green Ext Time (p_c), s	18.0			0.7			14.2					
Intersection Summary												
HCM 6th Ctrl Delay			13.5									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary

27: Laurel Canyon Boulevard & Laurel Terrace Drive/Sunshine Terrace Drive

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (veh/h)	16	18	164	97	33	27	152	1435	186	31	1032	10
Future Volume (veh/h)	16	18	164	97	33	27	152	1435	186	31	1032	10
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	17	20	178	105	36	29	165	1560	202	34	1122	11
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	46	40	261	156	52	33	110	2322	296	186	2280	22
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.06	0.73	0.73	0.63	0.63	0.63
Sat Flow, veh/h	75	217	1406	578	282	177	1781	3170	405	272	3605	35
Grp Volume(v), veh/h	215	0	0	170	0	0	165	864	898	34	553	580
Grp Sat Flow(s), veh/h/ln	1698	0	0	1037	0	0	1781	1777	1798	272	1777	1864
Q Serve(g_s), s	0.0	0.0	0.0	5.6	0.0	0.0	7.4	30.4	32.0	9.2	19.9	19.9
Cycle Q Clear(g_c), s	14.4	0.0	0.0	20.0	0.0	0.0	7.4	30.4	32.0	29.2	19.9	19.9
Prop In Lane	0.08		0.83	0.62		0.17	1.00		0.23	1.00		0.02
Lane Grp Cap(c), veh/h	348	0	0	241	0	0	110	1302	1317	186	1124	1179
V/C Ratio(X)	0.62	0.00	0.00	0.70	0.00	0.00	1.50	0.66	0.68	0.18	0.49	0.49
Avail Cap(c_a), veh/h	410	0	0	294	0	0	110	1302	1317	186	1124	1179
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.79	0.79	0.79
Uniform Delay (d), s/veh	45.8	0.0	0.0	48.4	0.0	0.0	56.3	8.4	8.6	19.6	11.8	11.8
Incr Delay (d2), s/veh	2.1	0.0	0.0	5.8	0.0	0.0	267.4	2.7	2.9	1.7	1.2	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(95%),veh/ln	10.3	0.0	0.0	9.2	0.0	0.0	19.0	16.2	17.1	1.2	11.8	12.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.9	0.0	0.0	54.2	0.0	0.0	323.7	11.1	11.4	21.3	13.0	12.9
LnGrp LOS	D	A	A	D	A	A	F	B	B	C	B	B
Approach Vol, veh/h		215			170			1927			1167	
Approach Delay, s/veh		47.9			54.2			38.0			13.2	
Approach LOS		D			D			D			B	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	20.0	80.7		27.3		92.7		27.3				
Change Period (Y+Rc), s	4.6	4.8		* 5		4.8		* 5				
Max Green Setting (Gmax), s	71.2			* 27		83.2		* 27				
Max Q Clear Time (g_c+I), s	31.2			16.4		34.0		22.0				
Green Ext Time (p_c), s	0.0	10.6		0.9		21.6		0.4				

Intersection Summary

HCM 6th Ctrl Delay	31.1
HCM 6th LOS	C

Notes

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

Queues

28: Laurel Canyon Boulevard & Fryman Road

06/24/2024
























Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	180	13	12	1758	1419
v/c Ratio	0.63	0.05	0.06	0.69	0.57
Control Delay	44.7	29.8	5.8	9.6	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.7	29.8	5.8	9.6	7.5
Queue Length 50th (ft)	97	6	2	246	165
Queue Length 95th (ft)	153	21	9	405	272
Internal Link Dist (ft)				236	183
Turn Bay Length (ft)			145		
Base Capacity (vph)	542	485	203	2544	2504
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.33	0.03	0.06	0.69	0.57
Intersection Summary					

HCM Signalized Intersection Capacity Analysis

28: Laurel Canyon Boulevard & Fryman Road

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								 			  	
Traffic Volume (vph)	166	0	12	0	0	0	11	1617	0	0	1137	168
Future Volume (vph)	166	0	12	0	0	0	11	1617	0	0	1137	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4		5.4				5.4	5.4			5.4	
Lane Util. Factor	1.00		1.00				1.00	0.95			0.95	
Frt	1.00		0.85				1.00	1.00			0.98	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	3539			3471	
Flt Permitted	0.95		1.00				0.15	1.00			1.00	
Satd. Flow (perm)	1770		1583				283	3539			3471	
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)	180	0	13	0	0	0	12	1758	0	0	1236	183
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	8	0
Lane Group Flow (vph)	180	0	13	0	0	0	12	1758	0	0	1411	0
Turn Type	Perm		Perm				Perm	NA		Perm	NA	
Protected Phases								2			6	
Permitted Phases	8		8				2			6		
Actuated Green, G (s)	14.5		14.5				64.7	64.7			64.7	
Effective Green, g (s)	14.5		14.5				64.7	64.7			64.7	
Actuated g/C Ratio	0.16		0.16				0.72	0.72			0.72	
Clearance Time (s)	5.4		5.4				5.4	5.4			5.4	
Vehicle Extension (s)	3.0		3.0				4.8	4.8			5.1	
Lane Grp Cap (vph)	285		255				203	2544			2495	
v/s Ratio Prot								c0.50			0.41	
v/s Ratio Perm	c0.10		0.01				0.04					
v/c Ratio	0.63		0.05				0.06	0.69			0.57	
Uniform Delay, d1	35.3		31.9				3.7	7.1			6.0	
Progression Factor	1.00		1.00				1.00	1.00			1.00	
Incremental Delay, d2	4.5		0.1				0.6	1.6			0.9	
Delay (s)	39.8		32.0				4.3	8.6			6.9	
Level of Service	D		C				A	A			A	
Approach Delay (s)		39.2			0.0			8.6			6.9	
Approach LOS		D			A			A			A	
Intersection Summary												
HCM 2000 Control Delay			9.6				HCM 2000 Level of Service			A		
HCM 2000 Volume to Capacity ratio			0.68									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			10.8		
Intersection Capacity Utilization			61.7%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th TWSC
29: Laurel Canyon Boulevard & Woodbridge Street

06/24/2024

Intersection												
Int Delay, s/veh	36.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	4	1	31	5	1	97	33	1757	20	62	1512	27
Future Vol, veh/h	4	1	31	5	1	97	33	1757	20	62	1512	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	65	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	1	34	5	1	105	36	1910	22	67	1643	29

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2820	3796	836	2949	3799	966	1672	0	0	1932	0	0
Stage 1	1792	1792	-	1993	1993	-	-	-	-	-	-	-
Stage 2	1028	2004	-	956	1806	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	8	4	310	6	4	254	380	-	-	301	-	-
Stage 1	84	131	-	62	104	-	-	-	-	-	-	-
Stage 2	251	103	-	277	129	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 3	3	310	~ 3	3	254	380	-	-	301	-	-
Mov Cap-2 Maneuver	~ 3	3	-	~ 3	3	-	-	-	-	-	-	-
Stage 1	76	102	-	56	94	-	-	-	-	-	-	-
Stage 2	131	93	-	190	100	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s\$	852.8	\$ 927.3	0.3	0.8
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	380	-	-	20 43	301	-	-
HCM Lane V/C Ratio	0.094	-	-	1.957 2.604	0.224	-	-
HCM Control Delay (s)	15.5	-	-	\$ 852.8\$ 927.3	20.4	-	-
HCM Lane LOS	C	-	-	F F	C	-	-
HCM 95th %tile Q(veh)	0.3	-	-	5.2 12.1	0.8	-	-

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

HCM 6th TWSC
30: Valleyheart Drive (North) & Laurel Canyon Boulevard

06/24/2024

Intersection

Int Delay, s/veh 1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	2	0	14	2	0	10	18	1876	48	10	1559	5
Future Vol, veh/h	2	0	14	2	0	10	18	1876	48	10	1559	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	40	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	15	2	0	11	20	2039	52	11	1695	5

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2780	3851	850	2975	3827	1046	1700	0	0	2091	0	0
Stage 1	1720	1720	-	2105	2105	-	-	-	-	-	-	-
Stage 2	1060	2131	-	870	1722	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	9	4	304	6	4	225	371	-	-	261	-	-
Stage 1	93	143	-	53	91	-	-	-	-	-	-	-
Stage 2	239	88	-	313	142	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	8	4	304	5	4	225	371	-	-	261	-	-
Mov Cap-2 Maneuver	8	4	-	5	4	-	-	-	-	-	-	-
Stage 1	88	137	-	50	86	-	-	-	-	-	-	-
Stage 2	215	83	-	285	136	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	100.6		228.2		0.1		0.1	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	371	-	-	54	27	261	-
HCM Lane V/C Ratio	0.053	-	-	0.322	0.483	0.042	-
HCM Control Delay (s)	15.2	-	-	100.6	228.2	19.4	-
HCM Lane LOS	C	-	-	F	F	C	-
HCM 95th %tile Q(veh)	0.2	-	-	1.1	1.5	0.1	-





HCM 6th TWSC

31: Laurel Canyon Boulevard & Valleyheart Drive (South)

06/24/2024

Intersection

Int Delay, s/veh 6.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	114	1818	37	111	1477
Future Vol, veh/h	3	114	1818	37	111	1477
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	35	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	124	1976	40	121	1605

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	3041	1008	0
Stage 1	1996	-	-
Stage 2	1045	-	-
Critical Hdwy	6.84	6.94	-
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	-
Pot Cap-1 Maneuver	10	239	-
Stage 1	91	-	-
Stage 2	300	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	6	239	-
Mov Cap-2 Maneuver	6	-	-
Stage 1	91	-	-
Stage 2	170	-	-

Approach	WB	NB	SB
HCM Control Delay, s	168.8	0	1.9
HCM LOS	F		





Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	120	279
HCM Lane V/C Ratio	-	-	1.06	0.432
HCM Control Delay (s)	-	-	168.8	27.4
HCM Lane LOS	-	-	F	D
HCM 95th %tile Q(veh)	-	-	7.4	2.1

HCM 6th AWSC
32: Radford Avenue & Sarah Street

06/24/2024

Intersection

Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	0	6	1	6	1	51	3	7	70	9
Future Vol, veh/h	5	0	0	6	1	6	1	51	3	7	70	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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	0	7	1	7	1	55	3	8	76	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0




Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.5	7.2	7.3	7.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	100%	46%	8%
Vol Thru, %	93%	0%	8%	81%
Vol Right, %	5%	0%	46%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	55	5	13	86
LT Vol	1	5	6	7
Through Vol	51	0	1	70
RT Vol	3	0	6	9
Lane Flow Rate	60	5	14	93
Geometry Grp	1	1	1	1
Degree of Util (X)	0.067	0.007	0.016	0.103
Departure Headway (Hd)	4.01	4.41	4.017	3.967
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	893	804	882	904
Service Time	2.037	2.478	2.084	1.989
HCM Lane V/C Ratio	0.067	0.006	0.016	0.103
HCM Control Delay	7.3	7.5	7.2	7.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0	0	0.3

Intersection

Intersection Delay, s/veh 0

Intersection LOS -

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	0	0	0
HCM LOS	-	-	-

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0
LT Vol	0	0	0
Through Vol	0	0	0
RT Vol	0	0	0
Lane Flow Rate	0	0	0
Geometry Grp	1	1	1
Degree of Util (X)	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0
HCM Control Delay	6.9	6.9	6.9
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

HCM 6th AWSC

54: Radford Avenue & Radford Gate

06/24/2024

Intersection

Intersection Delay, s/veh 0

Intersection LOS -

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

Intersection

Intersection Delay, s/veh 0

Intersection LOS -




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

HCM 6th TWSC
56: Colfax Avenue & Colfax Gate

06/24/2024

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1	1	- 0 - 0
Stage 1	1	-	- - -
Stage 2	0	-	- - -
Critical Hdwy	6.42	6.22	- - -
Critical Hdwy Stg 1	5.42	-	- - -
Critical Hdwy Stg 2	5.42	-	- - -
Follow-up Hdwy	3.518	3.318	- - -
Pot Cap-1 Maneuver	1022	1084	0 - - 0
Stage 1	1022	-	0 - - 0
Stage 2	-	-	0 - - 0
Platoon blocked, %			- -
Mov Cap-1 Maneuver	1022	1084	- - -
Mov Cap-2 Maneuver	1022	-	- - -
Stage 1	1022	-	- - -
Stage 2	-	-	- - -

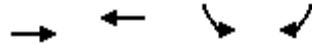
Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

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

Queues

121: Ventura Boulevard & Ventura PI

06/24/2024



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1225	1282	151	24
v/c Ratio	1.35	0.61	0.24	0.08
Control Delay	205.1	6.3	49.6	16.7
Queue Delay	1.9	50.8	0.0	0.0
Total Delay	207.0	57.1	49.6	16.7
Queue Length 50th (ft)	~766	46	60	0
Queue Length 95th (ft)	#906	m27	93	27
Internal Link Dist (ft)	509	48	136	
Turn Bay Length (ft)				40
Base Capacity (vph)	907	2116	669	328
Starvation Cap Reductn	0	1272	0	0
Spillback Cap Reductn	248	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.86	1.52	0.23	0.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

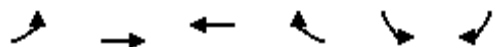
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

121: Ventura Boulevard & Ventura PI

06/24/2024
































Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	↑
Traffic Volume (vph)	0	1127	1179	0	139	22
Future Volume (vph)	0	1127	1179	0	139	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.1	6.1		5.7	5.7
Lane Util. Factor		0.95	0.95		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3433	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1225	1282	0	151	24
RTOR Reduction (vph)	0	0	0	0	0	20
Lane Group Flow (vph)	0	1225	1282	0	151	4
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2 4		3	
Permitted Phases						3
Actuated Green, G (s)		35.9	83.7		25.5	25.5
Effective Green, g (s)		35.9	83.7		25.5	25.5
Actuated g/C Ratio		0.26	0.60		0.18	0.18
Clearance Time (s)		6.1			5.7	5.7
Vehicle Extension (s)		4.6			3.0	3.0
Lane Grp Cap (vph)		907	2115		625	288
v/s Ratio Prot		c0.35	c0.36		c0.04	
v/s Ratio Perm						0.00
v/c Ratio		1.35	0.61		0.24	0.02
Uniform Delay, d1		52.0	17.8		49.0	47.0
Progression Factor		1.00	0.34		1.00	1.00
Incremental Delay, d2		165.1	0.0		0.2	0.0
Delay (s)		217.1	6.1		49.2	47.0
Level of Service		F	A		D	D
Approach Delay (s)		217.1	6.1		48.9	
Approach LOS		F	A		D	
Intersection Summary						
HCM 2000 Control Delay		105.3		HCM 2000 Level of Service		F
HCM 2000 Volume to Capacity ratio		0.86				
Actuated Cycle Length (s)		140.0		Sum of lost time (s)		31.8
Intersection Capacity Utilization		49.1%		ICU Level of Service		A
Analysis Period (min)		15				
c Critical Lane Group						

***Existing with Project Construction Conditions
Peak Construction Worker Activity***

HCM 6th Signalized Intersection Summary

1: Riverside Drive & Laurel Canyon Boulevard








06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 		 	 			 			  	
Traffic Volume (veh/h)	247	594	111	151	930	138	227	765	98	129	782	309
Future Volume (veh/h)	247	594	111	151	930	138	227	765	98	129	782	309
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	268	646	121	164	1011	150	247	832	107	140	850	336
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	180	1029	459	258	927	413	300	1349	720	291	1264	497
Arrive On Green	0.10	0.29	0.29	0.02	0.09	0.09	0.09	0.38	0.38	0.07	0.35	0.35
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	3554	1585	1781	3602	1417
Grp Volume(v), veh/h	268	646	121	164	1011	150	247	832	107	140	803	383
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1777	1585	1781	1702	1615
Q Serve(g_s), s	12.1	18.9	7.0	5.6	31.3	10.7	10.7	22.8	4.7	6.0	24.1	24.2
Cycle Q Clear(g_c), s	12.1	18.9	7.0	5.6	31.3	10.7	10.7	22.8	4.7	6.0	24.1	24.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.88
Lane Grp Cap(c), veh/h	180	1029	459	258	927	413	300	1349	720	291	1194	567
V/C Ratio(X)	1.49	0.63	0.26	0.64	1.09	0.36	0.82	0.62	0.15	0.48	0.67	0.68
Avail Cap(c_a), veh/h	180	1029	459	357	927	413	300	1349	720	328	1194	567
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	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	0.97	0.97	0.97	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.0	37.0	32.8	56.9	54.8	45.4	26.2	30.2	19.2	24.2	33.1	33.1
Incr Delay (d2), s/veh	248.5	2.9	1.4	2.6	57.4	2.5	16.4	2.1	0.4	1.2	3.0	6.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	28.1	13.2	0.3	4.7	31.6	8.3	9.6	15.0	3.2	4.6	15.3	15.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	302.5	39.9	34.2	59.5	112.3	47.9	42.6	32.2	19.6	25.4	36.1	39.5
LnGrp LOS	F	D	C	E	F	D	D	C	B	C	D	D
Approach Vol, veh/h	1035				1325				1186			
Approach Delay, s/veh	107.2				98.4				33.3			
Approach LOS	F				F				C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	48.0	18.0	37.0	13.6	51.4	14.6	40.4				
Change Period (Y+Rc), s	5.6	5.9	5.9	* 5.7	5.6	5.9	5.6	* 5.7				
Max Green Setting (Gmax), s	11.4	42.1	12.1	* 31	10.4	43.1	12.4	* 31				
Max Q Clear Time (g_c+I1), s	12.7	26.2	14.1	33.3	8.0	24.8	7.6	20.9				
Green Ext Time (p_c), s	0.0	7.0	0.0	0.0	0.1	5.8	0.2	3.3				
Intersection Summary												
HCM 6th Ctrl Delay	67.4											
HCM 6th LOS	E											
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
User approved changes to right turn type.												

HCM 6th TWSC

2: Riverside Drive & Radford Avenue

06/24/2024

Intersection												
Int Delay, s/veh	17.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	906	89	76	1002	11	28	6	87	4	10	28
Future Vol, veh/h	23	906	89	76	1002	11	28	6	87	4	10	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	105	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	985	97	83	1089	12	30	7	95	4	11	30

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1101	0	0	1082	0	0	1751	2302	493	1807	2393	551
Stage 1	-	-	-	-	-	-	1035	1035	-	1261	1261	-
Stage 2	-	-	-	-	-	-	716	1267	-	546	1132	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	630	-	-	640	-	-	55	38	522	50	33	478
Stage 1	-	-	-	-	-	-	248	307	-	180	240	-
Stage 2	-	-	-	-	-	-	387	238	-	490	276	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	630	-	-	640	-	-	32	32	522	30	28	478
Mov Cap-2 Maneuver	-	-	-	-	-	-	32	32	-	30	28	-
Stage 1	-	-	-	-	-	-	238	295	-	173	209	-
Stage 2	-	-	-	-	-	-	299	207	-	377	265	-

























Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.8	286.4	107
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	98	630	-	-	640	-	-	76
HCM Lane V/C Ratio	1.342	0.04	-	-	0.129	-	-	0.601
HCM Control Delay (s)	286.4	10.9	-	-	11.5	-	-	107
HCM Lane LOS	F	B	-	-	B	-	-	F
HCM 95th %tile Q(veh)	9.4	0.1	-	-	0.4	-	-	2.7

HCM 6th Signalized Intersection Summary

3: Colfax Avenue & Riverside Drive

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	612	205	188	725	77	120	409	71	80	481	120
Future Volume (veh/h)	103	612	205	188	725	77	120	409	71	80	481	120
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	112	665	223	204	788	84	130	445	77	87	523	130
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	251	1356	605	259	1356	605	295	826	700	462	826	700
Arrive On Green	0.26	0.26	0.26	0.38	0.38	0.38	0.88	0.88	0.88	0.44	0.44	0.44
Sat Flow, veh/h	635	3554	1585	626	3554	1585	779	1870	1585	880	1870	1585
Grp Volume(v), veh/h	112	665	223	204	788	84	130	445	77	87	523	130
Grp Sat Flow(s),veh/h/ln	635	1777	1585	626	1777	1585	779	1870	1585	880	1870	1585
Q Serve(g_s), s	10.3	9.6	6.9	13.3	10.6	2.1	8.3	3.2	0.4	4.0	13.0	3.0
Cycle Q Clear(g_c), s	20.9	9.6	6.9	22.9	10.6	2.1	21.3	3.2	0.4	7.2	13.0	3.0
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	251	1356	605	259	1356	605	295	826	700	462	826	700
V/C Ratio(X)	0.45	0.49	0.37	0.79	0.58	0.14	0.44	0.54	0.11	0.19	0.63	0.19
Avail Cap(c_a), veh/h	251	1356	605	259	1356	605	295	826	700	462	826	700
HCM Platoon Ratio	0.67	0.67	0.67	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	0.94	0.94	0.94	0.83	0.83	0.83	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	17.4	16.4	25.4	14.7	12.1	8.6	2.1	2.0	12.4	13.0	10.2
Incr Delay (d2), s/veh	5.7	1.3	1.7	20.0	1.7	0.5	3.9	2.1	0.3	0.9	3.7	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(95%),veh/ln	3.5	6.9	4.6	7.4	6.9	1.2	1.6	2.0	0.3	1.4	9.1	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.4	18.6	18.1	45.4	16.5	12.6	12.5	4.2	2.2	13.3	16.7	10.8
LnGrp LOS	C	B	B	D	B	B	B	A	A	B	B	B
Approach Vol, veh/h	1000			1076			652			740		
Approach Delay, s/veh	20.1			21.6			5.6			15.2		
Approach LOS	C			C			A			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	28.0			32.0			28.0			32.0		
Change Period (Y+Rc), s	* 5.1			* 5.5			* 5.1			* 5.5		
Max Green Setting (Gmax), s	* 23			* 27			* 23			* 27		
Max Q Clear Time (g_c+I1), s	22.9			23.3			24.9			15.0		
Green Ext Time (p_c), s	0.0			1.2			0.0			3.3		
Intersection Summary												
HCM 6th Ctrl Delay	16.8											
HCM 6th LOS	B											
Notes												

Queues

4: Riverside Drive & SR 170 Southbound Off-Ramp

06/24/2024



Lane Group	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	812	9	699	29	187	183	171
v/c Ratio	0.40	0.03	0.35	0.11	0.57	0.52	0.40
Control Delay	11.9	13.0	11.6	0.8	31.5	20.5	6.8
Queue Delay	0.3	0.0	0.4	0.1	0.1	0.2	0.0
Total Delay	12.2	13.0	12.0	0.9	31.6	20.7	6.8
Queue Length 50th (ft)	72	3	122	0	76	48	0
Queue Length 95th (ft)	203	m9	193	0	126	101	44
Internal Link Dist (ft)	2214		245	105		344	
Turn Bay Length (ft)		25			140		150
Base Capacity (vph)	2010	307	2010	286	456	464	532
Starvation Cap Reductn	0	0	777	0	0	0	0
Spillback Cap Reductn	583	0	0	57	26	38	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.03	0.57	0.13	0.43	0.43	0.32


Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: Riverside Drive & SR 170 Southbound Off-Ramp













06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑	↑↑			↑↓		↑	↑↓	↑
Traffic Volume (vph)	0	745	2	8	643	0	7	0	19	253	6	238
Future Volume (vph)	0	745	2	8	643	0	7	0	19	253	6	238
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Lane Util. Factor		0.95		1.00	0.95			1.00		0.95	0.91	0.95
Frt		1.00		1.00	1.00			0.90		1.00	0.93	0.85
Flt Protected		1.00		0.95	1.00			0.99		0.95	0.98	1.00
Satd. Flow (prot)		3538		1770	3539			1658		1681	1536	1504
Flt Permitted		1.00		0.29	1.00			0.84		0.95	0.98	1.00
Satd. Flow (perm)		3538		542	3539			1409		1681	1536	1504
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)	0	810	2	9	699	0	8	0	21	275	7	259
RTOR Reduction (vph)	0	0	0	0	0	0	0	28	0	0	52	138
Lane Group Flow (vph)	0	812	0	9	699	0	0	1	0	187	131	33
Turn Type		NA		Perm	NA		Perm	NA		Split	NA	Perm
Protected Phases		6			2			4		3	3	
Permitted Phases				2			4					3
Actuated Green, G (s)		36.1		36.1	36.1			3.2		13.7	13.7	13.7
Effective Green, g (s)		36.1		36.1	36.1			3.2		13.7	13.7	13.7
Actuated g/C Ratio		0.52		0.52	0.52			0.05		0.20	0.20	0.20
Clearance Time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Vehicle Extension (s)		3.8		2.4	2.4			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1824		279	1825			64		328	300	294
v/s Ratio Prot		c0.23			0.20					c0.11	0.09	
v/s Ratio Perm				0.02				c0.00				0.02
v/c Ratio		0.45		0.03	0.38			0.02		0.57	0.44	0.11
Uniform Delay, d1		10.7		8.3	10.2			31.9		25.5	24.8	23.2
Progression Factor		1.00		1.05	1.08			1.00		1.00	1.00	1.00
Incremental Delay, d2		0.8		0.2	0.5			0.1		2.4	1.0	0.2
Delay (s)		11.4		9.0	11.6			32.0		27.9	25.8	23.3
Level of Service		B		A	B			C		C	C	C
Approach Delay (s)		11.4			11.5			32.0			25.7	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			15.5			HCM 2000 Level of Service			B			
HCM 2000 Volume to Capacity ratio			0.45									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			48.4%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	NWL	NWR
Lane Group Flow (vph)	197	607	298	225	414	115	24	568	152	1025	239	81
v/c Ratio	0.62	0.93dr	0.96	0.97	0.49	0.30	0.29	0.84	0.63	0.77	0.58	0.47
Control Delay	41.9	69.3	93.8	90.4	48.8	47.5	58.8	66.0	69.2	42.5	63.8	65.9
Queue Delay	0.0	48.1	42.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.9	117.4	135.8	90.4	48.8	47.5	58.8	66.0	69.2	42.5	63.8	65.9
Queue Length 50th (ft)	141	290	285	~181	176	88	18	258	132	410	108	76
Queue Length 95th (ft)	167	#417	#516	#355	232	148	51	#370	211	524	147	132
Internal Link Dist (ft)		245			745			2580		383	758	
Turn Bay Length (ft)	140		230	85		110	270		290		215	
Base Capacity (vph)	320	678	311	233	851	380	84	680	242	1334	695	292
Starvation Cap Reductn	0	138	49	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	1.12	1.14	0.97	0.49	0.30	0.29	0.84	0.63	0.77	0.34	0.28

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.





















Queue shown is maximum after two cycles.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024

												
Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	181	281	370	182	12	195	381	106	22	447	59	17
Future Volume (vph)	181	281	370	182	12	195	381	106	22	447	59	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Lane Util. Factor	1.00	0.91	0.91			1.00	0.95	1.00	1.00	0.95		
Frt	1.00	0.93	0.85			1.00	1.00	0.85	1.00	0.98		
Flt Protected	0.95	1.00	1.00			0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1770	3137	1441			1770	3539	1583	1770	3463		
Flt Permitted	0.43	1.00	1.00			0.15	1.00	1.00	0.23	1.00		
Satd. Flow (perm)	804	3137	1441			277	3539	1583	430	3463		
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)	197	305	402	198	13	212	414	115	24	486	64	18
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	197	607	298	0	0	225	414	115	24	568	0	0
Turn Type	pm+pt	NA	Perm		pm+pt	pm+pt	NA	Perm	Perm	NA		
Protected Phases	1	6			5	5	2			8		
Permitted Phases	6		6		2	2		2	8			
Actuated Green, G (s)	41.5	30.4	30.4			47.0	33.7	33.7	27.4	27.4		
Effective Green, g (s)	41.5	30.4	30.4			47.0	33.7	33.7	27.4	27.4		
Actuated g/C Ratio	0.30	0.22	0.22			0.34	0.24	0.24	0.20	0.20		
Clearance Time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Vehicle Extension (s)	3.0	3.9	3.9			3.0	4.6	4.6	4.7	4.7		
Lane Grp Cap (vph)	314	681	312			234	851	381	84	677		
v/s Ratio Prot	0.05	0.19				c0.09	0.12			0.16		
v/s Ratio Perm	0.14		0.21			c0.23		0.07	0.06			
v/c Ratio	0.63	0.93dr	0.96			0.96	0.49	0.30	0.29	0.84		
Uniform Delay, d1	39.6	53.2	54.1			38.1	45.7	43.5	48.0	54.2		
Progression Factor	0.96	1.00	1.00			1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2	3.6	15.4	39.1			47.8	2.0	2.0	3.5	9.8		
Delay (s)	41.7	68.6	93.2			85.9	47.7	45.5	51.5	64.0		
Level of Service	D	E	F			F	D	D	D	E		
Approach Delay (s)		70.4					58.8			63.5		
Approach LOS		E					E			E		
Intersection Summary												
HCM 2000 Control Delay			58.5			HCM 2000 Level of Service				E		
HCM 2000 Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			33.0			
Intersection Capacity Utilization			96.9%			ICU Level of Service			F			
Analysis Period (min)			15									
dr Defacto Right Lane. Recode with 1 though lane as a right lane.												
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024



Movement	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	16	124	870	73	37	175	79	4
Future Volume (vph)	16	124	870	73	37	175	79	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.3			6.6	6.6	
Lane Util. Factor		1.00	0.95			0.97	0.91	
Frt		1.00	0.99			0.99	0.85	
Flt Protected		0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	3498			3428	1441	
Flt Permitted		0.95	1.00			0.95	1.00	
Satd. Flow (perm)		1770	3498			3428	1441	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	135	946	79	40	190	86	4
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	152	1025	0	0	239	81	0
Turn Type	Prot	Prot	NA		Prot	Prot	Perm	
Protected Phases	7	7	4		3	3		
Permitted Phases							3	
Actuated Green, G (s)		19.2	53.4			16.7	16.7	
Effective Green, g (s)		19.2	53.4			16.7	16.7	
Actuated g/C Ratio		0.14	0.38			0.12	0.12	
Clearance Time (s)		6.8	6.3			6.6	6.6	
Vehicle Extension (s)		3.0	4.9			4.6	4.6	
Lane Grp Cap (vph)		242	1334			408	171	
v/s Ratio Prot		0.09	c0.29			c0.07		
v/s Ratio Perm							0.06	
v/c Ratio		0.63	0.77			0.59	0.47	
Uniform Delay, d1		57.0	37.9			58.4	57.5	
Progression Factor		1.00	1.00			1.00	1.00	
Incremental Delay, d2		5.0	3.2			3.0	3.7	
Delay (s)		62.1	41.1			61.4	61.2	
Level of Service		E	D			E	E	
Approach Delay (s)			43.8			61.3		
Approach LOS			D			E		
Intersection Summary								

HCM 6th Signalized Intersection Summary

6: Laurel Canyon Boulevard & US 101 Northbound Ramps

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰	↰	↰	↰	↰			↰	↰
Traffic Volume (veh/h)	0	0	0	395	2	234	532	530	0	0	1216	345
Future Volume (veh/h)	0	0	0	395	2	234	532	530	0	0	1216	345
Initial Q (Qb), veh				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
Parking Bus, Adj				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		
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				509	0	170	578	576	0	0	1322	375
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				625	0	278	675	2532	0	0	2340	726
Arrive On Green				0.18	0.00	0.18	0.33	1.00	0.00	0.00	0.46	0.46
Sat Flow, veh/h				3563	0	1585	3456	3647	0	0	5274	1585
Grp Volume(v), veh/h				509	0	170	578	576	0	0	1322	375
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	0	1702	1585
Q Serve(g_s), s				12.4	0.0	8.9	14.1	0.0	0.0	0.0	17.0	15.1
Cycle Q Clear(g_c), s				12.4	0.0	8.9	14.1	0.0	0.0	0.0	17.0	15.1
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				625	0	278	675	2532	0	0	2340	726
V/C Ratio(X)				0.81	0.00	0.61	0.86	0.23	0.00	0.00	0.56	0.52
Avail Cap(c_a), veh/h				819	0	365	948	2532	0	0	2340	726
HCM Platoon Ratio				1.00	1.00	1.00	1.67	1.67	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.79	0.79	0.00	0.00	0.75	0.75
Uniform Delay (d), s/veh				35.7	0.0	34.3	29.1	0.0	0.0	0.0	17.8	17.3
Incr Delay (d2), s/veh				4.9	0.0	2.2	4.6	0.2	0.0	0.0	0.7	2.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				9.3	0.0	6.1	8.5	0.1	0.0	0.0	10.0	8.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				40.6	0.0	36.5	33.7	0.2	0.0	0.0	18.6	19.3
LnGrp LOS				D	A	D	C	A	A	A	B	B
Approach Vol, veh/h					679			1154			1697	
Approach Delay, s/veh					39.5			17.0			18.7	
Approach LOS					D			B			B	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	32.9	46.0		21.1		68.9						
Change Period (Y+Rc), s	5.3	4.8		* 5.3		4.8						
Max Green Setting (Gmax), s	25	29.2		* 21		59.2						
Max Q Clear Time (g_c+M0), s	19.0			14.4		2.0						
Green Ext Time (p_c), s	1.5	6.8		1.4		4.3						

Intersection Summary

HCM 6th Ctrl Delay	22.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.








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

HCM 6th Signalized Intersection Summary

7: US 101 Southbound Ramps & Laurel Canyon Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	10	833	0	0	0	0	928	491	493	1123	0
Future Volume (veh/h)	148	10	833	0	0	0	0	928	491	493	1123	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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		
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	111	0	966				0	1009	534	536	1221	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	2	2	0
Cap, veh/h	431	0	768				0	1640	509	918	2286	0
Arrive On Green	0.24	0.00	0.24				0.00	0.32	0.32	0.53	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	5274	1585	3456	3647	0
Grp Volume(v), veh/h	111	0	966				0	1009	534	536	1221	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1702	1585	1728	1777	0
Q Serve(g_s), s	4.5	0.0	21.8				0.0	15.0	28.9	9.5	0.0	0.0
Cycle Q Clear(g_c), s	4.5	0.0	21.8				0.0	15.0	28.9	9.5	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	431	0	768				0	1640	509	918	2286	0
V/C Ratio(X)	0.26	0.00	1.26				0.00	0.62	1.05	0.58	0.53	0.00
Avail Cap(c_a), veh/h	431	0	768				0	1640	509	922	2286	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.72	0.72	0.00
Uniform Delay (d), s/veh	27.6	0.0	34.1				0.0	25.8	30.5	17.7	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	126.6				0.0	1.7	53.4	0.7	0.6	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
%ile BackOfQ(95%),veh/ln	8.3	0.0	32.5				0.0	10.1	25.7	5.4	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.9	0.0	160.7				0.0	27.6	83.9	18.4	0.6	0.0
LnGrp LOS	C	A	F				A	C	F	B	A	A
Approach Vol, veh/h	1077						1543			1757		
Approach Delay, s/veh	147.0						47.1			6.1		
Approach LOS	F						D			A		
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	29.0	34.0	27.0	63.0								
Change Period (Y+Rc), s	5.1	* 5.1	* 5.2	* 5.1								
Max Green Setting (Gmax), s	24	* 29	* 22	* 58								
Max Q Clear Time (g_c+M), s	30.9	30.9	23.8	2.0								
Green Ext Time (p_c), s	1.6	0.0	0.0	12.3								

Intersection Summary

HCM 6th Ctrl Delay 55.2

HCM 6th LOS E

Notes

User approved volume balancing among the lanes for turning movement.

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

Queues

8: Laurel Canyon Boulevard & Landale Street

06/24/2024



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	148	194	164	63	173	1346	29	1804	248
v/c Ratio	0.70	0.61	0.75	0.17	0.64	0.71	0.26	1.38	0.54
Control Delay	56.9	18.3	58.7	1.0	33.9	9.2	22.2	200.9	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.9	18.3	58.7	1.0	33.9	9.2	22.2	200.9	23.6
Queue Length 50th (ft)	86	16	90	0	66	112	10	~742	103
Queue Length 95th (ft)	#177	87	#177	0	m48	m88	m14	m#806	m137
Internal Link Dist (ft)		140	232			591		375	
Turn Bay Length (ft)	85			40	155		125		115
Base Capacity (vph)	212	317	237	380	290	1886	112	1306	458
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.61	0.69	0.17	0.60	0.71	0.26	1.38	0.54

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

8: Laurel Canyon Boulevard & Landale Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	151	13	151	24	127	58	159	1209	29	27	1660	228
Future Volume (vph)	151	13	151	24	127	58	159	1209	29	27	1660	228
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.89			1.00	1.00	1.00	1.00		1.00	1.00	0.78
Flpb, ped/bikes	1.00	1.00			0.99	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.87			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1374			1823	1583	1770	3522		1762	3539	1241
Flt Permitted	0.95	1.00			0.90	1.00	0.10	1.00		0.16	1.00	1.00
Satd. Flow (perm)	1681	1374			1655	1583	193	3522		304	3539	1241
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)	164	14	164	26	138	63	173	1314	32	29	1804	248
RTOR Reduction (vph)	0	143	0	0	0	55	0	2	0	0	0	0
Lane Group Flow (vph)	148	51	0	0	164	8	173	1344	0	29	1804	248
Confl. Peds. (#/hr)			49	49			89		12	12		89
Turn Type	Split	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	3	3			4		1	6			2	
Permitted Phases				4		4	6			2		2
Actuated Green, G (s)	11.3	11.3			12.0	12.0	48.2	48.2		33.2	33.2	33.2
Effective Green, g (s)	11.3	11.3			12.0	12.0	48.2	48.2		33.2	33.2	33.2
Actuated g/C Ratio	0.13	0.13			0.13	0.13	0.54	0.54		0.37	0.37	0.37
Clearance Time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	5.2		4.5	4.5	4.5
Lane Grp Cap (vph)	211	172			220	211	271	1886		112	1305	457
v/s Ratio Prot	c0.09	0.04					0.07	c0.38			c0.51	
v/s Ratio Perm					c0.10	0.01	0.27			0.10		0.20
v/c Ratio	0.70	0.29			0.75	0.04	0.64	0.71		0.26	1.38	0.54
Uniform Delay, d1	37.7	35.7			37.5	34.0	18.1	15.7		19.8	28.4	22.4
Progression Factor	1.00	1.00			1.00	1.00	2.24	0.55		0.81	0.95	0.86
Incremental Delay, d2	10.1	1.0			12.8	0.1	0.5	0.2		3.5	175.1	2.9
Delay (s)	47.8	36.7			50.4	34.1	41.0	8.9		19.4	202.1	22.2
Level of Service	D	D			D	C	D	A		B	F	C
Approach Delay (s)		41.5			45.8			12.6			178.1	
Approach LOS		D			D			B			F	
Intersection Summary												
HCM 2000 Control Delay			99.4									F
HCM 2000 Volume to Capacity ratio			1.08									
Actuated Cycle Length (s)			90.0							23.9		
Intersection Capacity Utilization			93.7%									F
ICU Level of Service												
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

9: Colfax Avenue & Sarah Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↑	↕
Traffic Volume (veh/h)	36	80	10	33	16	147	20	447	47	131	684	45
Future Volume (veh/h)	36	80	10	33	16	147	20	447	47	131	684	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.89		0.81	0.85		0.81	1.00		0.93	0.98		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	39	87	11	36	17	160	22	486	51	142	743	49
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	156	303	33	102	50	248	230	964	758	453	964	758
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.69	0.69	0.69	0.35	0.35	0.35
Sat Flow, veh/h	315	1215	134	129	200	992	685	1870	1471	853	1870	1471
Grp Volume(v), veh/h	137	0	0	213	0	0	22	486	51	142	743	49
Grp Sat Flow(s),veh/h/ln	1664	0	0	1320	0	0	685	1870	1471	853	1870	1471
Q Serve(g_s), s	0.0	0.0	0.0	2.4	0.0	0.0	1.6	7.5	0.7	8.3	21.3	1.3
Cycle Q Clear(g_c), s	3.7	0.0	0.0	8.4	0.0	0.0	22.8	7.5	0.7	15.8	21.3	1.3
Prop In Lane	0.28		0.08	0.17		0.75	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	492	0	0	400	0	0	230	964	758	453	964	758
V/C Ratio(X)	0.28	0.00	0.00	0.53	0.00	0.00	0.10	0.50	0.07	0.31	0.77	0.06
Avail Cap(c_a), veh/h	635	0	0	521	0	0	230	964	758	453	964	758
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	0.67	0.67	0.67
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.95	0.95	0.95	0.76	0.76	0.76
Uniform Delay (d), s/veh	18.3	0.0	0.0	20.0	0.0	0.0	16.9	5.8	4.7	17.8	16.5	10.0
Incr Delay (d2), s/veh	0.3	0.0	0.0	1.1	0.0	0.0	0.8	1.8	0.2	1.4	4.6	0.1
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(95%),veh/ln	2.7	0.0	0.0	4.7	0.0	0.0	0.5	4.3	0.4	3.2	14.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.6	0.0	0.0	21.1	0.0	0.0	17.7	7.5	4.8	19.2	21.1	10.1
LnGrp LOS	B	A	A	C	A	A	B	A	A	B	C	B
Approach Vol, veh/h	137			213			559			934		
Approach Delay, s/veh	18.6			21.1			7.7			20.2		
Approach LOS	B			C			A			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	35.7			24.3			35.7			24.3		
Change Period (Y+Rc), s	4.8			* 9.3			4.8			* 9.3		
Max Green Setting (Gmax), s	25.2			* 21			25.2			* 21		
Max Q Clear Time (g_c+I1), s	24.8			5.7			23.3			10.4		
Green Ext Time (p_c), s	0.1			0.6			1.1			1.1		

Intersection Summary

HCM 6th Ctrl Delay	16.4
HCM 6th LOS	B

Notes

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

Queues

10: Landale Street & Colfax Avenue

06/24/2024



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	81	32	487	839	37
v/c Ratio	0.30	0.09	0.34	0.59	0.03
Control Delay	20.4	5.6	5.5	2.9	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	20.4	5.6	5.5	2.9	0.1
Queue Length 50th (ft)	19	4	73	29	0
Queue Length 95th (ft)	51	15	140	36	m0
Internal Link Dist (ft)	262		575	593	
Turn Bay Length (ft)		40			80
Base Capacity (vph)	534	354	1434	1434	1223
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.15	0.09	0.34	0.59	0.03

Intersection Summary






m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

10: Landale Street & Colfax Avenue

06/24/2024












Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	52	22	29	448	772	34
Future Volume (vph)	52	22	29	448	772	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	9.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.96		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1727		1770	1863	1863	1583
Flt Permitted	0.97		0.25	1.00	1.00	1.00
Satd. Flow (perm)	1727		461	1863	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	57	24	32	487	839	37
RTOR Reduction (vph)	22	0	0	0	0	7
Lane Group Flow (vph)	59	0	32	487	839	30
Turn Type	Perm		Perm	NA	NA	Perm
Protected Phases				6	2	
Permitted Phases	8		6			2
Actuated Green, G (s)	5.4		40.6	40.6	40.6	40.6
Effective Green, g (s)	5.4		40.6	40.6	40.6	40.6
Actuated g/C Ratio	0.09		0.68	0.68	0.68	0.68
Clearance Time (s)	9.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		4.9	4.9	5.3	5.3
Lane Grp Cap (vph)	155		311	1260	1260	1071
v/s Ratio Prot				0.26	c0.45	
v/s Ratio Perm	c0.03		0.07			0.02
v/c Ratio	0.38		0.10	0.39	0.67	0.03
Uniform Delay, d1	25.7		3.4	4.2	5.7	3.2
Progression Factor	1.00		1.00	1.00	0.27	0.02
Incremental Delay, d2	1.6		0.7	0.9	1.9	0.0
Delay (s)	27.3		4.0	5.1	3.5	0.1
Level of Service	C		A	A	A	A
Approach Delay (s)	27.3			5.1	3.4	
Approach LOS	C			A	A	
Intersection Summary						
HCM 2000 Control Delay			5.3	HCM 2000 Level of Service		A
HCM 2000 Volume to Capacity ratio			0.63			
Actuated Cycle Length (s)			60.0	Sum of lost time (s)		14.0
Intersection Capacity Utilization			59.0%	ICU Level of Service		B
Analysis Period (min)			15			
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

11: Whitsett Avenue & Moorpark Street

06/24/2024












Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	780	210	106	571	62	56	227	68	79	467	58
Future Volume (veh/h)	64	780	210	106	571	62	56	227	68	79	467	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	70	848	228	115	621	67	61	247	74	86	508	63
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	177	850	720	81	754	81	350	1166	341	473	1369	169
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	755	1870	1585	524	1659	179	841	2711	794	1059	3183	393
Grp Volume(v), veh/h	70	848	228	115	0	688	61	160	161	86	283	288
Grp Sat Flow(s),veh/h/ln	755	1870	1585	524	0	1838	841	1777	1727	1059	1777	1800
Q Serve(g_s), s	8.0	40.7	8.2	0.2	0.0	29.4	4.8	5.1	5.3	5.0	9.7	9.8
Cycle Q Clear(g_c), s	37.4	40.7	8.2	40.9	0.0	29.4	14.6	5.1	5.3	10.3	9.7	9.8
Prop In Lane	1.00		1.00	1.00		0.10	1.00		0.46	1.00		0.22
Lane Grp Cap(c), veh/h	177	850	720	81	0	835	350	764	743	473	764	774
V/C Ratio(X)	0.40	1.00	0.32	1.42	0.00	0.82	0.17	0.21	0.22	0.18	0.37	0.37
Avail Cap(c_a), veh/h	177	850	720	81	0	835	350	764	743	473	764	774
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	37.7	24.5	15.6	45.0	0.0	21.4	22.4	16.1	16.1	19.4	17.4	17.4
Incr Delay (d2), s/veh	6.5	30.3	1.2	246.4	0.0	9.0	1.1	0.6	0.7	0.8	1.4	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(95%),veh/ln	8.2	31.4	5.5	13.2	0.0	19.7	1.8	3.8	3.8	2.3	7.3	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.2	54.8	16.8	291.4	0.0	30.4	23.4	16.7	16.8	20.2	18.8	18.8
LnGrp LOS	D	D	B	F	A	C	C	B	B	C	B	B
Approach Vol, veh/h	1146					803		382		657		
Approach Delay, s/veh	46.6					67.8		17.8		19.0		
Approach LOS	D					E		B		B		
Timer - Assigned Phs	2		4			6		8				
Phs Duration (G+Y+Rc), s	46.0		44.0			46.0		44.0				
Change Period (Y+Rc), s	5.1		5.3			5.1		5.3				
Max Green Setting (Gmax), s	40.9		38.7			40.9		38.7				
Max Q Clear Time (g_c+I1), s	42.9		12.3			42.7		16.6				
Green Ext Time (p_c), s	0.0		3.9			0.0		2.2				
Intersection Summary												
HCM 6th Ctrl Delay	42.5											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary

12: Laurel Canyon Boulevard & Moorpark Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	284	571	189	206	426	107	98	1054	163	84	1569	229
Future Volume (veh/h)	284	571	189	206	426	107	98	1054	163	84	1569	229
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	309	621	205	224	463	116	107	1146	177	91	1705	249
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	294	704	232	295	502	552	227	912	140	222	916	131
Arrive On Green	0.11	0.27	0.27	0.14	0.36	0.36	0.08	0.30	0.30	0.11	0.39	0.39
Sat Flow, veh/h	1781	2626	866	1781	1870	1585	1781	3087	475	1781	3122	445
Grp Volume(v), veh/h	309	420	406	224	463	116	107	658	665	91	952	1002
Grp Sat Flow(s),veh/h/ln	1781	1777	1715	1781	1870	1585	1781	1777	1785	1781	1777	1790
Q Serve(g_s), s	9.5	20.4	20.4	8.2	21.4	4.2	3.6	26.6	26.6	3.0	26.4	26.4
Cycle Q Clear(g_c), s	9.5	20.4	20.4	8.2	21.4	4.2	3.6	26.6	26.6	3.0	26.4	26.4
Prop In Lane	1.00		0.50	1.00		1.00	1.00		0.27	1.00		0.25
Lane Grp Cap(c), veh/h	294	477	460	295	502	552	227	525	527	222	521	525
V/C Ratio(X)	1.05	0.88	0.88	0.76	0.92	0.21	0.47	1.25	1.26	0.41	1.83	1.91
Avail Cap(c_a), veh/h	294	507	490	295	534	579	252	525	527	250	521	525
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	26.4	31.6	31.6	22.3	28.1	18.0	22.5	31.7	31.7	21.9	27.4	27.4
Incr Delay (d2), s/veh	66.8	15.8	16.5	10.8	21.1	0.2	1.5	129.2	132.2	0.1	372.1	408.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	15.3	15.7	15.4	7.1	16.7	2.6	2.7	43.9	44.8	1.7	90.4	99.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	93.2	47.4	48.1	33.1	49.2	18.2	24.0	160.9	163.9	22.0	399.6	436.3
LnGrp LOS	F	D	D	C	D	B	C	F	F	C	F	F
Approach Vol, veh/h	1135			803			1430			2045		
Approach Delay, s/veh	60.1			40.2			152.0			400.8		
Approach LOS	E			D			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.7	31.8	15.0	30.4	12.6	32.0	15.0	30.4				
Change Period (Y+Rc), s	* 5.3	* 5.4	* 5.5	6.3	* 5.4	* 5.4	* 5.5	6.3				
Max Green Setting (Gmax), s	* 18.8	* 24	* 9.5	25.7	* 8.6	* 24	* 9.5	25.7				
Max Q Clear Time (g_c+I), s	17.6	28.4	11.5	23.4	5.0	28.6	10.2	22.4				
Green Ext Time (p_c), s	0.1	0.0	0.0	0.8	0.1	0.0	0.0	1.6				

Intersection Summary

HCM 6th Ctrl Delay 210.1

HCM 6th LOS F






Notes

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

HCM 6th TWSC

13: Moorpark Street & Radford Avenue























06/24/2024

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	52	714	802	38	13	30
Future Vol, veh/h	52	714	802	38	13	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	50
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	57	776	872	41	14	33
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	913	0	-	0	1395	457
Stage 1	-	-	-	-	893	-
Stage 2	-	-	-	-	502	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	742	-	-	-	132	551
Stage 1	-	-	-	-	360	-
Stage 2	-	-	-	-	573	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	742	-	-	-	122	551
Mov Cap-2 Maneuver	-	-	-	-	122	-
Stage 1	-	-	-	-	332	-
Stage 2	-	-	-	-	573	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.7	0		19.9		
HCM LOS	C					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	742	-	-	-	122	551
HCM Lane V/C Ratio	0.076	-	-	-	0.116	0.059
HCM Control Delay (s)	10.3	-	-	-	38.3	11.9
HCM Lane LOS	B	-	-	-	E	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.4	0.2

HCM 6th Signalized Intersection Summary

14: Colfax Avenue & Moorpark Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	559	84	159	629	147	90	203	132	145	448	104
Future Volume (veh/h)	89	559	84	159	629	147	90	203	132	145	448	104
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		0.96	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	97	608	91	173	684	160	98	221	143	158	487	113
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	1222	182	274	747	175	229	460	384	382	740	733
Arrive On Green	0.14	0.79	0.79	0.09	0.09	0.09	0.25	0.25	0.25	0.09	0.40	0.40
Sat Flow, veh/h	1781	3089	461	737	2836	663	815	1870	1560	1781	1870	1569
Grp Volume(v), veh/h	97	349	350	173	428	416	98	221	143	158	487	113
Grp Sat Flow(s),veh/h/ln	1781	1777	1774	737	1777	1722	815	1870	1560	1781	1870	1569
Q Serve(g_s), s	3.3	6.1	6.1	20.9	21.5	21.6	10.1	9.1	6.8	5.6	19.2	3.7
Cycle Q Clear(g_c), s	3.3	6.1	6.1	20.9	21.5	21.6	15.8	9.1	6.8	5.6	19.2	3.7
Prop In Lane	1.00		0.26	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	222	703	702	274	468	454	229	460	384	382	740	733
V/C Ratio(X)	0.44	0.50	0.50	0.63	0.91	0.92	0.43	0.48	0.37	0.41	0.66	0.15
Avail Cap(c_a), veh/h	264	703	702	274	468	454	229	460	384	393	740	733
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	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	0.78	0.78	0.78
Uniform Delay (d), s/veh	21.4	6.3	6.3	39.8	40.1	40.1	34.2	29.0	28.2	21.3	22.2	13.8
Incr Delay (d2), s/veh	1.4	2.5	2.5	10.6	25.0	25.7	5.8	3.6	2.8	0.6	3.6	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(95%),veh/ln	2.3	3.7	3.7	8.5	19.4	19.0	4.1	7.8	5.0	4.2	12.9	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.7	8.8	8.8	50.4	65.1	65.8	39.9	32.6	30.9	21.9	25.8	14.2
LnGrp LOS	C	A	A	D	E	E	D	C	C	C	C	B
Approach Vol, veh/h	796			1017			462			758		
Approach Delay, s/veh	10.5			62.9			33.6			23.2		
Approach LOS	B			E			C			C		
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	11.9	33.1		45.0		45.0	13.4	31.6				
Change Period (Y+Rc), s	* 5.5	* 9.4		* 9.4		* 9.4	5.6	* 9.4				
Max Green Setting (Gmax), s	* 8.5	* 22		* 36		* 36	8.4	* 22				
Max Q Clear Time (g_c+I1), s	5.3	23.6		21.2		8.1	7.6	17.8				
Green Ext Time (p_c), s	0.1	0.0		2.9		4.5	0.0	0.9				

Intersection Summary

HCM 6th Ctrl Delay 34.8

HCM 6th LOS C

Notes

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

HCM 6th TWSC
15: Irvine Avenue & Moorpark Street























06/24/2024

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕↕				↕↕			↕			↕	
Traffic Vol, veh/h	56	717	5	15	802	107	2	1	17	8	1	139
Future Vol, veh/h	56	717	5	15	802	107	2	1	17	8	1	139
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	61	779	5	16	872	116	2	1	18	9	1	151
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	988	0	0	784	0	0	1373	1924	392	1474	1868	494
Stage 1	-	-	-	-	-	-	904	904	-	962	962	-
Stage 2	-	-	-	-	-	-	469	1020	-	512	906	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	695	-	-	830	-	-	105	66	607	88	72	521
Stage 1	-	-	-	-	-	-	298	354	-	275	332	-
Stage 2	-	-	-	-	-	-	544	312	-	513	353	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	695	-	-	830	-	-	63	53	607	72	58	521
Mov Cap-2 Maneuver	-	-	-	-	-	-	63	53	-	72	58	-
Stage 1	-	-	-	-	-	-	252	299	-	232	317	-
Stage 2	-	-	-	-	-	-	368	298	-	418	298	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.4			0.3			20.5			21.6		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	254	695	-	-	830	-	-	375				
HCM Lane V/C Ratio	0.086	0.088	-	-	0.02	-	-	0.429				
HCM Control Delay (s)	20.5	10.7	0.7	-	9.4	0.2	-	21.6				
HCM Lane LOS	C	B	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.3	0.3	-	-	0.1	-	-	2.1				

HCM 6th Signalized Intersection Summary

16: Tujunga Avenue & Moorpark Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	651	75	91	665	50	65	202	69	146	357	183
Future Volume (veh/h)	150	651	75	91	665	50	65	202	69	146	357	183
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	163	708	82	99	723	54	71	220	75	159	388	199
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	344	1648	191	338	1722	129	213	685	581	298	452	383
Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.51	0.13	0.73	0.73	0.24	0.24	0.24
Sat Flow, veh/h	694	3209	371	686	3352	250	1781	1870	1585	1084	1870	1585
Grp Volume(v), veh/h	163	392	398	99	383	394	71	220	75	159	388	199
Grp Sat Flow(s),veh/h/ln	694	1777	1804	686	1777	1825	1781	1870	1585	1084	1870	1585
Q Serve(g_s), s	17.1	12.4	12.4	9.5	12.0	12.0	0.0	3.7	1.3	12.4	17.9	9.8
Cycle Q Clear(g_c), s	29.2	12.4	12.4	21.9	12.0	12.0	0.0	3.7	1.3	16.1	17.9	9.8
Prop In Lane	1.00		0.21	1.00		0.14	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	344	913	926	338	913	937	213	685	581	298	452	383
V/C Ratio(X)	0.47	0.43	0.43	0.29	0.42	0.42	0.33	0.32	0.13	0.53	0.86	0.52
Avail Cap(c_a), veh/h	344	913	926	338	913	937	270	698	592	344	532	451
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	0.99	0.99	0.99	0.49	0.49	0.49
Uniform Delay (d), s/veh	22.6	13.7	13.7	20.5	13.6	13.6	36.4	8.1	7.8	33.7	32.6	29.6
Incr Delay (d2), s/veh	4.6	1.5	1.5	2.2	1.4	1.4	0.9	0.3	0.1	0.7	6.2	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(95%),veh/ln	5.6	8.6	8.7	3.0	8.4	8.5	2.5	2.3	0.8	5.3	11.9	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.3	15.1	15.1	22.7	15.0	15.0	37.3	8.4	7.9	34.4	38.8	30.1
LnGrp LOS	C	B	B	C	B	B	D	A	A	C	D	C
Approach Vol, veh/h		953			876			366			746	
Approach Delay, s/veh		17.2			15.8			13.9			35.6	
Approach LOS		B			B			B			D	
Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		51.6	11.2	27.2		51.6		38.4				
Change Period (Y+Rc), s		* 5.4	* 5.4	* 5.4		* 5.4		* 5.4				
Max Green Setting (Gmax), s		* 40	* 8.7	* 26		* 40		* 34				
Max Q Clear Time (g_c+I1), s		23.9	2.0	19.9		31.2		5.7				
Green Ext Time (p_c), s		7.0	0.1	1.9		5.1		1.5				
Intersection Summary												
HCM 6th Ctrl Delay			21.0									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary

17: Woodbridge Street & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↕	
Traffic Volume (veh/h)	9	7	15	17	8	30	12	287	16	40	478	24
Future Volume (veh/h)	9	7	15	17	8	30	12	287	16	40	478	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	10	8	16	18	9	33	13	312	17	43	520	26
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	73	48	62	78	32	71	780	1520	1289	895	1436	72
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.81	0.81	0.81	1.00	1.00	1.00
Sat Flow, veh/h	267	599	769	318	402	881	861	1870	1585	1051	1766	88
Grp Volume(v), veh/h	34	0	0	60	0	0	13	312	17	43	0	546
Grp Sat Flow(s), veh/h/ln	1635	0	0	1601	0	0	861	1870	1585	1051	0	1854
Q Serve(g_s), s	0.0	0.0	0.0	0.8	0.0	0.0	0.3	3.4	0.2	0.2	0.0	0.0
Cycle Q Clear(g_c), s	1.7	0.0	0.0	3.1	0.0	0.0	0.3	3.4	0.2	3.5	0.0	0.0
Prop In Lane	0.29		0.47	0.30		0.55	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	183	0	0	181	0	0	780	1520	1289	895	0	1508
V/C Ratio(X)	0.19	0.00	0.00	0.33	0.00	0.00	0.02	0.21	0.01	0.05	0.00	0.36
Avail Cap(c_a), veh/h	508	0	0	503	0	0	780	1520	1289	895	0	1508
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.97	0.97	0.97	0.62	0.00	0.62
Uniform Delay (d), s/veh	38.8	0.0	0.0	39.5	0.0	0.0	1.6	1.9	1.6	0.1	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	1.1	0.0	0.0	0.0	0.3	0.0	0.1	0.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	1.3	0.0	0.0	2.4	0.0	0.0	0.1	1.3	0.1	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	39.3	0.0	0.0	40.5	0.0	0.0	1.6	2.2	1.6	0.1	0.0	0.4
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	34			60			342			589		
Approach Delay, s/veh	39.3			40.5			2.1			0.4		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	77.7			12.3			77.7			12.3		
Change Period (Y+Rc), s	* 4.5			* 5.1			* 4.5			* 5.1		
Max Green Setting (Gmax), s	* 55			* 26			* 55			* 26		
Max Q Clear Time (g_c+I1), s	5.5			3.7			5.4			5.1		
Green Ext Time (p_c), s	9.5			0.1			5.0			0.2		

Intersection Summary

HCM 6th Ctrl Delay	4.6
HCM 6th LOS	A

Notes

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

Queues

18: Whitsett Avenue & Ventura Boulevard

06/24/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	83	988	63	28	782	120	62	83	634	247	464
v/c Ratio	0.34	0.64	0.09	0.20	0.73	0.21	0.48	0.25	0.87	0.73	0.49
Control Delay	20.3	23.9	16.3	40.0	47.4	11.6	48.0	34.4	54.5	50.9	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.3	23.9	16.3	40.0	47.4	11.6	48.0	34.4	54.5	50.9	12.9
Queue Length 50th (ft)	30	245	22	13	284	17	36	44	206	149	152
Queue Length 95th (ft)	59	312	47	m22	346	m38	75	82	#374	220	218
Internal Link Dist (ft)	1440			2938			648			1328	
Turn Bay Length (ft)	95	135		145	60		60	220		65	
Base Capacity (vph)	275	1592	712	142	1077	588	168	440	727	441	987
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.62	0.09	0.20	0.73	0.20	0.37	0.19	0.87	0.56	0.47

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
























Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

18: Whitsett Avenue & Ventura Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	909	58	26	719	110	57	74	3	583	227	427
Future Volume (vph)	76	909	58	26	719	110	57	74	3	583	227	427
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	5.4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1853		3433	1863	1583
Flt Permitted	0.14	1.00	1.00	0.25	1.00	1.00	0.38	1.00		0.95	1.00	1.00
Satd. Flow (perm)	268	3539	1583	469	3539	1583	712	1853		3433	1863	1583
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)	83	988	63	28	782	120	62	80	3	634	247	464
RTOR Reduction (vph)	0	0	0	0	0	84	0	2	0	0	0	13
Lane Group Flow (vph)	83	988	63	28	782	36	62	81	0	634	247	451
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Prot	NA	custom
Protected Phases	1	6			2			4		3	8	1 3
Permitted Phases	6		6	2		2	4					8
Actuated Green, G (s)	43.9	43.9	43.9	30.1	30.1	30.1	18.2	18.2		21.2	18.2	53.2
Effective Green, g (s)	43.9	43.9	43.9	30.1	30.1	30.1	18.2	18.2		21.2	18.2	53.2
Actuated g/C Ratio	0.44	0.44	0.44	0.30	0.30	0.30	0.18	0.18		0.21	0.18	0.53
Clearance Time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	
Vehicle Extension (s)	3.0	4.9	4.9	4.7	4.7	4.7	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	243	1553	694	141	1065	476	129	337		727	339	842
v/s Ratio Prot	0.03	c0.28			c0.22			0.04		c0.18	c0.13	0.19
v/s Ratio Perm	0.12		0.04	0.06		0.02	0.09					0.10
v/c Ratio	0.34	0.64	0.09	0.20	0.73	0.08	0.48	0.24		0.87	0.73	0.54
Uniform Delay, d1	19.1	21.8	16.4	26.0	31.4	25.0	36.7	35.0		38.1	38.6	15.3
Progression Factor	1.00	1.00	1.00	1.37	1.38	4.94	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.8	2.0	0.3	2.5	3.6	0.2	2.8	0.4		11.2	7.6	0.7
Delay (s)	19.9	23.8	16.6	38.0	46.9	123.8	39.5	35.4		49.3	46.2	16.0
Level of Service	B	C	B	D	D	F	D	D		D	D	B
Approach Delay (s)		23.1			56.5			37.1			37.2	
Approach LOS		C			E			D			D	
Intersection Summary												
HCM 2000 Control Delay			37.8									D
HCM 2000 Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			100.0							22.1		
Intersection Capacity Utilization			74.0%									D
Analysis Period (min)			15									
c Critical Lane Group												

Queues

19: Laurel Canyon Boulevard & Ventura Place

06/24/2024



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	50	40	159	11	1079	35	76	1850
v/c Ratio	0.38	0.26	0.54	0.06	0.49	0.03	0.30	0.62
Control Delay	45.9	46.5	11.6	33.4	30.2	0.7	19.7	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0
Total Delay	45.9	46.5	11.6	33.4	30.7	0.7	19.7	17.2
Queue Length 50th (ft)	26	24	0	7	338	0	22	255
Queue Length 95th (ft)	63	56	44	m11	411	m0	83	#482
Internal Link Dist (ft)	123	395			458			232
Turn Bay Length (ft)			380	105		85	55	
Base Capacity (vph)	135	222	345	177	2186	1005	253	2979
Starvation Cap Reductn	0	0	0	0	592	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.18	0.46	0.06	0.68	0.03	0.30	0.62

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

19: Laurel Canyon Boulevard & Ventura Place

06/24/2024













Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	28	11	7	27	10	146	10	993	32	70	1654	48
Future Volume (vph)	28	11	7	27	10	146	10	993	32	70	1654	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		9.4			9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.91	
Frpb, ped/bikes		1.00			1.00	0.93	1.00	1.00	0.96	1.00	1.00	
Flpb, ped/bikes		0.96			1.00	1.00	1.00	1.00	1.00	0.99	1.00	
Frt		0.98			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.97			0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1703			1798	1479	1770	3539	1518	1760	5064	
Flt Permitted		0.79			0.97	1.00	0.95	1.00	1.00	0.23	1.00	
Satd. Flow (perm)		1391			1798	1479	1770	3539	1518	432	5064	
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)	30	12	8	29	11	159	11	1079	35	76	1798	52
RTOR Reduction (vph)	0	7	0	0	0	145	0	0	14	0	2	0
Lane Group Flow (vph)	0	43	0	0	40	14	11	1079	21	76	1848	0
Confl. Peds. (#/hr)	16					16			16	16		
Turn Type	Perm	NA		Split	NA	Perm	Prot	NA	Perm	Perm	NA	
Protected Phases		3		4	4		1	6			2	
Permitted Phases	3					4			6	2		
Actuated Green, G (s)		7.3			8.7	8.7	2.0	59.9	59.9	52.9	52.9	
Effective Green, g (s)		7.3			8.7	8.7	2.0	59.9	59.9	52.9	52.9	
Actuated g/C Ratio		0.07			0.09	0.09	0.02	0.60	0.60	0.53	0.53	
Clearance Time (s)		9.4			9.6	9.6	5.0	5.1	5.1	5.1	5.1	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	4.8	4.8	3.1	3.1	
Lane Grp Cap (vph)		101			156	128	35	2119	909	228	2678	
v/s Ratio Prot					c0.02		0.01	c0.30			c0.36	
v/s Ratio Perm		c0.03				0.01			0.01	0.18		
v/c Ratio		0.42			0.26	0.11	0.31	0.51	0.02	0.33	0.69	
Uniform Delay, d1		44.3			42.6	42.1	48.3	11.6	8.2	13.5	17.5	
Progression Factor		1.00			1.00	1.00	0.80	2.50	1.00	1.00	1.00	
Incremental Delay, d2		2.8			0.9	0.4	3.4	0.6	0.0	3.9	1.5	
Delay (s)		47.2			43.5	42.4	42.2	29.5	8.2	17.4	18.9	
Level of Service		D			D	D	D	C	A	B	B	
Approach Delay (s)		47.2			42.7			28.9			18.9	
Approach LOS		D			D			C			B	
Intersection Summary												
HCM 2000 Control Delay		24.2										
HCM 2000 Volume to Capacity ratio		0.62										
Actuated Cycle Length (s)		100.0							29.1			
Intersection Capacity Utilization		66.8%										
Analysis Period (min)		15										
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

20: Laurel Canyon Boulevard & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	513	434	286	554	132	289	828	168	583	867	172
Future Volume (veh/h)	148	513	434	286	554	132	289	828	168	583	867	172
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	0.99		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	161	558	472	311	602	143	314	900	183	634	942	187
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	314	1031	610	284	1003	597	359	1069	464	359	1069	593
Arrive On Green	0.03	0.10	0.10	0.08	0.28	0.28	0.10	0.30	0.30	0.03	0.10	0.10
Sat Flow, veh/h	1781	3554	1534	1781	3554	1533	3456	3554	1541	3456	3554	1541
Grp Volume(v), veh/h	161	558	472	311	602	143	314	900	183	634	942	187
Grp Sat Flow(s),veh/h/ln	1781	1777	1534	1781	1777	1533	1728	1777	1541	1728	1777	1541
Q Serve(g_s), s	6.3	15.0	13.8	7.6	14.6	6.3	9.0	23.7	9.4	10.4	26.2	5.6
Cycle Q Clear(g_c), s	6.3	15.0	13.8	7.6	14.6	6.3	9.0	23.7	9.4	10.4	26.2	5.6
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	314	1031	610	284	1003	597	359	1069	464	359	1069	593
V/C Ratio(X)	0.51	0.54	0.77	1.10	0.60	0.24	0.87	0.84	0.39	1.76	0.88	0.32
Avail Cap(c_a), veh/h	318	1031	610	284	1003	597	359	1080	468	359	1080	598
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	0.61	0.61	0.61	0.88	0.88	0.88	0.77	0.77	0.77	0.75	0.75	0.75
Uniform Delay (d), s/veh	25.0	38.9	18.7	32.8	31.0	20.8	44.2	32.7	27.7	48.3	43.3	10.9
Incr Delay (d2), s/veh	0.8	1.2	5.8	78.3	2.3	0.8	16.6	5.2	0.8	352.3	7.7	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.0	10.7	9.6	14.6	10.3	4.2	7.7	15.3	6.2	34.6	18.8	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.9	40.1	24.5	111.1	33.4	21.6	60.7	37.9	28.5	400.6	51.0	11.7
LnGrp LOS	C	D	C	F	C	C	E	D	C	F	D	B
Approach Vol, veh/h	1191			1056			1397			1763		
Approach Delay, s/veh	32.0			54.7			41.8			172.5		
Approach LOS	C			D			D			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	35.3	35.3	16.0	35.7	13.8	34.5	16.0	35.7				
Change Period (Y+Rc), s	5.4	6.3	5.6	5.6	5.6	6.3	5.6	5.6				
Max Green Setting (Gmax), s	28.7	28.7	10.4	30.4	8.4	27.7	10.4	30.4				
Max Q Clear Time (g_c+19.6)	17.0	17.0	11.0	28.2	8.3	16.6	12.4	25.7				
Green Ext Time (p_c), s	0.0	7.8	0.0	1.9	0.0	3.9	0.0	3.5				

Intersection Summary

HCM 6th Ctrl Delay 84.8

HCM 6th LOS F

Notes

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

Queues

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Lane Group	EBL	EBT	WBL	WBT	WBR2	NBT	NBR	SBL	SBT	SBR2
Lane Group Flow (vph)	665	792	63	882	113	37	45	65	200	62
v/c Ratio	1.15	0.44	0.64	1.20	0.38	0.13	0.11	0.34	1.32	0.20
Control Delay	94.6	0.2	91.9	150.6	51.4	51.3	0.5	63.4	231.0	1.4
Queue Delay	9.5	52.3	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	104.1	52.5	91.9	151.4	51.4	51.3	0.5	63.4	231.0	1.4
Queue Length 50th (ft)	~729	0	57	~512	89	29	0	56	~235	0
Queue Length 95th (ft)	m467	m0	#122	#646	151	64	0	105	#398	0
Internal Link Dist (ft)		48		634		86			226	
Turn Bay Length (ft)	90		95		55		30	90		90
Base Capacity (vph)	580	1810	102	733	300	309	420	190	151	316
Starvation Cap Reductn	346	1133	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	83	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	2.84	1.17	0.62	1.36	0.38	0.12	0.11	0.34	1.32	0.20

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	612	714	15	58	721	90	104	26	8	41	60	16
Future Volume (vph)	612	714	15	58	721	90	104	26	8	41	60	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.7		4.9	6.1		6.1		6.9	6.9	7.0	7.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.99		0.89		1.00	0.91	1.00	0.88
Flpb, ped/bikes	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	0.98		0.85		1.00	0.85	1.00	0.86
Flt Protected	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (prot)	1770	3524		1770	3438		1408		1795	1440	1770	1413
Flt Permitted	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (perm)	1770	3524		1770	3438		1408		1795	1440	1770	1413
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)	665	776	16	63	784	98	113	28	9	45	65	17
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	38	0	0
Lane Group Flow (vph)	665	791	0	63	882	0	113	0	37	7	65	200
Confl. Peds. (#/hr)	29		16	16		29	29	44		44	44	
Turn Type	Prot	NA		Prot	NA		Perm	Split	NA	Perm	Split	NA
Protected Phases	1 3	3 6		5	2			7	7		8	8
Permitted Phases							2			7		
Actuated Green, G (s)	47.3	70.9		6.5	28.9		28.9		23.0	23.0	15.1	15.1
Effective Green, g (s)	47.3	64.8		6.5	28.9		28.9		23.0	23.0	15.1	15.1
Actuated g/C Ratio	0.34	0.46		0.05	0.21		0.21		0.16	0.16	0.11	0.11
Clearance Time (s)				4.9	6.1		6.1		6.9	6.9	7.0	7.0
Vehicle Extension (s)				3.0	4.8		4.8		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	598	1631		82	709		290		294	236	190	152
v/s Ratio Prot	c0.38	0.22		0.04	c0.26				c0.02		0.04	c0.14
v/s Ratio Perm							0.08			0.01		
v/c Ratio	1.11	0.48		0.77	1.24		0.39		0.13	0.03	0.34	1.32
Uniform Delay, d1	46.4	26.0		66.0	55.5		47.9		49.9	49.1	57.8	62.5
Progression Factor	0.54	0.01		1.00	1.00		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	53.0	0.0		34.2	121.5		3.9		0.2	0.1	1.1	180.9
Delay (s)	78.0	0.2		100.2	177.0		51.8		50.1	49.2	58.9	243.3
Level of Service	E	A		F	F		D		D	D	E	F
Approach Delay (s)		35.7			159.1				49.6			171.2
Approach LOS		D			F				D			F
Intersection Summary												
HCM 2000 Control Delay			95.9			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			1.03									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			31.8			
Intersection Capacity Utilization			103.2%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Movement	SBR	SBR2
Lane Configurations		
Traffic Volume (vph)	168	57
Future Volume (vph)	168	57
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		7.0
Lane Util. Factor		1.00
Frpb, ped/bikes		0.78
Flpb, ped/bikes		1.00
Frt		0.85
Flt Protected		1.00
Satd. Flow (prot)		1235
Flt Permitted		1.00
Satd. Flow (perm)		1235
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	183	62
RTOR Reduction (vph)	0	55
Lane Group Flow (vph)	0	7
Confl. Peds. (#/hr)	44	44
Turn Type		Perm
Protected Phases		
Permitted Phases		8
Actuated Green, G (s)		15.1
Effective Green, g (s)		15.1
Actuated g/C Ratio		0.11
Clearance Time (s)		7.0
Vehicle Extension (s)		3.0
Lane Grp Cap (vph)		133
v/s Ratio Prot		
v/s Ratio Perm		0.01
v/c Ratio		0.05
Uniform Delay, d1		56.0
Progression Factor		1.00
Incremental Delay, d2		0.2
Delay (s)		56.2
Level of Service		E
Approach Delay (s)		
Approach LOS		
Intersection Summary		

HCM 6th Signalized Intersection Summary

22: Carpenter Avenue & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	704	96	111	915	22	60	4	84	10	30	6
Future Volume (veh/h)	18	704	96	111	915	22	60	4	84	10	30	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.95	0.91		0.90	0.93		0.90
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	20	765	104	121	995	24	65	4	91	11	33	7
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	276	1918	261	383	2178	53	143	26	156	104	284	281
Arrive On Green	0.62	0.62	0.62	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	553	3119	424	634	3541	85	468	129	787	300	1435	1422
Grp Volume(v), veh/h	20	436	433	121	499	520	160	0	0	44	0	7
Grp Sat Flow(s),veh/h/ln	553	1777	1766	634	1777	1849	1384	0	0	1735	0	1422
Q Serve(g_s), s	2.4	12.5	12.5	17.1	24.7	24.7	7.3	0.0	0.0	0.0	0.0	0.4
Cycle Q Clear(g_c), s	27.1	12.5	12.5	29.6	24.7	24.7	10.2	0.0	0.0	1.9	0.0	0.4
Prop In Lane	1.00		0.24	1.00		0.05	0.41		0.57	0.25		1.00
Lane Grp Cap(c), veh/h	276	1093	1086	383	1093	1137	325	0	0	388	0	281
V/C Ratio(X)	0.07	0.40	0.40	0.32	0.46	0.46	0.49	0.00	0.00	0.11	0.00	0.02
Avail Cap(c_a), veh/h	276	1093	1086	383	1093	1137	469	0	0	565	0	434
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	0.84	0.84	0.84	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.7	9.8	9.8	32.7	25.2	25.2	36.1	0.0	0.0	32.9	0.0	32.3
Incr Delay (d2), s/veh	0.5	1.0	1.0	1.8	1.2	1.1	1.2	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	8.1	8.0	5.5	17.2	17.7	6.6	0.0	0.0	1.6	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.2	10.8	10.8	34.5	26.3	26.3	37.3	0.0	0.0	33.1	0.0	32.4
LnGrp LOS	C	B	B	C	C	C	D	A	A	C	A	C
Approach Vol, veh/h	889			1140			160			51		
Approach Delay, s/veh	11.0			27.2			37.3			33.0		
Approach LOS	B			C			D			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	70.7			29.3			70.7			29.3		
Change Period (Y+Rc), s	* 9.2			9.5			* 9.2			9.5		
Max Green Setting (Gmax), s	* 51			30.5			* 51			30.5		
Max Q Clear Time (g_c+I1), s	29.1			3.9			31.6			12.2		
Green Ext Time (p_c), s	11.8			0.2			13.5			0.9		

Intersection Summary

HCM 6th Ctrl Delay	21.6
HCM 6th LOS	C

Notes

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

Queues

23: Ventura Boulevard & Colfax Avenue

06/24/2024






















Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	204	697	908	304	387
v/c Ratio	0.47	0.29	0.55	0.78	0.45
Control Delay	7.0	4.8	14.2	49.8	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	7.0	4.8	14.2	49.8	3.7
Queue Length 50th (ft)	8	13	132	183	7
Queue Length 95th (ft)	25	36	147	254	50
Internal Link Dist (ft)		981	464		
Turn Bay Length (ft)	160			360	360
Base Capacity (vph)	435	2371	1659	494	863
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.47	0.29	0.55	0.62	0.45
Intersection Summary					

HCM Signalized Intersection Capacity Analysis

23: Ventura Boulevard & Colfax Avenue

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					 							
Traffic Volume (vph)	188	641	0	0	689	146	0	0	0	280	0	356
Future Volume (vph)	188	641	0	0	689	146	0	0	0	280	0	356
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.4			5.4					5.4		5.7
Lane Util. Factor	1.00	0.95			0.95					1.00		1.00
Frt	1.00	1.00			0.97					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1770	3539			3446					1770		1583
Flt Permitted	0.20	1.00			1.00					0.95		1.00
Satd. Flow (perm)	378	3539			3446					1770		1583
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)	204	697	0	0	749	159	0	0	0	304	0	387
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	238
Lane Group Flow (vph)	204	697	0	0	908	0	0	0	0	304	0	149
Turn Type	pm+pt	NA			NA					pm+pt		pm+ov
Protected Phases	5	2			6			3		4		5
Permitted Phases	2						3			7		4
Actuated Green, G (s)	67.0	67.0			48.1					22.2		35.4
Effective Green, g (s)	67.0	67.0			48.1					22.2		35.4
Actuated g/C Ratio	0.67	0.67			0.48					0.22		0.35
Clearance Time (s)	5.7	5.4			5.4					5.4		5.7
Vehicle Extension (s)	3.0	4.3			4.5					3.0		3.0
Lane Grp Cap (vph)	437	2371			1657					392		560
v/s Ratio Prot	c0.06	0.20			c0.26					c0.17		0.04
v/s Ratio Perm	0.25											0.06
v/c Ratio	0.47	0.29			0.55					0.78		0.27
Uniform Delay, d1	8.9	6.8			18.3					36.6		23.0
Progression Factor	0.49	0.60			0.64					1.00		1.00
Incremental Delay, d2	0.7	0.3			1.3					9.3		0.3
Delay (s)	5.2	4.3			13.0					45.8		23.3
Level of Service	A	A			B					D		C
Approach Delay (s)		4.5			13.0			0.0			33.2	
Approach LOS		A			B			A			C	
Intersection Summary												
HCM 2000 Control Delay	15.5				HCM 2000 Level of Service				B			
HCM 2000 Volume to Capacity ratio	0.65											
Actuated Cycle Length (s)	100.0				Sum of lost time (s)				22.8			
Intersection Capacity Utilization	62.2%				ICU Level of Service				B			
Analysis Period (min)	15											
c Critical Lane Group												

Queues

24: Berry Drive & Ventura Boulevard

06/24/2024



Lane Group	EBT	WBL	WBT	NBT
Lane Group Flow (vph)	1947	40	935	61
v/c Ratio	0.67	0.33	0.32	0.26
Control Delay	4.3	14.4	4.7	2.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.3	14.4	4.7	2.8
Queue Length 50th (ft)	130	13	158	0
Queue Length 95th (ft)	175	m20	17	1
Internal Link Dist (ft)	342		273	287
Turn Bay Length (ft)		65		
Base Capacity (vph)	2908	123	2933	394
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.67	0.33	0.32	0.15



















Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

24: Berry Drive & Ventura Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1681	110	37	860	0	18	0	38	0	0	0
Future Volume (vph)	0	1681	110	37	860	0	18	0	38	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0			9.4				
Lane Util. Factor		0.95		1.00	0.95			1.00				
Frt		0.99		1.00	1.00			0.91				
Flt Protected		1.00		0.95	1.00			0.98				
Satd. Flow (prot)		3506		1770	3539			1666				
Flt Permitted		1.00		0.08	1.00			0.98				
Satd. Flow (perm)		3506		150	3539			1666				
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)	0	1827	120	40	935	0	20	0	41	0	0	0
RTOR Reduction (vph)	0	2	0	0	0	0	0	58	0	0	0	0
Lane Group Flow (vph)	0	1945	0	40	935	0	0	3	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		6			2		3	3			4	
Permitted Phases	6			2						4		
Actuated Green, G (s)		80.0		80.0	80.0			5.6				
Effective Green, g (s)		80.0		80.0	80.0			5.6				
Actuated g/C Ratio		0.80		0.80	0.80			0.06				
Clearance Time (s)		5.0		5.0	5.0			9.4				
Vehicle Extension (s)		4.9		4.0	4.0			3.0				
Lane Grp Cap (vph)		2804		120	2831			93				
v/s Ratio Prot		c0.55			0.26			c0.00				
v/s Ratio Perm				0.27								
v/c Ratio		0.69		0.33	0.33			0.04				
Uniform Delay, d1		4.5		2.7	2.7			44.6				
Progression Factor		0.67		1.90	1.64			1.00				
Incremental Delay, d2		1.4		6.5	0.3			0.2				
Delay (s)		4.4		11.7	4.7			44.8				
Level of Service		A		B	A			D				
Approach Delay (s)		4.4			5.0			44.8			0.0	
Approach LOS		A			A			D			A	
Intersection Summary												
HCM 2000 Control Delay			5.4			HCM 2000 Level of Service			A			
HCM 2000 Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			23.7			
Intersection Capacity Utilization			67.8%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

25: Ventura Boulevard & Tujunga Avenue

06/24/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	132	913	884	243	317
v/c Ratio	0.30	0.37	0.46	0.39	0.54
Control Delay	9.1	9.4	15.3	36.4	23.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	9.1	9.4	15.3	36.4	23.3
Queue Length 50th (ft)	30	154	162	71	128
Queue Length 95th (ft)	m64	236	263	95	181
Internal Link Dist (ft)		426	233	3083	
Turn Bay Length (ft)	180			100	60
Base Capacity (vph)	450	2499	1915	1218	588
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.29	0.37	0.46	0.20	0.54

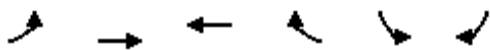
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

25: Ventura Boulevard & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	121	840	717	97	224	292
Future Volume (vph)	121	840	717	97	224	292
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.5	5.5		5.5	5.6
Lane Util. Factor	1.00	0.95	0.95		0.97	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3476		3433	1583
Flt Permitted	0.24	1.00	1.00		0.95	1.00
Satd. Flow (perm)	442	3539	3476		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	132	913	779	105	243	317
RTOR Reduction (vph)	0	0	8	0	0	49
Lane Group Flow (vph)	132	913	876	0	243	268
Turn Type	pm+pt	NA	NA		Prot	pt+ov
Protected Phases	1	6	2		4	1 7
Permitted Phases	6					4
Actuated Green, G (s)	70.6	70.6	54.8		18.4	34.1
Effective Green, g (s)	70.6	70.6	54.8		18.4	28.6
Actuated g/C Ratio	0.71	0.71	0.55		0.18	0.29
Clearance Time (s)	5.6	5.5	5.5		5.5	
Vehicle Extension (s)	3.0	4.4	4.9		3.0	
Lane Grp Cap (vph)	447	2498	1904		631	452
v/s Ratio Prot	0.03	0.26	c0.25		0.07	c0.17
v/s Ratio Perm	0.18					
v/c Ratio	0.30	0.37	0.46		0.39	0.59
Uniform Delay, d1	6.3	5.8	13.7		35.8	30.7
Progression Factor	1.36	1.38	1.00		1.00	1.00
Incremental Delay, d2	0.3	0.3	0.8		0.4	2.1
Delay (s)	8.8	8.3	14.5		36.2	32.8
Level of Service	A	A	B		D	C
Approach Delay (s)		8.4	14.5		34.3	
Approach LOS		A	B		C	
Intersection Summary						
HCM 2000 Control Delay			16.4		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.54			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	22.1
Intersection Capacity Utilization			53.4%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

26: Laurel Canyon Boulevard & Maxwellton Road

06/24/2024









Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Volume (veh/h)	120	0	75	0	0	0	2	1081	0	0	1486	97
Future Volume (veh/h)	120	0	75	0	0	0	2	1081	0	0	1486	97
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.83				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
Work Zone On Approach	No						No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h	130	0	82				2	1175	0	0	1615	105
Peak Hour Factor	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	0	0	2	2
Cap, veh/h	218	0	138				41	1987	0	0	1934	125
Arrive On Green	0.23	0.00	0.23				0.57	0.57	0.00	0.00	0.57	0.57
Sat Flow, veh/h	960	0	605				1	3567	0	0	3482	219
Grp Volume(v), veh/h	212	0	0				631	546	0	0	842	878
Grp Sat Flow(s),veh/h/ln	1565	0	0				1866	1617	0	0	1777	1831
Q Serve(g_s), s	10.9	0.0	0.0				0.0	19.7	0.0	0.0	34.8	35.6
Cycle Q Clear(g_c), s	10.9	0.0	0.0				19.7	19.7	0.0	0.0	34.8	35.6
Prop In Lane	0.61		0.39				0.00		0.00	0.00		0.12
Lane Grp Cap(c), veh/h	356	0	0				1105	923	0	0	1014	1045
V/C Ratio(X)	0.60	0.00	0.00				0.57	0.59	0.00	0.00	0.83	0.84
Avail Cap(c_a), veh/h	431	0	0				1105	923	0	0	1014	1045
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				0.83	0.83	0.00	0.00	0.37	0.37
Uniform Delay (d), s/veh	31.1	0.0	0.0				12.5	12.5	0.0	0.0	15.8	15.9
Incr Delay (d2), s/veh	1.6	0.0	0.0				1.8	2.3	0.0	0.0	3.1	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.6	0.0	0.0				12.0	10.8	0.0	0.0	16.7	17.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.7	0.0	0.0				14.3	14.9	0.0	0.0	18.9	19.2
LnGrp LOS	C	A	A				B	B	A	A	B	B
Approach Vol, veh/h		212						1177			1720	
Approach Delay, s/veh		32.7						14.6			19.0	
Approach LOS		C						B			B	
Timer - Assigned Phs		2		4			6					
Phs Duration (G+Y+Rc), s		60.4		29.6			60.4					
Change Period (Y+Rc), s		9.0		9.2			9.0					
Max Green Setting (Gmax), s		47.0		24.8			47.0					
Max Q Clear Time (g_c+I1), s		37.6		12.9			21.7					
Green Ext Time (p_c), s		8.8		1.0			16.3					
Intersection Summary												
HCM 6th Ctrl Delay			18.3									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary

27: Laurel Canyon Boulevard & Laurel Terrace Drive/Sunshine Terrace Drive

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	15	249	93	22	89	57	1096	47	22	1523	18
Future Volume (veh/h)	16	15	249	93	22	89	57	1096	47	22	1523	18
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	17	16	271	101	24	97	62	1191	51	24	1655	20
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	43	30	340	126	38	93	80	2407	103	299	2195	26
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.04	0.69	0.69	0.61	0.61	0.61
Sat Flow, veh/h	52	132	1512	364	168	413	1781	3472	149	448	3596	43
Grp Volume(v), veh/h	304	0	0	222	0	0	62	609	633	24	817	858
Grp Sat Flow(s),veh/h/ln	1696	0	0	945	0	0	1781	1777	1844	448	1777	1863
Q Serve(g_s), s	0.0	0.0	0.0	6.3	0.0	0.0	4.1	19.2	19.2	3.2	39.8	40.0
Cycle Q Clear(g_c), s	20.7	0.0	0.0	27.0	0.0	0.0	4.1	19.2	19.2	12.4	39.8	40.0
Prop In Lane	0.06		0.89	0.45		0.44	1.00		0.08	1.00		0.02
Lane Grp Cap(c), veh/h	413	0	0	256	0	0	80	1232	1278	299	1084	1137
V/C Ratio(X)	0.74	0.00	0.00	0.87	0.00	0.00	0.78	0.49	0.50	0.08	0.75	0.75
Avail Cap(c_a), veh/h	413	0	0	256	0	0	110	1232	1278	299	1084	1137
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.44	0.44	0.44
Uniform Delay (d), s/veh	44.3	0.0	0.0	47.5	0.0	0.0	56.7	8.6	8.6	13.8	16.9	16.9
Incr Delay (d2), s/veh	6.7	0.0	0.0	25.3	0.0	0.0	20.8	1.4	1.4	0.2	2.2	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(95%),veh/ln	11.4	0.0	0.0	13.3	0.0	0.0	4.2	11.5	11.8	0.6	19.9	20.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.0	0.0	0.0	72.8	0.0	0.0	77.5	10.0	10.0	14.1	19.1	19.0
LnGrp LOS	D	A	A	E	A	A	E	B	A	B	B	B
Approach Vol, veh/h	304		222				1304			1699		
Approach Delay, s/veh	51.0		72.8				13.2			19.0		
Approach LOS	D		E				B			B		
Timer - Assigned Phs	1	2	4		6		8					
Phs Duration (G+Y+Rc), s	30.0	78.0	32.0		88.0		32.0					
Change Period (Y+Rc), s	4.6	4.8	* 5		4.8		* 5					
Max Green Setting (Gmax), s	71.2	71.2	* 27		83.2		* 27					
Max Q Clear Time (g_c+I1), s	42.0	42.0	22.7		21.2		29.0					
Green Ext Time (p_c), s	0.0	15.8	0.8		11.3		0.0					

Intersection Summary

HCM 6th Ctrl Delay 23.0

HCM 6th LOS C

Notes

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

Queues

28: Laurel Canyon Boulevard & Fryman Road

06/24/2024



Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	248	7	23	1033	2075
v/c Ratio	0.71	0.02	0.28	0.43	0.88
Control Delay	44.2	26.0	18.6	7.7	18.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.2	26.0	18.6	7.7	18.0
Queue Length 50th (ft)	132	3	5	121	420
Queue Length 95th (ft)	195	14	29	200	#771
Internal Link Dist (ft)				236	183
Turn Bay Length (ft)			145		
Base Capacity (vph)	542	485	82	2412	2370
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.46	0.01	0.28	0.43	0.88








Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

28: Laurel Canyon Boulevard & Fryman Road

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	228	0	6	0	0	0	21	950	0	0	1623	286
Future Volume (vph)	228	0	6	0	0	0	21	950	0	0	1623	286
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4		5.4				5.4	5.4			5.4	
Lane Util. Factor	1.00		1.00				1.00	0.95			0.95	
Frt	1.00		0.85				1.00	1.00			0.98	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	3539			3460	
Flt Permitted	0.95		1.00				0.07	1.00			1.00	
Satd. Flow (perm)	1770		1583				122	3539			3460	
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)	248	0	7	0	0	0	23	1033	0	0	1764	311
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	12	0
Lane Group Flow (vph)	248	0	7	0	0	0	23	1033	0	0	2063	0
Turn Type	Perm		Perm				Perm	NA		Perm	NA	
Protected Phases								2			6	
Permitted Phases	8		8				2			6		
Actuated Green, G (s)	17.9		17.9				61.3	61.3			61.3	
Effective Green, g (s)	17.9		17.9				61.3	61.3			61.3	
Actuated g/C Ratio	0.20		0.20				0.68	0.68			0.68	
Clearance Time (s)	5.4		5.4				5.4	5.4			5.4	
Vehicle Extension (s)	3.0		3.0				4.8	4.8			5.1	
Lane Grp Cap (vph)	352		314				83	2410			2356	
v/s Ratio Prot								0.29			c0.60	
v/s Ratio Perm	c0.14		0.00				0.19					
v/c Ratio	0.70		0.02				0.28	0.43			0.88	
Uniform Delay, d1	33.6		29.0				5.6	6.5			11.3	
Progression Factor	1.00		1.00				1.00	1.00			1.00	
Incremental Delay, d2	6.3		0.0				8.1	0.6			4.9	
Delay (s)	39.9		29.0				13.8	7.0			16.3	
Level of Service	D		C				B	A			B	
Approach Delay (s)		39.6			0.0			7.2			16.3	
Approach LOS		D			A			A			B	
Intersection Summary												
HCM 2000 Control Delay			15.2				HCM 2000 Level of Service				B	
HCM 2000 Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			10.8		
Intersection Capacity Utilization			74.4%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th TWSC
29: Laurel Canyon Boulevard & Woodbridge Street

06/24/2024

Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	3	0	16	4	0	47	14	1221	4	125	1893	21
Future Vol, veh/h	3	0	16	4	0	47	14	1221	4	125	1893	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	65	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	17	4	0	51	15	1327	4	136	2058	23

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	3036	3703	1041	2660	3712	666	2081	0	0	1331	0	0
Stage 1	2342	2342	-	1359	1359	-	-	-	-	-	-	-
Stage 2	694	1361	-	1301	2353	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	6	5	227	11	4	402	263	-	-	514	-	-
Stage 1	37	69	-	157	215	-	-	-	-	-	-	-
Stage 2	399	215	-	170	68	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	4	3	227	8	3	402	263	-	-	514	-	-
Mov Cap-2 Maneuver	4	3	-	8	3	-	-	-	-	-	-	-
Stage 1	35	51	-	148	203	-	-	-	-	-	-	-
Stage 2	328	203	-	115	50	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s\$	391.1		110.1		0.2		0.9	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	263	-	-	23 83	514	-	-
HCM Lane V/C Ratio	0.058	-	-	0.898 0.668	0.264	-	-
HCM Control Delay (s)	19.5	-	-	\$ 391.1 110.1	14.5	-	-
HCM Lane LOS	C	-	-	F F	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	2.6 3.2	1.1	-	-

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

HCM 6th TWSC
30: Valleyheart Drive (North) & Laurel Canyon Boulevard

06/24/2024

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	2	0	10	6	0	27	13	1214	8	29	1899	7
Future Vol, veh/h	2	0	10	6	0	27	13	1214	8	29	1899	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	40	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	11	7	0	29	14	1320	9	32	2064	8





Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2820	3489	1036	2449	3489	665	2072	0	0	1329	0	0
Stage 1	2132	2132	-	1353	1353	-	-	-	-	-	-	-
Stage 2	688	1357	-	1096	2136	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	8	6	228	16	6	403	265	-	-	515	-	-
Stage 1	51	88	-	158	216	-	-	-	-	-	-	-
Stage 2	403	215	-	228	88	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	7	5	228	14	5	403	265	-	-	515	-	-
Mov Cap-2 Maneuver	7	5	-	14	5	-	-	-	-	-	-	-
Stage 1	48	83	-	150	205	-	-	-	-	-	-	-
Stage 2	354	204	-	204	83	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	153.6		108.7		0.2		0.2	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	265	-	-	36 67	515	-	-
HCM Lane V/C Ratio	0.053	-	-	0.362 0.535	0.061	-	-
HCM Control Delay (s)	19.3	-	-	153.6 108.7	12.4	-	-
HCM Lane LOS	C	-	-	F F	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.2 2.2	0.2	-	-

Intersection

Int Delay, s/veh 1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	93	1146	18	121	1779
Future Vol, veh/h	5	93	1146	18	121	1779
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	35	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	101	1246	20	132	1934

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	2487	633	0
Stage 1	1256	-	-
Stage 2	1231	-	-
Critical Hdwy	6.84	6.94	-
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	-
Pot Cap-1 Maneuver	24	422	-
Stage 1	232	-	-
Stage 2	239	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	18	422	-
Mov Cap-2 Maneuver	18	-	-
Stage 1	232	-	-
Stage 2	181	-	-

Approach	WB	NB	SB
HCM Control Delay, s	42.9	0	0.9
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	197	545
HCM Lane V/C Ratio	-	-	0.541	0.241
HCM Control Delay (s)	-	-	42.9	13.7
HCM Lane LOS	-	-	E	B
HCM 95th %tile Q(veh)	-	-	2.8	0.9

HCM 6th AWSC
32: Radford Avenue & Sarah Street

06/24/2024

Intersection

Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	12	1	0	3	6	54	2	36	1	114	103	13
Future Vol, veh/h	12	1	0	3	6	54	2	36	1	114	103	13
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	1	0	3	7	59	2	39	1	124	112	14
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0




Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8	7.4	7.6	9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	92%	5%	50%
Vol Thru, %	92%	8%	10%	45%
Vol Right, %	3%	0%	86%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	39	13	63	230
LT Vol	2	12	3	114
Through Vol	36	1	6	103
RT Vol	1	0	54	13
Lane Flow Rate	42	14	68	250
Geometry Grp	1	1	1	1
Degree of Util (X)	0.051	0.019	0.078	0.29
Departure Headway (Hd)	4.372	4.851	4.101	4.177
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	824	742	879	855
Service Time	2.372	2.856	2.103	2.233
HCM Lane V/C Ratio	0.051	0.019	0.077	0.292
HCM Control Delay	7.6	8	7.4	9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.1	0.3	1.2

Intersection

Intersection Delay, s/veh 0

Intersection LOS -

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	0	0	0
HCM LOS	-	-	-

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0
LT Vol	0	0	0
Through Vol	0	0	0
RT Vol	0	0	0
Lane Flow Rate	0	0	0
Geometry Grp	1	1	1
Degree of Util (X)	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0
HCM Control Delay	6.9	6.9	6.9
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

HCM 6th AWSC

54: Radford Avenue & Radford Gate

06/24/2024

Intersection

Intersection Delay, s/veh 0

Intersection LOS -

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

Intersection

Intersection Delay, s/veh 0

Intersection LOS -




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

HCM 6th TWSC
56: Colfax Avenue & Colfax Gate

06/24/2024

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1	1	0
Stage 1	1	-	-
Stage 2	0	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	1022	1084	0
Stage 1	1022	-	0
Stage 2	-	-	0
Platoon blocked, %			-
Mov Cap-1 Maneuver	1022	1084	-
Mov Cap-2 Maneuver	1022	-	-
Stage 1	1022	-	-
Stage 2	-	-	-

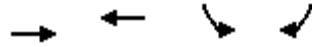
Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

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

Queues

121: Ventura Boulevard & Ventura PI

06/24/2024



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1388	995	70	30
v/c Ratio	1.43	0.48	0.10	0.09
Control Delay	235.3	8.7	46.9	15.6
Queue Delay	1.8	51.3	0.0	0.0
Total Delay	237.1	60.0	46.9	15.6
Queue Length 50th (ft)	~928	55	27	0
Queue Length 95th (ft)	#1069	m32	50	29
Internal Link Dist (ft)	509	48	136	
Turn Bay Length (ft)				40
Base Capacity (vph)	973	2070	669	332
Starvation Cap Reductn	0	1277	0	0
Spillback Cap Reductn	267	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.97	1.25	0.10	0.09

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

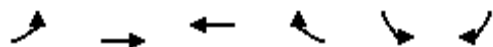
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

121: Ventura Boulevard & Ventura PI

06/24/2024

































Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	↑
Traffic Volume (vph)	0	1277	915	0	64	28
Future Volume (vph)	0	1277	915	0	64	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.1	6.1		5.7	5.7
Lane Util. Factor		0.95	0.95		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3433	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1388	995	0	70	30
RTOR Reduction (vph)	0	0	0	0	0	24
Lane Group Flow (vph)	0	1388	995	0	70	6
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2 4		3	
Permitted Phases						3
Actuated Green, G (s)		37.5	80.9		27.3	27.3
Effective Green, g (s)		37.5	80.9		27.3	27.3
Actuated g/C Ratio		0.27	0.58		0.20	0.20
Clearance Time (s)		6.1			5.7	5.7
Vehicle Extension (s)		4.6			3.0	3.0
Lane Grp Cap (vph)		947	2045		669	308
v/s Ratio Prot		c0.39	c0.28		c0.02	
v/s Ratio Perm						0.00
v/c Ratio		1.47	0.49		0.10	0.02
Uniform Delay, d1		51.2	17.4		46.3	45.5
Progression Factor		1.00	0.51		1.00	1.00
Incremental Delay, d2		215.4	0.0		0.1	0.0
Delay (s)		266.6	8.8		46.4	45.6
Level of Service		F	A		D	D
Approach Delay (s)		266.6	8.8		46.1	
Approach LOS		F	A		D	
Intersection Summary						
HCM 2000 Control Delay		154.4		HCM 2000 Level of Service		F
HCM 2000 Volume to Capacity ratio		0.81				
Actuated Cycle Length (s)		140.0		Sum of lost time (s)		31.8
Intersection Capacity Utilization		51.8%		ICU Level of Service		A
Analysis Period (min)		15				
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

1: Riverside Drive & Laurel Canyon Boulevard









06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 		 	 			 			  	
Traffic Volume (veh/h)	310	939	143	111	484	105	177	738	116	156	767	221
Future Volume (veh/h)	310	939	143	111	484	105	177	738	116	156	767	221
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	337	1021	155	121	526	114	192	802	126	170	834	240
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	180	1032	460	255	927	413	309	1314	703	308	1427	408
Arrive On Green	0.10	0.29	0.29	0.02	0.09	0.09	0.08	0.37	0.37	0.08	0.36	0.36
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	1781	3554	1585	1781	3944	1128
Grp Volume(v), veh/h	337	1021	155	121	526	114	192	802	126	170	719	355
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1781	1777	1585	1781	1702	1667
Q Serve(g_s), s	12.1	34.3	9.2	4.1	17.1	8.1	8.0	22.0	5.8	7.1	20.5	20.7
Cycle Q Clear(g_c), s	12.1	34.3	9.2	4.1	17.1	8.1	8.0	22.0	5.8	7.1	20.5	20.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.68
Lane Grp Cap(c), veh/h	180	1032	460	255	927	413	309	1314	703	308	1231	603
V/C Ratio(X)	1.88	0.99	0.34	0.48	0.57	0.28	0.62	0.61	0.18	0.55	0.58	0.59
Avail Cap(c_a), veh/h	180	1032	460	357	927	413	329	1314	703	326	1231	603
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	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	54.0	42.4	33.5	56.3	48.3	44.2	23.5	30.8	20.2	23.5	31.0	31.0
Incr Delay (d2), s/veh	414.7	25.5	2.0	1.4	2.5	1.6	2.8	1.8	0.5	1.8	2.0	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(95%),veh/ln	41.2	25.2	6.7	3.4	13.2	6.3	6.4	14.3	3.9	5.5	13.3	13.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	468.7	67.9	35.4	57.6	50.8	45.9	26.2	32.6	20.7	25.3	33.0	35.2
LnGrp LOS	F	E	D	E	D	D	C	C	C	C	C	D
Approach Vol, veh/h		1513			761			1120			1244	
Approach Delay, s/veh		153.8			51.2			30.2			32.6	
Approach LOS		F			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.7	49.3	18.0	37.0	14.7	50.3	14.4	40.6				
Change Period (Y+Rc), s	5.6	5.9	5.9	* 5.7	5.6	5.9	5.6	* 5.7				
Max Green Setting (Gmax), s	11.4	42.1	12.1	* 31	10.4	43.1	12.4	* 31				
Max Q Clear Time (g_c+I1), s	10.0	22.7	14.1	19.1	9.1	24.0	6.1	36.3				
Green Ext Time (p_c), s	0.1	6.8	0.0	2.9	0.1	5.7	0.2	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			74.6									
HCM 6th LOS			E									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
User approved changes to right turn type.												

HCM 6th TWSC

2: Riverside Drive & Radford Avenue

























06/24/2024

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	954	32	36	963	7	16	2	28	1	0	8
Future Vol, veh/h	11	954	32	36	963	7	16	2	28	1	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	105	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	1037	35	39	1047	8	17	2	30	1	0	9
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1055	0	0	1072	0	0	1663	2194	519	1673	2225	528
Stage 1	-	-	-	-	-	-	1061	1061	-	1129	1129	-
Stage 2	-	-	-	-	-	-	602	1133	-	544	1096	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	656	-	-	646	-	-	64	45	502	62	43	495
Stage 1	-	-	-	-	-	-	239	299	-	217	277	-
Stage 2	-	-	-	-	-	-	453	276	-	491	287	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	656	-	-	646	-	-	59	42	502	53	40	495
Mov Cap-2 Maneuver	-	-	-	-	-	-	59	42	-	53	40	-
Stage 1	-	-	-	-	-	-	235	294	-	213	260	-
Stage 2	-	-	-	-	-	-	418	259	-	449	282	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.4			53			19.6		
HCM LOS							F			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	123	656	-	-	646	-	-	257				
HCM Lane V/C Ratio	0.407	0.018	-	-	0.061	-	-	0.038				
HCM Control Delay (s)	53	10.6	-	-	10.9	-	-	19.6				
HCM Lane LOS	F	B	-	-	B	-	-	C				
HCM 95th %tile Q(veh)	1.7	0.1	-	-	0.2	-	-	0.1				

HCM 6th Signalized Intersection Summary

3: Colfax Avenue & Riverside Drive

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	625	180	173	697	39	145	468	83	29	313	80
Future Volume (veh/h)	148	625	180	173	697	39	145	468	83	29	313	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	161	679	196	188	758	42	158	509	90	32	340	87
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	265	1356	605	258	1356	605	425	826	700	425	826	700
Arrive On Green	0.26	0.26	0.26	0.38	0.38	0.38	0.88	0.88	0.88	0.44	0.44	0.44
Sat Flow, veh/h	680	3554	1585	634	3554	1585	961	1870	1585	820	1870	1585
Grp Volume(v), veh/h	161	679	196	188	758	42	158	509	90	32	340	87
Grp Sat Flow(s),veh/h/ln	680	1777	1585	634	1777	1585	961	1870	1585	820	1870	1585
Q Serve(g_s), s	12.8	9.8	6.0	13.1	10.1	1.0	5.4	4.2	0.4	1.5	7.4	1.9
Cycle Q Clear(g_c), s	22.9	9.8	6.0	22.9	10.1	1.0	12.8	4.2	0.4	5.7	7.4	1.9
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	265	1356	605	258	1356	605	425	826	700	425	826	700
V/C Ratio(X)	0.61	0.50	0.32	0.73	0.56	0.07	0.37	0.62	0.13	0.08	0.41	0.12
Avail Cap(c_a), veh/h	265	1356	605	258	1356	605	425	826	700	425	826	700
HCM Platoon Ratio	0.67	0.67	0.67	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	0.94	0.94	0.94	0.69	0.69	0.69	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.0	17.4	16.0	25.2	14.6	11.8	4.7	2.2	2.0	12.3	11.4	9.9
Incr Delay (d2), s/veh	9.9	1.3	1.4	15.5	1.6	0.2	1.7	2.4	0.3	0.3	1.5	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(95%),veh/ln	5.5	7.1	3.9	6.5	6.6	0.6	0.9	2.2	0.3	0.5	5.2	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.9	18.8	17.5	40.7	16.1	12.0	6.4	4.6	2.2	12.7	12.9	10.3
LnGrp LOS	D	B	B	D	B	B	A	A	A	B	B	B
Approach Vol, veh/h	1036			988			757			459		
Approach Delay, s/veh	21.5			20.6			4.7			12.4		
Approach LOS	C			C			A			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	28.0			32.0			28.0			32.0		
Change Period (Y+Rc), s	* 5.1			* 5.5			* 5.1			* 5.5		
Max Green Setting (Gmax), s	* 23			* 27			* 23			* 27		
Max Q Clear Time (g_c+I1), s	24.9			14.8			24.9			9.4		
Green Ext Time (p_c), s	0.0			3.4			0.0			2.2		
Intersection Summary												
HCM 6th Ctrl Delay	16.0											
HCM 6th LOS	B											
Notes												

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

Queues

4: Riverside Drive & SR 170 Southbound Off-Ramp

06/24/2024



Lane Group	EBT	WBL	WBT	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	828	5	728	14	225	215	210
v/c Ratio	0.40	0.02	0.35	0.04	0.61	0.47	0.43
Control Delay	10.6	9.4	9.6	0.2	31.4	10.2	6.3
Queue Delay	0.5	0.0	0.3	0.1	0.3	0.4	0.0
Total Delay	11.0	9.4	9.9	0.3	31.7	10.6	6.3
Queue Length 50th (ft)	83	1	73	0	90	18	0
Queue Length 95th (ft)	207	m5	210	0	151	72	48
Internal Link Dist (ft)	2214		245	105		344	
Turn Bay Length (ft)		25			140		150
Base Capacity (vph)	2070	309	2071	343	457	524	562
Starvation Cap Reductn	0	0	688	0	0	0	0
Spillback Cap Reductn	715	0	0	74	32	71	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.02	0.53	0.05	0.53	0.47	0.37


Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

4: Riverside Drive & SR 170 Southbound Off-Ramp













06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↑	↑↑			↑↓		↑	↑↓	↑
Traffic Volume (vph)	0	757	5	5	670	0	0	0	13	247	6	345
Future Volume (vph)	0	757	5	5	670	0	0	0	13	247	6	345
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Lane Util. Factor		0.95		1.00	0.95			1.00		0.95	0.91	0.95
Frt		1.00		1.00	1.00			0.86		1.00	0.88	0.85
Flt Protected		1.00		0.95	1.00			1.00		0.95	0.99	1.00
Satd. Flow (prot)		3536		1770	3539			1611		1681	1485	1504
Flt Permitted		1.00		0.28	1.00			1.00		0.95	0.99	1.00
Satd. Flow (perm)		3536		529	3539			1611		1681	1485	1504
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)	0	823	5	5	728	0	0	0	14	268	7	375
RTOR Reduction (vph)	0	0	0	0	0	0	0	14	0	0	129	164
Lane Group Flow (vph)	0	828	0	5	728	0	0	0	0	225	86	46
Turn Type		NA		Perm	NA			NA		Split	NA	Perm
Protected Phases		6			2			4		3	3	
Permitted Phases				2			4					3
Actuated Green, G (s)		36.1		36.1	36.1			1.6		15.3	15.3	15.3
Effective Green, g (s)		36.1		36.1	36.1			1.6		15.3	15.3	15.3
Actuated g/C Ratio		0.52		0.52	0.52			0.02		0.22	0.22	0.22
Clearance Time (s)		4.9		4.9	4.9			6.1		6.0	6.0	6.0
Vehicle Extension (s)		3.8		2.4	2.4			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1823		272	1825			36		367	324	328
v/s Ratio Prot		c0.23			0.21			c0.00		c0.13	0.06	
v/s Ratio Perm				0.01								0.03
v/c Ratio		0.45		0.02	0.40			0.01		0.61	0.27	0.14
Uniform Delay, d1		10.7		8.3	10.3			33.4		24.7	22.7	22.0
Progression Factor		1.00		0.86	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2		0.8		0.1	0.6			0.1		3.0	0.4	0.2
Delay (s)		11.5		7.3	11.0			33.5		27.7	23.1	22.2
Level of Service		B		A	B			C		C	C	C
Approach Delay (s)		11.5			10.9			33.5			24.4	
Approach LOS		B			B			C			C	
Intersection Summary												
HCM 2000 Control Delay			15.2			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.49									
Actuated Cycle Length (s)			70.0			Sum of lost time (s)			17.0			
Intersection Capacity Utilization			53.6%			ICU Level of Service			A			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	NWL	NWR
Lane Group Flow (vph)	221	635	285	208	348	132	30	791	61	527	340	123
v/c Ratio	0.69	0.91	0.92	1.11	0.44	0.38	0.13	0.87	0.39	0.41	0.66	0.57
Control Delay	48.4	71.8	87.4	135.6	49.0	49.8	47.4	61.1	68.1	34.5	62.0	64.9
Queue Delay	0.0	47.8	48.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.4	119.6	135.4	135.6	49.0	49.8	47.4	61.1	68.1	34.5	62.0	64.9
Queue Length 50th (ft)	160	308	276	~161	144	103	22	375	54	185	153	116
Queue Length 95th (ft)	185	#436	#483	#328	195	168	56	#601	101	255	195	183
Internal Link Dist (ft)		245			745			2580		383	758	
Turn Bay Length (ft)	140		230	85		110	270		290		215	
Base Capacity (vph)	321	700	311	187	791	353	223	912	157	1285	695	292
Starvation Cap Reductn	0	171	55	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	1.20	1.11	1.11	0.44	0.37	0.13	0.87	0.39	0.41	0.49	0.42

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.





















95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024

												
Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Traffic Volume (vph)	203	408	271	167	16	176	320	121	28	626	86	17
Future Volume (vph)	203	408	271	167	16	176	320	121	28	626	86	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Lane Util. Factor	1.00	0.91	0.91			1.00	0.95	1.00	1.00	0.95		
Frt	1.00	0.95	0.85			1.00	1.00	0.85	1.00	0.98		
Flt Protected	0.95	1.00	1.00			0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	1770	3236	1441			1770	3539	1583	1770	3465		
Flt Permitted	0.45	1.00	1.00			0.13	1.00	1.00	0.46	1.00		
Satd. Flow (perm)	843	3236	1441			251	3539	1583	850	3465		
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)	221	443	295	182	17	191	348	132	30	680	93	18
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	221	635	285	0	0	208	348	132	30	791	0	0
Turn Type	pm+pt	NA	Perm		pm+pt	pm+pt	NA	Perm	Perm	NA		
Protected Phases	1	6			5	5	2			8		
Permitted Phases	6		6		2	2		2	8			
Actuated Green, G (s)	39.2	28.7	28.7			40.1	29.7	29.7	36.9	36.9		
Effective Green, g (s)	39.2	28.7	28.7			40.1	29.7	29.7	36.9	36.9		
Actuated g/C Ratio	0.28	0.20	0.20			0.29	0.21	0.21	0.26	0.26		
Clearance Time (s)	5.5	6.7	6.7			6.6	6.7	6.7	6.3	6.3		
Vehicle Extension (s)	3.0	3.9	3.9			3.0	4.6	4.6	4.7	4.7		
Lane Grp Cap (vph)	305	663	295			184	750	335	224	913		
v/s Ratio Prot	0.05	0.20				c0.08	0.10			c0.23		
v/s Ratio Perm	0.15		0.20			c0.24		0.08	0.04			
v/c Ratio	0.72	0.96	0.97			1.13	0.46	0.39	0.13	0.87		
Uniform Delay, d1	43.1	55.1	55.2			43.8	48.2	47.4	39.4	49.2		
Progression Factor	1.00	1.01	1.01			1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2	7.7	24.9	42.7			105.8	2.1	3.5	0.5	9.3		
Delay (s)	50.9	80.6	98.5			149.6	50.3	50.9	39.9	58.5		
Level of Service	D	F	F			F	D	D	D	E		
Approach Delay (s)		79.3					80.4			57.8		
Approach LOS		E					F			E		
Intersection Summary												
HCM 2000 Control Delay			65.3			HCM 2000 Level of Service				E		
HCM 2000 Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			33.0			
Intersection Capacity Utilization			94.3%			ICU Level of Service			F			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: Tujunga Avenue & Riverside Drive & Camarillo Street

06/24/2024



Movement	SBL2	SBL	SBT	SBR	NWL2	NWL	NWR	NWR2
Lane Configurations								
Traffic Volume (vph)	15	41	399	86	29	272	110	14
Future Volume (vph)	15	41	399	86	29	272	110	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.3			6.6	6.6	
Lane Util. Factor		1.00	0.95			0.97	0.91	
Frt		1.00	0.97			0.99	0.85	
Flt Protected		0.95	1.00			0.95	1.00	
Satd. Flow (prot)		1770	3446			3429	1441	
Flt Permitted		0.95	1.00			0.95	1.00	
Satd. Flow (perm)		1770	3446			3429	1441	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	45	434	93	32	296	120	15
RTOR Reduction (vph)	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	61	527	0	0	340	123	0
Turn Type	Prot	Prot	NA		Prot	Prot	Perm	
Protected Phases	7	7	4		3	3		
Permitted Phases							3	
Actuated Green, G (s)		9.9	53.6			21.1	21.1	
Effective Green, g (s)		9.9	53.6			21.1	21.1	
Actuated g/C Ratio		0.07	0.38			0.15	0.15	
Clearance Time (s)		6.8	6.3			6.6	6.6	
Vehicle Extension (s)		3.0	4.9			4.6	4.6	
Lane Grp Cap (vph)		125	1319			516	217	
v/s Ratio Prot		0.03	c0.15			c0.10		
v/s Ratio Perm							0.09	
v/c Ratio		0.49	0.40			0.66	0.57	
Uniform Delay, d1		62.6	31.5			56.1	55.2	
Progression Factor		1.00	1.00			1.00	1.00	
Incremental Delay, d2		3.0	0.4			3.8	4.9	
Delay (s)		65.6	31.9			59.8	60.1	
Level of Service		E	C			E	E	
Approach Delay (s)			35.4			59.9		
Approach LOS			D			E		
Intersection Summary								

HCM 6th Signalized Intersection Summary

6: Laurel Canyon Boulevard & US 101 Northbound Ramps

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↖	↖	↖	↖		↖	↖	↖
Traffic Volume (veh/h)	0	0	0	472	0	501	859	926	0	1	813	161
Future Volume (veh/h)	0	0	0	472	0	501	859	926	0	1	813	161
Initial Q (Qb), veh				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
Parking Bus, Adj				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		No
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	1870	1870	1870
Adj Flow Rate, veh/h				688	0	358	934	1007	0	1	884	175
Peak Hour Factor				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	0	2	2	2
Cap, veh/h				819	0	365	1043	2338	0	40	1476	471
Arrive On Green				0.23	0.00	0.23	0.10	0.22	0.00	0.30	0.30	0.30
Sat Flow, veh/h				3563	0	1585	3456	3647	0	1	4966	1585
Grp Volume(v), veh/h				688	0	358	934	1007	0	333	552	175
Grp Sat Flow(s),veh/h/ln				1781	0	1585	1728	1777	0	1869	1549	1585
Q Serve(g_s), s				16.6	0.0	20.2	24.0	22.0	0.0	0.0	13.7	7.9
Cycle Q Clear(g_c), s				16.6	0.0	20.2	24.0	22.0	0.0	13.7	13.7	7.9
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				819	0	365	1043	2338	0	595	921	471
V/C Ratio(X)				0.84	0.00	0.98	0.90	0.43	0.00	0.56	0.60	0.37
Avail Cap(c_a), veh/h				819	0	365	1102	2338	0	595	921	471
HCM Platoon Ratio				1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.81	0.81	0.00	0.82	0.82	0.82
Uniform Delay (d), s/veh				33.1	0.0	34.5	39.1	20.7	0.0	27.0	27.0	25.0
Incr Delay (d2), s/veh				7.8	0.0	42.2	7.8	0.5	0.0	3.1	2.4	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
%ile BackOfQ(95%),veh/ln				12.1	0.0	17.1	17.3	15.2	0.0	10.1	8.5	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				40.8	0.0	76.6	47.0	21.2	0.0	30.1	29.4	26.8
LnGrp LOS				D	A	E	D	C	A	C	C	C
Approach Vol, veh/h				1046			1941			1060		
Approach Delay, s/veh				53.1			33.6			29.2		
Approach LOS				D			C			C		
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	32.5	31.5		26.0		64.0						
Change Period (Y+Rc), s	5.3	4.8		* 5.3		4.8						
Max Green Setting (Gmax), s	25.2	25.2		* 21		59.2						
Max Q Clear Time (g_c+20), s	15.7	15.7		22.2		24.0						
Green Ext Time (p_c), s	1.1	4.2		0.0		8.5						

Intersection Summary

HCM 6th Ctrl Delay 37.5

HCM 6th LOS D

Notes

User approved volume balancing among the lanes for turning movement.

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

HCM 6th Signalized Intersection Summary

7: US 101 Southbound Ramps & Laurel Canyon Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	317	21	580	0	0	0	1	1482	532	261	998	0
Future Volume (veh/h)	317	21	580	0	0	0	1	1482	532	261	998	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	238	0	760				1	1611	578	284	1085	0
Peak Hour Factor	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	0
Cap, veh/h	431	0	768				40	3195	1020	324	2286	0
Arrive On Green	0.24	0.00	0.24				0.64	0.64	0.64	1.00	1.00	0.00
Sat Flow, veh/h	1781	0	3170				0	4967	1585	347	3647	0
Grp Volume(v), veh/h	238	0	760				607	1005	578	284	1085	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				1870	1549	1585	173	1777	0
Q Serve(g_s), s	10.5	0.0	21.5				0.0	15.4	18.4	42.5	0.0	0.0
Cycle Q Clear(g_c), s	10.5	0.0	21.5				15.4	15.4	18.4	57.9	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	431	0	768				1243	1993	1020	324	2286	0
V/C Ratio(X)	0.55	0.00	0.99				0.49	0.50	0.57	0.88	0.47	0.00
Avail Cap(c_a), veh/h	431	0	768				1243	1993	1020	324	2286	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				1.00	1.00	1.00	0.61	0.61	0.00
Uniform Delay (d), s/veh	29.8	0.0	34.0				8.5	8.5	9.0	16.7	0.0	0.0
Incr Delay (d2), s/veh	1.5	0.0	29.8				1.4	0.9	2.3	18.2	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
%ile BackOfQ(95%),veh/ln	7.8	0.0	16.3				9.6	8.1	9.9	6.1	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.3	0.0	63.8				9.8	9.4	11.3	35.0	0.4	0.0
LnGrp LOS	C	A	E				A	A	B	C	A	A
Approach Vol, veh/h	998						2190			1369		
Approach Delay, s/veh	56.1						10.0			7.6		
Approach LOS	E						B			A		
Timer - Assigned Phs	2			4			6					
Phs Duration (G+Y+Rc), s	63.0			27.0			63.0					
Change Period (Y+Rc), s	* 5.1			* 5.2			* 5.1					
Max Green Setting (Gmax), s	* 34			* 22			* 58					
Max Q Clear Time (g_c+I1), s	20.4			23.5			59.9					
Green Ext Time (p_c), s	10.0			0.0			0.0					

Intersection Summary

HCM 6th Ctrl Delay 19.4

HCM 6th LOS B

Notes

User approved volume balancing among the lanes for turning movement.

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

Queues

8: Laurel Canyon Boulevard & Landale Street

06/24/2024



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	178	163	50	77	68	1984	59	1478	105
v/c Ratio	0.84	0.60	0.37	0.23	0.28	0.95	0.69	0.89	0.23
Control Delay	72.5	22.7	44.5	1.6	20.7	22.7	54.4	24.5	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	7.1	0.0	0.0	0.0
Total Delay	72.5	22.7	44.5	1.6	20.7	29.8	54.4	24.5	9.5
Queue Length 50th (ft)	105	25	27	0	7	501	22	~481	21
Queue Length 95th (ft)	#224	91	61	0	m4	m68	m#56	#685	m49
Internal Link Dist (ft)		140	232			591		375	
Turn Bay Length (ft)	85			40	155		125		115
Base Capacity (vph)	212	272	172	380	286	2083	86	1656	458
Starvation Cap Reductn	0	0	0	0	0	102	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.60	0.29	0.20	0.24	1.00	0.69	0.89	0.23

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.






















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

8: Laurel Canyon Boulevard & Landale Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	10	109	29	17	71	63	1809	17	54	1360	97
Future Volume (vph)	195	10	109	29	17	71	63	1809	17	54	1360	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Lane Util. Factor	0.95	0.95			1.00	1.00	1.00	0.95		1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.86			1.00	1.00	1.00	1.00		1.00	1.00	0.62
Flpb, ped/bikes	1.00	1.00			0.87	1.00	1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.89			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	0.99			0.97	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1681	1339			1568	1583	1770	3532		1770	3539	979
Flt Permitted	0.95	0.99			0.71	1.00	0.09	1.00		0.10	1.00	1.00
Satd. Flow (perm)	1681	1339			1144	1583	164	3532		187	3539	979
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)	212	11	118	32	18	77	68	1966	18	59	1478	105
RTOR Reduction (vph)	0	103	0	0	0	70	0	0	0	0	0	0
Lane Group Flow (vph)	178	60	0	0	50	7	68	1984	0	59	1478	105
Confl. Peds. (#/hr)			79	79			164		19	19		164
Turn Type	Split	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	3	3			4		1	6			2	
Permitted Phases				4		4	6			2		2
Actuated Green, G (s)	11.3	11.3			8.3	8.3	51.9	51.9		39.9	39.9	39.9
Effective Green, g (s)	11.3	11.3			8.3	8.3	51.9	51.9		39.9	39.9	39.9
Actuated g/C Ratio	0.13	0.13			0.09	0.09	0.58	0.58		0.44	0.44	0.44
Clearance Time (s)	6.6	6.6			6.1	6.1	5.4	5.8		5.8	5.8	5.8
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	5.2		4.5	4.5	4.5
Lane Grp Cap (vph)	211	168			105	145	212	2036		82	1568	434
v/s Ratio Prot	c0.11	0.04					0.02	c0.56			0.42	
v/s Ratio Perm					c0.04	0.00	0.16			0.32		0.11
v/c Ratio	0.84	0.36			0.48	0.05	0.32	0.97		0.72	0.94	0.24
Uniform Delay, d1	38.5	36.0			38.8	37.3	16.9	18.4		20.5	24.0	15.6
Progression Factor	1.00	1.00			1.00	1.00	2.11	1.07		0.56	0.60	0.45
Incremental Delay, d2	25.2	1.3			3.4	0.1	0.1	2.5		36.1	10.9	1.1
Delay (s)	63.7	37.3			42.2	37.4	35.8	22.2		47.6	25.3	8.2
Level of Service	E	D			D	D	D	C		D	C	A
Approach Delay (s)		51.1			39.3			22.7			25.0	
Approach LOS		D			D			C			C	
Intersection Summary												
HCM 2000 Control Delay			26.4									
HCM 2000 Volume to Capacity ratio			0.97									
Actuated Cycle Length (s)			90.0							23.9		
Intersection Capacity Utilization			84.3%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th Signalized Intersection Summary

9: Colfax Avenue & Sarah Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↑	↕
Traffic Volume (veh/h)	13	2	5	7	1	30	6	654	17	35	604	14
Future Volume (veh/h)	13	2	5	7	1	30	6	654	17	35	604	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.99	0.98		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	14	2	5	8	1	33	7	711	18	38	657	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	153	25	24	85	8	79	469	1310	1106	386	1310	1106
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.06	0.23	0.23	0.23	0.47	0.47	0.47
Sat Flow, veh/h	817	381	374	213	121	1222	766	1870	1579	726	1870	1579
Grp Volume(v), veh/h	21	0	0	42	0	0	7	711	18	38	657	15
Grp Sat Flow(s),veh/h/ln	1573	0	0	1556	0	0	766	1870	1579	726	1870	1579
Q Serve(g_s), s	0.0	0.0	0.0	0.5	0.0	0.0	0.5	20.1	0.5	2.5	14.6	0.3
Cycle Q Clear(g_c), s	0.7	0.0	0.0	1.5	0.0	0.0	15.1	20.1	0.5	22.5	14.6	0.3
Prop In Lane	0.67		0.24	0.19		0.79	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	202	0	0	172	0	0	469	1310	1106	386	1310	1106
V/C Ratio(X)	0.10	0.00	0.00	0.24	0.00	0.00	0.01	0.54	0.02	0.10	0.50	0.01
Avail Cap(c_a), veh/h	604	0	0	601	0	0	469	1310	1106	386	1310	1106
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	0.67	0.67	0.67
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.91	0.91	0.91	0.87	0.87	0.87
Uniform Delay (d), s/veh	26.5	0.0	0.0	26.9	0.0	0.0	19.0	14.6	7.1	18.6	8.7	4.9
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.7	0.0	0.0	0.1	1.5	0.0	0.4	1.2	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(95%),veh/ln	0.5	0.0	0.0	1.1	0.0	0.0	0.2	15.1	0.2	0.8	10.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.8	0.0	0.0	27.7	0.0	0.0	19.0	16.1	7.1	19.0	9.9	4.9
LnGrp LOS	C	A	A	C	A	A	B	B	A	B	A	A
Approach Vol, veh/h	21			42			736			710		
Approach Delay, s/veh	26.8			27.7			15.9			10.2		
Approach LOS	C			C			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	46.8			13.2			46.8			13.2		
Change Period (Y+Rc), s	4.8			* 9.3			4.8			* 9.3		
Max Green Setting (Gmax), s	25.2			* 21			25.2			* 21		
Max Q Clear Time (g_c+I1), s	22.1			2.7			24.5			3.5		
Green Ext Time (p_c), s	1.4			0.0			0.3			0.1		

Intersection Summary

HCM 6th Ctrl Delay	13.7
HCM 6th LOS	B

Notes

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

Queues

10: Landale Street & Colfax Avenue

06/24/2024



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	41	15	705	668	26
v/c Ratio	0.17	0.03	0.44	0.42	0.02
Control Delay	17.7	3.9	4.9	2.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.7	3.9	4.9	2.1	0.1
Queue Length 50th (ft)	7	0	0	0	0
Queue Length 95th (ft)	31	7	216	5	m0
Internal Link Dist (ft)	262		575	593	
Turn Bay Length (ft)		40			80
Base Capacity (vph)	524	572	1587	1587	1351
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.08	0.03	0.44	0.42	0.02

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

10: Landale Street & Colfax Avenue

06/24/2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		W	U	U	W
Traffic Volume (vph)	21	17	14	649	615	24
Future Volume (vph)	21	17	14	649	615	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	9.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		1.00	1.00	1.00	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	0.97		0.95	1.00	1.00	1.00
Satd. Flow (prot)	1705		1770	1863	1863	1583
Flt Permitted	0.97		0.36	1.00	1.00	1.00
Satd. Flow (perm)	1705		672	1863	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	23	18	15	705	668	26
RTOR Reduction (vph)	17	0	0	0	0	5
Lane Group Flow (vph)	24	0	15	705	668	21
Turn Type	Perm		Perm	NA	NA	Perm
Protected Phases				6	2	
Permitted Phases	8		6			2
Actuated Green, G (s)	3.3		42.7	42.7	42.7	42.7
Effective Green, g (s)	3.3		42.7	42.7	42.7	42.7
Actuated g/C Ratio	0.05		0.71	0.71	0.71	0.71
Clearance Time (s)	9.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		4.9	4.9	5.3	5.3
Lane Grp Cap (vph)	93		478	1325	1325	1126
v/s Ratio Prot				c0.38	0.36	
v/s Ratio Perm	c0.01		0.02			0.01
v/c Ratio	0.26		0.03	0.53	0.50	0.02
Uniform Delay, d1	27.2		2.6	4.0	3.9	2.5
Progression Factor	1.00		1.00	1.00	0.40	0.05
Incremental Delay, d2	1.5		0.1	1.5	1.1	0.0
Delay (s)	28.7		2.7	5.5	2.7	0.2
Level of Service	C		A	A	A	A
Approach Delay (s)	28.7			5.5	2.6	
Approach LOS	C			A	A	

Intersection Summary

HCM 2000 Control Delay	4.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	14.0
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM 6th Signalized Intersection Summary

11: Whitsett Avenue & Moorpark Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	779	80	122	542	83	106	674	131	82	360	113
Future Volume (veh/h)	130	779	80	122	542	83	106	674	131	82	360	113
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	141	847	87	133	589	90	115	733	142	89	391	123
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	180	850	720	82	720	110	373	1277	247	234	1147	357
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	761	1870	1585	599	1585	242	887	2969	575	634	2668	829
Grp Volume(v), veh/h	141	847	87	133	0	679	115	439	436	89	259	255
Grp Sat Flow(s),veh/h/ln	761	1870	1585	599	0	1827	887	1777	1767	634	1777	1721
Q Serve(g_s), s	11.9	40.6	2.9	0.3	0.0	29.0	9.0	16.8	16.8	11.1	8.7	8.9
Cycle Q Clear(g_c), s	40.9	40.6	2.9	40.9	0.0	29.0	17.9	16.8	16.8	28.0	8.7	8.9
Prop In Lane	1.00		1.00	1.00		0.13	1.00		0.33	1.00		0.48
Lane Grp Cap(c), veh/h	180	850	720	82	0	830	373	764	760	234	764	740
V/C Ratio(X)	0.78	1.00	0.12	1.63	0.00	0.82	0.31	0.57	0.57	0.38	0.34	0.34
Avail Cap(c_a), veh/h	180	850	720	82	0	830	373	764	760	234	764	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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.8	24.5	14.2	45.0	0.0	21.3	23.2	19.4	19.4	30.0	17.1	17.2
Incr Delay (d2), s/veh	27.9	30.0	0.3	330.9	0.0	8.8	2.1	3.1	3.1	4.6	1.2	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.0	31.3	1.9	16.7	0.0	19.4	3.6	11.5	11.5	3.5	6.5	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.7	54.5	14.5	375.9	0.0	30.1	25.3	22.5	22.6	34.6	18.3	18.4
LnGrp LOS	E	D	B	F	A	C	C	C	C	C	B	B
Approach Vol, veh/h	1075			812			990			603		
Approach Delay, s/veh	53.1			86.7			22.9			20.8		
Approach LOS	D			F			C			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	46.0			44.0			46.0			44.0		
Change Period (Y+Rc), s	5.1			5.3			5.1			5.3		
Max Green Setting (Gmax), s	40.9			38.7			40.9			38.7		
Max Q Clear Time (g_c+I1), s	42.9			30.0			42.9			19.9		
Green Ext Time (p_c), s	0.0			2.5			0.0			6.0		

Intersection Summary










HCM 6th Ctrl Delay	46.8
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary

12: Laurel Canyon Boulevard & Moorpark Street

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	287	530	107	159	426	99	152	1613	186	103	1191	262
Future Volume (veh/h)	287	530	107	159	426	99	152	1613	186	103	1191	262
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	312	576	116	173	463	108	165	1753	202	112	1295	285
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	293	841	169	325	505	560	236	933	105	229	833	181
Arrive On Green	0.11	0.29	0.29	0.09	0.27	0.27	0.09	0.29	0.29	0.11	0.38	0.38
Sat Flow, veh/h	1781	2949	592	1781	1870	1585	1781	3218	364	1781	2904	630
Grp Volume(v), veh/h	312	346	346	173	463	108	165	952	1003	112	785	795
Grp Sat Flow(s),veh/h/ln	1781	1777	1764	1781	1870	1585	1781	1777	1805	1781	1777	1757
Q Serve(g_s), s	9.5	15.6	15.7	6.2	21.6	4.3	5.7	26.1	26.1	3.8	25.8	25.8
Cycle Q Clear(g_c), s	9.5	15.6	15.7	6.2	21.6	4.3	5.7	26.1	26.1	3.8	25.8	25.8
Prop In Lane	1.00		0.34	1.00		1.00	1.00		0.20	1.00		0.36
Lane Grp Cap(c), veh/h	293	507	503	325	505	560	236	515	523	229	510	504
V/C Ratio(X)	1.06	0.68	0.69	0.53	0.92	0.19	0.70	1.85	1.92	0.49	1.54	1.58
Avail Cap(c_a), veh/h	293	507	504	351	534	585	252	515	523	250	510	504
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Uniform Delay (d), s/veh	26.3	28.6	28.6	21.9	31.9	20.2	23.1	32.0	32.0	22.0	27.8	27.8
Incr Delay (d2), s/veh	70.6	3.8	3.9	1.4	20.2	0.2	7.7	389.8	419.6	0.5	246.1	262.7
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(95%),veh/ln	15.7	11.2	11.2	4.6	17.9	2.8	5.0	104.1	112.7	2.6	63.5	66.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	96.8	32.3	32.5	23.2	52.0	20.3	30.8	421.7	451.5	22.6	273.9	290.6
LnGrp LOS	F	C	C	C	D	C	C	F	F	C	F	F
Approach Vol, veh/h	1004			744			2120			1692		
Approach Delay, s/veh	52.4			40.7			405.4			265.1		
Approach LOS	D			D			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.2	31.2	15.0	30.6	12.9	31.5	13.6	32.0				
Change Period (Y+Rc), s	5.3	* 5.4	* 5.5	6.3	* 5.4	* 5.4	* 5.5	6.3				
Max Green Setting (Gmax), s	30.7	* 24	* 9.5	25.7	* 8.6	* 24	* 9.5	25.7				
Max Q Clear Time (g_c+I1), s	27.8	27.8	11.5	23.6	5.8	28.1	8.2	17.7				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.1	0.0	0.1	2.6				

Intersection Summary

HCM 6th Ctrl Delay 250.2

HCM 6th LOS F

Notes

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






HCM 6th TWSC

13: Moorpark Street & Radford Avenue

06/24/2024

Intersection

Int Delay, s/veh 1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	82	765	745	39	11	49
Future Vol, veh/h	82	765	745	39	11	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	120	-	-	-	0	50
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	89	832	810	42	12	53

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	852	0	0 1425 426
Stage 1	-	-	- 831 -
Stage 2	-	-	- 594 -
Critical Hdwy	4.14	-	- 6.84 6.94
Critical Hdwy Stg 1	-	-	- 5.84 -
Critical Hdwy Stg 2	-	-	- 5.84 -
Follow-up Hdwy	2.22	-	- 3.52 3.32
Pot Cap-1 Maneuver	783	-	- 126 577
Stage 1	-	-	- 388 -
Stage 2	-	-	- 514 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	783	-	- 112 577
Mov Cap-2 Maneuver	-	-	- 112 -
Stage 1	-	-	- 344 -
Stage 2	-	-	- 514 -























Approach	EB	WB	SB
HCM Control Delay, s	1	0	17.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	783	-	-	-	112	577
HCM Lane V/C Ratio	0.114	-	-	-	0.107	0.092
HCM Control Delay (s)	10.2	-	-	-	40.9	11.9
HCM Lane LOS	B	-	-	-	E	B
HCM 95th %tile Q(veh)	0.4	-	-	-	0.3	0.3

HCM 6th Signalized Intersection Summary

14: Colfax Avenue & Moorpark Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	568	111	107	534	121	122	341	188	141	384	121
Future Volume (veh/h)	92	568	111	107	534	121	122	341	188	141	384	121
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	0.98		0.95	0.98		0.95	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	100	617	121	116	580	132	133	371	204	153	417	132
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	253	1164	228	266	748	170	267	461	371	285	740	720
Arrive On Green	0.14	0.79	0.79	0.09	0.09	0.09	0.25	0.25	0.25	0.09	0.40	0.40
Sat Flow, veh/h	1781	2943	576	706	2844	645	840	1870	1504	1781	1870	1535
Grp Volume(v), veh/h	100	372	366	116	362	350	133	371	204	153	417	132
Grp Sat Flow(s),veh/h/ln	1781	1777	1742	706	1777	1712	840	1870	1504	1781	1870	1535
Q Serve(g_s), s	3.4	6.8	6.8	14.3	17.9	18.0	13.2	16.8	10.6	5.4	15.6	4.5
Cycle Q Clear(g_c), s	3.4	6.8	6.8	14.3	17.9	18.0	15.4	16.8	10.6	5.4	15.6	4.5
Prop In Lane	1.00		0.33	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	253	703	689	266	467	450	267	461	371	285	740	720
V/C Ratio(X)	0.39	0.53	0.53	0.44	0.77	0.78	0.50	0.81	0.55	0.54	0.56	0.18
Avail Cap(c_a), veh/h	294	703	689	266	467	450	267	461	371	296	740	720
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Uniform Delay (d), s/veh	20.6	6.4	6.4	36.8	38.5	38.5	32.4	31.9	29.6	22.8	21.2	14.0
Incr Delay (d2), s/veh	1.0	2.8	2.9	5.1	11.8	12.5	6.5	13.9	5.8	1.6	2.8	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(95%),veh/ln	2.4	4.0	3.9	5.5	15.2	14.9	5.5	14.0	7.7	4.1	11.1	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.5	9.2	9.3	41.9	50.3	51.0	38.9	45.8	35.4	24.4	24.0	14.5
LnGrp LOS	C	A	A	D	D	D	D	D	D	C	C	B
Approach Vol, veh/h		838			828			708			702	
Approach Delay, s/veh		10.7			49.4			41.5			22.3	
Approach LOS		B			D			D			C	
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	11.9	33.1		45.0		45.0	13.4	31.6				
Change Period (Y+Rc), s	* 5.5	* 9.4		* 9.4		* 9.4	5.6	* 9.4				
Max Green Setting (Gmax), s	* 8.5	* 22		* 36		* 36	8.4	* 22				
Max Q Clear Time (g_c+I1), s	5.4	20.0		17.6		8.8	7.4	18.8				
Green Ext Time (p_c), s	0.1	0.8		2.8		4.9	0.0	1.1				

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.

HCM 6th TWSC
15: Irvine Avenue & Moorpark Street























06/24/2024

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	793	15	14	747	6	4	0	10	0	0	13
Future Vol, veh/h	5	793	15	14	747	6	4	0	10	0	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	862	16	15	812	7	4	0	11	0	0	14
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	819	0	0	878	0	0	1316	1729	439	1287	1734	410
Stage 1	-	-	-	-	-	-	880	880	-	846	846	-
Stage 2	-	-	-	-	-	-	436	849	-	441	888	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	805	-	-	765	-	-	115	87	566	121	87	591
Stage 1	-	-	-	-	-	-	308	363	-	323	377	-
Stage 2	-	-	-	-	-	-	569	375	-	565	360	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	805	-	-	765	-	-	108	83	566	114	83	591
Mov Cap-2 Maneuver	-	-	-	-	-	-	108	83	-	114	83	-
Stage 1	-	-	-	-	-	-	304	359	-	319	363	-
Stage 2	-	-	-	-	-	-	535	362	-	547	356	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.4			19.9			11.2		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	256	805	-	-	765	-	-	591				
HCM Lane V/C Ratio	0.059	0.007	-	-	0.02	-	-	0.024				
HCM Control Delay (s)	19.9	9.5	0.1	-	9.8	0.2	-	11.2				
HCM Lane LOS	C	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.1				

HCM 6th Signalized Intersection Summary

16: Tujunga Avenue & Moorpark Street

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	209	644	83	87	483	63	82	356	93	89	213	89
Future Volume (veh/h)	209	644	83	87	483	63	82	356	93	89	213	89
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	227	700	90	95	525	68	89	387	101	97	232	97
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	470	1776	228	379	1775	229	284	597	506	209	357	303
Arrive On Green	0.56	0.56	0.56	0.56	0.56	0.56	0.07	0.32	0.32	0.19	0.19	0.19
Sat Flow, veh/h	824	3167	407	686	3165	409	1781	1870	1585	908	1870	1585
Grp Volume(v), veh/h	227	392	398	95	294	299	89	387	101	97	232	97
Grp Sat Flow(s),veh/h/ln	824	1777	1797	686	1777	1797	1781	1870	1585	908	1870	1585
Q Serve(g_s), s	18.0	11.2	11.2	8.2	7.8	7.9	3.4	16.0	4.2	9.2	10.3	4.7
Cycle Q Clear(g_c), s	25.9	11.2	11.2	19.4	7.8	7.9	3.4	16.0	4.2	13.7	10.3	4.7
Prop In Lane	1.00		0.23	1.00		0.23	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	470	996	1008	379	996	1007	284	597	506	209	357	303
V/C Ratio(X)	0.48	0.39	0.39	0.25	0.30	0.30	0.31	0.65	0.20	0.46	0.65	0.32
Avail Cap(c_a), veh/h	470	996	1008	379	996	1007	333	698	592	294	532	451
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	0.95	0.95	0.95	0.76	0.76	0.76
Uniform Delay (d), s/veh	17.3	11.1	11.2	16.6	10.4	10.4	25.3	26.3	22.3	37.1	33.6	31.4
Incr Delay (d2), s/veh	3.5	1.2	1.2	1.6	0.8	0.8	0.6	1.6	0.2	1.2	1.5	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(95%),veh/ln	6.5	7.7	7.8	2.5	5.4	5.5	2.6	11.3	2.7	3.7	7.8	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.8	12.3	12.3	18.2	11.2	11.2	25.9	27.9	22.4	38.3	35.1	31.8
LnGrp LOS	C	B	B	B	B	B	C	C	C	D	D	C
Approach Vol, veh/h	1017				688				577			
Approach Delay, s/veh	14.2				12.1				26.6			
Approach LOS	B				B				C			
Timer - Assigned Phs	2			3		4		6		8		
Phs Duration (G+Y+Rc), s	55.9			11.5		22.6		55.9		34.1		
Change Period (Y+Rc), s	* 5.4			* 5.3		* 5.4		* 5.4		* 5.4		
Max Green Setting (Gmax), s	* 40			* 8.7		* 26		* 40		* 34		
Max Q Clear Time (g_c+I1), s	21.4			5.4		15.7		27.9		18.0		
Green Ext Time (p_c), s	5.9			0.0		1.5		6.8		2.3		
Intersection Summary												
HCM 6th Ctrl Delay	19.6											
HCM 6th LOS	B											
Notes												

HCM 6th Signalized Intersection Summary

17: Woodbridge Street & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑	↕	↕	↕	
Traffic Volume (veh/h)	10	7	17	15	9	56	17	484	26	39	316	32
Future Volume (veh/h)	10	7	17	15	9	56	17	484	26	39	316	32
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	11	8	18	16	10	61	18	526	28	42	343	35
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	76	49	69	63	25	95	892	1512	1281	707	1350	138
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.81	0.81	0.81	1.00	1.00	1.00
Sat Flow, veh/h	283	578	815	186	293	1124	1005	1870	1585	854	1669	170
Grp Volume(v), veh/h	37	0	0	87	0	0	18	526	28	42	0	378
Grp Sat Flow(s),veh/h/ln	1676	0	0	1603	0	0	1005	1870	1585	854	0	1840
Q Serve(g_s), s	0.0	0.0	0.0	2.0	0.0	0.0	0.3	6.7	0.3	0.4	0.0	0.0
Cycle Q Clear(g_c), s	1.8	0.0	0.0	4.7	0.0	0.0	0.3	6.7	0.3	7.2	0.0	0.0
Prop In Lane	0.30		0.49	0.18		0.70	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	194	0	0	183	0	0	892	1512	1281	707	0	1487
V/C Ratio(X)	0.19	0.00	0.00	0.47	0.00	0.00	0.02	0.35	0.02	0.06	0.00	0.25
Avail Cap(c_a), veh/h	508	0	0	502	0	0	892	1512	1281	707	0	1487
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.84	0.84	0.84	0.84	0.00	0.84
Uniform Delay (d), s/veh	38.5	0.0	0.0	39.8	0.0	0.0	1.7	2.3	1.7	0.3	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	1.9	0.0	0.0	0.0	0.5	0.0	0.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	0.0	0.0	3.5	0.0	0.0	0.1	2.6	0.1	0.0	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.0	0.0	0.0	41.7	0.0	0.0	1.7	2.8	1.7	0.5	0.0	0.3
LnGrp LOS	D	A	A	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	37			87			572			420		
Approach Delay, s/veh	39.0			41.7			2.7			0.4		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	77.3			12.7			77.3			12.7		
Change Period (Y+Rc), s	* 4.5			* 5.1			* 4.5			* 5.1		
Max Green Setting (Gmax), s	* 55			* 26			* 55			* 26		
Max Q Clear Time (g_c+I1), s	9.2			3.8			8.7			6.7		
Green Ext Time (p_c), s	6.1			0.1			9.4			0.4		

Intersection Summary

HCM 6th Ctrl Delay	6.1
HCM 6th LOS	A

Notes

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

Queues

18: Whitsett Avenue & Ventura Boulevard

06/24/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	250	1054	221	36	1052	318	89	191	288	159	209
v/c Ratio	0.76	0.55	0.24	0.21	0.86	0.49	0.55	0.67	0.62	0.56	0.24
Control Delay	38.6	17.5	5.0	19.8	28.4	8.6	50.6	49.4	46.4	45.9	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.6	17.5	5.0	19.8	28.4	8.6	50.6	49.4	46.4	45.9	10.1
Queue Length 50th (ft)	100	217	15	14	240	63	53	112	90	95	53
Queue Length 95th (ft)	#279	340	62	m21	m#422	m87	98	173	127	150	84
Internal Link Dist (ft)	1429			2938			634			1297	
Turn Bay Length (ft)	95		135	145		60	60		220		65
Base Capacity (vph)	329	1923	936	175	1221	646	253	438	523	441	857
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.55	0.24	0.21	0.86	0.49	0.35	0.44	0.55	0.36	0.24

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
























Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

18: Whitsett Avenue & Ventura Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	970	203	33	968	293	82	154	22	265	146	192
Future Volume (vph)	230	970	203	33	968	293	82	154	22	265	146	192
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	5.4
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	1828		3433	1863	1583
Flt Permitted	0.10	1.00	1.00	0.27	1.00	1.00	0.57	1.00		0.95	1.00	1.00
Satd. Flow (perm)	187	3539	1583	506	3539	1583	1070	1828		3433	1863	1583
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)	250	1054	221	36	1052	318	89	167	24	288	159	209
RTOR Reduction (vph)	0	0	76	0	0	101	0	6	0	0	0	11
Lane Group Flow (vph)	250	1054	145	36	1052	217	89	185	0	288	159	198
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Prot	NA	custom
Protected Phases	1	6			2			4		3	8	1 3
Permitted Phases	6		6	2		2	4					8
Actuated Green, G (s)	54.4	54.4	54.4	34.5	34.5	34.5	15.3	15.3		13.6	15.3	48.8
Effective Green, g (s)	54.4	54.4	54.4	34.5	34.5	34.5	15.3	15.3		13.6	15.3	48.8
Actuated g/C Ratio	0.54	0.54	0.54	0.34	0.34	0.34	0.15	0.15		0.14	0.15	0.49
Clearance Time (s)	5.4	5.0	5.0	5.0	5.0	5.0	6.3	6.3		5.4	6.3	
Vehicle Extension (s)	3.0	4.9	4.9	4.7	4.7	4.7	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	331	1925	861	174	1220	546	163	279		466	285	772
v/s Ratio Prot	c0.11	0.30			c0.30			c0.10		c0.08	0.09	0.09
v/s Ratio Perm	0.30		0.09	0.07		0.14	0.08					0.04
v/c Ratio	0.76	0.55	0.17	0.21	0.86	0.40	0.55	0.66		0.62	0.56	0.26
Uniform Delay, d1	24.0	14.8	11.4	23.1	30.5	24.9	39.1	39.9		40.7	39.2	15.0
Progression Factor	1.00	1.00	1.00	0.65	0.64	0.47	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.4	1.1	0.4	1.8	5.7	1.5	3.7	5.8		2.4	2.4	0.2
Delay (s)	33.4	15.9	11.9	16.8	25.3	13.0	42.8	45.7		43.2	41.6	15.2
Level of Service	C	B	B	B	C	B	D	D		D	D	B
Approach Delay (s)		18.2			22.3			44.8			33.9	
Approach LOS		B			C			D			C	
Intersection Summary												
HCM 2000 Control Delay			24.3									
HCM 2000 Volume to Capacity ratio			0.76									
Actuated Cycle Length (s)			100.0									
Intersection Capacity Utilization			74.9%									
Analysis Period (min)			15									
c Critical Lane Group												

Queues

19: Laurel Canyon Boulevard & Ventura Place

06/24/2024



Lane Group	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	177	71	238	29	1598	33	93	1311
v/c Ratio	1.26	0.38	0.78	0.16	0.82	0.04	1.21	0.57
Control Delay	199.6	47.4	30.7	35.6	23.8	0.0	198.8	22.0
Queue Delay	0.0	0.0	0.0	0.0	14.2	0.0	0.0	0.0
Total Delay	199.6	47.4	30.7	35.6	38.0	0.0	198.8	22.0
Queue Length 50th (ft)	~142	43	34	18	431	0	~79	241
Queue Length 95th (ft)	#294	85	#138	m20	m553	m0	#180	291
Internal Link Dist (ft)	123	395			458			232
Turn Bay Length (ft)			380	105		85	55	
Base Capacity (vph)	141	224	330	177	1942	930	77	2320
Starvation Cap Reductn	0	0	0	0	363	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.26	0.32	0.72	0.16	1.01	0.04	1.21	0.57

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.


















Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

19: Laurel Canyon Boulevard & Ventura Place

06/24/2024













														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations														
Traffic Volume (vph)	102	39	22	40	26	219	27	1470	30	86	1133	73		
Future Volume (vph)	102	39	22	40	26	219	27	1470	30	86	1133	73		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Total Lost time (s)		9.4			9.6		9.6	5.0	5.1	5.1	5.1	5.1		
Lane Util. Factor		1.00			1.00		1.00	0.95	1.00	1.00	0.91			
Frpb, ped/bikes		1.00			1.00		0.85	1.00	0.98	1.00	1.00			
Flpb, ped/bikes		0.92			1.00		1.00	1.00	1.00	1.00	1.00			
Frt		0.98			1.00		0.85	1.00	0.85	1.00	0.99			
Flt Protected		0.97			0.97		1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)		1635			1808		1343	1770	3539	1550	1770	5039		
Flt Permitted		0.77			0.97		1.00	0.95	1.00	1.00	0.09	1.00		
Satd. Flow (perm)		1294			1808		1343	1770	3539	1550	170	5039		
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)	111	42	24	43	28	238	29	1598	33	93	1232	79		
RTOR Reduction (vph)	0	5	0	0	0	163	0	0	15	0	7	0		
Lane Group Flow (vph)	0	172	0	0	71	75	29	1598	18	93	1304	0		
Confl. Peds. (#/hr)	49						49		5		5			
Turn Type	Perm	NA		Split		NA	Perm	Prot	NA	Perm	Perm	NA		
Protected Phases	3		4		4	1		6		2				
Permitted Phases	3							4		6		2		
Actuated Green, G (s)	10.7							10.3	10.3	6.0	54.9	54.9	43.9	43.9
Effective Green, g (s)	10.7							10.3	10.3	6.0	54.9	54.9	43.9	43.9
Actuated g/C Ratio	0.11							0.10	0.10	0.06	0.55	0.55	0.44	0.44
Clearance Time (s)	9.4							9.6	9.6	5.0	5.1	5.1	5.1	5.1
Vehicle Extension (s)	3.0							3.0	3.0	3.0	4.8	4.8	3.1	3.1
Lane Grp Cap (vph)	138							186	138	106	1942	850	74	2212
v/s Ratio Prot						0.04		0.02		c0.45				0.26
v/s Ratio Perm	c0.13							c0.06		0.01		c0.55		
v/c Ratio	1.24							0.38	0.54	0.27	0.82	0.02	1.26	0.59
Uniform Delay, d1	44.6							41.9	42.6	44.9	18.6	10.3	28.1	21.2
Progression Factor	1.00							1.00	1.00	0.83	1.13	1.00	1.00	1.00
Incremental Delay, d2	156.4							1.3	4.3	0.7	2.2	0.0	188.5	1.2
Delay (s)	201.0							43.2	46.9	37.9	23.2	10.3	216.6	22.4
Level of Service	F							D	D	D	C	B	F	C
Approach Delay (s)	201.0							46.0		23.2		35.3		
Approach LOS	F							D		C		D		
Intersection Summary														
HCM 2000 Control Delay			38.8		HCM 2000 Level of Service				D					
HCM 2000 Volume to Capacity ratio			1.14											
Actuated Cycle Length (s)			100.0		Sum of lost time (s)				29.1					
Intersection Capacity Utilization			87.2%		ICU Level of Service				E					
Analysis Period (min)			15											
c Critical Lane Group														

HCM 6th Signalized Intersection Summary

20: Laurel Canyon Boulevard & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	181	586	251	172	586	545	435	844	196	242	761	199
Future Volume (veh/h)	181	586	251	172	586	545	435	844	196	242	761	199
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.93	0.98		0.93	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	197	637	273	187	637	592	473	917	213	263	827	216
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	282	1062	605	320	1027	577	359	1065	460	333	1038	581
Arrive On Green	0.17	0.60	0.60	0.08	0.29	0.29	0.10	0.30	0.30	0.03	0.10	0.10
Sat Flow, veh/h	1781	3554	1474	1781	3554	1470	3456	3554	1533	3456	3554	1531
Grp Volume(v), veh/h	197	637	273	187	637	592	473	917	213	263	827	216
Grp Sat Flow(s),veh/h/ln	1781	1777	1474	1781	1777	1470	1728	1777	1533	1728	1777	1531
Q Serve(g_s), s	8.1	11.2	2.2	7.4	15.5	28.9	10.4	24.4	11.3	7.6	22.8	6.6
Cycle Q Clear(g_c), s	8.1	11.2	2.2	7.4	15.5	28.9	10.4	24.4	11.3	7.6	22.8	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	282	1062	605	320	1027	577	359	1065	460	333	1038	581
V/C Ratio(X)	0.70	0.60	0.45	0.58	0.62	1.03	1.32	0.86	0.46	0.79	0.80	0.37
Avail Cap(c_a), veh/h	282	1062	605	320	1027	577	359	1080	466	359	1080	599
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	0.80	0.80	0.80	0.70	0.70	0.70	0.44	0.44	0.44	0.80	0.80	0.80
Uniform Delay (d), s/veh	22.0	16.4	4.4	23.3	30.8	31.0	44.8	33.0	28.5	47.4	42.3	11.4
Incr Delay (d2), s/veh	6.0	2.0	1.9	1.9	2.0	38.0	150.9	3.6	0.6	8.6	4.7	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(95%),veh/ln	0.0	6.4	2.6	5.7	10.3	25.8	17.4	14.2	6.3	6.6	16.4	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.0	18.4	6.4	25.2	32.8	69.0	195.7	36.6	29.1	56.0	46.9	12.5
LnGrp LOS	C	B	A	C	C	F	F	D	C	E	D	B
Approach Vol, veh/h	1107			1416			1603			1306		
Approach Delay, s/veh	17.1			46.9			82.6			43.1		
Approach LOS	B			D			F			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.0	36.2	16.0	34.8	14.0	35.2	15.2	35.6				
Change Period (Y+Rc), s	5.4	6.3	5.6	5.6	5.6	6.3	5.6	5.6				
Max Green Setting (Gmax), s	28.7	28.7	10.4	30.4	8.4	27.7	10.4	30.4				
Max Q Clear Time (g_c+19, s)	13.2	13.2	12.4	24.8	10.1	30.9	9.6	26.4				
Green Ext Time (p_c), s	0.0	9.0	0.0	4.4	0.0	0.0	0.1	3.1				

Intersection Summary

HCM 6th Ctrl Delay 50.4

HCM 6th LOS D

Notes

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

Queues

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Lane Group	EBL	EBT	WBL	WBT	WBR2	NBT	NBR	SBL	SBT	SBR2
Lane Group Flow (vph)	260	1048	110	825	85	61	77	108	671	92
v/c Ratio	0.48	0.62	1.08	1.13	0.30	0.21	0.19	0.48	4.30	0.75
Control Delay	11.6	1.7	171.5	122.6	49.6	52.8	1.1	65.5	1514.5	93.2
Queue Delay	66.0	13.9	0.0	0.2	0.0	0.0	0.0	0.0	5.7	0.0
Total Delay	77.6	15.5	171.5	122.9	49.6	52.8	1.1	65.5	1520.2	93.2
Queue Length 50th (ft)	185	10	~111	~455	66	49	0	92	~1106	81
Queue Length 95th (ft)	m136	m1	#238	#588	118	93	0	161	#1382	#194
Internal Link Dist (ft)		48		634		66			226	
Turn Bay Length (ft)	90		95		55		30	90		90
Base Capacity (vph)	580	1744	102	733	287	308	405	224	156	123
Starvation Cap Reductn	396	692	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	25	0	0	0	0	39	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.41	1.00	1.08	1.17	0.30	0.20	0.19	0.48	5.74	0.75

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	239	948	17	101	684	75	78	44	12	71	99	19
Future Volume (vph)	239	948	17	101	684	75	78	44	12	71	99	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.1	5.7		4.9	6.1		6.1		6.9	6.9	7.0	7.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00		1.00	1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	0.98		0.85		1.00	0.85	1.00	0.82
Flpb, ped/bikes	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	0.99		0.85		1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (prot)	1770	3523		1770	3434		1344		1792	1352	1770	1306
Flt Permitted	0.95	1.00		0.95	1.00		1.00		0.96	1.00	0.95	1.00
Satd. Flow (perm)	1770	3523		1770	3434		1344		1792	1352	1770	1306
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)	260	1030	18	110	743	82	85	48	13	77	108	21
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	64	0	0
Lane Group Flow (vph)	260	1047	0	110	825	0	85	0	61	13	108	671
Confl. Peds. (#/hr)	42		32	32		42	42	75		75	75	
Turn Type	Prot	NA		Prot	NA		Perm	Split	NA	Perm	Split	NA
Protected Phases	1 3	3 6		5	2			7	7		8	8
Permitted Phases							2			7		
Actuated Green, G (s)	43.6	66.6		8.1	29.9		29.9		23.0	23.0	17.8	17.8
Effective Green, g (s)	43.6	60.5		8.1	29.9		29.9		23.0	23.0	17.8	17.8
Actuated g/C Ratio	0.31	0.43		0.06	0.21		0.21		0.16	0.16	0.13	0.13
Clearance Time (s)				4.9	6.1		6.1		6.9	6.9	7.0	7.0
Vehicle Extension (s)				3.0	4.8		4.8		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	551	1522		102	733		287		294	222	225	166
v/s Ratio Prot	0.15	c0.30		0.06	c0.24				c0.03		0.06	c0.51
v/s Ratio Perm							0.06			0.01		
v/c Ratio	0.47	0.69		1.08	1.13		0.30		0.21	0.06	0.48	4.04
Uniform Delay, d1	38.9	32.1		66.0	55.0		46.2		50.6	49.4	56.8	61.1
Progression Factor	0.29	0.05		1.00	1.00		1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.1		111.9	73.4		2.6		0.4	0.1	1.6	1383.2
Delay (s)	11.2	1.9		177.8	128.5		48.8		51.0	49.5	58.4	1444.3
Level of Service	B	A		F	F		D		D	D	E	F
Approach Delay (s)		3.7			127.2				50.1			1127.3
Approach LOS		A			F				D			F
Intersection Summary												
HCM 2000 Control Delay			336.6			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			1.27									
Actuated Cycle Length (s)			140.0			Sum of lost time (s)			31.8			
Intersection Capacity Utilization			104.5%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

21: Retail Driveway/Radford Avenue & Ventura Boulevard

06/24/2024



Movement	SBR	SBR2
Lane Configurations		
Traffic Volume (vph)	598	85
Future Volume (vph)	598	85
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)		7.0
Lane Util. Factor		1.00
Frpb, ped/bikes		0.69
Flpb, ped/bikes		1.00
Frt		0.85
Flt Protected		1.00
Satd. Flow (prot)		1094
Flt Permitted		1.00
Satd. Flow (perm)		1094
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	650	92
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	92
Confl. Peds. (#/hr)	75	75
Turn Type	Perm	
Protected Phases		
Permitted Phases	8	
Actuated Green, G (s)	17.8	
Effective Green, g (s)	17.8	
Actuated g/C Ratio	0.13	
Clearance Time (s)	7.0	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	139	
v/s Ratio Prot		
v/s Ratio Perm	0.08	
v/c Ratio	0.66	
Uniform Delay, d1	58.2	
Progression Factor	1.00	
Incremental Delay, d2	11.2	
Delay (s)	69.5	
Level of Service	E	
Approach Delay (s)		
Approach LOS		
Intersection Summary		

HCM 6th Signalized Intersection Summary

22: Carpenter Avenue & Ventura Boulevard

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	980	76	184	884	35	71	12	157	25	15	23
Future Volume (veh/h)	31	980	76	184	884	35	71	12	157	25	15	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.98		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	34	1065	83	200	961	38	77	13	171	27	16	25
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	278	2026	158	280	2116	84	123	31	204	182	95	318
Arrive On Green	0.61	0.61	0.61	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	564	3331	259	490	3479	138	374	150	995	601	464	1553
Grp Volume(v), veh/h	34	568	580	200	491	508	261	0	0	43	0	25
Grp Sat Flow(s),veh/h/ln	564	1777	1813	490	1777	1840	1519	0	0	1066	0	1553
Q Serve(g_s), s	4.1	18.4	18.4	40.6	24.3	24.3	13.3	0.0	0.0	0.0	0.0	1.3
Cycle Q Clear(g_c), s	28.4	18.4	18.4	59.0	24.3	24.3	16.4	0.0	0.0	2.6	0.0	1.3
Prop In Lane	1.00		0.14	1.00		0.07	0.30		0.66	0.63		1.00
Lane Grp Cap(c), veh/h	278	1081	1103	280	1081	1119	358	0	0	277	0	318
V/C Ratio(X)	0.12	0.53	0.53	0.72	0.45	0.45	0.73	0.00	0.00	0.16	0.00	0.08
Avail Cap(c_a), veh/h	278	1081	1103	280	1081	1119	508	0	0	415	0	474
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.78	0.55	0.55	0.55	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.4	11.3	11.3	48.4	25.4	25.4	38.0	0.0	0.0	32.5	0.0	32.1
Incr Delay (d2), s/veh	0.7	1.4	1.4	8.4	0.8	0.7	3.2	0.0	0.0	0.3	0.0	0.1
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(95%),veh/ln	0	10.7	10.9	8.9	15.8	16.3	10.6	0.0	0.0	1.6	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.1	12.7	12.7	56.8	26.1	26.1	41.2	0.0	0.0	32.7	0.0	32.2
LnGrp LOS	C	B	B	E	C	C	D	A	A	C	A	C
Approach Vol, veh/h	1182			1199			261			68		
Approach Delay, s/veh	13.0			31.2			41.2			32.5		
Approach LOS	B			C			D			C		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	70.0			30.0			70.0			30.0		
Change Period (Y+Rc), s	* 9.2			9.5			* 9.2			9.5		
Max Green Setting (Gmax), s	* 51			30.5			* 51			30.5		
Max Q Clear Time (g_c+I1), s	30.4			4.6			61.0			18.4		
Green Ext Time (p_c), s	14.6			0.3			0.0			1.3		

Intersection Summary

HCM 6th Ctrl Delay	24.3
HCM 6th LOS	C

Notes

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

Queues

23: Ventura Boulevard & Colfax Avenue

06/24/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	329	951	1064	253	295
v/c Ratio	0.55	0.39	0.90	0.74	0.30
Control Delay	13.0	9.3	36.3	50.3	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.0	9.3	36.3	50.3	2.1
Queue Length 50th (ft)	128	204	363	153	0
Queue Length 95th (ft)	224	297	#498	220	34
Internal Link Dist (ft)		981	464		
Turn Bay Length (ft)	160			360	360
Base Capacity (vph)	599	2468	1178	488	997
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.55	0.39	0.90	0.52	0.30

Intersection Summary




















95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

23: Ventura Boulevard & Colfax Avenue

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	303	875	0	0	774	205	0	0	0	233	0	271
Future Volume (vph)	303	875	0	0	774	205	0	0	0	233	0	271
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.7	5.4			5.4					5.4		5.7
Lane Util. Factor	1.00	0.95			0.95					1.00		1.00
Frt	1.00	1.00			0.97					1.00		0.85
Flt Protected	0.95	1.00			1.00					0.95		1.00
Satd. Flow (prot)	1770	3539			3428					1770		1583
Flt Permitted	0.10	1.00			1.00					0.95		1.00
Satd. Flow (perm)	186	3539			3428					1770		1583
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)	329	951	0	0	841	223	0	0	0	253	0	295
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	150
Lane Group Flow (vph)	329	951	0	0	1064	0	0	0	0	253	0	145
Turn Type	pm+pt	NA			NA					pm+pt		pm+ov
Protected Phases	5	2			6			3		4		5
Permitted Phases	2						3			7		4
Actuated Green, G (s)	69.8	69.8			34.4					19.4		49.1
Effective Green, g (s)	69.8	69.8			34.4					19.4		49.1
Actuated g/C Ratio	0.70	0.70			0.34					0.19		0.49
Clearance Time (s)	5.7	5.4			5.4					5.4		5.7
Vehicle Extension (s)	3.0	4.3			4.5					3.0		3.0
Lane Grp Cap (vph)	600	2470			1179					343		777
v/s Ratio Prot	c0.16	0.27			c0.31					c0.14		0.06
v/s Ratio Perm	0.22											0.04
v/c Ratio	0.55	0.39			0.90					0.74		0.19
Uniform Delay, d1	19.3	6.2			31.2					37.9		14.3
Progression Factor	0.55	1.28			0.78					1.00		1.00
Incremental Delay, d2	0.9	0.4			10.4					8.0		0.1
Delay (s)	11.5	8.4			34.9					45.9		14.4
Level of Service	B	A			C					D		B
Approach Delay (s)		9.2			34.9			0.0			29.0	
Approach LOS		A			C			A			C	
Intersection Summary												
HCM 2000 Control Delay		22.4			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		0.80										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)			22.8				
Intersection Capacity Utilization		70.2%			ICU Level of Service			C				
Analysis Period (min)		15										
c Critical Lane Group												

Queues

24: Berry Drive & Ventura Boulevard

06/24/2024



Lane Group	EBT	WBL	WBT	NBT
Lane Group Flow (vph)	1358	50	1292	84
v/c Ratio	0.46	0.18	0.44	0.37
Control Delay	5.5	3.7	2.8	7.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.5	3.7	2.8	7.6
Queue Length 50th (ft)	335	6	88	0
Queue Length 95th (ft)	68	m9	97	21
Internal Link Dist (ft)	342		273	287
Turn Bay Length (ft)		65		
Base Capacity (vph)	2924	277	2930	390
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.46	0.18	0.44	0.22



















Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

24: Berry Drive & Ventura Boulevard

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1234	16	46	1189	0	16	0	62	0	0	0
Future Volume (vph)	0	1234	16	46	1189	0	16	0	62	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0			9.4				
Lane Util. Factor		0.95		1.00	0.95			1.00				
Frt		1.00		1.00	1.00			0.89				
Flt Protected		1.00		0.95	1.00			0.99				
Satd. Flow (prot)		3533		1770	3539			1646				
Flt Permitted		1.00		0.18	1.00			0.99				
Satd. Flow (perm)		3533		334	3539			1646				
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)	0	1341	17	50	1292	0	17	0	67	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	79	0	0	0	0
Lane Group Flow (vph)	0	1358	0	50	1292	0	0	5	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		6			2		3	3			4	
Permitted Phases	6			2						4		
Actuated Green, G (s)		79.9		79.9	79.9			5.7				
Effective Green, g (s)		79.9		79.9	79.9			5.7				
Actuated g/C Ratio		0.80		0.80	0.80			0.06				
Clearance Time (s)		5.0		5.0	5.0			9.4				
Vehicle Extension (s)		4.9		4.0	4.0			3.0				
Lane Grp Cap (vph)		2822		266	2827			93				
v/s Ratio Prot		c0.38			0.37			c0.00				
v/s Ratio Perm				0.15								
v/c Ratio		0.48		0.19	0.46			0.05				
Uniform Delay, d1		3.3		2.4	3.2			44.6				
Progression Factor		1.51		0.78	0.74			1.00				
Incremental Delay, d2		0.6		1.4	0.5			0.2				
Delay (s)		5.5		3.3	2.9			44.8				
Level of Service		A		A	A			D				
Approach Delay (s)		5.5			2.9			44.8			0.0	
Approach LOS		A			A			D			A	
Intersection Summary												
HCM 2000 Control Delay			5.4			HCM 2000 Level of Service			A			
HCM 2000 Volume to Capacity ratio			0.51									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			23.7			
Intersection Capacity Utilization			56.1%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

Queues

25: Ventura Boulevard & Tujunga Avenue

06/24/2024



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	278	990	1072	142	189
v/c Ratio	0.53	0.36	0.61	0.34	0.30
Control Delay	25.1	2.0	19.1	42.0	16.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.1	2.0	19.1	42.0	16.4
Queue Length 50th (ft)	65	24	228	43	60
Queue Length 95th (ft)	159	66	337	70	103
Internal Link Dist (ft)		426	233	3083	
Turn Bay Length (ft)	180			100	60
Base Capacity (vph)	528	2719	1762	1218	633
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.53	0.36	0.61	0.12	0.30
Intersection Summary					

HCM Signalized Intersection Capacity Analysis

25: Ventura Boulevard & Tujunga Avenue

06/24/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	256	911	786	201	131	174
Future Volume (vph)	256	911	786	201	131	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.5	5.5		5.5	5.6
Lane Util. Factor	1.00	0.95	0.95		0.97	1.00
Frt	1.00	1.00	0.97		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	3539	3431		3433	1583
Flt Permitted	0.16	1.00	1.00		0.95	1.00
Satd. Flow (perm)	299	3539	3431		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	278	990	854	218	142	189
RTOR Reduction (vph)	0	0	18	0	0	34
Lane Group Flow (vph)	278	990	1054	0	142	155
Turn Type	pm+pt	NA	NA		Prot	pt+ov
Protected Phases	1	6	2		4	1 7
Permitted Phases	6					4
Actuated Green, G (s)	76.9	76.9	50.9		12.1	38.0
Effective Green, g (s)	76.9	76.9	50.9		12.1	32.5
Actuated g/C Ratio	0.77	0.77	0.51		0.12	0.32
Clearance Time (s)	5.6	5.5	5.5		5.5	
Vehicle Extension (s)	3.0	4.4	4.9		3.0	
Lane Grp Cap (vph)	530	2721	1746		415	514
v/s Ratio Prot	c0.11	0.28	c0.31		c0.04	0.10
v/s Ratio Perm	0.30					
v/c Ratio	0.52	0.36	0.60		0.34	0.30
Uniform Delay, d1	8.9	3.7	17.4		40.3	25.2
Progression Factor	3.19	0.41	1.00		1.00	1.00
Incremental Delay, d2	0.9	0.3	1.6		0.5	0.3
Delay (s)	29.3	1.9	19.0		40.8	25.6
Level of Service	C	A	B		D	C
Approach Delay (s)		7.9	19.0		32.1	
Approach LOS		A	B		C	
Intersection Summary						
HCM 2000 Control Delay			15.3		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.59			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	22.1
Intersection Capacity Utilization			64.5%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

HCM 6th Signalized Intersection Summary

26: Laurel Canyon Boulevard & Maxwellton Road

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕↕			↕↕	
Traffic Volume (veh/h)	61	0	69	0	0	0	14	1484	0	0	1025	67
Future Volume (veh/h)	61	0	69	0	0	0	14	1484	0	0	1025	67
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92				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
Work Zone On Approach	No						No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870				1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h	66	0	75				15	1613	0	0	1114	73
Peak Hour Factor	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	0	0	2	2
Cap, veh/h	122	0	139				48	2183	0	0	2148	141
Arrive On Green	0.16	0.00	0.16				0.63	0.63	0.00	0.00	0.63	0.63
Sat Flow, veh/h	748	0	850				12	3525	0	0	3478	222
Grp Volume(v), veh/h	141	0	0				869	759	0	0	585	602
Grp Sat Flow(s),veh/h/ln	1598	0	0				1835	1617	0	0	1777	1829
Q Serve(g_s), s	7.3	0.0	0.0				0.0	29.1	0.0	0.0	16.1	16.2
Cycle Q Clear(g_c), s	7.3	0.0	0.0				28.6	29.1	0.0	0.0	16.1	16.2
Prop In Lane	0.47		0.53				0.02		0.00	0.00		0.12
Lane Grp Cap(c), veh/h	261	0	0				1205	1026	0	0	1127	1161
V/C Ratio(X)	0.54	0.00	0.00				0.72	0.74	0.00	0.00	0.52	0.52
Avail Cap(c_a), veh/h	440	0	0				1205	1026	0	0	1127	1161
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.64	0.64	0.00	0.00	0.67	0.67
Uniform Delay (d), s/veh	34.6	0.0	0.0				11.2	11.3	0.0	0.0	9.0	9.0
Incr Delay (d2), s/veh	1.7	0.0	0.0				2.4	3.1	0.0	0.0	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
%ile BackOfQ(95%),veh/ln	5.3	0.0	0.0				14.9	13.5	0.0	0.0	8.8	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.3	0.0	0.0				13.7	14.4	0.0	0.0	10.1	10.1
LnGrp LOS	D	A	A				B	B	A	A	B	B
Approach Vol, veh/h	141						1628			1187		
Approach Delay, s/veh	36.3						14.0			10.1		
Approach LOS	D						B			B		
Timer - Assigned Phs	2		4		6							
Phs Duration (G+Y+Rc), s	66.1		23.9		66.1							
Change Period (Y+Rc), s	9.0		9.2		9.0							
Max Green Setting (Gmax), s	47.0		24.8		47.0							
Max Q Clear Time (g_c+I1), s	18.2		9.3		31.1							
Green Ext Time (p_c), s	18.0		0.7		14.2							
Intersection Summary												
HCM 6th Ctrl Delay			13.5									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary

27: Laurel Canyon Boulevard & Laurel Terrace Drive/Sunshine Terrace Drive

06/24/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (veh/h)	16	18	164	97	33	27	152	1435	186	31	1032	10
Future Volume (veh/h)	16	18	164	97	33	27	152	1435	186	31	1032	10
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	17	20	178	105	36	29	165	1560	202	34	1122	11
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	46	40	261	156	52	33	110	2322	296	186	2280	22
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.06	0.73	0.73	0.63	0.63	0.63
Sat Flow, veh/h	75	217	1406	578	282	177	1781	3170	405	272	3605	35
Grp Volume(v), veh/h	215	0	0	170	0	0	165	864	898	34	553	580
Grp Sat Flow(s), veh/h/ln	1698	0	0	1037	0	0	1781	1777	1798	272	1777	1864
Q Serve(g_s), s	0.0	0.0	0.0	5.6	0.0	0.0	7.4	30.4	32.0	9.2	19.9	19.9
Cycle Q Clear(g_c), s	14.4	0.0	0.0	20.0	0.0	0.0	7.4	30.4	32.0	29.2	19.9	19.9
Prop In Lane	0.08		0.83	0.62		0.17	1.00		0.23	1.00		0.02
Lane Grp Cap(c), veh/h	348	0	0	241	0	0	110	1302	1317	186	1124	1179
V/C Ratio(X)	0.62	0.00	0.00	0.70	0.00	0.00	1.50	0.66	0.68	0.18	0.49	0.49
Avail Cap(c_a), veh/h	410	0	0	294	0	0	110	1302	1317	186	1124	1179
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(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.79	0.79	0.79
Uniform Delay (d), s/veh	45.8	0.0	0.0	48.4	0.0	0.0	56.3	8.4	8.6	19.6	11.8	11.8
Incr Delay (d2), s/veh	2.1	0.0	0.0	5.8	0.0	0.0	267.4	2.7	2.9	1.7	1.2	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(95%),veh/ln	10.3	0.0	0.0	9.2	0.0	0.0	19.0	16.2	17.1	1.2	11.8	12.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.9	0.0	0.0	54.2	0.0	0.0	323.7	11.1	11.4	21.3	13.0	12.9
LnGrp LOS	D	A	A	D	A	A	F	B	B	C	B	B
Approach Vol, veh/h		215			170			1927			1167	
Approach Delay, s/veh		47.9			54.2			38.0			13.2	
Approach LOS		D			D			D			B	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	20.0	80.7		27.3		92.7		27.3				
Change Period (Y+Rc), s	4.6	4.8		* 5		4.8		* 5				
Max Green Setting (Gmax), s	71.2			* 27		83.2		* 27				
Max Q Clear Time (g_c+I19, s)	31.2			16.4		34.0		22.0				
Green Ext Time (p_c), s	0.0	10.6		0.9		21.6		0.4				

Intersection Summary

HCM 6th Ctrl Delay	31.1
HCM 6th LOS	C

Notes

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

Queues

28: Laurel Canyon Boulevard & Fryman Road

06/24/2024























Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	180	13	12	1758	1419
v/c Ratio	0.63	0.05	0.06	0.69	0.57
Control Delay	44.7	29.8	5.8	9.6	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.7	29.8	5.8	9.6	7.5
Queue Length 50th (ft)	97	6	2	246	165
Queue Length 95th (ft)	153	21	9	405	272
Internal Link Dist (ft)				236	183
Turn Bay Length (ft)			145		
Base Capacity (vph)	542	485	203	2544	2504
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.33	0.03	0.06	0.69	0.57
Intersection Summary					

HCM Signalized Intersection Capacity Analysis

28: Laurel Canyon Boulevard & Fryman Road

06/24/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								 			 	
Traffic Volume (vph)	166	0	12	0	0	0	11	1617	0	0	1137	168
Future Volume (vph)	166	0	12	0	0	0	11	1617	0	0	1137	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.4		5.4				5.4	5.4			5.4	
Lane Util. Factor	1.00		1.00				1.00	0.95			0.95	
Frt	1.00		0.85				1.00	1.00			0.98	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	3539			3471	
Flt Permitted	0.95		1.00				0.15	1.00			1.00	
Satd. Flow (perm)	1770		1583				283	3539			3471	
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)	180	0	13	0	0	0	12	1758	0	0	1236	183
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	8	0
Lane Group Flow (vph)	180	0	13	0	0	0	12	1758	0	0	1411	0
Turn Type	Perm		Perm				Perm	NA		Perm	NA	
Protected Phases								2			6	
Permitted Phases	8		8				2			6		
Actuated Green, G (s)	14.5		14.5				64.7	64.7			64.7	
Effective Green, g (s)	14.5		14.5				64.7	64.7			64.7	
Actuated g/C Ratio	0.16		0.16				0.72	0.72			0.72	
Clearance Time (s)	5.4		5.4				5.4	5.4			5.4	
Vehicle Extension (s)	3.0		3.0				4.8	4.8			5.1	
Lane Grp Cap (vph)	285		255				203	2544			2495	
v/s Ratio Prot								c0.50			0.41	
v/s Ratio Perm	c0.10		0.01				0.04					
v/c Ratio	0.63		0.05				0.06	0.69			0.57	
Uniform Delay, d1	35.3		31.9				3.7	7.1			6.0	
Progression Factor	1.00		1.00				1.00	1.00			1.00	
Incremental Delay, d2	4.5		0.1				0.6	1.6			0.9	
Delay (s)	39.8		32.0				4.3	8.6			6.9	
Level of Service	D		C				A	A			A	
Approach Delay (s)		39.2			0.0			8.6			6.9	
Approach LOS		D			A			A			A	
Intersection Summary												
HCM 2000 Control Delay			9.6				HCM 2000 Level of Service				A	
HCM 2000 Volume to Capacity ratio			0.68									
Actuated Cycle Length (s)			90.0				Sum of lost time (s)			10.8		
Intersection Capacity Utilization			61.7%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM 6th TWSC
29: Laurel Canyon Boulevard & Woodbridge Street

06/24/2024

Intersection												
Int Delay, s/veh	56.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	4	1	31	5	1	97	33	1904	20	62	1450	27
Future Vol, veh/h	4	1	31	5	1	97	33	1904	20	62	1450	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	65	-	-	60	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	1	34	5	1	105	36	2070	22	67	1576	29

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2833	3889	803	3076	3892	1046	1605	0	0	2092	0	0
Stage 1	1725	1725	-	2153	2153	-	-	-	-	-	-	-
Stage 2	1108	2164	-	923	1739	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	8	3	326	~ 5	3	225	403	-	-	260	-	-
Stage 1	92	142	-	49	86	-	-	-	-	-	-	-
Stage 2	224	85	-	290	140	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 2	2	326	~ 2	2	225	403	-	-	260	-	-
Mov Cap-2 Maneuver	~ 2	2	-	~ 2	2	-	-	-	-	-	-	-
Stage 1	84	105	-	45	78	-	-	-	-	-	-	-
Stage 2	107	77	-	191	104	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$ 1363.6		\$ 1500.8	0.2	1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	403	-	-	14 30	260	-	-
HCM Lane V/C Ratio	0.089	-	-	2.795 3.732	0.259	-	-
HCM Control Delay (s)	14.8	-	-	\$ 1363.6 \$ 1500.8	23.6	-	-
HCM Lane LOS	B	-	-	F F	C	-	-
HCM 95th %tile Q(veh)	0.3	-	-	5.7 13.4	1	-	-

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

HCM 6th TWSC
30: Valleyheart Drive (North) & Laurel Canyon Boulevard

06/24/2024

Intersection												
Int Delay, s/veh	1.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	2	0	14	2	0	10	18	2023	48	10	1497	5
Future Vol, veh/h	2	0	14	2	0	10	18	2023	48	10	1497	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	40	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	15	2	0	11	20	2199	52	11	1627	5

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2792	3943	816	3101	3919	1126	1632	0	0	2251	0	0
Stage 1	1652	1652	-	2265	2265	-	-	-	-	-	-	-
Stage 2	1140	2291	-	836	1654	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	9	3	320	5	3	199	394	-	-	225	-	-
Stage 1	103	154	-	42	75	-	-	-	-	-	-	-
Stage 2	214	73	-	328	154	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	8	3	320	4	3	199	394	-	-	225	-	-
Mov Cap-2 Maneuver	8	3	-	4	3	-	-	-	-	-	-	-
Stage 1	98	146	-	40	71	-	-	-	-	-	-	-
Stage 2	192	69	-	297	146	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	100.6	\$ 305.2	0.1	0.1
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	394	-	-	54 22	225	-	-
HCM Lane V/C Ratio	0.05	-	-	0.322 0.593	0.048	-	-
HCM Control Delay (s)	14.6	-	-	100.6\$ 305.2	21.8	-	-
HCM Lane LOS	B	-	-	F F	C	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.1 1.7	0.2	-	-

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





HCM 6th TWSC

31: Laurel Canyon Boulevard & Valleyheart Drive (South)

06/24/2024

Intersection

Int Delay, s/veh 11.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	114	1965	37	111	1415
Future Vol, veh/h	3	114	1965	37	111	1415
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	35	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	124	2136	40	121	1538

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	3167	1088	0
Stage 1	2156	-	-
Stage 2	1011	-	-
Critical Hdwy	6.84	6.94	-
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	3.32	-
Pot Cap-1 Maneuver	8	211	-
Stage 1	74	-	-
Stage 2	312	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	4	211	-
Mov Cap-2 Maneuver	4	-	-
Stage 1	74	-	-
Stage 2	155	-	-

Approach	WB	NB	SB
HCM Control Delay, s\$	315.3	0	2.5
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	91	241
HCM Lane V/C Ratio	-	-	1.398	0.501
HCM Control Delay (s)	-	-	\$ 315.3	34
HCM Lane LOS	-	-	F	D
HCM 95th %tile Q(veh)	-	-	9.5	2.6

Notes

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

HCM 6th AWSC
32: Radford Avenue & Sarah Street

06/24/2024

Intersection

Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	0	6	1	6	1	51	3	7	70	9
Future Vol, veh/h	5	0	0	6	1	6	1	51	3	7	70	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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	0	7	1	7	1	55	3	8	76	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0




Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.5	7.2	7.3	7.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	100%	46%	8%
Vol Thru, %	93%	0%	8%	81%
Vol Right, %	5%	0%	46%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	55	5	13	86
LT Vol	1	5	6	7
Through Vol	51	0	1	70
RT Vol	3	0	6	9
Lane Flow Rate	60	5	14	93
Geometry Grp	1	1	1	1
Degree of Util (X)	0.067	0.007	0.016	0.103
Departure Headway (Hd)	4.01	4.41	4.017	3.967
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	893	804	882	904
Service Time	2.037	2.478	2.084	1.989
HCM Lane V/C Ratio	0.067	0.006	0.016	0.103
HCM Control Delay	7.3	7.5	7.2	7.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0	0	0.3

Intersection

Intersection Delay, s/veh 0

Intersection LOS -

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left NB			WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right SB		WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	0	0	0
HCM LOS	-	-	-

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%
Vol Thru, %	100%	100%	100%
Vol Right, %	0%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0
LT Vol	0	0	0
Through Vol	0	0	0
RT Vol	0	0	0
Lane Flow Rate	0	0	0
Geometry Grp	1	1	1
Degree of Util (X)	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes
Cap	0	0	0
Service Time	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0
HCM Control Delay	6.9	6.9	6.9
HCM Lane LOS	N	N	N
HCM 95th-tile Q	0	0	0

HCM 6th AWSC

54: Radford Avenue & Radford Gate

06/24/2024

Intersection

Intersection Delay, s/veh 0

Intersection LOS -

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

HCM 6th AWSC
55: Alley & Carpenter Gate

06/24/2024

Intersection

Intersection Delay, s/veh 0

Intersection LOS -




Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	0	0	0	0
HCM LOS	-	-	-	-

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	0%	0%
Vol Thru, %	100%	100%	100%	100%
Vol Right, %	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	0	0	0
LT Vol	0	0	0	0
Through Vol	0	0	0	0
RT Vol	0	0	0	0
Lane Flow Rate	0	0	0	0
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0	0	0
Departure Headway (Hd)	3.934	3.934	3.934	3.934
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	0	0	0
Service Time	1.934	1.934	1.934	1.934
HCM Lane V/C Ratio	0	0	0	0
HCM Control Delay	6.9	6.9	6.9	6.9
HCM Lane LOS	N	N	N	N
HCM 95th-tile Q	0	0	0	0

HCM 6th TWSC
56: Colfax Avenue & Colfax Gate

06/24/2024

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1	1	- 0 - 0
Stage 1	1	-	- - -
Stage 2	0	-	- - -
Critical Hdwy	6.42	6.22	- - -
Critical Hdwy Stg 1	5.42	-	- - -
Critical Hdwy Stg 2	5.42	-	- - -
Follow-up Hdwy	3.518	3.318	- - -
Pot Cap-1 Maneuver	1022	1084	0 - - 0
Stage 1	1022	-	0 - - 0
Stage 2	-	-	0 - - 0
Platoon blocked, %			- -
Mov Cap-1 Maneuver	1022	1084	- - -
Mov Cap-2 Maneuver	1022	-	- - -
Stage 1	1022	-	- - -
Stage 2	-	-	- - -

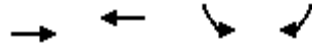
Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

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

Queues

121: Ventura Boulevard & Ventura PI

06/24/2024



Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1158	1441	151	24
v/c Ratio	1.28	0.67	0.25	0.08
Control Delay	175.2	10.9	50.5	16.8
Queue Delay	1.8	50.8	0.0	0.0
Total Delay	177.0	61.7	50.5	16.8
Queue Length 50th (ft)	~700	87	62	0
Queue Length 95th (ft)	#839	m24	93	27
Internal Link Dist (ft)	509	48	136	
Turn Bay Length (ft)				40
Base Capacity (vph)	907	2138	669	328
Starvation Cap Reductn	0	1315	0	0
Spillback Cap Reductn	239	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.73	1.75	0.23	0.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

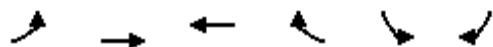
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

121: Ventura Boulevard & Ventura PI

06/24/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	↑
Traffic Volume (vph)	0	1065	1326	0	139	22
Future Volume (vph)	0	1065	1326	0	139	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.1	6.1		5.7	5.7
Lane Util. Factor		0.95	0.95		0.97	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		3539	3539		3433	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		3539	3539		3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1158	1441	0	151	24
RTOR Reduction (vph)	0	0	0	0	0	20
Lane Group Flow (vph)	0	1158	1441	0	151	4
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2 4		3	
Permitted Phases						3
Actuated Green, G (s)		35.9	84.6		24.6	24.6
Effective Green, g (s)		35.9	84.6		24.6	24.6
Actuated g/C Ratio		0.26	0.60		0.18	0.18
Clearance Time (s)		6.1			5.7	5.7
Vehicle Extension (s)		4.6			3.0	3.0
Lane Grp Cap (vph)		907	2138		603	278
v/s Ratio Prot		c0.33	c0.41		c0.04	
v/s Ratio Perm						0.00
v/c Ratio		1.28	0.67		0.25	0.02
Uniform Delay, d1		52.0	18.5		49.8	47.7
Progression Factor		1.00	0.56		1.00	1.00
Incremental Delay, d2		133.1	0.1		0.2	0.0
Delay (s)		185.1	10.5		50.0	47.7
Level of Service		F	B		D	D
Approach Delay (s)		185.1	10.5		49.7	
Approach LOS		F	B		D	
Intersection Summary						
HCM 2000 Control Delay		85.9		HCM 2000 Level of Service		F
HCM 2000 Volume to Capacity ratio		0.89				
Actuated Cycle Length (s)		140.0		Sum of lost time (s)		31.8
Intersection Capacity Utilization		53.2%		ICU Level of Service		A
Analysis Period (min)		15				
c Critical Lane Group						

Appendix 0.2

LADOT Transportation Assessment Approval Letter

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

4024, 4064 & 4200 N. Radford Avenue
LADOT Case No. SFV24-116500
LADOT Project ID No. 56834

Date: January 15, 2025

To: Claudia Rodriguez, Senior City Planner
Department of City Planning
Vicente Cordero

From: Vicente Cordero, Acting Senior Transportation Engineer
Department of Transportation

Subject: **UPDATED TRANSPORTATION ASSESSMENT FOR THE RADFORD STUDIOS
DEVELOPMENT LOCATED AT 4024, 4064, AND 4200 NORTH RADFORD AVENUE (CPC-
2023-1347-GPA-VZC-SP-SN)**

On August 9, 2024, the Los Angeles Department of Transportation (LADOT) issued a Transportation Assessment Letter for the Radford Studios Center development located at 4024, 4064, and 4200 N Radford Avenue in the Sherman Oaks-Studio City-Toluca Lake-Cahuenga Pass Community Planning Area of the City of Los Angeles. Since then, Gibson Transportation Consulting, Inc. submitted a revised Transportation Assessment, dated January 2025, for consistency with the Draft Environmental Impact Report.

LADOT has reviewed the revised Transportation Assessment and determined that the revisions provided do not affect the conclusions made in Gibson's previously submitted July 2024 Transportation Assessment. Therefore, the Discussion and Findings of the August 9, 2024 Transportation Assessment Letter as shown in **Attachment A** remain the same.

If you have any questions, you may contact Sheila Ahorian of my staff at (818) 374-4690.

Attachments

J:\Projects\SFV\56834-4200 N Radford Ave_Radford Studios

cc: Armida Reyes, Council District 4
Steve Rostam, LADOT East Valley District
Ali Nahass, BOE Valley District
Quyen Phan, BOE Land Development Group
Emily Wong, Gibson Transportation Consulting, Inc.

ATTACHMENT A

CITY OF LOS ANGELES INTER-DEPARTMENTAL CORRESPONDENCE

4024, 4064 & 4200 N. Radford Avenue
LADOT Case No. SFV24-116500
LADOT Project ID No. 56834

Date: August 9, 2024

To: Claudia Rodriguez, Senior City Planner
Department of City Planning
Vicente Cordero

From: Vicente Cordero, Transportation Engineer
Department of Transportation

Subject: **TRANSPORTATION ASSESSMENT FOR THE RADFORD STUDIOS DEVELOPMENT
LOCATED AT 4024, 4064, AND 4200 NORTH RADFORD AVENUE (CPC-2023-1347-
GPA-VZC-SP-SN)**

The Los Angeles Department of Transportation (LADOT) has reviewed the transportation assessment prepared by Gibson Transportation Consulting, Inc., dated July 2024, for the Radford Studio Center development located at 4024, 4064, and 4200 N Radford Avenue in the Sherman Oaks - Studio City - Toluca Lake -Cahuenga Pass Community Planning Area of the City of Los Angeles. On July 30, 2019, pursuant to Senate Bill (SB) 743 and the recent changes to Section 15064.3 of the State's California Environmental Quality Act (CEQA) Guidelines, the City of Los Angeles adopted vehicle miles traveled (VMT) as the criteria by which to determine transportation impacts under CEQA. Pursuant to the VMT thresholds and study methodology established in LADOT's Transportation Assessment Guidelines (TAG), the proposed project submitted a transportation impact assessment and VMT analysis, which is summarized below.

DISCUSSION AND FINDINGS

A. Project Description

The project would establish the Radford Studio Center Specific Plan to allow for the continuation of an existing studio use and the modernization of media production facilities. The North and South Lots are currently improved with multiple buildings totaling approximately 1,179,110 square feet (sf), including 359,730 sf of sound stages, 255,510 sf of production support, 450,060 sf of production office, and 113,810 sf of creative office.

The proposed Specific Plan would allow a maximum total of up to approximately 2,200,000 sf of sound stage, production support, production office, creative office, and retail uses within the project site upon buildout of the project as well as associated ingress/egress, circulation, parking, landscaping, and open space improvements. The Specific Plan would permit up to approximately 1,667,010 sf of new floor area, the retention of approximately 532,990 sf of existing uses, and the demolition of up to approximately 646,120 sf of existing uses. The project also includes open space and landscaping

improvements to enhance the public realm along the perimeter of the project site and improve public access to the Los Angeles River and Tujunga Wash. Consistent with existing conditions, the project would continue to operate 24 hours a day, seven days a week, and special events would continue to be governed by the Los Angeles Municipal Code (LAMC).

Under the proposed Specific Plan, the permitted floor area of certain studio uses may be adjusted pursuant to the land use exchange provisions detailed in the proposed Specific Plan, provided the total permitted floor area on-site does not exceed 2,200,000 sf. The proposed Specific Plan would allow for limited exchanges between certain permitted studio land uses and associated floor areas. Specifically, the floor area from any permitted land use could be reduced in exchange for an equivalent increase in sound stage and/or production support floor area, as long as the limitations of the proposed Specific Plan are met. The permitted adjustments would be limited as follows:

- The total sound stage floor area may be increased from 450,000 sf up to a total of 575,000 sf in exchange for equivalent decreases in the floor area of any other permitted uses.
- The total production support floor area may be increased from 300,000 sf up to a total of 575,000 sf in exchange for equivalent decreases in the floor area of any other permitted uses.
- As the exchange in floor area is only limited to the sound stage and production support uses, the total permitted floor area for production office uses would not exceed 725,000 sf, the total permitted floor area for creative office uses would not exceed 700,000 sf, and the total permitted floor area for retail uses would not exceed 25,000 sf.

For the purposes of the transportation assessment, the proposed project development summary from **Attachment A** represents a conservative program and was used in all analyses herein.

A total of approximately 6,050 parking spaces would be provided, including approximately 2,170 existing parking spaces to remain, within a combination of above-grade parking structures, subterranean structures, and/or surface parking lots. The project would also provide bicycle parking spaces, including short-term and long-term spaces, in accordance with the LAMC.

Vehicular access to the project site would continue to be provided along Radford Avenue via the existing ingress/egress driveways at the southwestern portion of the South Lot, the Radford Gate, and the northwestern portion of the South Lot, which provides direct access to the existing Sater parking structure. Vehicular access from Colfax Avenue via the existing ingress/egress driveway, the Colfax Gate, would be located in the southeastern portion of the South Lot. Additional vehicular access from Ventura Boulevard, via Carpenter Avenue, would be provided via a former ingress/egress driveway at the Carpenter Gate that would be restored as part of the project. The project is also proposing a new multi-modal bridge, referred to as the Radford Mobility Connector, which would extend Radford Avenue north across the Tujunga Wash to Moorpark Street (no through access for vehicles would be permitted north or south along Radford Avenue). Two additional existing ingress/egress driveways located in the northwestern and southwestern portion of the North Lot along Radford Avenue would be for limited access only, consistent with existing conditions. Two loading/service access areas would also be located along the southern boundary of the project site accessed from the adjacent public alley.

Mobility Hub(s) would be located on-site, currently proposed as one in the northern portion of the North Lot and one in the southern portion of the South Lot, subject to operational needs. The Mobility Hub within the North Lot would be constructed after completion of the Radford Mobility Connector. The Mobility Hub(s) would support first-mile/last-mile connections; encourage employee use of public transit, carpooling, vanpooling, and biking/scooter to work; and support other transportation demand management (TDM) strategies. The Mobility Hub(s) would provide an off-street space for project-related passenger pick-up/drop-off and the temporary parking of buses, carpools, vanpools, shuttles, ride-share, taxi, and other commercial and non-commercial vehicles. The Mobility Hub(s) would include space to accommodate support uses, storage, maintenance, staging facilities, bike share, and ridership amenities.

Project buildout could take place in one or multiple years and is anticipated to be completed as early as Year 2028. However, the project is seeking a Development Agreement with a term of 20 years, which could extend the full buildout year to approximately year 2045. The analysis in this study considers project operations in Year 2028 as well as the Year 2045 long-term buildout scenario.

B. Freeway Safety Analysis

Per the Interim Guidance for Freeway Safety Analysis memorandum issued by LADOT on May 1, 2020 to address Caltrans safety concerns on freeways, the study addressed the project's effects on vehicle queuing on freeway off-ramps. Such an evaluation measures the project's potential to lengthen a forecasted off-ramp queue and create speed differentials between vehicles exiting the freeway off-ramps and vehicles operating on the freeway mainline. The evaluation identified the number of project trips expected to be added to nearby freeway off-ramps serving the project site. It was determined that the project would add 25 or more peak hour trips to the following off-ramps during the morning and afternoon peak hours:

- US 101 Northbound Off-Ramp to Laurel Canyon Boulevard (morning peak hour)
- US 101 Southbound Off-Ramp to Laurel Canyon Boulevard (morning and afternoon peak hours)
- SR 170 Southbound Off-Ramp to Riverside Drive (morning peak hour)
- SR 134 Westbound Off-Ramp to Lankershim Boulevard (morning peak hour)
-

Conditions were analyzed for the anticipated project buildout year of 2028 and the long-term buildout year of 2045. The assessment of the off-ramp facilities included a review of the resulting queue length as compared to the total available queuing capacity of the ramp to determine whether the queue would extend beyond the length of the ramp onto the freeway mainline. As shown in **Attachment B**, under Future with Project Conditions (Year 2028) and Future with Project Conditions (Year 2045), none of the four analyzed off-ramps would have queues that both exceed the ramp storage length and include project-related vehicles that would add 50 feet or more to any queue during any of the analyzed peak hours compared to Future without Project Conditions (Year 2028 and Year 2045). Therefore, the project would not be subject to a speed differential analyses and no corrective measures are required. The project would implement comprehensive TDM strategies to reduce single-occupancy vehicle trips and encourage the use of alternative transportation modes to and from the project site.

C. CEQA Screening Threshold

A trip generation analysis was conducted to determine if the project would exceed the net 250 daily

vehicle trips (DVT) screening threshold set forward by the TAG. The City of Los Angeles VMT Calculator Tool, which draws upon trip rate estimates published in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition, as well as applying trip generation adjustments when applicable, based on sociodemographic data and the built environment factors of the project's surroundings, determined that the project exceeds the net 250 DVT threshold. The transportation assessment concluded that implementation of the project would **not** result in a significant transportation impact. The traffic analysis included further discussion on the screening of the following CEQA transportation thresholds:

1. Threshold T-1: Conflicting with Plans, Programs, Ordinances, or Policies

The transportation assessment evaluated the proposed project for conformance with the adopted City's transportation plans and policies for all travel modes. According to the analysis, the project does not obstruct or conflict with the City's development policies and standards for the transportation system. Therefore, no project or cumulative significant transportation impact was identified for this threshold.

2. Threshold T-2.1: Causing Substantial Vehicle Miles Traveled

Using the VMT Calculator, the assessment determined that the project would generate a net increase in DVT and a net increase in daily VMT. The analysis concluded that the project would not result in a significant VMT impact as discussed below under Section D, CEQA Transportation Analysis.

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

The project does not involve any design features that are unusual for the area or any incompatible use.

D. CEQA Transportation Analysis

The LADOT Transportation Assessment Guidelines (TAG) provide instructions on preparing transportation assessments for land use proposals and defines the significant impact thresholds. LADOT identified distinct thresholds for significant VMT impacts for each of the seven Area Planning Commission (APC) areas in the City. For the South Valley APC area, in which the project is located, the following threshold has been established:

- Daily Household VMT per Capita: 9.4
- Daily Work VMT per Employee: 11.6

The VMT analysis was based on the gross total project, including 2,175,000 sf of total permitted floor area for sound stages, production support, production office, and creative office uses, and 25,000 sf of total permitted floor area for retail on the project site. For conservative purposes, the 25,000 sf of retail space in its entirety was considered as high-turnover restaurant use in the VMT calculator. Although the project would voluntarily implement a comprehensive TDM Program, the VMT analysis conservatively considered only those TDM measures required by City ordinance and code. The analysis incorporated two of these measures, which are bicycle parking per the LAMC and promotions and marketing of site-specific transportation options, and the effects of travel choices. The project would generate an average Work VMT per Employee of 6.2

which falls below the established threshold for the South Valley APC area. The project does not have a residential component and, therefore, the household VMT per capita does not apply. The VMT analysis results are shown in **Attachment C**. It was concluded that the implementation of the project would not result in a significant VMT impact. The additional TDM measures not accounted for in this analysis would further reduce total VMT and VMT per Employee.

Land Use Exchange Scenarios

The proposed Specific Plan would allow for limited exchanges between certain permitted studio land uses and associated floor areas, would account for the special needs of the project site, and allow for adapting to and addressing potential future changes in technology and space requirements inherent to the rapid pace of entertainment technology's advancement. Accordingly, the Specific Plan would allow for the limited increase in sound stages, and production support uses for an equivalent decrease in the floor area of other permitted uses, provided that the maximum permitted floor area of 2,200,000 sf is not exceeded. Specifically, sound stage floor area may be increased by up to 125,000 sf (from 450,000 sf to up to 575,000 sf) in exchange for equivalent decreases in the floor area of other uses, and production support floor area may be increased by up to 275,000 sf (from 300,000 sf to up to 575,000 sf) in exchange for equivalent decreases in the floor area of other uses. The Maximum Land Use Exchange Scenarios and supplemental VMT analysis can be seen in **Attachment D** and **Attachment E**, respectively.

E. Pedestrian, Bicycle, and Transit Access Assessment

The project's potential effect on surrounding pedestrian, bicycle, and transit facilities was assessed and would result in an increase in activity. Given the project site's location near local bus stops and its proximity to active commercial centers, it is ideally located to encourage non-automobile trips to and from those destinations and reach additional public transit routes. The project would also expand employment opportunities in close proximity to housing and transit options to further reduce the reliance on single occupancy vehicle travel. Additionally, the project would improve the adjacent pedestrian facilities and promote a more comfortable and safer environment for all users through a new bridge connection, a protected bikeway along Radford Avenue, wider setback areas, and new landscaping along the project frontages. The project's on-site Mobility Hub(s) would also provide first-mile/last-mile connections for employees and visitors through bike-share facilities, shuttle connections, etc. The amount of additional pedestrian, bicycle, and transit activity generated by the project would not strain the capacity of facilities and operations dedicated to those modes.

F. Access and Circulation

The access and circulation analysis included a study of selected intersections using the Highway Capacity Manual (HCM) methodology which calculates the amount of delay per vehicle based upon the intersection traffic volumes, lane configurations, and signal timing.

Traffic Conditions

Intersection turning movement counts at the study intersections were collected in March 2023 and November 2023 during the morning (7:00 AM to 10:00 AM) and afternoon (3:00 PM to 6:00 PM) peak periods to develop the Existing Conditions Year 2023. The project may be constructed over a 39-month period beginning in Year 2025 and ending by Year 2028. Under the project's Development Agreement, the project buildout could extend through Year 2045. Thus, for the purposes of the transportation

analysis, it is anticipated that by Year 2045, the study area would be affected by transportation infrastructure improvements and other development projects completed in the interim.

The Future without Project traffic volumes include ambient growth, which reflects increases in traffic due to regional growth and development outside the study area, as well as traffic generated by ongoing or entitled projects near or within the study area. An ambient growth factor of 1% per year compounded annually was applied to be conservative by adjusting the existing traffic volumes to reflect the effects of the regional growth and development. A total growth of 5.1% was applied to account for the five-year period corresponding to buildout in Year 2028. An ambient growth factor of 0.5% per year compounded annually was applied to the adjusted traffic volumes between Year 2028 to Year 2045 to simulate regional traffic growth corresponding to the project's buildout under the Development Agreement. As such, a total growth of 14.95% was applied to account for the additional 17-year period. These growth factors account for increases in traffic due to potential projects plus projects not yet proposed and projects located outside of the study area.

Related Projects were considered and conservatively assumed to be completed by completion of the project in Year 2028. The related project volumes were added to the existing traffic volumes after accounting for ambient growth through the project buildout Year 2028 and Development Agreement Year 2045. These volumes represent the Future without Project Conditions for Year 2028 and Year 2045 at the study intersections.

The project-only morning and afternoon peak hour traffic volumes without and with completion of the Radford Mobility Connector were added to both the Future without Project Conditions (Year 2028) and Future without Project Conditions (Year 2045) morning and afternoon peak hour traffic volumes. The resulting volumes represent the Future with Project Conditions (Year 2028) and Future with Project Conditions (Year 2045) without and with the Radford Mobility Connector respectively. All future adjustments including cumulative traffic growth (i.e., ambient growth and Related Project traffic) and programmed transportation improvements are incorporated into the Future with Project Conditions (Year 2028) and Future with Project Conditions (Year 2045).

Under the HCM methodology, level of service (LOS) at signalized and unsignalized intersections is defined based on the delay experienced per vehicle as seen in **Attachment F**. LADOT has reviewed this analysis and determined that it adequately disclosed operation concerns.

Intersection Queuing Analysis

Project vehicles were evaluated to determine whether the project site access would contribute to unacceptable queueing on an Avenue or Boulevard at project driveways or would cause or substantially extend queueing at nearby signalized intersections. The queue lengths were estimated using Synchro software, which reports the 95th percentile queue length, in vehicles, for each approach lane. The reported queues are calculated using the HCM signalized intersection methodology. The results of the queuing analysis are shown in **Attachment G**. LADOT has reviewed this analysis and determined that it adequately disclosed queueing concerns.

Driveway Operational Analysis

An analysis of anticipated operating conditions based on the Future with Project Conditions (Year 2028) and Future with Project Conditions (Year 2045) was conducted for the project's five vehicular

driveways. The analysis determined that the anticipated queues entering the project driveways would not extend into the public right of way and would not substantially affect through traffic along adjacent corridors. All security gates would be located to provide adequate queueing areas that would meet City requirements and project demand and would minimize the potential for vehicle queueing into the public streets. The results of the driveway operational analysis under Future with Project Conditions (Year 2028) and Future with Project Conditions (Year 2045) are shown in **Attachment H**.

Signal Warrant Analysis

Signal warrant analyses were conducted at the intersection of Radford Avenue & Moorpark Street proposed for signalization to determine whether the anticipated traffic volumes are sufficient to technically justify the installation of traffic signals. The analysis used Future with Project Conditions with the Radford Mobility Connector traffic volume forecasts for Year 2028 and 2045. The analyzed intersection meets the warrant thresholds for signalization under both Year 2028 and 2045. Furthermore, signalization is recommended in order to provide safe pedestrian and bicycle crossings and safe operations for vehicles accessing the project site via the Radford Mobility Connector. No through vehicle access would be allowed north or south on Radford Avenue from the Radford Mobility Connector.

Residential Street Cut-Through Analysis

The objective of the residential street cut-through analysis is to determine potential increases in average daily traffic volumes on designated Local Streets, as classified in the City's General Plan, that can be identified as cut-through trips generated by the project. Based on the analysis indicated in the traffic study, the residential streets in the following four neighborhoods to the north (North Neighborhood), east (East Neighborhood), south (South Neighborhood), and west (West Neighborhood) of the project site were examined for the availability of parallel local streets that could be used as cut-through route to avoid arterial congestion as shown in **Attachment I**.

- North Neighborhood: The neighborhood to the north of the project site is generally bounded by US 101 to the north, Colfax Avenue to the east, Moorpark Street to the south, and Laurel Canyon Boulevard to the west.
- East Neighborhood: The neighborhood to the east of the project site is generally bounded by Moorpark Street to the north, Tujunga Avenue to the east, the Los Angeles River to the south, and Colfax Avenue to the west.
- South Neighborhood: The neighborhood to the south of the project site is generally bounded by Ventura Boulevard to the north, Carpenter Avenue to the east, Sunshine Terrace to the south, and Whitsett Avenue to the west.
- West Neighborhood: The neighborhood to the west of the project site is generally bounded by Moorpark Street to the north, Radford Avenue to the east, Ventura Boulevard to the south, and Laurel Canyon Boulevard to the west.

Neighborhood Traffic Management Plan (NTMP)

LADOT has developed an iterative process, through which neighborhoods most directly affected by a project's potential cut-through traffic effects are included in the process to develop, evaluate, and implement traffic calming options preferred as part of a NTMP to minimize these types of issues. This NTMP process includes the collection of new traffic data after the approval of a project to assess the actual effects of project trips and multiple community workshops with potentially affected residents

and LADOT, during which a mutually acceptable NTMP would be formed. A toolbox of typical neighborhood measures is provided in **Attachment J**.

The project applicant has voluntarily begun the NTMP process in the four neighborhoods identified above. Individual, small group, and neighborhood-wide meetings and public workshops with each of the neighborhoods have been underway since October 2023. While the general concerns and issue areas are similar in the four neighborhoods, representatives from each neighborhood have identified specific topics that relate to their particular geographic area. Because the issues and concerns in each neighborhood are different, the detailed NTMP plans for each neighborhood would utilize different measures and strategies to minimize the identified issues and concerns. For this reason, it is important that the detailed NTMP plans be prepared by each individual neighborhood in consultation with LADOT.

The project applicant would continue the NTMP process in each of the four study neighborhoods by funding and coordinating the implementation of the NTMP studies already begun as part of the project planning efforts. As a component of the project's NTMP contribution, the applicant would contribute a total of up to \$500,000 to assist with the funding of an NTMP study in the neighborhoods and the implementation of the measures approved by LADOT and supported by stakeholders.

PROJECT REQUIREMENTS

A. TDM Program

The project would implement a series of TDM measures for the project site as a whole and would be available to both existing and new employees on-site. The TDM strategies proposed under the TDM program are as follows:

- Educational Programs/On-Site Coordinator: The coordinator would provide information on public transit and any related incentives, flexible work schedules and telecommuting programs, pedestrian and bicycle amenities provided, ride-share/carpool/vanpool programs, and parking incentives.
- Transportation Information Center/Kiosks via Mobility Hub(s): The project would install a transportation information center at the Mobility Hub(s). The transportation information center would provide employees and visitors with information regarding transit, commute programs, and planning travel without using an automobile.
- Bicycle Parking and Amenities: In order to facilitate bicycle use, the project would provide short-term and long-term bicycle parking spaces in accordance with the LAMC, as well as showers, lockers, and bicycle service areas and repair stands within the Project Site. The project would incorporate features for bicyclists, such as exclusive access points and secured bicycle parking facilities. The project applicant would also contribute toward the implementation of bicycle improvements within the study area under the Mobility Plan.
- Pedestrian Amenities: The project would incorporate features for pedestrians, such as pedestrian-only access points and upgraded pedestrian facilities and bus stops. Additionally,

the Project Site would be designed to be a friendly and convenient environment for pedestrians. The Project would provide more pedestrian-friendly sidewalks and areas along Radford Avenue, Colfax Avenue, and Moorpark Street, and maintain internal walkways throughout the Project Site. The project applicant would also contribute toward pedestrian facilities improvements as part of Vision Zero.

- Ride-Share Matching and Carpool/Vanpool Program: The on-site TDM coordinator would provide ride share matching services to match interested employees with similar commutes into carpools and vanpools. Carpools/vanpools provide the potential for employees to come to work relaxed and/or work during the commute and reduce the number of single-occupant vehicles and, therefore, reduce automobile trips and VMT.
- Neighborhood Enhancements: The project would enhance the transportation mobility around the perimeter of the project site to encourage alternative transportation modes within the development and connections to the development from off-site locations. The project would also enhance existing crosswalks at the signalized intersections in the Project area to current LADOT standards. As part of the Radford Mobility Connector, the project would provide pedestrian and bicycle access from Moorpark Street to Ventura Boulevard via Radford Avenue, while prohibiting through access north and south along Radford Avenue for vehicles. Access to the Los Angeles River and Tujunga Wash would also be enhanced.
- First-Mile/Last-Mile Options: There has been a proliferation of new options for personal transportation in recent years that help to address first-mile/last-mile connectivity issues with public transit including motorized scooters, skateboards, and bicycles as well as human-powered bicycles. The project applicant is committed to forward-thinking mobility solutions in the design and implementation of the project and intends to provide support for such services at the Mobility Hub(s).
- Carpool/Vanpool Parking and Loading via Mobility Hub: The Mobility Hub(s) would provide safe and convenient passenger loading areas for employee carpools/vanpools along with access to the project site's internal roadway network to get to the parking structures. Additional passenger loading areas are also proposed within the project site at the Mobility Hub(s).
- Guaranteed Ride Home Program: A Guaranteed Ride Home program assures transportation service to individuals who commute without their personal automobiles. In the event of personal or family emergencies, the individual would be reimbursed for a taxi ride, ride-share ride, or short-term car rental. This program would cover all employees participating in the carpool/vanpool program or using transit to and from the project site.

B. Off-Site Transportation Improvements

The project would implement a series of off-site transportation improvements that were identified in consultation with LADOT. These improvements fall into the categories of pedestrian and bicycle safety, traffic signal operations and vehicular mobility, neighborhood transportation conditions, and transit stop amenities as shown in **Attachment K**.

Pedestrian and Bicycle Improvements

The project would install a Class IV protected bicycle lane along Radford Avenue between Radford Mobility Connector and Hoffman Street, as programmed in the Los Angeles River Revitalization Master Plan. In addition, the project would contribute toward the implementation of bicycle and pedestrian connections to the Tujunga Wash as part of the Radford Mobility Connector or an equivalent bicycle/pedestrian connection at a similar location. The project would contribute up to \$3 million toward these improvements.

Transportation Systems Management (TSM) Improvements

The project would contribute toward the installation of TSM improvements at locations identified by LADOT to provide system-wide benefits and to better accommodate traffic operations throughout the project area. These features could include signal upgrades, new controllers and cabinets, closed circuit television cameras and necessary infrastructure, installation of vehicle detection loops, flashing yellow arrows, leading pedestrian intervals, and/or left-turn signal phasing at several key intersections along Laurel Canyon Boulevard, Colfax Avenue, Moorpark Street, and Ventura Boulevard. The TSM improvements would provide LADOT with the ability to better monitor traffic operations and respond instantly to incidents that delay vehicles and transit service. The project would contribute up to \$1.55 million toward the implementation of TSM improvements.

NTMP

As noted in Section F, four neighborhoods were identified as potential alternative routes that could be used as a cut-through route to avoid arterial congestion. The project applicant would allocate funds for a NTMP to assist with the funding of an NTMP study in each neighborhood and the implementation of the measures approved by LADOT and supported by stakeholders. In total, the project would contribute a total of up to \$500,000 (e.g. \$125,000 to each neighborhood).

Vision Zero

Vision Zero is a traffic safety policy that promotes strategies to eliminate transportation-related collisions that result in severe injury or death. As part of the Vision Zero improvements, upgraded ADA ramps would be provided at key locations in the Project Site vicinity (all corner ramps at Radford Avenue & Ventura Boulevard, northwest and southwest corners at 4024 Radford Avenue, and southwest corner at 4141 Radford Avenue) and a pedestrian hybrid beacon (a type of traffic signal control for pedestrian crosswalks) at the intersection of Laurel Canyon Boulevard & Valleyheart Drive. The project would contribute up to \$550,000 toward these Vision Zero improvements.

Transit Stop Improvements

The project would contribute to the implementation of transit stop improvements to promote non-auto travel. Upgrading and enhancing the transit stop infrastructure around the project site and throughout the study area effectively facilitates the use of alternative modes and reduces the reliance on single occupancy vehicle travel. The transit stop improvements may include the installation of bus stop shelters, benches, signage, etc. The project would contribute up to \$200,000 toward transit stop improvements.

C. Non-CEQA-Related Requirements and Considerations

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

1. **Construction Impacts**

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

2. **Highway Dedication and Street Widening Requirements**

The project would be consistent with the intent of the Mobility Plan and would maintain roadways with street standards in accordance with standards and criteria contained in the Mobility Plan standards. The project applicant is requesting a waiver of dedication, but would provide a three-foot public sidewalk easement to widen the existing sidewalk along Radford Avenue.

The applicant should check with Bureau of Engineering's Land Development Group to determine if there are any applicable highway dedication, street widening, and/or sidewalk requirements for this project.

3. **Parking Requirements**

There are currently approximately 3,095 parking spaces located in multiple above-grade parking structures and surface parking lots throughout the project site. With the project, a total of approximately 6,050 parking spaces would be provided, including approximately 2,170 existing parking spaces to remain, within a combination of above-grade parking structures, subterranean structures, and/or surface parking lots. The project would also provide bicycle parking spaces including short-term and long-term spaces in accordance with the LAMC. The on-site parking facilities would serve the parking needs for project employees, staff, visitors, audiences, etc.

The applicant should check with the Department of Building and Safety on the number of Code-required parking spaces needed for the project.

4. **Driveway Access and Circulation**

Vehicular access to the project site would continue to be provided along Radford Avenue via the existing ingress/egress driveways at the southwestern portion of the South Lot, the Radford Gate, and the northwestern portion of the South Lot, which provides direct access to the existing Sater parking structure. Vehicular access from Colfax Avenue via the existing ingress/egress driveway, the Colfax Gate, would be located in the southeastern portion of the South Lot. Additional vehicular access from Ventura Boulevard, via Carpenter Avenue, would be provided via a former ingress/egress driveway at the Carpenter Gate that would be restored as part of the project. The project is also proposing a new multi-modal bridge, the Radford Mobility Connector, which would extend Radford Avenue north across the Tujunga Wash to Moorpark Street (no through access for vehicles would be permitted

north or south along Radford Avenue). Removable bollards, fire access gates, planters, and/or other traffic calming measures would be installed to prevent cut-through vehicular traffic by prohibiting vehicular access from Moorpark Street south to Ventura Boulevard. The Radford Mobility Connector would provide a pedestrian and bicycle connection to the Tujunga Wash and include new studio-related vehicle access, as well as ramps and/or stairs to provide direct access to the Los Angeles River trail system.

Two additional existing ingress/egress driveways located in the northwestern and southwestern portion of the North Lot along Radford Avenue would be for limited access only, consistent with existing conditions. Two loading/service access areas would also be located along the southern boundary of the project site accessed from the adjacent public alley.

A copy of the project site plan is shown in **Attachment L**. The review of this study does not constitute approval of the existing driveway dimensions, access, and circulation scheme with regard to this project. Those elements require separate review and approval and should be coordinated with LADOT's Valley Planning Coordination Section (6262 Van Nuys Boulevard, Rm 320, @ 818-374-4699). To minimize and prevent last-minute design changes, the applicant should contact LADOT before the commencement of building or parking layout design efforts, for driveway width and internal circulation requirements. Additionally, the applicant should check with City Planning regarding the project's vehicular access and design.

5. **Transportation Demand Management Ordinance**

The TDM Ordinance establishes trip reduction requirements for non-residential projects in excess of 25,000 sf. The project will comply with the requirements of the TDM Ordinance through the project's design and TDM program. Transportation information and carpool/vanpool loading areas would be provided at the on-site Mobility Hub(s). Designated carpool/vanpool parking would be provided within the project site. The project's internal circulation system would provide pathways for pedestrians and bicycles to the public street and sidewalks, and the project would provide pedestrian enhancements around the project site within the proposed setbacks. The project would coordinate with the appropriate agencies regarding any improvements to local transit services in the area, such as upgraded benches, shelters, lighting, signage, etc.

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

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

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

6. Development Review Fees

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

If you have any questions, please contact Sheila Ahoraian of my staff at (818) 374-4690.

Attachments

J:\Projects\SFV\56834 – 4200 N Radford Ave_Radford Studios

cc: Armida Reyes, Council District 4
Steve Rostam, LADOT East Valley District
Ali Nahass, BOE Valley District
Quyen Phan, BOE Land Development Group
Emily Wong, Gibson Transportation Consulting, Inc.

Attachment A

Proposed Project Development Summary

TABLE 1
PROPOSED PROJECT DEVELOPMENT SUMMARY [a]

Land Use	Existing	Demolition	Existing to Remain	Proposed New Construction	Total Permitted [b]	Net New [c]
Sound Stages	359,730 sf	136,310 sf	223,420 sf	226,580 sf	450,000 sf	90,270 sf
Production Support	255,510 sf	170,370 sf	85,140 sf	214,860 sf	300,000 sf	44,490 sf
Production Office [d]	450,060 sf	297,110 sf	152,950 sf	572,050 sf	725,000 sf	274,940 sf
Creative Office	113,810 sf	42,330 sf	71,480 sf	628,520 sf	700,000 sf	586,190 sf
Retail [e]	-	-	-	25,000 sf	25,000 sf	25,000 sf
Total Development	1,179,110 sf	646,120 sf	532,990 sf	1,667,010 sf	2,200,000 sf	1,020,890 sf

Notes:

All land use sizes shown in square feet (sf) measured as described in the Radford Studio Center Specific Plan.

[a] Per the proposed Radford Studio Center Specific Plan, floor area shall be defined in accordance with LAMC Section 12.03, with the following exceptions: areas related to the Mobility Hubs; basecamp; outdoor eating areas (covered or uncovered); trellis and shade structures; covered walkways and storage areas; and all temporary uses (e.g., sets/façades). The approximately 2,200,000 sf of total floor area within the Project Site per the Specific Plan definition is equivalent to approximately 2,345,000 sf based on the LAMC definition.

[b] Total permitted includes existing uses to remain. The Specific Plan would allow for the exchange of certain permitted studio land uses and associated floor areas in order to respond to the future needs and demands of the entertainment industry. Specifically, floor area from any permitted land use category may be exchanged for additional sound stage and production support uses as long as the limitations of the Specific Plan are met. However, the total permitted floor area on-site would not exceed 2,200,000 sf. In addition, the total floor area of production office, creative office, and retail uses permitted under the Specific Plan would not exceed 725,000 sf, 700,000 sf, and 25,000 sf, respectively.

[c] Net new = Proposed New Construction – Demolition.

[d] Includes an approximately 13,500 sf Mill building that would be relocated within the Project Site.

[e] Could include up to 25,000 sf of ancillary restaurant uses.

Attachment B

Freeway Off-ramp Queuing Safety Analysis (Year 2028 & 2045)

TABLE 12
FREEWAY OFF-RAMP QUEUING SAFETY ANALYSIS (YEAR 2028)

Off-ramp	Ramp Storage Length Capacity (ft) [a]	Peak Hour	95th Percentile Queue (ft)		Exceeds Ramp Storage [b]	Project Adds 50 Feet [c]	Requires Speed Analysis [d]
			Future without Project Conditions (Year 2028)	Future with Project Conditions (Year 2028)			
US 101 Northbound Off-ramp to Laurel Canyon Boulevard	935	A.M.	253	288	NO	NO	NO
US 101 Southbound Off-ramp to Laurel Canyon Boulevard	1,265	A.M.	218	270	NO	YES	NO
		P.M.	310	333	NO	NO	NO
SR 170 Southbound Off-ramp to Riverside Drive	815	A.M.	270	355	NO	YES	NO
SR 134 Westbound Off-ramp to Lankershim Boulevard	830	A.M.	298	290	NO	NO	NO

Notes:

Ramp storage length and 95th percentile queue reported in feet.

[a] Storage length capacity is the distance from the freeway mainline gore point to the terminus of the off-ramp, expressed in feet.

[b] Based on Future with Project Conditions (Year 2028) queue.

[c] The difference in queue length between Future with Project and without Project Conditions.

[d] Speed differential analysis is required if the ramp storage length is exceeded and the Project adds 50 or more feet to the queue length.

TABLE 13
FREEWAY OFF-RAMP QUEUING SAFETY ANALYSIS (YEAR 2045)

Off-ramp	Ramp Storage Length Capacity (ft) [a]	Peak Hour	95th Percentile Queue (ft)		Exceeds Ramp Storage [b]	Project Adds 50 Feet [c]	Requires Speed Analysis [d]
			Future without Project Conditions (Year 2045)	Future with Project Conditions (Year 2045)			
US 101 Northbound Off-ramp to Laurel Canyon Boulevard	935	A.M.	278	310	NO	NO	NO
US 101 Southbound Off-ramp to Laurel Canyon Boulevard	1,265	A.M.	235	290	NO	YES	NO
		P.M.	343	363	NO	NO	NO
SR 170 Southbound Off-ramp to Riverside Drive	815	A.M.	328	510	NO	YES	NO
SR 134 Westbound Off-ramp to Lankershim Boulevard	830	A.M.	303	320	NO	NO	NO

Notes:

Ramp storage length and 95th percentile queue reported in feet.

[a] Storage length capacity is the distance from the freeway mainline gore point to the terminus of the off-ramp, expressed in feet.

[b] Based on Future with Project Conditions (Year 2045) queue.

[c] The difference in queue length between Future with Project and without Project Conditions.

[d] Speed differential analysis is required if the ramp storage length is exceeded and the Project adds 50 or more feet to the queue length.

Attachment C

City of LA VMT Calculator Results

CITY OF LOS ANGELES VMT CALCULATOR Version 1.4



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

Project Information

Project: Radford Studio Center Project
Scenario: Project - Custom Studio & Office Land Use
Address: 4200 N RADFORD AVE, 91604



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

☒ Yes ☐ No

Existing Land Use

Land Use Type	Value	Unit
Office General Office	285	ksf
(custom) Studio, Production & Office Daily	8622	Trips
(custom) Studio, Production & Office HBW-At	52	Percent
(custom) Studio, Production & Office HBO-At	24	Percent
(custom) Studio, Production & Office NHB-At	12	Percent
(custom) Studio, Production & Office HBW-Pr	0	Percent
(custom) Studio, Production & Office HBO-Pr	0	Percent
(custom) Studio, Production & Office NHB-Pr	12	Percent
(custom) Studio, Production & Office Daily	0	Residents
(custom) Studio, Production & Office Daily	4781	Employees
(custom) Studio, Production & Office Daily	Non-Retail	Retail/Non-Retail

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

Proposed Project Land Use

Land Use Type	Value	Unit
Office General Office	0.001	ksf
Retail High-Turnover Sit-Down Restaurant	25	ksf
Office General Office	0.001	ksf
(custom) Studio, Production & Office Daily	16981	Trips
(custom) Studio, Production & Office HBW-At	52	Percent
(custom) Studio, Production & Office HBO-At	24	Percent
(custom) Studio, Production & Office NHB-At	12	Percent
(custom) Studio, Production & Office HBW-Pr	0	Percent
(custom) Studio, Production & Office HBO-Pr	0	Percent
(custom) Studio, Production & Office NHB-Pr	12	Percent
(custom) Studio, Production & Office Daily	0	Residents
(custom) Studio, Production & Office Daily	8820	Employees
(custom) Studio, Production & Office Daily	Non-Retail	Retail/Non-Retail

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

Project Screening Summary

Existing Land Use	Proposed Project
7,783 Daily Vehicle Trips	17,228 Daily Vehicle Trips
52,567 Daily VMT	115,300 Daily VMT

Tier 1 Screening Criteria

Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station. ☐

Tier 2 Screening Criteria

The net increase in daily trips < 250 trips
Net Daily Trips 9,445

The net increase in daily VMT ≤ 0
Net Daily VMT 62,733

The proposed project consists of only retail land uses ≤ 50,000 square feet total.
ksf 25,000

The proposed project is required to perform VMT analysis.



CITY OF LOS ANGELES VMT CALCULATOR Version 1.4



Project Information

Project: Radford Studio Center Project
Scenario: Project - Custom Studio & Office Land Use
Address: 4200 N RADFORD AVE, 91604



Proposed Project Land Use Type

Proposed Project Land Use Type	Value	Unit
Retail High-Turnover Sit-Down Restaurant	25	ksf
Office General Office	0.001	ksf
(custom) Studio, Production & Office Daily	16981	Trips
(custom) Studio, Production & Office HBW-At	52	Percent
(custom) Studio, Production & Office HBO-At	24	Percent
(custom) Studio, Production & Office NHB-At	12	Percent
(custom) Studio, Production & Office HBW-Pr	0	Percent
(custom) Studio, Production & Office HBO-Pr	0	Percent
(custom) Studio, Production & Office NHB-Pr	12	Percent
(custom) Studio, Production & Office Daily	0	Residents
(custom) Studio, Production & Office Daily	8820	Employees
(custom) Studio, Production & Office Daily	Non-Retail	Retail/Non-Retail

TDM Strategies

Select each section to show individual strategies

Use ☒ to denote if the TDM strategy is part of the proposed project or is a mitigation strategy

	Proposed Project	With Mitigation
Max Home Based TDM Achieved?	No	No
Max Work Based TDM Achieved?	No	No

A Parking

Reduce Parking Supply ☐ Proposed Pj ☐ Mitigation 100 city code parking provision for the project site
74 actual parking provision for the project site

Unbundle Parking ☐ Proposed Pj ☐ Mitigation 175 monthly parking cost (dollar) for the project site

Parking Cash-Out ☐ Proposed Pj ☐ Mitigation 50 percent of employees eligible

Price Workplace Parking ☐ Proposed Pj ☐ Mitigation 6.00 daily parking charge (dollar)
50 percent of employees subject to priced parking

Residential Area Parking ☐ Proposed Pj ☐ Mitigation 200 cost (dollar) of annual permit

B Transit

C Education & Encouragement

D Commute Trip Reductions

E Shared Mobility

F Bicycle Infrastructure

G Neighborhood Enhancement

Analysis Results

Proposed Project	With Mitigation
16,435 Daily Vehicle Trips	16,435 Daily Vehicle Trips
109,996 Daily VMT	109,996 Daily VMT
0.0 Household VMT per Capita	0.0 Household VMT per Capita
6.2 Work VMT per Employee	6.2 Work VMT per Employee

Significant VMT Impact?

Household: No	Household: No
Threshold = 9.4 15% Below APC	Threshold = 9.4 15% Below APC
Work: No	Work: No
Threshold = 11.6 15% Below APC	Threshold = 11.6 15% Below APC



Attachment D
Maximum Land Use Exchange Scenarios

TABLE D-1
ANALYSIS SCENARIO SUMMARY

Land Use	Existing Uses	Conceptual Development Program	Maximum Land Use Exchange Scenario 1	Maximum Land Use Exchange Scenario 2	Maximum Land Use Exchange Scenario 3	Maximum Land Use Exchange Scenario 4
Sound Stages	359,730 sf	450,000 sf	575,000 sf	175,000 sf	575,000 sf	450,000 sf
Production Support	255,510 sf	300,000 sf	175,000 sf	575,000 sf	300,000 sf	575,000 sf
Production Office	450,060 sf	725,000 sf	725,000 sf	725,000 sf	600,000 sf	450,000 sf
Creative Office	113,810 sf	700,000 sf	700,000 sf	700,000 sf	700,000 sf	700,000 sf
Retail	-	25,000 sf	25,000 sf	25,000 sf	25,000 sf	25,000 sf
Total Development	1,179,110 sf	2,200,000 sf	2,200,000 sf	2,200,000 sf	2,200,000 sf	2,200,000 sf

Notes
All land use sizes shown in square feet (sf) measured as described in the Radford Studios Center Specific Plan.
[a] Permitted development for individual land uses varies from these values as described in Chapter 1. Overall site-wide permitted development is 2,200,000 sf.

Attachment E

City of LA VMT Calculator Results – Scenario 1

CITY OF LOS ANGELES VMT CALCULATOR Version 1.4



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

Project Information

Project: Radford Studio Center Project
Scenario: Max LU Exchange Scenario 1
Address: 4200 N RADFORD AVE, 91604



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

☒ Yes ☐ No

Existing Land Use

Land Use Type	Value	Unit
Office General Office	285	kfsf
(custom) Studio, Production & Office	Daily 8622	Trips
(custom) Studio, Production & Office	HBW-At 52	Percent
(custom) Studio, Production & Office	HBO-At 24	Percent
(custom) Studio, Production & Office	NHB-Att 12	Percent
(custom) Studio, Production & Office	HBW-Pr 0	Percent
(custom) Studio, Production & Office	HBO-Pr 0	Percent
(custom) Studio, Production & Office	NHB-Pr 12	Percent
(custom) Studio, Production & Office	Daily 0	Residents
(custom) Studio, Production & Office	Daily 4781	Employees
(custom) Studio, Production & Office	Daily Non-Retail	Retail/Non-Retail

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

Proposed Project Land Use

Land Use Type	Value	Unit
Office General Office	285	kfsf
Retail High-Turnover Sit-Down Restaurant	25	kfsf
Office General Office	0.001	kfsf
(custom) Studio, Production & Office	Daily 17202	Trips
(custom) Studio, Production & Office	HBW-At 52	Percent
(custom) Studio, Production & Office	HBO-At 24	Percent
(custom) Studio, Production & Office	NHB-Att 12	Percent
(custom) Studio, Production & Office	HBW-Pr 0	Percent
(custom) Studio, Production & Office	HBO-Pr 0	Percent
(custom) Studio, Production & Office	NHB-Pr 12	Percent
(custom) Studio, Production & Office	Daily 0	Residents
(custom) Studio, Production & Office	Daily 9270	Employees
(custom) Studio, Production & Office	Daily Non-Retail	Retail/Non-Retail

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

Project Screening Summary

Existing Land Use	Proposed Project
7,783 Daily Vehicle Trips	17,425 Daily Vehicle Trips
52,567 Daily VMT	116,632 Daily VMT
Tier 1 Screening Criteria	
Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station. <input type="checkbox"/>	
Tier 2 Screening Criteria	
The net increase in daily trips < 250 trips	9,642 Net Daily Trips
The net increase in daily VMT ≤ 0	64,065 Net Daily VMT
The proposed project consists of only retail land uses ≤ 50,000 square feet total.	25,000 ksf
The proposed project is required to perform VMT analysis.	

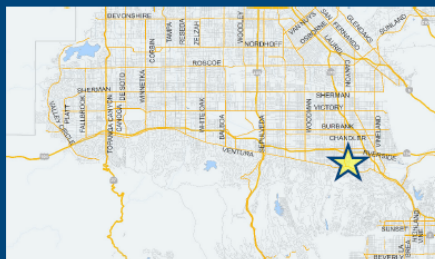


CITY OF LOS ANGELES VMT CALCULATOR Version 1.4



Project Information

Project: Radford Studio Center Project
Scenario: Max LU Exchange Scenario 1
Address: 4200 N RADFORD AVE, 91604



TDM Strategies

Select each section to show individual strategies

Use ☒ to denote if the TDM strategy is part of the proposed project or is a mitigation strategy

Max Home Based TDM Achieved? Proposed Project No With Mitigation No
Max Work Based TDM Achieved? Proposed Project No With Mitigation No

A	Parking
B	Transit
C	Education & Encouragement
Voluntary Travel Behavior Change Program <input type="checkbox"/> Proposed Pj <input type="checkbox"/> Mitigation 100 percent of employees and residents participating	
Promotions & Marketing <input checked="" type="checkbox"/> Proposed Pj <input type="checkbox"/> Mitigation 100 percent of employees and residents participating	
D	Commute Trip Reductions
E	Shared Mobility
F	Bicycle Infrastructure
G	Neighborhood Enhancement

Analysis Results

Proposed Project	With Mitigation
16,623 Daily Vehicle Trips	16,623 Daily Vehicle Trips
111,266 Daily VMT	111,266 Daily VMT
0.0 Household VMT per Capita	0.0 Household VMT per Capita
6.0 Work VMT per Employee	6.0 Work VMT per Employee
Significant VMT Impact?	
Household: No Threshold = 9.4 15% Below APC	Household: No Threshold = 9.4 15% Below APC
Work: No Threshold = 11.6 15% Below APC	Work: No Threshold = 11.6 15% Below APC



Attachment E (cont'd)

City of LA VMT Calculator Results – Scenario 2

CITY OF LOS ANGELES VMT CALCULATOR Version 1.4

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

Project Information

Project: Radford Studio Center Project

Scenario: Max LU Exchange Scenario 2 [www](#)

Address: 4200 N RADFORD AVE, 91604 [Q](#)

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

☒ Yes ☐ No

Existing Land Use

Land Use Type	Value	Unit
Office General Office	285	ksf
(custom) Studio, Production & Office Daily	8622	Trips
(custom) Studio, Production & Office HBW-At	52	Percent
(custom) Studio, Production & Office HBO-At	24	Percent
(custom) Studio, Production & Office NHB-Att	12	Percent
(custom) Studio, Production & Office HBW-Pr	0	Percent
(custom) Studio, Production & Office HBO-Pr	0	Percent
(custom) Studio, Production & Office NHB-Pr	12	Percent
(custom) Studio, Production & Office Daily	0	Residents
(custom) Studio, Production & Office Daily	4781	Employees
(custom) Studio, Production & Office Daily	Non-Retail	Retail/Non-R

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

Proposed Project Land Use

Land Use Type	Value	Unit
Retail High-Turnover Sit-Down Restaurant	25	ksf
Office General Office	0.001	ksf
(custom) Studio, Production & Office Daily	16494	Trips
(custom) Studio, Production & Office HBW-At	52	Percent
(custom) Studio, Production & Office HBO-At	24	Percent
(custom) Studio, Production & Office NHB-Att	12	Percent
(custom) Studio, Production & Office HBW-Pr	0	Percent
(custom) Studio, Production & Office HBO-Pr	0	Percent
(custom) Studio, Production & Office NHB-Pr	12	Percent
(custom) Studio, Production & Office Daily	0	Residents
(custom) Studio, Production & Office Daily	7830	Employees
(custom) Studio, Production & Office Daily	Non-Retail	Retail/Non-R

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

Project Screening Summary

Existing Land Use	Proposed Project
7,783 Daily Vehicle Trips	16,789 Daily Vehicle Trips
52,567 Daily VMT	112,336 Daily VMT

Tier 1 Screening Criteria

Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station. ☐

Tier 2 Screening Criteria

The net increase in daily trips < 250 trips 9,006
Net Daily Trips

The net increase in daily VMT ≤ 0 59,769
Net Daily VMT

The proposed project consists of only retail land uses ≤ 50,000 square feet total. 25,000
ksf

The proposed project is required to perform VMT analysis.

CITY OF LOS ANGELES VMT CALCULATOR Version 1.4

Project Information

Project: Radford Studio Center Project

Scenario: Max LU Exchange Scenario 2

Address: 4200 N RADFORD AVE, 91604

TDM Strategies

Select each section to show individual strategies

Use ☒ to denote if the TDM strategy is part of the proposed project or is a mitigation strategy

	Proposed Project	With Mitigation
Max Home Based TDM Achieved?	No	No
Max Work Based TDM Achieved?	No	No

A Parking

B Transit

C Education & Encouragement

Voluntary Travel Behavior Change Program ☐ Proposed Prj ☐ Mitigation 100 percent of employees and residents participating

Promotions & Marketing ☒ Proposed Prj ☐ Mitigation 100 percent of employees and residents participating

D Commute Trip Reductions

E Shared Mobility

F Bicycle Infrastructure

G Neighborhood Enhancement

Analysis Results

Proposed Project	With Mitigation
16,017 Daily Vehicle Trips	16,017 Daily Vehicle Trips
107,168 Daily VMT	107,168 Daily VMT
0.0 Household VMT per Capita	0.0 Household VMT per Capita
6.8 Work VMT per Employee	6.8 Work VMT per Employee

Significant VMT Impact?

Household: No Threshold = 9.4 15% Below APC	Household: No Threshold = 9.4 15% Below APC
Work: No Threshold = 11.6 15% Below APC	Work: No Threshold = 11.6 15% Below APC

Proposed Project Land Use Type

Land Use Type	Value	Unit
Retail High-Turnover Sit-Down Restaurant	25	ksf
Office General Office	0.001	ksf
(custom) Studio, Production & Office Daily	16494	Trips
(custom) Studio, Production & Office HBW-At	52	Percent
(custom) Studio, Production & Office HBO-At	24	Percent
(custom) Studio, Production & Office NHB-Att	12	Percent
(custom) Studio, Production & Office HBW-Pr	0	Percent
(custom) Studio, Production & Office HBO-Pr	0	Percent
(custom) Studio, Production & Office NHB-Pr	12	Percent
(custom) Studio, Production & Office Daily	0	Residents
(custom) Studio, Production & Office Daily	7830	Employees
(custom) Studio, Production & Office Daily	Non-Retail	Retail/Non-R

Attachment E (cont'd)

City of LA VMT Calculator Results – Scenario 3

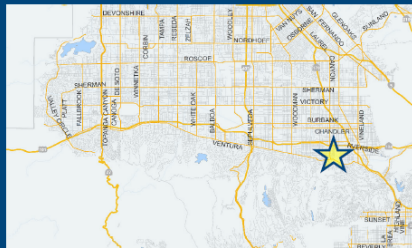
CITY OF LOS ANGELES VMT CALCULATOR Version 1.4



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

Project Information

Project: Radford Studio Center Project
 Scenario: Max LU Exchange Scenario 3
 Address: 4200 N RADFORD AVE, 91604



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

☒ Yes ☐ No

Existing Land Use

Land Use Type	Value	Unit
Office General Office	285	ksf
(custom) Studio, Production & Office Daily	8622	Trips
(custom) Studio, Production & Office HBW-At	52	Percent
(custom) Studio, Production & Office HBO-At	24	Percent
(custom) Studio, Production & Office NHB-At	12	Percent
(custom) Studio, Production & Office HBW-Pr	0	Percent
(custom) Studio, Production & Office HBO-Pr	0	Percent
(custom) Studio, Production & Office NHB-Pr	12	Percent
(custom) Studio, Production & Office Daily	0	Residents
(custom) Studio, Production & Office Daily	4781	Employees
(custom) Studio, Production & Office Daily	Non-Retail	Retail/Non-R

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

Proposed Project Land Use

Land Use Type	Value	Unit
Office General Office		ksf
Retail High-Turnover Sit-Down Restaurant	25	ksf
Office General Office	0.001	ksf
(custom) Studio, Production & Office Daily	16551	Trips
(custom) Studio, Production & Office HBW-At	52	Percent
(custom) Studio, Production & Office HBO-At	24	Percent
(custom) Studio, Production & Office NHB-At	12	Percent
(custom) Studio, Production & Office HBW-Pr	0	Percent
(custom) Studio, Production & Office HBO-Pr	0	Percent
(custom) Studio, Production & Office NHB-Pr	12	Percent
(custom) Studio, Production & Office Daily	0	Residents
(custom) Studio, Production & Office Daily	9020	Employees
(custom) Studio, Production & Office Daily	Non-Retail	Retail/Non-R

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

Project Screening Summary

Existing Land Use	Proposed Project
7,783 Daily Vehicle Trips	16,841 Daily Vehicle Trips
52,567 Daily VMT	112,688 Daily VMT
Tier 1 Screening Criteria Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station. <input type="checkbox"/>	
Tier 2 Screening Criteria The net increase in daily trips < 250 trips Net Daily Trips 9,058 The net increase in daily VMT ≤ 0 Net Daily VMT 60,121 The proposed project consists of only retail land uses ≤ 50,000 square feet total. ksf 25,000 The proposed project is required to perform VMT analysis.	

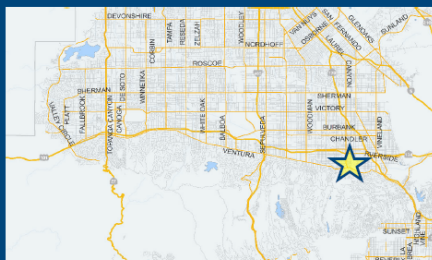


CITY OF LOS ANGELES VMT CALCULATOR Version 1.4



Project Information

Project: Radford Studio Center Project
 Scenario: Max LU Exchange Scenario 3
 Address: 4200 N RADFORD AVE, 91604



TDM Strategies

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

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

A	Parking
B	Transit
C	Education & Encouragement
Voluntary Travel Behavior Change Program <input type="checkbox"/> 100 percent of employees and residents participating <input type="checkbox"/> Proposed Prj <input type="checkbox"/> Mitigation	
Promotions & Marketing <input type="checkbox"/> 100 percent of employees and residents participating <input checked="" type="checkbox"/> Proposed Prj <input type="checkbox"/> Mitigation	
D	Commute Trip Reductions
E	Shared Mobility
F	Bicycle Infrastructure
G	Neighborhood Enhancement

Analysis Results

Proposed Project	With Mitigation
16,067 Daily Vehicle Trips	16,067 Daily Vehicle Trips
107,504 Daily VMT	107,504 Daily VMT
0.0 Household VMT per Capita	0.0 Household VMT per Capita
5.9 Work VMT per Employee	5.9 Work VMT per Employee
Significant VMT Impact? Household: No Threshold = 9.4 15% Below APC Work: No Threshold = 11.6 15% Below APC	



Attachment E (cont'd)

City of LA VMT Calculator Results – Scenario 4

CITY OF LOS ANGELES VMT CALCULATOR Version 1.4

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

Project Information

Project: Radford Studio Center Project

Scenario: Max LU Exchange Scenario 4 [www](#)

Address: 4200 N RADFORD AVE, 91604

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

☒ Yes ☐ No

Existing Land Use

Land Use Type	Value	Unit
Office General Office	285	ksf
(custom) Studio, Production & Office Daily	8622	Trips
(custom) Studio, Production & Office HBW-At	52	Percent
(custom) Studio, Production & Office HBO-At	24	Percent
(custom) Studio, Production & Office NHB-Att	12	Percent
(custom) Studio, Production & Office HBW-Pr	0	Percent
(custom) Studio, Production & Office NHB-Pr	12	Percent
(custom) Studio, Production & Office Daily	0	Residents
(custom) Studio, Production & Office Daily	4781	Employees
(custom) Studio, Production & Office Daily	Non-Retail	Retail/Non-R

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

Project Screening Summary

Existing Land Use	Proposed Project
7,783 Daily Vehicle Trips	15,938 Daily Vehicle Trips
52,567 Daily VMT	106,589 Daily VMT

Tier 1 Screening Criteria

Project will have less residential units compared to existing residential units & is within one-half mile of a fixed-rail station. ☐

Tier 2 Screening Criteria

The net increase in daily trips < 250 trips	8,155 Net Daily Trips
The net increase in daily VMT ≤ 0	54,022 Net Daily VMT
The proposed project consists of only retail land uses ≤ 50,000 square feet total.	25,000 ksf

The proposed project is required to perform VMT analysis.

CITY OF LOS ANGELES VMT CALCULATOR Version 1.4

Project Information

Project: Radford Studio Center Project

Scenario: Max LU Exchange Scenario 4

Address: 4200 N RADFORD AVE, 91604

TDM Strategies

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

	Proposed Project	With Mitigation
Max Home Based TDM Achieved?	No	No
Max Work Based TDM Achieved?	No	No

A **Parking**

B **Transit**

C **Education & Encouragement**

Voluntary Travel Behavior Change Program ☐ 100 percent of employees and residents participating

Promotions & Marketing ☒ 100 percent of employees and residents participating

D **Commute Trip Reductions**

E **Shared Mobility**

F **Bicycle Infrastructure**

G **Neighborhood Enhancement**

Proposed Project Land Use Type

Land Use Type	Value	Unit
Retail High-Turnover Sit-Down Restaurant	25	ksf
Office General Office	0.001	ksf
(custom) Studio, Production & Office Daily	15551	Trips
(custom) Studio, Production & Office HBW-At	52	Percent
(custom) Studio, Production & Office HBO-At	24	Percent
(custom) Studio, Production & Office NHB-Att	12	Percent
(custom) Studio, Production & Office HBW-Pr	0	Percent
(custom) Studio, Production & Office NHB-Pr	12	Percent
(custom) Studio, Production & Office Daily	0	Residents
(custom) Studio, Production & Office Daily	8270	Employees
(custom) Studio, Production & Office Daily	Non-Retail	Retail/Non-Retail

Analysis Results

Proposed Project	With Mitigation
15,205 Daily Vehicle Trips	15,205 Daily Vehicle Trips
101,687 Daily VMT	101,687 Daily VMT
0.0 Household VMT per Capita	0.0 Household VMT per Capita
6.1 Work VMT per Employee	6.1 Work VMT per Employee

Significant VMT Impact?

Household: No Threshold = 9.4 15% Below APC	Household: No Threshold = 9.4 15% Below APC
Work: No Threshold = 11.6 15% Below APC	Work: No Threshold = 11.6 15% Below APC

Attachment F

Intersection Levels of Service (LOS)

TABLE 16
EXISTING CONDITIONS (YEAR 2023)
INTERSECTION LEVELS OF SERVICE

No	Intersection	Peak Hour	Existing Conditions		Existing with Project Conditions	
			Delay	LOS	Delay	LOS
1.	Laurel Canyon Boulevard	AM	67.4	E	67.5	E
	Riverside Drive	PM	74.6	E	74.2	E
2.	Radford Avenue	AM	286.4	F	286.4	F
[a]	Riverside Drive	PM	53.0	F	53.0	F
3.	Coffax Avenue	AM	16.8	B	22.5	C
	Riverside Drive	PM	16.0	B	16.6	B
4.	SR 170 Southbound Off-Ramp	AM	15.5	B	16.0	B
[b]	Riverside Drive	PM	15.2	B	15.4	B
5.	Tujunga Avenue	AM	58.5	E	59.0	E
[b]	Riverside Drive-Camarillo Street	PM	65.3	E	67.4	E
6.	Laurel Canyon Boulevard	AM	20.4	C	21.8	C
	US 101 Northbound Ramps	PM	32.0	C	33.5	C
7.	Laurel Canyon Boulevard	AM	25.7	C	27.5	C
	US 101 Southbound Ramps	PM	13.6	B	15.9	B
8.	Laurel Canyon Boulevard	AM	29.4	C	65.0	E
[b]	Landale Street	PM	22.0	C	24.9	C
9.	Coffax Avenue	AM	16.4	B	16.3	B
	Sarah Street	PM	13.7	B	14.2	B
10.	Coffax Avenue	AM	5.3	A	5.9	A
[b]	Landale Street	PM	4.8	A	5.0	A
11.	Whitsett Avenue	AM	42.5	D	46.7	D
	Moorpark Street	PM	46.8	D	49.4	D
12.	Laurel Canyon Boulevard	AM	106.6	F	176.1	F
	Moorpark Street	PM	149.0	F	209.5	F
13.	Radford Avenue	AM	19.9	C	19.9	C
[a]	Moorpark Street	PM	17.2	C	17.2	C
14.	Coffax Avenue	AM	34.6	C	39.2	D
	Moorpark Street	PM	30.9	C	32.9	C
15.	Irvin Avenue	AM	21.6	C	24.5	C
[a]	Moorpark Street	PM	19.9	C	20.8	C
16.	Tujunga Avenue	AM	21.0	C	20.4	C
	Moorpark Street	PM	19.6	B	21.2	C
17.	Tujunga Avenue	AM	4.6	A	4.5	A
	Woodbridge Street	PM	6.1	A	6.0	A
18.	Whitsett Avenue	AM	38.1	D	38.4	D
[b]	Ventura Boulevard	PM	24.3	C	25.0	C
19.	Laurel Canyon Boulevard	AM	23.1	C	23.6	C
[b]	Ventura Place	PM	30.5	C	37.8	D
20.	Laurel Canyon Boulevard	AM	43.0	D	51.3	D
	Ventura Boulevard	PM	47.0	D	47.0	D
21a.	Retail Drive-Radford Avenue	AM	48.5	D	65.1	E
[b]	Ventura Boulevard	PM	58.9	E	127.7	F
21b.	Ventura Place	AM	29.8	C	92.7	F
[b]	Ventura Boulevard	PM	71.7	E	108.0	F
22.	Carpenter Avenue	AM	21.6	C	63.7	E
	Ventura Boulevard	PM	24.3	C	79.5	E
23.	Coffax Avenue	AM	15.5	B	17.4	B
[b]	Ventura Boulevard	PM	22.4	C	25.9	C
24.	Berry Drive	AM	5.4	A	5.5	A
[b]	Ventura Boulevard	PM	5.4	A	6.1	A
25.	Tujunga Avenue	AM	16.4	B	17.1	B
[b]	Ventura Boulevard	PM	15.3	B	21.0	C
26.	Laurel Canyon Boulevard	AM	18.2	B	18.3	B
	Maxwellton Road	PM	13.5	B	13.6	B
27.	Laurel Canyon Boulevard	AM	23.0	C	24.0	C
	Laurel Terrace Dr-Sunshine Terrace Dr	PM	31.1	C	32.5	C
28.	Laurel Canyon Boulevard	AM	15.2	B	15.4	B
[b]	Fryman Road	PM	9.6	A	9.8	A
29.	Laurel Canyon Boulevard	AM	93.7	F	[c]	F
[a]	Woodbridge Street	PM	201.8	F	[c]	F
30.	Laurel Canyon Boulevard	AM	47.8	E	89.7	F
[a]	Valleyheart Drive (North)	PM	70.1	F	148.1	F
31.	Laurel Canyon Boulevard	AM	25.0	C	35.6	E
[a]	Valleyheart Drive (South)	PM	45.4	E	112.6	F
32.	Radford Avenue	AM	8.5	A	8.5	A
[d]	Sarah Street	PM	7.4	A	7.4	A

Notes:

Delay is measured in seconds per vehicle. LOS = Level of Service

Intersection analysis based on HCM 6th Edition Signalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection, unless otherwise stated.

[a] Intersection analysis based on the HCM 6th Edition Two-Way Stop Control Unsignalized methodology, which calculates the control delay, in seconds, for each individual approach of an intersection. The reported control delay represents the worst-case approach, and does not account for traffic gaps created by adjacent traffic signals.

[b] Intersection analysis based on HCM 2000 Signalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection.

[c] The reported control delay of the worst-case approach (i.e., minor street of the intersection) exceeds 300 seconds.

[d] Intersection analysis based on HCM 6th Edition All-Way Stop Control Unsignalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection.

Attachment F (cont'd)

Intersection Levels of Service (LOS)

TABLE 16
FUTURE CONDITIONS (YEAR 2028)
INTERSECTION LEVELS OF SERVICE

No	Intersection	Peak Hour	Future without Project Conditions		Future with Project Conditions without Radford Mobility Connector		Future with Project Conditions with Radford Mobility Connector	
			Delay	LOS	Delay	LOS	Delay	LOS
1.	Laurel Canyon Boulevard Riverside Drive	AM PM	67.7 49.6	E D	73.5 52.3	E D	73.5 52.3	E D
2.	Radford Avenue Riverside Drive	AM PM	[b] 73.7	F F	[b] 73.7	F F	[b] 73.7	F F
3.	Coffax Avenue Riverside Drive	AM PM	16.8 12.0	B B	23.6 12.5	C B	23.6 12.5	C B
4.	SR 170 Southbound Off-Ramp Riverside Drive	AM PM	16.9 16.2	B B	17.4 16.5	B B	17.4 16.5	B B
5.	Tujunga Avenue Riverside Drive-Camarillo Street	AM PM	69.8 83.0	E F	70.4 88.4	E F	70.4 88.4	E F
6.	Laurel Canyon Boulevard US 101 Northbound Ramps	AM PM	21.4 29.1	C C	22.8 30.8	C C	22.8 30.8	C C
7.	Laurel Canyon Boulevard US 101 Southbound Ramps	AM PM	20.0 13.6	B B	21.2 22.1	C C	21.2 22.3	C C
8.	Laurel Canyon Boulevard Lendale Street	AM PM	37.9 25.9	D C	80.8 32.3	F C	81.0 31.6	F C
9.	Coffax Avenue Sarah Street	AM PM	16.9 14.5	B B	21.0 12.6	C B	21.0 12.6	C B
10.	Coffax Avenue Lendale Street	AM PM	6.5 5.2	A A	7.4 5.5	A A	7.4 5.5	A A
11.	Whitsett Avenue Moorpark Street	AM PM	53.1 61.6	D E	58.6 66.6	E E	58.6 66.6	E E
12.	Laurel Canyon Boulevard Moorpark Street	AM PM	142.2 102.2	F F	204.1 247.5	F F	179.9 219.9	F F
13.	Radford Avenue Moorpark Street	AM PM	23.1 19.6	C C	23.1 19.6	C C	4.6 4.3	A A
14.	Coffax Avenue Moorpark Street	AM PM	36.2 36.2	D D	49.3 48.9	D D	41.0 43.4	D D
15.	Invine Avenue Moorpark Street	AM PM	26.5 22.1	D C	26.3 23.1	D C	31.5 24.8	D C
16.	Tujunga Avenue Moorpark Street	AM PM	23.8 18.5	C B	21.7 22.3	C C	22.2 19.6	C B
17.	Tujunga Avenue Woodbridge Street	AM PM	4.5 6.0	A A	4.5 5.9	A A	4.5 5.9	A A
18.	Whitsett Avenue Venture Boulevard	AM PM	41.3 34.0	D C	42.7 39.2	D D	42.8 39.2	D D
19.	Laurel Canyon Boulevard Venture Place	AM PM	23.9 35.8	C D	25.6 60.8	C E	25.0 56.4	C E
20.	Laurel Canyon Boulevard Venture Boulevard	AM PM	47.3 37.2	D D	57.2 42.2	E D	56.2 41.6	E D
21a.	Retail Driveway-Radford Avenue Venture Boulevard	AM PM	79.2 69.2	E F	96.4 170.3	F F	92.5 155.2	F F
21b.	Venture Place Venture Boulevard	AM PM	39.9 119.3	D F	132.2 155.7	F F	115.6 149.8	F F
22.	Carpenter Avenue Venture Boulevard	AM PM	22.7 26.2	C C	62.3 106.1	E F	44.2 106.2	D F
23.	Coffax Avenue Venture Boulevard	AM PM	20.4 76.9	C E	26.4 76.3	C E	26.0 79.5	C E
24.	Berry Drive Venture Boulevard	AM PM	6.7 5.7	A A	7.4 6.4	A A	7.1 6.0	A A
25.	Tujunga Avenue Venture Boulevard	AM PM	17.9 17.1	B B	19.2 22.9	B C	19.2 19.9	B B
26.	Laurel Canyon Boulevard Macwellton Road	AM PM	19.0 14.5	B B	18.8 14.4	B B	18.7 14.4	B B
27.	Laurel Canyon Boulevard Laurel Terrace Dr-Sunshine Terrace Dr	AM PM	25.5 34.1	C C	26.8 35.9	C D	26.8 35.9	C D
28.	Laurel Canyon Boulevard Fryman Road	AM PM	18.5 10.6	B B	19.0 10.8	B B	19.0 10.8	B B
29.	Laurel Canyon Boulevard Woodbridge Street	AM PM	135.5 [b]	F F	[b] [b]	F F	270.3 [b]	F F
30.	Laurel Canyon Boulevard Valleyheart Drive (North)	AM PM	66.2 137.9	F F	[b] 272.3	F F	114.7 215.1	F F
31.	Laurel Canyon Boulevard Valleyheart Drive (South)	AM PM	32.7 66.9	D F	54.4 [b]	F F	47.1 231.2	E F
32.	Radford Avenue Sarah Street	AM PM	8.6 7.4	A A	8.6 7.4	A A	8.6 7.4	A A

Notes:

Delay is measured in seconds per vehicle. LOS = Level of Service

Intersection analysis based on HCM 6th Edition Signalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection, unless otherwise stated.

[a] Intersection analysis based on the HCM 6th Edition Two-Way Stop Control Unsignalized methodology, which calculates the control delay, in seconds, for each individual approach of an intersection. The reported control delay represents the worst-case approach, and does not account for traffic gaps created by adjacent traffic signals.

[b] The reported control delay of the worst-case approach (i.e., minor street of the intersection) exceeds 300 seconds.

[c] Intersection analysis based on HCM 2000 Signalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection.

[d] The intersection is currently and would be unsignalized under with Project without Radford Mobility Connector scenario. Under with Project with Radford Mobility Connector Scenario, the intersection would be signalized.

[e] Intersection analysis based on HCM 6th Edition All-Way Stop Control Unsignalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection.

Attachment F (cont'd)

Intersection Levels of Service (LOS)

TABLE 17
FUTURE CONDITIONS (YEAR 2045)
INTERSECTION LEVELS OF SERVICE

No	Intersection	Peak Hour	Future without Project Conditions		Future with Project Conditions without Radford Mobility Connector		Future with Project Conditions with Radford Mobility Connector	
			Delay	LOS	Delay	LOS	Delay	LOS
1.	Laurel Canyon Boulevard Riverside Drive	AM PM	84.8 56.7	F E	90.5 63.8	F E	90.5 63.8	F E
2.	Radford Avenue Riverside Drive	AM PM	[b] 129.8	F F	[b] 129.8	F F	[b] 129.8	F F
3.	Colfax Avenue Riverside Drive	AM PM	18.2 13.8	B B	30.4 14.5	C B	30.4 14.5	C B
4.	SR 170 Southbound Off-Ramp Riverside Drive	AM PM	17.6 17.5	B B	17.6 17.4	B B	17.6 17.4	B B
5.	Tujunga Avenue Riverside Drive-Camarillo Street	AM PM	86.9 102.3	F F	88.1 106.9	F F	88.1 106.9	F F
6.	Laurel Canyon Boulevard US 101 Northbound Ramps	AM PM	22.9 31.0	C C	24.3 32.6	C C	24.3 32.6	C C
7.	Laurel Canyon Boulevard US 101 Southbound Ramps	AM PM	21.8 18.0	C B	24.1 28.9	C C	24.1 29.1	C C
8.	Laurel Canyon Boulevard Lindale Street	AM PM	55.0 36.4	D D	102.5 48.5	F D	102.6 47.6	F D
9.	Colfax Avenue Sarah Street	AM PM	19.9 13.1	B B	30.5 13.5	C B	30.5 13.5	C B
10.	Colfax Avenue Lindale Street	AM PM	7.3 6.5	A A	8.7 7.0	A A	8.7 7.0	A A
11.	Whitsett Avenue Moorpark Street	AM PM	71.3 87.3	E F	78.0 95.8	E F	78.0 95.8	E F
12.	Laurel Canyon Boulevard Moorpark Street	AM PM	187.7 237.1	F F	249.0 292.9	F F	221.8 264.6	F F
13.	Radford Avenue Moorpark Street	AM PM	27.8 23.1	D C	27.8 23.1	D C	4.0 4.0	A A
14.	Colfax Avenue Moorpark Street	AM PM	43.2 47.3	D D	67.3 58.3	E E	53.5 48.3	D D
15.	Inline Avenue Moorpark Street	AM PM	40.9 28.9	E D	52.5 30.4	F D	54.8 33.0	F D
16.	Tujunga Avenue Moorpark Street	AM PM	23.0 20.0	C B	20.8 24.0	C C	22.1 21.4	C C
17.	Tujunga Avenue Woodbridge Street	AM PM	4.5 6.1	A A	4.5 6.1	A A	4.5 6.1	A A
18.	Whitsett Avenue Venture Boulevard	AM PM	51.5 57.0	D E	53.3 64.3	D E	53.6 64.3	D E
19.	Laurel Canyon Boulevard Venture Place	AM PM	25.4 50.0	C D	26.2 75.5	C E	25.9 74.0	C E
20.	Laurel Canyon Boulevard Venture Boulevard	AM PM	65.2 44.3	E D	79.9 53.2	E D	73.8 52.0	E D
21.	Retail Driveway-Radford Avenue Venture Boulevard	AM PM	94.4 110.5	F F	113.7 194.1	F F	110.0 179.5	F F
21.	Venture Place Venture Boulevard	AM PM	59.6 145.4	E F	171.8 181.7	F F	153.9 175.9	F F
22.	Carpenter Avenue Venture Boulevard	AM PM	23.8 36.5	C D	71.0 131.0	E F	48.6 130.2	D F
23.	Colfax Avenue Venture Boulevard	AM PM	30.5 96.9	C F	53.5 96.3	D F	54.0 96.5	D F
24.	Berry Drive Venture Boulevard	AM PM	8.2 6.4	A A	8.8 7.2	A A	8.6 6.6	A A
25.	Tujunga Avenue Venture Boulevard	AM PM	19.7 20.0	B B	20.9 41.0	C D	20.8 27.0	C C
26.	Laurel Canyon Boulevard Morwellton Road	AM PM	21.8 16.0	C B	22.7 16.3	C B	22.7 16.3	C B
27.	Laurel Canyon Boulevard Laurel Terrace Dr-Sunshine Terrace Dr	AM PM	31.7 40.7	C D	33.9 42.3	C D	33.9 42.3	C D
28.	Laurel Canyon Boulevard Fryman Road	AM PM	34.2 12.7	C B	35.6 13.1	D B	35.6 13.1	D B
29.	Laurel Canyon Boulevard Woodbridge Street	AM PM	253.7 [b]	F F	[b] [b]	F F	[b] [b]	F F
30.	Laurel Canyon Boulevard Valleyheart Drive (North)	AM PM	128.6 215.1	F F	[b] [b]	F F	259.5 [b]	F F
31.	Laurel Canyon Boulevard Valleyheart Drive (South)	AM PM	59.6 224.2	F F	138.1 [b]	F F	116.2 [b]	F F
32.	Radford Avenue Sarah Street	AM PM	8.8 7.4	A A	8.8 7.4	A A	8.8 7.4	A A

Notes:

Delay is measured in seconds per vehicle. LOS = Level of Service.

Intersection analysis based on HCM 6th Edition Signalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection, unless otherwise stated.

(a) Intersection analysis based on the HCM 6th Edition Two-Way Stop Control Unsignalized methodology, which calculates the control delay, in seconds, for each individual approach of an intersection. The reported control delay represents the worst-case approach, and does not account for traffic gaps created by adjacent traffic signals.

(b) The reported control delay of the worst-case approach (i.e., minor street of the intersection) exceeds 300 seconds.

(c) Intersection analysis based on HCM 2000 Signalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection.

(d) The intersection is currently and would be unsignalized under with Project without Radford Mobility Connector scenario. Under with Project with Radford Mobility Connector Scenario, the intersection would be signalized.

(e) Intersection analysis based on HCM 6th Edition All-Way Stop Control Unsignalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection.

Attachment G

Queuing Analysis Results

TABLE 18
FUTURE CONDITIONS (YEAR 2028)
INTERSECTION CORRIDOR QUEUES

Intersection	Intersection Spacing (Capacity)	Peak Hour	Approach LOS (Fut w Proj)	95th Percentile Queue (ft)			Project Contribution to Queue (ft) without Radford Mobility Connector	Project Contribution to Queue (ft) with Radford Mobility Connector
				Future without Project Conditions	Future with Project Conditions without Radford Mobility Connector	Future with Project Conditions with Radford Mobility Connector		
Intersection #8. Laurel Canyon Boulevard & Landale Street								
Westbound Through	2,525	A.M. P.M.	D [a] [b]	-- --	-- --	-- --	-- --	-- --
Northbound Through	525	A.M. P.M.	A [a] [b]	-- --	-- --	-- --	-- --	-- --
Southbound Through	595	A.M. P.M.	F [b]	596 --	810 --	810 --	214 --	214 --
Intersection #12. Laurel Canyon Boulevard & Moorpark Street								
Eastbound Through	2,525	A.M. P.M.	F F	470 328	530 338	530 338	60 10	60 10
Westbound Through	2,525	A.M. P.M.	E D [a]	578 --	543 --	620 --	-35 --	42 --
Northbound Through	1,825	A.M. P.M.	F F	1,078 1,650	1,253 2,305	1,218 2,060	175 655	140 410
Southbound Through	515	A.M. P.M.	F F	1,188 1,673	2,035 1,853	1,755 1,735	847 180	567 62
Intersection #14. Colfax Avenue & Moorpark Street								
Eastbound Through	2,525	A.M. P.M.	A [a] A [a]	-- --	-- --	-- --	-- --	-- --
Westbound Through	560	A.M. P.M.	E D [a]	-- --	-- --	-- --	-- --	-- --
Northbound Through	3,200	A.M. P.M.	E F	260 468	245 680	260 680	-15 212	0 212
Southbound Through	570	A.M. P.M.	C [a] C [a]	-- --	-- --	-- --	-- --	-- --
Intersection #19. Laurel Canyon Boulevard & Ventura Place								
Westbound Through	940	A.M. P.M.	[b] F	-- 89	-- 89	-- 89	-- 0	-- 0
Northbound Through	440	A.M. P.M.	[b] C [a]	-- --	-- --	-- --	-- --	-- --
Southbound Through	1,830	A.M. P.M.	[b] C [a]	-- --	-- --	-- --	-- --	-- --
Intersection #20. Laurel Canyon Boulevard & Ventura Boulevard								
Eastbound Through	585	A.M. P.M.	D [a] C [a]	-- --	-- --	-- --	-- --	-- --
Westbound Through	440	A.M. P.M.	D [a] D [a]	-- --	-- --	-- --	-- --	-- --
Northbound Through	880	A.M. P.M.	E D [a]	425 --	548 --	520 --	123 --	95 --
Southbound Through	440	A.M. P.M.	E E	565 470	550 488	590 488	-15 18	25 18

Notes:

All lengths shown in feet based on 25 feet per vehicle. Queues based on 95th percentile queue calculated by the HCM methodology.

[a] The directional approach is not anticipated to operate at LOS E or F. As such, no further corridor queue analysis is not required.

[b] As detailed in Table 16, the Intersection is not anticipated to operate at LOS D or worse during this peak hour. As such, a detailed corridor queue analysis is not required.

Attachment G (cont'd)

Queuing Analysis Results

TABLE 18 (CONT'D)
FUTURE CONDITIONS (YEAR 2028)
INTERSECTION CORRIDOR QUEUES

Intersection	Intersection Spacing (Capacity)	Peak Hour	Approach LOS (Fut w Proj)	95th Percentile Queue (ft)			Project Contribution to Queue (ft) without Radford Mobility Connector	Project Contribution to Queue (ft) with Radford Mobility Connector
				Future without Project Conditions	Future with Project Conditions without Radford Mobility Connector	Future with Project Conditions with Radford Mobility Connector		
Intersection #21a. Ventura Place-Radford Avenue & Ventura Boulevard								
Eastbound Through	90	A.M. P.M.	A [a] A [a]	-- --	-- --	-- --	-- --	-- --
Westbound Through	610	A.M. P.M.	F F	767 725	866 1,001	847 943	99 276	80 218
Southbound Through	315	A.M. P.M.	E F	150 343	180 406	180 406	30 63	30 63
Intersection #21b. Ventura Place & Ventura Boulevard								
Eastbound Through	420	A.M. P.M.	F F	657 916	1,094 1,036	1,030 1,047	437 120	373 131
Westbound Through	95	A.M. P.M.	B [a] C [a]	-- --	-- --	-- --	-- --	-- --
Intersection #22. Carpenter Avenue & Ventura Boulevard								
Eastbound Through	615	A.M. P.M.	D [a] D [a]	-- --	-- --	-- --	-- --	-- --
Westbound Through	935	A.M. P.M.	F F	460 383	768 463	608 443	308 80	148 60
Intersection #23. Colfax Avenue & Ventura Boulevard								
Eastbound Through	935	A.M. P.M.	B [a] B [a]	-- --	-- --	-- --	-- --	-- --
Westbound Through	2,685	A.M. P.M.	D [a] F	-- 693	-- 716	-- 716	-- 23	-- 23

Notes:

All lengths shown in feet based on 25 feet per vehicle. Queues based on 95th percentile queue calculated by the HCM methodology.

[a] The directional approach is not anticipated to operate at LOS E or F. As such, no further corridor queue analysis is not required.

[b] As detailed in Table 16, the intersection is not anticipated to operate at LOS D or worse during this peak hour. As such, a detailed corridor queue analysis is not required.

Attachment G (cont'd)

Queuing Analysis Results

TABLE 19
FUTURE CONDITIONS (YEAR 2028)
INTERSECTION TURN POCKET QUEUES

Intersection	Turn Pocket Length (ft)	Peak Hour	95th Percentile Queue (ft)			Project Contribution to Queue (ft) without Radford Mobility Connector	Project Contribution to Queue (ft) with Radford Mobility Connector
			Future without Project Conditions	Future with Project Conditions without Radford Mobility Connector	Future with Project Conditions with Radford Mobility Connector		
Intersection #8. Laurel Canyon Boulevard & Landale Street [a]							
Eastbound Left-Turn	50	A.M. P.M.	189 238	189 238	189 238	0 0	0 0
Northbound Left-Turn	160	A.M. P.M.	50 7	46 8	52 9	-4 1	2 2
Southbound Left-Turn	125	A.M. P.M.	23 90	20 18	20 81	-3 -72	-3 -9
Southbound Right-Turn	120	A.M. P.M.	0 0	0 0	0 0	0 0	0 0
Intersection #12. Laurel Canyon Boulevard & Moorpark Street							
Eastbound Left-Turn	120	A.M. P.M.	603 585	600 588	600 590	-3 3	-3 5
Westbound Left-Turn	490	A.M. P.M.	230 123	245 128	255 135	15 5	25 12
Westbound Right-Turn	2525	A.M. P.M.	78 48	68 73	138 135	-10 25	60 87
Northbound Left-Turn	155	A.M. P.M.	73 63	80 213	80 200	7 150	7 137
Southbound Left-Turn	155	A.M. P.M.	43 65	45 58	113 83	2 -7	70 18
Intersection #14. Colfax Avenue & Moorpark Street							
Eastbound Left-Turn	180	A.M. P.M.	55 60	60 58	58 58	5 -2	3 -2
Westbound Left-Turn	90	A.M. P.M.	258 203	493 238	303 210	235 35	45 7
Northbound Left-Turn	75	A.M. P.M.	245 220	318 270	283 248	73 50	38 28
Northbound Right-Turn	190	A.M. P.M.	195 245	175 308	160 220	-20 63	-35 -25
Southbound Left-Turn	95	A.M. P.M.	123 125	108 130	113 130	-15 5	-10 5
Southbound Right-Turn	190	A.M. P.M.	70 78	63 80	105 98	-7 2	35 20
Intersection #19. Laurel Canyon Boulevard & Ventura Place [a]							
Westbound Right-Turn	40	A.M. P.M.	62 214	68 339	68 339	6 125	6 125
Northbound Left-Turn	105	A.M. P.M.	11 21	11 22	11 22	0 1	0 1
Southbound Left-Turn	55	A.M. P.M.	88 178	94 199	92 194	6 21	4 16

Attachment G (cont'd)

Queuing Analysis Results

TABLE 19 (CONT'D)
FUTURE CONDITIONS (YEAR 2028)
INTERSECTION TURN POCKET QUEUES

Intersection	Turn Pocket Length (ft)	Peak Hour	95th Percentile Queue (ft)			Project Contribution to Queue (ft) without Radford Mobility Connector	Project Contribution to Queue (ft) with Radford Mobility Connector
			Future without Project Conditions	Future with Project Conditions without Radford Mobility Connector	Future with Project Conditions with Radford Mobility Connector		
Intersection #20. Laurel Canyon Boulevard & Ventura Boulevard							
Eastbound Left-Turn	370	A.M. P.M.	125 168	123 168	123 168	-2 0	-2 0
Eastbound Right-Turn	45	A.M. P.M.	255 63	260 63	255 63	5 0	0 0
Westbound Left-Turn	220	A.M. P.M.	325 200	458 240	435 245	133 40	110 45
Westbound Right-Turn	20	A.M. P.M.	45 70	90 200	75 163	45 130	30 93
Northbound Left-Turn	180	A.M. P.M.	208 228	215 258	215 258	7 30	7 30
Northbound Right-Turn	215	A.M. P.M.	170 173	230 195	228 195	60 22	58 22
Southbound Left-Turn	175	A.M. P.M.	78 145	305 223	263 205	227 78	185 60
Southbound Right-Turn	140	A.M. P.M.	123 150	123 120	125 120	0 -30	2 -30
Intersection #21a. Ventura Place-Radford Avenue & Ventura Boulevard [a]							
Eastbound Left-Turn	90	A.M. P.M.	101 83	157 87	171 89	56 4	70 6
Westbound Left-Turn	95	A.M. P.M.	132 251	132 251	131 251	0 0	-1 0
Westbound Right-Turn	50	A.M. P.M.	167 138	152 136	152 136	-15 -2	-15 -2
Southbound Left-Turn	90	A.M. P.M.	114 196	117 164	117 164	3 -32	3 -32
Southeastbound Right-Turn	90	A.M. P.M.	0 253	0 438	0 438	0 185	0 185
Intersection #21b. Ventura Place & Ventura Boulevard [a]							
Southbound Left-Turn	50	A.M. P.M.	54 108	52 116	52 108	-2 8	-2 0
Southbound Right-Turn	50	A.M. P.M.	31 28	30 31	30 28	-1 3	-1 0
Intersection #22. Carpenter Avenue & Ventura Boulevard							
Eastbound Left-Turn	70	A.M. P.M.	18 30	235 198	70 163	217 168	52 133
Westbound Left-Turn	55	A.M. P.M.	140 190	143 180	145 175	3 -10	5 -15
Intersection #23. Colfax Avenue & Ventura Boulevard [a]							
Eastbound Left-Turn	160	A.M. P.M.	104 246	130 152	122 141	26 -94	18 -105
Southbound Left-Turn	150	A.M. P.M.	331 306	338 331	338 331	7 25	7 25
Southbound Right-Turn	150	A.M. P.M.	50 32	119 41	83 34	69 9	33 2

Notes:

All lengths shown in feet based on 25 feet per vehicle. Queues based on 95th percentile queue calculated by the HCM methodology.
[a] Queues based on 95th percentile queue (in feet) as calculated by Synchro software.

Attachment G (cont'd)

Queuing Analysis Results

TABLE 20
FUTURE CONDITIONS (YEAR 2046)
INTERSECTION CORRIDOR QUEUES

Intersection	Intersection Spacing (Capacity)	Peak Hour	Approach LOS (Future w/ Project)	95th Percentile Queue (ft)			Project Contribution to Queue (ft) without Radford Mobility Connector	Project Contribution to Queue (ft) with Radford Mobility Connector
				Future without Project Conditions	Future with Project Conditions without Radford Mobility Connector	Future with Project Conditions with Radford Mobility Connector		
Intersection #8. Laurel Canyon Boulevard & Landale Street								
Westbound Through	2,525	A.M. P.M.	D [a] D [a]	— —	— —	— —	— —	— —
Northbound Through	525	A.M. P.M.	B [a] C [a]	— —	— —	— —	— —	— —
Southbound Through	595	A.M. P.M.	F E	680 765	892 833	892 833	212 68	212 68
Intersection #12. Laurel Canyon Boulevard & Moorpark Street								
Eastbound Through	2,525	A.M. P.M.	F F	590 370	658 385	658 385	68 15	68 15
Westbound Through	2,525	A.M. P.M.	F E	725 710	688 710	763 743	-37 0	38 33
Northbound Through	1,825	A.M. P.M.	F F	1,360 1,990	1,540 2,640	1,493 2,395	180 650	133 405
Southbound Through	515	A.M. P.M.	F F	1,643 1,925	2,393 2,140	2,065 2,028	750 215	422 103
Intersection #14. Colfax Avenue & Moorpark Street								
Eastbound Through	2,525	A.M. P.M.	B [a] B [a]	— —	— —	— —	— —	— —
Westbound Through	560	A.M. P.M.	F D [a]	543 —	603 —	655 —	60 —	112 —
Northbound Through	3,200	A.M. P.M.	F F	273 685	268 840	275 765	-5 155	2 80
Southbound Through	570	A.M. P.M.	D [a] C [a]	— —	— —	— —	— —	— —
Intersection #18. Laurel Canyon Boulevard & Ventura Place								
Westbound Through	940	A.M. P.M.	[b] F	— 97	— 97	— 97	— 0	— 0
Northbound Through	440	A.M. P.M.	[b] C [a]	— —	— —	— —	— —	— —
Southbound Through	1,830	A.M. P.M.	[b] D [a]	— —	— —	— —	— —	— —
Intersection #20. Laurel Canyon Boulevard & Ventura Boulevard								
Eastbound Through	585	A.M. P.M.	C [a] E	— 215	— 203	— 203	— -12	— -12
Westbound Through	440	A.M. P.M.	F E	298 343	298 355	303 360	0 12	5 17
Northbound Through	880	A.M. P.M.	F F	555 350	628 408	628 385	73 58	73 35
Southbound Through	440	A.M. P.M.	F F	740 593	723 605	725 605	-17 12	-15 12

Notes:

All lengths shown in feet based on 25 feet per vehicle. Queues based on 95th percentile queue calculated by the HCM methodology.

[a] The directional approach is not anticipated to operate at LOS E or F. As such, no further corridor queue analysis is not required.

[b] As detailed in Table 17, the intersection is not anticipated to operate at LOS D or worse during this peak hour. As such, a detailed corridor queue analysis is not required.

Attachment G (cont'd)

Queuing Analysis Results

TABLE 20 (CONT'D)
FUTURE CONDITIONS (YEAR 2046)
INTERSECTION CORRIDOR QUEUES

Intersection	Intersection Spacing (Capacity)	Peak Hour	Approach LOS (Fut w Proj)	95th Percentile Queue (ft)			Project Contribution to Queue (ft) without Radford Mobility Connector	Project Contribution to Queue (ft) with Radford Mobility Connector
				Future without Project Conditions	Future with Project Conditions without Radford Mobility Connector	Future with Project Conditions with Radford Mobility Connector		
Intersection #21a. Ventura Place-Radford Avenue & Ventura Boulevard								
Eastbound Through	90	A.M. P.M.	A [a] A [a]	— —	— —	— —	— —	— —
Westbound Through	610	A.M. P.M.	F F	853 808	953 1,083	932 1,025	100 275	79 217
Southbound Through	315	A.M. P.M.	E F	161 371	201 434	201 434	40 63	40 63
Intersection #21b. Ventura Place & Ventura Boulevard								
Eastbound Through	420	A.M. P.M.	F F	742 1,019	1,176 1,176	1,113 1,151	434 157	371 132
Westbound Through	95	A.M. P.M.	C [a] C [a]	— —	— —	— —	— —	— —
Intersection #22. Carpenter Avenue & Ventura Boulevard								
Eastbound Through	615	A.M. P.M.	D [a] E	— 398	— 753	— 703	— 355	— 305
Westbound Through	935	A.M. P.M.	E B [a]	473 —	800 —	590 —	327 —	117 —
Intersection #23. Colfax Avenue & Ventura Boulevard								
Eastbound Through	935	A.M. P.M.	B [a] B [a]	— —	— —	— —	— —	— —
Westbound Through	2,685	A.M. P.M.	D [a] F	— 770	— 796	— 796	— 26	— 26

Notes:

All lengths shown in feet, based on 25 feet per vehicle. Queues based on 95th percentile queue calculated by the HCM methodology.

[a] The directional approach is not anticipated to operate at LOS E or F. As such, no further corridor queue analysis is not required.

[b] As detailed in Table 17, the intersection is not anticipated to operate at LOS D or worse during this peak hour. As such, a detailed corridor queue analysis is not required.

Attachment G (cont'd)

Queuing Analysis Results

TABLE 21
FUTURE CONDITIONS (YEAR 2045)
INTERSECTION TURN POCKET QUEUES

Intersection	Turn Pocket Length (ft)	Peak Hour	85th Percentile Queue (ft)			Project Contribution to Queue (ft) without Radford Mobility Connector	Project Contribution to Queue (ft) with Radford Mobility Connector
			Future without Project Conditions	Future with Project Conditions without Radford Mobility Connector	Future with Project Conditions with Radford Mobility Connector		
Intersection #8. Laurel Canyon Boulevard & Landale Street [a]							
Eastbound Left-Turn	50	A.M. P.M.	211 266	211 266	211 266	0 0	0 0
Northbound Left-Turn	160	A.M. P.M.	50 8	47 6	52 9	-3 -2	2 1
Southbound Left-Turn	125	A.M. P.M.	26 86	22 79	22 79	-4 -7	-4 -7
Southbound Right-Turn	120	A.M. P.M.	206 59	202 58	202 58	-4 -1	-4 -1
Intersection #12. Laurel Canyon Boulevard & Moorpark Street							
Eastbound Left-Turn	120	A.M. P.M.	740 735	740 735	740 735	0 0	0 0
Westbound Left-Turn	490	A.M. P.M.	313 158	318 158	323 165	5 0	10 7
Westbound Right-Turn	2525	A.M. P.M.	85 80	75 80	148 208	-10 0	63 128
Northbound Left-Turn	155	A.M. P.M.	80 170	90 255	90 255	10 85	10 85
Southbound Left-Turn	155	A.M. P.M.	48 58	50 58	128 83	2 0	80 25
Intersection #14. Colfax Avenue & Moorpark Street							
Eastbound Left-Turn	180	A.M. P.M.	63 65	68 65	65 65	5 0	2 0
Westbound Left-Turn	90	A.M. P.M.	303 210	605 263	365 230	302 53	62 20
Northbound Left-Turn	75	A.M. P.M.	303 320	473 385	378 310	170 65	75 -10
Northbound Right-Turn	190	A.M. P.M.	203 300	193 353	173 235	-10 53	-30 -65
Southbound Left-Turn	95	A.M. P.M.	128 150	113 150	115 148	-15 0	-13 -2
Southbound Right-Turn	190	A.M. P.M.	75 90	70 88	103 103	-5 -2	28 13
Intersection #18. Laurel Canyon Boulevard & Ventura Place [a]							
Westbound Right-Turn	40	A.M. P.M.	76 251	91 376	91 376	15 125	15 125
Northbound Left-Turn	105	A.M. P.M.	10 21	9 24	9 23	-1 3	-1 2
Southbound Left-Turn	55	A.M. P.M.	114 207	126 183	122 224	12 -24	8 17

Attachment G (cont'd)

Queuing Analysis Results

TABLE 21 (CONT'D)
FUTURE CONDITIONS (YEAR 2045)
INTERSECTION TURN POCKET QUEUES

Intersection	Turn Pocket Length (ft)	Peak Hour	95th Percentile Queue (ft)			Project Contribution to Queue (ft) without Radford Mobility Connector	Project Contribution to Queue (ft) with Radford Mobility Connector
			Future without Project Conditions	Future with Project Conditions without Radford Mobility Connector	Future with Project Conditions with Radford Mobility Connector		
Intersection #20. Laurel Canyon Boulevard & Ventura Boulevard							
Eastbound Left-Turn	370	A.M. P.M.	120 175	115 203	115 203	-5 28	-5 28
Eastbound Right-Turn	45	A.M. P.M.	288 70	265 65	273 65	-23 -5	-15 -5
Westbound Left-Turn	220	A.M. P.M.	543 233	688 260	643 265	145 27	100 32
Westbound Right-Turn	20	A.M. P.M.	45 73	93 203	78 165	48 130	33 92
Northbound Left-Turn	180	A.M. P.M.	280 245	273 295	273 295	-7 50	-7 50
Northbound Right-Turn	215	A.M. P.M.	178 165	230 183	230 183	52 18	52 18
Southbound Left-Turn	175	A.M. P.M.	83 155	420 255	295 235	337 100	212 80
Southbound Right-Turn	140	A.M. P.M.	138 128	140 133	138 133	2 5	0 5
Intersection #21a. Ventura Place-Radford Avenue & Ventura Boulevard [a]							
Eastbound Left-Turn	90	A.M. P.M.	90 83	137 87	146 89	47 4	56 6
Westbound Left-Turn	95	A.M. P.M.	149 277	149 277	149 277	0 0	0 0
Westbound Right-Turn	50	A.M. P.M.	180 147	167 146	167 146	-13 -1	-13 -1
Southbound Left-Turn	90	A.M. P.M.	123 220	126 181	126 181	3 -39	3 -39
Southbound Right-Turn	90	A.M. P.M.	0 277	0 459	0 459	0 182	0 182
Intersection #21b. Ventura Place & Ventura Boulevard [a]							
Southbound Left-Turn	50	A.M. P.M.	58 116	56 116	56 116	-2 0	-2 0
Southbound Right-Turn	50	A.M. P.M.	32 31	31 31	31 31	-1 0	-1 0
Intersection #22. Carpenter Avenue & Ventura Boulevard							
Eastbound Left-Turn	70	A.M. P.M.	20 38	535 195	345 168	515 157	325 130
Westbound Left-Turn	55	A.M. P.M.	140 395	120 213	123 203	-20 -182	-17 -192
Intersection #23. Colfax Avenue & Ventura Boulevard [a]							
Eastbound Left-Turn	160	A.M. P.M.	117 326	129 166	136 143	12 -160	19 -183
Southbound Left-Turn	150	A.M. P.M.	355 325	362 352	362 352	7 27	7 27
Southbound Right-Turn	150	A.M. P.M.	64 33	144 52	104 43	80 19	40 10

Notes:

All lengths shown in feet based on 25 feet per vehicle. Queues based on 95th percentile queue calculated by the HCM methodology.

[a] Queues based on 95th percentile queue (in feet) as calculated by Synchro software.

Attachment H

Project Driveway Level of Service (LOS)

TABLE 22
PROJECT DRIVEWAY LEVEL OF SERVICE OPERATIONS (YEAR 2028)

Access Point [a]	Peak Hour	Future with Project without Radford Mobility Connector		Future with Project with Radford Mobility Connector	
		Delay	LOS	Delay	LOS
Moorpark Gate	AM	0.0	A	8.9	A
	PM	0.0	A	7.9	A
Sater Parking Structure Gate	AM	9.4	A	8.8	A
	PM	10.1	B	9.4	A
Radford Gate	AM	13.4	B	13.4	B
	PM	13.6	B	13.6	B
Carpenter Gate	AM	15.6	C	11.5	B
	PM	13.2	B	10.6	B
Colfax Gate [b]	AM	91.9	F	48.7	E
	PM	269.4	F	113.9	F

Notes:

- [a] Unless otherwise noted, operational analysis is based on *Highway Capacity Manual, 6th Edition* (Transportation Research Board, 2016) (HCM) All-Way Stop Control Unsignalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection.
- [b] Operational analysis is based on HCM 6th Edition Two-Way Stop Control methodology, which calculates the control delay, in seconds, for each individual approach of an intersection. The reported control delay represents the worst-case approach, and does not account for traffic gaps created by adjacent traffic signals.

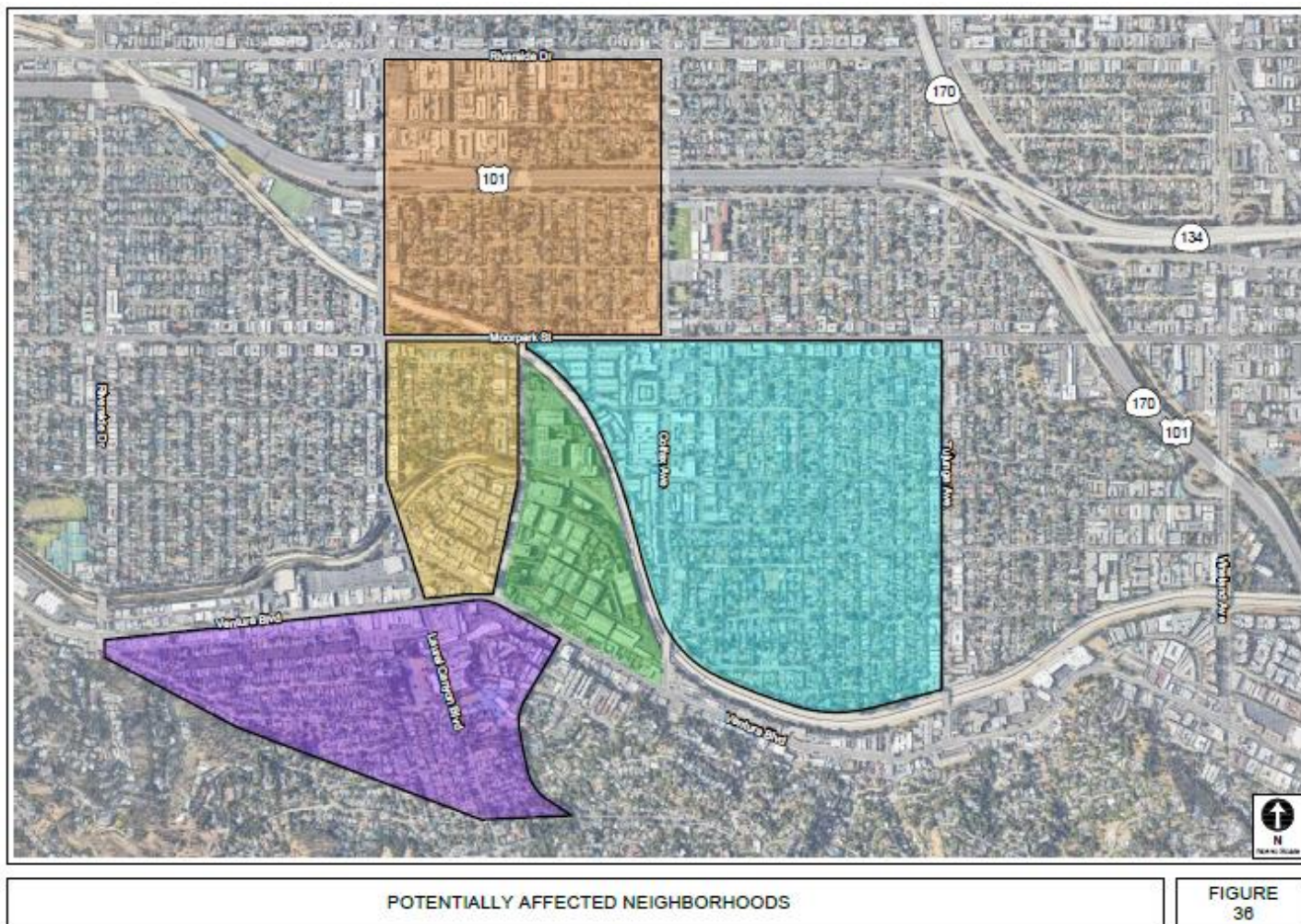
TABLE 23
PROJECT DRIVEWAY LEVEL OF SERVICE OPERATIONS (YEAR 2045)

Access Point [a]	Peak Hour	Future with Project without Radford Mobility Connector		Future with Project with Radford Mobility Connector	
		Delay	LOS	Delay	LOS
Moorpark Gate	AM	--	N/A	8.9	A
	PM	--	N/A	7.9	A
Sater Parking Structure Gate	AM	9.5	A	8.8	A
	PM	10.2	B	9.5	A
Radford Gate	AM	14.2	B	14.2	B
	PM	14.7	B	14.7	B
Carpenter Gate	AM	16.1	C	11.7	B
	PM	13.4	B	10.7	B
Colfax Gate [b]	AM	127.1	F	60.8	F
	PM	404.0	F	168.6	F

Notes:

- [a] Unless otherwise noted, operational analysis is based on *Highway Capacity Manual, 6th Edition* (Transportation Research Board, 2016) (HCM) All-Way Stop Control Unsignalized methodology, which calculates the average intersection delay, in seconds, for each vehicle passing through the intersection.
- [b] Operational analysis is based on HCM 6th Edition Two-Way Stop Control methodology, which calculates the control delay, in seconds, for each individual approach of an intersection. The reported control delay represents the worst-case approach, and does not account for traffic gaps created by adjacent traffic signals.

Attachment I Neighborhood Boundaries




Attachment J

Neighborhood Traffic Management Tool Samples




City of Los Angeles Department of Transportation NEIGHBORHOOD TRAFFIC MANAGEMENT TOOLS

¹These are only rough cost estimates, and should not be used to formulate detailed budgets. Actual costs can vary greatly from the rough cost estimates, depending on street conditions, extent of landscaping, NTM goals, inflation, etc.

Neighborhood Traffic Measures / (Rough Cost ¹)	Depiction	Pros	Cons	Considerations
EDGE LINES (\$1,000 or more for each 1,000 ft.)	n/a	<ul style="list-style-type: none"> • Reduces side-swipe collisions. • May reduce vehicular speeds. • May facilitate traffic entering and exiting driveways, if there is a parking or shoulder area. • Inexpensive. 	<ul style="list-style-type: none"> • May raise aesthetics concerns. 	<ul style="list-style-type: none"> • 18-ft min. lane width if on-street parking is provided. • Must have adequate lane width for each direction of traffic.
LANE STRIPING — Such as two-way left-turn lane, centerline, etc. (\$1,000 to \$2,000 per 1,000 ft)	n/a	<ul style="list-style-type: none"> • May reduce vehicular speeds. • May reduce collisions. • Inexpensive. 	<ul style="list-style-type: none"> • May raise aesthetics concerns 	<ul style="list-style-type: none"> • Requires adequate roadway width to accommodate the existing or desired roadway usage (for traffic, parking, etc.) based on LADOT standards.
STOP SIGN PATTERN (Less than \$3,000 per intersection)	n/a	<ul style="list-style-type: none"> • May reduce vehicular speeds, esp. at intersections. • Increases opportunity for pedestrian crossings. • May discourage cut-through traffic. • Inexpensive 	<ul style="list-style-type: none"> • Drivers may speed up between stop signs. • Will increase noise and emissions at stop signs. • May require police enforcement. 	<ul style="list-style-type: none"> • Must meet LADOT stop sign warrants.
SPEED HUMPS (\$6,000 for three units)		<ul style="list-style-type: none"> • Slows traffic, esp. at midblock locations. • Self-enforcing. • Minimum maintenance. • More cost-effective than other traffic calming roadway features. 	<ul style="list-style-type: none"> • May increase emergency service response time slightly. • May increase traffic noise in the vicinity of the hump. • May raise aesthetics concerns. 	<ul style="list-style-type: none"> • Must meet justification and feasibility criteria. • Requires petition signed by at least 75% of households per block. • Higher cost for longer blocks.

City of Los Angeles Department of Transportation NEIGHBORHOOD TRAFFIC MANAGEMENT TOOLS

¹These are only rough cost estimates, and should not be used to formulate detailed budgets. Actual costs can vary greatly from the rough cost estimates, depending on street conditions, extent of landscaping, NTM goals, inflation, etc.

Neighborhood Traffic Measures / (Rough Cost ¹)	Depiction	Pros	Cons	Considerations
SPEED TRAILERS (\$15,000 per trailer)		<ul style="list-style-type: none"> • Slows traffic by educating drivers. • More cost-effective than the fixed speed display sign. • Allows for placement at multiple locations. 	<ul style="list-style-type: none"> • May lose effectiveness over time, if periodic police enforcement is not provided. • May raise aesthetics concerns. 	<ul style="list-style-type: none"> • Requires staffing resources to move around. • LAPD only has a limited number of these trailers. • Requires adequate shoulder or curb lane width for placement.
SPEED FEEDBACK SIGNS (\$30,000 per sign, incl. 500 ft trench for power drop & new pole if a/c powered)		<ul style="list-style-type: none"> • Slows traffic by educating drivers. 	<ul style="list-style-type: none"> • May lose effectiveness over time, if periodic police enforcement is not provided. • May raise aesthetics concerns. • Expensive. 	<ul style="list-style-type: none"> • Must meet justification and feasibility criteria. • A/C powered sign is expensive to install. • Most effective with periodic police enforcement. • Solar powered sign can operate for a maximum of 12 hours/day, and for a shorter duration if daily sun exposure is less than optimum.
TRAFFIC CIRCLES (\$100,000 to \$150,000 or more, depending on size, extent of decorative treatments, and street conditions)		<ul style="list-style-type: none"> • Slows traffic, esp. at intersections. • Reduces collisions at intersection. • Landscaping enhances residential setting. 	<ul style="list-style-type: none"> • Drivers have to learn to go around it. • May impede left turns by very large vehicles (buses, trailers, etc.). • May increase emergency service response time slightly. • May require removal of on-street parking. • Residents will have to maintain landscaping. • Very expensive. 	<ul style="list-style-type: none"> • Must meet justification and feasibility requirements. • Requires petition signed by at least 67% of households from each block adjacent to the intersection. • Higher cost for larger intersections. • Requires commitment from neighborhood to maintain landscaping.




Note: Other NTM strategies and/or tools not listed in Attachment J may be used by the LADOT, with concurrence from LADCP, as part of the NTMP.

Attachment J (cont'd)

Neighborhood Traffic Management Tool Samples

City of Los Angeles Department of Transportation NEIGHBORHOOD TRAFFIC MANAGEMENT TOOLS

¹These are only rough cost estimates, and should not be used to formulate detailed budgets. Actual costs can vary greatly from the rough cost estimates, depending on street conditions, extent of landscaping, NTM goals, inflation, etc.

Neighborhood Traffic Measures / (Rough Cost ¹)	Depiction	Pros	Cons	Considerations
RAISED MEDIAN ISLANDS (\$30,000 + \$100 per sq. ft.)		<ul style="list-style-type: none"> • May slow traffic by narrowing traffic lanes and creating a visual break in the roadway. • Landscaping enhances residential setting. 	<ul style="list-style-type: none"> • May require removal of on-street parking spaces. • May restrict driveway access, resulting in u-turns. • Residents will have to maintain landscaping. • Very expensive. 	<ul style="list-style-type: none"> • There may be objections from residents affected by parking and driveway access restrictions. • Requires commitment from neighborhood to maintain landscaping.
CURB EXTENSIONS / BUMPOUTS (\$50,000 or more per corner)		<ul style="list-style-type: none"> • May slow traffic by narrowing traffic lanes. • Shortens pedestrian crossing distance if located at intersections. • Landscaping enhances residential setting. 	<ul style="list-style-type: none"> • May require removal of on-street parking spaces. • At driveways, may impact driveway access. • Residents will have to maintain landscaping. • Very expensive. 	<ul style="list-style-type: none"> • There may be objections from residents affected by parking restrictions. • Extent of driveway, gutter & curb work increases costs. • Requires commitment from neighborhood to maintain landscaping.
TURN RESTRICTION SIGNS (\$500 for each access point)		<ul style="list-style-type: none"> • Reduces cut-through traffic volume. • May limit restrictions to problem hours. • No effect on response time for emergency service providers when compared to physical barriers. • Inexpensive. 	<ul style="list-style-type: none"> • May cause drivers to use other neighborhood streets. • Will increase travel time for local residents as well. • Not self-enforcing; requires police enforcement. 	<ul style="list-style-type: none"> • Must be verified by LADOT that there is a demonstrated cut-through problem. • Requires support of residents in the affected area (at least two-thirds in support). • Must address potential diversion of traffic to other neighborhood streets if restriction affects access to high volume streets (esp. collector streets).

City of Los Angeles Department of Transportation NEIGHBORHOOD TRAFFIC MANAGEMENT TOOLS

¹These are only rough cost estimates, and should not be used to formulate detailed budgets. Actual costs can vary greatly from the rough cost estimates, depending on street conditions, extent of landscaping, NTM goals, inflation, etc.

Neighborhood Traffic Measures / (Rough Cost ¹)	Depiction	Pros	Cons	Considerations
SIGNAL TIMING METERING— To reduce green time for targeted traffic flows	n/a	<ul style="list-style-type: none"> • May reduce traffic volume, by discouraging some drivers from using the cut-thru route, once they perceive better time saving and convenience on adjacent highways and freeways. • Delay may create conditions that result in slower speeds. 	<ul style="list-style-type: none"> • May cause drivers to use other neighborhood streets. • Excessive delay may cause long queue lengths over a longer period of time (to clear out). Residents may perceive the long queues to be undesirable as well (noise, emissions). • Residents are subjected to delays, too, while leaving or returning home. • May make driveway access across long queues difficult. • Depending on the signal timing scheme, may cause inconvenience to non-participating residents immediately adjacent to the NTM project area. • Expensive if traffic signal hardware changes are needed. 	<ul style="list-style-type: none"> • Must be verified by LADOT that there is a demonstrated cut-through problem. • Requires support of residents in the affected area (at least two-thirds in support). • Must address potential diversion of traffic to other neighborhood streets if restriction affects access to high volume streets (esp. collector streets). • May be most effective if there are signal timing and striping changes that facilitate movements leading to the arterials.


Note: Other NTM strategies and/or tools not listed in Attachment J may be used by the LADOT, with concurrence from LADCP, as part of the NTMP.

Attachment J (cont'd)

Neighborhood Traffic Management Tool Samples

City of Los Angeles Department of Transportation NEIGHBORHOOD TRAFFIC MANAGEMENT TOOLS

¹These are only rough cost estimates, and should not be used to formulate detailed budgets. Actual costs can vary greatly from the rough cost estimates, depending on street conditions, extent of landscaping, NTM goals, inflation, etc.

Neighborhood Traffic Measures / (Rough Cost ¹)	Depiction	Pros	Cons	Considerations
BARRIERS-- Such as half street closures, diagonal diverters, etc. (\$50,000 to \$100,000 and more for each access point, depending on street conditions and extent of landscaping)	 <p>One type of barriers: Half Street Closure</p>	<ul style="list-style-type: none"> • Reduces cut-through traffic volume. • Self-enforcing. • Landscaping enhances residential setting. 	<ul style="list-style-type: none"> • May cause drivers to use other neighborhood streets. • Will increase travel time for local residents as well. • Some drivers may go around the barrier. • Very expensive. 	<ul style="list-style-type: none"> • Must be verified by LADOT that there is a demonstrated cut-through problem. • Requires support of residents in the affected area (at least two-thirds in support). • Must maintain emergency or routine street access for service providers, including but not limited to the Fire Department and the Bureau of Sanitation. • Must address potential diversion of traffic to other neighborhood streets if restriction affects access to high volume streets (esp. collector streets). • Extent of gutter & curb work increases costs. • Requires commitment from neighborhood to maintain landscaping.

Note: Other NTM strategies and/or tools not listed in Attachment J may be used by the LADOT, with concurrence from LADCP, as part of the NTMP.

Attachment K

Recommended Transportation Improvements

TABLE 25
RECOMMENDED TRANSPORTATION IMPROVEMENTS

Improvement Measures	Cost Estimates ^[a]	
	without Moorpark Gate	with Moorpark Gate
<u><i>Project Access Improvements</i></u>		
New Carpenter Avenue Gate Carpenter Avenue & Ventura Boulevard Improvements	\$1,000,000	\$1,000,000
Improved Gate Control Operations RFID	\$200,000	\$200,000
Radford Mobility Connector / New Moorpark Street Gate ^[b] Bridge Connection & Neighborhood Access Restrictions Traffic Signal Installation		\$28,000,000 \$500,000
Subtotal - Project Access Improvements	\$1,200,000	\$29,700,000
<u><i>Project Features</i></u>		
TDM Program		
Mobility Hub Construction Cost	\$500,000	\$4,500,000
Annual Operations / Maintenance ^[c]	\$2,000,000	\$2,000,000
Subtotal - Project Features & Ongoing Operations and Maintenance	\$500,000 + \$2,000,000 Annual Operations / Maintenance Costs	\$4,500,000 + \$2,000,000 Annual Operations / Maintenance Costs
<u><i>Off-Site Improvements</i></u>		
Radford Mobility Connector - Bike & Pedestrian Improvements ^[d]	\$2,000,000	\$2,000,000
Radford Avenue - Class IV Bike Lanes from Radford Mobility Connector to Hoffman Street ^[e]	\$1,000,000	\$1,000,000
TSM Improvements (Intersection Signals and Corridor Signals) ^[f] ^[g]	\$1,550,000	\$1,550,000
Neighborhood Traffic Management Improvements	\$500,000	\$500,000
Vision Zero / Pedestrian / Mobility Improvements	\$550,000	\$550,000
Transit Stop Improvements	\$200,000	\$200,000
Subtotal - Off-Site Improvements ^[h]	\$5,800,000	\$5,800,000
Total - Project Contribution	\$7,500,000 + \$2,000,000 Annual Operations / Maintenance Costs	\$40,000,000 + \$2,000,000 Annual Operations / Maintenance Costs

Notes

[a] Cost estimates reflect one-time payments and do not include costs associated with design, engineering, utilities, on-going operations & maintenance, etc.

[b] The Radford Mobility Connector is a multi-modal bridge that would provide vehicular, pedestrian, and bicycle routes access across the Tujunga Wash, and include a new studio-related vehicle access.

[c] Represents an ongoing annual Operating and Maintenance cost to operate the TDM Program.

[d] The Project would contribute toward the LA River Master Plan improvement that would provide a pedestrian and bicycle route across the Tujunga Wash and the ramps and/or stairs that would provide direct access to the Los Angeles River trail system.

[e] Bike improvements along Radford Avenue to provide access to and connect pedestrians and bicyclists with the Los Angeles River and tributaries already envisioned by the City have been incorporated as part of the Project's off-site improvements.

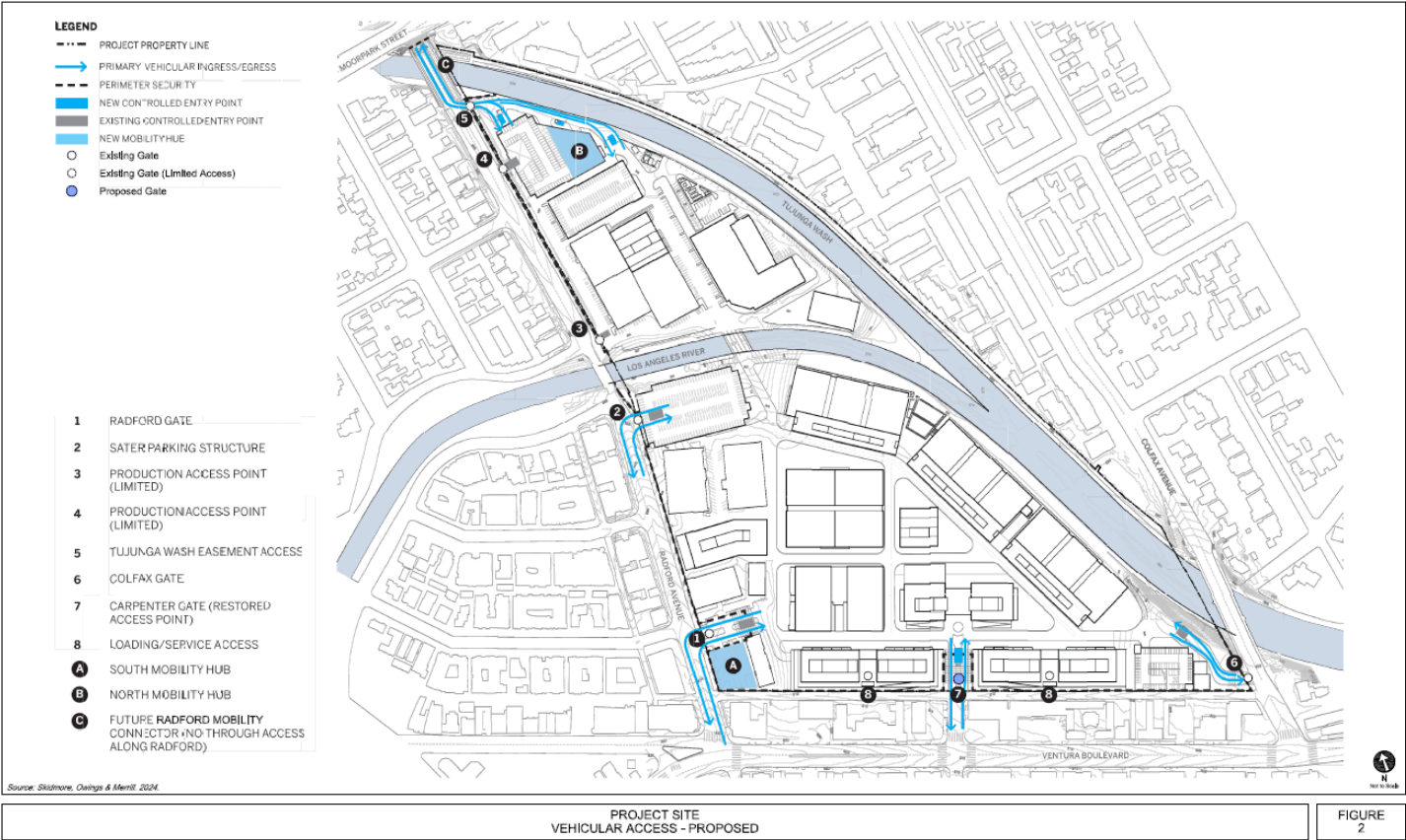
[f] Traffic signal improvements could include but are not limited to signal controller upgrades, loop detectors, signal cabinets, etc.

[g] Corridor-wide improvements could include but are not limited to fiber optic cables, systemwide advance loop detectors, conduits, interconnect cables, etc.

[h] The off-site improvements are subject to refinement.

Attachment L

Project Site Plan



Appendix 0.3

LADOT Haul Route Approval Letter

CITY OF LOS ANGELES
INTER-DEPARTMENTAL MEMORANDUM

4 – E. Valley #1-5081180911
Radford Studio Center Project
4200 N. Radford Ave

Date: January 21, 2025 ***Supersedes Memo dated January 16, 2025***

To: Kathleen King, City Planner
Department of City Planning
200 North Spring Street

From: *Steve Rostam*
Steve Rostam, Acting Senior Transportation Engineer
Department of Transportation, 6262 Van Nuys Blvd

Subject: **IMPORT/EXPORT OF EARTH –RADFORD STUDIO CENTER PROJECT 4200 N. RADFORD AVENUE**

The Department of Transportation has reviewed the requested haul routes. Our recommendations are as follows:

1. RECOMMENDED HAUL ROUTE:

COLFAX GATE:

Loaded Truck: -

Exit jobsite onto Colfax Avenue (Southbound); Right onto Ventura Boulevard (Westbound); Right onto Laurel Canyon Boulevard (Northbound); Left onto Northbound Ventura Fwy On-ramp (101); Merge onto Northbound San Diego Fwy (405); Merge onto Northbound Golden State Fwy (5); Exit Roxford Street West (Exit 159B); Right onto Roxford Street (Westbound); Right onto Sepulveda Boulevard (Northbound); Left onto San Fernando Road (Northbound); Left into disposal site at Sunshine Canyon Road (Private Driveway).

Exit jobsite onto Colfax Avenue (Southbound); Right onto Ventura Boulevard (Westbound); Right onto Laurel Canyon Boulevard (Northbound); Left onto Northbound Ventura Fwy On-ramp (101); Merge onto Northbound San Diego Fwy On-ramp (405); Merge onto Northbound Golden State Fwy (5); continue to disposal site outside of the City Limits Chiquita Canyon Landfill.

Empty Truck: -

Exit disposal site Sunshine Canyon Landfill onto San Fernando Road (Southbound); Right onto Sepulveda Boulevard (Southbound); Left onto Roxford Street (Eastbound); Right onto Southbound Golden State Fwy (5); Merge onto Southbound San Diego Fwy (405); Merge onto Southbound Ventura Fwy (101) Exit Laurel Canyon Boulevard (Exit 14) turn right (Southbound); Left on

Moorpark Street (Eastbound); Right on Colfax Avenue (Southbound) arriving at job site.

From disposal site Chiquita Canyon Landfill, outside City Limits, take the Southbound Golden State Fwy (5); Merge onto Southbound San Diego Fwy (405); Merge onto Southbound Ventura Fwy (101) Exit Laurel Canyon Boulevard (Exit 14) turn right (Southbound); Left on Moorpark Street (Eastbound); Right on Colfax Avenue (Southbound) arriving at job site.

CARPENTER GATE:

Loaded Truck: -

Exit jobsite onto Carpenter Avenue (Southbound); Right onto Ventura Boulevard (Westbound); Right onto Laurel Canyon Boulevard (Northbound); Left onto Northbound Ventura Fwy On-ramp (101); Merge onto Northbound San Diego Fwy (405); Merge onto Northbound Golden State Fwy (5); Exit Roxford Street West (Exit 159B); Right onto Roxford Street (Westbound); Right onto Sepulveda Boulevard (Northbound); Left onto San Fernando Road (Northbound); Left into disposal site at Sunshine Canyon Road (Private Driveway).

Exit jobsite onto Carpenter Avenue (Southbound); Right onto Ventura Boulevard (Westbound); Right onto Laurel Canyon Boulevard (Northbound); Left onto Northbound Ventura Fwy On-ramp (101); Merge onto Northbound San Diego Fwy On-ramp (405); Merge onto Northbound Golden State Fwy (5); continue to disposal site outside of the City Limits Chiquita Canyon Landfill.

Empty Truck: -

Exit disposal site Sunshine Canyon Landfill onto San Fernando Road (Southbound); Right onto Sepulveda Boulevard (Southbound); Left onto Roxford Street (Eastbound); Right onto Southbound Golden State Fwy (5); Merge onto Southbound San Diego Fwy (405); Merge onto Southbound Ventura Fwy (101) Exit Laurel Canyon Boulevard (Exit 14) turn right (Southbound); Left on Ventura Boulevard (Eastbound); Left on Carpenter Avenue (Northbound) arriving at job site.

From disposal site Chiquita Canyon Landfill, outside City Limits, take the Southbound Golden State Fwy (5); Merge onto Southbound San Diego Fwy (405); Merge onto Southbound Ventura Fwy (101) Exit Laurel Canyon Boulevard (Exit 14) turn right (Southbound); Left on Ventura Boulevard (Eastbound); Left on Ventura Boulevard (Eastbound); Left on Carpenter Avenue (Northbound) arriving at job site.

RADFORD GATE:

Loaded Truck: -

Exit jobsite onto Radford Avenue (Southbound); Right onto Ventura Boulevard (Westbound); Right onto Laurel Canyon Boulevard (Northbound); Left onto Northbound Ventura Fwy On-ramp (101); Merge onto Northbound San Diego Fwy (405); Merge onto Northbound Golden State Fwy (5); Exit Roxford Street West (Exit 159B); Right onto Roxford Street (Westbound); Right onto Sepulveda Boulevard (Northbound); Left onto San Fernando Road (Northbound); Left into disposal site at Sunshine Canyon Road (Private Driveway).

Exit jobsite onto Radford Avenue (Southbound); Right onto Ventura Boulevard (Westbound); Right onto Laurel Canyon Boulevard (Northbound); Left onto Northbound Ventura Fwy On-ramp (101); Merge onto Northbound San Diego Fwy On-ramp (405); Merge onto Northbound Golden State Fwy (5); continue to disposal site outside of the City Limits Chiquita Canyon Landfill.

Empty Truck: -

Exit disposal site Sunshine Canyon Landfill onto San Fernando Road (Southbound); Right onto Sepulveda Boulevard (Southbound); Left onto Roxford Street (Eastbound); Right onto Southbound Golden State Fwy (5); Merge onto Southbound San Diego Fwy (405); Merge onto Southbound Ventura Fwy (101) Exit Laurel Canyon Boulevard (Exit 14) turn right (Southbound); Left on Ventura Boulevard (Eastbound); Left on Radford Avenue (Northbound) arriving at job site.

From disposal site Chiquita Canyon Landfill, outside City Limits, take the Southbound Golden State Fwy (5); Merge onto Southbound San Diego Fwy (405); Merge onto Southbound Ventura Fwy (101) Exit Laurel Canyon Boulevard (Exit 14) turn right (Southbound); Left on Ventura Boulevard (Eastbound); Left on Radford Avenue (Northbound) arriving at job site.

RADFORD BRIDGE GATE (Once Constructed):

Loaded Truck: -

Exit jobsite onto Radford Avenue (Northbound); Left onto Moorpark Street (Westbound); Right onto Laurel Canyon Boulevard (Northbound); Left onto Northbound Ventura Fwy On-ramp (101); Merge onto Northbound San Diego Fwy (405); Merge onto Northbound Golden State Fwy (5); Exit Roxford Street West (Exit 159B); Right onto Roxford Street (Westbound); Right onto Sepulveda Boulevard (Northbound); Left onto San Fernando Road (Northbound); Left into disposal site at Sunshine Canyon Road (Private Driveway).

Exit jobsite onto Radford Avenue (Northbound); Left onto Moorpark Street (Westbound); Right onto Laurel Canyon Boulevard (Northbound); Left onto Northbound Ventura Fwy On-ramp (101); Merge onto Northbound San Diego

Fwy On-ramp (405); Merge onto Northbound Golden State Fwy (5); continue to disposal site outside of the City Limits Chiquita Canyon Landfill.

Empty Truck: -

Exit disposal site Sunshine Canyon Landfill onto San Fernando Road (Southbound); Right onto Sepulveda Boulevard (Southbound); Left onto Roxford Street (Eastbound); Right onto Southbound Golden State Fwy (5); Merge onto Southbound San Diego Fwy (405); Merge onto Southbound Ventura Fwy (101) Exit Laurel Canyon Boulevard (Exit 14) turn right (Southbound); Left on Moorpark Street (Eastbound); Right on Radford Avenue (Southbound) arriving at job site.

From disposal site Chiquita Canyon Landfill, outside City Limits, take the Southbound Golden State Fwy (5); Merge onto Southbound San Diego Fwy (405); Merge onto Southbound Ventura Fwy (101) Exit Laurel Canyon Boulevard (Exit 14) turn right (Southbound); Left on Moorpark Street (Eastbound); Right on Radford Avenue (Southbound) arriving at job site.

2. DAYS AND HOURS OF HAULING OPERATION

- a. Hauling shall be limited to the hours of 9AM to 4PM weekdays, and 8AM to 4PM on Saturdays.
- b. For routes using the intersection of Colfax Avenue & Moorpark Street, the weekday hauling hours will be restricted to the hours of 9AM to 1:30PM. This route will not be approved for any weekday hours otherwise. **NO HAULING SHALL BE PERFORMED ON SUNDAYS AND HOLIDAYS.**

3. STAGING AREA

All trucks shall be staged on jobsite. **NO INTERFERENCE TO TRAFFIC AND ACCESS TO DRIVEWAYS MUST BE MAINTAINED AT ALL TIMES.**

4. ADDITIONAL COMMENTS AND/OR REQUIREMENTS

Flagger control should be provided during the hauling operations to assist with ingress/egress of truck traffic and pedestrian traffic.