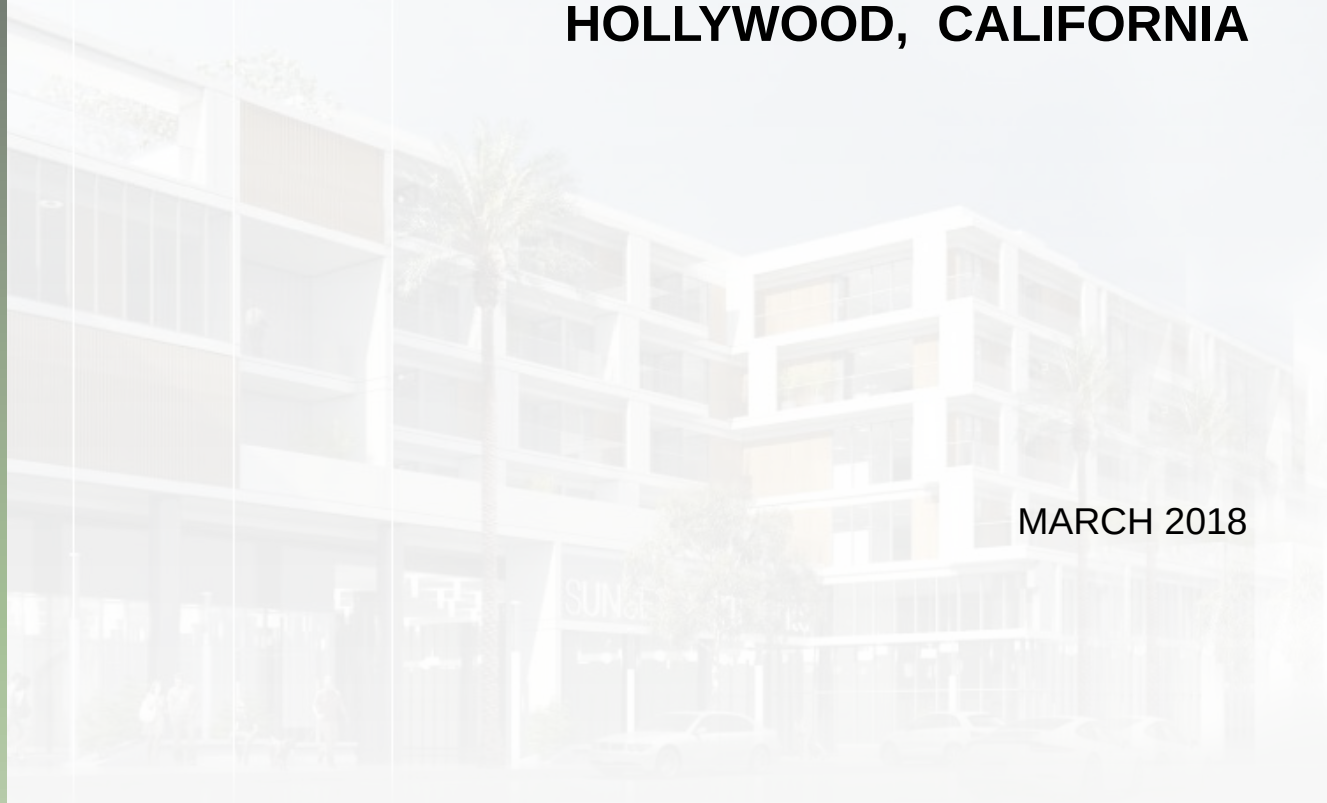
Appendix P

Traffic Study

TRANSPORTATION IMPACT STUDY FOR THE SUNSET/WESTERN MIXED-USE DEVELOPMENT

HOLLYWOOD, CALIFORNIA



MARCH 2018

PREPARED FOR

5420 SUNSET BOULEVARD LP, LLC

PREPARED BY

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TRANSPORTATION IMPACT STUDY
FOR THE
SUNSET/WESTERN MIXED-USE DEVELOPMENT

HOLLYWOOD, CALIFORNIA

March 2018

Prepared for:

5420 SUNSET BOULEVARD LP, LLC

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Chapter 1
Introduction

This study presents the transportation impact analysis for the proposed Sunset/Western Mixed-Use Development project (Project) located at 5420 Sunset Boulevard in the Hollywood community of the City of Los Angeles (City). The methodology and base assumptions used in the analysis were established in conjunction with the Los Angeles Department of Transportation (LADOT).

PROJECT DESCRIPTION

The Project is a new mixed-use development that includes 735 apartment units and 95,820 square feet (sf) of neighborhood-serving commercial uses, which may include supermarket, retail, and restaurant uses. The Project would also include ancillary residential uses, such as lobbies and leasing offices, pools, spas, and other recreational facilities providing services to the residents. In addition, the Project would provide landscaped courtyards, a paved plaza fronting Sunset Boulevard, and landscaped paseos at the ground level that would be publicly accessible from Sunset Boulevard. The existing 18,525 sf of commercial space, 78,328 sf grocery store, and 3,943 sf fast-food restaurant on the site, as well as the associated parking areas, would be removed with the development of the Project.

Parking would be distributed throughout the Project Site in two subterranean parking levels and in an at-grade parking level. Bicycle parking would be provided within the Project Site and on adjacent sidewalks. The Project would also comply with City standards for providing electric vehicle charging capabilities and electric vehicle charging stations within the proposed parking. Vehicular access to the Project would be provided via two driveways (one commercial and one residential) on Serrano Avenue, a residential driveway on Sunset Boulevard, and one driveway (two lanes inbound and two lanes outbound) on Western Avenue serving both commercial and residential components of the Project. Commercial service, loading, and fire department access would be provided via a driveway that would bisect the Project Site. The residential driveway on

Sunset Boulevard would accommodate both right and left-turn ingress and right-turn-only egress. All other Project driveways would provide full access by accommodating both right-turn and left-turn ingress and egress. The driveways located on Western Avenue will be designed to align with the future traffic signal at De Longpre Avenue.

The conceptual Project site plan is shown in Figure 1.

PROJECT LOCATION AND STUDY AREA

The Project is located within the *Hollywood Community Plan* (Los Angeles Department of City Planning, December 1988) area, as well as the *Vermont/Western Transit Oriented District Specific Plan (Station Neighborhood Area Plan)* (Los Angeles Department of City Planning, 2001) (Vermont/Western TOD Specific Plan) area. The Project Site is bounded by Sunset Boulevard to the north, Serrano Avenue to the east, various residential and commercial land uses to the south, and Western Avenue to the west. Nearby uses include commercial and multi-family residential developments.

The Project Site is located approximately 0.3 miles east of US 101, which provides regional access between Downtown Los Angeles (approximately 4.5 miles southeast) and the San Fernando Valley (approximately seven miles northwest). Surface street access to the Project Site is primarily provided by Sunset Boulevard and Western Avenue.

As shown in Figure 2, the transportation analysis Study Area includes a geographic area bounded by Franklin Avenue to the north, Normandie Avenue to the east, Santa Monica Boulevard to the south, and Bronson Avenue to the west. Detailed transportation analyses were conducted at key intersections within the Study Area.

The Project Site is located approximately 0.25 miles south of the Los Angeles County Metropolitan Transportation Authority's (Metro) Hollywood/Western station. This station serves Metro's Red Line subway, which travels between Union Station in Downtown Los Angeles and North Hollywood in the San Fernando Valley at 10-minute intervals during the commuter peak periods. Additionally, transit bus service is provided throughout the Study Area by Metro and LADOT.

TRANSPORTATION ANALYSIS METHODOLOGY

Study Scope and Analysis Conditions

The scope of analysis for this study was developed in consultation with LADOT. The base assumptions and technical methodologies (i.e., trip generation, study locations, analysis methodology, etc.) were identified as part of the study approach and were outlined in a Memorandum of Understanding (MOU) dated October 13, 2016, which was reviewed and approved by LADOT. As part of the MOU, a review of the freeway impact analysis screening criteria on the California Department of Transportation (Caltrans) facilities (i.e., ramps and freeway segments) was prepared pursuant to *First Amendment to the Agreement Between City of Los Angeles and Caltrans District 7 on Freeway Impact Analysis Procedures* (State of California and City of Los Angeles, December 2015) (the "Caltrans Agreement"). A copy of the signed MOU is provided in Appendix A.

This study analyzed the potential Project-generated transportation impacts on the street system in the vicinity of the Project Site as compared to existing conditions and projected future conditions at the time the Project is expected to be occupied (Year 2024). Potential intersection impacts were evaluated for typical weekday morning (7:00 AM to 10:00 AM) and afternoon (3:00 PM to 6:00 PM) peak periods. Consistent with *Transportation Impact Study Guidelines* (LADOT, December 2016), the following traffic conditions were developed and analyzed as part of this study:

- Existing Conditions– The analysis of existing traffic conditions provides a basis for the assessment of future traffic conditions. The Existing Conditions analysis includes a description of key area streets and highways, traffic volumes and current operating conditions, and transit service in the Study Area. Intersection turning movement counts were collected in Years 2015 and 2016 during the typical weekday morning (7:00 AM to 10:00 AM) and afternoon (3:00 PM to 6:00 PM) peak periods. Turning movement counts collected in November 2010 for the intersection of Western Avenue & De Longpre Avenue were provided by LADOT. Older counts were used at this intersection due to the partial closure of De Longpre Avenue during adjacent construction activities; thus, traffic counts and lane configurations as of January 2016 do not reflect the typical conditions at the intersection. This intersection is unsignalized under Existing Conditions and is proposed to be signalized once the adjacent construction is complete. Based on direction from LADOT staff, this intersection was only analyzed when signalized under Future Conditions (Year 2024). The counts collected in Years 2010 and 2015 were grown 1% per year to reflect conditions in Year 2017. Local schools were in session when all traffic counts were conducted and the weather conditions were typical.

Fieldwork (to obtain lane configurations and signal phasing) for the analyzed intersections was also conducted and is provided in Appendix B.

- Existing with Project Conditions – This analysis condition projects the potential intersection operations that could be expected if the Project were built now. This analysis evaluates the potential Project-related transportation impacts as compared to Existing Conditions.

- Existing with Project with Mitigation Conditions – This analysis condition projects the potential intersection operating conditions that could be expected if the Project were built under existing conditions, including the effect of any mitigation. In this analysis condition, the Project-generated traffic with mitigation incorporated is added to the Existing Conditions.

- Future without Project Conditions (Year 2024) – This analysis condition projects the potential intersection operations that could be expected as a result of regional growth and related project traffic in the Study Area by Year 2024. This analysis provides the conditions by which the Project impacts are evaluated in the future at full buildout. This scenario includes roadway improvements constructed by other projects in the Study Area that will be in place prior to Project occupancy.

- Future with Project Conditions (Year 2024) – This analysis condition projects the potential intersection operations that could be expected if the Project were occupied in the projected buildout year. In this scenario, the traffic generated by the Project is added to Future without Project Conditions.

- Future with Project with Mitigation Conditions (Year 2024) – This analysis projects the potential intersection operating conditions that could be expected if the Project were built in the projected buildout year, including the effect of any mitigation. In this analysis condition, the Project-generated traffic with mitigation incorporated is added to the Future without Project Conditions.

Signalized Intersection Analysis Methodology

Intersection capacity has been analyzed using the "Critical Movement Analysis (CMA) – Planning" (*Transportation Research Circular No. 212, Interim Materials on Highway Capacity*, Transportation Research Board, 1980) methodology in accordance with the *Transportation Impact Study Guidelines*. The CMA methodology was implemented using LADOT's CalcaDB Lite spreadsheet application to analyze intersection operating conditions. The methodology calculates the volume-to-capacity (V/C) ratio, which is used to determine the intersection level of service (LOS) according to the LOS definitions provided in Table 1.

The City's Automated Traffic Surveillance and Control (ATSAC) system represents an advanced system in computer control of traffic signals. It was first put into operation in June 1984 in the Coliseum area of the City to anticipate the expected increase in traffic due to the Summer Olympic Games, and has since been expanded to other parts of the City. The advantages of ATSAC-controlled traffic signals are substantial, including real-time adjustment of signal timing plans to reflect changing traffic conditions, identification of unusual traffic conditions caused by incidents, the ability to implement special purpose short-term signal timing changes in response to incidents, and the ability to identify signal equipment malfunctions quickly. LADOT estimates that implementation of this system improves intersection capacity by an average of 7%.

In addition to ATSAC, the Adaptive Traffic Control System (ATCS) has been implemented in the City. ATCS is a computer-based traffic signal control program that provides fully responsive traffic signal control based on real-time traffic conditions. It automatically adjusts and optimizes traffic signal timing in response to current traffic demands on the entire signal network such that the number of stops and the amount of delay is minimized along with improved traffic signal coordination throughout the network. LADOT estimates that implementation of this system improves intersection capacity by an additional 3% over those operating under the ATSAC system alone.

Each of the signalized study intersections is equipped with both ATSAC and ATCS. In accordance with standard LADOT procedures, a capacity increase of 10% (0.10 V/C adjustment) was applied to each intersection to reflect the benefits of ATSAC and ATCS control. The capacity increases are applied within the CalcaDB Lite software and, therefore, are inherent in the analysis results.

Impact Criteria and Significance Thresholds

The significance of the potential impacts of Project-generated traffic at the signalized study intersections was determined using criteria identified in *Transportation Impact Study Guidelines*. LADOT guidelines indicate that a project is considered to have a significant transportation impact on a signalized intersection if the increase in the V/C ratio attributable to the project exceeds a specific threshold depending on the final intersection LOS. LADOT has developed a

sliding scale methodology in which the allowable increase in the V/C ratio attributable to a project decreases as the V/C ratio of the intersection increases:

Intersection Conditions with Project Traffic		Significant Impact Threshold for Project-related Increase in V/C Ratio
LOS	**V/C**	
C	0.701 – 0.800	Equal to or greater than 0.04
D	0.801 – 0.900	Equal to or greater than 0.02
E, F	> 0.900	Equal to or greater than 0.01

Source: City of Los Angeles.

The relative impact of the added traffic volumes to be generated by the Project was evaluated based on analysis of existing and future operating conditions at the study intersections, with and without the Project.

Street Segments

As outlined in *Transportation Impact Study Guidelines*, a local residential street shall be deemed significantly impacted based on an increase in the projected average daily traffic (ADT) volumes as follows:

Projected ADT with Project (Final ADT)	Project-Related Increase in ADT
0 to 999	120 trips or more
1,000 to 1,999	12% or more of Final ADT
2,000 to 2,999	10% or more of Final ADT
3,000 or more	8% or more of Final ADT

ADDITIONAL TRANSPORTATION ANALYSES

Congestion Management Program

An analysis was also conducted according to *2010 Los Angeles County Congestion Management Program* (Los Angeles County Metropolitan Transportation Authority [Metro], 2010) (CMP) guidelines. The CMP is a State-mandated program that serves as the monitoring and analytical basis for transportation funding decisions in the County made through the Regional Transportation Improvement Program and State Transportation Improvement Program processes. The CMP requires that a Traffic Impact Analysis (TIA) be performed for (1) all CMP arterial monitoring intersections where a project would add 50 or more trips during either the morning or afternoon weekday peak hours and (2) all mainline freeway monitoring locations where a project would add 150 or more trips (in either direction) during the morning or afternoon weekday peak hours. In addition, it requires a review of potential impacts to the regional transit system.

The required CMP analyses were performed, as detailed in Chapter 10, in accordance with the TIA guidelines referenced in the CMP.

Caltrans

Caltrans facilities were evaluated according to the requirements of the Caltrans Agreement with LADOT. The Caltrans Agreement identifies a series of screening criteria that, if any are met by the Project, require a more detailed analysis of Caltrans facilities. A supplemental analysis was conducted using *2010 Highway Capacity Manual* (Transportation Research Board, 2010) (HCM 2010) methodology, in accordance with *Guide for the Preparation of Traffic Impact Studies* (Caltrans, December 2002) (Caltrans TIS Guide) and is presented in Chapter 11. The Caltrans screening analysis is included in the MOU provided in Appendix A. A copy of the Caltrans Agreement is also provided in Appendix A.

State of California Senate Bill No. 743

Senate Bill 743 (Steinberg, 2013) (SB 743), made effective in January 2014, requires the Governor's Office of Planning and Research to change the California Environmental Quality Act (CEQA) guidelines regarding the analysis of transportation impacts. Under SB 743, the focus of transportation analysis will shift from driver delay to reduction of greenhouse gas (GHG) emissions, creation of multimodal networks and promotion mixed-use developments. Although originally scheduled to be fully implemented in guidelines by January 1, 2016, an extension has allowed cities more time to establish an analysis methodology. The City is currently in the process of updating its travel demand model and transportation impact thresholds based on vehicle miles traveled (VMT). To better align with the State's multimodal transportation and environmental action goals, Caltrans is also pursuing VMT as a metric of Project impacts, which is outlined in *Local Development – Intergovernmental Review Program Interim Guide* (Caltrans, Approved September 2016).

The Project's transportation characteristics (e.g., its location, proximity to transit, access to other nearby destinations, pedestrian connections, bicycle amenities, etc.) and design features (e.g., neighborhood-serving commercial uses, residential amenities) would encourage non-auto modes of transportation such as walking, bicycling, carpool, vanpool, transit, etc. and, therefore, would reduce VMT to the Project Site and the associated transportation-related GHG emissions.

The Project Site represents an urban/compact infill location within the Hollywood community of the City and is located within 1,500 feet of Metro's Red Line Hollywood/Western Station as well as numerous transit lines. The Project is also located along two major corridors, Sunset Boulevard and Western Avenue. The location efficiency of the Project Site would result in synergistic benefits that would reduce vehicle trips and VMT. Further, the Project would be located within an area that offers access to other nearby retail and entertainment destinations and within 7.5 miles of Downtown Los Angeles, a primary job center.

Access to on-site uses would be provided from existing pedestrian pathways, as well as adequate bicycle parking for residential and commercial uses. The Project would provide an internal pedestrian network that links to the existing off-site pedestrian network including existing off-site sidewalks. Streets within 0.5 miles of the Project Site are equipped with sidewalks and intersections that include marked crosswalks and/or countdown signal timers. The combined

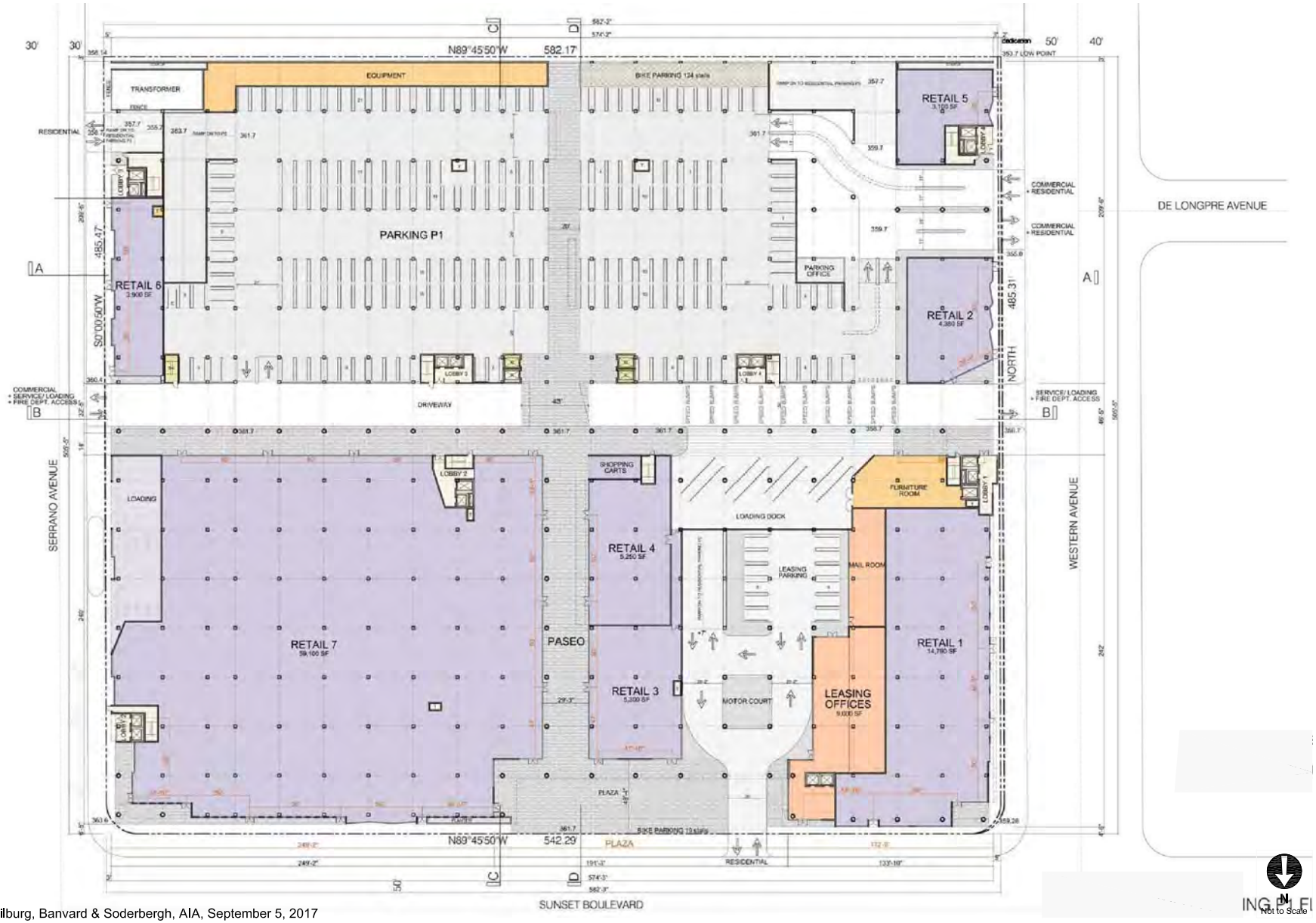
effects of these factors would reduce the Project's anticipated vehicle trips by encouraging walking and other non-auto forms of transportation, which would result in corresponding reductions in VMT and in transportation-related emissions, as compared to developments that do not benefit from the same transportation characteristics.

Additional Review and Analysis

This study also includes a review of various other features and conditions related to the proposed Project. These include a review of Project access and circulation, parking requirements and proposed supply, and an analysis of potential transportation impacts associated with the Project's construction.

ORGANIZATION OF REPORT

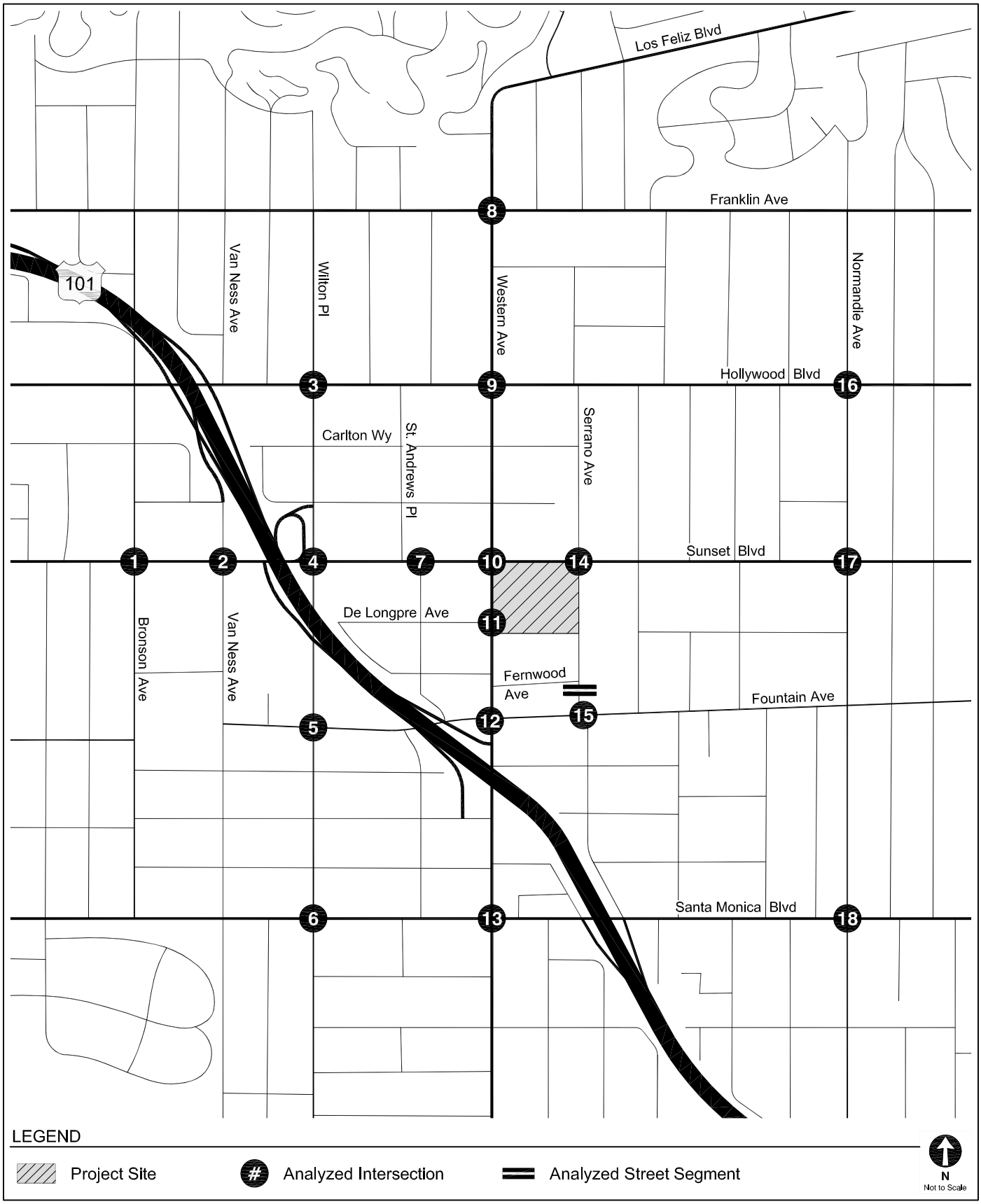
This report is divided into 15 chapters, including this introduction. Chapter 2 describes the existing circulation system, traffic volumes, and traffic conditions in the Study Area. Chapter 3 forecasts the Future without Project Conditions. Chapter 4 describes the procedure used to forecast Project traffic volumes and distribution through the Study Area. Chapter 5 presents the intersection operating conditions associated with construction of the Project on top of Existing Conditions. Chapter 6 presents the intersection operating conditions associated with construction of the Project on top of Future without Project Conditions (Year 2024). Chapter 7 identifies the potential significant transportation impacts, prior to mitigation, of the proposed Project under Existing with Project and Future with Project Conditions. Chapter 8 describes the transportation improvement and mitigation program designed to reduce the impacts of the Project to the extent possible. Chapter 9 presents the residential street segment analysis. Chapter 10 presents the regional CMP analysis. Chapter 11 presents the analyses of Caltrans facilities. Chapter 12 describes site access and internal circulation. Chapter 13 reviews the proposed parking and the City's parking requirement for the Project. Chapter 14 presents the impacts associated with the construction phase of the Project. Chapter 15 summarizes the analyses and study conclusions. The Appendices contain supporting documentation and additional details of the technical analyses, as well as the additional analysis described above.



Source: Van Tilburg, Banvard & Soderbergh, AIA, September 5, 2017

SITE PLAN

FIGURE 1



STUDY AREA

FIGURE 2

TABLE 1
LEVEL OF SERVICE DEFINITIONS FOR INTERSECTIONS

Level of Service	Signalized V/C Ratio [a]	Definition
A	0.000 - 0.600	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.
B	0.601 - 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701 - 0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801 - 0.900	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.
E	0.901 - 1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.000	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.

Notes

[a] *Transportation Research Circular No. 212, Interim Materials on Highway Capacity,* Transportation Research Board, 1980.

Chapter 2
Existing Conditions

A comprehensive data collection effort was undertaken to develop a detailed description of existing 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 as of June 2017.

STUDY AREA

The Project's transportation analysis Study Area, shown in Figure 2, is generally bounded by Franklin Avenue to the north, Normandie Avenue to the east, Santa Monica Boulevard to the south, and Bronson Avenue to the west.

A transportation analysis study area generally comprises those intersections with the greatest potential to experience significant transportation impacts due to the project, as defined by the City, including intersections that are:

1. Immediately adjacent or in close proximity to the project site
2. In the vicinity of the project site that are documented to have current or projected future adverse operational issues
3. In the vicinity of the project site that are forecast to experience a relatively greater percentage of project-related vehicular turning movements (e.g., at freeway ramp intersections)

This Study Area was established in consultation with LADOT, based on the above criteria, as well as peak hour Project trip generation, the anticipated distribution of Project traffic, and the existing intersections/corridor operations. It contains those intersections with a reasonable potential to experience significant transportation impacts due to the Project.

Several other intersections were considered but were not selected for analysis as they did not meet the criteria outlined above, since they (1) are located a great distance from the Project Site, (2) have relatively lower traffic volumes on the site street and minor approach to the intersection, and (3) accommodate little, if any, Project-related traffic volumes/vehicular turning movements, eliminating the possibility of a significant traffic impact. For example, the signalized intersection of Harvard Boulevard & Hollywood Boulevard is located between the signalized intersections of Western Avenue & Hollywood Boulevard and Normandie Avenue & Hollywood Boulevard and has relatively low traffic volumes on the minor street approach, with no documented existing or projected future adverse operations issues. Therefore, this intersection was not evaluated. The results of the transportation impact analysis detailed in this Transportation Study were reviewed to ensure that all potentially significantly impacted intersections, prior to mitigation, were analyzed, and that the boundary of the Study Area was extended, as necessary, to confirm that there were no significant impacts at or beyond the Study Area periphery. As detailed later in this Transportation Study, the study intersections on the Study Area periphery are not anticipated to be significantly impacted by the Project and, thus, the analyzed locations are considered to be adequate.

A total of 18 intersections were identified during the MOU process for detailed analysis of the above conditions, as identified in Table 2. Figure 2 illustrates the location of the Project Site in relation to the surrounding street system and the 18 study intersections. The existing lane configurations at the analyzed intersections are provided in Appendix B.

EXISTING STREET SYSTEM

The existing street system in the Study Area consists of a regional roadway system including freeways, primary and secondary arterials, and collector and local streets that provide regional, sub-regional, or local access and circulation within the Study Area. These transportation facilities generally provide two to six travel lanes and usually allow parking on one or both sides 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 for roadways within the City of Los Angeles are designated in *Mobility Plan 2035, An Element of the General Plan* (Los Angeles Department of City Planning, January

2016) (Mobility Plan) and *City of Los Angeles Transportation Element of the General Plan* (Los Angeles Department of City Planning, 1999) (General Plan), previously in effect. The Mobility Plan revised street standards previously outlined in the General Plan in an effort to provide a more enhanced balance between traffic flow and other important street functions including transit routes and stops, pedestrian environments, bicycle routes, building design and site access, etc.

The available facilities in the Study Area are defined by the following in the Mobility Plan:

- Freeways are high-volume, high-speed roadways with limited access provided by interchanges that carry regional traffic through and do not provide local access to adjacent land uses.
- Arterial Streets are major streets that serve through traffic, as well as provide access to major commercial activity centers. Arterials are divided into two categories:
    - Boulevards represent the widest streets that typically provide regional access to major destinations and include two categories:
        - Boulevard I provides up to four travel lanes in each direction with a target operating speed of 40 mph
        - Boulevard II provides up to three travel lanes in each direction with a target operating speed of 35 mph
    - Avenues pass through both residential and commercial areas and include three categories:
        - Avenue I provides up to two travel lanes in each direction with a target operating speed of 35 mph
        - Avenue II provides up to two travel lanes in each direction with a target operating speed of 30 mph
        - Avenue III provides up to two travel lanes in each direction with a target operating speed of 25 mph
- Collector Streets are generally located in residential neighborhoods and provide access to and from arterial streets for local traffic and are not intended for cut-through traffic. They provide one travel lane in each direction with operating speed of 25 mph.
- Local Streets are intended to accommodate lower volumes of vehicle traffic and provide parking on both sides of the street. They provide one travel lane in each direction with a target operating speed of 15 to 20 mph. Local streets include two categories:
    - Continuous local streets connect to other streets at both ends

- Non-continuous local streets lead to a dead-end

The Mobility Plan is currently under litigation that could potentially result in its nullification. In that scenario, the General Plan would once more be in effect. Arterial streets are designated as the following in the General Plan:

- Arterial Streets are major streets that serve through traffic, as well as provide access to major commercial activity centers. Arterials are divided into three categories: Major Class Highway I, Major Class Highway II, and Secondary Highway.
    - Major Highway Class I has average daily traffic (ADT) of more than 50,000.
    - Major Highway Class II is typically spaced one mile apart in a grid system, with an ADT of 30,000 to 50,000.
    - Secondary Highway supplements the through-traffic characteristics of major highways and typically located one mile apart midway between major highways, with an ADT of 20,000 to 30,000.

Primary regional access to the Project Site is provided by US 101. The major arterials providing regional and sub-regional access to the Project vicinity include Sunset Boulevard and Western Avenue. The following is a brief description of the major roadways in the Study Area:

Freeways

- US 101 – US 101 generally travels in the northwest-southeast direction and is located approximately 0.3 miles west of the Project Site. In the vicinity of the Study Area, US 101 provides four travel lanes in each direction. Access to and from US 101 is available via interchanges at Sunset Boulevard, Western Avenue, Hollywood Boulevard, and Santa Monica Boulevard.

Roadways

- Bronson Avenue – Bronson Avenue is a designated Avenue III in the Mobility Plan and a designated Secondary Highway in the General Plan. It travels in the north-south direction, and is located west of the Project Site. It generally provides two 18-foot travel lanes, one lane in each direction, and left-turn lanes at most intersections. Unmetered parking is generally provided on both sides of the street within the Study Area.
- Van Ness Avenue – Van Ness Avenue is a designated Local Street in both the Mobility Plan and the General Plan and travels in the north-south direction. It is located west of the Project Site and provides two 18- to 20 foot travel lanes, one lane in each direction. Van Ness Avenue is a discontinuous street that is bisected by US 101. Parking is generally provided on both sides of the street within the Study Area.

- Wilton Place – Wilton Place is a designated Avenue III in the Mobility Plan and a designated Secondary Highway in the General Plan and travels in the north-south direction. It is located west of the Project Site and provides three to four 10-foot travel lanes, one to two lanes in each direction, with left-turn lanes at intersections. Parking is generally available with afternoon peak hour restrictions on the east side of the street and no peak hour restrictions on the west side of the street north of Sunset Boulevard. Parking is generally available with peak hour restrictions on both sides of the street south of Sunset Boulevard.

- St. Andrews Place – St. Andrews Place is a designated Local Street in both the Mobility Plan and the General Plan and travels in the north-south direction. It is located west of the Project Site and provides two 20-foot travel lanes, one lane in each direction. Parking is generally available on both sides of the street within the Study Area.

- Western Avenue – Western Avenue is a designated Avenue I in the Mobility Plan and a designated Major Highway Class II in the General Plan and travels in the north-south direction. It forms the western boundary of the Project Site and provides four 10- to 18-foot travel lanes, two in each direction, with left-turn lanes at intersections. One-hour unmetered and one-hour metered parking is generally available on both sides of the street within the Study Area.

- Serrano Avenue – Serrano Avenue is a designated Local Street in both the Mobility Plan and the General Plan and travels in the north-south direction. It forms the eastern boundary of the Project Site. It provides two 17-foot travel lanes, one lane in each direction. Parking is generally available on both sides of the street within the Study Area.

- Normandie Avenue – Normandie Avenue is a designated Avenue III in the Mobility Plan and a designated Secondary Highway in the General Plan and travels in the north-south direction. It is located east of the Project Site and provides two 20-foot travel lanes, one lane in each direction. Parking is generally provided on both sides of the street within the Study Area.

- Franklin Avenue – Franklin Avenue is a designated Avenue II in the Mobility Plan and a designated Secondary Highway in the General Plan. It travels in the east-west direction and is located north of the Project Site. It generally provides two to four 10- to 15-foot travel lanes, one to two lanes in each direction, and left-turn lanes at most intersections. Unmetered parking is generally provided on both sides of the street.

- Hollywood Boulevard – Hollywood Boulevard is a designated Avenue I in the Mobility Plan and a designated Major Highway Class II in the General Plan and travels in the east-west direction. It is located north of the Project Site and provides four 10- to 18-foot travel lanes, two lanes in each direction, and left-turn lanes at intersections. One-hour metered parking is generally provided on both sides of the street within the Study Area.

- Sunset Boulevard – Sunset Boulevard is a designated Avenue I in the Mobility Plan and a designated Major Highway Class II in the General Plan and travels in the east-west direction. It forms the northern boundary of the Project Site and provides six 10- to 15-foot travel lanes, three lanes in each direction, and left-turn lanes at intersections. No parking is generally allowed along the Project frontage.

- De Longpre Avenue – De Longpre Avenue is a designated Local Street in both the Mobility Plan and the General Plan. It travels in the east-west direction and provides two 18-foot travel lanes, one lane in each direction. Parking is generally available on the south side of the street west of St. Andrews Place within the Study Area. A portion near the intersection of Western Avenue & De Longpre Avenue is disrupted by construction in the area, and is expected to return to normal when the construction is complete.

- Fountain Avenue – Fountain Avenue is a designated Collector Street in the Mobility Plan and a designated Secondary Highway in the General Plan. It travels in the east-west direction and is located south of the Project Site. It provides two 19-foot travel lanes, one lane in each direction, and left-turn lanes at major intersections. Parking is generally available on both sides of the street within the Study Area.

- Santa Monica Boulevard – Santa Monica Boulevard is a designated Avenue I in the Mobility Plan and a designated Major Highway Class II in the General Plan. It travels in the east-west direction and is located south of the Project Site. It provides four 10- to 18-foot travel lanes, two lanes in each direction, and left-turn lanes at intersections. One-hour metered parking with peak hour restrictions is generally available on both sides of the street within the Study Area.

EXISTING TRANSIT SYSTEM

The Study Area is served by bus lines operated by Metro, LADOT's Downtown Area Shuttle (DASH), and LADOT's Commuter Express (CE). Figure 3 illustrates the existing transit service in the Study Area. The following provides a brief description of the bus lines providing service in the Project vicinity:

- Metro Local 2 – Route 2 is a local line that travels from Downtown Los Angeles to Pacific Palisades via Sunset Boulevard, with average headways of approximately 10 to 14 minutes during the weekday morning and afternoon peak hours. This line provides service to Hollywood, West Hollywood, and Westwood and travels along Sunset Boulevard in the vicinity of the Project Site.

- Metro Local 4 – Route 4 is a local line that travels from Santa Monica to Downtown Los Angeles via Santa Monica Boulevard, with average headways of 10 to 13 minutes during the weekday morning and afternoon peak hours. This line provides service to West Los Angeles, West Hollywood, and Echo Park. It travels along Santa Monica Boulevard in the vicinity of the Project Site.

- Metro Local 175 – Route 175 is a local line that travels from Silver Lake to Hollywood via Hyperion Avenue and Fountain Avenue, with average headways of 35 to 42 minutes during the weekday morning peak hour and 60 to 80 minutes during the weekday afternoon peak hour. This line provides service to Los Feliz and travels along Western Avenue in the vicinity of the Project Site.

- Metro Local 180/181 – Route 180/181 is a local line that travels from Hollywood to Altadena via Los Feliz Boulevard and Colorado Boulevard with average headways of approximately 34 to 40 minutes during the weekday morning and afternoon peak hours. This line provides service to Pasadena, Eagle Rock, and Glendale and travels along Hollywood Boulevard in the vicinity of the Project Site.

- Metro Local 206 – Route 206 is a local line that travels from Hollywood to Athens via Normandie Avenue with average headways of approximately 11 to 13 minutes during the weekday morning and afternoon peak hours. This line provides service to the Metro Green Line Crenshaw Station, the Metro Purple Line Wilshire/Western Station, and the Metro Red Line Hollywood/Western Station and travels along Franklin Avenue and Western Avenue in the vicinity of the Project Site.

- Metro Local 207 – Route 207 is a local line that travels from Hollywood to Athens via Western Avenue with average headways of approximately 12 to 14 minutes during the weekday morning and afternoon peak hours. This line provides service to the Metro Red Line Vermont/Sunset Station and the Metro Purple Line Wilshire/Normandie Station and travels along Western Avenue in the vicinity of the Project Site.

- Metro Limited 302 – Route 302 is a limited service line that travels from Downtown Los Angeles to Pacific Palisades via Sunset Boulevard with average headways of approximately 12 minutes in the westbound direction during the weekday morning peak hours and nine minutes in the eastbound direction during the weekday afternoon peak hours. This line provides service to Hollywood, West Hollywood, and Westwood and travels along Sunset Boulevard in the vicinity of the Project Site.

- Metro Rapid 704 – Route 704 is a rapid line that travels from Santa Monica to Downtown Los Angeles via Santa Monica Boulevard, with average headways of 11 to 20 minutes during the weekday morning and afternoon peak hours. This line provides service to West Los Angeles, Century City, and West Hollywood and travels along Santa Monica Boulevard in the vicinity of the Project Site.

- Metro Rapid 757 – Route 757 is a rapid line that travels from Hollywood to Hawthorne via Western Avenue, with average headways of approximately 10 to 14 minutes during the weekday morning and afternoon peak hours. This line provides service to the Metro Green Line Crenshaw Station, the Metro Purple Line Wilshire/Western Station, and the Metro Red Line Hollywood/Western Station and travels along Western Avenue in the vicinity of the Project Site.

- Metro Rapid 780 – Route 780 is a rapid line that travels from Mid City Los Angeles to Pasadena via Hollywood Boulevard in the vicinity of the Project Site, with average headways of approximately 13 to 15 minutes during the weekday morning and afternoon peak hours. This line provides service to all the Metro Red Line Stations along Hollywood Boulevard.

- LADOT DASH Hollywood – DASH Hollywood is a local line that travels from Argyle Avenue & Hollywood Boulevard to Santa Monica Boulevard & Vermont Avenue via Hollywood Boulevard and Fountain Avenue, with average headways of approximately 30 to 36 minutes during the weekday morning and afternoon peak hours. This line provides service to the Metro Red Line Vermont/Sunset, Vermont/Santa Monica, and

Hollywood/Vine Stations and travels along Sunset Boulevard in the vicinity of the Project Site.

- LADOT CE 422 – Route 422 is a commuter express line that travels from Thousand Oaks and Agoura Hills to the San Fernando Valley and Downtown Los Angeles, with average headways of 17 minutes during the morning peak hours and 21 minutes during the afternoon peak hours. It provides service to Westlake Village, Woodland Hills, and Van Nuys. This line travels along US 101 in the vicinity of the Project Site.

In addition to the bus lines that provide service within the Project vicinity, the Metro Red Line subway operates in the Study Area with average headways of 10 minutes. The Metro Red Line runs between North Hollywood and Downtown Los Angeles, connecting with the Metro Orange Line in North Hollywood, the Metro Purple Line at Wilshire Boulevard, the Metro Blue Line and Metro Expo Line in Downtown Los Angeles, and the Metro Gold Line at Union Station. In the Project vicinity, the Metro Red Line has stations at Hollywood Boulevard & Western Avenue, approximately one-quarter mile north of the Project Site.

Table 3 summarizes the transit lines operating in the Study Area for each of the service providers in the region, the type of service (peak vs. off-peak, express vs. local), and frequency of service, as described above. The average frequency of transit service during the peak hour was derived from the number of peak period stops made at the stop nearest the Project Site.

Table 4 summarizes the total average residual capacity of the Metro and LADOT bus lines during the morning and afternoon peak hours based on the frequency of service of each line and the maximum seated and standing capacity of each Metro bus. As shown in Table 4, the Metro and LADOT bus lines within the Study Area currently have an average residual capacity for 3,368 transit trips during the morning peak hour and 3,342 transit trips during the afternoon peak hour. Additionally, the Metro Red Line has average residual capacity of 5,064 transit trips during the morning peak hour and 4,356 transit trips in the afternoon peak hour.

BICYCLE AND PEDESTRIAN NETWORK

Existing Bicycle System

Based on the Mobility Plan and *2010 Bicycle Plan, A Component of the City of Los Angeles*

Transportation Element (Los Angeles Department of City Planning, 2010) (2010 Bicycle Plan), the existing bicycle system in the Study Area consists of a limited coverage of bicycle lanes (Class II) and bicycle routes (Class III). Bicycle lanes are a component of street design with dedicated striping, separating vehicular traffic from bicycle traffic. These facilities offer a safer environment for both cyclists and motorists. Bicycle routes are identified as bicycle-friendly streets where motorists and cyclists share the roadway and there is no dedicated striping of a bicycle lane. Bicycle routes are preferably located on collector and lower volume arterial streets. The following bicycle facilities are provided along corridors within the Study Area:

Bicycle Lanes (Class II)

- Bronson Avenue between Fountain Avenue and Santa Monica Boulevard

Bicycle Routes (Class III)

- Franklin Avenue
- Fountain Avenue

Existing Pedestrian Facilities

The walkability of existing facilities is based on the availability of pedestrian routes necessary to accomplish daily tasks without the use of an automobile; these attributes are quantified by WalkScore.com, an online tool that measures the walkability of communities, and assigned a score out of 100 points. With the various commercial businesses and cultural facilities adjacent to residential neighborhoods, the walkability of the area is approximately 87 points[1].

The sidewalks that serve as routes to the Project Site provide proper connectivity and adequate widths for a comfortable and safe pedestrian environment. The sidewalks provide connectivity to pedestrian crossings at study intersections. The intersection of Sunset Boulevard & Western Avenue provides marked pedestrian crosswalks on all four legs of the intersection. The currently unsignalized intersection of Western Avenue & De Longpre Avenue provides a marked pedestrian crosswalk on the south side of the intersection. When signalized under Future

[1] Walk Score (www.walkscore.com) rates the Project site (5420 Sunset Boulevard) with a score of 87 of 100 possible points (scores accessed on February 5, 2018). Walk Score calculates the walkability of specific addresses by taking into account the ease of living in the neighborhood with a reduced reliance on automobile travel.

Conditions (Year 2024), this intersection is expected to provide marked pedestrian crosswalks on all legs of the intersection. The remaining study intersections provide marked pedestrian crosswalks on all legs. Each of the study intersections provides pedestrian phasing, crosswalk striping, and wheelchair ramps.

Vision Zero

As described in *Vision Zero: Eliminating Traffic Deaths in Los Angeles by 2025* (City of Los Angeles, August 2015), Vision Zero is a traffic safety policy that promotes strategies to eliminate collisions that result in severe injury or death. Vision Zero has identified the High Injury Network, a network of streets based on the collision data from the last five years, where strategic investments will have the biggest impact in reducing death and severe injury. The following streets within the Study Area have been identified in the High Injury Network:

- Hollywood Boulevard
- Sunset Boulevard
- Fountain Avenue
- Santa Monica Boulevard
- Wilton Place between Sunset Boulevard and Santa Monica Boulevard
- Western Avenue
- Hobart Boulevard between Sunset Boulevard and Fountain Avenue

EXISTING TRAFFIC VOLUMES AND LEVELS OF SERVICE

This section presents the existing peak hour turning movement traffic volumes for the intersections analyzed in the study, describes the methodology used to assess the traffic conditions at each intersection, and analyzes the resulting operating conditions at each intersection indicating V/C ratios or delay and LOS.

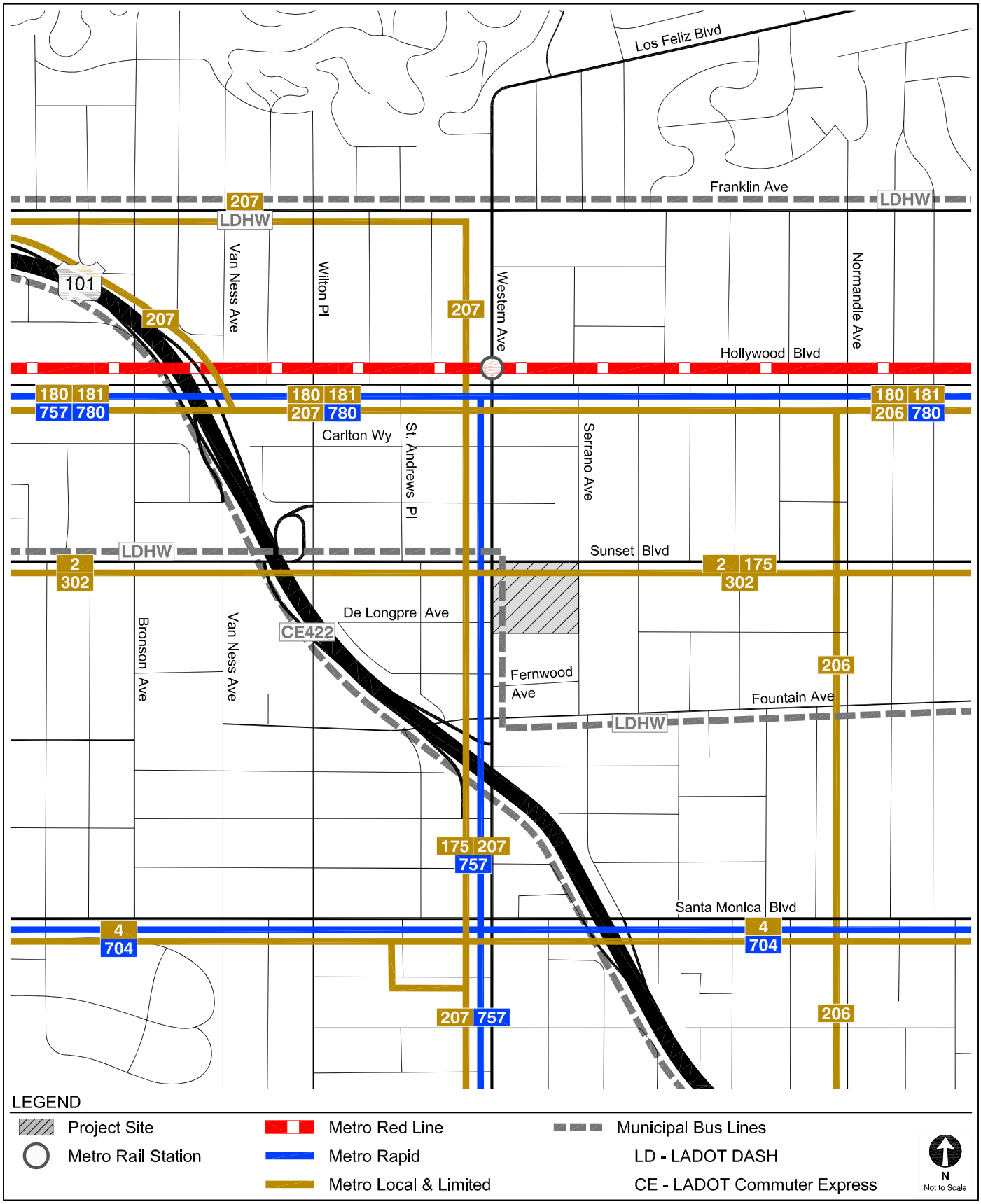
Existing Traffic Volumes

Intersection turning movement counts at the study intersections were collected in Years 2015 and 2016 during the typical weekday morning (7:00 AM to 10:00 AM) and afternoon (3:00 PM to 6:00 PM) peak hours. Local schools were in session when all traffic counts were conducted and the weather conditions were typical. Turning movement counts collected in November 2010 for the intersection of Western Avenue & De Longpre Avenue were provided by LADOT. Year 2010 counts were utilized at this location due to the partial closure of De Longpre Avenue during adjacent construction activities, therefore, traffic counts and lane configurations as of January 2016 do not reflect the typical conditions at the intersection. This intersection is unsignalized under Existing Conditions and is proposed to be signalized once the adjacent construction is complete. Based on direction from LADOT staff, the intersection of Western Avenue & De Longpre Avenue was analyzed only under Future Conditions (Year 2024), when the intersection is signalized.

The counts collected in Year 2010 and 2015 were grown 1% per year to reflect Existing Year 2017 Conditions. Thus, the existing volumes utilized in this analysis (i.e., traffic volume figures, LOS calculations, etc.) reflect Existing Year 2017 Conditions. The existing intersection peak hour traffic volumes are illustrated in Figure 4. Bicycle and pedestrian counts were also collected. Detailed traffic, bicycle and pedestrian count worksheets are provided in Appendix C.

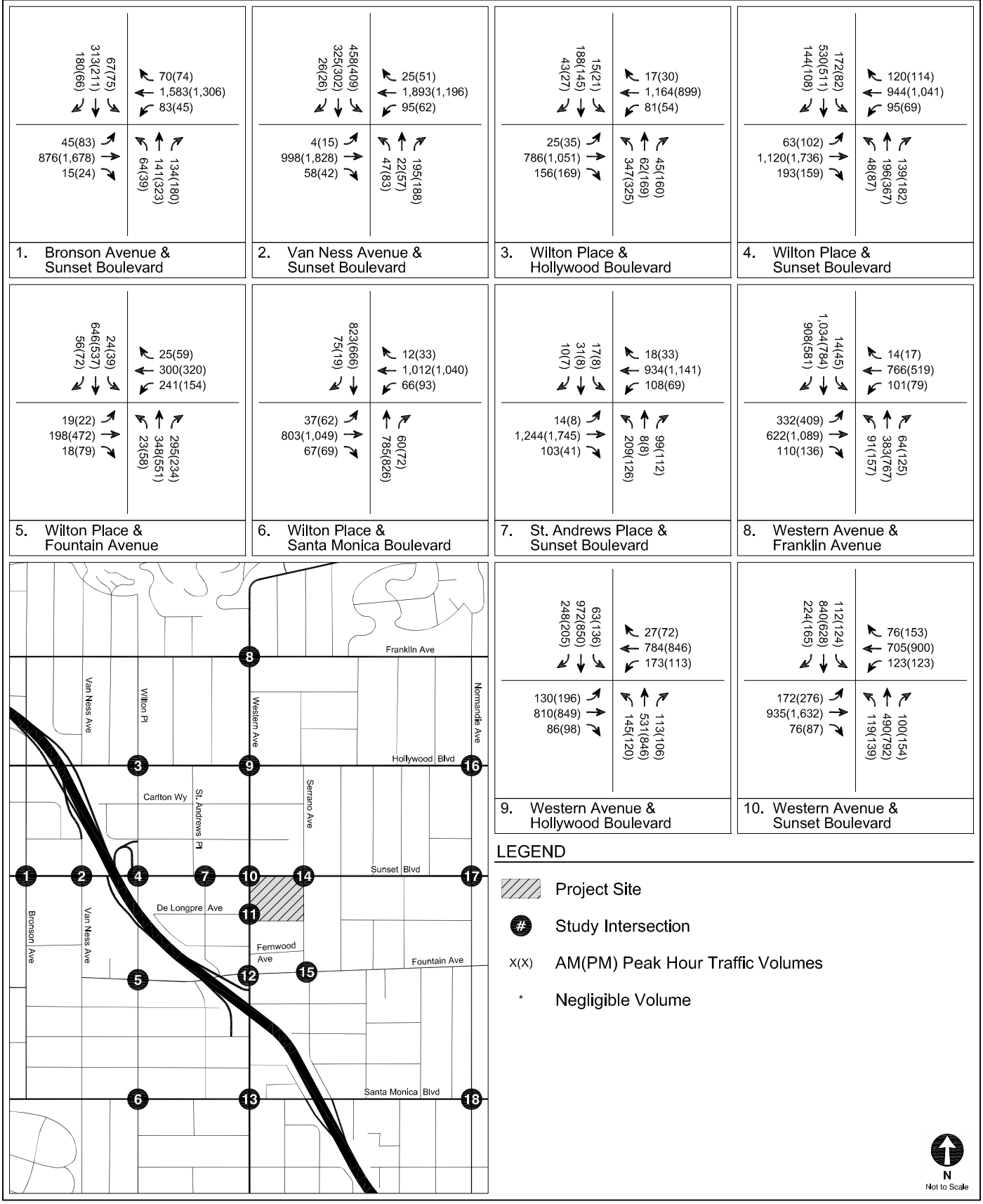
Existing Intersection Levels of Service

Table 5 summarizes the weekday morning and afternoon peak hour LOS results for each of the signalized study intersections under Existing Conditions. Table 5 indicates that, under Existing Conditions, 16 of the 17 signalized study intersections currently operate at LOS D or better during both the morning and afternoon peak hours. The intersection of Western Avenue & Hollywood Boulevard (Intersection #9) operates at LOS E during the morning peak hour and LOS D during the afternoon peak hour. The LOS calculation worksheets are provided in Appendix D.



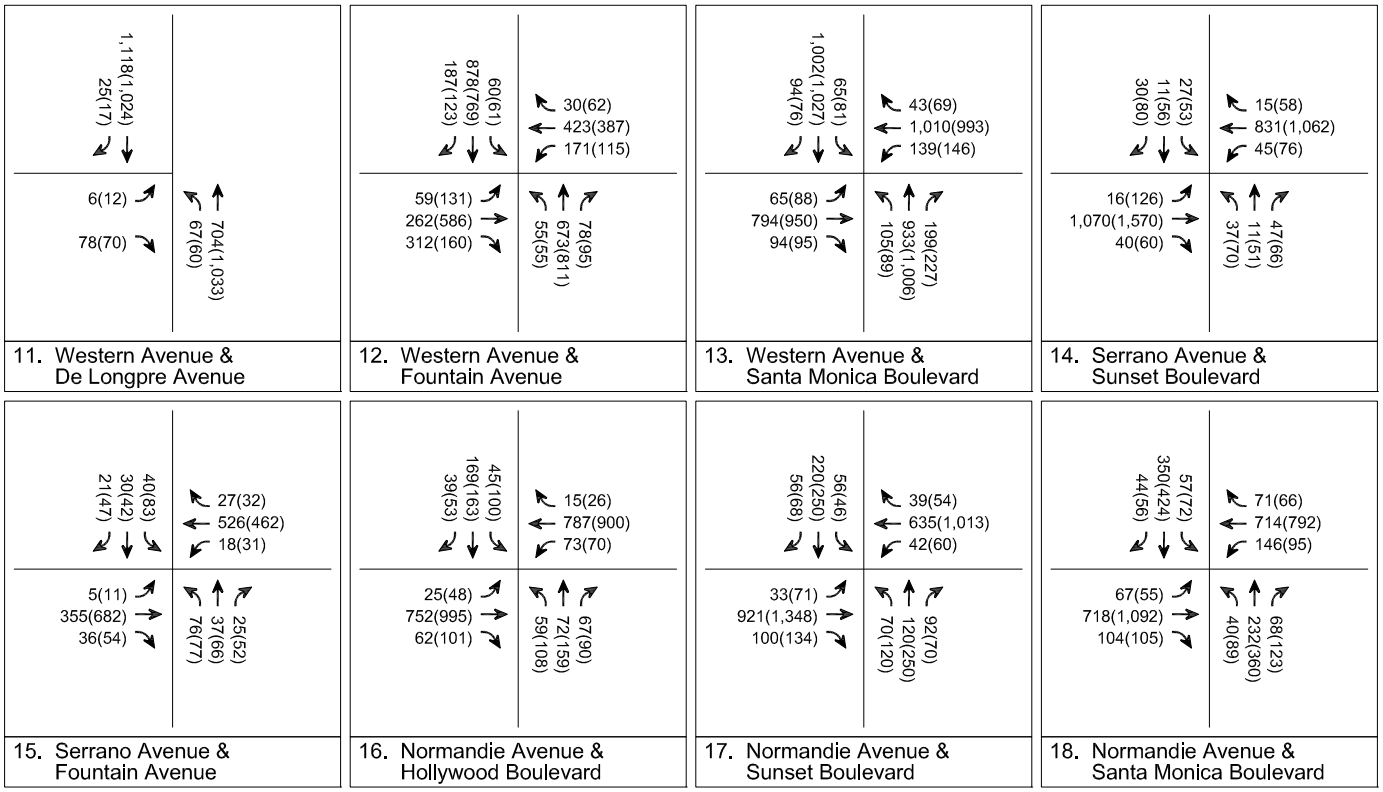
EXITSING TRANSIT SERVICE

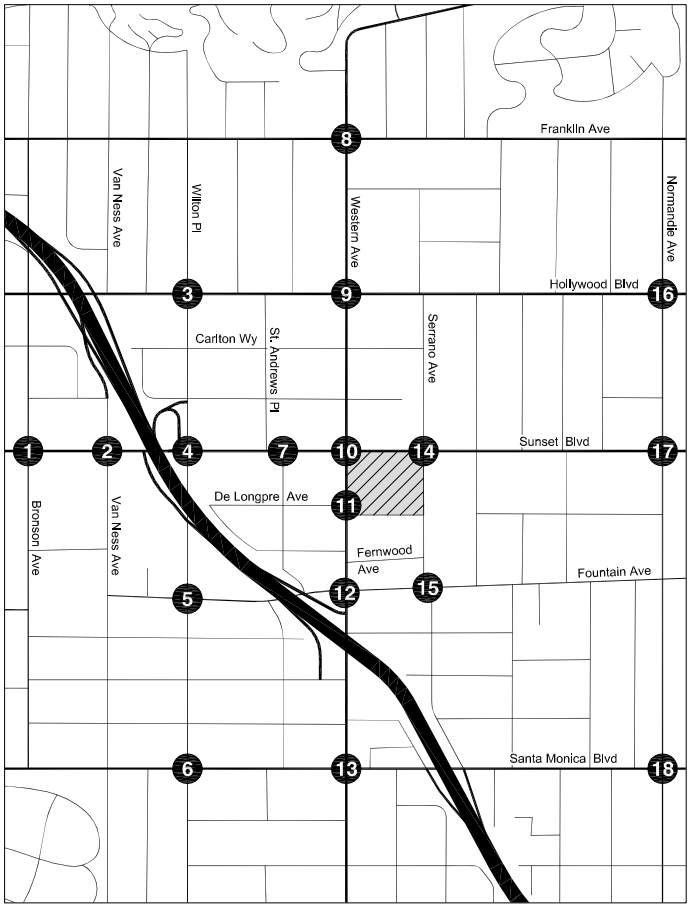
FIGURE 3



EXISTING CONDITIONS (YEAR 2017)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 4





LEGEND

- Project Site
- # Study Intersection
- X(X) AM(PM) Peak Hour Traffic Volumes
- * Negligible Volume

N
Not to Scale

EXISTING CONDITIONS (YEAR 2017)
PEAK HOUR TRAFFIC VOLUMES

FIGURE
4 (CONT.)

TABLE 2
STUDY INTERSECTIONS

No	Intersection	Jurisdiction
1.	Bronson Avenue & Sunset Boulevard	City of Los Angeles
2.	Van Ness Avenue & Sunset Boulevard	City of Los Angeles
3.	Wilton Place & Hollywood Boulevard	City of Los Angeles
4.	Wilton Place & Sunset Boulevard	City of Los Angeles
5.	Wilton Place & Fountain Avenue	City of Los Angeles
6.	Wilton Place & Santa Monica Boulevard	City of Los Angeles
7.	St. Andrews Place & Sunset Boulevard	City of Los Angeles
8.	Western Avenue & Franklin Avenue	City of Los Angeles
9.	Western Avenue & Hollywood Boulevard	City of Los Angeles
10.	Western Avenue & Sunset Boulevard	City of Los Angeles
11.	Western Avenue & De Longpre Avenue	City of Los Angeles
12.	Western Avenue & Fountain Avenue	City of Los Angeles
13.	Western Avenue & Santa Monica Boulevard	City of Los Angeles
14.	Serrano Avenue & Sunset Boulevard	City of Los Angeles
15.	Serrano Avenue & Fountain Avenue	City of Los Angeles
16.	Normandie Avenue & Hollywood Boulevard	City of Los Angeles
17.	Normandie Avenue & Sunset Boulevard	City of Los Angeles
18.	Normandie Avenue & Santa Monica Boulevard	City of Los Angeles

TABLE 3
EXISTING TRANSIT SERVICE IN STUDY AREA

Provider, Route, and Service Area		Service Type	Hours of Operation	Average Headway (minutes)			
				A.M. Peak Hour		P.M. Peak Hour	
Metro Bus Service				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
2	Downtown Los Angeles - Pacific Palisades via Sunset Boulevard	Local	5:15 A.M. - 2:00 A.M.	14	10	10	10
4	Downtown Los Angeles - West Los Angeles - Santa Monica via Santa Monica Boulevard	Local	24-Hour	12	11	10	13
175	Silver Lake - Hollywood via Hyperion Avenue & Fountain Avenue	Local	6:30 A.M. - 12:00 A.M.	35	42	80	60
180	Hollywood - Glendale - Pasadena via Los Feliz Boulevard & Colorado Boulevard	Local	5:00 A.M. - 12:00 A.M.	34	40	34	34
181	Hollywood - Glendale - Pasadena via Los Feliz Boulevard & Colorado Boulevard	Local	5:00 A.M. - 12:00 A.M.	34	34	40	34
206	Hollywood - Athens via Normandie Avenue	Local	5:00 A.M. - 1:00 A.M.	12	13	11	11
207	Hollywood - Athens via Western Avenue	Local	24-Hour	12	14	13	12
302	Downtown Los Angeles - Pacific Palisades via Sunset Boulevard	Limited	6:30 A.M. - 6:00 P.M.	N/A	12	9	N/A
704	Downtown Los Angeles - West Los Agneles - Santa Monica via Santa Monica Boulevard	Rapid	6:00 A.M. - 12:30 A.M.	20	11	11	14
757	Hollywood - Athens via Western Avenue	Rapid	5:45 A.M. - 7:45 P.M.	10	14	11	10
780	Washington & Fairfax - Pasadena via Fairfax Avenue, Hollywood Boulevard & Colorado Bouelvard	Rapid	6:00 A.M. - 7:30 P.M.	15	15	13	15
LADOT DASH Bus Service				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
HW	Hollywood	Local	7:00 A.M. - 7:00 P.M.	30	36	30	30
HWL	Hollywood / Wilshrie	Local	7:00 A.M. - 7:00 P.M.	20	26	27	24
LADOT Commuter Express				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
422	Thousand Oaks/Agoura Hills - San Fernando Valley - Downtown Los Angeles	Local	5:30 A.M. - 7:30 P.M.	17	N/A	N/A	21
Metro Rail Service				**NB/EB**	**SB/WB**	**NB/EB**	**SB/WB**
Red	Downtown Los Angeles - North Hollywood	Rail	4:30 A.M. - 2:00 A.M.	10	10	10	10

Notes
Metro: Los Angeles County Metropolitan Transportation Authority
LADOT DASH: Los Angeles Department of Transportation Downtown Area SHuttle

TABLE 4
EXISTING TRANSIT SERVICE PATRONAGE
LINES SERVING PROJECT PERIPHERY

A.M. Peak Period							
Provider	**Route**	**Number of Runs During Peak Hour** [a]	**Capacity** [c]	**Average Load** [d]	**Load Factor - Average Load/Capacity**	**Residual Capacity per Run**	**Residual Capacity in Peak Hour** [e]
Metro	2 - 302	14	50	31	0.62	19	266
	4	10	50	32	0.64	18	180
	175	3	50	4	0.08	46	138
	180 - 181	7	50	14	0.28	36	252
	206	14	50	9	0.18	41	574
	207	9	50	10	0.20	40	360
	704	8	75	32	0.43	43	344
	757	11	75	11	0.15	64	704
	780	8	75	20	0.27	55	440
LADOT DASH	HW	3	30	6	0.20	24	72
LADOT CE	422	2	49	30	0.61	19	38
						Total Residual Capacity in Peak Hour - Bus Line	**3,368**
Metro	Red	12	750	328	0.44	422	5,064
						Total Residual Capacity in Peak Hour - Rail Line	**5,064**

P.M. Peak Period							
Provider	**Route**	**Number of Runs During Peak Hour** [a]	**Capacity** [c]	**Average Load** [d]	**Load Factor - Average Load/Capacity**	**Residual Capacity per Run**	**Residual Capacity in Peak Hour** [e]
Metro	2 - 302	21	50	25	0.50	25	525
	4	11	50	31	0.62	19	209
	175	2	50	5	0.10	45	90
	180 - 181	7	50	18	0.36	32	224
	206	12	50	19	0.38	31	372
	207	10	50	22	0.44	28	280
	704	10	75	38	0.51	37	370
	757	11	75	21	0.28	54	594
	780	9	75	23	0.31	52	468
LADOT DASH	HW	4	30	6	0.20	24	96
LADOT CE	422	3	49	11	0.22	38	114
						Total Residual Capacity in Peak Hour - Bus Line	**3,342**
Metro	Red	12	750	387	0.52	363	4,356
						Total Residual Capacity in Peak Hour - Rail Line	**4,356**

Notes:

[a] Number of runs in both directions combined during peak hour.

[c] Capacity assumptions based on discussions with agencies:
Metro Regular Bus - 40 seated / 50 seated and standing.
Metro Articulated Bus - 66 seated / 75 seated and standing standing.
LADOT DASH - 25 seated / 30 seated and standing.
LADOT Commuter Express Bus - 49 seated
M Metro Red Line - 55 seats / car, 6 cars / run during peak periods. Metro assumes a maximum capacity of 230% of seated capacity, or approximately 125 / car.

[d] Average Load is the average number of riders per bus at the analyzed stop in the peak direction based on data provided by Metro and LADOT.

[e] Average residual capacity in peak hours = (Average residual capacity per run) x (number of peak hour runs).

Metro: Los Angeles County Metropolitan Transportation Authority.
LADOT: Los Angeles Department of Transportation

TABLE 5
EXISTING CONDITIONS (YEAR 2017)
SIGNALIZED INTERSECTION LEVELS OF SERVICE

No.	Intersection	Peak Hour	Existing Conditions	
			V/C	LOS
1.	Bronson Avenue & Sunset Boulevard	AM PM	0.669 0.693	B B
2.	Van Ness Avenue & Sunset Boulevard	AM PM	0.779 0.793	C C
3.	Wilton Place & Hollywood Boulevard	AM PM	0.792 0.789	C C
4.	Wilton Place & Sunset Boulevard	AM PM	0.513 0.632	A B
5.	Wilton Place & Fountain Avenue	AM PM	0.553 0.750	A C
6.	Wilton Place & Santa Monica Boulevard	AM PM	0.565 0.634	A B
7.	St. Andrews Place & Sunset Boulevard	AM PM	0.449 0.442	A A
8.	Western Avenue & Franklin Avenue	AM PM	0.875 0.771	D C
9.	Western Avenue & Hollywood Boulevard	AM PM	0.901 0.821	E D
10.	Western Avenue & Sunset Boulevard	AM PM	0.708 0.796	C C
11. [a]	Western Avenue & De Longpre Avenue	AM PM	-- --	N/A N/A
12.	Western Avenue & Fountain Avenue	AM PM	0.633 0.710	B C
13.	Western Avenue & Santa Monica Boulevard	AM PM	0.805 0.818	D D
14.	Serrano Avenue & Sunset Boulevard	AM PM	0.258 0.485	A A
15.	Serrano Avenue & Fountain Avenue	AM PM	0.465 0.704	A C
16.	Normandie Avenue & Hollywood Boulevard	AM PM	0.428 0.617	A B
17.	Normandie Avenue & Sunset Boulevard	AM PM	0.423 0.593	A A
18.	Normandie Avenue & Santa Monica Boulevard	AM PM	0.599 0.790	A C

Notes
[a] Intersection is unsignalized under Existing Conditions.

Chapter 3
Future without Project Conditions

Estimates of future transportation conditions both with and without the Project, representing cumulative conditions, were developed to evaluate the potential impacts of the Project on the local street system. This discussion details the assumptions used to develop the Future without Project Conditions in Year 2024, which corresponds to the anticipated occupancy of the Project.

The existing traffic volumes were factored by an annual ambient growth rate of 1% per year to approximate regional growth and development. In addition to the ambient growth, for purposes of providing a conservative analysis of potential cumulative transportation impacts, the traffic generated by related projects was also added to estimate the Future without Project traffic conditions.

CEQA GUIDELINES REGARDING FUTURE TRANSPORTATION CONDITIONS

The forecast of Future without Project Conditions was prepared in accordance with procedures outlined in Section 15130 of *Guidelines for Implementation of the California Environmental Quality Act*, *Chapter 3, Title 14, California Code of Regulations* (California Natural Resources Agency, amended July 27, 2007) (*Guidelines*). Specifically, two options are provided for developing the cumulative traffic volume forecast:

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

> Any such planning document shall be referenced and made available to the public at a location specified by the lead agency."

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

AMBIENT TRAFFIC GROWTH

Existing traffic is expected to increase as a result of regional growth and development outside the Study Area. The CMP provides general growth factors based on regional modeling. As shown in Exhibit D-1 of the CMP, the Central Los Angeles area is estimated to experience a total regional growth in traffic of 1.70% between the years of 2015 and 2025, which equates to an ambient growth factor of approximately 0.17% per year.

However, based on discussions with LADOT through the MOU process, an ambient growth factor of 1% per year compounded annually was used to adjust the existing traffic volumes to reflect the effects of the regional growth and development by Year 2024. The total adjustment applied over the seven-year period was 7.21%. This growth factor accounts for increases in traffic due to potential projects not yet proposed or projects outside the Hollywood area. Therefore, the ambient growth rate of 1% per year more than accounts for the projected growth from the CMP. This growth factor conservatively accounts for increases in traffic due to small or re-use projects that do not require full traffic studies, potential projects not yet proposed or projects outside the transportation analysis Study Area, as well as projects outside of a 2.0-mile radius from the Project Site or the general Hollywood area.

RELATED PROJECTS

In accordance with the CEQA requirements in *Guidelines*, this study also considers the effects of the Project in relation to other developments either proposed, approved, or under construction

(collectively, the Related Projects). With this information, the potential impact of the Project is, therefore, evaluated within the context of the cumulative impact of all ongoing development. The list of Related Projects is based on information provided by the Department of City Planning and LADOT, as well as recent studies of projects in the area. The Related Projects are detailed in Table 6 and shown in Figure 5.

Though the buildout years of many of these Related Projects are uncertain and may be well beyond the buildout year of the Project, and notwithstanding that some may never be approved or developed, they were all considered as part of this transportation study and conservatively assumed to be completed by the Project buildout Year 2024. 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 Hollywood area that would likely occur prior to Project buildout.

In addition, the list of Related Projects includes the City's draft update to the *Hollywood Community Plan*, which is in the initial planning stages. Based on preliminary information from the City, the updated *Hollywood Community Plan* will propose updates to land use polices and plans that would primarily increase commercial and residential development potential in and near the Regional Center Commercial portion of the community and along selected corridors in the *Hollywood Community Plan* area. Corresponding decreases in development potential would be primarily focused on low to medium-scale multi-family residential neighborhoods to conserve existing density and intensity of those neighborhoods. The *Hollywood Community Plan* update, once adopted, will be a long-range plan designed to accommodate growth in Hollywood until Year 2040.

Only the initial period of any such projected growth would overlap with the Project's future baseline forecast as the Project would be completed in Year 2024, well before the update to the *Hollywood Community Plan*'s horizon year. Moreover, Year 2024 is a similar projected buildout year as many of the Related Projects identified in Table 6. Accordingly, it can be assumed that the projected growth reflected by the list of Related Projects, which in itself is a conservative assumption as discussed above, would account for any overlapping growth that may be assumed by the update to the *Hollywood Community Plan* upon its adoption. With the addition of the 1% per year ambient growth factor previously discussed, the Future without Project cumulative condition is even more conservative.

Using these conservative assumptions, the potential transportation impacts of the Project were evaluated within the context of the worst-case cumulative impact of all prospective development. The development of estimated traffic volumes added to the study intersections as a result of Related Projects involves the use of a three-step process: trip generation, trip distribution, and trip assignment.

Trip Generation

Trip generation estimates for the Related Projects were provided by LADOT or were calculated using a combination of previous study findings and the trip generation rates contained in *Trip Generation, 9th Edition* (Institute of Transportation Engineers, 2012). The Related Projects trip generation estimates summarized in Table 6 are very conservative in that they do not in every case account for either the trips generated by the existing uses to be removed or the likely use of other travel modes (transit, bicycle, walk, etc.) Further, they do not account for the internal capture trips within a multi-use development, nor the interaction of trips between multiple Related Projects within the Hollywood area, in which one Related Project serves as the origin for a trip destined for another Related Project.

Trip Distribution

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

Trip Assignment

The trip generation estimates for the Related Projects were assigned to the local street system using the trip distribution pattern described above. Figure 6 shows the peak hour traffic volumes

associated with these Related Projects at the study intersections. These volumes were then added to the existing traffic volumes after adjustment for ambient growth through the projected buildout year of 2024. As discussed above, this is a conservative approach as many of the Related Projects may be reflected in the ambient growth rate. These volumes represent the Future without Project conditions (i.e., existing traffic volumes increased by ambient traffic growth and Related Project traffic growth) and are shown in Figure 7 for the 18 study intersections.

FUTURE IMPROVEMENTS

Future Roadway 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. These roadway improvements result in changes to the physical configuration at the study intersections. Other proposed traffic/trip reduction strategies such as the proposed creation of a Hollywood Transportation Management Organization (TMO) and Transportation Demand Management (TDM) programs for individual buildings and developments were conservatively omitted from the Future Conditions analyses. The following roadway improvements were included in the Future Conditions analysis:

Intersection #11, Western Avenue & De Longpre Avenue. As part of the approved De Longpre Avenue residential project, the signalization of Western Avenue & De Longpre Avenue is proposed. As shown in Appendix B, after the installation of the signal, the intersection will consist of one left-turn lane, two through lanes, and one right-turn lane at the southbound approach, one left-turn lane, one through lane, and one shared through/right-turn lane at the northbound approach, and one left-turn lane and one right-turn lane at the eastbound approach. Marked pedestrian crosswalks would be provided on all sides of the intersection. This improvement is expected to be implemented within the existing right-of-way and will be completed prior to occupancy of the Project.

Future Bicycle System

Based on the Mobility Plan and the 2010 Bicycle Plan, the bicycle system in the Study Area will be expanded to create a more integrated network. The three components of the bicycle network designated in the 2010 Bicycle Plan include the Backbone, the Neighborhood Network, and the Green Network. Class II bicycle lanes will be added to high volume corridors to form the Backbone Network, while in-road bikeways in lower volume and collector streets will form the Neighborhood Network through the implementation of Class II bicycle routes and bicycle-friendly streets. The Green Network consists of dedicated bicycle paths that connect the City's open spaces.

Within the Study Area, bicycle lanes are proposed on Wilton Place, Sunset Boulevard, Fountain Avenue, and Santa Monica Boulevard. Bicycle routes and sharrowed bicycle routes are proposed on Van Ness Avenue and St. Andrews Place.

Similar to the street designations of the 1999 Transportation Element, the bicycle facilities of the 2010 Bicycle Plan have been re-designated with the adoption of the Mobility Plan. The components of the 2010 Bicycle Plan have been incorporated into the bicycle network of the Mobility Plan, which consists of a Low-Stress Bikeway System and Backbone Streets. The Low-Stress Bikeway System is comprised of the Bicycle Enhanced Network, the Neighborhood Enhanced Network, and Bicycle Paths. The Bicycle Enhanced Network includes protected bicycle lanes, which could provide infrastructure including cycle tracks, bicycle signals, and demarcated areas to facilitate turns at intersections, and neighborhood streets, which would typically provide mini-roundabouts, cross-street stop signs, crossing islands at major intersection crossings, improved street lighting, bicycle boxes, and bicycle-only left-turn pockets. The Neighborhood Enhanced Network and Bicycle Paths are relatively unchanged from 2010 Bicycle Plan. The Backbone Streets that are not included in the Bicycle Enhanced Network would have bicycle lanes, but not separated cycle tracks. The Backbone Streets include Priority Streets, 460 miles of street to receive bicycle lanes by Year 2035, and Deferred Streets, 195 miles of streets that are not likely to receive lanes before Year 2035.

As detailed in the Mobility Plan, within the Study Area, the Low-Stress Bikeway System includes Hollywood Boulevard as part of the Bicycle Enhanced Network, Van Ness Avenue as part of the Bicycle Enhanced Neighborhood Network and Franklin Avenue, Fountain Avenue, and Wilton

Place as part of the Neighborhood Network. The Backbone Streets System includes Wilton Place as part of the Priority Streets and Sunset Boulevard and Santa Monica Boulevard as part of the Deferred Streets. None of these proposed bicycle facilities is definitively scheduled for implementation and, therefore, was not assumed in the Future Conditions analysis.

Future Pedestrian Network

The Neighborhood Network established in the 2010 Bicycle Plan, which included a network of local streets that were adequate for bicycling, could also serve local pedestrian activity, as recognized in the Mobility Plan. The Neighborhood Enhanced Network of the Mobility Plan 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 Neighborhood Enhanced Network has designated the following streets within the Study Area as part of the Neighborhood Network:

- Franklin Avenue
- Fountain Avenue
- Van Ness Avenue
- Wilton Place

The Mobility Plan aims to promote walking to reduce the reliance on auto travel by providing more attractive and wider sidewalks, as well as adding pedestrian signalizations, street trees, and pedestrian-oriented design features. The Pedestrian Enhanced District of the Mobility Plan has designated the following arterial streets within the Study Area as Pedestrian Segments, where pedestrian improvements could be prioritized to provide better connectivity to and from major destinations within communities:

- Franklin Avenue
- Hollywood Boulevard
- Sunset Boulevard
- Fountain Avenue
- Santa Monica Boulevard

- Bronson Avenue
- Western Avenue
- Normandie Avenue

FUTURE WITHOUT PROJECT INTERSECTION LEVELS OF SERVICE

Table 7 summarizes the weekday morning and afternoon peak hour LOS results for each of the signalized study intersections under Future without Project Conditions. Table 7 indicates that 11 of the 18 study intersections are projected to operate at LOS D or better during both the weekday morning and afternoon peak hours. The remaining seven intersections are anticipated to operate at LOS E or F during at least one of the peak hours.

The LOS calculation worksheets are provided in Appendix D

LEGEND

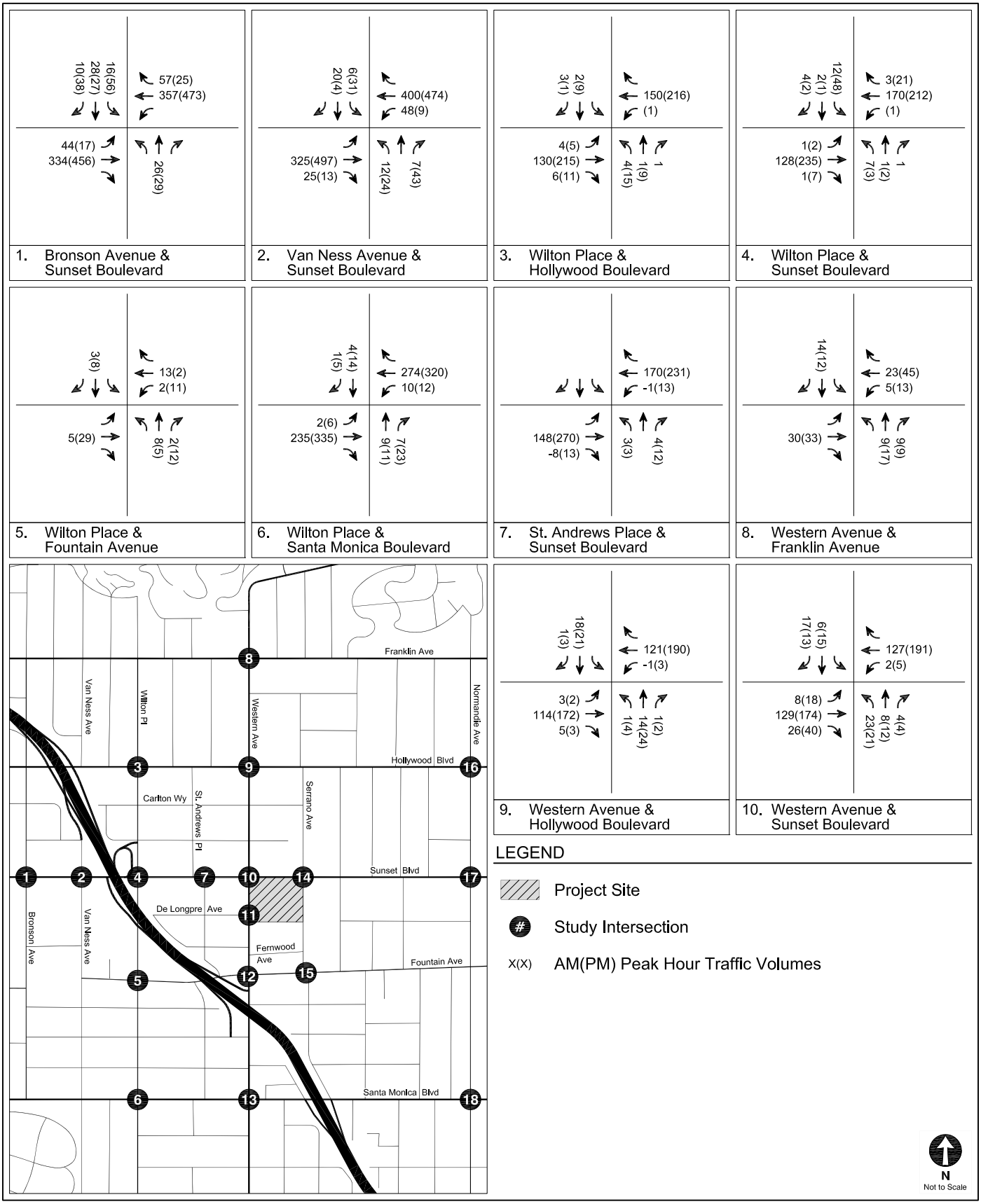
Project Site

Related Projects

N
Not to Scale

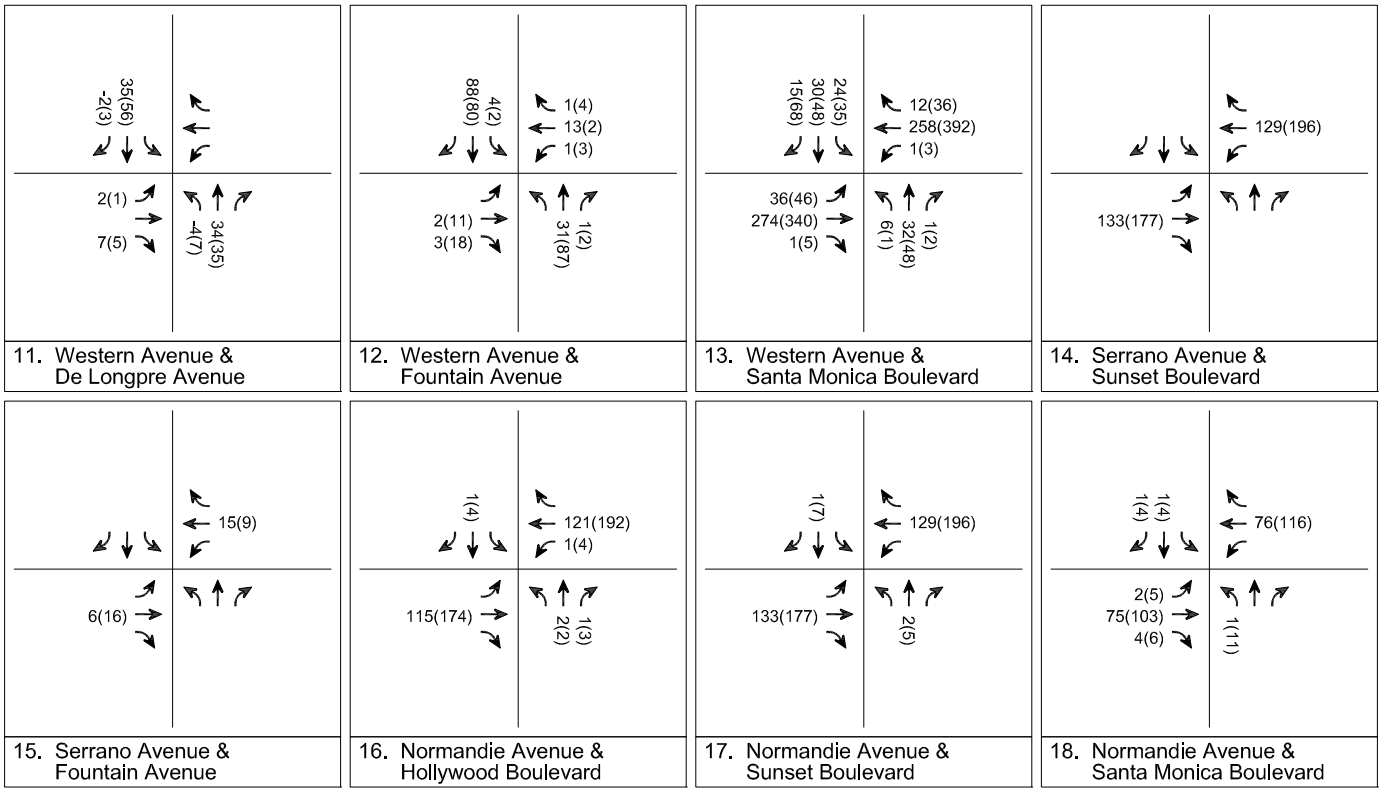
LOCATIONS OF RELATED PROJECTS

FIGURE 5



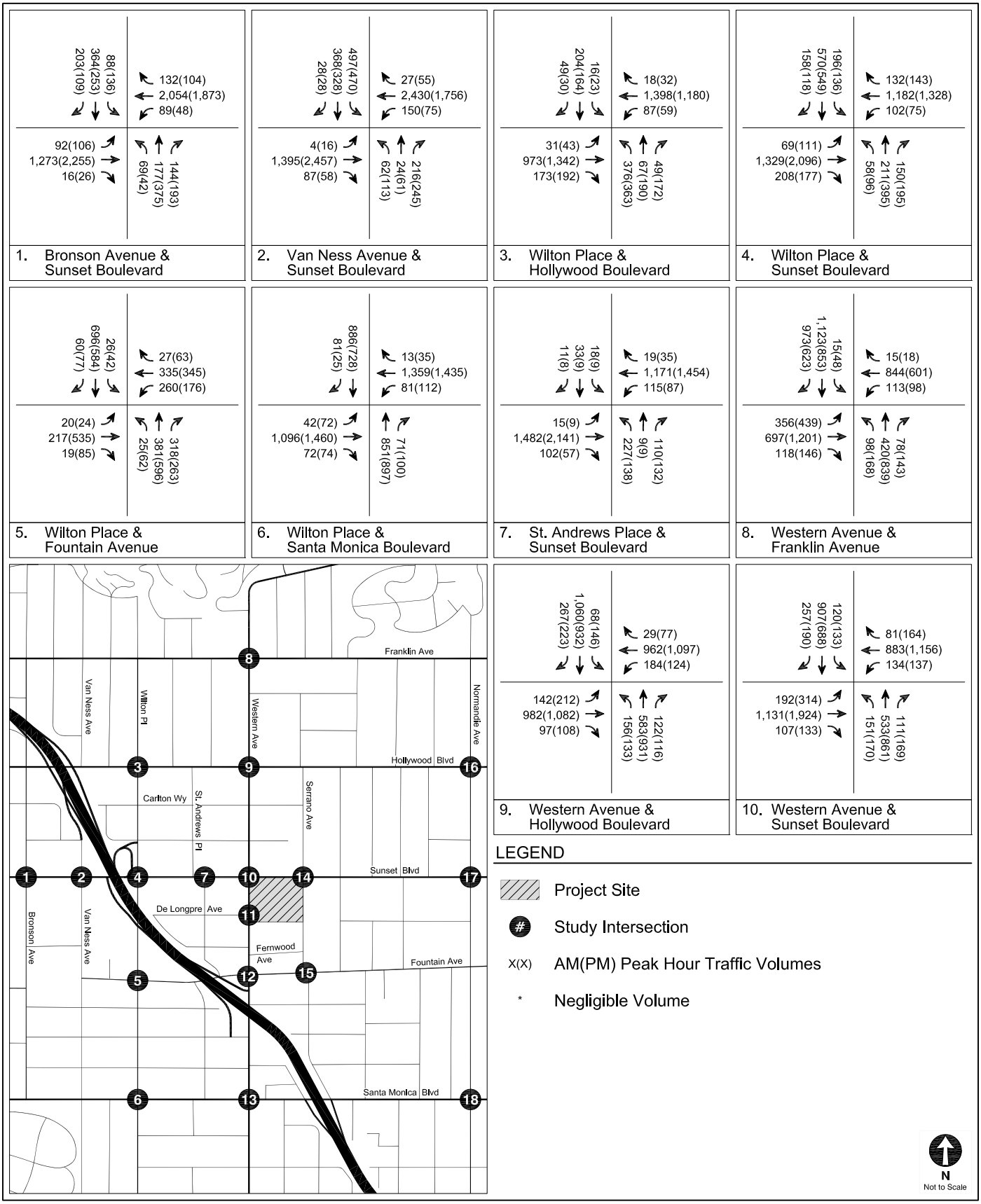
RELATED PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE
6



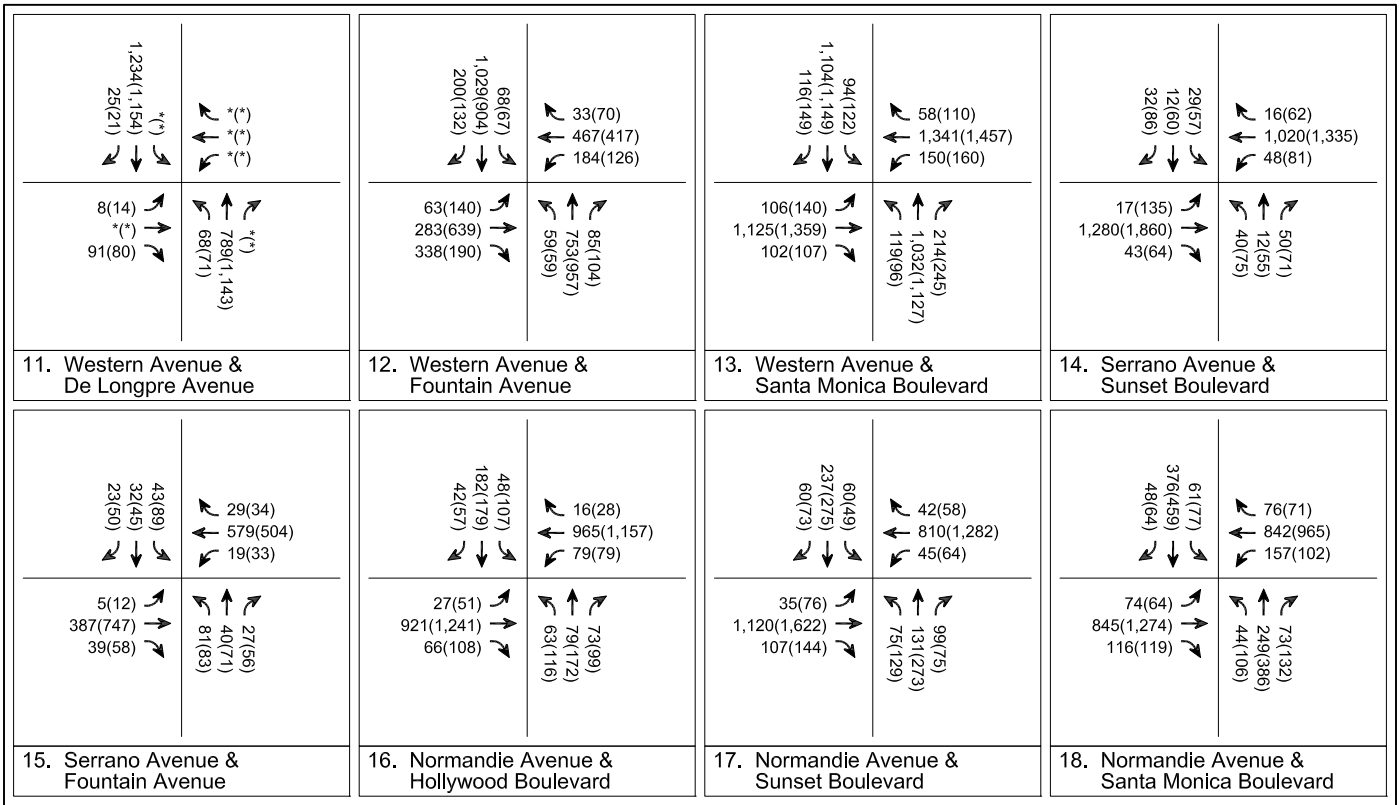
RELATED PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE
6 (CONT.)



FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2024)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 7



FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2024)
PEAK HOUR TRAFFIC VOLUMES

FIGURE
7 (CONT.)

TABLE 6
RELATED PROJECTS

No	Project Name [a]	Address	Description	Trip Generation						
				Daily	AM Peak Hour			PM Peak Hour		
					Inbound	Outbound	Total	Inbound	Outbound	Total
1.	Paseo Plaza Mixed-Use	5651 W Santa Monica Bl	375 condo units and 377,900 sf retail	6,831	50	200	250	419	225	644
2.	BLVD 6200 Mixed-Use	6200 W Hollywood Bl	28 JLWQ Units, 1,014 apartment units and 175,000 sf retail (Phase 1 Complete)	2,816	41	103	143	133	109	242
3.	Sunset Bronson Studios	5800 W Sunset Bl	404,799 sf office	2,690	356	48	404	64	314	378
4.	Yucca Street Condos	6230 W Yucca St	114 apartment units and 2,697 sf commercial	473	5	27	32	26	12	38
5.	Hollywood 959	959 N Seward St	241,568 sf office	2,337	297	39	336	58	252	310
6.	Archstone Hollywood Mixed-Use Project	6901-6911 W Santa Monica Bl	231 apartments, 5,000 sf high-turnover restaurant, 10,000 sf general retail	2,272	1	111	112	133	54	187
7.	Mixed-Use	5245 W Santa Monica Bl	49 apartment units and 32,272 sf retail	857	3	29	32	45	28	73
8.	Selma Hotel	6417 W Selma Ave	180 room hotel and 12,840 sf restaurant	1,849	6	4	10	61	59	120
9.	Hollywood Production Center	1149 N Gower St	57 Apartments	735	6	23	29	23	12	35
10.	Hollywood Gower Mixed-Use	6100 W Hollywood Bl	220 apartment units and 3,270 sf restaurant	1,439	24	76	100	86	46	132
11.	Pantages Theater Office	6225 W Hollywood Bl	210,000 sf office	1,918	243	33	276	43	411	254
12.	Selma & Vine Office Project	1601 N Vine St	100,386 sf office and 2,012 sf commercial	1,239	155	27	182	39	145	184
13.	Argyle Hotel Project	1800 N Argyle Ave	225 room hotel	1,360	22	37	59	60	18	78
14.	Seward Street Office Project	956 N Seward St	126,980 sf office	1,240	165	21	186	29	151	180
15.	Hotel & Restaurant Project	6381 W Hollywood Bl	80 hotel rooms and 15,290 sf restaurant	1,020	(19)	11	(8)	62	4	66
16.	Television Center (TVC Expansion)	6300 W Romaine St	114,725 office, 40,927 gym and 38,072 dance studio	1,596	199	27	226	20	17	37
17.	Western Galleria Market	100 N Western Ave	187 apartment units and 76,500 sf retail (including grocery store)	940	17	40	57	54	38	92
18.	Hollywood Center Studios Office	6601 W Romaine St	106,125 sf office	808	88	4	92	12	39	51
19. [b]	Selma Community Housing	1603 N Cherokee Ave	66 affordable apartment units	439	7	27	34	26	15	41
20.	Hudson Building	6523 W Hollywood Bl	10,402 sf restaurant, 4,074 sf of office, and 890 sf of storage	547	(16)	(11)	(27)	32	4	36
21.	Target Retail Shopping Center Project	5520 W Sunset Bl	163,862 sf discount store and 30,887 shopping center	4,903	52	21	73	211	211	422
22.	Residential	712 N Wilcox Ave	103 apartment units	550	8	34	42	33	18	51
23.	Mixed-Use	1600-1610 N Highland Ave	248 apartment units and 12,785 sf retail	1,805	22	90	112	96	54	150
24.	Millennium Hollywood Mixed-Use Project	1740 N Vine St	492 apartment units, 200 hotel rooms, 100,000 sf office, 35,000 sf fitness club, 15,000 sf retail, 34,000 sf restaurant	9,922	321	253	574	486	438	924
25.	Paramount Pictures	5555 W Melrose Ave	635,500 sf of production office, 638,100 sf of office, 89,200 sf of retail, 21,000 sf of stage, and 1,900 sf of support uses	9,830	712	213	925	297	736	1,033
26.	Apartments	1411 N Highland Ave	76 apartment units, 2,500 sf commercial	823	23	43	66	45	26	71
27.	Apartment Project	1824 N Highland Ave	118 apartment units	667	10	41	51	40	22	62
28.	Hotel	1133 N Vine St	112 hotel rooms, 661 sf café	457	19	13	32	18	15	33
29.	The Lexington Mixed-Use	6677 W Santa Monica Bl	695 apartment units, 24,900 sf commercial	1,938	127	182	309	170	122	292
30. [b]	Columbia Square Mixed-Use	6121 W Sunset Bl	200 apartment units, 422,610 sf office, 41,300 sf retail/restaurant, and 125 hotel rooms	6,327	477	211	688	254	428	682
31.	Mixed-Use (High Line West)	5550 W Hollywood Bl	280 apartment units and 12,030 sf retail	1,267	(3)	43	40	47	17	64
32.	Hotel - Restaurant	1629 N Griffith Park Bl	25 hotel rooms, 3,374 sf restaurant, and 633 sf bar/lounge	262	0	0	0	25	13	38
33.	Las Palmas Residential (Hollywood Cherokee)	1718 N Las Palmas Ave	224 du and 985 sf retail	1,333	21	84	105	81	43	124
34. [b]	Sunset & Vine Mixed-Use	1538 N Vine St	306 apartment units and 68,000 sf retail	3,049	57	78	136	158	136	294
35.	Condos & Retail	5663 Melrose Ave	96 condominium units and 3,350 sf retail	797	8	37	45	96	54	63
36.	6250 Sunset (Nickelodeon)	6250 W Sunset Bl	200 apartment units and 4,700 sf retail	1,473	52	80	132	71	50	121
37.	Hollywood Central Park	Hollywood Freeway (US 101)	625,086 sf park, 500 seat amphitheater, 5 room inn, 30,000 sf community center, 15,000 banquet space, 29,000 commercial, 15 low income apartment	2,298	104	69	173	115	89	204
38.	Mixed-Use	5901 Sunset Bl	274,000 sf office and 26,000 sf supermarket	3,839	350	61	411	122	339	461
39.	John Anson Ford Theater	2580 Cahuenga Bl East	311 net new theater seats, 5,400 sf restaurant, and 30 office employees	610	34	1	35	18	43	61
40.	1717 Bronson Avenue	1717 N Bronson Ave	89 apartment units	436	6	27	33	26	14	40

TABLE 6 (CONTINUED)
RELATED PROJECTS

No	Project Name [a]	Address	Description	Trip Generation						
				Daily	AM Peak Hour			PM Peak Hour		
					Inbound	Outbound	Total	Inbound	Outbound	Total
41.	Sunset + Wilcox	1541 N Wilcox Ave	200 hotel rooms and 9,000 sf restaurant	3,359	103	80	183	147	114	261
42.	Mixed-Use	1350 N Western Ave	200 apartment units, 4 guest rooms and 5,500 sf retail/restaurant	1,439	24	76	100	86	46	132
43.	Palladium Residences	6201 W Sunset Bl	731 apartment units (37 affordable) and 24,000 sf of retail and restaurant uses	4,913	128	228	356	234	169	403
44.	5600 W Hollywood Boulevard	5600 W Hollywood Bl	33 apartment units, 1,289 sf commercial	604	22	16	38	22	22	44
45.	5750 Hollywood	5750 Hollywood Bl	161 apartment units and 4,747 sf commercial	1,180	22	66	88	68	38	106
46.	2014 Residential	707 N Cole Ave	84 apartment units	398	6	25	31	24	12	36
47.	Cahuenga Boulevard Hotel	1525 N Cahuenga Bl	64 hotel rooms, 700 sf rooftop restaurant/lounge, and 3,300 sf restaurant	469	13	9	22	17	17	34
48.	Academy Square	1341 Vine St	285,719 sf office, 200 apartment units, 16,135 sf restaurant	6,218	330	164	494	152	220	372
49.	Hotel	1921 Wilcox Ave	122 hotel rooms and 4,225 sf restaurant	1,233	34	26	60	51	40	91
50.	Mixed-Use	901 N Vine St	70 apartment units, 3,000 sf commercial	(32)	4	26	30	(5)	1	(4)
51.	Apartments	525 N Wilton Pl	88 apartment units	449	6	28	34	27	14	41
52.	Hardware Store	4905 W Hollywood Bl	36,600 sf retail	1,404	13	12	25	64	68	132
53.	Mixed-Use	1233 N Highland Ave	72 apartment units, 12,160 sf commercial	714	11	27	38	38	28	66
54.	Mixed-Use	1310 N Cole Ave	369 apartment units and 2,570 office	2,226	20	139	159	139	58	197
55.	Restaurants	135 N Western Ave	4,066 sf restaurant addition to 7,838 sf existing restaurant	457	2	2	4	25	13	38
56.	City Lights Mixed-Use	1515 N Hillhurst Ave	202 Apts, 5.35 KSF Retail, 5.05 KSF Restaurant, 3.025 KSF Coffee/Donut	1,664	43	92	134	111	73	183
57.	Hotel & Retail	4110 W 3rd St	171 room hotel & 2,800 sf retail	1,185	45	35	80	46	40	86
58. [b]	TAO Restaurant	6421 W Selma Ave	Replace auto body shop with 17,607 sf quality restaurant	1,688	8	7	15	94	46	140
59.	Hollywood Crossroads	1540-1552 Highland Ave	950 residential units, 308 hotel rooms, 95,000 sf office, and 185,000 sf commercial retail uses	14,833	381	498	879	733	548	1,281
60.	Wilcox Hotel	1717 N Wilcox Ave	133 hotel rooms and 3,580 sf retail	1,244	54	35	89	49	43	92
61.	Apartments	5460 W Fountain Ave	75 apartment units	499	8	30	38	31	16	47
62.	Mixed-Use	6220 W Yucca St	210 hotel rooms, 136 apartment units and 6,980 sf restaurant	2,647	88	110	198	129	85	214
63.	SunWest Project (Mixed-Use)	5525 W Sunset Bl	293 apartment units and 33,980 sf commercial	3,411	80	124	204	203	142	345
64.	Hollywood De Longpre Apartments	5632 De Longpre Ave	185 apartment units	800	(31)	25	(6)	50	19	69
65.	Ivar Gardens Hotel	6409 W Sunset Bl	275 hotel rooms and 1,900 sf retail	1,285	51	26	77	53	60	113
66.	Selma Hotel	6516 W Selma Ave	212 rooms, 3,855 sf bar/lounge, and 8,500 sf rooftop bar/event space	2,241	71	50	121	105	84	189
67.	Mixed-Use	1657 N Western Ave	91 apartment units, 15,300 sf retail	702	10	29	39	37	25	62
68.	McCadden Campus (LGBT)	1118 N McCadden Pl	45 housing units, 50,325 sf social service support facility, 17,040 sf office, 1,885 sf commercial retail or restaurant, and 100-bed temporary housing	1,346	49	31	80	53	56	109
69.	4900 Hollywood Mixed-Use	4900 W Hollywood Bl	150 apartment units and 13,813 sf retail	1,585	24	75	99	89	56	145
70.	citizenM Hotel	1718 Vine St	216 hotel rooms and 4,354 sf restaurant	1,101	58	41	99	35	42	77
71.	Apartments	1749 Las Palmas Ave	70 apartment units and 3,117 sf retail	147	2	9	11	9	5	14
72.	Mixed-Use	1868 N Western Ave	96 apartment units and 5,546 sf retail	363	(5)	18	13	20	7	27
73.	6400 Sunset Mixed-Use	6400 Sunset Bl	232 apartment units and 7,000 sf restaurant	214	18	88	106	69	1	70
74.	AMCAL - Meridian Apts	241 N Vermont Ave	100 apartment units and 4,134 sf retail	510	7	38	45	33	16	49
75.	4121 Santa Monica Shopping Center	4121 W Santa Monica Bl	14,322 sf shopping center	344	4	2	6	14	16	30
76.	6200 W Sunset Boulevard	6200 W Sunset Bl	270 apartment units, 1,750 sf quality restaurant, 2,300 sf pharmacy, and 8,070 sf retail	1,778	26	97	123	100	35	135
77.	747 N Western Avenue	747 N Western Ave	44 apartment units and 7,700 sf retail	622	8	21	29	32	24	56
78.	6630 W Sunset Boulevard	6630 W Sunset Bl	40 apartment units	266	4	16	20	16	9	25
79.	Sunset-Junction	4000-4301 Sunset Bl	297 apartment units and 25,877 sf commercial	2,947	83	154	237	156	95	251
80.	Hollywood & Wilcox	6430-6440 W Hollywood Bl	260 apartment units, 3,580 sf office, 11,020 sf retail and 3,200 sf restaurant	1,625	23	98	121	99	44	143

TABLE 6 (CONTINUED)
RELATED PROJECTS

No	Project Name [a]	Address	Description	Trip Generation						
				Daily	AM Peak Hour			PM Peak Hour		
					Inbound	Outbound	Total	Inbound	Outbound	Total
81.	Mixed-Use	4914 W Melrose Ave	45 live/work units & 3,760 sf retail	460	7	20	27	25	17	42
82.	Hospital Seismic Retrofit	1300 N Vermont Ave	Replace existing hospital and ancillary uses with 30,933 sf office	290	36	5	41	6	30	36
83.	Postpartum Extended Care & Retail	257 S Mariposa Ave	112 apt units and 4,630 sf of commercial	772	10	41	51	44	25	69
84.	Onni Group Mixed-Use Development	1360 N Vine St	429 condo units 55,000 sf grocery, 5,000 sf retail and 8,988 sf of restaurant	3,768	57	157	214	202	140	342
85.	1600 Schrader	1600 Schrader Bl	168-room hotel and 5,979 sf restaurant	1,666	58	40	98	80	63	143
86.	Mixed-Use	5939 W Sunset Bl	299 apartment units, 38,440 sf office and 5,064 sf of restaurant, and 3,739 sf retail	3,731	152	191	343	182	152	334
87.	Melrose & Beachwood	5570 W Melrose Ave	52 apartment units and 5,500 sf commercial	430	(1)	20	19	21	10	31
88.	Modera Argyle	1546 N Argyle Ave	276 apartment units, 9,000 sf retail, and 15,000 sf restaurant	2,013	43	127	170	128	51	179
89.	Montecito Senior Housing	6650 W Franklin Ave	68 senior apartments	234	5	9	14	9	8	17
90.	Godfrey Hotel	1400 N Cahuenga Bl	221-room hotel and 3,000 sf restaurant	1,866	63	53	116	72	58	130
91.	6140 Hollywood	6140 Hollywood Bl	102-room hotel, 27 condominium units, and 11,460 sf restaurant	1,782	76	62	138	78	58	136
92.	Selma - Wilcox Hotel	6421 W Selma Ave	114-room hotel, 1,993 sf restaurant	1,227	43	27	70	56	44	100
93.	Apartments	1601 N Las Palmas Ave	86 apartment units	157	4	28	32	20	8	28
94.	Mixed-Use	600 N Vermont Ave	80 apartment units and 14,780 sf retail	62	4	30	34	(4)	11	7
95.	1723 N Wilcox Residential	1723 N Wilcox Ave	68 apartment units and 3,700 sf retail	537	16	28	44	29	18	47
96.	Select @ Los Feliz (Mixed-Use)	4850 W Hollywood Bl	101 apartments and 10,000 sf restaurant	1,108	41	68	109	61	32	93
97.	1719 Whitley Hotel	1719 N Whitley Ave	156-room hotel	1,275	49	34	83	48	46	94
98.	Kaiser Hospital Redevelopment	1317-1345 N. Vermont/1328 N New Hampshire/4760 Sunset/1505 N Edgemont/1526 N Edgemont/1517 N Vermont/1424-1430 N Alexandria	211,992 sf hospital expansion	6,512	341	91	431	181	464	643
99.	1276 N Western Ave	1276 N Western Ave	75 apartment units	424	7	26	33	23	17	40
100.	NBC Universal Evolution Plan	100 Universal City Plaza	307,949 sf studio, 647,320 sf studio office, 495,406 sf office, 337,895 sf entertainment, 39,216 sf entertainment retail, 900,000 sf hotel	19,139	1,271	489	1,760	307	1,391	1,698

OTHER AREA-WIDE PROJECTS

Project	Description	Extents
Hollywood Community Plan Update	The Hollywood Community Plan Update proposes updates to land use policies and the land use diagram. The proposed changes would primarily increase commercial and residential development potential in and near the Regional Center Commercial portion of the community and along selected corridors in the Community Plan Area. The decreases in development potential would be primarily focused on low to medium scale multi-family residential neighborhoods to conserve existing density and intensity of those neighborhoods. The projected population growth has been captured in the conservative ambient growth rate assumed in the Future analysis.	South of City of Burbank, City of Glendale, and SR 134; west of Interstate 5; north of Melrose Avenue; south of Mulholland Drive, City of West Hollywood, Beverly Hills, including land south of the City of West Hollywood and north of Rosewood Avenue between La Cienega Boulevard and La Brea Avenue.

Notes
[a] Related project list based on information provided by LADOT, Department of City Planning, and recent studies at the time of the NOP (July 2017).
[b] Although construction of the related project may be partially complete/entirely complete, the project was not fully occupied at the time of the NOP or when traffic counts were conducted. Therefore, the related project was considered and listed to provide a more conservative analysis.

TABLE 7
FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2024)
SIGNALIZED INTERSECTION LEVELS OF SERVICE

No.	Intersection	Peak Hour	Future without Project Conditions	
			V/C	LOS
1.	Bronson Avenue & Sunset Boulevard	AM PM	0.871 0.779	D C
2.	Van Ness Avenue & Sunset Boulevard	AM PM	0.940 1.026	E F
3.	Wilton Place & Hollywood Boulevard	AM PM	0.918 0.953	E E
4.	Wilton Place & Sunset Boulevard	AM PM	0.621 0.743	B C
5.	Wilton Place & Fountain Avenue	AM PM	0.612 0.844	B D
6.	Wilton Place & Santa Monica Boulevard	AM PM	0.708 0.819	C D
7.	St. Andrews Place & Sunset Boulevard	AM PM	0.521 0.556	A A
8.	Western Avenue & Franklin Avenue	AM PM	0.953 0.859	E D
9.	Western Avenue & Hollywood Boulevard	AM PM	1.023 0.971	F E
10.	Western Avenue & Sunset Boulevard	AM PM	0.831 0.941	D E
11. [a]	Western Avenue & De Longpre Avenue	AM PM	0.395 0.362	A A
12.	Western Avenue & Fountain Avenue	AM PM	0.725 0.809	C D
13.	Western Avenue & Santa Monica Boulevard	AM PM	1.016 1.114	F F
14.	Serrano Avenue & Sunset Boulevard	AM PM	0.313 0.567	A A
15.	Serrano Avenue & Fountain Avenue	AM PM	0.516 0.773	A C
16.	Normandie Avenue & Hollywood Boulevard	AM PM	0.505 0.732	A C
17.	Normandie Avenue & Sunset Boulevard	AM PM	0.491 0.686	A B
18.	Normandie Avenue & Santa Monica Boulevard	AM PM	0.678 0.903	B E

Notes
[a] Intersection will be signalized by the Future buildout Year 2024.

Chapter 4
Project Traffic

This chapter describes the assumptions and methodology used in developing the traffic volumes associated with the proposed Project within the Study Area.

PROJECT DESCRIPTION

The Project is a new mixed-use development that includes 735 apartment units and approximately 95,820 sf of neighborhood-serving commercial uses, which may include supermarket, retail, and restaurant uses. The existing 18,525 sf of commercial space, 78,328 sf grocery store, and 3,943 sf fast-food restaurant on the site would be removed with the development of the Project.

Vehicular access to the Project would be provided via two driveways (one commercial and one residential) on Serrano Avenue, a residential driveway on Sunset Boulevard, and one driveway (two lanes inbound and two lanes outbound) on Western Avenue serving both commercial and residential components of the Project. The residential driveway on Sunset Boulevard would accommodate both right and left-turn ingress and right-turn-only egress. All other Project driveways would provide full access by accommodating both right-turn and left-turn ingress and egress. The driveways located on Western Avenue will be designed to align with the future traffic signal at De Longpre Avenue.

PROJECT TRIP GENERATION

The number of vehicular trips expected to be generated by the Project was estimated using rates published in *Trip Generation, 9th Edition*. These rates are based on surveys of similar land uses at sites around the country and are provided as both daily rates and morning and

afternoon peak-hour rates. The number of vehicle trips traveling to and from the Project Site is related to the size of each land use.

Appropriate trip generation reductions to account for public transit usage, trips shared between the different uses within the Project, and pass-by trips were made in consultation with LADOT. The Project is located within 0.25 miles of the Metro Red Line Hollywood/Western Station and a Metro Rapid Bus stop; therefore, a 15% transit adjustment was applied to the Project, per *Transportation Impact Study Guidelines*. The internal capture reduction was calculated for each individual land use per the NCHRP 8-51 Internal Trip Capture Estimation Tool (*National Cooperative Highway Research Program Report 684 – Enhancing Internal Trip Capture Estimation for Mixed-Use Developments*, Transportation Research Board and National Research Council, 2011) to account for person trips made between the different uses of the Project without using an off-site road system. Detailed NCHRP 8-51 Internal Trip Capture Estimation Tool worksheets are provided in Appendix E. The supermarket and shopping center trip generation estimates were also reduced by 40% and 50%, respectively, (as allowed by *Transportation Impact Study Guidelines*) to account for Project trips made by drivers passing on an adjacent roadway and stopping on the way from an origin to another destination. The pass-by trips are not new trips to the Study Area.

After accounting for the adjustments above and the removal of the existing uses, the Project is expected to generate 2,369 net new trips on a typical weekday, including a net increase of 212 morning peak hour trips (nine inbound trips, 203 outbound trips) and a net increase of 228 afternoon peak hour trips (164 inbound trips, 64 outbound trips), as shown in Table 8.

PROJECT TRIP DISTRIBUTION

Similar to the trip distribution of traffic for the Related Projects described in Chapter 3, the geographic distribution of trips generated by the Project is dependent on the location of employment and commercial centers from which residents and patrons of the Project would be drawn, characteristics of the street system serving the Project Site, and 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.

Based on these considerations, traffic entering and exiting the Project was assigned to the surrounding street system. The intersection-level trip distribution patterns for the residential and commercial components of the Project are shown in Figures 8A and 8B, respectively. Generally, the residential pattern is as follows:

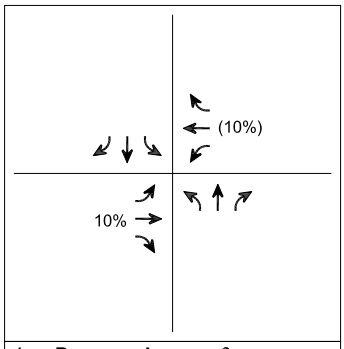
- 5% to/from the north
- 10% to/from the south
- 15% to/from the east
- 20% to/from the west
- 25% to/from the northwest on US 101
- 25% to/from the southeast on US 101

The commercial trip distribution pattern is generally as follows:

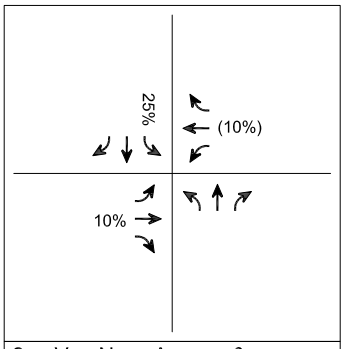
- 5% to/from the north
- 15% to/from the south
- 25% to/from the east
- 35% to/from the west
- 10% to/from the northwest on US 101
- 10% to/from the southeast on US 101

PROJECT TRIP ASSIGNMENT

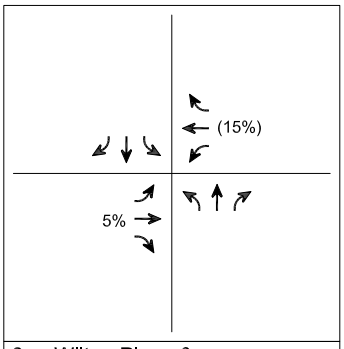
The Project trip generation estimates summarized in Table 8 and the trip distribution patterns shown in Figures 8A and 8B were used to assign the Project-generated traffic through the study intersections. Figure 9 illustrates the Project-only traffic volumes at the study intersections during typical weekday morning and afternoon peak hours.



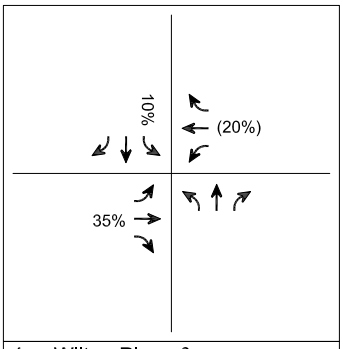
1. Bronson Avenue & Sunset Boulevard



2. Van Ness Avenue & Sunset Boulevard



3. Wilton Place & Hollywood Boulevard



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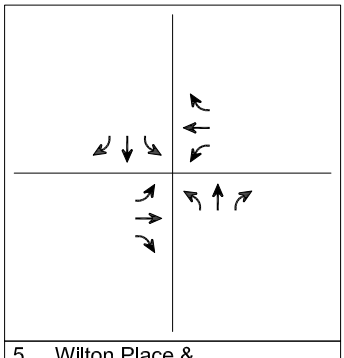
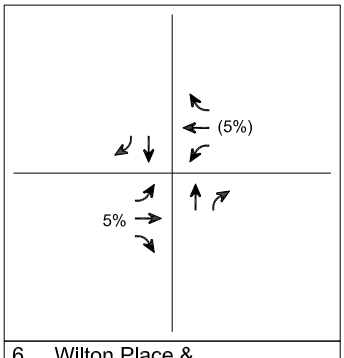
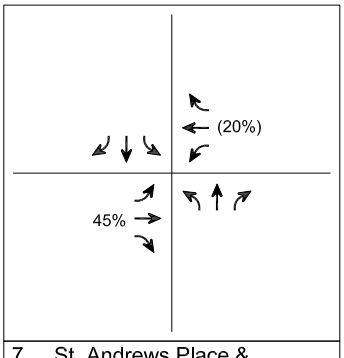


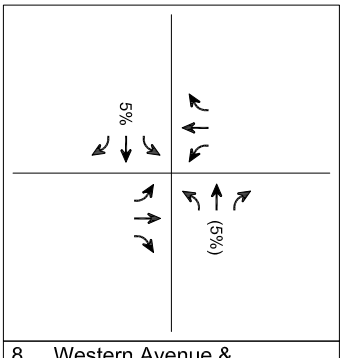
5. Wilton Place & Fountain Avenue



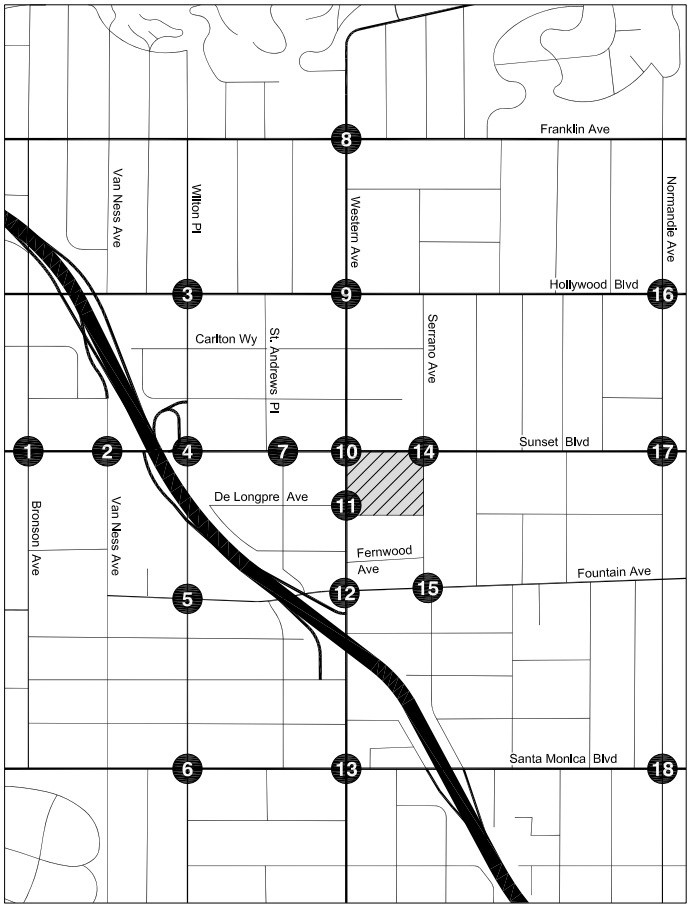
6. Wilton Place & Santa Monica Boulevard

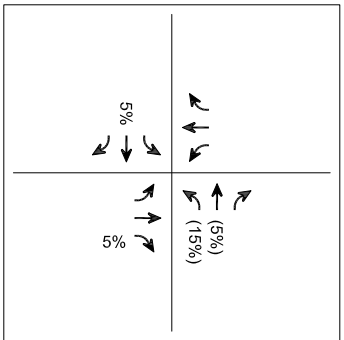


7. St. Andrews Place & Sunset Boulevard

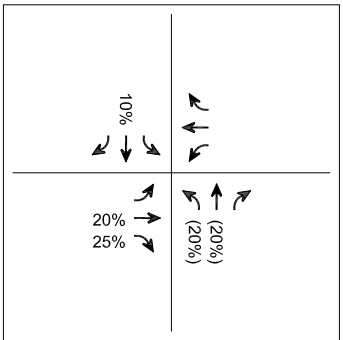


8. Western Avenue & Franklin Avenue





9. Western Avenue & Hollywood Boulevard



10. Western Avenue & Sunset Boulevard

LEGEND

Project Site

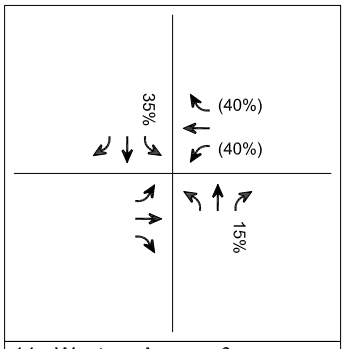
Study Intersection

X%(X%) Inbound(Outbound) Trip Percentage

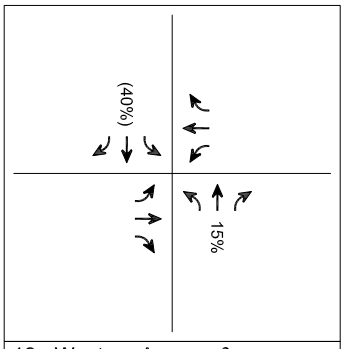
N
Not to Scale

TRIP DISTRIBUTION
RESIDENTIAL

FIGURE
8A



11. Western Avenue & De Longpre Avenue



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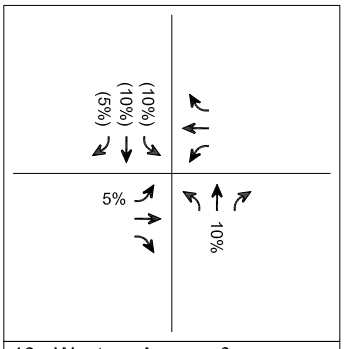
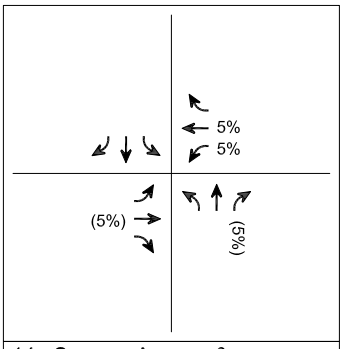
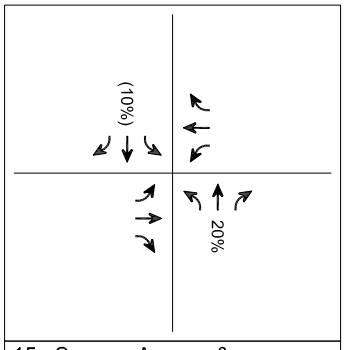


13. Western Avenue & Santa Monica Boulevard



14. Serrano Avenue & Sunset Boulevard



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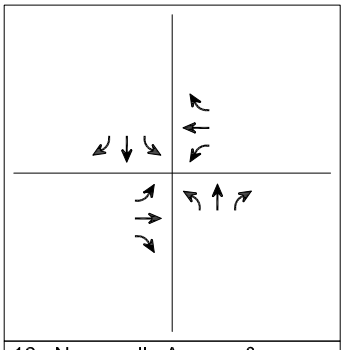
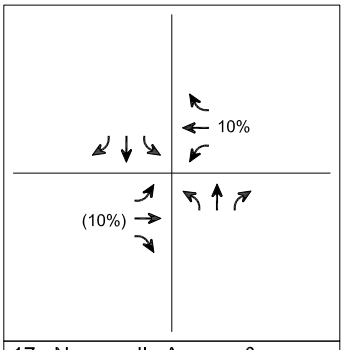


16. Normandie Avenue & Hollywood Boulevard



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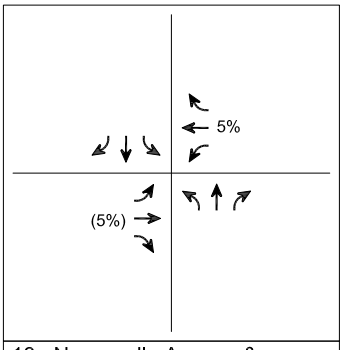
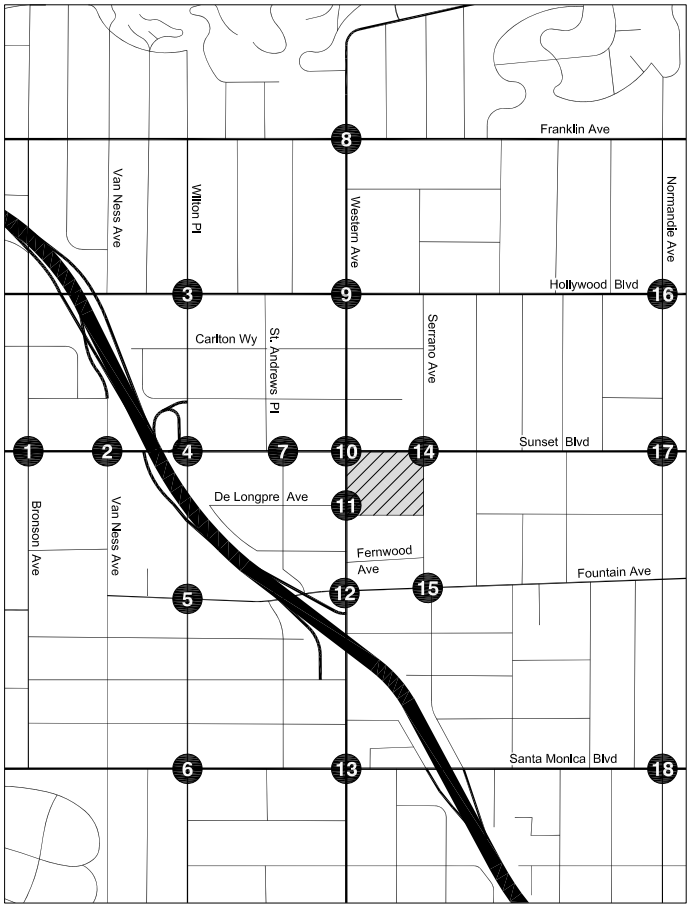


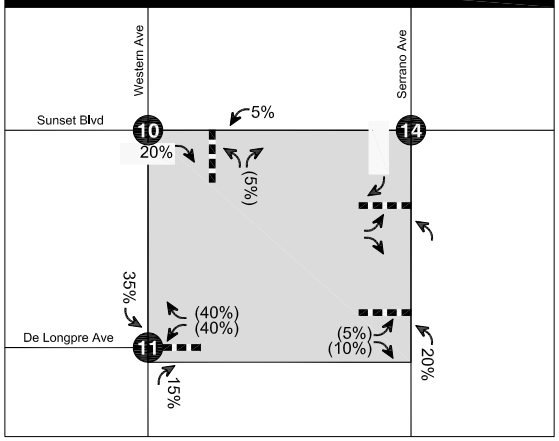
18. Normandie Avenue & Santa Monica Boulevard



LEGEND

- Project Site
- # Study Intersection
- X%(X%) Inbound(Outbound) Trip Percentage

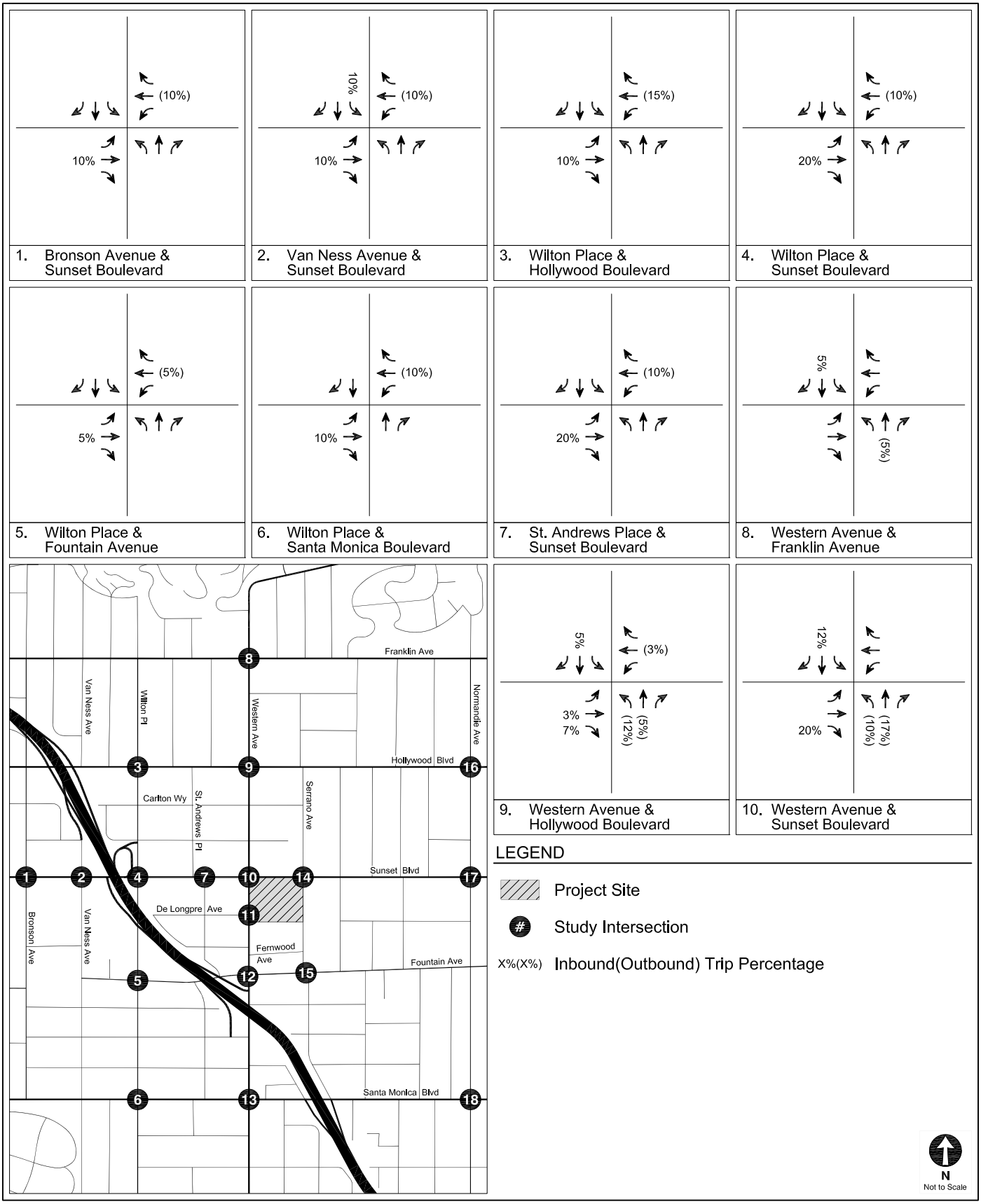
DRIVEWAY VOLUMES



N
Not to Scale

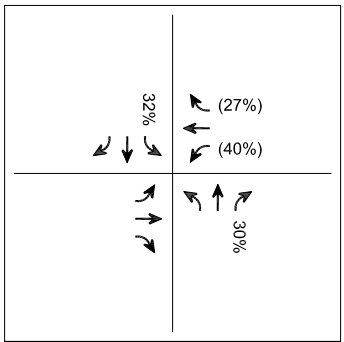
TRIP DISTRIBUTION
RESIDENTIAL

FIGURE
8A (CONT.)

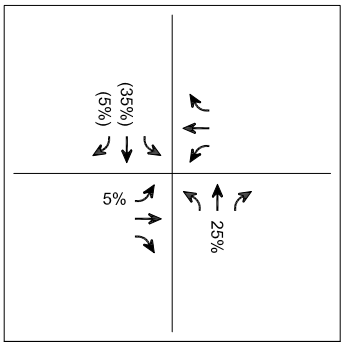


TRIP DISTRIBUTION
COMMERCIAL

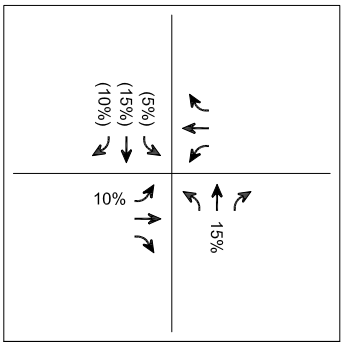
FIGURE
8B



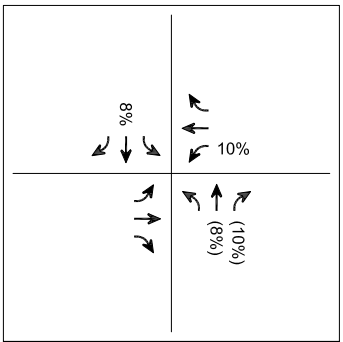
11. Western Avenue & De Longpre Avenue



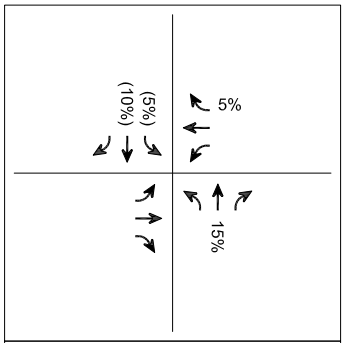
12. Western Avenue & Fountain Avenue



13. Western Avenue & Santa Monica Boulevard



14. Serrano Avenue & Sunset Boulevard



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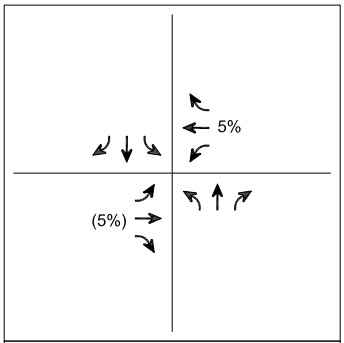
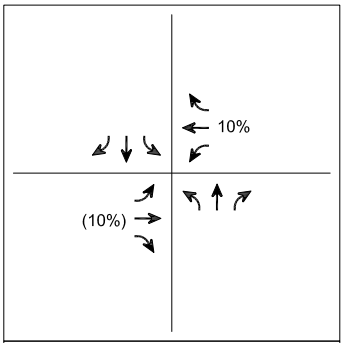


16. Normandie Avenue & Hollywood Boulevard



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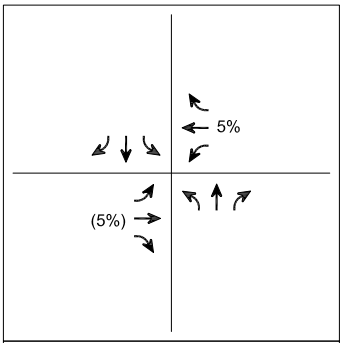
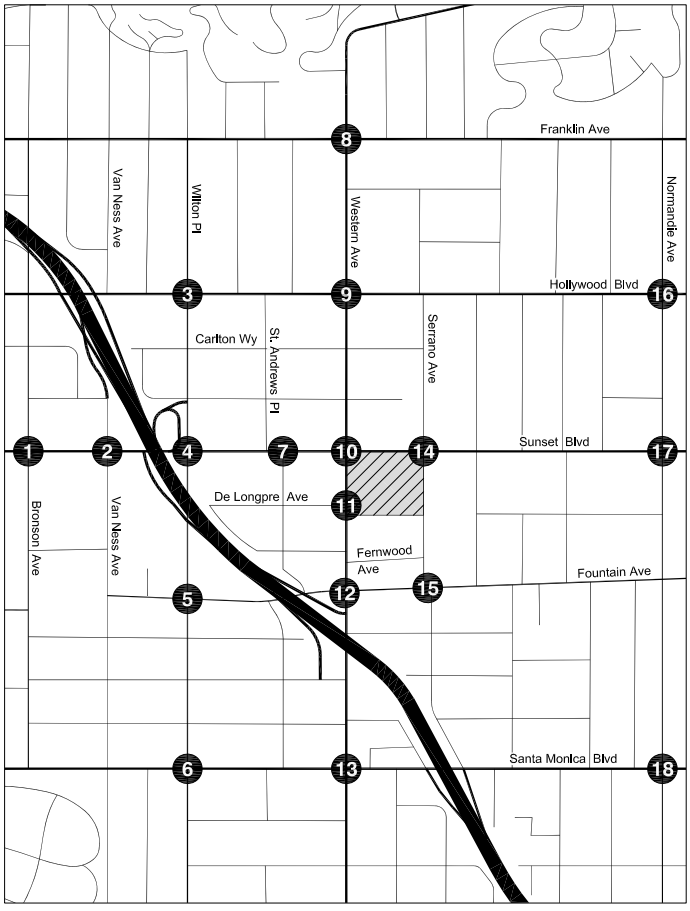


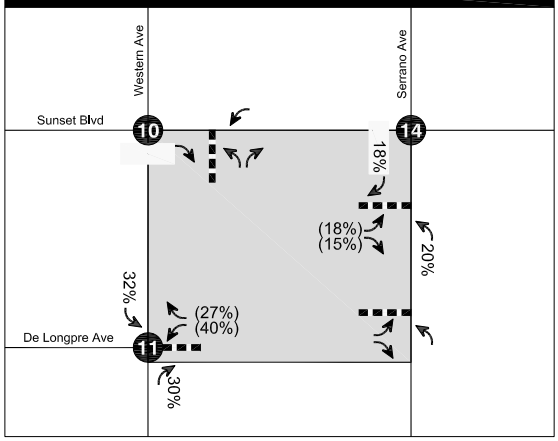
18. Normandie Avenue & Santa Monica Boulevard



LEGEND

- Project Site
- # Study Intersection
- X%(X%) Inbound(Outbound) Trip Percentage

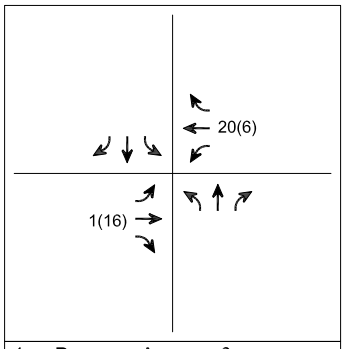
DRIVEWAY VOLUMES



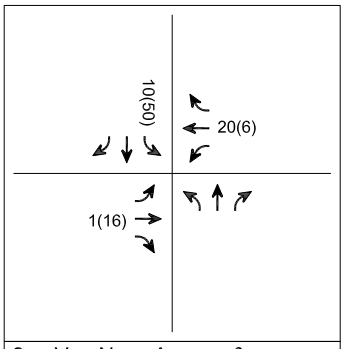
N
Not to Scale

TRIP DISTRIBUTION
COMMERCIAL

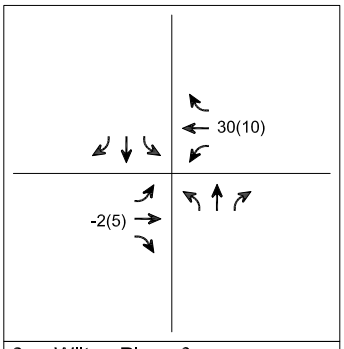
FIGURE
8B (CONT.)



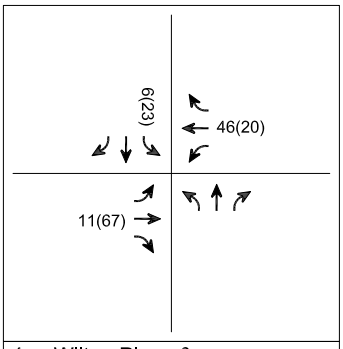
1. Bronson Avenue & Sunset Boulevard



2. Van Ness Avenue & Sunset Boulevard



3. Wilton Place & Hollywood Boulevard



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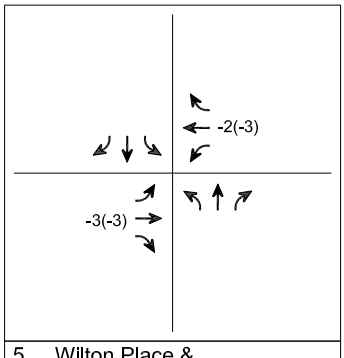
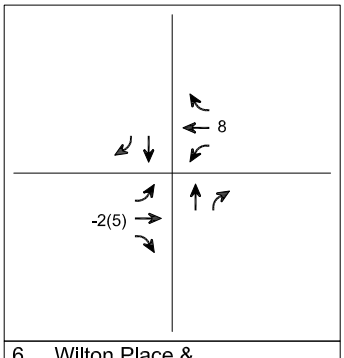
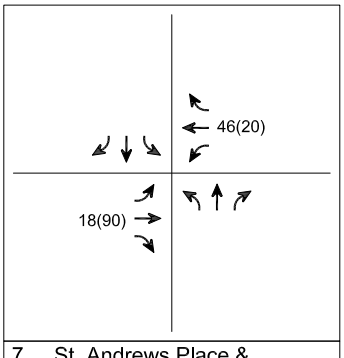


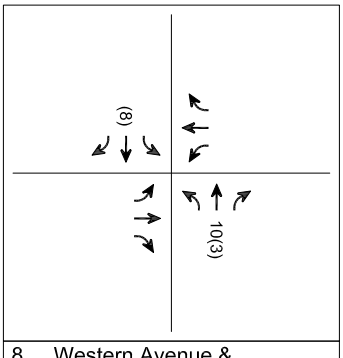
5. Wilton Place & Fountain Avenue



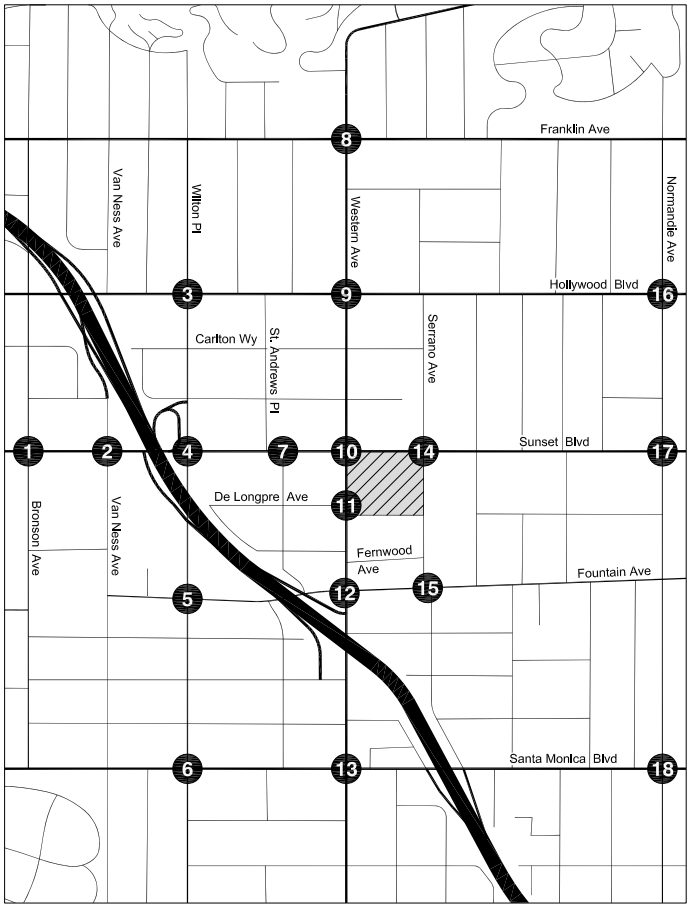
6. Wilton Place & Santa Monica Boulevard

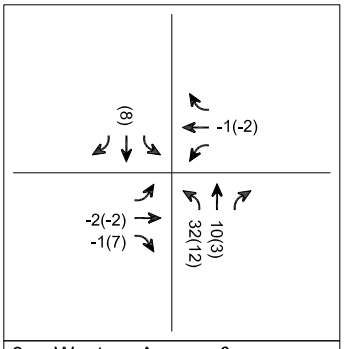


7. St. Andrews Place & Sunset Boulevard

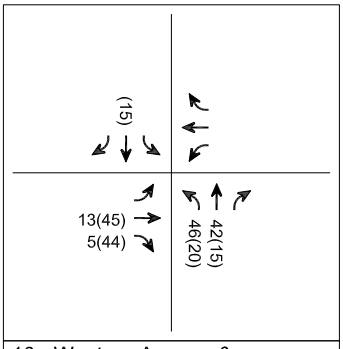


8. Western Avenue & Franklin Avenue





9. Western Avenue & Hollywood Boulevard



10. Western Avenue & Sunset Boulevard

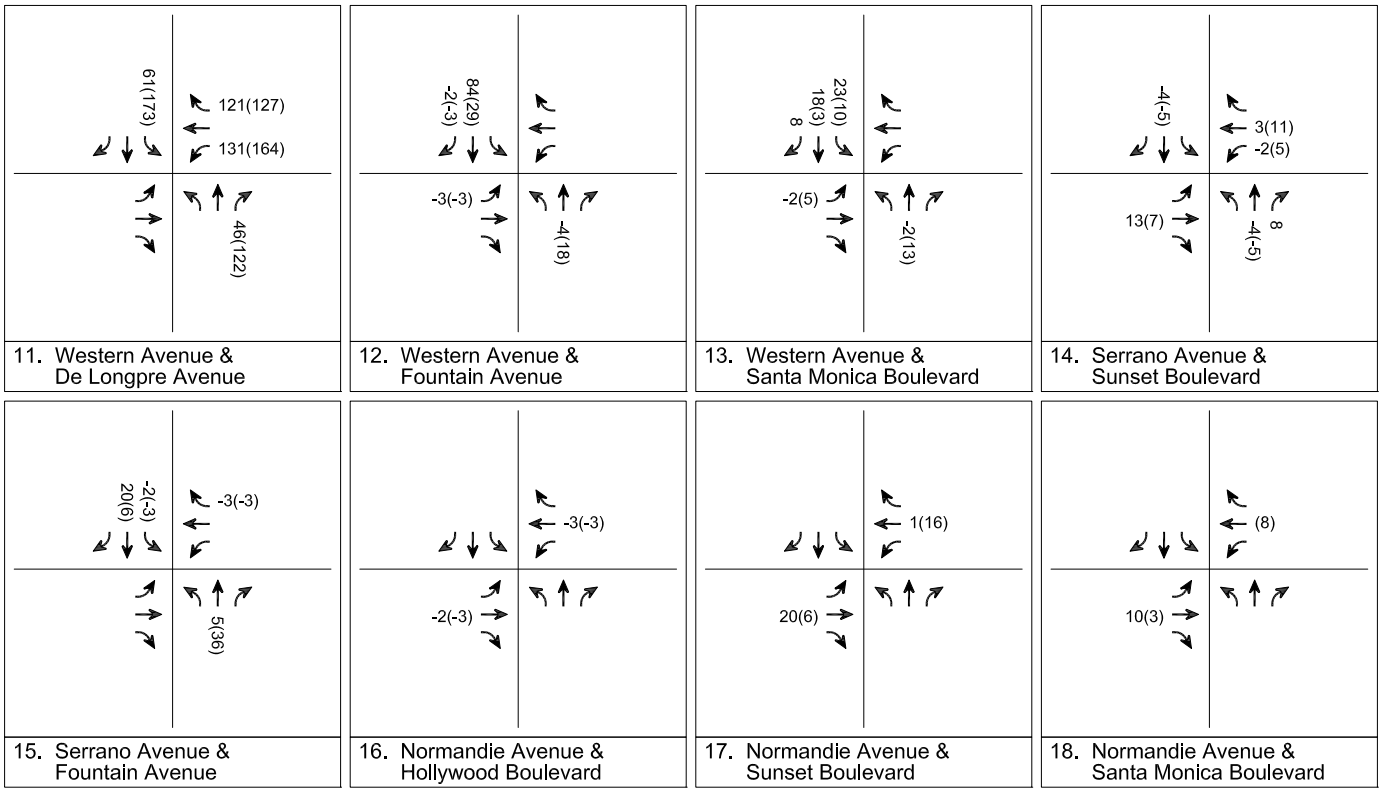
LEGEND

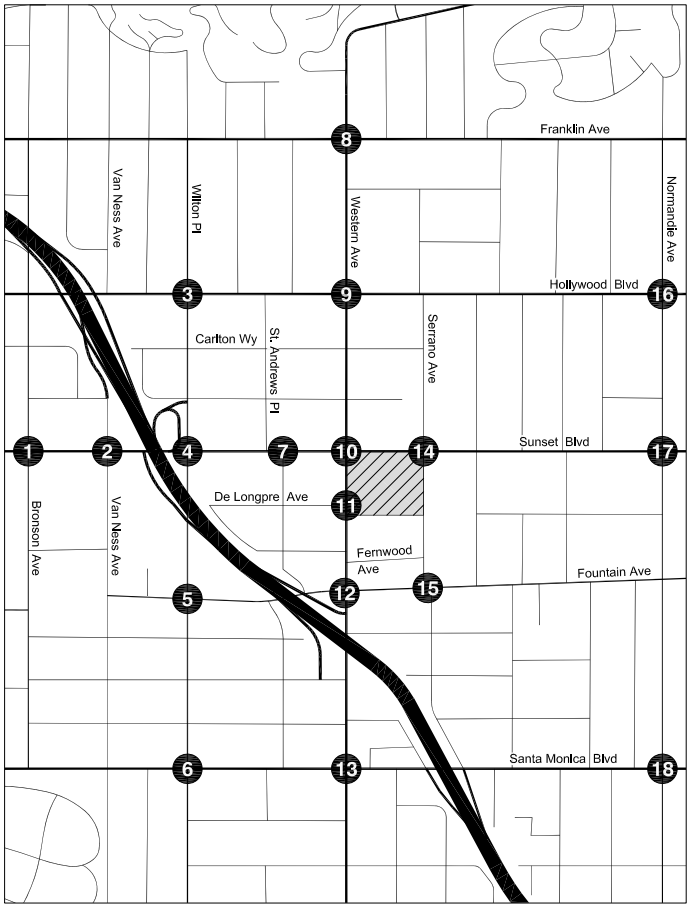
- Project Site
- # Study Intersection
- X(X) AM(PM) Peak Hour Traffic Volumes

N
Not to Scale

PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

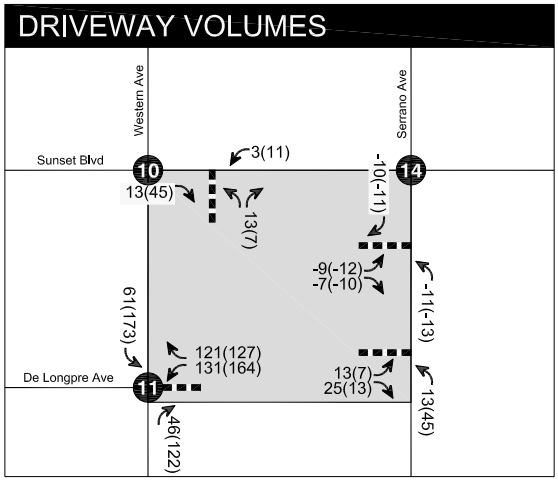
FIGURE
9





LEGEND

- Project Site
- # Study Intersection
- X(X) AM(PM) Peak Hour Traffic Volumes



N
Not to Scale

PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE
9 (CONT.)

TABLE 8
PROJECT TRIP GENERATION ESTIMATES

Trip Generation Rates [a]									
Land Use	**ITE Land Use Code**	**Rate**	**Daily**	**AM Peak Hour**			**PM Peak Hour**		
				In	**Out**	**Total**	**In**	**Out**	**Total**
Supermarket	850	per 1,000 sf	102.24	62%	38%	3.40	51%	49%	9.48
Fast-Food Restaurant with Drive-Through Window	934	per 1,000 sf	496.12	51%	49%	45.42	52%	48%	32.65
Apartment	220	per dwelling unit	6.65	20%	80%	0.51	65%	35%	0.62
Shopping Center	820	per 1,000 sf	42.70	62%	38%	0.96	48%	52%	3.71

Trip Generation Estimates									
Land Use	**ITE Land Use Code**	**Size**	**Daily**	**AM Peak Hour**			**PM Peak Hour**		
				In	**Out**	**Total**	**In**	**Out**	**Total**
Existing Uses to be Removed									
Commercial	820	18,525 sf	791	11	7	18	33	36	69
Less 15% Transit/Bike/Walk-In [b]			*(119)*	*(2)*	*(1)*	*(3)*	*(5)*	*(5)*	*(10)*
Less 50% Pass-by [c]			*(336)*	*(5)*	*(3)*	*(8)*	*(14)*	*(16)*	*(30)*
Subtotal - Commercial			**336**	**4**	**3**	**7**	**14**	**15**	**29**
Supermarket	850	78,328 sf	8,008	165	101	266	379	364	743
Less 15% Transit/Bike/Walk-In [b]			*(1,201)*	*(25)*	*(15)*	*(40)*	*(57)*	*(54)*	*(111)*
Less 40% Pass-by [c]			*(2,723)*	*(56)*	*(34)*	*(90)*	*(129)*	*(124)*	*(253)*
Subtotal - Supermarket			**4,084**	**84**	**52**	**136**	**193**	**186**	**379**
Fast-Food Restaurant	934	3,943 sf	1,956	91	88	179	67	62	129
Less 15% Transit/Bike/Walk-In [b]			*(293)*	*(14)*	*(13)*	*(27)*	*(10)*	*(9)*	*(19)*
Less 50% Pass-by [c]			*(832)*	*(39)*	*(37)*	*(76)*	*(29)*	*(26)*	*(55)*
Subtotal - Fast-Food Restaurant			**831**	**38**	**38**	**76**	**28**	**27**	**55**
TOTAL - EXISTING USES TO BE REMOVED			**5,251**	**126**	**93**	**219**	**235**	**228**	**463**
Proposed Project									
Apartments	220	735 du	4,888	75	300	375	296	160	456
Less 15% Transit/Bike/Walk-In [b]			*(733)*	*(11)*	*(45)*	*(56)*	*(44)*	*(24)*	*(68)*
Less Internal Capture [d]			*(187)*	*(1)*	*(3)*	*(4)*	*(25)*	*(5)*	*(30)*
Subtotal - Apartments			**3,968**	**63**	**252**	**315**	**227**	**131**	**358**
Supermarket	850	59,100 sf	6,042	125	76	201	286	274	560
Less 15% Transit/Bike/Walk-In [b]			*(906)*	*(19)*	*(11)*	*(30)*	*(43)*	*(41)*	*(84)*
Less 40% Pass-by [c]			*(2,054)*	*(42)*	*(26)*	*(68)*	*(97)*	*(93)*	*(190)*
Subtotal - Supermarket			**3,082**	**64**	**39**	**103**	**146**	**140**	**286**
Shopping Center - Retail/Restaurant	820	36,720 sf	1,568	22	13	35	65	71	136
Less 15% Transit/Bike/Walk-In [b]			*(235)*	*(3)*	*(2)*	*(5)*	*(10)*	*(10)*	*(20)*
Less Internal Capture [d]			*(193)*	*(2)*	*(1)*	*(3)*	*(6)*	*(16)*	*(22)*
Less 50% Pass-by [c]			*(570)*	*(9)*	*(5)*	*(14)*	*(23)*	*(24)*	*(47)*
Subtotal - Shopping Center			**570**	**8**	**5**	**13**	**26**	**21**	**47**
TOTAL - PROPOSED PROJECT			**7,620**	**135**	**296**	**431**	**399**	**292**	**691**
NET NEW PROJECT TRIPS			**2,369**	**9**	**203**	**212**	**164**	**64**	**228**

Notes
du = Dwelling Unit
sf = Square Feet
[a] Source: *Trip Generation, 9th Edition* , Institute of Transportation Engineers, 2012.
[b] Based on *Traffic Study Policies and Procedures* (LADOT, August 2014), a 15% transit reduction was applied due to a Metro transit station stop being located less than 1/4 mile from the Project Site and to account for bike or walk-in trips.
[c] Pass-by trips are those traveling through the study area regardless of the existence of the Project and are based on Traffic Study Policies and Procedures (LADOT, August 2014).
[d] Mixed Use Internal Capture credit was developed based on the NCHRP 8-51 Internal Trip Capture Estimation Tool.

Chapter 5
Existing with Project Conditions

This chapter describes the results of the analysis of intersection operating conditions associated with the Project when compared to Existing Conditions. The analysis corresponds with the Existing Conditions data and analysis presented in Chapter 2. The Existing Conditions are defined by the existing traffic volumes, roadway classifications, and intersection configurations that existed at the time of the issuance of the MOU (October 2016). The Existing with Project Conditions reflect Existing Conditions with the addition of Project traffic.

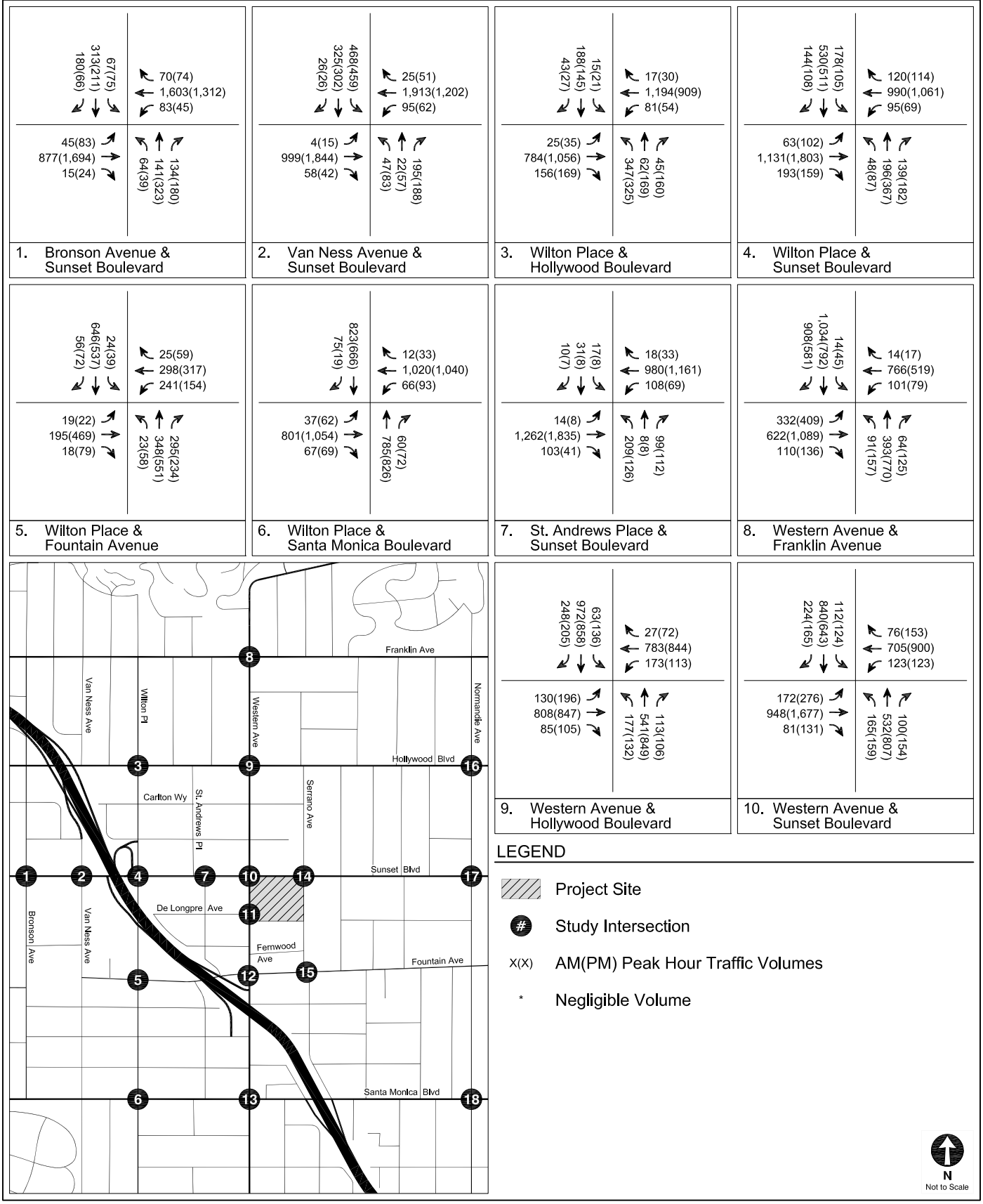
TRAFFIC VOLUMES

The Project-only morning and afternoon peak hour traffic volumes described in Chapter 4 and shown in Figure 9 were added to the Existing morning and afternoon peak hour traffic volumes shown in Figure 4. The resulting volumes are illustrated in Figure 10 and represent Existing with Project Conditions, assuming the Project would be in operation under Existing Conditions.

INTERSECTION LEVELS OF SERVICE

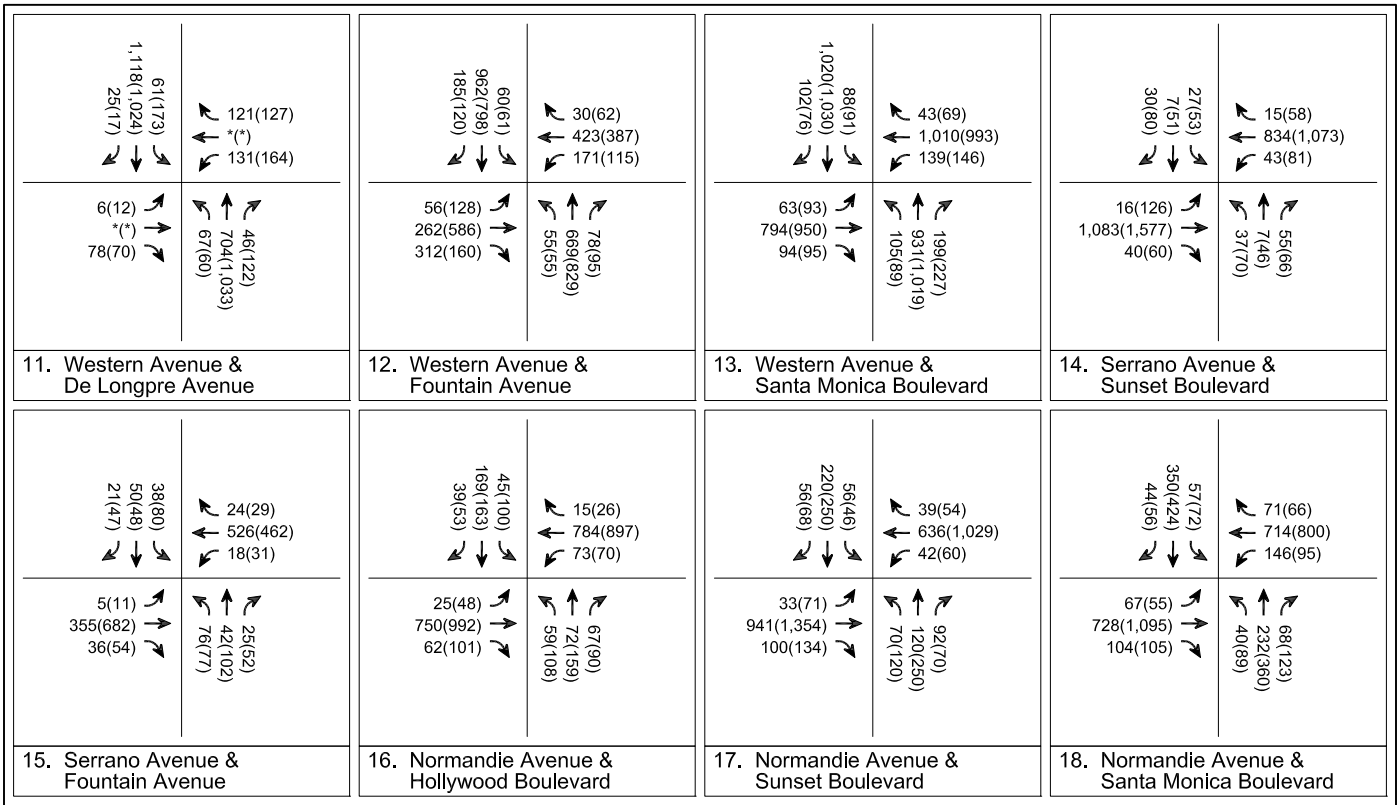
Table 9 summarizes the results of the Existing with Project Conditions during the weekday morning and afternoon peak hours for the study intersections. As shown in Table 9, under Existing Conditions, 16 of the 17 signalized study intersections are expected to continue to operate at LOS D or better during both the morning and afternoon peak hours under Existing with Project Conditions. Western Avenue & Hollywood Boulevard (Intersection #9) is anticipated to continue to operate at LOS E during the morning peak hour and LOS D during the afternoon peak hour.

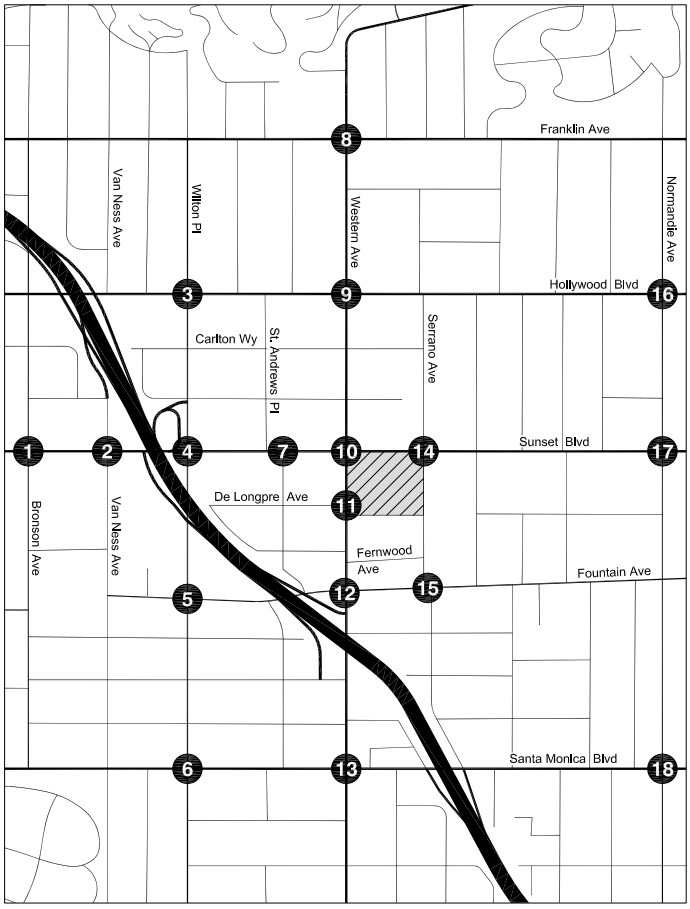
The detailed LOS calculation worksheets are provided in Appendix D.



EXISTING WITH PROJECT CONDITIONS (YEAR 2017)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 10





LEGEND

- Project Site
- # Study Intersection
- X(X) AM(PM) Peak Hour Traffic Volumes
- * Negligible Volume

N
Not to Scale

EXISTING WITH PROJECT CONDITIONS (YEAR 2017)
PEAK HOUR TRAFFIC VOLUMES

FIGURE
10 (CONT.)

TABLE 9
EXISTING WITH PROJECT CONDITIONS (YEAR 2017)
SIGNIFICANT IMPACT ANALYSIS

No.	Intersection	Peak Hour	Existing Conditions		Existing with Project Conditions			
			V/C	LOS	V/C	LOS	Change in V/C	Impact
1.	Bronson Avenue & Sunset Boulevard	AM	0.669	B	0.673	B	0.004	NO
		PM	0.693	B	0.697	B	0.004	NO
2.	Van Ness Avenue & Sunset Boulevard	AM	0.779	C	0.790	C	0.011	NO
		PM	0.793	C	0.830	D	0.037	**YES**
3.	Wilton Place & Hollywood Boulevard	AM	0.792	C	0.802	D	0.010	NO
		PM	0.789	C	0.791	C	0.002	NO
4.	Wilton Place & Sunset Boulevard	AM	0.513	A	0.529	A	0.016	NO
		PM	0.632	B	0.647	B	0.015	NO
5.	Wilton Place & Fountain Avenue	AM	0.553	A	0.551	A	-0.002	NO
		PM	0.750	C	0.748	C	-0.002	NO
6.	Wilton Place & Santa Monica Boulevard	AM	0.565	A	0.568	A	0.003	NO
		PM	0.634	B	0.636	B	0.002	NO
7.	St. Andrews Place & Sunset Boulevard	AM	0.449	A	0.453	A	0.004	NO
		PM	0.442	A	0.462	A	0.020	NO
8.	Western Avenue & Franklin Avenue	AM	0.875	D	0.875	D	0.000	NO
		PM	0.771	C	0.774	C	0.003	NO
9.	Western Avenue & Hollywood Boulevard	AM	0.901	E	0.923	E	0.022	**YES**
		PM	0.821	D	0.832	D	0.011	NO
10.	Western Avenue & Sunset Boulevard	AM	0.708	C	0.746	C	0.038	NO
		PM	0.796	C	0.837	D	0.041	**YES**
11. [a]	Western Avenue & De Longpre Avenue	AM	--	N/A	--	N/A	N/A	NO
		PM	--	N/A	--	N/A	N/A	NO
12.	Western Avenue & Fountain Avenue	AM	0.633	B	0.659	B	0.026	NO
		PM	0.710	C	0.716	C	0.006	NO
13.	Western Avenue & Santa Monica Boulevard	AM	0.805	D	0.813	D	0.008	NO
		PM	0.818	D	0.821	D	0.003	NO
14.	Serrano Avenue & Sunset Boulevard	AM	0.258	A	0.262	A	0.004	NO
		PM	0.485	A	0.487	A	0.002	NO
15.	Serrano Avenue & Fountain Avenue	AM	0.465	A	0.479	A	0.014	NO
		PM	0.704	C	0.731	C	0.027	NO
16.	Normandie Avenue & Hollywood Boulevard	AM	0.428	A	0.427	A	-0.001	NO
		PM	0.617	B	0.616	B	-0.001	NO
17.	Normandie Avenue & Sunset Boulevard	AM	0.423	A	0.427	A	0.004	NO
		PM	0.593	A	0.595	A	0.002	NO
18.	Normandie Avenue & Santa Monica Boulevard	AM	0.599	A	0.602	B	0.003	NO
		PM	0.790	C	0.791	C	0.001	NO

Notes
[a] Intersection is unsignalized under Existing Conditions.

Chapter 6
Future with Project Conditions

This chapter describes the results of the analysis of intersection operating conditions associated with the Project when compared to the Future without Project Conditions. The analysis year of 2024 corresponds to the anticipated buildout year of the Project. All future cumulative traffic growth (i.e., ambient and related project traffic growth) and transportation infrastructure improvements described in Chapter 3 are incorporated into this analysis.

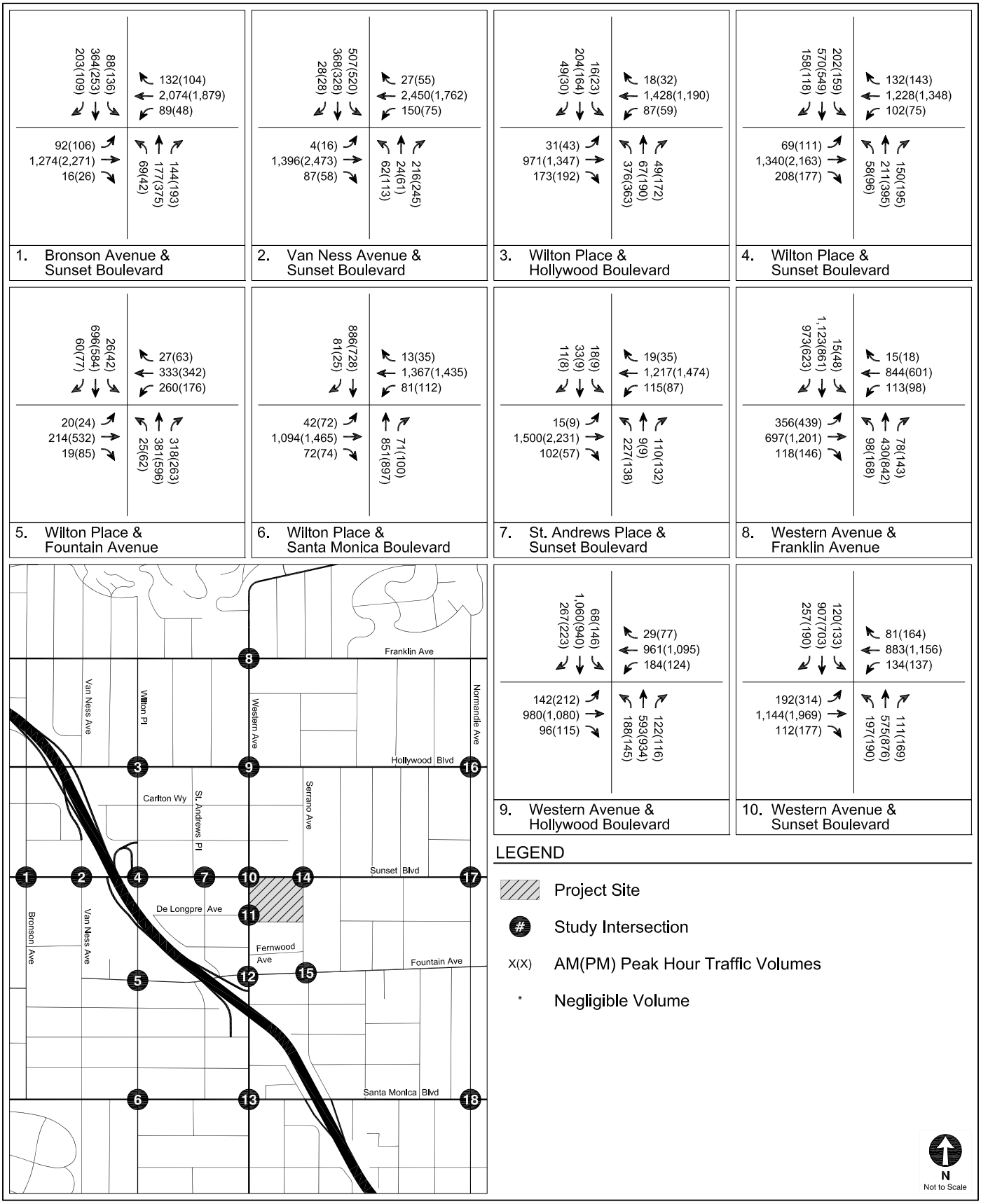
TRAFFIC VOLUMES

The Project-only morning and afternoon peak hour traffic volumes described in Chapter 4 and shown in Figure 9 were added to the Future without Project morning and afternoon peak hour traffic volumes shown in Figure 7. The resulting volumes are illustrated in Figure 11 and represent Future with Project Conditions after development of the Project in the Year 2024.

INTERSECTION LEVELS OF SERVICE

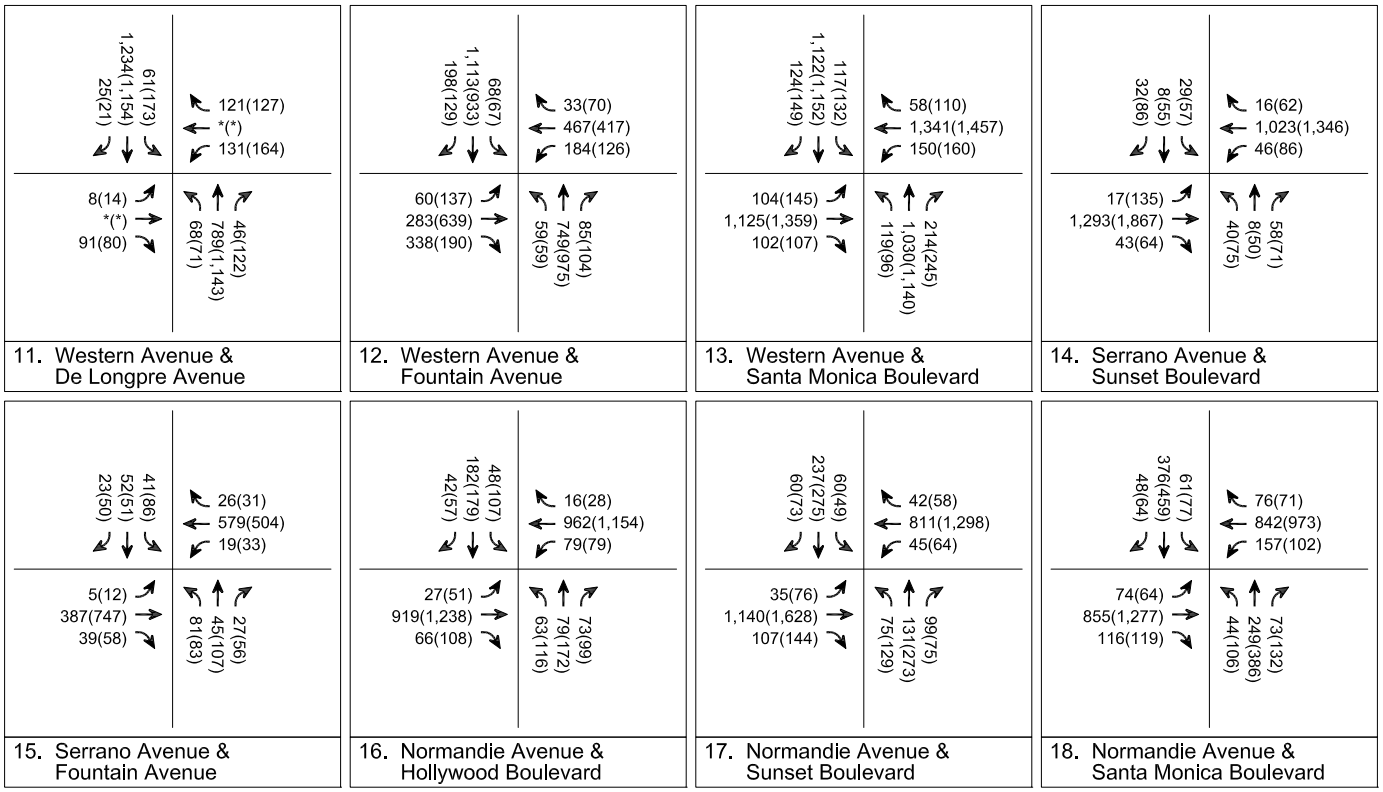
Table 10 summarizes the results of the Future with Project Conditions during the weekday morning and afternoon peak hours for the study intersections. As shown in Table 10, 11 of the 18 study intersections continue to operate at LOS D or better during both the morning and afternoon peak hours under Future with Project Conditions. The remaining seven intersections continue to operate at LOS E or F during at least one of the peak hours.

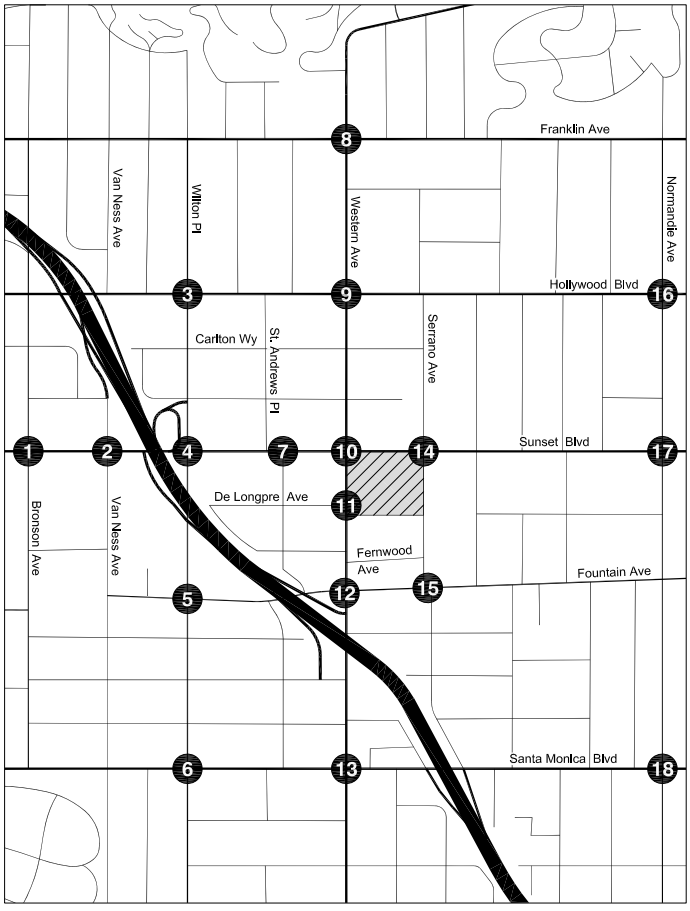
The detailed LOS calculation worksheets are provided in Appendix D.



FUTURE WITH PROJECT CONDITIONS (YEAR 2024)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 11





LEGEND

- Project Site
- # Study Intersection
- X(X) AM(PM) Peak Hour Traffic Volumes
- * Negligible Volume

N
Not to Scale

FUTURE WITH PROJECT CONDITIONS (YEAR 2024)
PEAK HOUR TRAFFIC VOLUMES

FIGURE
11 (CONT.)

TABLE 10
FUTURE WITH PROJECT CONDITIONS (YEAR 2024)
SIGNIFICANT IMPACT ANALYSIS

No.	Intersection	Peak Hour	Future without Project Conditions		Future with Project Conditions			
			V/C	LOS	V/C	LOS	Change in V/C	Impact
1.	Bronson Avenue & Sunset Boulevard	AM PM	0.871 0.779	D C	0.875 0.783	D C	0.004 0.004	NO NO
2.	Van Ness Avenue & Sunset Boulevard	AM PM	0.940 1.026	E F	0.951 1.063	E F	0.011 0.037	**YES** **YES**
3.	Wilton Place & Hollywood Boulevard	AM PM	0.918 0.953	E E	0.929 0.955	E E	0.011 0.002	**YES** NO
4.	Wilton Place & Sunset Boulevard	AM PM	0.621 0.743	B C	0.637 0.773	B C	0.016 0.030	NO NO
5.	Wilton Place & Fountain Avenue	AM PM	0.612 0.844	B D	0.611 0.842	B D	-0.001 -0.002	NO NO
6.	Wilton Place & Santa Monica Boulevard	AM PM	0.708 0.819	C D	0.711 0.821	C D	0.003 0.002	NO NO
7.	St. Andrews Place & Sunset Boulevard	AM PM	0.521 0.556	A A	0.525 0.576	A A	0.004 0.020	NO NO
8.	Western Avenue & Franklin Avenue	AM PM	0.953 0.859	E D	0.953 0.862	E D	0.000 0.003	NO NO
9.	Western Avenue & Hollywood Boulevard	AM PM	1.023 0.971	F E	1.045 0.981	F E	0.022 0.010	**YES** **YES**
10.	Western Avenue & Sunset Boulevard	AM PM	0.831 0.941	D E	0.869 0.983	D E	0.038 0.042	**YES** **YES**
11. [a]	Western Avenue & De Longpre Avenue	AM PM	0.395 0.362	A A	0.482 0.577	A A	0.087 0.215	NO NO
12.	Western Avenue & Fountain Avenue	AM PM	0.725 0.809	C D	0.750 0.815	C D	0.025 0.006	NO NO
13.	Western Avenue & Santa Monica Boulevard	AM PM	1.016 1.114	F F	1.024 1.119	F F	0.008 0.005	NO NO
14.	Serrano Avenue & Sunset Boulevard	AM PM	0.313 0.567	A A	0.317 0.569	A A	0.004 0.002	NO NO
15.	Serrano Avenue & Fountain Avenue	AM PM	0.516 0.773	A C	0.530 0.800	A C	0.014 0.027	NO NO
16.	Normandie Avenue & Hollywood Boulevard	AM PM	0.505 0.732	A C	0.505 0.731	A C	0.000 -0.001	NO NO
17.	Normandie Avenue & Sunset Boulevard	AM PM	0.491 0.686	A B	0.495 0.687	A B	0.004 0.001	NO NO
18.	Normandie Avenue & Santa Monica Boulevard	AM PM	0.678 0.903	B E	0.681 0.904	B E	0.003 0.001	NO NO

Notes
[a] Intersection will be signalized by the Future buildout Year 2024.

Chapter 7
Transportation Impact Analysis

This chapter describes the results of the intersection impact analysis for the proposed Project under Existing Conditions (Year 2017) and Future Conditions (Year 2024). The analyses measured significant intersection impacts according to the impact criteria specified by the City.

The relative impact of adding Project traffic volumes during the peak hours was evaluated based on a comparative analysis of the operating conditions at the study intersections without the Project. The previously discussed significance criteria and thresholds outlined in Chapter 1 were used to determine the significance of a transportation impact caused by the Project on the study intersections.

EXISTING WITH PROJECT CONDITIONS

As detailed in Table 9, when measuring the Existing with Project Conditions against the Existing Conditions, the incremental increase in the V/C ratios as a result of Project traffic exceed the thresholds of the LADOT significant impact criteria at the following three study intersections:

2. Van Ness Avenue & Sunset Boulevard (afternoon peak hour)
9. Western Avenue & Hollywood Boulevard (morning peak hour)
10. Western Avenue & Sunset Boulevard (afternoon peak hour)

Thus, the Project is anticipated to result in a significant transportation impact at three of the study intersections under Existing with Project Conditions, and mitigation measures are required, to the extent feasible, at those locations.

FUTURE WITH PROJECT CONDITIONS

As detailed in Table 10, when measuring the Future with Project Conditions against Future without Project Conditions, the incremental increases in the V/C ratios resulting from Project traffic exceed the thresholds of the LADOT significant impact criteria at four study intersections, as follows:

2. Van Ness Avenue & Sunset Boulevard (morning and afternoon peak hour)
3. Wilton Place & Hollywood Boulevard (morning peak hour)
9. Western Avenue & Hollywood Boulevard (morning and afternoon peak hour)
10. Western Avenue & Sunset Boulevard (morning and afternoon peak hours)

Thus, the Project is anticipated to result in a significant transportation impact at four of the study intersections under Future with Project Conditions, and mitigation measures are required, to the extent feasible, at those locations.

IMPACTS AT BOUNDARIES

As detailed above, significant impacts have been identified at the boundary of the Study Area (Intersection #2 Van Ness Avenue & Sunset Boulevard and Intersection #3 Wilton Place & Hollywood Boulevard). The Project trips entering and exiting the Study Area from those intersections, as illustrated in Figure 9, are not anticipated to result in a significant impact at the signalized intersections beyond the Study Area.

The signalized intersections bordering Van Ness Avenue & Sunset Boulevard (Intersection #2) have been included as part of the Study Area. The intersections to the north (US 101 Southbound Off-Ramp/Van Ness Avenue & Harold Way) and to the south (Van Ness Avenue & Fountain Avenue) are all-way stop-controlled intersections and were, therefore, not included as part of this analysis.

Wilton Place & Hollywood Boulevard (Intersection #3) is bordered by Wilton Place & Franklin Avenue to the north and Van Ness Avenue/US 101 Northbound Ramps & Hollywood Boulevard to the west. As shown in Figure 9, no Project trips are anticipated to travel on Wilton Place north

of Hollywood Boulevard; therefore, the intersection of Wilton Place & Franklin Avenue was not included as part of the Study Area. The Project is anticipated to add trips to the intersection of Van Ness Avenue/US 101 Northbound Ramps & Hollywood Boulevard. The intersection operates with a total intersection capacity of 1,425 (three-phase signal). Assuming the Project trips are added to the critical moves of each intersection, the incremental change in V/C ratio with the addition of the Project trips would not result in a significant impact at the intersection, regardless of the LOS.

In summary, the Project does not add enough traffic in any direction to create an additional significant impact beyond the current Study Area boundaries. Therefore, the Study Area is valid and the analysis of additional study intersections is not required.

Chapter 8

Transportation Mitigation Program

This chapter describes the transportation mitigation measures that were considered in order to mitigate the significant transportation impacts at study intersections associated with construction of the Project and to improve transportation operations in the Project vicinity. The various guidelines, methods, and assumptions mandated by LADOT, wherever applicable, have been used in the preparation of this analysis.

The various mitigation measures described in this chapter relate to the significant transportation impacts previously described with respect to both the Existing with Project (Year 2017) and the Future with Project (Year 2024) analyses presented in Chapter 7. As described in that chapter, under Existing with Project Conditions, before mitigation, the Project is anticipated to result in significant transportation impacts at the following three study intersections:

2. Van Ness Avenue & Sunset Boulevard (afternoon peak hour)
9. Western Avenue & Hollywood Boulevard (morning peak hour)
10. Western Avenue & Sunset Boulevard (afternoon peak hour)

Under Future with Project, before mitigation, the Project is expected to result in significant transportation impacts at the following four study intersections:

2. Van Ness Avenue & Sunset Boulevard (morning and afternoon peak hour)
3. Wilton Place & Hollywood Boulevard (morning peak hour)
9. Western Avenue & Hollywood Boulevard (morning and afternoon peak hour)
10. Western Avenue & Sunset Boulevard (morning and afternoon peak hours)

TRANSPORTATION MITIGATION MEASURES

The mitigation program for the Project includes the following major components:

1. Implementation of a TDM program for the Project Site to promote peak period trip reduction
2. Specific intersection improvements, including physical mitigation measures.

These mitigation measures are consistent with the City's policies and procedures that support improvements that reduce greenhouse gas emissions by reducing the use of single-occupant vehicle trips, pedestrian-friendly projects with safe and walkable sidewalks, and promote other modes of travel.

TDM PROGRAM

The TDM program outlined below details a set of strategies proposed for the Project designed to reduce peak hour vehicular traffic to and from the Project Site. It is a comprehensive program of design features, transportation services, education programs, and incentive programs intended to reduce the impact of traffic from residents, employees and visitors to the Project Site during the most congested time periods of the day. The Project shall develop and implement a TDM program to promote non-automobile travel, reduce the use of single-occupant vehicle trips, etc. The TDM program would be subject to review and approval by the City (Department of City Planning and LADOT). The strategies in the TDM program can include, but are not necessarily limited to, the following:

- Transportation Information Center, educational programs, kiosks and/or other measures
- Promotion and support of carpools and rideshare
- Bicycle amenities such as racks and showers
- Guaranteed ride home (GRH) program
- Incentives for using alternative travel modes
- Parking incentives and administrative support for formation of carpools/vanpools
- On-site TDM coordinator
- Mobility hub support
- Contribution to the City's Bicycle Plan Trust Fund for implementation of bicycle improvements in the Project area
- Participation as a member in the future Hollywood Community TMO, when operational

TDM Program Strategies

The following provides further information and description of the TDM program strategies.

Educational Programs. A key component of a successful TDM program is to make residents, employers and employees at the Project Site aware of the various programs offered. To this end, a TDM coordinator on the building management staff would reach out to residents, employers and employees directly to promote the benefits of TDM.

Transportation Information Center. A Transportation Information Center is a centrally-located commuter information center where project employees, tenants, and patrons can obtain information regarding commute programs, and individuals can obtain real-time information for planning travel without using an automobile. A Transportation Information Center would support orientation for new residents and employees and provide information about transit schedules, commute planning, rideshare, and bicycle and pedestrian plans.

Project Design Features to Promote Bicycling and Walking. A growing number of people in the City prefer to ride bicycles or walk to their employment given sufficient facilities to make the commute feel safe and convenient. The Project would incorporate features for bicyclists and pedestrians, such as exclusive access points, secured bicycle parking facilities or valet system, or a bicycle sharing or rental program. Additionally, the Project Site would be designed to be a friendly and convenient environment for pedestrians.

The Project would contribute a one-time fixed fee to be deposited into the City's Bicycle Plan Trust Fund to implement bicycle improvements in the Hollywood area.

Ridesharing Services and Transportation Assurance Programs. The TDM program would provide services to match employees together to establish carpools and vanpools, and encourage their use by providing a GRH program. Carpools/vanpools provide the potential for employees to come to work relaxed and/or work during the commute and reduce the number of vehicle trips to and from the Project Site. A GRH 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 the case of an emergency. The GRH program would

cover all employees participating in the carpool/vanpool program or using transit to and from the Project Site in the event of personal or family emergencies. The individual would be reimbursed for a taxi ride or short-term car rental. A support service such as GRH is an important part of TDM implementation that assures an individual he or she will not be "stuck" depending on a ridesharing or transit schedule in the event of an emergency.

Short-Term Car Rentals. The Project would partner with short-term car rental services such as Zip-Car or Car-to-Go, which would provide vehicles available to users for hourly rentals at strategic locations within the Hollywood area. Similar to the GRH program, this service offers assurance to users of alternative modes of transit that they have options should the need arise to leave at an unscheduled time. Short-term car rentals can be used to travel to business meetings, lunch, or in emergencies, and can provide the source of emergency transportation for those using the GRH program.

Incentives for Using Alternative Travel Modes. The Project TMC would incorporate various incentives for use of its programs. For example, eligible employees could be provided with discounted monthly transit passes for Metro rail and bus service. Carpool and vanpool users could be offered preferential load/unload areas or convenient designated parking spaces. Those who choose not to drive their own cars and park them at the Project Site could receive a "parking cash-out" subsidy. Unbundled parking is a program wherein parking spaces are rented or sold separately from the building space, which allows for a separate charge for parking and the flexibility to vary the number of spaces rented. Unbundling parking is an essential first step toward getting people to understand the economic cost of parking. Without unbundled parking, tenants and homeowners often assume that parking is free.

Mobility Hub Support. The Project would support existing and/or future efforts by LADOT to provide first-mile and last-mile service for transit users through the mobility hub program. Mobility hubs, typically located at or near public transit centers, would provide amenities such as, but not limited to, bicycle parking and rentals, shared vehicle rentals (e.g., Zip-Car), and transit information. The Project would provide space for similar amenities at the Project Site to complement future mobility hubs in the Study Area.

Hollywood Community TMO. The Hollywood community is a strong candidate for alternative modes of transportation, including convenient walking and bicycling, carpooling and vanpooling,

use of public transit, short-term automobile rentals, etc. At present, there is no organization to administrate these options to the public. A TMO is an organization that helps to promote these services to a community by providing information about available public transportation options and matching people into ridesharing services. The developers of various approved projects in the Hollywood Area, along with LADOT and stakeholders, have proposed to initiate a Hollywood TMO. Many of the strategies described above could be enhanced through participation in the Hollywood TMO. Should the Hollywood TMO become operational, the Project would become a member of and participate in the TMO. The Hollywood TMO's services could replace some of the in-house TDM services where applicable, such as matching services for multi-employer carpools and vanpools (for example, ridesharing registries by which users can find people to share in a carpool or vanpool are much more effective with a larger pool of potential candidates).

Project Trip Reduction from the TDM Program

The combined effect of the various strategies implemented as part of the TDM program would result in a reduction in peak hour trip generation by offering services, actions, specific facilities, etc., aimed at encouraging use of alternative transportation modes (e.g., transit, bus, walking, bicycling, carpool, etc.) *Trip Generation Handbook, 3rd Edition* (Institute of Transportation Engineers, August 2014) provides a summary of research regarding TDM programs at many different employers. At places that had the most comprehensive programs, including both economic incentives (e.g., transit passes, etc.) and support services, the programs resulted in an average 24% reduction in commuter vehicles. Thus, as an achievable but conservative estimate, an overall TDM trip reduction credit of 10% was assumed for the residential and shopping center uses within the Project.

Table 11 summarizes the estimated trip reduction during the peak hours. As shown, the TDM program is expected to result in a reduction of 454 daily trips, including a reduction of 33 trips during the morning peak hour and a reduction of 41 trips during the afternoon peak hour. The Project, when fully built and occupied and with implementation of the TDM program, would generate a net total of 1,915 daily trips, including 179 during the morning peak hour (two inbound, 177 outbound) and 187 during the afternoon peak hour (138 inbound, 49 outbound).

The trip generation estimates with peak hour trip reductions from the TDM program were assigned through the study intersections using the trip distribution patterns illustrated in Figures 8A and 8B. The Project-only morning and afternoon peak hour traffic volumes after implementation of the TDM program as part of the Project's mitigation are shown in Figure 12.

SPECIFIC INTERSECTION IMPROVEMENT MEASURES

Intersection improvements designed to alleviate the significant impacts of the Project consist of physical improvements, such as widening or restriping. Widening and/or other improvements to the intersections would be designed to meet the requirements of LADOT, the City of Los Angeles Bureau of Engineering, and/or Caltrans, based on the jurisdiction responsible for the intersections.

The intersection improvements discussed below were considered at study intersections where the Project would result in a significant transportation impact that would not be mitigated to a level of insignificance with the implementation of the TDM program.

Proposed Physical Improvement Measures

The following is a description of the proposed intersection mitigation measures:

2. Van Ness Avenue & Sunset Boulevard. Although implementation of the TDM program would reduce the transportation impact identified at this intersection, the impact would still remain significant without additional physical improvement measures. The significant transportation impact at this intersection could be mitigated and reduced to less than significant levels by providing an additional southbound left-turn lane. In order to accommodate dual left-turn lanes, the traffic signal would be required to provide protected southbound left-turn phasing. The physical improvement could be accommodated within the existing right-of-way. Excess width exists on the eastern half of Van Ness Avenue at this location, so the additional left-turn lane could be installed by shifting the centerline to the east, north of Sunset Boulevard. Approximately seven unmetered on-street parking spaces on the east side of Van Ness Avenue would need to be removed. Should this improvement be determined to be infeasible during the

design process, the impact at the intersection would remain and be considered significant and unavoidable. A conceptual plan of the improvement is provided in Appendix F.

9. Western Avenue & Hollywood Boulevard. Although implementation of the TDM program would reduce the transportation impact identified at this intersection, the impact would still remain significant without additional physical improvement measures. The significant transportation impact at this intersection could be mitigated and reduced to less than significant levels by providing a dedicated right-turn lane on the southbound approach. Sufficient width exists within the existing right-of-way along the west edge of Western Avenue to accommodate the additional lane. No parking is allowed in this area, so no parking removal would be necessary. Should this improvement be determined to be infeasible during the design process, the impact at the intersection would remain and be considered significant and unavoidable. A conceptual plan of the improvement is provided in Appendix F.

10. Western Avenue & Sunset Boulevard. Although implementation of the TDM program would reduce the transportation impact identified at this intersection, the impact would still remain significant without additional physical improvement measures. The significant transportation impact at this intersection could be mitigated and reduced to less than significant levels by providing an additional northbound left-turn lane along the Project's Western Avenue frontage. This improvement cannot be accommodated within the existing right-of-way or roadway width and thus would require widening along the Project frontage. Should this improvement be determined to be infeasible during the design process, the impact at the intersection would remain and be considered significant and unavoidable. A conceptual plan of the improvement is provided in Appendix F.

Secondary Impact Analysis

Based on discussions with LADOT, additional analyses were conducted to evaluate the potential secondary impacts to traffic flow along Sunset Boulevard that may result from the proposed physical improvement at Van Ness Avenue & Sunset Boulevard and Western Avenue & Sunset Boulevard.

The overall operations of Sunset Boulevard between Bronson Avenue and Normandie Avenue with and without installation of the physical improvements detailed above were evaluated using Synchro software. The simulation was based on actual signal timing information provided by LADOT. As detailed in the Synchro analysis worksheets provided in Appendix G, the overall corridor delay and travel time with the proposed physical improvements would improve during the morning peak hour in the eastbound direction, while increasing in the westbound direction. The corridor delay and travel time in both the eastbound and westbound directions would increase during the afternoon peak hours. Should LADOT determine that the increases in delay and travel time in the westbound direction outweigh the improvements in the eastbound direction, then the impacts at the intersections of Van Ness Avenue & Sunset Boulevard (Intersection #2) and Western Avenue & Sunset Boulevard (Intersection #10) would remain significant and unavoidable.

MITIGATION EFFECTIVENESS

The components of the Project's mitigation program described above would result in peak hour trip reductions from the implementation of the TDM program, as well as operational improvements resulting from the specific intersection improvements. The effectiveness of the proposed transportation mitigation program was analyzed by applying the appropriate trip generation reductions and capacity enhancements from the implementation of the mitigation measures. This results in the Existing with Project with Mitigation and Future with Project with Mitigation Conditions. The intersections were analyzed using the methodology described in Chapter 1.

The trip generation estimates with peak hour trip reductions from the TDM program were assigned through the study intersections using the trip distribution patterns illustrated in Figures 8A and 8B. The Project-only morning and afternoon peak hour traffic volumes, after implementation of the Project's mitigation program, are shown in Figure 12. The Project-only with Mitigation traffic volumes illustrated in Figure 12 were added to the Existing morning and afternoon peak hour traffic volumes shown in Figure 4, resulting in the Existing with Project with Mitigation (Year 2017) traffic volumes, illustrated in Figure 13. The Project-only with Mitigation traffic volumes illustrated in Figure 12 were added to the Future without Project morning and

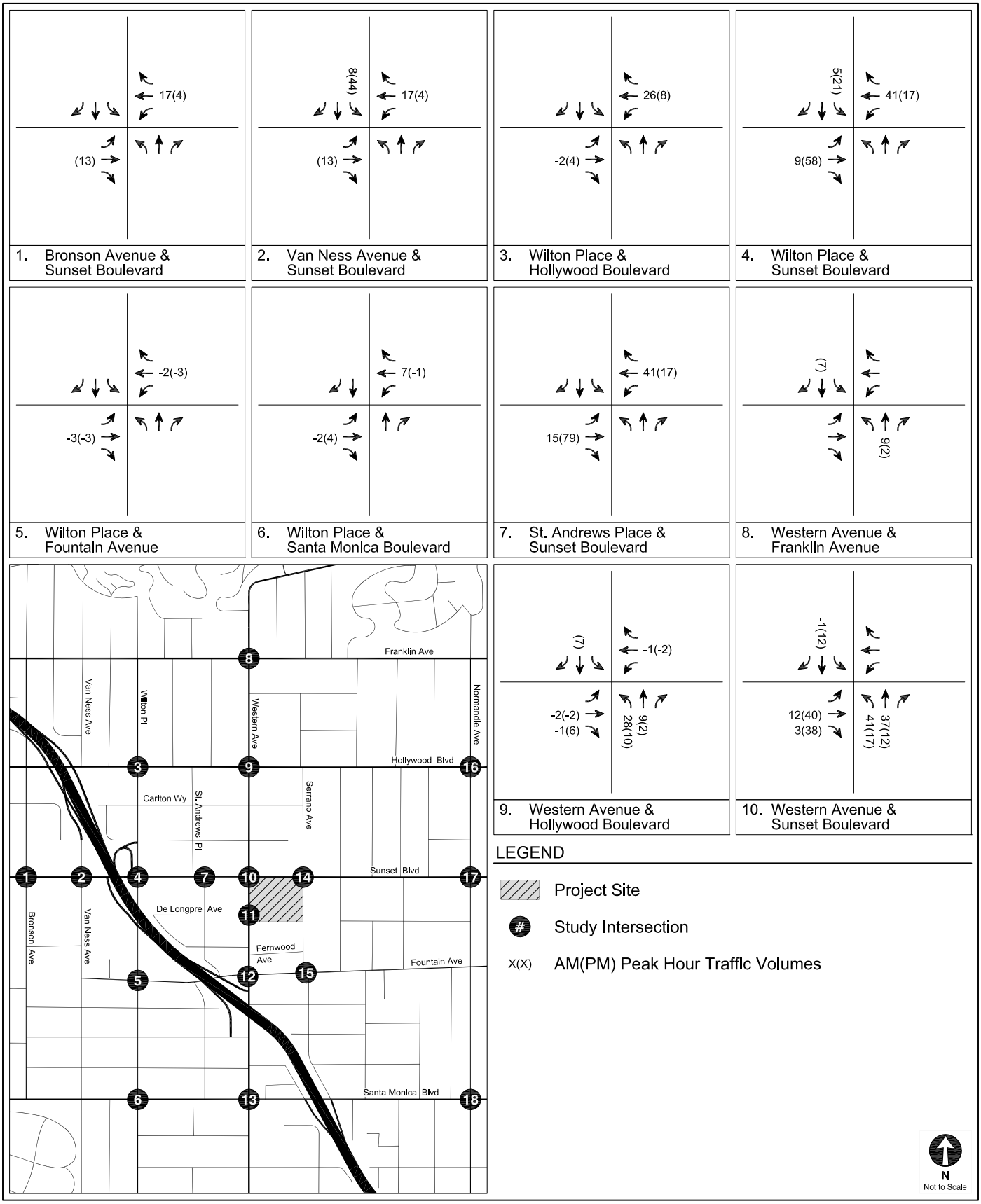
afternoon peak hour traffic volumes shown in Figure 7, resulting in the Future with Project with Mitigation (Year 2024) traffic volumes, illustrated in Figure 14.

EXISTING WITH PROJECT WITH MITIGATION CONDITIONS

Table 12 summarizes the results of the Existing with Project with Mitigation Conditions during the weekday morning and afternoon peak hours for the study intersections. As shown in Table 12, after mitigation, all three significantly impacted study intersections would be fully mitigated.

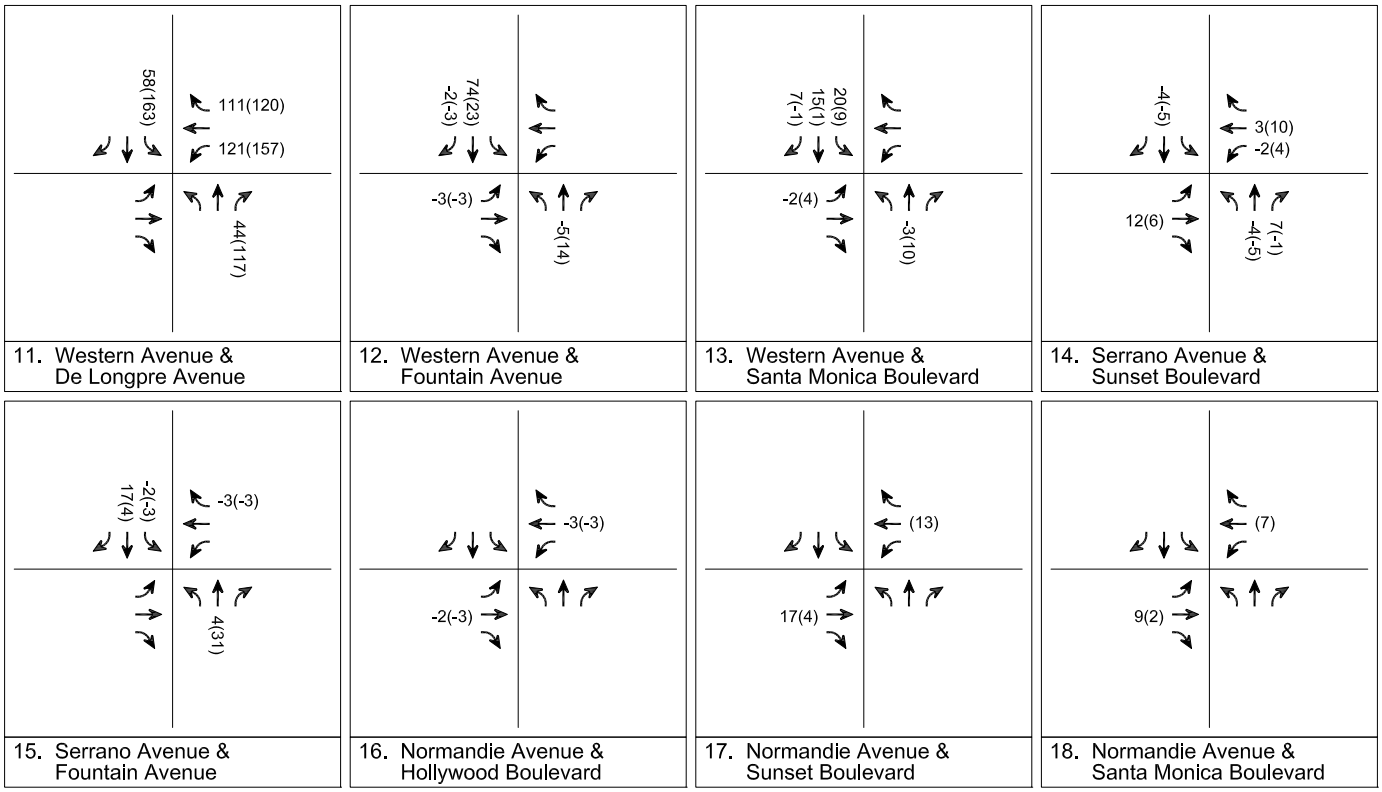
FUTURE WITH PROJECT WITH MITIGATION CONDITIONS

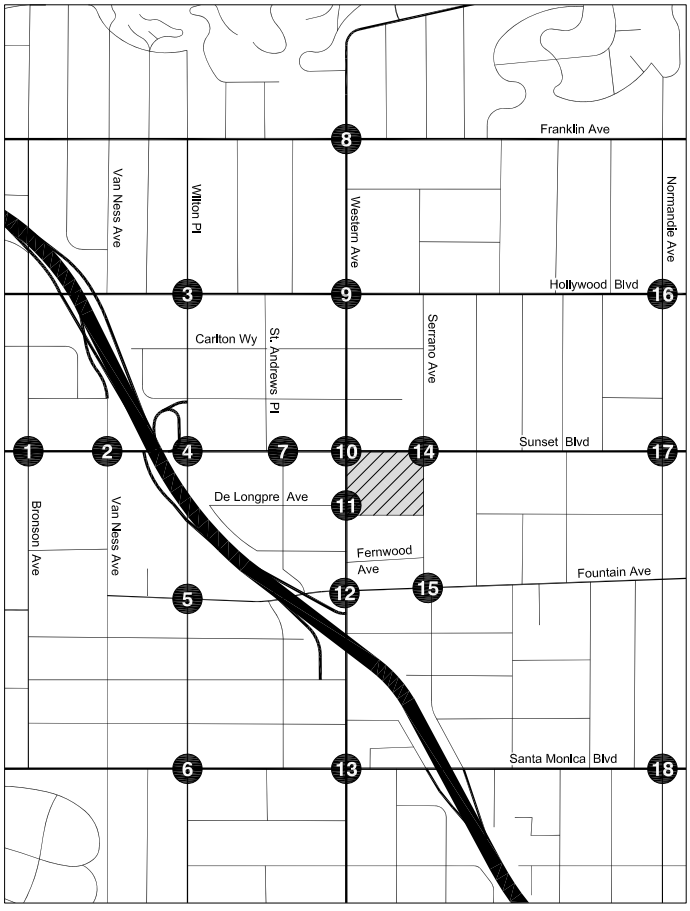
Table 13 summarizes the results of the Future with Project with Mitigation Conditions during the weekday morning and afternoon peak hours for the study intersections. As shown in Table 13, all four significantly impacted study intersections would be fully mitigated.



PROJECT-ONLY WITH MITIGATION
PEAK HOUR TRAFFIC VOLUMES

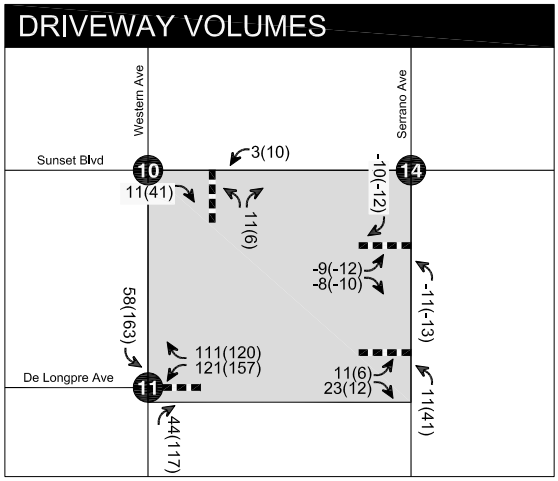
FIGURE
12





LEGEND

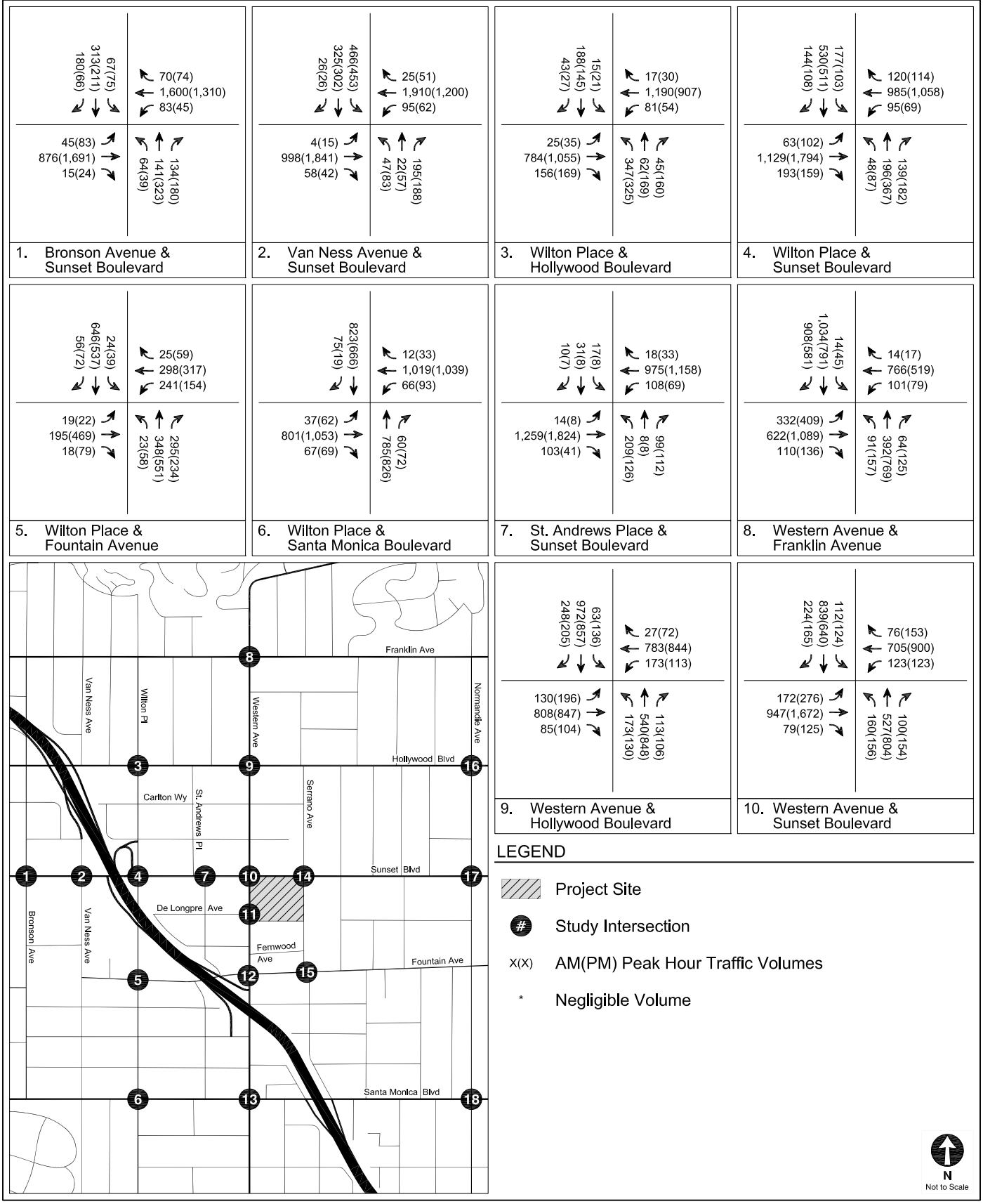
- Project Site
- # Study Intersection
- X(X) AM(PM) Peak Hour Traffic Volumes



N
Not to Scale

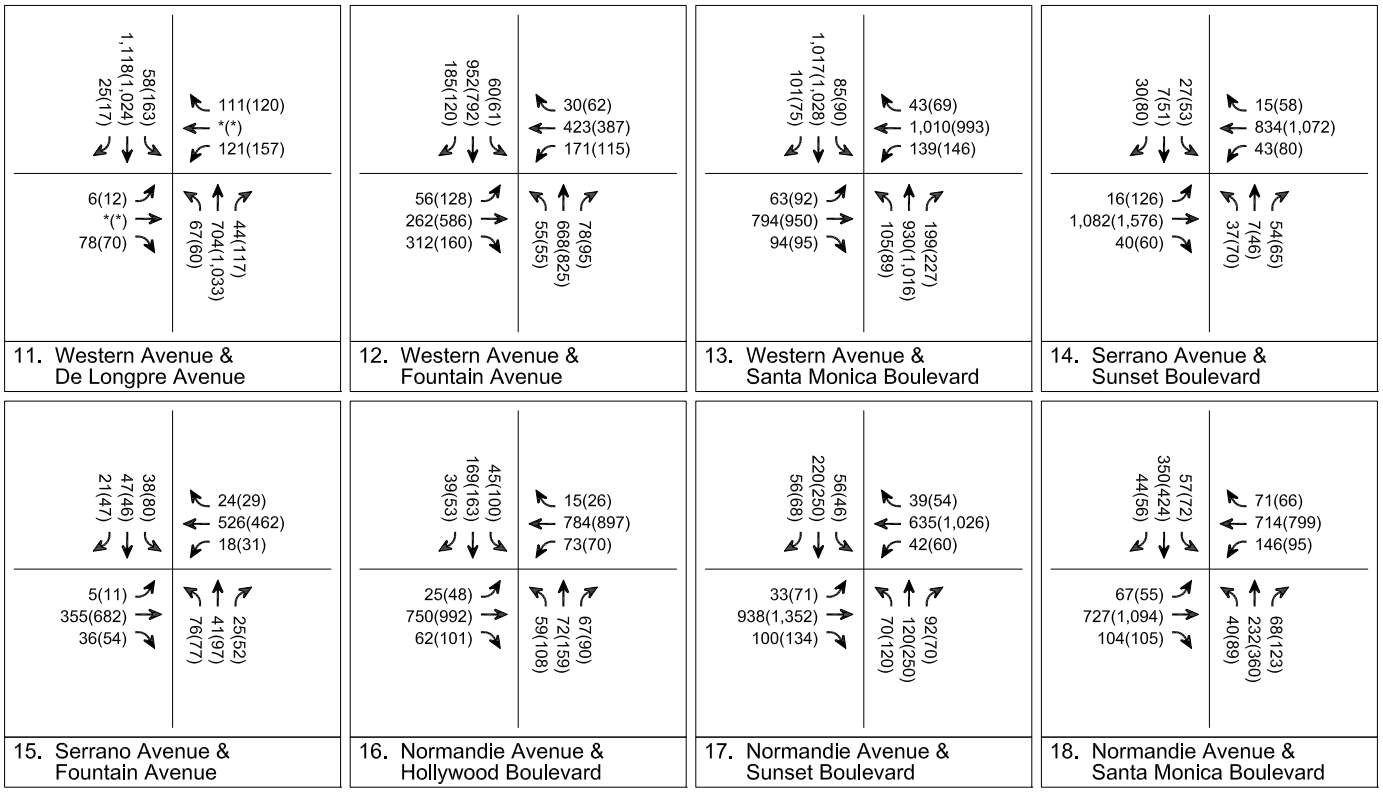
PROJECT-ONLY WITH MITIGATION
PEAK HOUR TRAFFIC VOLUMES

FIGURE
12 (CONT.)



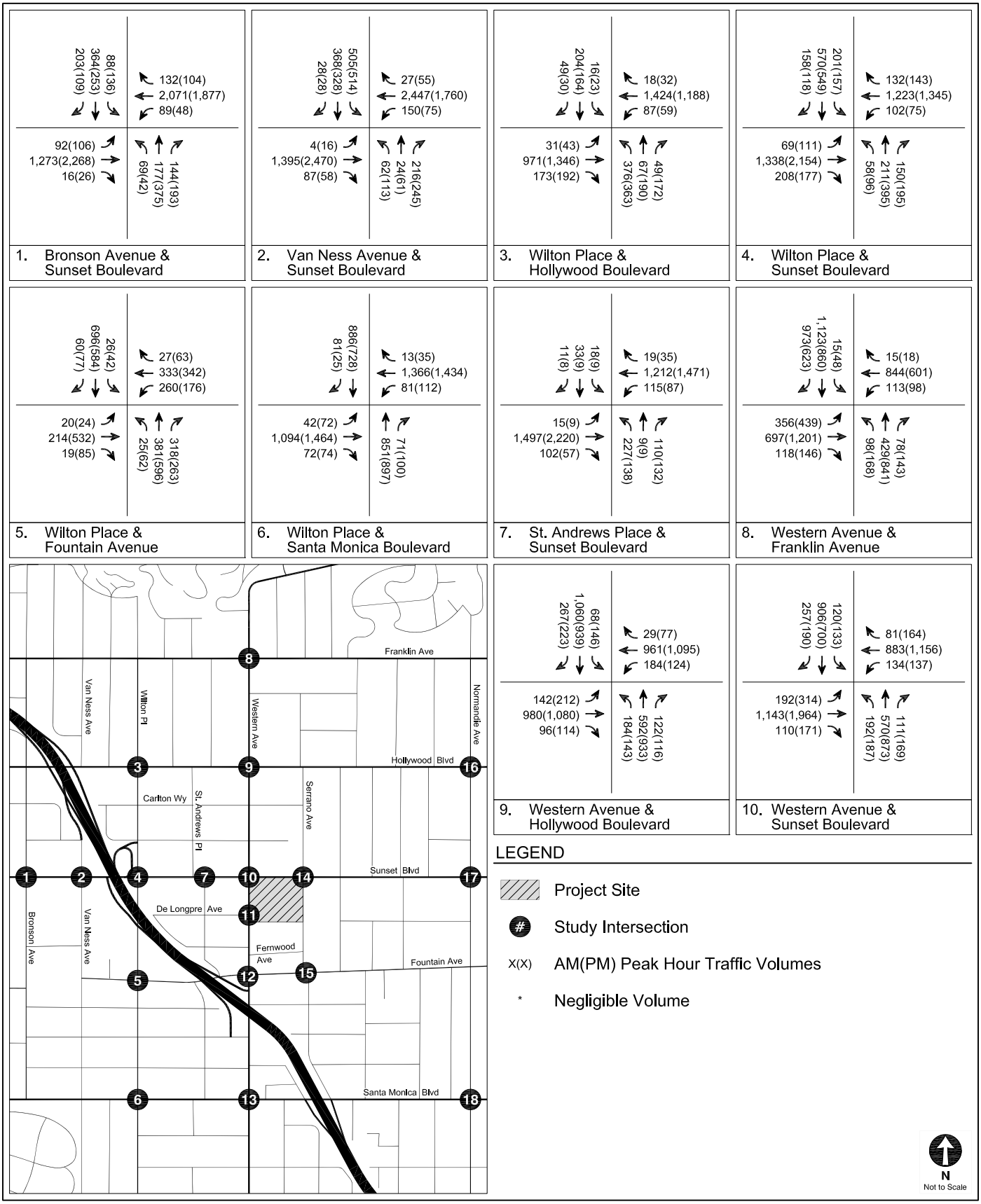
EXISTING WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2017)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 13



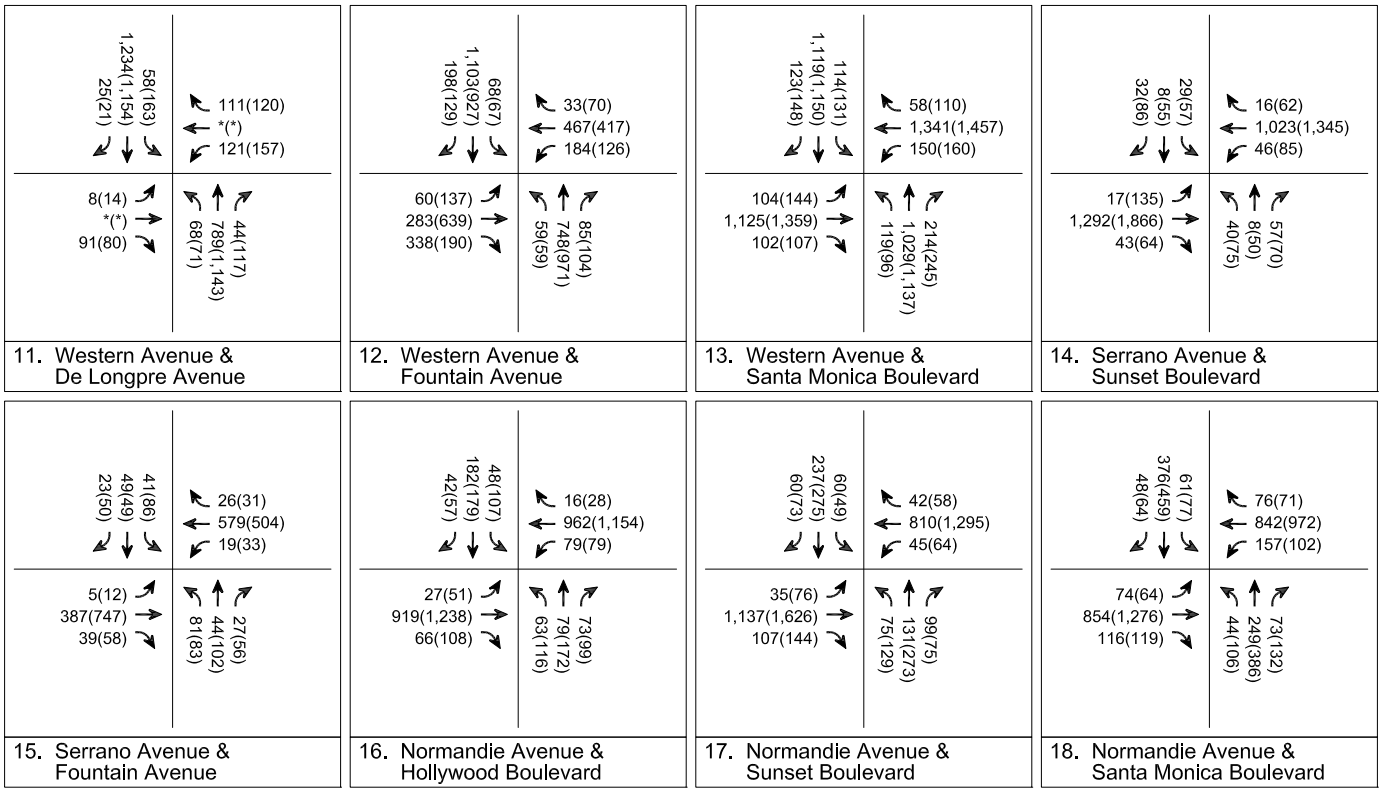
EXISTING WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2017)
PEAK HOUR TRAFFIC VOLUMES

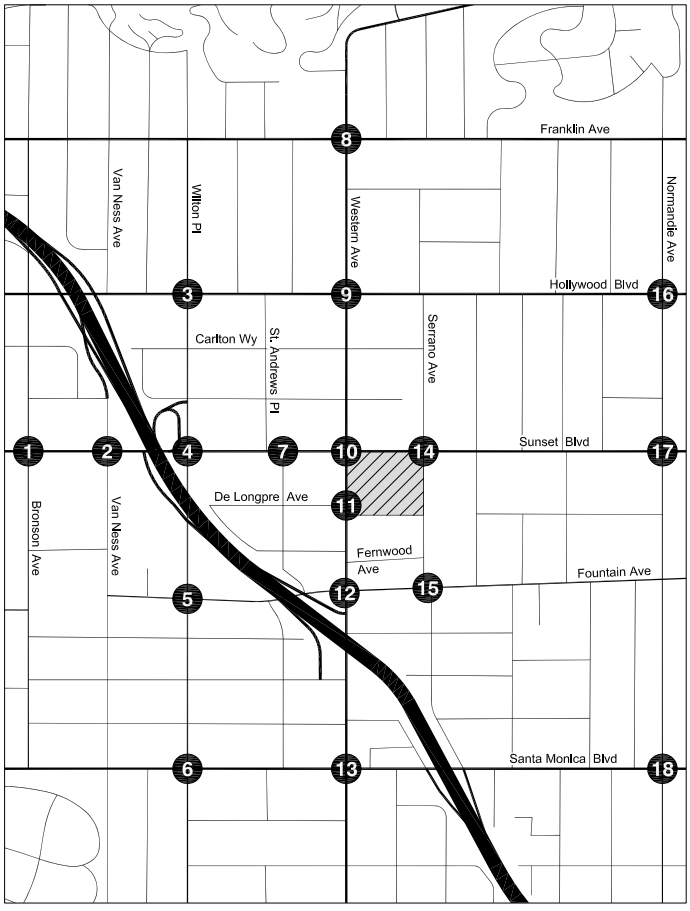
FIGURE
13 (CONT.)



FUTURE WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2024)
PEAK HOUR TRAFFIC VOLUMES

FIGURE 14





LEGEND

- Project Site
- # Study Intersection
- X(X) AM(PM) Peak Hour Traffic Volumes
- * Negligible Volume

N
Not to Scale

FUTURE WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2024)
PEAK HOUR TRAFFIC VOLUMES

FIGURE
14 (CONT.)

TABLE 11
PROJECT TRIP GENERATION ESTIMATES WITH TDM PROGRAM

Land Use	ITE Land Use Code	Size	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Existing Uses to be Removed [a]									
Commercial	820	18,525 sf	336	4	3	7	14	15	29
Supermarket	850	78,328 sf	4,084	84	52	136	193	186	379
Fast-Food Restaurant	934	3,943 sf	831	38	38	76	28	27	55
TOTAL - EXISTING USES TO BE REMOVED			**5,251**	**126**	**93**	**219**	**235**	**228**	**463**
Proposed Project [a]									
Apartments	220	735 du	3,968	63	252	315	227	131	358
Supermarket	850	59,100 sf	3,082	64	39	103	146	140	286
Shopping Center - Retail/Restaurant	820	36,720 sf	570	8	5	13	26	21	47
TOTAL - PROPOSED PROJECT			**7,620**	**135**	**296**	**431**	**399**	**292**	**691**
NET NEW PROJECT TRIPS, PRIOR TO TDM PROGRAM			**2,369**	**9**	**203**	**212**	**164**	**64**	**228**
TDM Program Reduction									
Apartment - Less 10% TDM Reduction	220	735 du	(397)	(6)	(25)	(31)	(23)	(13)	(36)
Shopping Center - Less 10% TDM Reduction	820	36,720 sf	(57)	(1)	(1)	(2)	(3)	(2)	(5)
TOTAL - TDM PROGRAM REDUCTION			**(454)**	**(7)**	**(26)**	**(33)**	**(26)**	**(15)**	**(41)**
NET NEW PROJECT TRIPS WITH TDM PROGRAM			**1,915**	**2**	**177**	**179**	**138**	**49**	**187**

Notes
du = Dwelling Unit
sf = Square Feet
[a] See Table 8 for calculations of trip generation estimates, prior to mitigaiton.

TABLE 12
EXISTING WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2017)
SIGNIFICANT IMPACT ANALYSIS

No.	Intersection	Peak Hour	Existing Conditions		Existing with Project Conditions				Existing with Project with Mitigation Conditions			
			V/C	LOS	V/C	LOS	Change in V/C	Impact	V/C	LOS	Change in V/C	Impact
1.	Bronson Avenue & Sunset Boulevard	AM	0.669	B	0.673	B	0.004	NO	1.191	F	0.522	YES
		PM	0.693	B	0.697	B	0.004	NO	0.697	B	0.004	NO
2.	Van Ness Avenue & Sunset Boulevard	AM	0.779	C	0.790	C	0.011	NO	0.648	B	-0.131	NO
		PM	0.793	C	0.830	D	0.037	**YES**	0.689	B	-0.104	NO
3.	Wilton Place & Hollywood Boulevard	AM	0.792	C	0.802	D	0.010	NO	0.801	D	0.009	NO
		PM	0.789	C	0.791	C	0.002	NO	0.791	C	0.002	NO
4.	Wilton Place & Sunset Boulevard	AM	0.513	A	0.529	A	0.016	NO	0.527	A	0.014	NO
		PM	0.632	B	0.647	B	0.015	NO	0.645	B	0.013	NO
5.	Wilton Place & Fountain Avenue	AM	0.553	A	0.551	A	-0.002	NO	0.551	A	-0.002	NO
		PM	0.750	C	0.748	C	-0.002	NO	0.748	C	-0.002	NO
6.	Wilton Place & Santa Monica Boulevard	AM	0.565	A	0.568	A	0.003	NO	0.568	A	0.003	NO
		PM	0.634	B	0.636	B	0.002	NO	0.635	B	0.001	NO
7.	St. Andrews Place & Sunset Boulevard	AM	0.449	A	0.453	A	0.004	NO	0.453	A	0.004	NO
		PM	0.442	A	0.462	A	0.020	NO	0.460	A	0.018	NO
8.	Western Avenue & Franklin Avenue	AM	0.875	D	0.875	D	0.000	NO	0.875	D	0.000	NO
		PM	0.771	C	0.774	C	0.003	NO	0.774	C	0.003	NO
9.	Western Avenue & Hollywood Boulevard	AM	0.901	E	0.923	E	0.022	**YES**	0.830	D	-0.071	NO
		PM	0.821	D	0.832	D	0.011	NO	0.757	C	-0.064	NO
10.	Western Avenue & Sunset Boulevard	AM	0.708	C	0.746	C	0.038	NO	0.689	B	-0.019	NO
		PM	0.796	C	0.837	D	0.041	**YES**	0.808	D	0.012	NO
11. [a]	Western Avenue & De Longpre Avenue	AM	--	N/A	--	N/A	N/A	NO	--	N/A	N/A	NO
		PM	--	N/A	--	N/A	N/A	NO	--	N/A	N/A	NO
12.	Western Avenue & Fountain Avenue	AM	0.633	B	0.659	B	0.026	NO	0.655	B	0.022	NO
		PM	0.710	C	0.716	C	0.006	NO	0.715	C	0.005	NO
13.	Western Avenue & Santa Monica Boulevard	AM	0.805	D	0.813	D	0.008	NO	0.812	D	0.007	NO
		PM	0.818	D	0.821	D	0.003	NO	0.819	D	0.001	NO
14.	Serrano Avenue & Sunset Boulevard	AM	0.258	A	0.262	A	0.004	NO	0.261	A	0.003	NO
		PM	0.485	A	0.487	A	0.002	NO	0.486	A	0.001	NO
15.	Serrano Avenue & Fountain Avenue	AM	0.465	A	0.479	A	0.014	NO	0.476	A	0.011	NO
		PM	0.704	C	0.731	C	0.027	NO	0.726	C	0.022	NO
16.	Normandie Avenue & Hollywood Boulevard	AM	0.428	A	0.427	A	-0.001	NO	0.427	A	-0.001	NO
		PM	0.617	B	0.616	B	-0.001	NO	0.616	B	-0.001	NO
17.	Normandie Avenue & Sunset Boulevard	AM	0.423	A	0.427	A	0.004	NO	0.427	A	0.004	NO
		PM	0.593	A	0.595	A	0.002	NO	0.594	A	0.001	NO
18.	Normandie Avenue & Santa Monica Boulevard	AM	0.599	A	0.602	B	0.003	NO	0.602	B	0.003	NO
		PM	0.790	C	0.791	C	0.001	NO	0.791	C	0.001	NO

Notes
[a] Intersection is unsignalized under Existing Conditions.

TABLE 13
FUTURE WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2024)
SIGNIFICANT IMPACT ANALYSIS

No.	Intersection	Peak Hour	Future without Project Conditions		Future with Project Conditions				Future with Project with Mitigation Conditions			
			V/C	LOS	V/C	LOS	Change in V/C	Impact	V/C	LOS	Change in V/C	Impact
1.	Bronson Avenue & Sunset Boulevard	AM PM	0.871 0.779	D C	0.875 0.783	D C	0.004 0.004	NO NO	0.875 0.783	D C	0.004 0.004	NO NO
2.	Van Ness Avenue & Sunset Boulevard	AM PM	0.940 1.026	E F	0.951 1.063	E F	0.011 0.037	**YES** **YES**	0.798 0.905	C E	-0.142 -0.121	NO NO
3.	Wilton Place & Hollywood Boulevard	AM PM	0.918 0.953	E E	0.929 0.955	E E	0.011 0.002	**YES** NO	0.927 0.954	E E	0.009 0.001	NO NO
4.	Wilton Place & Sunset Boulevard	AM PM	0.621 0.743	B C	0.637 0.773	B C	0.016 0.030	NO NO	0.635 0.769	B C	0.014 0.026	NO NO
5.	Wilton Place & Fountain Avenue	AM PM	0.612 0.844	B D	0.611 0.842	B D	-0.001 -0.002	NO NO	0.611 0.842	B D	-0.001 -0.002	NO NO
6.	Wilton Place & Santa Monica Boulevard	AM PM	0.708 0.819	C D	0.711 0.821	C D	0.003 0.002	NO NO	0.711 0.820	C D	0.003 0.001	NO NO
7.	St. Andrews Place & Sunset Boulevard	AM PM	0.521 0.556	A A	0.525 0.576	A A	0.004 0.020	NO NO	0.525 0.573	A A	0.004 0.017	NO NO
8.	Western Avenue & Franklin Avenue	AM PM	0.953 0.859	E D	0.953 0.862	E D	0.000 0.003	NO NO	0.953 0.861	E D	0.000 0.002	NO NO
9.	Western Avenue & Hollywood Boulevard	AM PM	1.023 0.971	F E	1.045 0.981	F E	0.022 0.010	**YES** **YES**	0.944 0.899	E D	-0.079 -0.072	NO NO
10.	Western Avenue & Sunset Boulevard	AM PM	0.831 0.941	D E	0.869 0.983	D E	0.038 0.042	**YES** **YES**	0.802 0.932	D E	-0.029 -0.009	NO NO
11. [a]	Western Avenue & De Longpre Avenue	AM PM	0.395 0.362	A A	0.482 0.577	A A	0.087 0.215	NO NO	0.475 0.563	A A	0.080 0.201	NO NO
12.	Western Avenue & Fountain Avenue	AM PM	0.725 0.809	C D	0.750 0.815	C D	0.025 0.006	NO NO	0.747 0.813	C D	0.022 0.004	NO NO
13.	Western Avenue & Santa Monica Boulevard	AM PM	1.016 1.114	F F	1.024 1.119	F F	0.008 0.005	NO NO	1.023 1.117	F F	0.007 0.003	NO NO
14.	Serrano Avenue & Sunset Boulevard	AM PM	0.313 0.567	A A	0.317 0.569	A A	0.004 0.002	NO NO	0.317 0.567	A A	0.004 0.000	NO NO
15.	Serrano Avenue & Fountain Avenue	AM PM	0.516 0.773	A C	0.530 0.800	A C	0.014 0.027	NO NO	0.527 0.795	A C	0.011 0.022	NO NO
16.	Normandie Avenue & Hollywood Boulevard	AM PM	0.505 0.732	A C	0.505 0.731	A C	0.000 -0.001	NO NO	0.505 0.731	A C	0.000 -0.001	NO NO
17.	Normandie Avenue & Sunset Boulevard	AM PM	0.491 0.686	A B	0.495 0.687	A B	0.004 0.001	NO NO	0.495 0.687	A B	0.004 0.001	NO NO
18.	Normandie Avenue & Santa Monica Boulevard	AM PM	0.678 0.903	B E	0.681 0.904	B E	0.003 0.001	NO NO	0.681 0.904	B E	0.003 0.001	NO NO

Notes
[a] Intersection will be signalized by the Future buildout Year 2024.

Chapter 9

Residential Street Segment Analysis

This section presents an analysis of the potential impacts to neighborhoods in the vicinity of the Project, in accordance with the methodology identified in *Transportation Impact Study Guidelines*.

STREET SEGMENT TRAFFIC VOLUMES

Street segment ADT counts during the typical weekday were conducted at the street segment of Serrano Avenue between Fernwood Avenue and Fountain Avenue in June 2016, and are illustrated in Figure 15.

The Future without Project street segment volume was estimated by applying an ambient growth factor to the anticipated year of project buildout and the addition of Related Project traffic to the Existing street segment traffic volume, and is illustrated in Figure 15.

Project traffic volumes were added to the Existing and Future without Project ADT volumes to estimate the Existing with Project and Future with Project ADT volumes, as illustrated in Figure 15. It should be noted that, for the purposes of this analysis, the trips generated by the residential uses of the Project were not considered as part of the evaluation of cut-through traffic on residential streets.

The summary data worksheets of the study street segment ADT volumes are available in Appendix C.

SUMMARY OF STREET SEGMENT ANALYSIS

The analysis of the study street segments are provided in Tables 14 and 15 for Existing with Project Conditions and Future with Project Conditions, respectively. As shown, the Project results in a reduction of non-residential traffic on the analyzed residential street segment and application of the LADOT significant impact criteria to the Existing with Project and Future with Project scenario indicates that the Project is not anticipated to result in a significant impact at the study street segment.

RESIDENTIAL STREET SEGMENT AVERAGE DAILY TRAFFIC VOLUMES

FIGURE 15

TABLE 14
STREET SEGMENT ANALYSIS
EXISTING WITH PROJECT CONDITIONS (YEAR 2017)

No.	Street Segment	Average Daily Traffic Volumes			Change in ADT	Impact [b]
		Existing	Project Only [a]	Existing with Project		
1.	Serrano Avenue between Fernwood Avenue and Fountain Avenue	3,145	-128	3,017	-4.1%	NO

Notes

[a] Residential trips were not included in the street segment analysis.

[b] Based on *Traffic Study Policies and Procedures* (LADOT, August 2014), a local residential street shall be deemed significantly impacted based on an increase in the projected ADT volumes as follows:

Projected ADT with Project (Final ADT)	Related Increase in ADT
0 to 999	120 or more
1,000 to 1,999	6 or more of final ADT
2,000 to 2,999	6 or more of final ADT
3,000 or more	or more of final ADT

TABLE 15
STREET SEGMENT ANALYSIS
FUTURE WITH PROJECT CONDITIONS (YEAR 2024)

No.	Street Segment	Average Daily Traffic Volumes					Change in ADT	Impact [b]
		Existing	Ambient Growth	Future without Project	Project Only [a]	Future with Project		
1.	Serrano Avenue between Fernwood Avenue and Fountain Avenue	3,145	227	3,372	-128	3,244	-3.8%	NO

Notes

[a] Residential trips were not included in the street segment analysis.

[b] Based on *Traffic Study Policies and Procedures* (LADOT, August 2014), a local residential street shall be deemed significantly impacted based on an increase in the projected ADT volumes as follows:

Projected ADT with Project (Final ADT)	Project-Related Increase in ADT
0 to 999	120 or more
1,000 to 1,999	12% or more of final ADT
2,000 to 2,999	10% or more of final ADT
3,000 or more	8% or more of final ADT

Chapter 10

Congestion Management Program Analysis

This chapter presents an analysis of the regional transportation facilities in the vicinity of the Project Site, in accordance with the procedures outlined in the CMP.

TRAFFIC IMPACT ANALYSIS GUIDELINES

The CMP requires that TIAs be performed on three types of facilities:

- Arterial Intersections
- Mainline Freeway Segments
- The Public Transit System

The CMP identifies specific arterial and freeway mainline locations for analysis.

Arterial Monitoring Intersection TIA Guidelines

The CMP requires that a TIA be performed for all CMP arterial monitoring intersections where a project would add 50 or more trips during either the weekday morning or afternoon peak hours. A detailed analysis is not required if the project adds fewer than 50 trips to an arterial monitoring intersection. The CMP analysis uses the same CMA methodology as used in earlier chapters for City intersections to determine intersection V/C ratio and LOS. A significant impact requiring mitigation occurs if project traffic causes an incremental increase in intersection V/C ratio of 0.02 or greater to a facility projected to operate at LOS F (V/C > 1.00) after the addition of project traffic.

Mainline Freeway Monitoring Location TIA Guidelines

The CMP requires that a TIA be performed for all CMP mainline freeway monitoring locations where a project would add 150 or more trips (in either direction) during the weekday morning or afternoon peak hours. A detailed analysis is not required if the project adds fewer than 150 trips to a mainline freeway monitoring location (in either direction) during either the weekday morning or afternoon peak hour. The CMP analysis uses a demand-to-capacity (D/C) ratio to determine facility LOS based on capacity identified in Appendix A of the CMP. Similar to arterial monitoring intersections, a significant impact requiring mitigation occurs if project traffic causes an incremental increase in intersection D/C ratio of 0.02 or greater to a facility projected to operate at LOS F (D/C > 1.00) after the addition of project traffic.

Transit Impact Review Guidelines

The CMP requires that a transit system analysis be performed to determine whether a project would increase transit ridership beyond the current capacity of the transit system.

ARTERIAL MONITORING STATION ANALYSIS

The CMP identifies the following arterial monitoring intersection within approximately 1.5 miles of the Study Area:

- Santa Monica Boulevard & Western Avenue (0.5 miles south of the Project Site)

At this intersection, the Project is expected to result in net increases of 45 trips during the morning peak hour and 31 trips during the afternoon peak hour. The Project would add fewer than 50 peak hour trips at the arterial monitoring intersections nearest the Project Study Area. Therefore, the Project's CMP arterial intersection impacts are considered to be less than significant and no further analysis is required.

FREEWAY SEGMENT ANALYSIS

The CMP identifies one mainline freeway monitoring location within the vicinity of the Project Site. The monitoring location is on US 101 south of Santa Monica Boulevard, approximately 0.75 miles southeast of the Project Site. At this location, the Project is expected to result in increases of 10 northbound trips and 58 southbound trips during the morning peak hour and increases of 50 northbound trips and 26 southbound trips during the afternoon peak hour. The Project would add fewer than 150 trips on the mainline freeway monitoring location in either direction during either peak hour. Therefore, the Project's CMP mainline freeway impacts are considered to be less than significant and no further analysis is required.

REGIONAL TRANSIT IMPACT ANALYSIS

Section B.8.4 of the CMP provides a methodology for estimating the number of transit trips expected to result from a proposed project based on the number of vehicle trips. This methodology assumes an average vehicle occupancy (AVO) factor of 1.4 in order to estimate the number of person trips to and from the Project and guidance regarding the percentage of Project person trips that may use public transit to travel to and from the Project Site depending on the mix of uses and proximity to transit. Based on the assumptions in the trip generation estimates shown in Table 8, a 15% transit/walk adjustment was applied to account for the use of non-auto travel modes (e.g., rail, light-rail, bus, bicycle, walk, etc.). For the purposes of this analysis, all the transit/walk trip estimates from Table 8 were conservatively assumed to travel via public transit.

As shown in Table 8, accounting for the existing use credit as well as internal capture and pass-by reductions, but prior to mitigation and transit/walk-in adjustments, the Project is estimated to generate 233 morning peak hour trips and 260 afternoon peak hour trips. Assuming an AVO of 1.4, the Project's vehicle trips result in an estimated increase of 326 person trips during the morning peak hour and 364 person trips during the afternoon peak hour. Using the 15% mode split, the Project would generate approximately 49 net new transit trips in the morning peak hour and 55 net new transit trips in the afternoon peak hour.

As detailed in Chapter 2, the Hollywood area is served by numerous established transit routes. The Project is also located within walking distance to the Red Line station at Hollywood/Western and in close proximity to other local and regional transit lines, as well as a wide diversity of land uses within reasonable walking distance. The total average residual capacity of the analyzed transit lines within the Study Area during the morning and afternoon peak hours is approximately 8,432 and 7,698 trips, respectively. The Project's morning and afternoon peak hour person trips by transit are projected at 49 and 55 net new trips, respectively, or less than approximately 1% of the average available capacity during morning and afternoon peak hours.

As detailed in Table 4, the Project Site is served by numerous Rapid and local bus lines, as well as the Metro Red Line. Overall the total transit capacity of the numerous transit lines can accommodate the Project's transit trips, with and without the promotion of transit usage with implementation of the Project's TDM Program. Therefore, the Project is not anticipated to result in material regional transit impacts.

Furthermore, Los Angeles County voters approved Measure R, a half-cent sales tax increase for transportation, which has allowed Metro to develop projects to improve the existing transportation system. *2009 Long Range Transportation Plan* (Metro, Adopted 2009) (the "2009 LRTP"), which outlined a range of transit and highway projects throughout Los Angeles County that were aimed to improve mobility and address future growth, is currently in the process of an update to address transportation issues and projects identified by local jurisdictions, Councils of Governments, and transportation agencies. *2014 Short Range Transportation Plan* (Metro, Adopted 2014) identifies projects and programs that will be implemented in accordance with the project priorities and funding schedules of the 2009 LRTP. 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. Although the Project (and other related projects) will cumulatively add transit ridership, Metro will continue to maintain and expand regional transit service to accommodate cumulative demand in the region; therefore, cumulative impacts on public transit are considered to be less than significant.

Chapter 11
Caltrans Analysis

This chapter presents an analysis of Caltrans facilities, including freeway mainline segments, Caltrans intersections, and off-ramp queuing to provide further information to the decision makers. The City's continued reliance on the Caltrans Agreement is based upon verbal direction from Caltrans that the Caltrans Agreement will remain in effect until such time as the City formally implements a VMT methodology. As detailed in the MOU, the Project meets the screening criteria identified in the Caltrans Agreement at the freeway off-ramps. Thus, further analyses of Caltrans facilities were conducted. The analysis follows the guidelines found in the Caltrans TIS Guide, as required. The screening analysis is included in the MOU provided in Appendix A.

VMT

As previously noted, under SB 743, the focus of transportation analysis will shift from driver delay to reduction of GHG, creation of multimodal networks and promotion of mixed-use developments. To better align with the State's multimodal transportation and environmental action goals, Caltrans is pursuing VMT as a metric of Project impacts, as outlined in *Local Development – Intergovernmental Review Program Interim Guide*. This interim guidance will remain in effect until superseded by new Caltrans transportation impact study guidelines, which are currently under development.

The Project characteristics (e.g., its location, proximity to transit, access to other nearby destinations, pedestrian connections, bicycle amenities, etc.) would encourage non-auto modes of transportation such as walking, bicycling, carpool, vanpool, transit, etc. and, therefore, would reduce VMT to the Project Site and associated transportation-related GHG emissions. The Project Site is located adjacent to and within walking distance of numerous transit line bus stops. The location efficiency of the Project Site would result in synergistic benefits that would reduce vehicle trips and VMT. Further, the Project would be located within an area that offers access to

other nearby retail and entertainment destinations. Access to the Project Site would be provided from pedestrian pathways, as well as adequate bicycle parking. The combined effects of these factors would reduce the Project's anticipated vehicle trips and VMT and encourage walking and non-auto forms of transportation and transit ridership, which results in corresponding reductions in transportation-related emissions.

ANALYZED FACILITIES

The analyses conducted on Caltrans facilities included freeway mainline segments, signalized intersections along Santa Monica Boulevard under Caltrans jurisdiction, and off-ramp queuing.

Five freeway mainline segments on US 101 were analyzed using the HCM 2010 methodology to determine density, speed, and LOS. Five signalized intersections along Santa Monica Boulevard under Caltrans jurisdiction were also analyzed using HCM 2010 methodology to identify average vehicle delay and LOS. Three freeway off-ramps were analyzed using the Synchro software to estimate queue lengths.

ANALYSIS RESULTS

As detailed in the technical analyses of Caltrans facilities provided in Appendix H, the Project would have no substantial impacts on Caltrans facilities.

Appendix H contains the LOS worksheets for each type of analysis.

Chapter 12
Site Access and Internal Circulation

This chapter summarizes the site access and internal circulation of the Project Site.

PROJECT SITE ACCESS AND CIRCULATION

Vehicles

Vehicular access to the Project would be provided via two driveways (one commercial and one residential) on Serrano Avenue, a residential driveway on Sunset Boulevard, and one driveway (two lanes inbound and two lanes outbound) on Western Avenue serving both commercial and residential components of the Project. The residential driveway on Sunset Boulevard would accommodate both right-turn and left-turn ingress and right-turn-only egress. All other Project driveways would provide full access by accommodating both right-turn and left-turn ingress and egress. The driveways located on Western Avenue would be designed to align with the future traffic signal at De Longpre Avenue. Parking for the Project would be provided on-site within the multi-level above-grade and subterranean parking garage.

Pedestrians and Bicycles

Pedestrian access to the ground-floor neighborhood-serving commercial uses would be from Sunset Boulevard, Western Avenue, and Serrano Avenue. Project residents would access each building from residential lobbies located along Western Avenue and Serrano Avenue. The residential uses would also be accessed from the two subterranean residential parking levels. The Project also includes a paved plaza fronting Sunset Boulevard and landscaped paseos at the ground level that would be publicly accessible from Sunset Boulevard. The Project access locations would be designed to City standards and would provide adequate sight distance,

sidewalks, crosswalks, and pedestrian movement controls that meet the City's requirements to protect pedestrian safety. All roadways and driveways intersect at right angles, and street trees and other potential impediments to prevent adequate visibility are minimal. Pedestrian access will also be provided from the parking facilities.

Residents arriving by bicycle would have the same access opportunities as pedestrians and vehicles. In order to promote bicycle use, bicycle parking spaces would be provided within the lower levels of the parking garage and would be accessible via De Longpre Avenue.

Chapter 13
Parking Analysis

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

PARKING SUPPLY

As proposed, up to 1,463 automobile parking spaces for the Project would be provided within an on-site parking garage consisting of one at-grade level and two subterranean levels. In addition, approximately 548 bicycle parking spaces would be provided on-site within the Project Site and on adjacent sidewalks. Short-term bicycle parking spaces would be distributed on the sidewalks along Sunset Boulevard and Western Avenue and within the Project plaza and paseos. Long-term bicycle spaces would be provided within the parking levels. The Project would also comply with City standards for providing electric vehicle charging capabilities and electric vehicle charging stations within the proposed parking areas.

CODE REQUIREMENTS

Automobile Parking Requirement

The Vermont/Western TOD Specific Plan and *Los Angeles Municipal Code* (City of Los Angeles, December 30, 2016) (LAMC) have identified the off-street automobile parking requirements of various land uses. The following automobile parking rates are indicated in Section 9.E of the Vermont/Western TOD Specific Plan and Section 12.21.A4 of the LAMC:

- Commercial Uses
    - Two spaces per 1,000 sf

- Residential Uses
  - Less than Three Habitable Rooms (Studio)
    - Minimum – 1.0 space per dwelling unit
    - Maximum – 1.0 space per dwelling unit
  - Three Habitable Rooms (One Bedroom)
    - 1.5 spaces per dwelling unit
  - More than Three Habitable Rooms (Two or More Bedrooms)
    - Minimum – 1.5 spaces per dwelling unit
    - Maximum – 2.0 spaces per dwelling unit
  - Guests[2]
    - Minimum – 0.25 space per dwelling unit
    - Maximum – 0.50 space per dwelling unit

As noted in Section 9.E of the Vermont/Western TOD Specific Plan, residential guest automobile parking spaces within a mixed-use project shall be shared with commercial automobile parking spaces. Per Section 12.21A.4 of the LAMC, residential and non-residential projects within 1,500 feet of a fixed-rail transit station may replace up to 15% and 30%, respectively, of the required automobile parking spaces with bicycle parking spaces. These parking rates and reductions were applied to the proposed floor area of the Project to determine the required amount of off-street automobile parking stalls.

Code-Required Project Automobile Parking

The Project consists of the following components:

- Residential
  - Less than three habitable rooms (Studio) – 189 dwelling units
  - Three habitable rooms (One Bedroom) – 355 dwelling units
  - More than three habitable rooms (Two or More Bedrooms) – 191 dwelling units

- Commercial : 95,820 sf

The aforementioned off-street automobile parking ratios were applied to these components in order to determine the off-street automobile parking requirement for the Project. As detailed in Table 16, the commercial component of the Project is required to provide 192 automobile parking spaces. The residential component of the Project is required to provide a minimum of

[2] "Notwithstanding the contrary provisions of Section 12.21.A4 of the LAMC, guest parking spaces for residential uses in Mixed-Use projects, as set forth above, shall be provided through shared use of required commercial parking spaces." (Vermont/Western TOD Specific Plan, Section 9.E.1.c)

1,009 automobile spaces, including 189 resident spaces for units with less than three habitable rooms, 533 residential spaces for units with three habitable rooms, 287 resident spaces for units with more than three habitable rooms and 184 guest spaces, and a maximum of 1,280 automobile spaces, including 189 resident spaces for units with less than three habitable rooms, 533 spaces for units with three habitable rooms, 382 resident spaces for units with more than three habitable rooms, and 368 guest spaces.

The total off-street automobile parking requirement of the Project is, as determined by the LAMC and the Vermont/Western TOD Specific Plan, a minimum of 1,009 automobile parking spaces and a maximum of 1,281 automobile parking spaces. Since the Project is located within 1,500 feet of the Metro Red Line Hollywood/Western Station, the automobile parking requirement may be reduced by 15% for the residential uses and 30% for the non-residential uses, thereby reducing the minimum LAMC-required automobile parking by 209 spaces and the maximum LAMC-required automobile parking by 250 spaces. Therefore, as shown in Table 16, the net off-street automobile parking requirement of the Project is a minimum of 992 spaces and a maximum of 1,222 spaces. The Project on-site parking supply would satisfy the LAMC automobile parking requirement, and no significant parking impacts are anticipated related to the LAMC automobile parking.

Bicycle Parking Requirement

Section 9.E of the Vermont/Western TOD Specific Plan identifies bicycle parking rates, which were used to determine the required bicycle parking spaces for the Project. The Vermont/Western TOD Specific Plan requires one bicycle parking space per two residential dwelling units and one bicycle parking space per 1,000 sf of non-residential floor area for the first 10,000 sf of floor area and one bicycle parking space for every additional 10,000 sf of floor area.

Code-Required Project Bicycle Parking

As previously detailed, the Project includes 735 residential dwelling units and 95,820 sf of commercial uses (59,100 sf supermarket and 36,720 sf shopping center), which would require a

total of 387 bicycle parking spaces, including 368 residential bicycle parking spaces and 19 commercial bicycle parking spaces, as detailed in Table 17. The LAMC bicycle parking requirement would be satisfied within the on-site bicycle parking supply.

TABLE 16
CODE AUTOMOBILE PARKING REQUIREMENTS

Land Use	Size	Minimum Parking Requirement [a]		Maximum Parking Requirement [a]	
		Parking Rate	Total Spaces	Parking Rate	Total Spaces
Residential					
< 3 Habitable Rooms	189 du	1.00 sp / 1 du	189	1.00 sp / 1 du	189
= 3 Habitable Rooms [b]	355 du	1.50 sp / 1 du	533	1.50 sp / 1 du	533
> 3 Habitable Rooms	191 du	1.50 sp / 1 du	287	2.00 sp / 1 du	382
Guest	735 du	0.25 sp / 1 du	184	0.50 sp / 1 du	368
Less Shared Commercial/Retail Spaces [c]			*(184)*		*(192)*
Commercial (Commercial, Supermarket & Retail)	95,820 sf	2.00 sp / 1,000 sf	192	2.00 sp / 1,000 sf	192
Total Code Parking Requirement			**1,201**		**1,472**
Bicycle Parking Reduction [d]					
Residential		*15%*	*(151)*	*15%*	*(192)*
Non-Residential		*30%*	*(58)*	*30%*	*(58)*
Net Code Parking Requirement			**992**		**1,222**

Notes

[a] Parking rates per Section 9.E of the *Vermont/Western Transit Oriented District Specific Plan (Station Neighborhood Area Plan)* , Los Angeles Department of City Planning, March 2001).

[b] Parking rate for residential uses with three habitable rooms is not provided in the Specific Plan, therefore the parking rate in Section 12.21.A4(a) of the Los Angeles Municipal Code (City of Los Angeles, December 2014) was utilized.

[c] Per Section 9.E of the *Vermont/Western Transit Oriented District Specific Plan,* guest parking for residential uses within mixed-use developments can be provided through shared use of required commercial parking spaces.

[d] Per Section12.21.A4 of the LAMC, residential and non-residential projects within 1,500 feet of a rail transit station may replace up to 15% and 30%, respectively, of required automobile parking with bicycle parking.

TABLE 17
CODE BICYCLE PARKING REQUIREMENTS

Project	Size	Bicycle Parking Rate [a]	Total Bicycle Spaces
Residential	735 du	1.00 sp / 2 du	368
Commercial [b]	95,820 sf		
First 1,000 sf of Floor Area	10,000 sf	1.00 sp / 1,000 sf	10
Remaining Floor Area	85,820 sf	1.00 sp / 10,000 sf	9
Total			**387**

Notes
[a] Bicycle parking rate per Section 9.E of the *Vermont/Western Transit Oriented District Specific Plan (Station Neighborhood Area Plan).*
[b] Per the Vermont/Western Transit Oriented District Specific Plan, bicycle parking spaces shall be provided at a ratio of one space per 1,000 sf of non-residential floor area for the first 10,000 sf of floor area, and one space for every additional 10,000 sf of floor area.

Chapter 14
Construction Impact Analysis

This chapter summarizes the construction schedule and construction impact analysis for the Project. The construction impact analysis relates to the temporary impacts that may result from the construction activities of the Project, which may include safety, operational, or capacity impacts, and was performed in accordance with *L.A. CEQA Thresholds Guide: Your Resource for Preparing CEQA Analyses in Los Angeles* (City of Los Angeles, 2006) ("*L.A. CEQA Thresholds Guide*").

TYPES OF CONSTRUCTION IMPACTS

L.A. CEQA Thresholds Guide identifies four types of in-street construction impacts. Each of the four types of impacts refers to a particular population that could be inconvenienced by construction activities. The four types of impacts and related populations are:

1. Temporary traffic impacts – potential impacts on vehicular travelers on roadways
2. Temporary loss of access – potential impacts on visitors entering and leaving sites
3. Temporary loss of bus stops or rerouting of bus lines – potential impacts on bus travelers
4. Temporary loss of on-street parking – potential impacts on parkers

The factors used to determine the significance of a project's impacts involve the likelihood and extent to which an impact might occur, the potential inconvenience caused to a population, and consideration for public safety. Traffic impacts from construction activities could occur as a result of the following types of activities:

- Increases in truck traffic associated with export or import of fill materials and delivery of construction materials

- Increases in automobile traffic associated with construction workers traveling to and from the Project Site
- Reductions in existing street capacity or on-street parking from temporary lane closures necessary for the construction of roadway improvements, utility relocation, and drainage facilities
- Blocking existing vehicle or pedestrian access to other parcels fronting streets

The impact of construction traffic (including haul trucks) would be a lessening of the capacities of access streets and haul routes due to slower movements and larger turning radii of trucks.

PROPOSED CONSTRUCTION SCHEDULE

The Project is anticipated to be constructed over a period of approximately 28 months, with completion anticipated in the Year 2024. The construction period would include subphases of site demolition, excavation and grading, foundations, and building construction. Peak haul truck activity occurs during excavation and grading, and peak worker activity occurs during building construction. These two subphases of construction were studied in greater detail.

EXCAVATION AND GRADING PHASE

The peak period of truck activity during construction would occur during excavation and grading of the Project Site. Based on projections compiled for the Project, approximately 330,000 cubic yards (CY) of material would be excavated and removed from the Project Site which would require approximately 30 haul truck trips per work day. The Project expects to use 30 haul trucks making two trips each per work day, based on an anticipated haul truck capacity of 14 CY each. Thus, up to 60 daily haul truck trips (30 inbound, 30 outbound) are forecast to occur during the excavation and grading period, with approximately eight trips per hour (four inbound, four outbound) uniformly over a typical eight-hour workday.

Transportation Research Circular No. 212 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 16.7 of the HCM 2010 suggest a PCE of 2.0 for trucks. Assuming a PCE factor of 2.0, the 60 truck trips would be equivalent to 120 daily PCE trips. The eight hourly truck trips would be equivalent to 16 PCE trips (eight inbound, eight outbound) per hour.

With the implementation of the Construction Management Plan, which is described in more detail later in this chapter, it is anticipated that almost all haul truck activity to and from the Project Site would occur outside of the morning and afternoon peak hours. Although some truck haul trips may fall within the morning peak hour, after accounting for the removal of existing uses trips, a net reduction in trips would be generated to the Project Site during the excavation period. In addition, as discussed in more detail in the following section, worker trips to and from the Project Site would also occur outside of the peak hours. Therefore, no peak hour construction transportation impacts are expected during the excavation and grading phase of construction.

Haul trucks would travel on approved truck routes designated within the City. Given the Project Site's proximity to US 101, haul truck traffic would take the most direct route to the appropriate freeway ramp traveling on Western Avenue to access US 101 northbound and Sunset Boulevard to access US 101 southbound. Inbound traffic would take the reverse route from US 101.

BUILDING CONSTRUCTION PHASE

The transportation impacts associated with construction workers depends on the number of construction workers employed during various phases of construction, as well as the travel mode and travel time of the workers. 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 (i.e., arrive at the site prior to 7:00 AM and depart before 4:00 PM or after 6:00 PM). Therefore, most, if not all, construction worker trips would occur outside of the typical weekday commuter peak periods.

The estimated number of construction workers each day depends on the phase of construction. According to construction projections prepared for the Project, the building subphase of construction would employ the most construction workers, with a maximum of approximately

120 workers per day. However, since the number of construction workers differs with each building component, this estimate likely overstates the number of workers that would be expected on the peak construction day. Furthermore, on most of the construction workdays, there would be far fewer workers than on the peak day. Therefore, the estimate of 120 workers per day used for the purposes of this analysis represents a higher-than-expected estimate.

Assuming minimal carpooling amongst those workers, an AVO of 1.135 persons per vehicle was applied, as provided in *CEQA Air Quality Handbook* (South Coast Air Quality Management District, 1993). Therefore, 120 workers would result in a total of 108 vehicles that would arrive and depart from the Project Site each day. The estimated number of daily trips associated with the construction workers is approximately 216 (108 inbound and 108 outbound trips), but nearly all of those trips would occur outside of the peak hours, as described above. As such, the building phase of Project construction is not expected to cause a significant transportation impact at any of the study intersections.

During construction, adequate parking for construction workers would be secured at an off-site parking area. Restrictions against workers parking in the public right-of-way in the vicinity of (or adjacent to) the Project Site will be identified as part of the Construction Management Plan. Construction parking will use an off-site parking area for materials storage and truck staging.

POTENTIAL IMPACTS ON ACCESS, TRANSIT, AND PARKING

Construction activities are expected to be primarily contained within the Project Site boundaries. However, it is expected that construction fences may encroach into the public right-of-way (e.g., sidewalk and roadways) adjacent to the Project Site. Adjacent to the Project Site, the parking lane on the east side of Serrano Avenue would be used intermittently throughout the construction period for equipment staging, concrete pumping, etc. Temporary traffic controls would be provided to direct traffic around any closures as required in the Construction Management Plan.

The use of the public right-of-way along Sunset Boulevard, Western Avenue and Serrano Avenue would require temporary re-routing of pedestrian traffic as the sidewalks fronting the Project Site would be closed. The Construction Management Plan would include measures to

ensure pedestrian safety along the affected sidewalks and temporary walkways (e.g., use of directional signage, maintaining continuous and unobstructed pedestrian paths, and/or providing overhead covering).

A bus stop is located adjacent to the Project Site on Sunset Boulevard just east of Western Avenue. Therefore, a temporary impact to transit is expected, as that bus stop will need to be temporarily relocated. This issue will be addressed in the Construction Management Plan. Parking is allowed on Serrano Avenue adjacent to the Project Site, so construction would result in the temporary loss of on-street parking spaces.

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

CONSTRUCTION MANAGEMENT PLAN

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

- Advance, bilingual notification of adjacent property owners and occupants, and nearby schools, of upcoming construction activities, including durations and daily hours of operation.
- Prohibition of construction worker or equipment parking on adjacent residential streets.

- Temporary pedestrian and vehicular traffic controls during all construction activities adjacent to Sunset Boulevard, Western Avenue and Serrano Avenue, to ensure traffic safety on public rights-of-way. These controls shall include, but not be limited to, flag people trained in pedestrian safety at the Project Site.

- Temporary traffic control during all construction activities adjacent to public rights-of-way to improve traffic flow on public roadways (e.g., flag men).

- Scheduling of construction activities to reduce the effect on traffic flow on surrounding arterial streets.

- Construction-related vehicles/equipment shall not park on surrounding public streets.

- Safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers shall be implemented as appropriate, including along all identified Los Angeles Unified School District pedestrian routes to nearby schools.

- Scheduling of construction-related deliveries, haul trips, etc., so as to occur outside the commuter peak hours to the extent feasible, and so as to not impede nearby school drop-off and pick-up activities.

Chapter 15

Summary and Conclusions

This study was undertaken to analyze the potential transportation impacts of the Sunset/Western Mixed-Use Development Project on the local street system. The following summarizes the results of this analysis:

- The proposed development consists of a new mixed-use Project on a site that currently includes a 18,525 sf commercial space, 78,328 sf grocery store and a 3,943 sf fast-food restaurant. The proposed Project components include 735 apartment units and 95,820 sf of neighborhood-serving commercial uses.

- With existing use credits, as well as appropriate credits for public transit usage, pass-by trips, internal capture, and walk-ins, the Project is estimated to generate a net total of 2,369 daily weekday trips, including net increases of 212 morning peak hour trips and 228 afternoon peak hour trips.

- The Project traffic was added to the existing circulation system to develop the Existing with Project traffic conditions. Based on LADOT significance criteria, impacts at three of the study intersections were determined to be significant under Existing with Project Conditions during either the morning or afternoon peak hour. Therefore, mitigation measures are required to offset these impacts.

- Future traffic conditions in the Study Area were forecast for the Project buildout year of 2024. Based on the LADOT significance criteria, impacts were determined to be significant at four study intersections under Future with Project Conditions (Year 2024) during at least one of the analyzed peak hours. Therefore, mitigation measures are required to offset these impacts.

- The mitigation program, which includes a TDM program and specific physical intersection improvements, would reduce the impacts at the three and four intersections to less than significant levels under Existing with Project with Mitigation Conditions and Future with Project with Mitigation Conditions, respectively.

- Analysis of potential impacts on the regional transportation system conducted in accordance with CMP guidelines determined that the Project would not have a significant impact on the regional freeway, arterial street system or transit system.

- Parking for the Project would be provided via a multi-level parking garage. Access to the parking levels would be provided via driveways on Serrano Avenue, Sunset Boulevard, and Western Avenue.

- The Project provides adequate internal circulation to accommodate vehicular traffic without impeding through traffic movements on City streets.

- The Project will incorporate pedestrian and bicycle-friendly designs, such as bicycle parking and open space.

- All construction activities would occur outside of the commuter morning and afternoon peak hours and would not result in significant transportation impacts.

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Appendix A

Memorandum of Understanding

TRAFFIC STUDY - MEMORANDUM OF UNDERSTANDING (MOU)

This MOU acknowledges that the traffic study for the following project will be prepared in accordance with the latest version of LADOT's Traffic Study Policies and Procedures:

Project Name: Sunset/Western Mixed-Use Development Project

Project Address: 5420 Sunset Boulevard, Los Angeles, California

Project Description: Mixed-use development consisting of 735 apartment units, a 60,000 square feet (sf) supermarket, 33,500 sf of restaurant/retail space, and 3,800 sf of live-work space to replace an existing 81,560 sf supermarket and a 4,125 sf fast-food restaurant. ***(See Figure 1)***

Residential Geographic Distribution: N 30 % S 35 % E 15 % W 20 %

Commercial Geographic Distribution: N 15 % S 25 % E 25 % W 35 %

Attach graphic illustrating project trip distribution percentages at the studied intersections ***(See Figure 3A and 3B)***

Trip Generation Rate(s): ITE 9th Edition / Other ITE 9th Edition
Attach trip generation table with a description of the proposed land uses, ITE rates, estimated morning and afternoon peak hour volumes (ins/outs/totals), proposed trip credits, etc. ***(See Table 2 and Figure 4)***

	In	out	total
AM Trips	10	205	215
PM Trips	167	65	232

Project Buildout Year: 2019 Ambient or CMP Growth Rate: 1.0 % Per Year
Related Projects: (to be researched by the consultant and approved by LADOT) ***(See Table 3 and Figure 5)***

Subject to Freeway Impact Analysis in addition to CMP Analysis (Yes/No): Yes
(Freeway analysis screening filter should be included in this MOU; selecting "yes" implies that at least one criteria was satisfied) ***(See Tables 3 and 4)***

Is this project on the High Injury Network? X Yes _____ No

Study Intersections
(Subject to LADOT revision after initial impact analysis)

(See Table 1 and Figure 2)

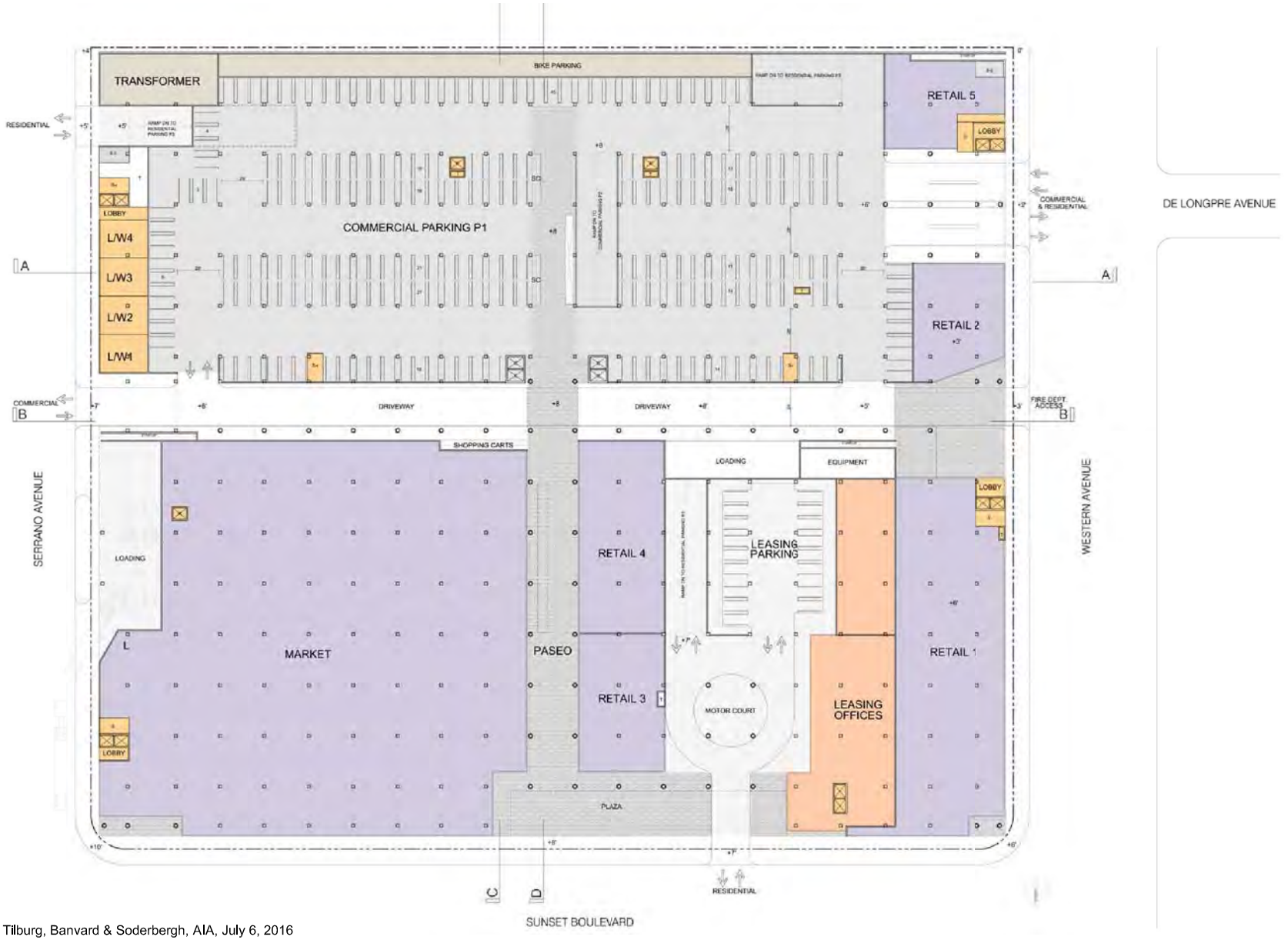
Trip Credits: (Exact amount of credit subject to approval by LADOT)

	Yes	No
Transit Usage	X	
Transportation Demand Management		X
Existing Active Land Use	X	
Previous Land Use		X
Internal Trip	X	
Pass-By Trip	X	

	Consultant	Developer
Name	Gibson Transportation Consulting, Inc.	Jim Smith c/o Mark Armbruster
Address	523 W. 6th Street, Suite 1234, Los Angeles, CA, 90014	12100 Wilshire Blvd., Suite 1600, Los Angeles, CA
Phone No.	(213) 683-0088	(310) 209-8800
E-Mail	ewong@gibsontrans.com	mark@agd-landuse.com

Approved by: _____ 10/13/16
Consultant's Representative Date

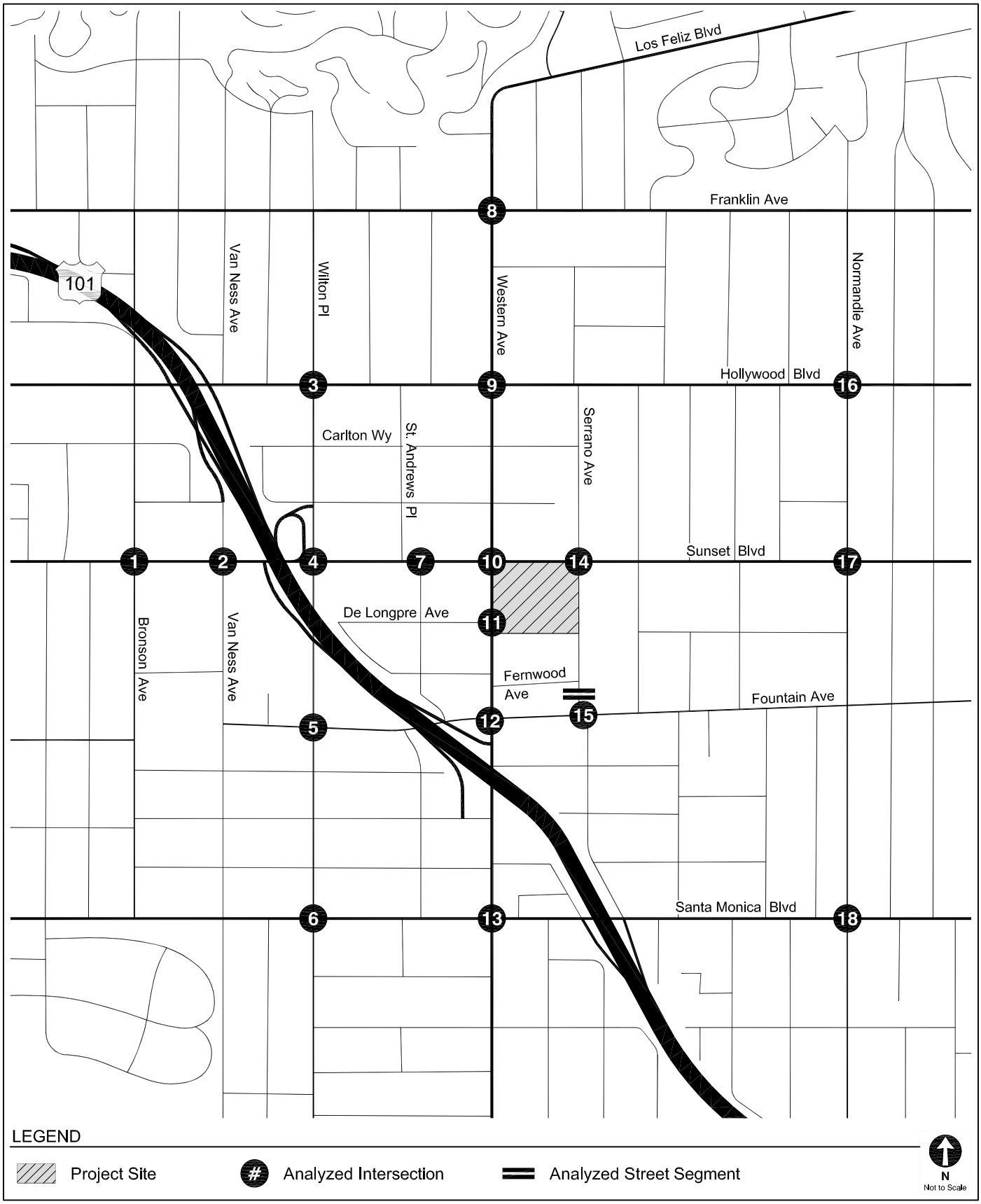
_____ 11/4/16
LADOT Representative Date



Source: Van Tilburg, Banvard & Soderbergh, AIA, July 6, 2016

SITE PLAN

FIGURE 1

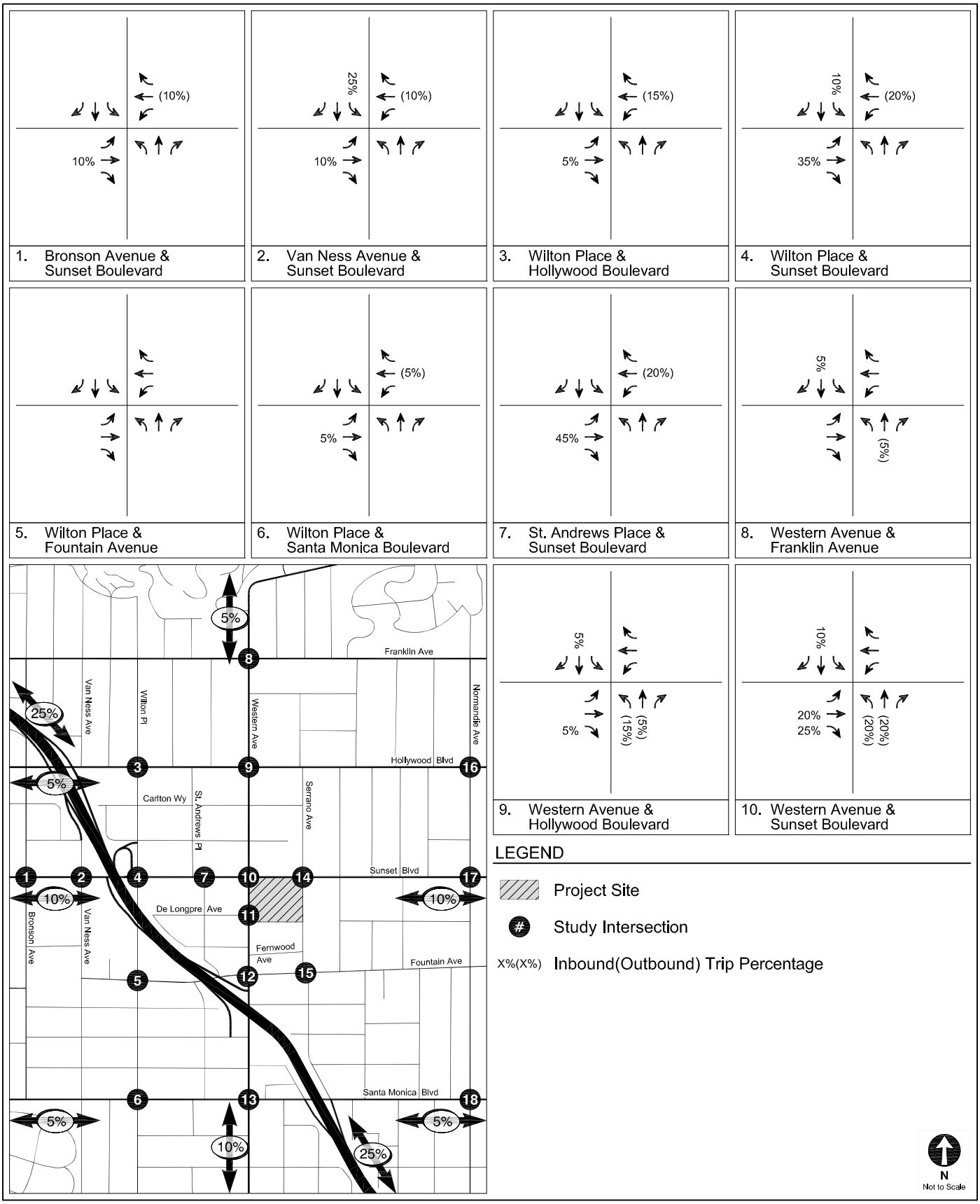


STUDY AREA

FIGURE 2

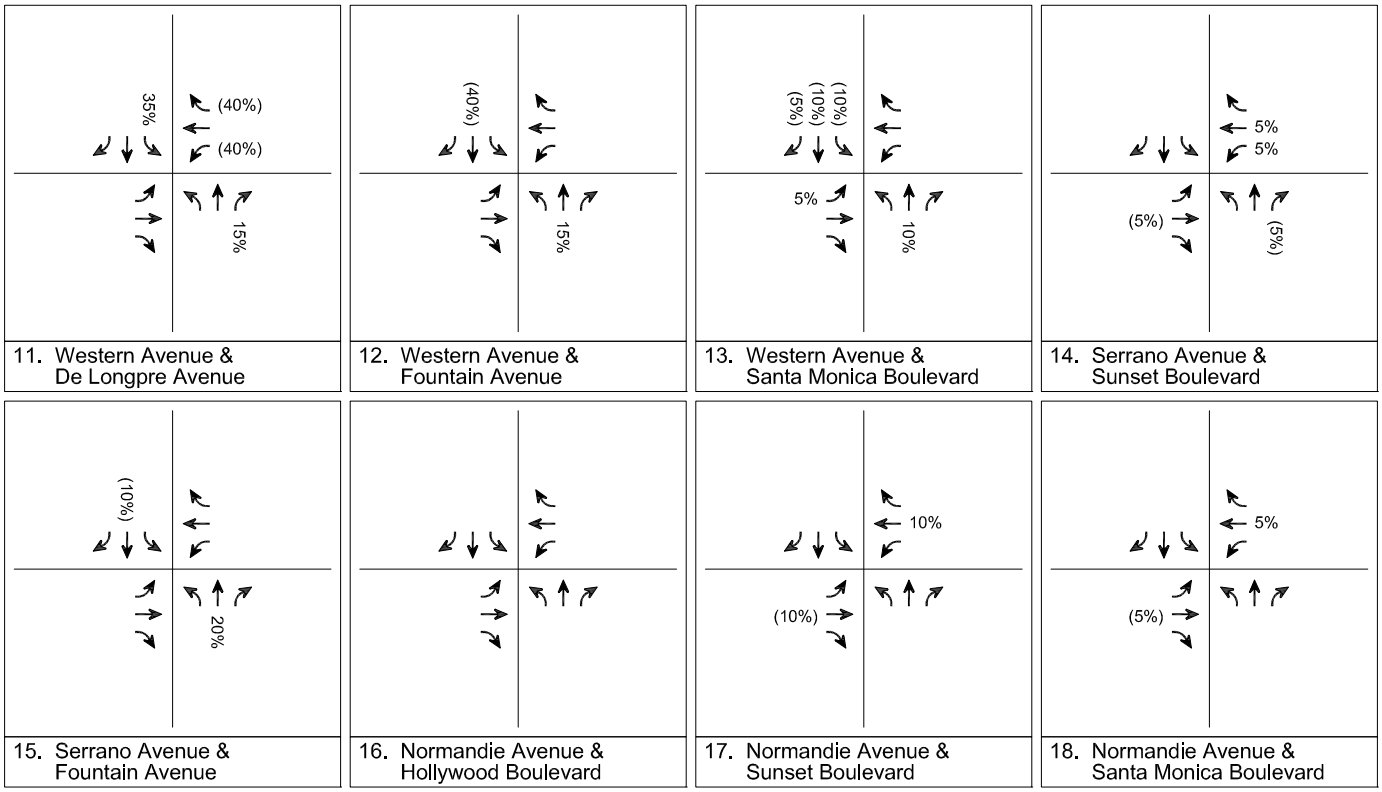
TABLE 1
STUDY INTERSECTIONS AND STREET SEGMENTS

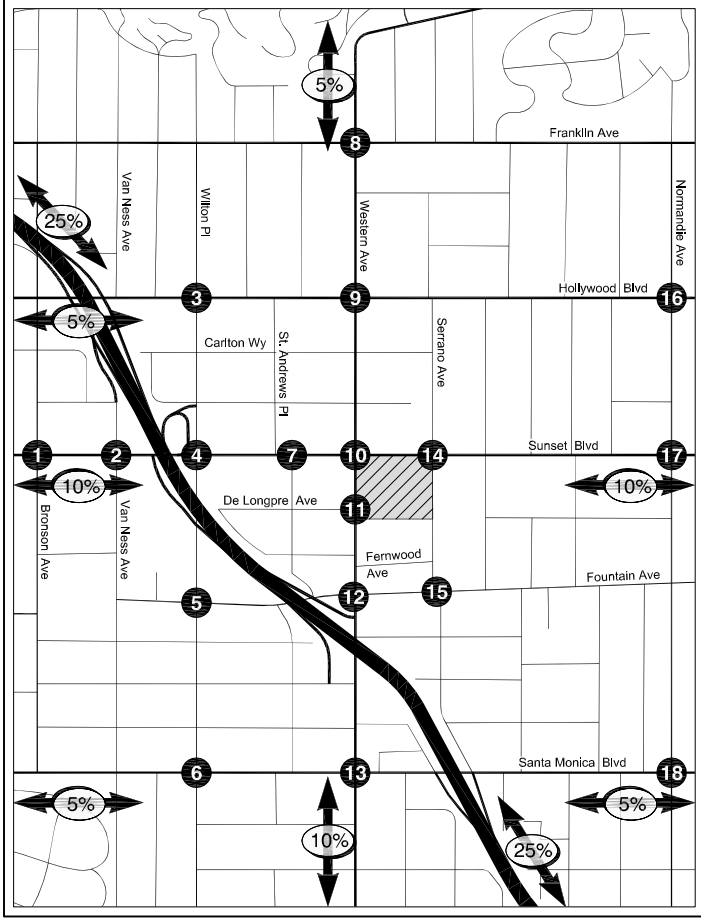
No	Intersection	Jurisdiction
1.	Bronson Avenue & Sunset Boulevard	City of Los Angeles
2.	Van Ness Avenue & Sunset Boulevard	City of Los Angeles
3.	Wilton Place & Hollywood Boulevard	City of Los Angeles
4.	Wilton Place & Sunset Boulevard	City of Los Angeles
5.	Wilton Place & Fountain Avenue	City of Los Angeles
6.	Wilton Place & Santa Monica Boulevard	City of Los Angeles
7.	St. Andrews Place & Sunset Boulevard	City of Los Angeles
8.	Western Avenue & Franklin Avenue	City of Los Angeles
9.	Western Avenue & Hollywood Boulevard	City of Los Angeles
10.	Western Avenue & Sunset Boulevard	City of Los Angeles
11.	Western Avenue & De Longpre Avenue	City of Los Angeles
12.	Western Avenue & Fountain Avenue	City of Los Angeles
13.	Western Avenue & Santa Monica Boulevard	City of Los Angeles
14.	Serrano Avenue & Sunset Boulevard	City of Los Angeles
15.	Serrano Avenue & Fountain Avenue	City of Los Angeles
16.	Normandie Avenue & Hollywood Boulevard	City of Los Angeles
17.	Normandie Avenue & Sunset Boulevard	City of Los Angeles
18.	Normandie Avenue & Santa Monica Boulevard	City of Los Angeles
No	**Street Segment**	**Jurisdiction**
1.	Serrano Avenue between Fernwood Avenue and Fountain Avenue	City of Los Angeles



TRIP DISTRIBUTION
RESIDENTIAL

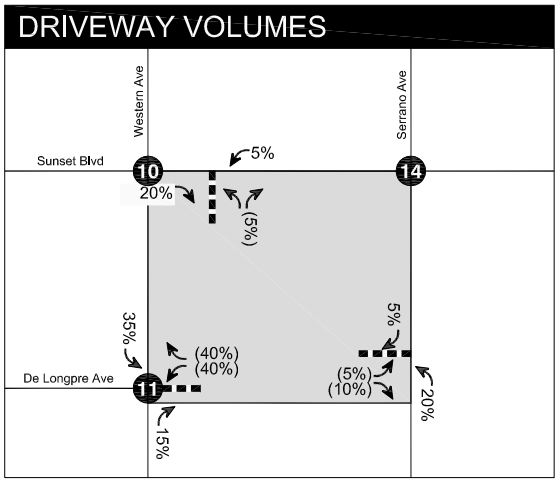
FIGURE
3A





LEGEND

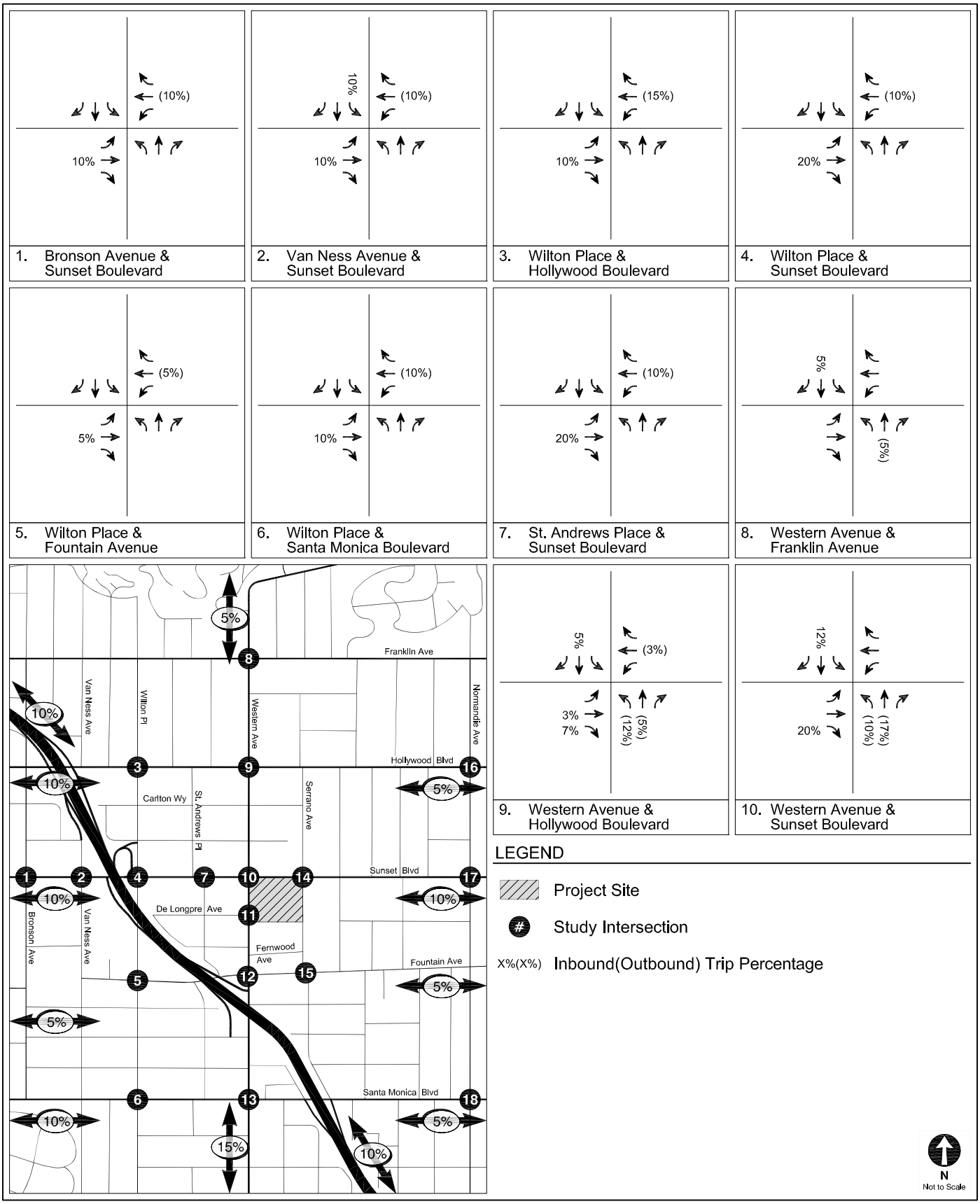
- Project Site
- # Study Intersection
- X%(X%) Inbound(Outbound) Trip Percentage



N
Not to Scale

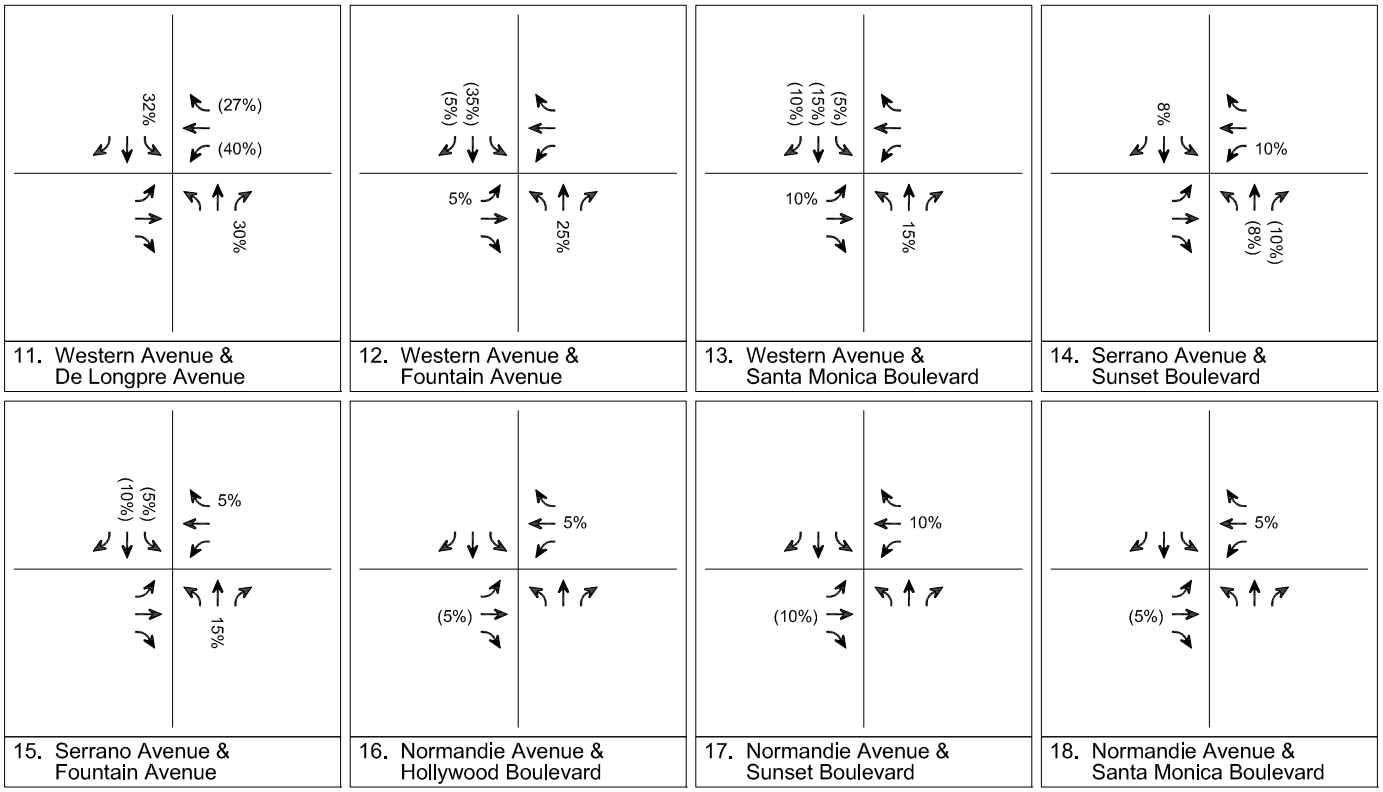
TRIP DISTRIBUTION
RESIDENTIAL

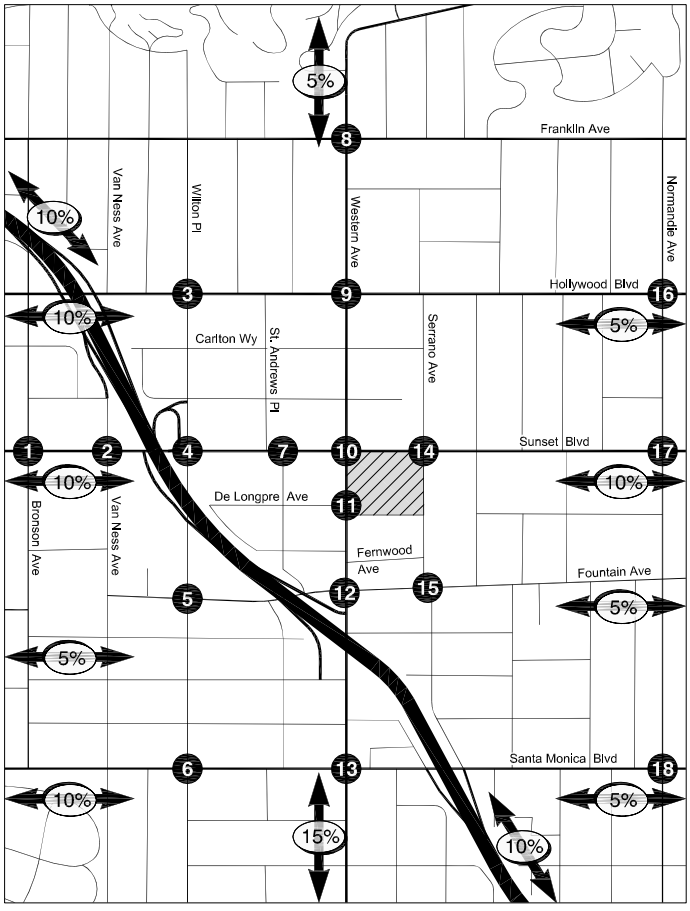
FIGURE
3A (CONT.)



TRIP DISTRIBUTION
COMMERCIAL

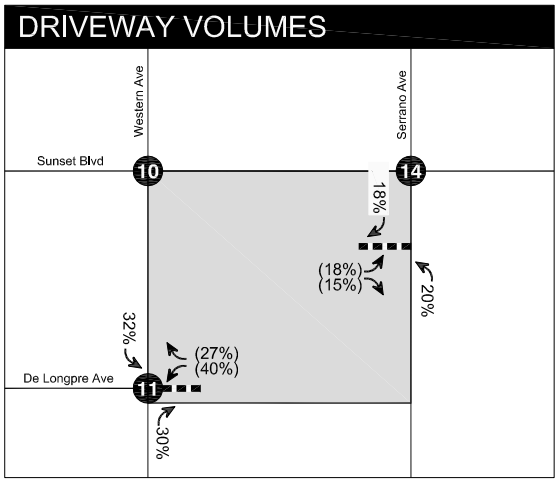
FIGURE
3B





LEGEND

- Project Site
- # Study Intersection
- X%(X%) Inbound(Outbound) Trip Percentage



N
Not to Scale

TRIP DISTRIBUTION
COMMERCIAL

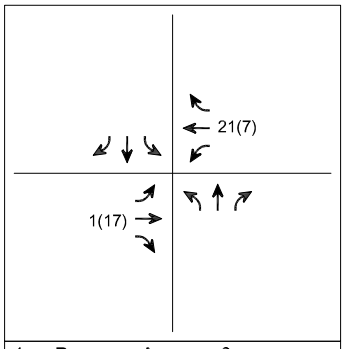
FIGURE
3B (CONT.)

TABLE 2
PROJECT TRIP GENERATION ESTIMATES

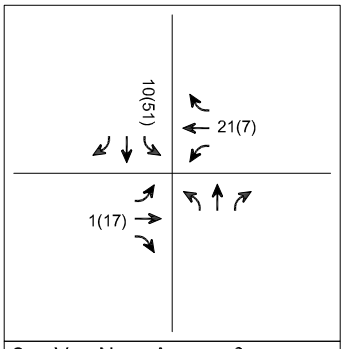
Trip Generation Rates [a]									
Land Use	**ITE Land Use Code**	**Rate**	**Daily**	**AM Peak Hour**			**PM Peak Hour**		
				In	**Out**	**Total**	**In**	**Out**	**Total**
Supermarket	850	per 1,000 sf	102.24	62%	38%	3.40	51%	49%	9.48
Fast-Food Restaurant with Drive-Through Window	934	per 1,000 sf	496.12	51%	49%	45.42	52%	48%	32.65
Apartment	220	per dwelling unit	6.65	20%	80%	0.51	65%	35%	0.62
Shopping Center	820	per 1,000 sf	42.70	62%	38%	0.96	48%	52%	3.71
General Office Building	710	per 1,000 sf	11.03	88%	12%	1.56	17%	83%	1.49

Trip Generation Estimates									
Land Use	**ITE Land Use Code**	**Size**	**Daily**	**AM Peak Hour**			**PM Peak Hour**		
				In	**Out**	**Total**	**In**	**Out**	**Total**
Existing Uses to be Removed									
Supermarket	850	81,560 sf	8,339	172	105	277	394	379	773
Less 15% Transit/Bike/Walk-In [b]			*(1,251)*	*(26)*	*(16)*	*(42)*	*(59)*	*(57)*	*(116)*
Less 40% Pass-by [c]			*(2,835)*	*(58)*	*(36)*	*(94)*	*(134)*	*(129)*	*(263)*
Subtotal - Supermarket			**4,253**	**88**	**53**	**141**	**201**	**193**	**394**
Fast-Food Restaurant	934	4,125 sf	2,046	95	92	187	70	65	135
Less 15% Transit/Bike/Walk-In [b]			*(307)*	*(14)*	*(14)*	*(28)*	*(10)*	*(10)*	*(20)*
Less 50% Pass-by [c]			*(870)*	*(41)*	*(39)*	*(80)*	*(30)*	*(28)*	*(58)*
Subtotal - Fast-Food Restaurant			**869**	**40**	**39**	**79**	**30**	**27**	**57**
TOTAL - EXISTING USES TO BE REMOVED			**5,122**	**128**	**92**	**220**	**231**	**220**	**451**
Proposed Project									
Apartments	220	735 du	4,888	75	300	375	296	160	456
Less 15% Transit/Bike/Walk-In [b]			*(733)*	*(11)*	*(45)*	*(56)*	*(44)*	*(24)*	*(68)*
Less Internal Capture [d]			*(187)*	*(1)*	*(3)*	*(4)*	*(23)*	*(8)*	*(31)*
Subtotal - Apartments			**3,968**	**63**	**252**	**315**	**229**	**128**	**357**
Supermarket	850	60,000 sf	6,134	126	78	204	290	279	569
Less 15% Transit/Bike/Walk-In [b]			*(920)*	*(19)*	*(12)*	*(31)*	*(43)*	*(42)*	*(85)*
Less 40% Pass-by [c]			*(2,086)*	*(43)*	*(26)*	*(69)*	*(99)*	*(95)*	*(194)*
Subtotal - Supermarket			**3,128**	**64**	**40**	**104**	**148**	**142**	**290**
Shopping Center - Retail/Restaurant	820	33,500 sf	1,430	20	12	32	60	64	124
Less 15% Transit/Bike/Walk-In [b]			*(215)*	*(3)*	*(2)*	*(5)*	*(9)*	*(10)*	*(19)*
Less Internal Capture [d]			*(158)*	*(1)*	*(1)*	*(2)*	*(6)*	*(14)*	*(20)*
Less 50% Pass-by [c]			*(529)*	*(9)*	*(5)*	*(14)*	*(25)*	*(28)*	*(53)*
Subtotal - Shopping Center			**528**	**7**	**4**	**11**	**20**	**12**	**32**
Office-Live/Work	710	3,800 sf	42	5	1	6	1	5	6
Less 15% Transit/Bike/Walk-In [b]			*(6)*	*(1)*	*0*	*(1)*	*0*	*(1)*	*(1)*
Less Internal Capture [d]			*(4)*	*0*	*0*	*0*	*0*	*(1)*	*(1)*
Subtotal - Office-Live/Work			**32**	**4**	**1**	**5**	**1**	**3**	**4**
TOTAL - PROPOSED PROJECT			**7,656**	**138**	**297**	**435**	**398**	**285**	**683**
NET NEW PROJECT TRIPS			**2,534**	**10**	**205**	**215**	**167**	**65**	**232**

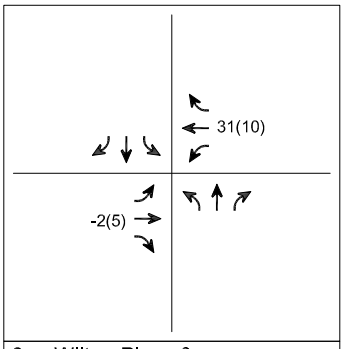
Notes
du = Dwelling Unit
sf = Square Feet
[a] Source: *Trip Generation, 9th Edition* , Institute of Transportation Engineers, 2012.
[b] Based on *Traffic Study Policies and Procedures* (LADOT, August 2014), a 15% transit reduction was applied due to a Metro transit station stop being located less than 1/4 mile from the Project Site and to account for bike or walk-in trips.
[c] Pass-by trips are those traveling through the study area regardless of the existence of the Project and are based on Traffic Study Policies and Procedures (LADOT, August 2014).
[d] Mixed Use Internal Capture credit was developed based on the NCHRP 8-51 Internal Trip Capture Estimation Tool.



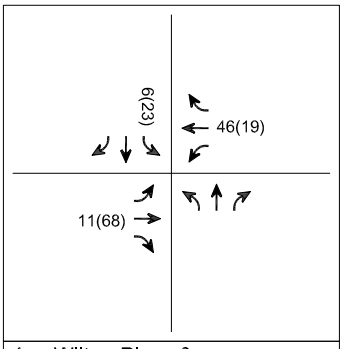
1. Bronson Avenue & Sunset Boulevard



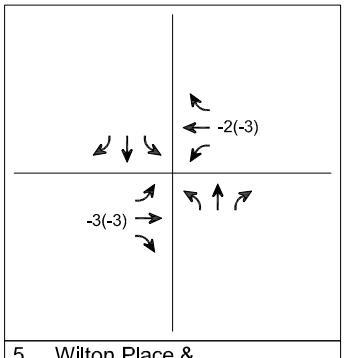
2. Van Ness Avenue & Sunset Boulevard



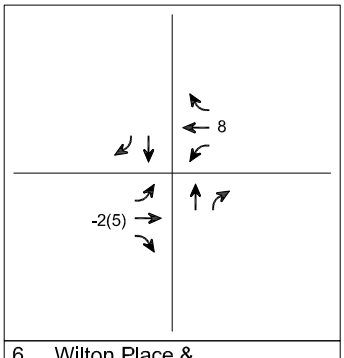
3. Wilton Place & Hollywood Boulevard



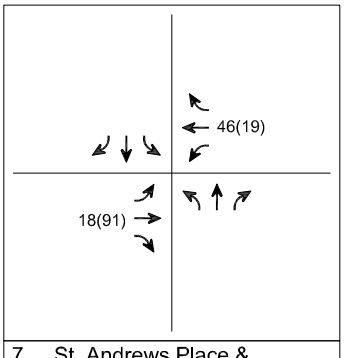
4. Wilton Place & Sunset Boulevard



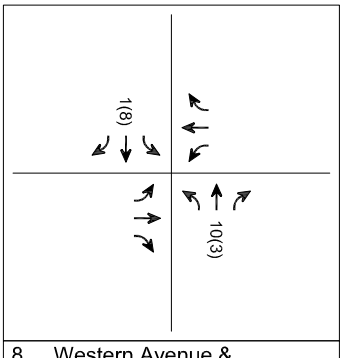
5. Wilton Place & Fountain Avenue



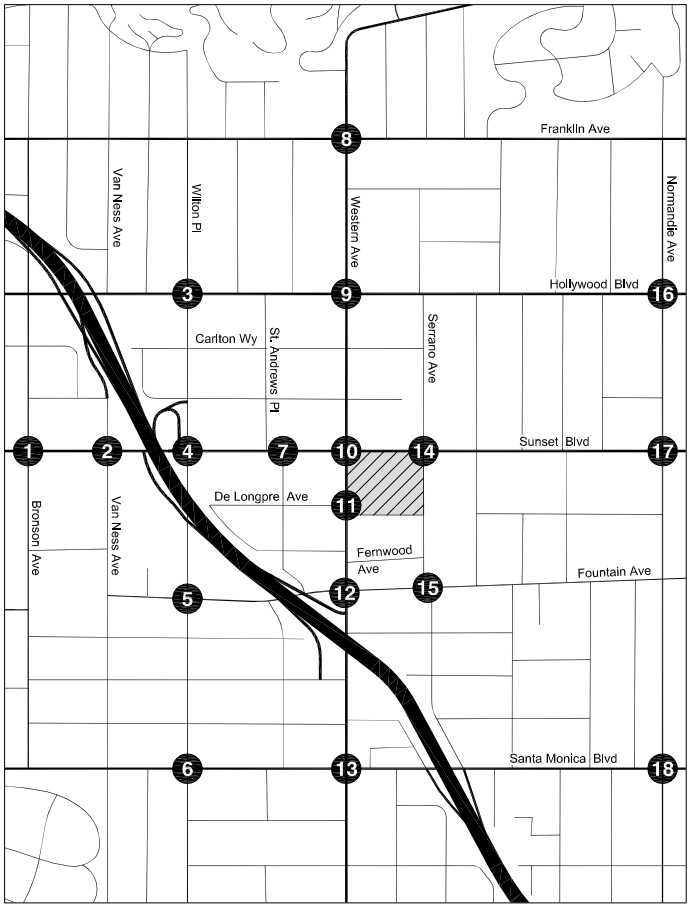
6. Wilton Place & Santa Monica Boulevard

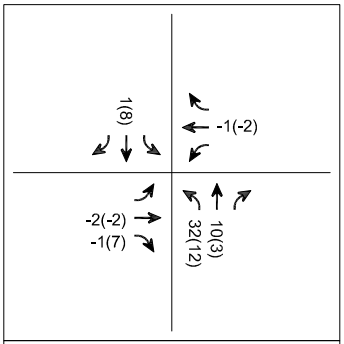


7. St. Andrews Place & Sunset Boulevard

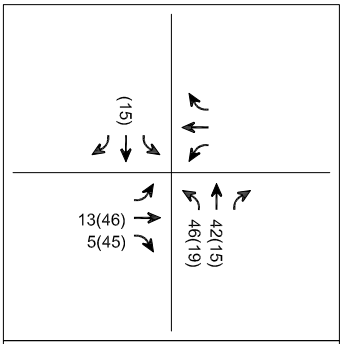


8. Western Avenue & Franklin Avenue





9. Western Avenue & Hollywood Boulevard



10. Western Avenue & Sunset Boulevard

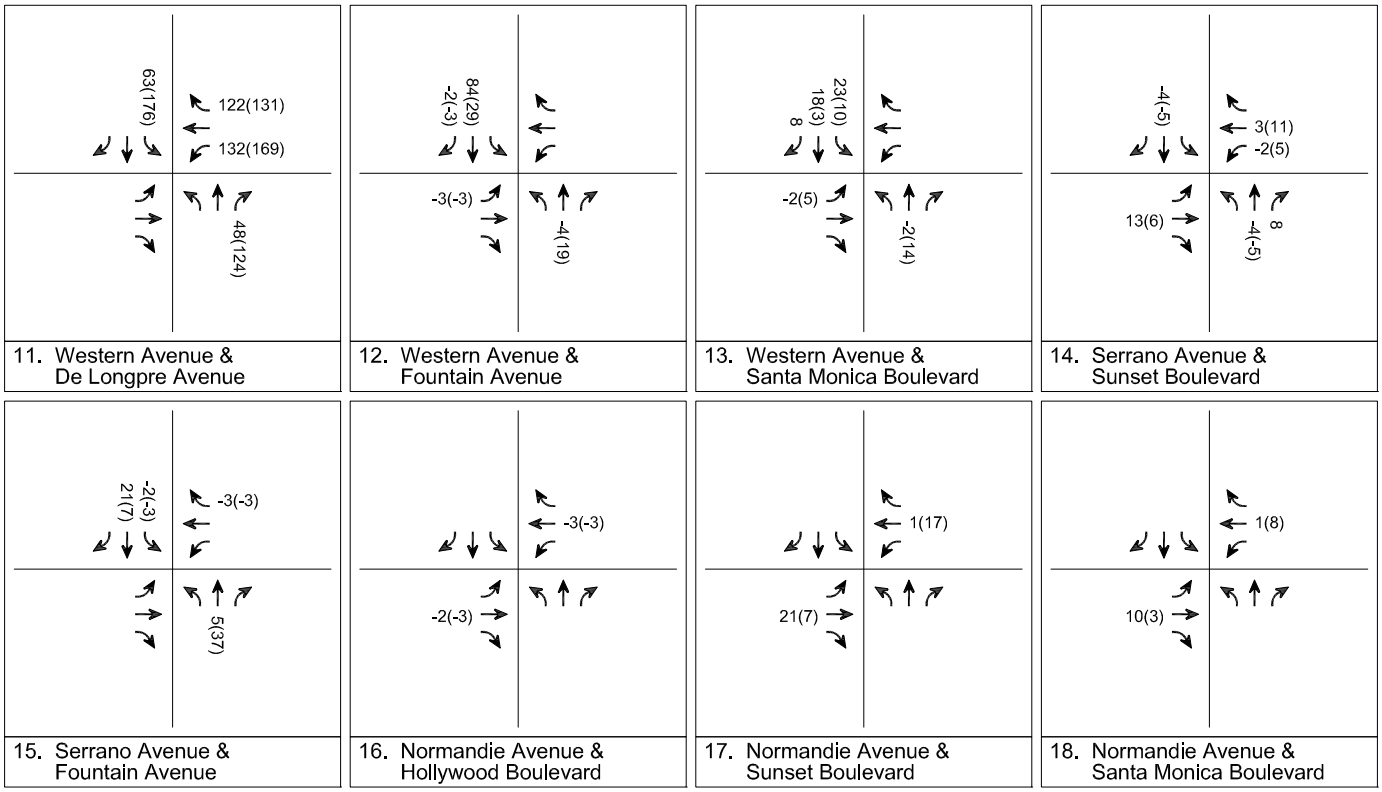
LEGEND

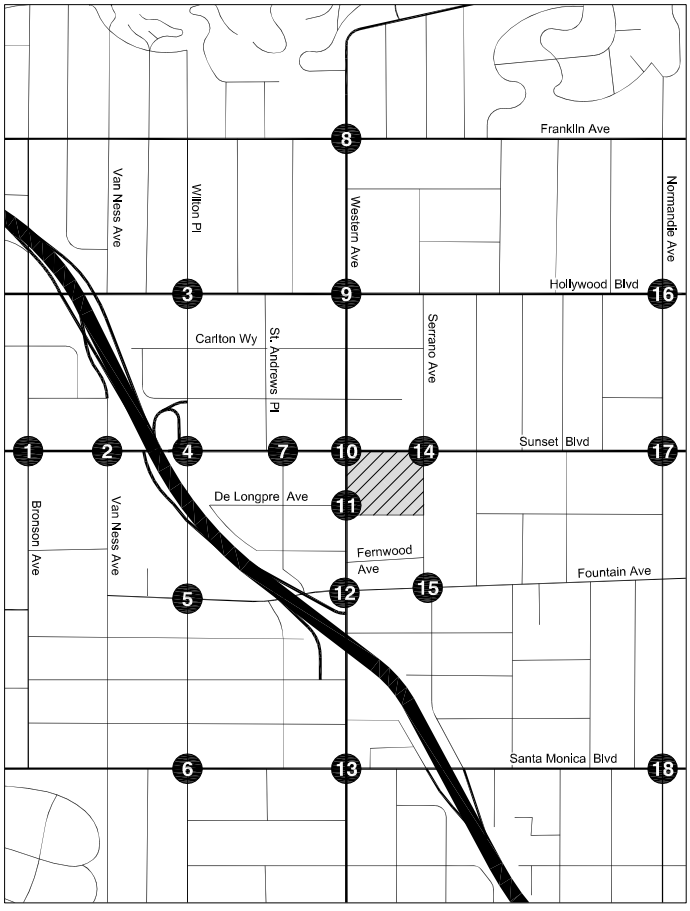
- Project Site
- # Study Intersection
- X(X) AM(PM) Peak Hour Traffic Volumes

N
Not to Scale

PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

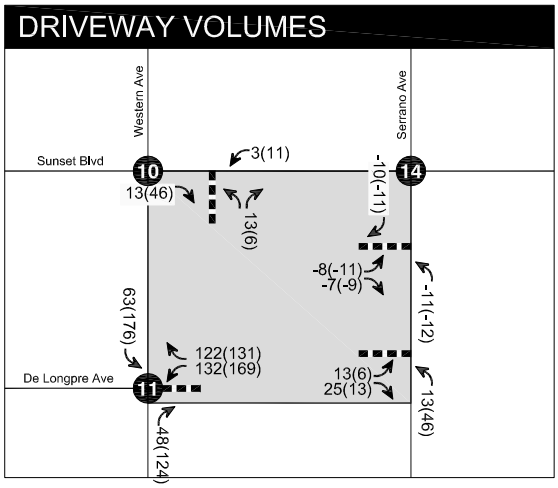
FIGURE
4





LEGEND

- Project Site
- # Study Intersection
- X(X) AM(PM) Peak Hour Traffic Volumes



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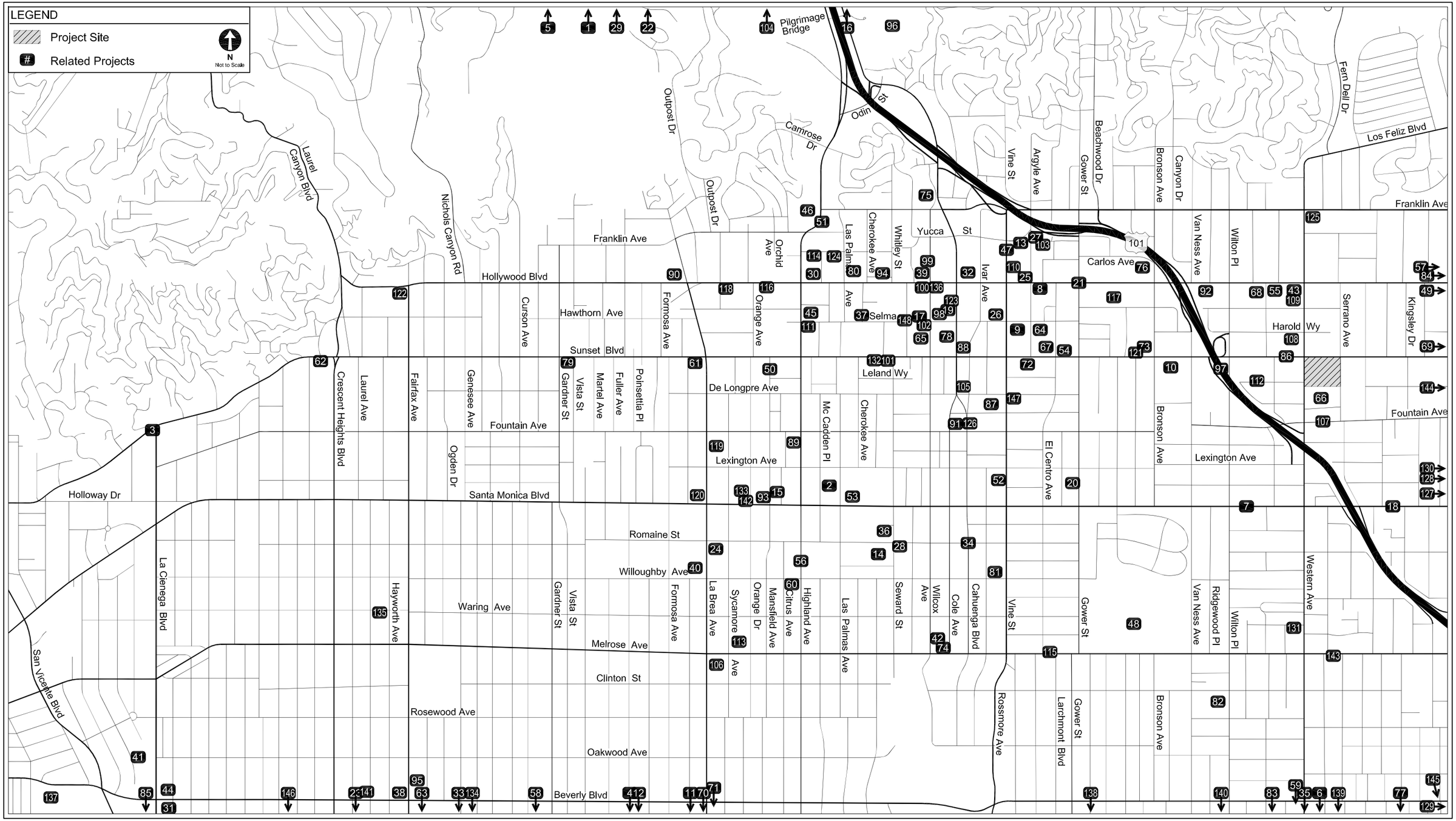
PROJECT-ONLY
PEAK HOUR TRAFFIC VOLUMES

FIGURE
4 (CONT.)



LOCATIONS OF RELATED PROJECTS

FIGURE 5

TABLE 3
RELATED PROJECTS

No.	Project	Address	Use	Trip Generation [a]						
				Daily	AM Peak Hour			PM Peak Hour		
					Inbound	Outbound	Total	Inbound	Outbound	Total
1.	Mixed-Use	3400 N Cahuenga Blvd	53 apartment units, 5,000 sf retail, 11,385 sf office, and 40,300 sf health club	1,518	115	110	225	121	67	188
2.	McCadden Campus	1118 N McCadden Place	100 senior housing units, 92 youth housing units, 17,040 sf office and 29,650 sf youth/senior center	1,346	49	31	80	53	56	109
3.	Sunset Millennium	8500 W Sunset Blvd	371 hotel rooms, 34,000 sf restaurant/retail, 7,000 sf theater, 2,500 sf dining	5,412	205	149	354	213	221	434
4.	Desmond's Tower	5500 W Wilshire Blvd	175 apartment units	820	13	51	64	51	28	79
5.	Condominium	3450 N Cahuenga Blvd	68 condominium units and 59,000 sf retail	3,010	15	72	87	131	64	195
6.	Gaju Market (New California Market)	450 S Western Ave	130,500 sf retail	3,019	47	29	76	138	138	276
7.	Paseo Plaza Mixed-Use	5651 W Santa Monica Blvd	437 apartment units and 378,000 sf retail	6,831	50	200	250	419	225	644
8.	BLVD 6200 Mixed-Use	6200 W Hollywood Blvd	952 apartment units and 190,000 sf retail (Phase 1 Complete)	2,816	41	103	143	133	109	242
9.	Sunset & Vine Mixed-Use	1538 N Vine Street	306 apartment units and 68,000 sf retail	3,049	27	109	136	191	103	294
10.	Sunset Bronson Studios	5800 W Sunset Blvd	404,799 sf office	2,690	356	48	404	64	314	378
11.	La Brea	101 S La Brea Ave	180 condominium units, 26,400 sf retail, and 3,000 sf other	1,503	11	52	63	62	30	92
12.	Third Street Mixed-Use Project	5863 W 3rd St	60 apartment units and 5,350 retail	1,248	29	140	169	85	42	127
13.	Yucca Street Condos	6230 W Yucca Street	85 condominium units and 13,890 sf commercial	364	4	21	25	21	11	32
14.	Office	959 N Seward Street	240,000 sf office	2,356	299	41	340	53	260	313
15.	Archstone Hollywood Mixed-Use Project	6911 W Santa Monica Blvd	374 condominium units and 15,000 sf retail	2,279	18	90	108	125	61	186
16.	Residential Project (Apartments)	3716 N Barham Blvd	364 Apartment Units	1,290	0	0	92	0	0	120
17.	6516 - 6525 Selma Hotel	6516 W Selma Ave	200 hotel rooms	1,634	63	43	106	54	66	120
18.	Mixed-Use	5245 W Santa Monica Blvd	68 apartment units and 51,674 sf retail	2,526	13	53	66	137	74	211
19.	Selma Hotel	6417 W Selma Ave	180 room hotel and 12,840 sf restaurant	1,849	6	4	10	61	59	120
20.	Hollywood Production Center	1149 N Gower Street	57 residential units	704	5	22	27	22	12	34
21.	Hanover Gower Mixed-Use	6100 W Hollywood Blvd	151 apartment units and 6,200 sf retail	1,397	21	72	93	76	45	121
22.	Gas Station & Convenience Store	3704 N Cahuenga Blvd	Adding 1,700 sf to existing "gas station w/ conv. Store"	1,157	48	45	93	58	58	116
23.	Wilshire & Crescent Heights Mixed-Use	6245 W Wilshire Blvd	4200 sf bank, 133 apts, 4 condos & 1570 sf coffee shop	1,214	29	74	103	32	2	34
24.	Mixed-Use Office/Retail	936 N La Brea Avee	88,750 sf office and 12,000 sf retail	911	24	5	29	14	37	38
25.	Pantages Theater Office	6225 W Hollywood Blvd	214,000 sf office	1,918	243	33	276	43	411	254
26.	Selma & Vine Office Project	1601 N Vine Street	121,609 sf office and 2,613 sf commercial	1,239	155	27	182	39	145	184
27.	Argyle Hotel Project	1800 N Argyle Avee	225 room hotel	1,360	22	37	59	60	18	78
28.	Seward Street Office Project	956 N Seward Street	130,000 sf office	1,240	165	21	186	29	151	180
29.	NBC Universal Evolution Plan	100 Universal City Plaza	Theme park, production studio, and entertainment district master plan	19,139	1,271	489	1,760	307	1,391	1,698
30.	Restaurant	6757 W Hollywood Blvd	17,717 sf restaurant	1,220	5	5	10	35	17	52
31.	The Beverly Connection	100 N La Cienega Blvd	Conversion & Renovation of existing shopping ctr	1,663	(11)	15	4	88	77	166
32.	Hotel & Restaurant Project	6381 W Hollywood Blvd	80 hotel rooms and 15,290 sf restaurant	1,020	(19)	11	(8)	62	4	66
33.	Residential	6298 W 3rd St	300 condominium units	(248)	17	85	102	(17)	(8)	(25)
34.	Television Center (TVC Expansion)	6300 W Romaine St	114,725 office, 40,927 gym and 38,072 dance studio	1,596	199	27	226	20	17	37
35.	Western Galleria Market	100 N Western Ave	98 apartment units and 30,000 sf retail	940	17	40	57	54	38	92
36.	Hollywood Center Studios Office	6601 W Romaine St	104,155 sf office and 1,970 sf storage	808	88	4	92	12	39	51
37.	Selma Community Housing	1603 N Cherokee Ave	66 affordable apartment units	439	7	27	34	26	15	41
38.	Beverly & Fairfax Mixed-Use	7901 W Beverly Blvd	71 apartment units and 11,454 sf retail	493	7	29	36	30	16	46
39.	Hudson Building	6523 W Hollywood Blvd	15,000 sf restaurant	547	(16)	(11)	(27)	32	4	36
40.	La Brea Gateway	915 N La Brea Ave	33,500 sf supermarket and 179 apartment units	2,615	5	86	91	158	90	248
41.	375 Luxe	375 N La Cienega Blvd	125 apts & 7900 sf retail	168	8	47	55	34	11	45
42.	Residential	712 N Wilcox Ave	100 apartment units	550	8	34	42	33	18	51
43.	Restaurant & Deli	5500 W Hollywood Blvd	4,648 sf restaurant and 1,000 sf deli	441	6	6	12	22	15	37
44.	Mixed-Use	316 N La Cienega Blvd	45 apts, 800 sf café, 3680 sf retail	602	41	53	94	31	22	53
45.	Mixed-Use	1610 N Highland Ave	248 apartment units and 14,710 sf retail	1,805	22	90	112	96	54	150
46.	Highland Avenue Indigo Hotel Project	1841 N Highland Ave	100 business hotel rooms	694	29	19	48	26	24	50
47.	Millennium Hollywood Mixed-Use Project	1740 N Vine St	461 apartment units, 254 hotel rooms, 80,000 sf health club, 264,303 sf office, 100,000 sf retail and 25,000 sf restaurant	9,922	321	253	574	486	438	924
48.	Paramount Studios	5555 W Melrose Ave	21,000 sf sound stage, 1,900 sf stage support, 635,500 sf production office, 638,100 sf office, and 64,200 sf retail	9,830	712	213	925	297	736	1,033
49.	4900 Hollywood Mixed-Use	4900 W Hollywood Blvd	200 apartment units and 25,000 sf retail	1,585	24	75	99	89	56	145
50.	Apartments	1411 N Highland Ave	90 apartment units	823	23	43	66	45	26	71

Notes

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

TABLE 3 (CONTINUED)
RELATED PROJECTS

No.	Project	Address	Use	Trip Generation [a]						
				Daily	AM Peak Hour			PM Peak Hour		
					Inbound	Outbound	Total	Inbound	Outbound	Total
51.	Apartment Project	1824 N Highland Ave	118 apartment units	667	10	41	51	40	22	62
52.	Hotel	1133 N Vine St	112 hotel rooms	457	19	13	32	18	15	33
53.	The Lexington Mixed-Use	6677 W Santa Monica Blvd	786 apartment units, 9,422 sf restaurant, and 12, 719 sf retail	1,938	127	182	309	170	122	292
54.	Columbia Square Mixed-Use	6121 W Sunset Blvd	200 apartment units, 422,500 sf office, 25,500 sf restaurant, 16,500 sf retail, and 15,000 sf health club	6,327	477	211	688	254	428	682
55.	Mixed-Use (High Line West)	5550 W Hollywood Blvd	278 apartment units and 12,500 sf retail	1,267	(3)	43	40	47	17	64
56.	Tutoring Center	927 N Highland Ave	100 school students and 18 tutoring employees	155	4	(1)	3	23	17	40
57.	Kaiser Permanente Medical Office	4905 W Hollywood Blvd	43,000 sf office	1,285	68	18	86	35	92	127
58.	Office - Museum Square	5757 W Wilshire Bl	265,000 sf office	1,798	251	34	285	47	228	275
59.	Restaurants	135 N Western Ave	11904 sf restaurant	330	21	20	41	9	9	18
60.	Starbucks w/ Drive-Thru	859 N Highland Ave	806 sf coffee shop	330	21	20	41	9	9	18
61.	Mixed-Use	7120 W Sunset Blvd	44 apartment units and 2,900 sf commercial	397	0	14	14	25	4	29
62.	Sunset Crescent Heights	8150 Sunset Blvd	249 apartment units, 51,150 sf retail, 24,811 sf supermarket, 5,094 sf bank, 22,189 sf restaurant, and 8,095 sf dance studio	1,077	(92)	10	(82)	158	58	216
63.	Academy Museum of Motion Pictures	6067 W Wilshire Blvd	Museum 5000 visitors, 135 employees, 5 ksf store, 4 KSF restaurant	2,693	0	0	0	56	261	317
64.	Ametron	1546 N Argyle Ave	169,463 sf office and 24,200 sf retail	532	163	12	175	10	130	140
65.	Sunset + Wilcox	1541 N Wilcox Ave	225 hotel rooms and 13,004 sf restaurant	3,359	103	80	183	147	114	261
66.	Mixed-Use	1350 N Western Ave	52 apartment units and 4,200 sf retail	243	(36)	39	3	29	(45)	(16)
67.	Palladium Residences	6201 W Sunset Blvd	731 apartment units, 5,000 sf restaurant, 21,000 sf retail, and 2,000 sf coffee shop	4,913	128	228	356	234	169	403
68.	Hollywood Hotel	5600 W Hollywood Blvd	80 hotel rooms	604	22	16	38	22	22	44
69.	City Lights Mixed-Use	1515 N Hillhurst Ave	202 Apts, 5.35 KSF Retail, 5.05 KSF Restaurant, 3.025 KSF Coffee/Donut	1,664	43	92	134	111	73	183
70.	925 La Brea Avenue	925 S La Brea Ave	17,000 sf retail and 53,000 sf office	810	66	11	77	24	71	95
71.	904 La Brea Avenue	904 S La Brea Ave	169 apartment units and 40,000 sf retail	2,072	25	68	93	106	80	186
72.	6250 Sunset (Nickelodeon)	6250 W Sunset Boulevard	200 apartment units, 13,510 sf office, 13,471 sf other, and 4,700 sf retail	1,473	52	80	132	71	50	121
73.	Mixed-Use	5901 Sunset Blvd	274,000 sf office and 26,000 sf supermarket	3,835	350	61	411	122	338	460
74.	2014 Residential	707 N Cole Ave	84 apartment units	236	2	15	18	13	6	19
75.	Hotel	1921 Wilcox Ave	159 hotel rooms and 3,050 sf restaurant	1,687	68	49	117	66	59	125
76.	1717 Bronson Avenue	1717 N Bronson Ave	93 apartment units	436	6	27	33	26	14	40
77.	Hotel & Retail	4110 W 3rd Street	173 room hotel & 2780 sf retail	1,185	45	35	80	46	40	86
78.	Cahuenga Boulevard Hotel	1525 N Cahuenga Blvd	64 hotel rooms, 1,500 sf commercial, and 3,550 sf restaurant	469	13	9	22	17	17	34
79.	Sunset Mixed-Use	7510 W Sunset Blvd	236 apartment units and 30,000 sf retail	4,288	21	84	105	81	43	124
80.	Las Palmas Residential (Hollywood Cherokee)	1718 N Las Palmas Ave	29 condominium units, 195 apartment units, and 985 sf retail	1,333	21	84	105	81	43	124
81.	Mixed-Use	901 N Vine Street	85 apartment units, 4,000 sf retail, and 4,000 sf restaurant	(32)	4	26	30	(5)	1	(4)
82.	Apartments	525 N Wilton Place	88 apartment units	449	6	28	34	27	14	41
83.	Apartments	3875 W Wilshire Blvd	220 apartment units	1,238	19	77	96	77	42	119
84.	Hardware Store	4905 W Hollywood Blvd	36,600 sf retail	1,404	13	12	25	64	68	132
85.	Caruso Affiliated	333 S La Cienega Blvd	162 apts, 27 ksf supermarket, 3560 sf restaurant	2,020	35	71	106	114	77	191
86.	Target Retail Shopping Center Project	5520 W Sunset Blvd	163,862 sf discount store and 30,887 shopping center	4,903	52	21	73	211	211	422
87.	Academy Square	1341 Vine St	233,685 sf office, 250 apartment units, 33,000 sf retail, and 7,000 sf restaurant	4,903	52	21	73	211	211	422
88.	Ivar Gardens Hotel	6409 W Sunset Blvd	275 hotel rooms and 1,900 sf retail	1,285	51	26	77	53	60	113
89.	Mixed-Use	1233 N Highland Ave	72 apartment units	714	11	27	38	38	28	66
90.	Mixed-Use	7107 Hollywood Blvd	410 apartment units, 5,000 sf restaurant, and 5,000 sf retail	2,637	49	157	206	167	86	253
91.	Mixed-Use	1310 N Cole Ave	375 apartment units and 2,800 office	2,226	20	139	159	139	58	197
92.	5750 Hollywood	5750 Hollywood Blvd	162 apartment units and 5,000 sf commercial	1,060	16	61	77	62	36	98
93.	Mixed-Use at 6901 Santa Monica Bl	6901 Santa Monica Blvd	231 apartment units, 5,000 sf restaurant, and 10,000 sf retail	1,010	0	78	78	66	18	84
94.	Hyatt House Hotel & Retail	6611 W Hollywood Blvd	167 hotel rooms, 10,500 sf retail, and 5,400 sf restaurant	529	26	21	47	14	34	48
95.	Jewish Family Service	320 N Fairfax Ave	28341 sf office	276	28	9	37	4	21	25
96.	John Anson Ford Theater	2580 Cahuenga Boulevard East	311 net new theater seats, 5,400 sf restaurant, and 30 office employees	610	34	1	35	18	43	61
97.	Hollywood Central Park	Hollywood Freeway (US 101)	38 acre park, amphitheater, and neighborhood uses	2,298	104	69	173	115	89	204
98.	TAO Restaurant	6421 W Selma Ave	Replace auto body shop with 17,607 sf quality restaurant	1,688	8	7	15	94	46	140
99.	Wilcox Hotel	1717 Wilcox Ave	140 hotel rooms and 10,000 sf restaurant	1,750	77	55	132	73	59	132
100.	Restaurant & Multi-Purpose Entertainment Venue	6506 W Hollywood Boulevard	13,000 sf bar and restaurant	1,179	0	0	0	78	40	118

Notes

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

TABLE 3 (CONTINUED)
RELATED PROJECTS

No.	Project	Address	Use	Trip Generation [a]						
				Daily	AM Peak Hour			PM Peak Hour		
					Inbound	Outbound	Total	Inbound	Outbound	Total
101.	Hotel	6600 W Sunset Boulevard	50 hotel rooms	409	17	11	28	15	15	30
102.	Hotel	6500 Selma Avenue	70 hotel rooms and 4,320 sf restaurant	1,121	48	36	84	47	38	85
103.	Mixed-Use	6220 W Yucca St	260 hotel rooms, 191 apartment units, 6,980 sf restaurant	3,182	114	119	233	144	105	249
104.	Apartments	2864 N Cahuenga Blvd	300 apartments	1,895	30	115	145	114	62	176
105.	Tommie Hotel	1400 N Cahuenga Blvd	175 hotel rooms, 600 sf retail, 5,043 sf restaurant	118	15	2	17	3	13	16
106.	Melrose Crossing Mixed-Use	7000 Melrose Avenue	40 apartment units and 7,565 sf retail	334	4	17	21	20	12	32
107.	Apartments	5460 W Fountain Ave	75 apartment units	499	0	0	38	0	0	47
108.	SunWest Project Mixed-Use	5525 W Sunset Blvd	240 apartment units, 34,500 sf grocery store, 5,000 sf restaurant	3,411	80	124	204	203	142	345
109.	Mixed-Use	1657 N Western Avenue	91 apartment units, 39,350 sf retail, 25,900 sf office and 16 senior housing units	702	10	29	39	37	25	62
110.	citizenM Hotel	1718 Vine Street	216 hotel rooms	1,370	70	52	122	47	51	98
111.	Hollywood Crossroads	1540-1552 Highland Ave	950 residential units, 308 hotel rooms, 95,000 sf office, and 185,000 sf commercial retail uses	17,734	657	664	1,321	842	682	1,524
112.	Hollywood De Longpre Apartments	5632 De Longpre Ave	185 apartment units	800	(31)	25	(6)	50	19	69
113.	Mixed-Use	6915 Melrose Avenue	13 condominium units and 7,500 sf retail	398	2	12	14	96	54	35
114.	Apartments & Retail	6758 W Yucca Street	270 apartment units and 8,500 sf retail	(138)	(17)	(68)	(85)	9	5	14
115.	Condos & Retail	5663 Melrose Avenue	96 condominium units and 3,350 sf retail	797	8	37	45	96	54	63
116.	Retail & Office Building	6904 W Hollywood Boulevard	29,900 sf retail and 16,700 sf office	352	17	11	28	18	24	42
117.	Residential Development	6001 W Carlton Way	42 condominium units	246	3	15	18	96	54	22
118.	Apartments	7046 W Hollywood Boulevard	42 apartment units	279	4	17	21	17	9	26
119.	Mixed-Use	1222 N La Brea Avenue	187 apartment units and 19,559 sf commercial retail uses	2,901	43	173	216	179	96	275
120.	Mixed-Use	7113 W Santa Monica Boulevard	184 apartment units and 13,350 sf commercial retail uses	2,368	33	131	164	144	78	222
121.	Sunset & Gordon Mixed-Use	5935 W Sunset Boulevard	311 condominium units, 40,000 sf office, 8,500 sf restaurant, and 5,000 sf retail	1,248	29	140	169	85	42	127
122.	7900 Hollywood Residential	7900 Hollywood Boulevard	50 apartment units	251	3	16	19	14	8	22
123.	Restaurant Expansion	1615 N Cahuenga Boulevard	10,270 sf restaurant use	294	2	1	3	17	7	24
124.	Apartments	1749 Las Palmas Avenue	38 apartment units	147	2	9	11	9	5	14
125.	Mixed-Use	1868 N Western Avenue	104 apartment units, 13,500 sf retail	363	(5)	18	13	20	7	14
126.	Mixed-Use	1311 N Cahuenga Boulevard	369 apartment units and 2,570 sf commercial uses	2,564	39	151	190	154	85	239
127.	Hotel - Restaurant	1629 N Griffith Park Bl	26 hotel rooms, 3,784 sf restaurant, and 2,497 sf bar/lounge	0	0	0	0	25	13	38
128.	Sunset Junction	4000 W Sunset Bl	311 apartment units, 9,560 sf retail, and 6,680 sf restaurant	2,660	67	149	216	129	74	203
129.	AMCAL - Meridian Apts	241 N Vemont Avenue	100 apartment units, 5,000 sf retail	510	7	38	45	33	16	49
130.	4121 Santa Monica Shopping Center	4121 W Santa Monica	14,378 sf shopping center	344	4	2	6	14	16	30
131.	747 N Western Avenue	747 N Western Avenue	44 apartment units and 7,700 sf retail	622	8	21	29	32	24	56
132.	6630 W Sunset Boulevard	6630 W Sunset Boulevard	40 apartment units	266	4	16	20	16	9	25
133.	1001 N Orange Drive	1001 N Orange Drive	53,000 sf office	585	73	10	83	13	66	79
134.	LACMA	5905 Wilshire Boulevard	368,300 sf museum	--	--	--	--	--	--	--
135.	750 N Edinburgh	750 N Edinburgh Ave	8 single family homes	23	1	1	2	2	1	3
136.	Hollywood/Wilcox	6430-6440 W Hollywood Bl	260 apartment units, 3,580 sf office, 11,020 sf retail, 3,200 sf restaurant	1,625	23	98	121	99	44	143
137.	Cedars-Sinai Medical Center Project - West Tower	8723 W Alden Dr	New medical building with 100 beds & new parking facility	1,181	79	34	113	47	83	130
138.	Apartments	850 S Crenshaw Bl	44 apartment units	293	4	18	22	18	10	28
139.	4074 W 5th Street Mixed Use	4074 W 5th St	119 aoartment units & 13,000 sf retail	908	13	44	57	51	32	83
140.	Mixed-Use	3986 W Wilshire Bl	228 apartment units, 5,000 sf coffee shop, 5,000 sf restaurant & 12,000 sf retail	1,354	100	23	123	124	77	201
141.	Edin Park	8001 W Beverly Bl	12,685 sf retail & 15,245 sf restaurant	2,110	84	66	150	97	71	168
142.	7007 W Romaine Street Office and Retail	7007 W Romaine St	53,356 sf office & 3,555 sf retail	567	63	7	70	17	58	75
143.	Mixed-Use	4914 W Melrose Ave	45 live/work units & 3,760 sf retail	460	7	20	27	25	17	42
144.	Hospital Seismic Retrofit	1300 N Vermont Ave	Replace existing hospital and ancillary uses with 30,933 sf office	290	36	5	41	6	30	36
145.	Postpartum Extended Care & Retail	257 S Mariposa Ave	Postpartun extended care with 3,490 sf retail & 98 apartment units	772	10	41	51	44	25	69
146.	Hotel 6399 Wilshire Boulevard	6399 W Wilshire Bl	176-room hotel	377	(63)	19	(45)	22	(48)	(26)
147.	Onni Group Mixed-Use Development	1360 N Vine Street	420 apartments with 60,000 sf commercial	3,768	57	157	214	202	140	342
148.	1600 Schrader	1600 Schrader Boulevard	168-room hotel with 4,028 sf restaurant	1,445	58	42	100	57	51	108

Notes

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

TABLE 4
FREEWAY SEGMENT SCREENING PROCESS
EXISTING OPERATING CONDITIONS

Freeway Segment	Direction	Number of Lanes [a]	Capacity [b]	Volume [c]	V/C Ratio	Project Traffic	Percent of Capacity	Meets Screening Criteria?
AM Peak Hour								
US 101 north of Hollywood Boulevard	NB SB	4 4	8,000 8,000	5,363 9,548	0.67 1.19	58 10	0.7% 0.1%	NO NO
US 101 between Hollywood Boulevard and Sunset Boulevard	NB SB	4 4	8,000 8,000	5,015 9,131	0.63 1.14	35 10	0.4% 0.1%	NO NO
US 101 between Sunset Boulevard and Western Avenue	NB SB	4 4	8,000 8,000	5,944 10,581	0.74 1.32	42 25	0.5% 0.3%	NO NO
US 101 between Western Avenue and Santa Monica Boulevard	NB SB	4 4	8,000 8,000	5,391 9,597	0.67 1.20	6 25	0.1% 0.3%	NO NO
US 101 south of Santa Monica Boulevard	NB SB	4 4	8,000 8,000	6,138 10,925	0.77 1.37	10 58	0.1% 0.7%	NO NO
PM Peak Hour								
US 101 north of Hollywood Boulevard	NB SB	4 4	8,000 8,000	4,447 9,446	0.56 1.18	26 51	0.3% 0.6%	NO NO
US 101 between Hollywood Boulevard and Sunset Boulevard	NB SB	4 4	8,000 8,000	4,185 9,080	0.52 1.14	16 51	0.2% 0.6%	NO NO
US 101 between Sunset Boulevard and Western Avenue	NB SB	4 4	8,000 8,000	4,928 10,468	0.62 1.31	39 13	0.5% 0.2%	NO NO
US 101 between Western Avenue and Santa Monica Boulevard	NB SB	4 4	8,000 8,000	4,470 9,494	0.56 1.19	23 13	0.3% 0.2%	NO NO
US 101 south of Santa Monica Boulevard	NB SB	4 4	8,000 8,000	5,088 10,808	0.64 1.35	51 26	0.6% 0.3%	NO NO

Notes
[a] Auxiliary lanes lanes are not included in the number of lanes.
[b] Lane capacity is 2,000 vehicles per hour per lane based on specifications in the screening criteria.
[c] An ambient growth rate of 1% per year was applied to the year 2014 traffic volume data from recent Caltrans published volume data (*2014 Traffic Volumes on California State Highways,* Caltrans, 2014) to reflect Existing year 2016 traffic conditions.

TABLE 5
FREEWAY OFF-RAMP SCREENING PROCESS
EXISTING OPERATING CONDITIONS

Freeway Off-ramp	Peak Hour	Number of Lanes	Capacity [a]	Volume [b]	V/C Ratio	Project Traffic	Percent of Capacity	Meets Screening Criteria?
US 101 Southbound Off-Ramp to Sunset Boulevard	AM	1	850	376	0.44	10	1.2%	YES
	PM	1	850	351	0.41	51	6.0%	YES
US 101 Northbound Off-Ramp to Sunset Boulevard / Wilton Place	AM	1	850	1,043	1.23	6	0.7%	NO
	PM	1	850	972	1.14	23	2.7%	YES
US 101 Northbound Off-Ramp to Santa Monica Boulevard	AM	1	850	1,017	1.20	4	0.5%	NO
	PM	1	850	948	1.12	28	3.3%	YES

Notes

[a] Off-ramp lane capacity is 850 vehicles per hour per lane based on specifications in the *First Amendment to the Agreement between LADOT and Caltrans District 7 on Freeway Impact Analysis Procedures*.

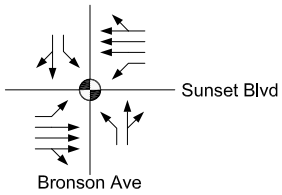
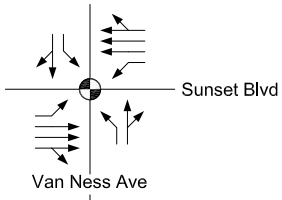
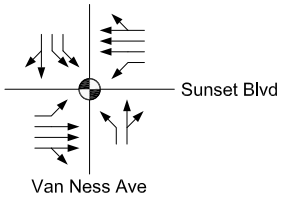
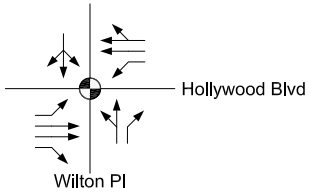
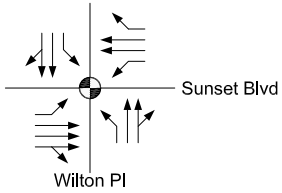
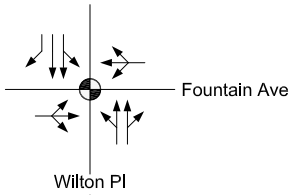
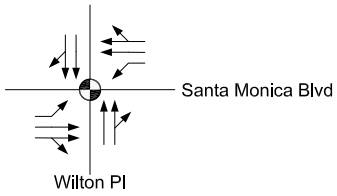
[b] An ambient growth rate of 1% per year was applied to the year 2013 traffic volume data from 2014 Traffic Volumes on California State Highways (Caltrans 2014) to reflect Existing year 2016 traffic conditions.

Appendix B

Intersection Lane Configurations

LEGEND

Traffic Signal

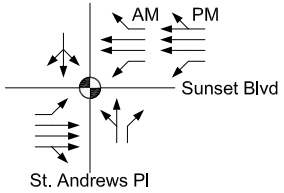
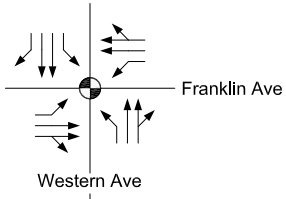
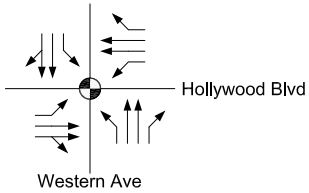
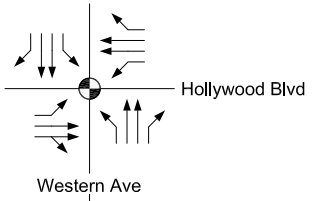
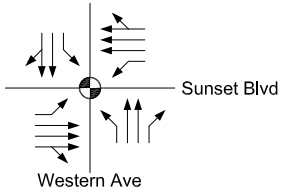
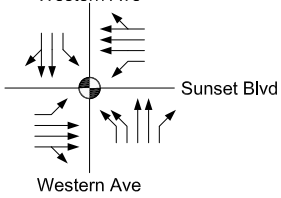
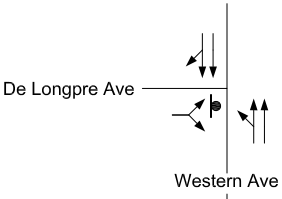
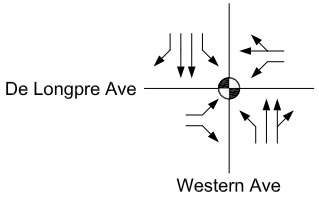
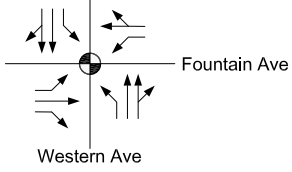
	EXISTING CONDITIONS (YEAR 2017)	FUTURE WITH PROJECT CONDITIONS (YEAR 2024)	FUTURE WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2024)
1. Bronson Avenue & Sunset Boulevard		Same as Existing Conditions	Same as Existing Conditions
2. Van Ness Avenue & Sunset Boulevard		Same as Existing Conditions	
3. Wilton Place & Hollywood Boulevard		Same as Existing Conditions	Same as Existing Conditions
4. Wilton Place & Sunset Boulevard		Same as Existing Conditions	Same as Existing Conditions
5. Wilton Place & Fountain Avenue		Same as Existing Conditions	Same as Existing Conditions
6. Wilton Place & Santa Monica Boulevard		Same as Existing Conditions	Same as Existing Conditions

INTERSECTION LANE CONFIGURATIONS

APPENDIX B

LEGEND

- Traffic Signal
- Stop Sign

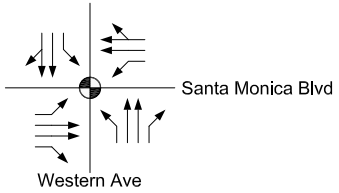
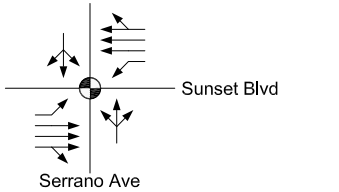
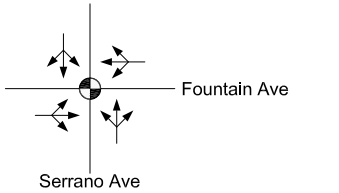
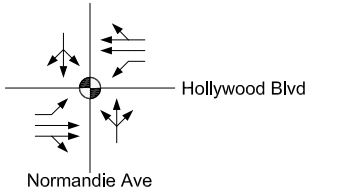
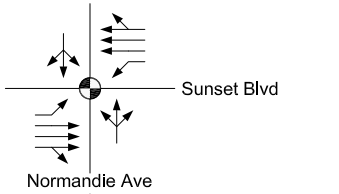
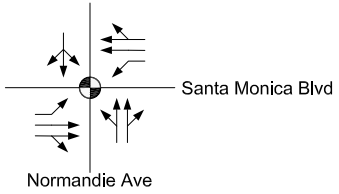
	EXISTING CONDITIONS (YEAR 2017)	FUTURE WITH PROJECT CONDITIONS (YEAR 2024)	FUTURE WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2024)
7. St. Andrews Place & Sunset Boulevard		Same as Existing Conditions	Same as Existing Conditions
8. Western Avenue & Franklin Avenue		Same as Existing Conditions	Same as Existing Conditions
9. Western Avenue & Hollywood Boulevard		Same as Existing Conditions	
10. Western Avenue & Sunset Boulevard		Same as Existing Conditions	
11. Western Avenue & De Longpre Avenue			Same as Future with Project Conditions
12. Western Avenue & Fountain Avenue		Same as Existing Conditions	Same as Existing Conditions

INTERSECTION LANE CONFIGURATIONS

APPENDIX B

LEGEND

Traffic Signal

	EXISTING CONDITIONS (YEAR 2017)	FUTURE WITH PROJECT CONDITIONS (YEAR 2024)	FUTURE WITH PROJECT WITH MITIGATION CONDITIONS (YEAR 2024)
13. Western Avenue & Santa Monica Boulevard		Same as Existing Conditions	Same as Existing Conditions
14. Serrano Avenue & Sunset Boulevard		Same as Existing Conditions	Same as Existing Conditions
15. Serrano Avenue & Fountain Avenue		Same as Existing Conditions	Same as Existing Conditions
16. Normandie Avenue & Hollywood Boulevard		Same as Existing Conditions	Same as Existing Conditions
17. Normandie Avenue & Sunset Boulevard		Same as Existing Conditions	Same as Existing Conditions
18. Normandie Avenue & Santa Monica Boulevard		Same as Existing Conditions	Same as Existing Conditions

INTERSECTION LANE CONFIGURATIONS

APPENDIX B

Appendix C

Traffic Counts

WILTEC

Tel: (626) 564-1944 Fax: (626) 564-0969 info@wiltecusa.com

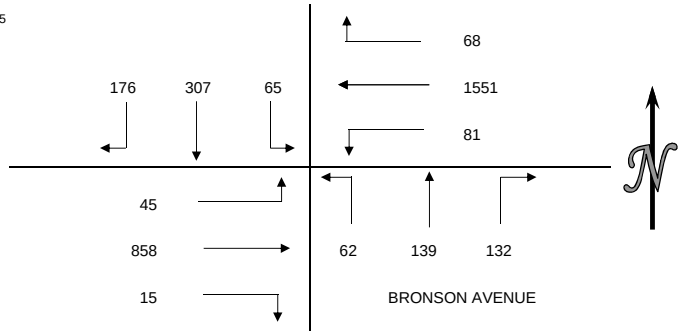
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: HOLLYWOOD TRAFFIC COUNTS
DATE: WEDNESDAY MAY 13 2015
PERIOD: 7:00 AM TO 10:00 AM
INTERSECTION: N/S BRONSON AVENUE
E/W SUNSET BLVD
CITY: HOLLYWOOD

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-715	21	28	11	8	350	14	21	14	4	0	178	12	661
715-730	24	40	15	14	382	28	34	33	15	5	187	11	788
730-745	36	55	9	6	376	24	41	36	15	5	214	11	828
745-800	32	73	16	10	403	26	26	32	3	7	212	10	850
800-815	50	92	14	22	387	21	40	31	20	3	226	8	914
815-830	64	66	17	22	373	16	38	48	27	4	200	14	889
830-845	30	76	18	14	388	18	28	28	12	1	220	13	846
845-900	44	92	21	14	371	28	15	46	2	2	188	17	840
900-915	42	105	24	14	224	26	20	33	7	8	203	16	722
915-930	35	96	23	9	175	13	14	30	3	2	221	12	633
930-945	26	92	15	9	192	17	18	28	4	4	197	16	618
945-1000	28	102	20	8	186	15	23	35	10	5	182	9	623
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-800	113	196	51	38	1511	92	122	115	37	17	791	44	3127
715-815	142	260	54	52	1548	99	141	132	53	20	839	40	3380
730-830	182	286	56	60	1539	87	145	147	65	19	852	43	3481
745-845	176	307	65	68	1551	81	132	139	62	15	858	45	3499
800-900	188	326	70	72	1519	83	121	153	61	10	834	52	3489
815-915	180	339	80	64	1356	88	101	155	48	15	811	60	3297
830-930	151	369	86	51	1158	85	77	137	24	13	832	58	3041
845-945	147	385	83	46	962	84	67	137	16	16	809	61	2813
900-1000	131	395	82	40	777	71	75	126	24	19	803	53	2596

AM PEAK HOUR: 745-845



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	12	13	13	15	53
715-730	22	25	16	20	83
730-745	10	28	12	8	58
745-800	15	11	21	8	55
800-815	14	23	14	3	54
815-830	23	20	23	13	79
830-845	29	18	25	22	94
854-900	27	22	14	7	70
900-915	14	14	19	16	63
915-930	29	12	17	25	83
930-945	18	15	16	13	62
945-1000	18	7	11	14	50
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	59	77	62	51	249
715-815	61	87	63	39	250
730-830	62	82	70	32	246
745-845	81	72	83	46	282
800-900	93	83	76	45	297
815-915	93	74	81	58	306
830-930	99	66	75	70	310
845-945	88	63	66	61	278
900-1000	79	48	63	68	258

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	1	2	2	1	6
715-730	2	0	1	0	3
730-745	4	1	2	0	7
745-800	0	0	0	0	0
800-815	3	2	4	0	9
815-830	4	3	1	1	9
830-845	4	1	1	0	6
845-900	3	1	3	3	10
900-915	7	1	0	1	9
915-930	1	2	6	0	9
930-945	2	0	2	1	5
945-1000	3	0	3	0	6
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	7	3	5	1	16
715-815	9	3	7	0	19
730-830	11	6	7	1	25
745-845	11	6	6	1	24
800-900	14	7	9	4	34
815-915	18	6	5	5	34
830-930	15	5	10	4	34
845-945	13	4	11	5	33
900-1000	13	3	11	2	29

WILTEC

Tel: (626) 564-1944 Fax: (626) 564-0969 info@wiltecusa.com

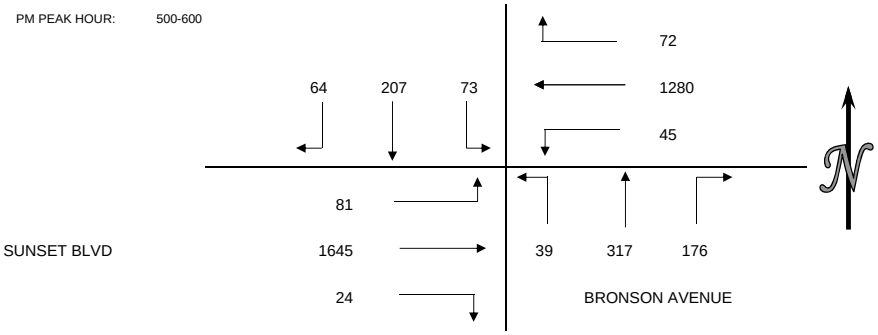
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: HOLLYWOOD TRAFFIC COUNTS
DATE: WEDNESDAY MAY 13 2015
PERIOD: 3:00 PM TO 6:00 PM
INTERSECTION: N/S BRONSON AVENUE
E/W SUNSET BLVD
CITY: HOLLYWOOD

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
300-315	21	54	23	19	323	19	49	62	9	3	390	27	999
315-330	19	37	21	15	321	25	30	65	4	6	302	21	866
330-345	16	53	24	17	286	16	39	55	8	8	335	23	880
345-400	32	48	15	32	310	20	50	50	5	6	374	21	963
400-415	18	74	15	15	284	16	46	75	7	3	359	21	933
415-430	14	38	19	19	303	10	38	69	11	5	366	24	916
430-445	14	46	14	15	333	12	31	69	6	7	359	23	929
445-500	22	53	16	22	278	14	31	84	4	9	388	17	938
500-515	15	55	15	17	315	8	34	72	6	6	407	22	972
515-530	17	59	17	19	313	16	35	73	11	7	423	23	1013
530-545	22	58	19	22	320	13	55	97	11	4	410	19	1050
545-600	10	35	22	14	332	8	52	75	11	7	405	17	988
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
300-400	88	192	83	83	1240	80	168	232	26	23	1401	92	3708
315-415	85	212	75	79	1201	77	165	245	24	23	1370	86	3642
330-430	80	213	73	83	1183	62	173	249	31	22	1434	89	3692
345-445	78	206	63	81	1230	58	165	263	29	21	1458	89	3741
400-500	68	211	64	71	1198	52	146	297	28	24	1472	85	3716
415-515	65	192	64	73	1229	44	134	294	27	27	1520	86	3755
430-530	68	213	62	73	1239	50	131	298	27	29	1577	85	3852
445-545	76	225	67	80	1226	51	155	326	32	26	1628	81	3973
500-600	64	207	73	72	1280	45	176	317	39	24	1645	81	4023

PM PEAK HOUR: 500-600



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-315	28	48	44	16	136
315-330	12	12	31	22	77
330-345	17	11	35	15	78
345-400	31	9	16	25	81
400-415	20	13	22	19	74
415-430	20	11	25	18	74
430-445	16	6	19	7	48
445-500	19	5	13	21	58
500-515	29	11	28	21	89
515-530	25	10	21	11	67
530-545	24	16	26	15	81
545-600	20	18	35	20	93
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-400	88	80	126	78	372
315-415	80	45	104	81	310
330-430	88	44	98	77	307
345-445	87	39	82	69	277
400-500	75	35	79	65	254
415-515	84	33	85	67	269
430-530	89	32	81	60	262
445-545	97	42	88	68	295
500-600	98	55	110	67	330

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-315	7	1	2	1	11
315-330	2	4	4	1	11
330-345	1	2	6	1	10
345-400	1	2	6	1	10
400-415	2	0	6	0	8
415-430	8	1	3	2	14
430-445	2	0	2	1	5
445-500	5	1	2	2	10
500-515	3	2	3	2	10
515-530	4	0	3	3	10
530-545	5	0	4	2	11
545-600	4	0	9	2	15
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-400	11	9	18	4	42
315-415	6	8	22	3	39
330-430	12	5	21	4	42
345-445	13	3	17	4	37
400-500	17	2	13	5	37
415-515	18	4	10	7	39
430-530	14	3	10	8	35
445-545	17	3	12	9	41
500-600	16	2	19	9	46

Turning Movement Count Report AM

Location ID: 2
North/South: Van Ness Avenue
East/West: Sunset Boulevard

Date: 04/28/16
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	7	49	92	4	394	25	19	3	2	5	171	2	773
7:15	12	64	119	3	453	28	41	6	4	3	212	0	945
7:30	4	59	96	9	474	30	59	3	8	7	240	0	989
7:45	7	82	120	2	476	17	57	5	18	13	254	1	1052
8:00	7	87	116	6	475	24	52	6	8	19	248	3	1051
8:15	8	94	121	8	449	23	25	8	13	18	246	0	1013
8:30	20	89	126	11	384	10	26	8	12	19	246	3	954
8:45	12	105	148	10	416	16	22	3	9	12	234	2	989
9:00	21	91	132	8	372	27	27	6	24	9	219	2	938
9:15	24	109	124	10	377	33	18	3	11	11	218	6	944
9:30	14	75	108	8	325	18	20	3	16	9	206	2	804
9:45	17	67	103	11	347	22	13	4	15	9	231	3	842
Total Volume:	153	971	1405	90	4942	273	379	58	140	134	2725	24	11294
Approach %	6%	38%	56%	2%	93%	5%	66%	10%	24%	5%	95%	1%	
Peak Hr Begin:	7:30												
PHV	26	322	453	25	1874	94	193	22	47	57	988	4	4105
PHF	0.898			0.971			0.819			0.971			0.976

Prepared by City Count, LLC. (www.citycount.com)

Turning Movement Count Report PM

Location ID: 2
North/South: Van Ness Avenue
East/West: Sunset Boulevard

Date: 04/28/16
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	15	84	99	6	314	17	65	12	24	7	373	4	1020
15:15	14	84	100	16	292	17	46	14	21	20	403	3	1030
15:30	11	53	85	13	298	10	39	10	14	7	401	1	942
15:45	8	73	98	7	280	24	33	10	16	15	430	4	998
16:00	11	94	92	9	291	20	48	12	18	12	388	0	995
16:15	4	82	104	16	299	18	44	21	17	8	422	1	1036
16:30	5	65	79	10	308	11	56	17	14	10	426	1	1002
16:45	3	88	93	11	333	7	36	13	22	6	459	4	1075
17:00	9	70	99	13	263	18	46	16	24	11	430	2	1001
17:15	5	81	93	21	304	14	43	18	25	11	452	5	1072
17:30	5	75	117	7	292	15	53	12	13	9	455	4	1057
17:45	7	73	96	9	325	14	44	10	20	11	473	4	1086

Total Volume:	97	922	1155	138	3599	185	553	165	228	127	5112	33	12314
Approach %	4%	42%	53%	4%	92%	5%	58%	17%	24%	2%	97%	1%	

Peak Hr Begin:	17:00												
PHV	26	299	405	50	1184	61	186	56	82	42	1810	15	4216
PHF	0.926			0.930			0.942			0.956			0.971

Pedestrian/Bicycle Count Report

	North		East		South		West	
Leg:	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*
7:00	3	1	3	0	4	0	1	0
7:15	7	1	3	0	9	1	1	0
7:30	7	2	3	0	6	0	3	0
7:45	27	1	8	1	13	0	3	0
8:00	5	2	1	1	2	1	5	0
8:15	12	0	6	0	9	3	2	0
8:30	14	2	1	0	11	0	1	1
8:45	11	2	1	0	7	0	1	1
9:00	9	2	2	1	7	0	2	0
9:15	15	2	5	0	2	3	4	0
9:30	10	1	3	0	6	0	1	0
9:45	8	3	1	0	2	4	2	0

	North		East		South		West	
Leg:	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*
15:00	9	4	2	0	24	2	1	1
15:15	16	1	3	0	28	1	2	1
15:30	9	0	0	0	28	0	0	0
15:45	8	3	4	4	10	3	3	0
16:00	9	3	4	1	13	2	2	0
16:15	17	4	7	0	4	4	1	0
16:30	21	0	0	1	14	0	5	0
16:45	21	3	2	0	12	1	1	1
17:00	12	1	1	0	2	4	6	0
17:15	20	1	4	0	16	4	3	0
17:30	11	2	1	0	10	0	2	0
17:45	9	0	0	0	8	1	2	1

WILTEC

Tel: (626) 564-1944 Fax: (626) 564-0969 info@wiltecusa.com

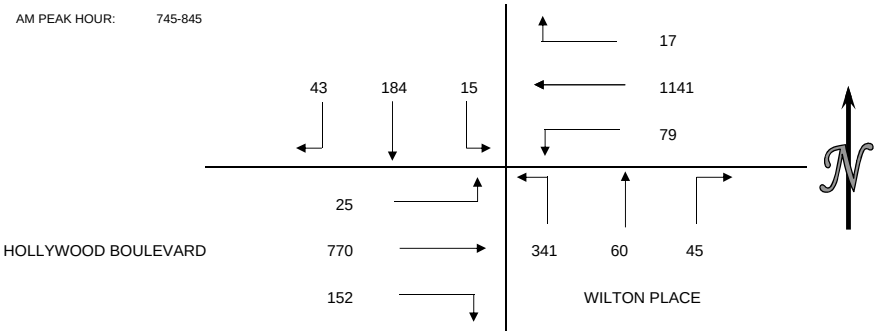
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: HOLLYWOOD TRAFFIC COUNTS
DATE: WEDNESDAY MAY 27, 2015
PERIOD: 7:00 AM TO 10:00 AM
INTERSECTION: N/S WILTON PLACE
E/W HOLLYWOOD BOULEVARD
CITY: HOLLYWOOD

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-715	3	16	2	3	207	15	17	15	58	10	150	3	499
715-730	6	21	4	1	221	19	17	17	73	23	140	2	544
730-745	12	19	3	2	248	20	11	19	58	27	152	3	574
745-800	12	35	2	6	315	23	15	15	74	42	189	5	733
800-815	8	43	5	4	290	21	6	13	90	30	219	8	737
815-830	8	50	5	4	283	18	16	13	93	45	185	6	726
830-845	15	56	3	3	253	17	8	19	84	35	177	6	676
845-900	9	42	3	5	261	24	12	22	79	28	168	7	660
900-915	10	55	4	4	244	30	12	19	71	28	159	6	642
915-930	8	62	4	4	229	27	13	32	65	21	132	4	601
930-945	6	40	4	10	209	24	14	22	78	24	129	8	568
945-1000	8	46	1	6	213	13	12	19	84	28	168	3	601
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-800	33	91	11	12	991	77	60	66	263	102	631	13	2350
715-815	38	118	14	13	1074	83	49	64	295	122	700	18	2588
730-830	40	147	15	16	1136	82	48	60	315	144	745	22	2770
745-845	43	184	15	17	1141	79	45	60	341	152	770	25	2872
800-900	40	191	16	16	1087	80	42	67	346	138	749	27	2799
815-915	42	203	15	16	1041	89	48	73	327	136	689	25	2704
830-930	42	215	14	16	987	98	45	92	299	112	636	23	2579
845-945	33	199	15	23	943	105	51	95	293	101	588	25	2471
900-1000	32	203	13	24	895	94	51	92	298	101	588	21	2412

AM PEAK HOUR: 745-845



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	14	10	3	0	27
715-730	12	8	5	0	25
730-745	17	12	4	0	33
745-800	11	23	7	0	41
800-815	18	10	11	0	39
815-830	8	15	10	0	33
830-845	11	10	13	0	34
854-900	15	60	56	0	131
900-915	9	13	13	0	35
915-930	12	6	9	0	27
930-945	12	7	8	0	27
945-1000	10	3	5	0	18
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	54	53	19	0	126
715-815	58	53	27	0	138
730-830	54	60	32	0	146
745-845	48	58	41	0	147
800-900	52	95	90	0	237
815-915	43	98	92	0	233
830-930	47	89	91	0	227
845-945	48	86	86	0	220
900-1000	43	29	35	0	107

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	2	0	1	0	3
715-730	1	0	1	0	2
730-745	1	0	0	0	1
745-800	1	0	1	0	2
800-815	3	0	0	0	3
815-830	9	2	2	0	13
830-845	1	0	2	0	3
845-900	6	1	0	0	7
900-915	5	0	0	0	5
915-930	4	0	2	1	7
930-945	4	1	3	0	8
945-1000	1	0	3	0	4
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	5	0	3	0	8
715-815	6	0	2	0	8
730-830	14	2	3	0	19
745-845	14	2	5	0	21
800-900	19	3	4	0	26
815-915	21	3	4	0	28
830-930	16	1	4	1	22
845-945	19	2	5	1	27
900-1000	14	1	8	1	24

WILTEC

Tel: (626) 564-1944 Fax: (626) 564-0969 info@wiltecusa.com

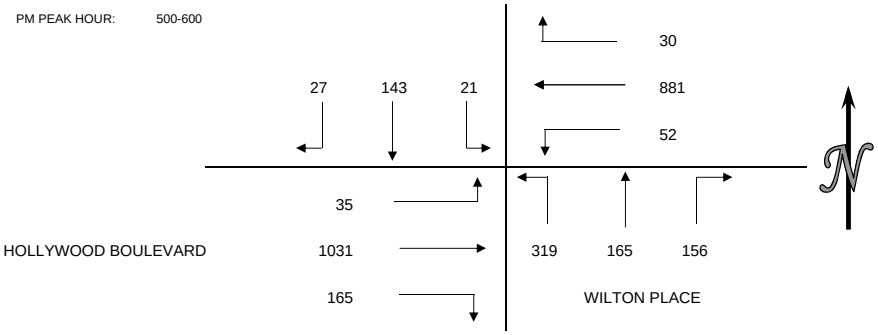
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: HOLLYWOOD TRAFFIC COUNTS
DATE: WEDNESDAY MAY 27, 2015
PERIOD: 3:00 PM TO 6:00 PM
INTERSECTION: N/S WILTON PLACE
E/W HOLLYWOOD BOULEVARD
CITY: HOLLYWOOD

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
300-315	8	32	2	8	211	16	26	33	79	37	251	6	709
315-330	6	24	0	6	226	14	33	24	66	45	269	6	719
330-345	7	27	7	10	224	13	32	27	81	55	275	9	767
345-400	6	31	1	8	189	17	26	23	94	59	280	3	737
400-415	6	31	1	8	199	18	19	38	85	58	244	10	717
415-430	4	41	4	5	214	19	16	29	85	42	234	7	700
430-445	7	24	6	6	200	14	25	26	81	42	218	6	655
445-500	6	49	3	5	186	11	26	40	70	48	262	10	716
500-515	5	28	5	6	205	16	27	52	81	24	209	18	676
515-530	9	35	2	6	196	12	30	35	94	44	279	7	749
530-545	6	35	4	10	261	13	29	42	69	46	281	5	801
545-600	7	45	10	8	219	11	70	36	75	51	262	5	799
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
300-400	27	114	10	32	850	60	117	107	320	196	1075	24	2932
315-415	25	113	9	32	838	62	110	112	326	217	1068	28	2940
330-430	23	130	13	31	826	67	93	117	345	214	1033	29	2921
345-445	23	127	12	27	802	68	86	116	345	201	976	26	2809
400-500	23	145	14	24	799	62	86	133	321	190	958	33	2788
415-515	22	142	18	22	805	60	94	147	317	156	923	41	2747
430-530	27	136	16	23	787	53	108	153	326	158	968	41	2796
445-545	26	147	14	27	848	52	112	169	314	162	1031	40	2942
500-600	27	143	21	30	881	52	156	165	319	165	1031	35	3025

PM PEAK HOUR: 500-600



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-315	10	61	15	0	86
315-330	16	12	19	0	47
330-345	10	14	24	0	48
345-400	14	16	23	1	54
400-415	12	7	22	0	41
415-430	13	26	25	0	64
430-445	18	13	30	0	61
445-500	17	16	17	1	51
500-515	18	14	20	2	54
515-530	14	16	19	0	49
530-545	26	20	12	0	58
545-600	14	16	56	0	86
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-400	50	103	81	1	235
315-415	52	49	88	1	190
330-430	49	63	94	1	207
345-445	57	62	100	1	220
400-500	60	62	94	1	217
415-515	66	69	92	3	230
430-530	67	59	86	3	215
445-545	75	66	68	3	212
500-600	72	66	107	2	247

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-315	2	0	0	1	3
315-330	6	0	7	0	13
330-345	5	2	2	0	9
345-400	3	1	3	0	7
400-415	1	1	1	0	3
415-430	4	1	3	0	8
430-445	2	3	1	1	7
445-500	2	0	3	1	6
500-515	5	2	5	0	12
515-530	4	1	5	0	10
530-545	3	0	1	0	4
545-600	5	1	4	1	11
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-400	16	3	12	1	32
315-415	15	4	13	0	32
330-430	13	5	9	0	27
345-445	10	6	8	1	25
400-500	9	5	8	2	24
415-515	13	6	12	2	33
430-530	13	6	14	2	35
445-545	14	3	14	1	32
500-600	17	4	15	1	37

Turning Movement Count Report AM

Location ID: 3
North/South: Wilton Place
East/West: Sunset Boulevard

Date: 04/28/16
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	20	49	35	23	177	23	23	36	16	23	165	14	604
7:15	28	72	38	16	210	20	24	57	6	46	255	9	781
7:30	31	126	42	30	244	28	23	42	7	56	261	19	909
7:45	41	127	34	22	228	20	30	47	15	49	290	18	921
8:00	40	130	46	36	223	26	52	55	12	35	286	10	951
8:15	31	142	48	31	240	20	33	50	14	51	272	15	947
8:30	22	124	25	27	222	23	21	39	10	44	279	9	845
8:45	24	147	32	19	237	17	24	57	15	45	276	15	908
9:00	33	155	23	20	188	25	26	52	14	41	259	18	854
9:15	23	133	21	20	194	39	22	53	12	35	231	16	799
9:30	27	115	21	23	180	24	23	37	7	37	224	14	732
9:45	14	77	18	30	181	22	21	50	10	36	239	16	714
Total Volume:	334	1397	383	297	2524	287	322	575	138	498	3037	173	9965
Approach %	16%	66%	18%	10%	81%	9%	31%	56%	13%	13%	82%	5%	
Peak Hr Begin:	7:30												
PHV	143	525	170	119	935	94	138	194	48	191	1109	62	3728
PHF	0.948			0.950			0.798			0.954			0.980

Prepared by City Count, LLC. (www.citycount.com)

Turning Movement Count Report PM

Location ID: 3
North/South: Wilton Place
East/West: Sunset Boulevard

Date: 04/28/16
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	27	114	32	37	214	17	35	51	25	27	374	34	987
15:15	26	116	21	33	234	21	39	60	13	34	365	25	987
15:30	19	109	32	45	193	21	28	51	13	28	328	29	896
15:45	16	113	32	28	193	22	33	53	9	34	368	22	923
16:00	22	95	26	34	245	22	45	91	19	24	374	22	1019
16:15	27	106	19	41	258	20	25	68	14	41	410	22	1051
16:30	38	97	32	40	257	18	33	81	17	46	391	21	1071
16:45	24	115	18	27	238	19	29	80	15	53	401	23	1042
17:00	35	138	31	39	244	15	48	95	18	44	398	26	1131
17:15	26	132	14	18	234	17	29	90	21	44	394	25	1044
17:30	20	105	19	33	256	18	60	118	26	36	476	23	1190
17:45	26	131	17	23	297	18	43	60	21	33	451	27	1147

Total Volume:	306	1371	293	398	2863	228	447	898	211	444	4730	299	12488
Approach %	16%	70%	15%	11%	82%	7%	29%	58%	14%	8%	86%	5%	

Peak Hr Begin:	17:00												
PHV	107	506	81	113	1031	68	180	363	86	157	1719	101	4512
PHF	0.850			0.896			0.771			0.924			0.948

Pedestrian/Bicycle Count Report

	North		East		South		West	
Leg:	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*
7:00	14	2	14	0	4	0	12	0
7:15	35	2	37	1	26	1	27	0
7:30	53	1	39	0	34	1	32	0
7:45	93	2	57	0	42	0	76	0
8:00	43	4	54	2	42	1	60	1
8:15	18	0	25	1	16	0	15	0
8:30	30	6	15	0	44	0	14	0
8:45	13	7	19	0	8	0	5	0
9:00	20	2	17	0	6	0	16	0
9:15	12	3	6	1	3	1	4	0
9:30	8	6	10	1	8	0	5	0
9:45	19	5	5	3	3	0	7	0

	North		East		South		West	
Leg:	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*
15:00	46	2	55	1	63	3	30	1
15:15	47	2	100	3	80	2	20	1
15:30	38	0	62	0	37	1	37	1
15:45	31	2	24	1	16	2	19	1
16:00	50	1	18	1	16	1	22	0
16:15	13	2	26	0	11	0	7	2
16:30	29	1	40	1	31	0	18	0
16:45	31	0	32	1	21	0	9	1
17:00	29	0	33	4	8	2	15	1
17:15	24	0	26	4	16	4	8	0
17:30	19	0	17	0	18	3	6	3
17:45	12	0	13	0	15	0	3	0

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5411-004 **Day:** Tuesday

City: Los Angeles **Date:** 6/7/2016

AM

NS/EW Streets:	Wilton Pl			Wilton Pl			Fountain Ave			Fountain Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	1	0	1	0	0	1	0	
7:00 AM	4	60	56	6	61	15	3	25	2	34	51	5	322
7:15 AM	7	69	62	8	72	20	5	37	6	46	72	9	413
7:30 AM	15	63	46	13	128	27	6	60	12	25	88	14	497
7:45 AM	11	72	54	21	133	34	10	48	11	34	84	21	533
8:00 AM	7	69	65	7	121	16	12	53	10	60	64	9	493
8:15 AM	5	96	65	7	143	12	8	43	4	58	68	5	514
8:30 AM	7	87	97	5	186	12	3	58	5	73	79	6	618
8:45 AM	7	82	74	8	159	18	7	45	2	49	83	8	542
9:00 AM	4	80	56	4	152	13	1	50	7	59	67	6	499
9:15 AM	3	53	42	7	108	15	2	37	6	56	77	8	414
9:30 AM	2	92	56	4	116	14	8	32	4	51	81	5	465
9:45 AM	0	69	47	7	120	14	6	37	6	52	71	9	438
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	72	892	720	97	1499	210	71	525	75	597	885	105	5748
APPROACH %'s :	4.28%	52.97%	42.76%	5.37%	83.00%	11.63%	10.58%	78.24%	11.18%	37.62%	55.77%	6.62%	
PEAK HR START TIME :	815 AM												TOTAL
PEAK HR VOL :	23	345	292	24	640	55	19	196	18	239	297	25	2173
PEAK HR FACTOR :		0.864			0.885			0.883			0.888		0.879

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5411-004 **Day:** Tuesday

City: Los Angeles **Date:** 6/7/2016

PM

NS/EW Streets:	Wilton Pl			Wilton Pl			Fountain Ave			Fountain Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	1	0	1	0	0	1	0	
4:00 PM	7	150	58	12	108	13	1	104	21	35	78	14	601
4:15 PM	8	140	55	12	126	9	4	113	14	33	84	16	614
4:30 PM	8	139	58	17	140	15	5	94	15	29	69	16	605
4:45 PM	7	122	42	12	122	16	4	101	6	39	77	10	558
5:00 PM	17	130	59	10	153	16	4	108	18	38	78	21	652
5:15 PM	16	142	54	14	128	17	6	126	16	42	83	11	655
5:30 PM	16	142	58	7	123	17	7	113	17	40	75	13	628
5:45 PM	8	132	61	8	128	21	5	120	27	32	81	13	636
6:00 PM	11	126	60	13	109	22	8	121	15	25	81	22	613
6:15 PM	7	129	76	12	141	17	7	117	22	45	73	20	666
6:30 PM	6	149	59	6	126	18	8	143	17	27	64	15	638
6:45 PM	8	141	45	4	106	14	6	138	17	23	69	14	585
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	119	1642	685	127	1510	195	65	1398	205	408	912	185	7451
APPROACH %'s :	4.87%	67.13%	28.00%	6.93%	82.42%	10.64%	3.90%	83.81%	12.29%	27.11%	60.60%	12.29%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	57	546	232	39	532	71	22	467	78	152	317	58	2571
PEAK HR FACTOR :		0.966			0.897			0.933			0.962		0.981

UTURNS				
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5411-004 **Day:** Tuesday

City: Los Angeles **Date:** 6/7/2016

NOON

NS/EW Streets:	Wilton Pl			Wilton Pl			Fountain Ave			Fountain Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	2	1	0	1	0	0	1	0	

UTURNS			
NB	SB	EB	WB

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	

NB	SB	EB	WB
0	0	0	0

PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.000

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

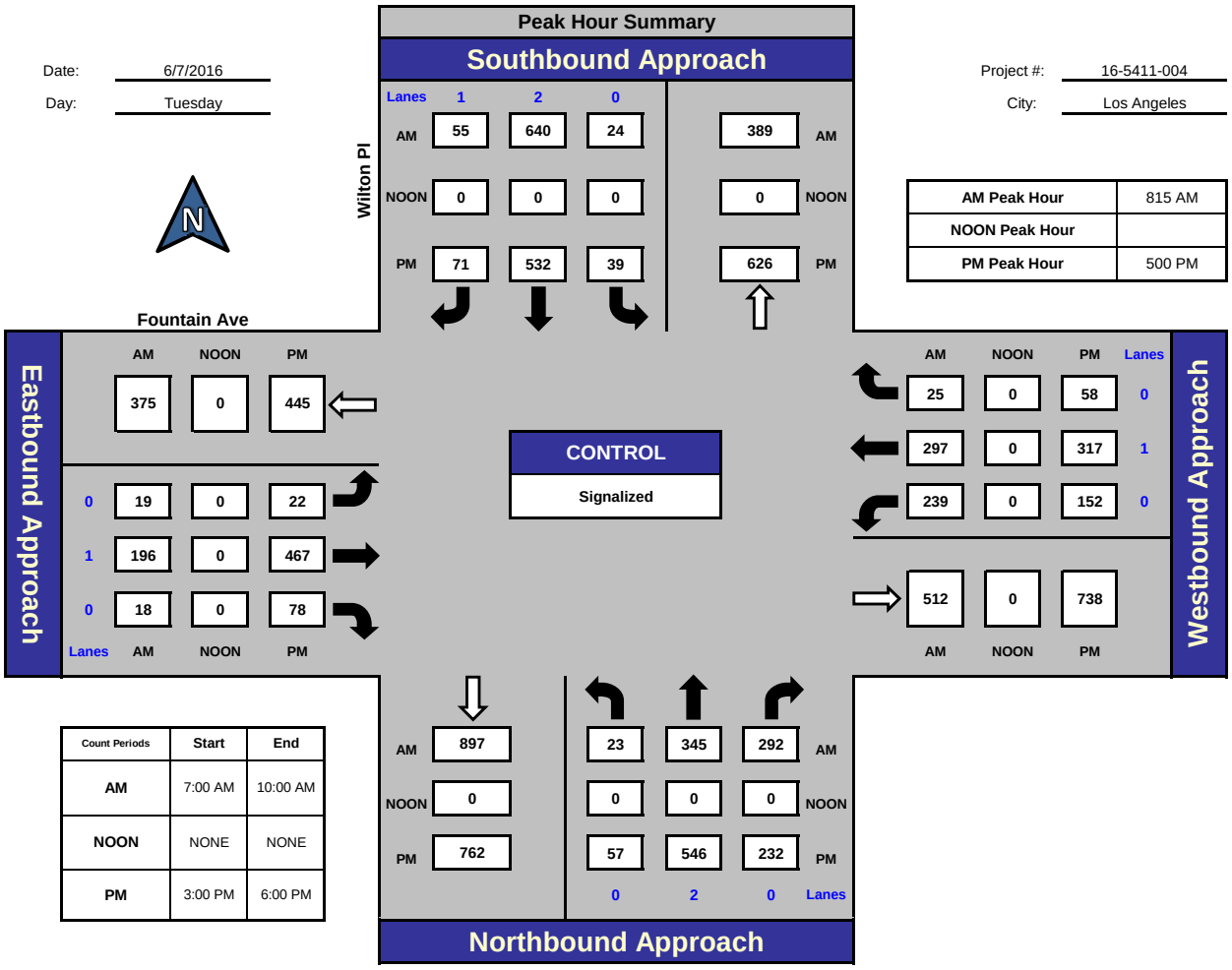
Wilton Pl and Fountain Ave , Los Angeles

Date: 6/7/2016

Day: Tuesday

Project #: 16-5411-004

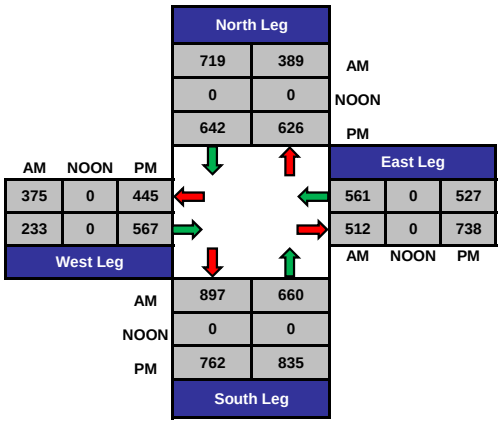
City: Los Angeles



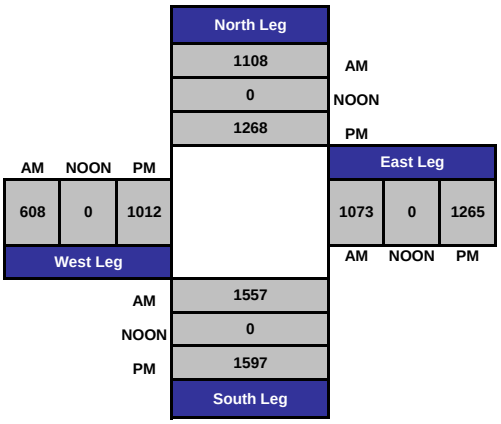
AM Peak Hour	815 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON	NONE	NONE
PM	3:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



WILTEC

Tel: (626) 564-1944 Fax: (626) 564-0969 info@wiltecusa.com

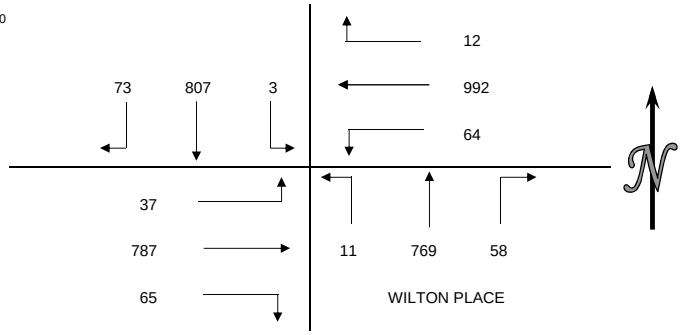
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: HOLLYWOOD TRAFFIC COUNTS
DATE: TUESDAY MAY 12 2015
PERIOD: 7:00 AM TO 10:00 AM
INTERSECTION: N/S WILTON PLACE
E/W SANTA MONICA BLVD
CITY: HOLLYWOOD

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-715	6	98	0	7	254	60	13	149	4	4	148	6	749
715-730	14	111	0	2	225	11	5	158	1	6	160	4	697
730-745	28	119	0	8	213	40	14	209	0	11	193	5	840
745-800	26	120	0	0	241	10	17	179	1	11	199	7	811
800-815	23	182	2	1	254	26	22	217	0	23	194	11	955
815-830	14	222	1	5	239	14	8	196	1	17	203	6	926
830-845	19	205	0	2	240	9	13	186	2	15	203	12	906
845-900	17	198	0	4	259	15	15	170	8	10	187	8	891
900-915	26	171	3	3	285	18	11	146	8	14	210	16	911
915-930	17	194	2	4	253	23	13	136	17	5	183	6	853
930-945	13	163	1	6	275	17	10	132	13	19	206	16	871
945-1000	13	124	2	2	293	21	5	131	14	13	188	10	816
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-800	74	448	0	17	933	121	49	695	6	32	700	22	3097
715-815	91	532	2	11	933	87	58	763	2	51	746	27	3303
730-830	91	643	3	14	947	90	61	801	2	62	789	29	3532
745-845	82	729	3	8	974	59	60	778	4	66	799	36	3598
800-900	73	807	3	12	992	64	58	769	11	65	787	37	3678
815-915	76	796	4	14	1023	56	47	698	19	56	803	42	3634
830-930	79	768	5	13	1037	65	52	638	35	44	783	42	3561
845-945	73	726	6	17	1072	73	49	584	46	48	786	46	3526
900-1000	69	652	8	15	1106	79	39	545	52	51	787	48	3451

AM PEAK HOUR: 800-900



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	12	7	19	10	48
715-730	24	14	65	54	157
730-745	33	56	141	73	303
745-800	55	47	192	137	431
800-815	23	37	138	69	267
815-830	25	39	30	21	115
830-845	22	25	27	20	94
854-900	24	27	29	15	95
900-915	16	12	27	22	77
915-930	13	8	29	12	62
930-945	11	8	30	12	61
945-1000	6	3	21	8	38
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	124	124	417	274	939
715-815	135	154	536	333	1158
730-830	136	179	501	300	1116
745-845	125	148	387	247	907
800-900	94	128	224	125	571
815-915	87	103	113	78	381
830-930	75	72	112	69	328
845-945	64	55	115	61	295
900-1000	46	31	107	54	238

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	2	0	5	1	8
715-730	2	2	1	1	6
730-745	7	4	2	0	13
745-800	1	2	4	1	8
800-815	6	0	4	2	12
815-830	4	1	3	2	10
830-845	1	0	2	0	3
845-900	7	0	2	1	10
900-915	4	1	2	0	7
915-930	3	1	2	1	7
930-945	1	1	4	2	8
945-1000	3	4	3	2	12
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	12	8	12	3	35
715-815	16	8	11	4	39
730-830	18	7	13	5	43
745-845	12	3	13	5	33
800-900	18	1	11	5	35
815-915	16	2	9	3	30
830-930	15	2	8	2	27
845-945	15	3	10	4	32
900-1000	11	7	11	5	34

WILTEC

Tel: (626) 564-1944 Fax: (626) 564-0969 info@wiltecusa.com

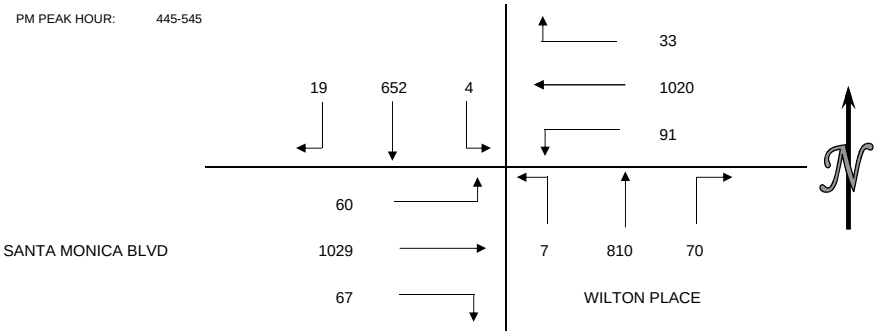
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: HOLLYWOOD TRAFFIC COUNTS
DATE: TUESDAY MAY 12 2015
PERIOD: 3:00 PM TO 6:00 PM
INTERSECTION: N/S WILTON PLACE
E/W SANTA MONICA BLVD
CITY: HOLLYWOOD

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
300-315	12	97	7	4	191	17	13	126	16	14	236	21	754
315-330	10	118	7	7	208	8	10	142	12	19	242	16	799
330-345	9	163	6	7	215	15	5	147	20	23	252	16	878
345-400	10	143	6	1	202	14	15	161	17	23	250	18	860
400-415	5	169	1	5	212	20	15	158	4	14	241	18	862
415-430	5	123	4	5	234	21	19	176	3	24	256	16	886
430-445	9	127	0	1	236	17	16	206	9	16	238	18	893
445-500	0	185	1	8	260	15	23	188	2	15	253	19	969
500-515	7	158	3	8	230	31	11	203	2	19	244	10	926
515-530	10	172	0	7	254	26	18	217	2	21	277	13	1017
530-545	2	137	0	10	276	19	18	202	1	12	255	18	950
545-600	6	152	0	11	252	8	20	220	4	19	241	17	950
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
300-400	41	521	26	19	816	54	43	576	65	79	980	71	3291
315-415	34	593	20	20	837	57	45	608	53	79	985	68	3399
330-430	29	598	17	18	863	70	54	642	44	84	999	68	3486
345-445	29	562	11	12	884	72	65	701	33	77	985	70	3501
400-500	19	604	6	19	942	73	73	728	18	69	988	71	3610
415-515	21	593	8	22	960	84	69	773	16	74	991	63	3674
430-530	26	642	4	24	980	89	68	814	15	71	1012	60	3805
445-545	19	652	4	33	1020	91	70	810	7	67	1029	60	3862
500-600	25	619	3	36	1012	84	67	842	9	71	1017	58	3843

PM PEAK HOUR: 445-545



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-315	57	69	85	31	242
315-330	16	35	73	24	148
330-345	19	23	51	23	116
345-400	20	25	58	15	118
400-415	20	26	40	13	99
415-430	18	30	42	25	115
430-445	14	28	49	31	122
445-500	17	15	53	32	117
500-515	21	20	52	29	122
515-530	20	28	51	22	121
530-545	33	27	62	36	158
545-600	8	13	60	16	97
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-400	112	152	267	93	624
315-415	75	109	222	75	481
330-430	77	104	191	76	448
345-445	72	109	189	84	454
400-500	69	99	184	101	453
415-515	70	93	196	117	476
430-530	72	91	205	114	482
445-545	91	90	218	119	518
500-600	82	88	225	103	498

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-315	3	3	4	2	12
315-330	5	2	6	1	14
330-345	1	4	6	0	11
345-400	2	2	8	0	12
400-415	3	1	10	2	16
415-430	5	5	8	2	20
430-445	4	5	10	2	21
445-500	1	1	14	1	17
500-515	1	2	11	0	14
515-530	0	2	7	1	10
530-545	6	4	1	1	12
545-600	2	2	9	0	13
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-400	11	11	24	3	49
315-415	11	9	30	3	53
330-430	11	12	32	4	59
345-445	14	13	36	6	69
400-500	13	12	42	7	74
415-515	11	13	43	5	72
430-530	6	10	42	4	62
445-545	8	9	33	3	53
500-600	9	10	28	2	49

Turning Movement Count Report AM

Location ID: 1
North/South: St. Andrews Place
East/West: Sunset Boulevard

Date: 01/26/16
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	1	4	2	8	187	13	14	4	39	11	172	2	457
7:15	1	1	8	6	227	16	12	3	44	14	234	0	566
7:30	1	2	3	6	220	25	18	2	69	12	313	1	672
7:45	2	3	5	3	228	26	16	3	55	27	333	4	705
8:00	2	8	4	2	247	25	18	2	51	18	309	2	688
8:15	1	16	4	6	223	29	35	0	54	32	286	6	692
8:30	5	4	4	7	227	27	29	3	47	25	304	2	684
8:45	0	2	7	5	224	22	35	0	55	16	272	3	641
9:00	4	0	4	6	185	21	24	0	39	21	241	0	545
9:15	5	1	4	8	182	20	23	0	38	15	270	2	568
9:30	2	1	1	8	208	21	17	3	40	20	246	1	568
9:45	2	2	3	9	227	32	33	2	51	13	262	1	637

Total Volume:	26	44	49	74	2585	277	274	22	582	224	3242	24	7423
Approach %	22%	37%	41%	3%	88%	9%	31%	3%	66%	6%	93%	1%	

Peak Hr Begin:	7:45												
PHV	10	31	17	18	925	107	98	8	207	102	1232	14	2769
PHF	0.690			0.958			0.879			0.926			0.982

Turning Movement Count Report PM

Location ID: 1
North/South: St. Andrews Place
East/West: Sunset Boulevard

Date: 01/26/16
City: Los Angeles, CA

	Southbound			*Westbound*			*Northbound*			*Eastbound*			
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	Totals:
Movements:	R	T	L	R	T	L	R	T	L	R	T	L	
15:00	3	6	1	4	218	29	28	4	32	13	325	1	664
15:15	4	7	5	4	217	23	50	2	48	16	322	6	704
15:30	1	3	7	6	215	16	42	1	42	14	344	1	692
15:45	2	2	5	10	219	23	27	3	35	15	365	2	708
16:00	1	3	5	8	223	20	23	4	41	18	345	3	694
16:15	3	1	2	10	251	14	31	1	42	12	387	0	754
16:30	4	7	1	7	232	22	26	3	33	10	374	1	720
16:45	4	5	4	8	266	12	21	0	30	13	404	3	770
17:00	1	1	1	9	263	21	30	2	33	13	400	3	777
17:15	0	0	4	7	264	20	32	2	35	15	423	2	804
17:30	4	3	1	6	294	19	25	1	32	11	446	3	845
17:45	2	4	2	11	309	8	24	3	25	2	459	0	849

Total Volume:	29	42	38	90	2971	227	359	26	428	152	4594	25	8981
Approach %	27%	39%	35%	3%	90%	7%	44%	3%	53%	3%	96%	1%	

Peak Hr Begin:	17:00												
PHV	7	8	8	33	1130	68	111	8	125	41	1728	8	3275
PHF	0.719			0.938			0.884			0.964			0.964

Pedestrian/Bicycle Count Report

	North		East		South		West	
Leg:	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*
7:00	40	0	15	1	17	1	0	0
7:15	56	1	27	2	23	2	0	0
7:30	85	1	15	0	15	0	0	0
7:45	100	4	17	0	10	0	0	0
8:00	70	3	22	2	18	0	1	0
8:15	49	1	22	0	21	2	0	0
8:30	39	3	20	1	20	1	0	0
8:45	42	3	23	0	23	0	0	0
9:00	24	2	18	0	17	0	0	0
9:15	32	1	19	2	17	1	0	0
9:30	31	1	17	0	16	0	0	0
9:45	37	1	24	2	19	1	0	0

	North		East		South		West	
Leg:	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*
15:00	53	1	30	1	26	0	0	0
15:15	57	5	39	1	37	3	1	0
15:30	73	5	47	0	43	0	2	0
15:45	62	8	28	2	27	0	0	0
16:00	73	4	26	0	28	0	0	1
16:15	77	1	23	1	24	1	2	0
16:30	60	3	38	1	35	1	0	0
16:45	64	7	28	0	21	1	0	0
17:00	66	2	18	1	19	2	0	0
17:15	63	7	26	0	27	1	0	0
17:30	60	8	22	2	23	1	3	0
17:45	48	1	17	2	16	1	1	0

WILTEC

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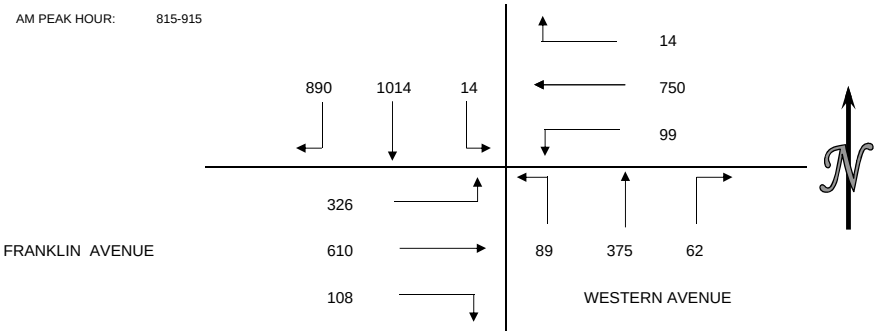
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: HOLLYWOOD TRAFFIC COUNTS
DATE: WEDNESDAY MAY 20 2015
PERIOD: 7:00 AM TO 10:00 AM
INTERSECTION: N/S WESTERN AVENUE
E/W FRANKLIN AVENUE
CITY: HOLLYWOOD

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-715	185	219	10	3	95	11	6	80	7	10	59	47	732
715-730	219	274	34	4	115	19	9	105	12	19	87	79	976
730-745	171	209	40	4	194	24	14	104	16	30	122	89	1017
745-800	183	244	27	0	201	40	10	83	10	29	142	77	1046
800-815	192	235	14	3	199	23	7	75	21	33	152	69	1023
815-830	211	245	3	0	183	28	23	93	23	20	154	71	1054
830-845	210	234	7	3	198	23	18	94	25	19	176	91	1098
845-900	228	280	4	5	183	30	10	83	19	35	157	81	1115
900-915	241	255	0	6	186	18	11	105	22	34	123	83	1084
915-930	221	215	2	5	176	24	13	102	16	16	136	82	1008
930-945	211	229	5	2	141	30	17	87	27	22	116	68	955
945-1000	199	201	1	4	139	22	17	89	21	33	139	89	954
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
700-800	758	946	111	11	605	94	39	372	45	88	410	292	3771
715-815	765	962	115	11	709	106	40	367	59	111	503	314	4062
730-830	757	933	84	7	777	115	54	355	70	112	570	306	4140
745-845	796	958	51	6	781	114	58	345	79	101	624	308	4221
800-900	841	994	28	11	763	104	58	345	88	107	639	312	4290
815-915	890	1014	14	14	750	99	62	375	89	108	610	326	4351
830-930	900	984	13	19	743	95	52	384	82	104	592	337	4305
845-945	901	979	11	18	686	102	51	377	84	107	532	314	4162
900-1000	872	900	8	17	642	94	58	383	86	105	514	322	4001

AM PEAK HOUR: 815-915



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	4	10	7	5	26
715-730	4	8	5	2	19
730-745	6	5	7	9	27
745-800	10	15	7	9	41
800-815	3	16	15	11	45
815-830	5	16	10	11	42
830-845	6	12	4	11	33
854-900	7	21	6	12	46
900-915	4	12	7	7	30
915-930	2	11	8	10	31
930-945	3	12	7	2	24
945-1000	7	7	6	11	31
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	24	38	26	25	113
715-815	23	44	34	31	132
730-830	24	52	39	40	155
745-845	24	59	36	42	161
800-900	21	65	35	45	166
815-915	22	61	27	41	151
830-930	19	56	25	40	140
845-945	16	56	28	31	131
900-1000	16	42	28	30	116

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-715	0	0	0	0	0
715-730	1	0	1	0	2
730-745	2	0	0	2	4
745-800	0	0	1	0	1
800-815	1	0	2	1	4
815-830	3	0	0	1	4
830-845	2	1	3	0	6
845-900	0	0	0	0	0
900-915	1	0	3	0	4
915-930	0	1	1	0	2
930-945	1	0	0	0	1
945-1000	0	1	0	0	1
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
700-800	3	0	2	2	7
715-815	4	0	4	3	11
730-830	6	0	3	4	13
745-845	6	1	6	2	15
800-900	6	1	5	2	14
815-915	6	1	6	1	14
830-930	3	2	7	0	12
845-945	2	1	4	0	7
900-1000	2	2	4	0	8

WILTEC

Tel: (626) 564-1944 Fax: (626) 564-0969 info@wiltecusa.com

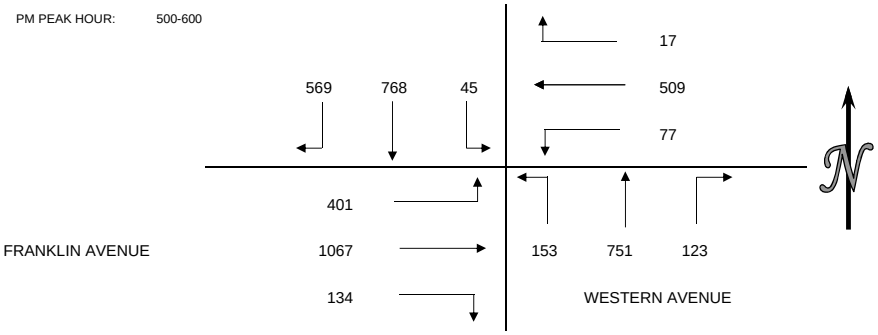
INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT: GIBSON TRANSPORTATION CONSULTING, INC.
PROJECT: HOLLYWOOD TRAFFIC COUNTS
DATE: WEDNESDAY MAY 20 2015
PERIOD: 3:00 PM TO 6:00 PM
INTERSECTION: N/S WESTERN AVENUE
E/W FRANKLIN AVENUE
CITY: HOLLYWOOD

VEHICLE COUNTS

15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
300-315	126	172	17	2	128	17	26	156	30	33	166	103	976
315-330	131	149	8	6	131	21	27	144	39	35	227	99	1017
330-345	142	157	19	4	125	22	17	173	29	33	242	95	1058
345-400	126	146	4	6	132	14	24	158	42	30	263	108	1053
400-415	124	160	13	5	146	11	17	175	45	33	257	90	1076
415-430	135	179	12	8	117	25	25	170	33	24	260	101	1089
430-445	131	140	13	8	140	25	25	183	34	45	248	89	1081
445-500	117	163	14	5	144	11	23	191	34	34	244	92	1072
500-515	111	190	9	4	119	18	35	197	37	32	235	100	1087
515-530	148	186	11	6	141	23	29	194	41	26	302	101	1208
530-545	144	194	16	3	117	20	29	176	37	40	227	91	1094
545-600	166	198	9	4	132	16	30	184	38	36	303	109	1225
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
300-400	525	624	48	18	516	74	94	631	140	131	898	405	4104
315-415	523	612	44	21	534	68	85	650	155	131	989	392	4204
330-430	527	642	48	23	520	72	83	676	149	120	1022	394	4276
345-445	516	625	42	27	535	75	91	686	154	132	1028	388	4299
400-500	507	642	52	26	547	72	90	719	146	136	1009	372	4318
415-515	494	672	48	25	520	79	108	741	138	135	987	382	4329
430-530	507	679	47	23	544	77	112	765	146	137	1029	382	4448
445-545	520	733	50	18	521	72	116	758	149	132	1008	384	4461
500-600	569	768	45	17	509	77	123	751	153	134	1067	401	4614

PM PEAK HOUR: 500-600



PEDESTRIAN COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-315	1	5	4	21	31
315-330	12	12	6	19	49
330-345	14	13	14	34	75
345-400	4	7	9	16	36
400-415	8	13	11	34	66
415-430	4	18	8	16	46
430-445	8	13	7	15	43
445-500	5	6	6	14	31
500-515	6	9	6	7	28
515-530	4	9	8	7	28
530-545	2	6	10	8	26
545-600	2	13	13	10	38
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-400	31	37	33	90	191
315-415	38	45	40	103	226
330-430	30	51	42	100	223
345-445	24	51	35	81	191
400-500	25	50	32	79	186
415-515	23	46	27	52	148
430-530	23	37	27	43	130
445-545	17	30	30	36	113
500-600	14	37	37	32	120

BICYCLE COUNTS

15 MIN COUNTS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-315	0	0	2	0	2
315-330	1	0	1	1	3
330-345	0	0	0	0	0
345-400	1	2	2	0	5
400-415	1	0	0	0	1
415-430	0	0	1	1	2
430-445	1	0	4	0	5
445-500	0	0	0	0	0
500-515	1	1	0	0	2
515-530	1	0	1	0	2
530-545	2	0	1	2	5
545-600	2	0	0	0	2
HOUR TOTALS	NORTH	EAST	SOUTH	WEST	TOTAL
PERIOD	LEG	LEG	LEG	LEG	
300-400	2	2	5	1	10
315-415	3	2	3	1	9
330-430	2	2	3	1	8
345-445	3	2	7	1	13
400-500	2	0	5	1	8
415-515	2	1	5	1	9
430-530	3	1	5	0	9
445-545	4	1	2	2	9
500-600	6	1	2	2	11

Turning Movement Count Report AM

Location ID: 1
North/South: Western Avenue
East/West: Hollywood Boulevard

Date: 04/28/16
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	43	175	11	2	132	27	17	81	25	13	88	18	632
7:15	61	212	16	6	147	18	20	84	35	8	115	12	734
7:30	50	207	13	8	205	35	18	125	51	17	163	28	920
7:45	54	216	23	4	199	41	21	135	35	25	198	21	972
8:00	69	204	22	9	216	45	39	122	35	19	216	33	1029
8:15	63	234	22	6	215	38	19	127	38	21	199	35	1017
8:30	54	220	14	7	149	40	22	149	42	25	206	35	963
8:45	60	304	4	5	196	48	32	128	29	20	181	26	1033
9:00	72	219	16	10	187	33	22	123	26	13	144	39	904
9:15	69	240	16	21	188	38	16	147	26	19	160	42	982
9:30	66	237	10	16	154	32	23	113	30	19	113	29	842
9:45	48	204	21	22	169	42	21	140	25	18	112	34	856
Total Volume:	709	2672	188	116	2157	437	270	1474	397	217	1895	352	10884
Approach %	20%	75%	5%	4%	80%	16%	13%	69%	19%	9%	77%	14%	
Peak Hr Begin:	8:00												
PHV	246	962	62	27	776	171	112	526	144	85	802	129	4042
PHF	0.863			0.902			0.918			0.948			0.978

Turning Movement Count Report PM

Location ID: 1
North/South: Western Avenue
East/West: Hollywood Boulevard

Date: 04/28/16
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	30	212	30	22	175	26	21	153	18	22	200	53	962
15:15	40	195	33	17	192	27	32	178	34	20	216	44	1028
15:30	40	160	25	21	173	32	33	168	29	18	226	54	979
15:45	45	176	18	23	187	40	17	161	30	30	212	43	982
16:00	44	191	34	32	195	17	30	189	27	33	204	57	1053
16:15	47	198	39	35	184	35	24	190	38	29	213	57	1089
16:30	46	182	38	16	170	34	26	196	38	28	211	44	1029
16:45	47	185	28	13	168	32	40	190	35	27	202	59	1026
17:00	49	204	27	18	212	26	27	205	30	26	221	48	1093
17:15	39	214	44	13	181	26	18	207	25	34	207	43	1051
17:30	51	210	25	14	227	33	29	218	30	16	215	48	1116
17:45	64	214	39	26	218	27	31	208	34	21	198	55	1135

Total Volume:	542	2341	380	250	2282	355	328	2263	368	304	2525	605	12543
Approach %	17%	72%	12%	9%	79%	12%	11%	76%	12%	9%	74%	18%	

Peak Hr Begin:	17:00												
PHV	203	842	135	71	838	112	105	838	119	97	841	194	4395
PHF	0.931			0.932			0.958			0.959			0.968

Pedestrian/Bicycle Count Report

	North		East		South		West	
Leg:	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*
7:00	48	1	61	1	44	0	27	1
7:15	32	1	54	0	57	0	31	1
7:30	54	0	79	1	69	0	30	0
7:45	53	0	75	0	85	0	48	0
8:00	52	2	97	2	60	1	37	2
8:15	50	1	85	1	57	1	14	2
8:30	32	0	90	1	62	0	40	0
8:45	28	1	135	1	58	0	32	0
9:00	34	1	61	0	65	2	141	3
9:15	50	0	76	0	43	0	24	0
9:30	65	1	88	1	81	1	50	0
9:45	59	1	64	1	51	0	45	2

	North		East		South		West	
Leg:	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*
15:00	71	1	115	3	55	3	39	0
15:15	89	4	121	3	78	2	52	4
15:30	91	1	144	0	91	3	44	2
15:45	82	2	124	2	77	2	54	0
16:00	98	2	167	0	99	4	45	1
16:15	127	1	132	1	90	3	47	2
16:30	109	1	114	0	95	1	51	1
16:45	89	1	145	3	80	1	51	0
17:00	118	4	155	2	120	1	86	0
17:15	96	3	143	1	104	2	50	1
17:30	120	2	152	2	108	3	49	0
17:45	115	1	128	4	98	3	48	0

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5411-001 **Day:** Tuesday

City: Los Angeles **Date:** 6/7/2016

AM

NS/EW Streets:	Western Ave			Western Ave			Sunset Blvd			Sunset Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	0	1	3	0	1	3	0	
7:00 AM	23	75	19	11	146	58	21	139	12	18	118	9	649
7:15 AM	28	88	21	16	170	65	21	175	15	17	139	8	763
7:30 AM	25	116	23	17	198	56	33	216	22	21	181	13	921
7:45 AM	25	110	22	32	182	56	34	216	29	28	167	19	920
8:00 AM	31	113	23	35	204	56	26	246	20	40	166	27	987
8:15 AM	32	142	25	31	217	58	47	252	23	21	173	10	1031
8:30 AM	25	119	26	29	206	43	52	233	13	35	180	25	986
8:45 AM	30	111	25	16	205	65	45	195	19	26	179	13	929
9:00 AM	23	113	25	25	215	61	46	202	25	19	152	13	919
9:15 AM	28	97	20	24	216	58	33	155	18	31	158	25	863
9:30 AM	23	117	17	22	210	51	47	171	19	21	164	20	882
9:45 AM	28	94	26	22	187	58	39	183	18	28	158	15	856
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	321	1295	272	280	2356	685	444	2383	233	305	1935	197	10706
APPROACH %'s :	17.00%	68.59%	14.41%	8.43%	70.94%	20.63%	14.51%	77.88%	7.61%	12.52%	79.40%	8.08%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	118	485	99	111	832	222	170	926	75	122	698	75	3933
PEAK HR FACTOR :		0.882			0.952			0.909			0.932		0.954

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5411-001 **Day:** Tuesday

City: Los Angeles **Date:** 6/7/2016

PM

NS/EW Streets:	Western Ave			Western Ave			Sunset Blvd			Sunset Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	0	1	3	0	1	3	0	
4:00 PM	38	149	23	39	143	44	63	291	19	34	230	26	1099
4:15 PM	36	132	15	38	183	41	65	319	20	31	244	33	1157
4:30 PM	19	166	15	35	133	41	76	328	24	30	224	35	1126
4:45 PM	30	152	20	31	147	39	70	316	22	43	273	25	1168
5:00 PM	35	199	19	38	162	38	68	363	21	42	230	31	1246
5:15 PM	28	160	23	48	173	41	81	351	22	35	234	27	1223
5:30 PM	42	158	26	32	164	39	80	395	35	29	223	27	1250
5:45 PM	34	173	26	33	139	51	73	407	26	31	231	36	1260
6:00 PM	43	203	44	28	168	41	67	391	28	24	264	37	1338
6:15 PM	37	183	35	26	142	42	78	403	16	41	210	30	1243
6:30 PM	30	192	34	34	153	50	68	385	22	39	210	42	1259
6:45 PM	28	206	39	35	159	30	60	437	20	18	207	42	1281
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	400	2073	319	417	1866	497	849	4386	275	397	2780	391	14650
APPROACH %'s :	14.33%	74.25%	11.43%	15.00%	67.12%	17.88%	15.41%	79.60%	4.99%	11.13%	77.91%	10.96%	
PEAK HR START TIME :	600 PM												TOTAL
PEAK HR VOL :	138	784	152	123	622	163	273	1616	86	122	891	151	5121
PEAK HR FACTOR :		0.926			0.958			0.955			0.895		0.957

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5411-001 **Day:** Tuesday

City: Los Angeles **Date:** 6/7/2016

NOON

NS/EW Streets:	Western Ave			Western Ave			Sunset Blvd			Sunset Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	0	1	3	0	1	3	0	
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.000

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Western Ave and Sunset Blvd , Los Angeles

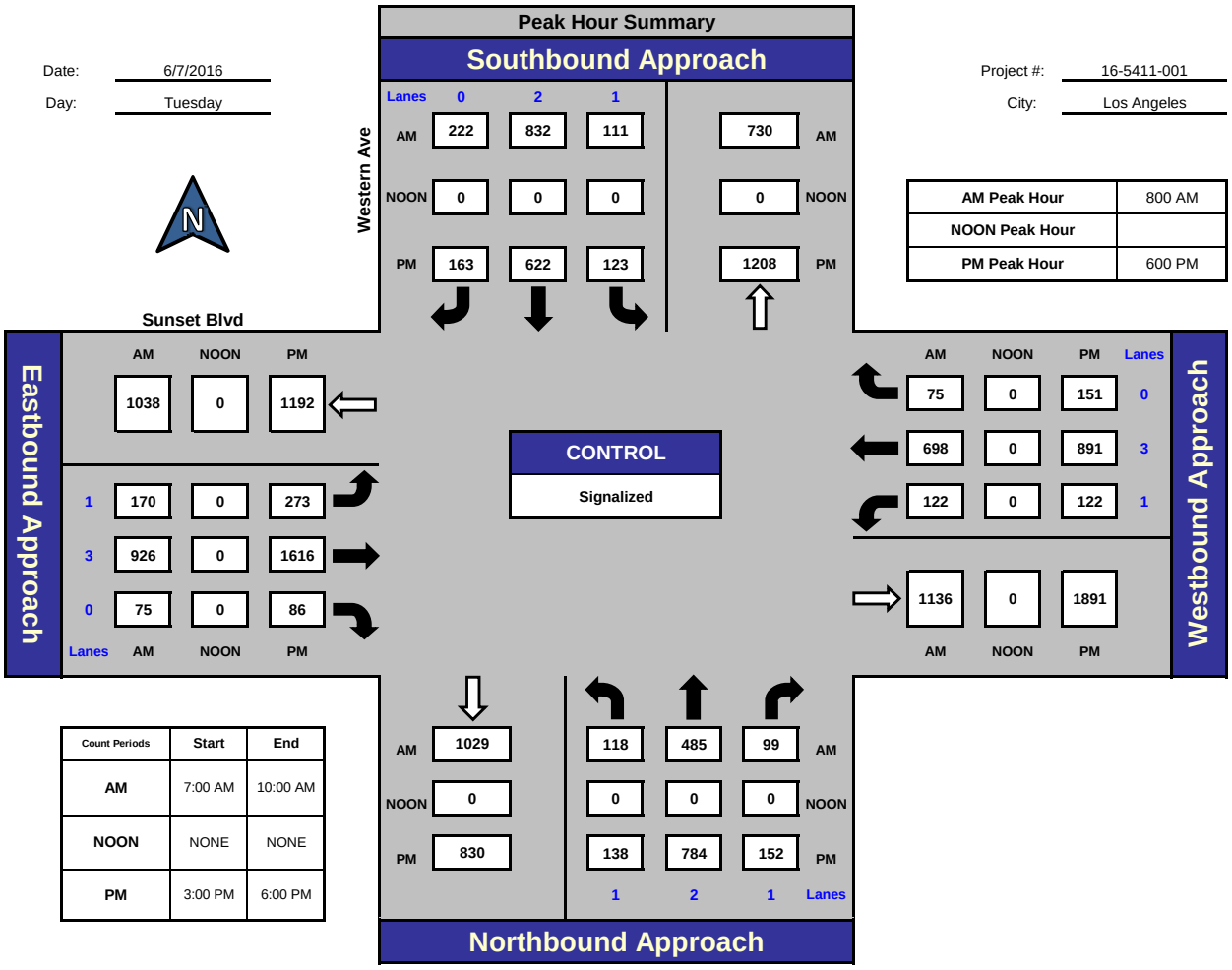
Date: 6/7/2016

Day: Tuesday

Project #: 16-5411-001

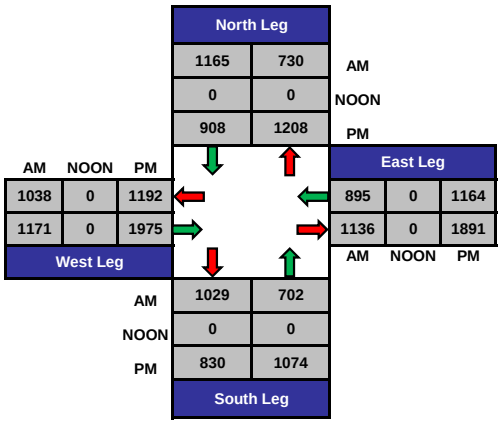
City: Los Angeles

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	600 PM

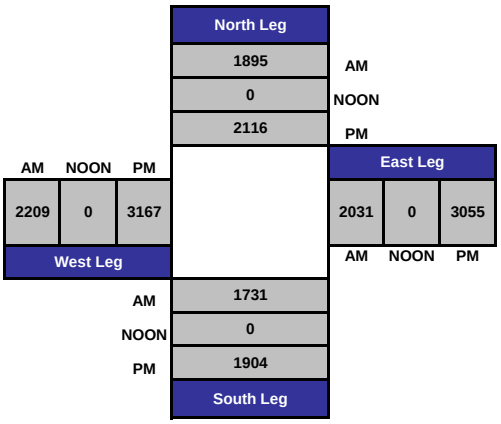


Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON	NONE	NONE
PM	3:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



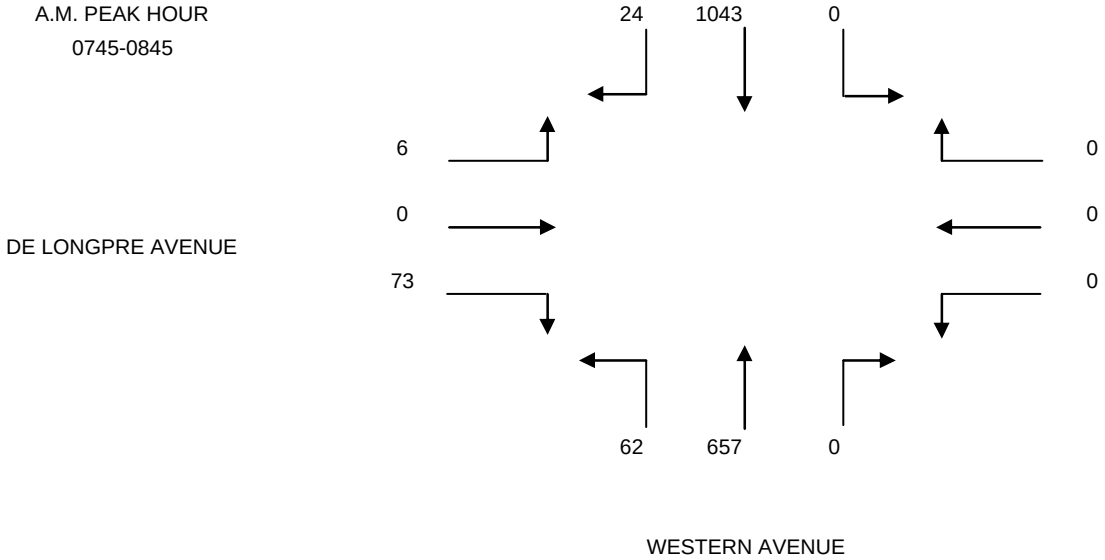
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: OVERLAND TRAFFIC CONSULTANTS, INC.
PROJECT: HOLLYWOOD
DATE: TUESDAY, NOVEMBER 09, 2010
PERIOD: 07:00 AM TO 09:00 AM
INTERSECTION: N/S WESTERN AVENUE
E/W DE LONGPRE AVENUE
FILE NUMBER: 16-AM

15 MINUTE TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
700-715	1	165	0	0	0	0	0	121	9	8	0	2
715-730	2	193	0	0	0	0	0	136	10	8	0	2
730-745	4	221	0	0	0	0	0	169	15	11	0	0
745-800	7	285	0	0	0	0	0	174	19	17	0	1
800-815	6	247	0	0	0	0	0	151	19	19	0	3
815-830	7	274	0	0	0	0	0	177	13	24	0	0
830-845	4	237	0	0	0	0	0	155	11	13	0	2
845-900	8	250	0	0	0	0	0	167	9	10	0	2

1 HOUR TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTALS
700-800	14	864	0	0	0	0	0	600	53	44	0	5	1580
715-815	19	946	0	0	0	0	0	630	63	55	0	6	1719
730-830	24	1027	0	0	0	0	0	671	66	71	0	4	1863
745-845	24	1043	0	0	0	0	0	657	62	73	0	6	1865
800-900	25	1008	0	0	0	0	0	650	52	66	0	7	1808

A.M. PEAK HOUR
0745-0845



THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978

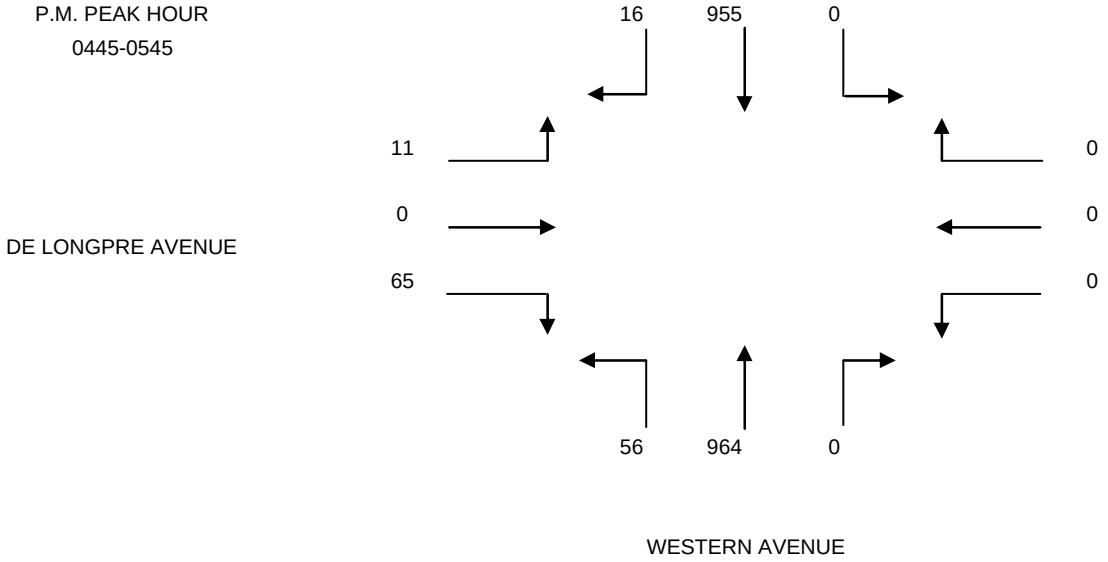
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: OVERLAND TRAFFIC CONSULTANTS, INC.
PROJECT: HOLLYWOOD
DATE: TUESDAY, NOVEMBER 09, 2010
PERIOD: 04:00 PM TO 06:00 PM
INTERSECTION: N/S WESTERN AVENUE
E/W DE LONGPRE AVENUE
FILE NUMBER: 16-PM

15 MINUTE	1	2	3	4	5	6	7	8	9	10	11	12
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT
400-415	8	200	0	0	0	0	0	202	10	18	0	2
415-430	10	217	0	0	0	0	0	232	8	15	0	5
430-445	5	228	0	0	0	0	0	230	14	17	0	3
445-500	5	241	0	0	0	0	0	253	19	22	0	2
500-515	5	230	0	0	0	0	0	244	13	23	0	3
515-530	4	233	0	0	0	0	0	237	14	12	0	3
530-545	2	251	0	0	0	0	0	230	10	8	0	3
545-600	2	243	0	0	0	0	0	229	7	7	0	3

1 HOUR	1	2	3	4	5	6	7	8	9	10	11	12	
TOTALS	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTALS
400-500	28	886	0	0	0	0	0	917	51	72	0	12	1966
415-515	25	916	0	0	0	0	0	959	54	77	0	13	2044
430-530	19	932	0	0	0	0	0	964	60	74	0	11	2060
445-545	16	955	0	0	0	0	0	964	56	65	0	11	2067
500-600	13	957	0	0	0	0	0	940	44	50	0	12	2016

P.M. PEAK HOUR
0445-0545



THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5411-002 **Day:** Tuesday

City: Los Angeles **Date:** 6/7/2016

AM

NS/EW Streets:	Western Ave			Western Ave			Fountain Ave			Fountain Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	1	1	1	1	0	
7:00 AM	2	124	19	6	173	23	7	35	60	32	63	6	550
7:15 AM	15	151	16	10	186	25	11	45	68	31	98	5	661
7:30 AM	16	132	23	16	222	24	14	64	92	44	106	3	756
7:45 AM	21	167	23	11	221	33	17	77	75	52	114	6	817
8:00 AM	10	161	17	20	227	45	13	60	79	49	101	9	791
8:15 AM	10	192	17	12	216	48	14	55	64	33	92	10	763
8:30 AM	13	146	20	16	205	59	14	67	91	35	112	5	783
8:45 AM	15	143	19	20	199	50	24	61	65	44	101	6	747
9:00 AM	16	140	27	15	207	53	11	59	72	38	88	16	742
9:15 AM	8	120	19	14	240	41	10	35	44	47	89	13	680
9:30 AM	14	145	21	7	218	47	17	41	65	35	99	7	716
9:45 AM	11	140	22	7	199	51	11	40	57	33	91	5	667
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	151	1761	243	154	2513	499	163	639	832	473	1154	91	8673
APPROACH %'s :	7.01%	81.72%	11.28%	4.86%	79.37%	15.76%	9.98%	39.11%	50.92%	27.53%	67.17%	5.30%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	54	666	77	59	869	185	58	259	309	169	419	30	3154
PEAK HR FACTOR :		0.910			0.953			0.910			0.898		0.965

UTURNS

NB	SB	EB	WB
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	1
0	0	0	0
0	0	0	0
0	0	0	1
0	0	0	2
0	0	0	1
NB	SB	EB	WB
0	0	0	5

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5411-002 **Day:** Tuesday

City: Los Angeles **Date:** 6/7/2016

PM

NS/EW Streets:	Western Ave			Western Ave			Fountain Ave			Fountain Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 1	ER 1	WL 1	WT 1	WR 0	TOTAL
4:00 PM	12	162	28	14	160	23	25	135	40	29	93	15	736
4:15 PM	13	149	15	28	220	35	21	138	49	34	109	25	836
4:30 PM	18	165	22	17	173	18	29	126	48	42	90	10	758
4:45 PM	10	182	29	14	187	29	28	131	34	26	94	14	778
5:00 PM	24	207	26	22	210	19	30	137	42	23	101	10	851
5:15 PM	10	175	27	13	175	28	31	149	45	36	104	13	806
5:30 PM	13	182	20	15	228	34	28	136	40	33	85	13	827
5:45 PM	17	208	17	19	171	28	28	148	27	30	103	13	809
6:00 PM	14	224	31	17	201	30	40	147	43	27	91	13	878
6:15 PM	10	189	26	9	161	30	34	149	48	24	104	22	806
6:30 PM	12	216	34	11	198	26	26	150	29	21	88	9	820
6:45 PM	13	228	24	12	180	23	31	141	39	30	78	11	810
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	166	2287	299	191	2264	323	351	1687	484	355	1140	168	9715
APPROACH %'s :	6.03%	83.10%	10.86%	6.88%	81.50%	11.63%	13.92%	66.89%	19.19%	21.35%	68.55%	10.10%	
PEAK HR START TIME :	530 PM												TOTAL
PEAK HR VOL :	54	803	94	60	761	122	130	580	158	114	383	61	3320
PEAK HR FACTOR :		0.884			0.851			0.939			0.930		0.945

UTURNS

NB	SB	EB	WB
0	0	0	0
0	0	0	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	2
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	1
NB	SB	EB	WB
0	0	0	4

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5411-002 **Day:** Tuesday

City: Los Angeles **Date:** 6/7/2016

NOON

NS/EW Streets:	Western Ave			Western Ave			Fountain Ave			Fountain Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	0	1	2	0	1	1	1	1	1	0	
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.000

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

ITM Peak Hour Summary

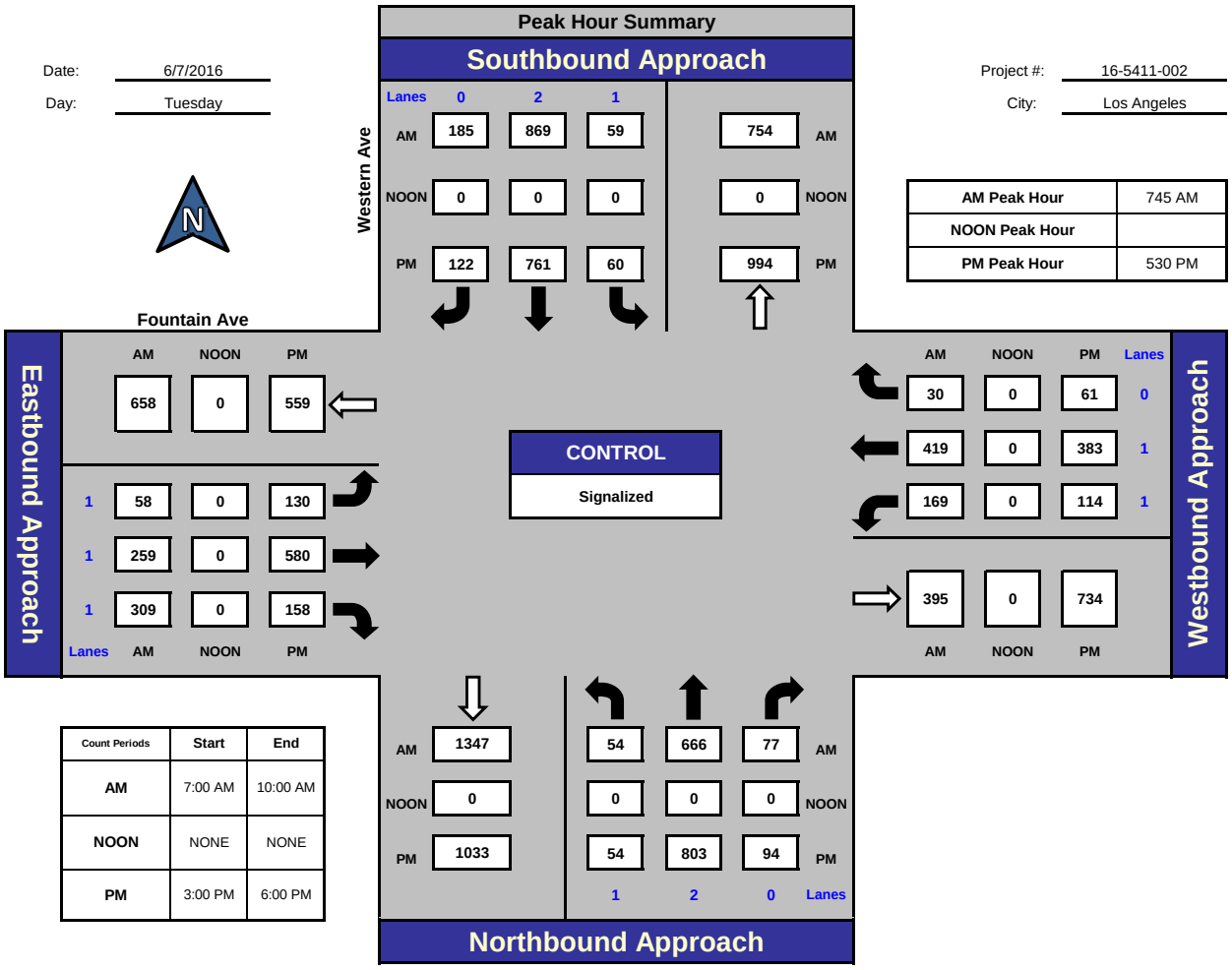
Prepared by:

National Data & Surveying Services

Western Ave and Fountain Ave , Los Angeles

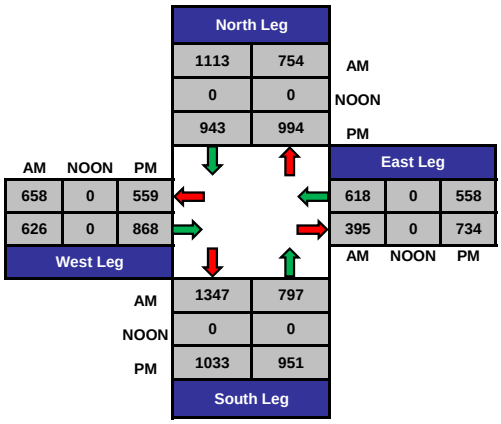
Date: 6/7/2016
Day: Tuesday
Project #: 16-5411-002
City: Los Angeles

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	530 PM

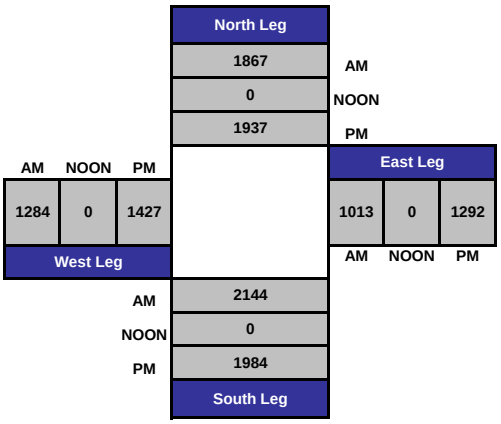


Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON	NONE	NONE
PM	3:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Turning Movement Count Report AM

Location ID: 5
North/South: Western Avenue
East/West: Santa Monica Boulevard

Date: 04/28/16
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	23	203	21	7	305	25	38	247	16	15	146	8	1054
7:15	23	215	20	9	245	32	35	229	23	12	183	11	1037
7:30	28	237	18	11	255	38	39	256	23	12	193	14	1124
7:45	20	220	18	12	189	34	46	239	36	18	201	21	1054
8:00	21	274	17	9	207	42	54	251	21	18	210	20	1144
8:15	28	226	17	12	245	38	58	216	24	24	165	15	1068
8:30	22	253	13	7	287	28	43	239	30	25	199	16	1162
8:45	22	239	17	15	261	30	42	218	29	26	212	13	1124
9:00	25	256	21	12	255	39	36	214	22	17	172	21	1090
9:15	24	238	18	17	265	38	42	235	18	21	181	12	1109
9:30	21	265	29	19	250	20	44	222	26	15	168	20	1099
9:45	33	258	17	15	268	31	36	139	13	21	185	10	1026
Total Volume:	290	2884	226	145	3032	395	513	2705	281	224	2215	181	13091
Approach %	9%	85%	7%	4%	85%	11%	15%	77%	8%	9%	85%	7%	
Peak Hr Begin:	8:00												
PHV	93	992	64	43	1000	138	197	924	104	93	786	64	4498
PHF	0.921			0.917			0.939			0.939			0.968

Prepared by City Count, LLC. (www.citycount.com)

Turning Movement Count Report PM

Location ID: 5
North/South: Western Avenue
East/West: Santa Monica Boulevard

Date: 04/28/16
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	11	253	24	17	257	36	46	248	26	33	222	24	1197
15:15	26	219	22	25	236	33	40	247	30	22	205	22	1127
15:30	22	238	25	20	225	33	55	228	22	27	217	29	1141
15:45	24	247	31	11	256	33	48	245	16	21	228	26	1186
16:00	22	229	24	19	235	34	47	251	18	19	242	29	1169
16:15	21	254	29	16	225	40	43	256	15	29	218	34	1180
16:30	10	237	26	18	263	33	42	241	21	23	259	26	1199
16:45	13	266	22	14	232	32	41	238	25	27	243	32	1185
17:00	16	249	18	19	240	33	41	228	19	28	223	21	1135
17:15	21	251	27	16	249	42	60	269	24	24	233	15	1231
17:30	17	250	19	15	231	32	59	241	25	19	243	30	1181
17:45	21	267	16	18	263	38	65	258	20	23	242	21	1252

Total Volume:	224	2960	283	208	2912	419	587	2950	261	295	2775	309	14183
Approach %	6%	85%	8%	6%	82%	12%	15%	78%	7%	9%	82%	9%	

Peak Hr Begin:	17:00												
PHV	75	1017	80	68	983	145	225	996	88	94	941	87	4799
PHF	0.964			0.937			0.927			0.961			0.958

Pedestrian/Bicycle Count Report

	North		East		South		West	
Leg:	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*
7:00	35	0	11	0	8	1	6	0
7:15	46	1	12	0	12	1	7	0
7:30	75	1	29	1	10	0	11	0
7:45	74	0	28	0	21	0	23	1
8:00	46	0	15	0	11	2	19	1
8:15	48	1	25	1	16	1	11	2
8:30	32	1	25	1	23	2	18	0
8:45	55	0	16	2	10	2	58	2
9:00	34	0	16	1	11	0	35	1
9:15	31	2	13	0	7	1	12	1
9:30	37	0	17	0	18	0	20	0
9:45	36	1	16	0	9	1	24	1

	North		East		South		West	
Leg:	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*	*Peds*	*Bicycle*
15:00	65	1	21	1	26	1	38	0
15:15	55	0	20	1	31	3	52	0
15:30	69	1	28	1	35	0	38	1
15:45	48	1	26	0	35	0	42	3
16:00	75	1	23	0	34	2	59	3
16:15	64	0	26	6	26	3	29	0
16:30	53	0	24	4	15	0	34	0
16:45	48	0	26	2	26	0	33	0
17:00	53	2	24	5	20	1	36	1
17:15	60	2	19	4	20	1	25	1
17:30	55	0	20	1	20	1	24	0
17:45	60	0	26	1	17	1	24	2

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5411-005 **Day:** Tuesday

City: Los Angeles **Date:** 6/7/2016

AM

NS/EW Streets:	Serrano Ave			Serrano Ave			Sunset Blvd			Sunset Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	1	3	0	1	3	0	
7:00 AM	8	1	7	6	3	7	2	159	2	8	129	2	334
7:15 AM	8	1	15	4	0	5	0	188	4	9	160	6	400
7:30 AM	7	3	5	5	4	7	1	236	5	7	198	3	481
7:45 AM	6	2	10	10	3	8	5	238	10	10	206	0	508
8:00 AM	11	4	7	3	5	8	2	268	13	11	211	9	552
8:15 AM	11	3	15	7	1	7	3	292	9	10	187	4	549
8:30 AM	9	2	15	7	2	7	6	261	8	14	219	2	552
8:45 AM	1	4	13	7	6	11	1	232	2	6	216	4	503
9:00 AM	2	5	10	2	3	19	1	225	4	6	163	9	449
9:15 AM	7	1	13	3	2	9	1	185	6	7	195	4	433
9:30 AM	11	2	11	9	2	12	6	178	2	9	190	4	436
9:45 AM	1	1	12	7	5	8	4	214	9	8	187	4	460
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	82	29	133	70	36	108	32	2676	74	105	2261	51	5657
APPROACH %'s :	33.61%	11.89%	54.51%	32.71%	16.82%	50.47%	1.15%	96.19%	2.66%	4.34%	93.55%	2.11%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	37	11	47	27	11	30	16	1059	40	45	823	15	2161
PEAK HR FACTOR :		0.819			0.810			0.917			0.939		0.979

UTURNS

	NB	SB	EB	WB
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
9:00 AM	0	0	0	0
9:15 AM	0	0	0	0
9:30 AM	0	0	0	1
9:45 AM	0	0	0	0
TOTAL VOLUMES :	0	0	0	1

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5411-005 **Day:** Tuesday

City: Los Angeles **Date:** 6/7/2016

PM

NS/EW Streets:	Serrano Ave			Serrano Ave			Sunset Blvd			Sunset Blvd				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	0	1	0	0	1	0	1	3	0	1	3	0					
4:00 PM	7	4	11	10	4	10	15	307	6	15	281	12	682	0	0	1	0
4:15 PM	12	11	25	15	6	8	16	329	12	8	291	9	742	0	0	0	0
4:30 PM	12	6	14	12	6	7	12	346	4	14	288	12	733	0	0	0	0
4:45 PM	9	6	20	8	12	10	12	319	11	14	320	12	753	0	0	0	0
5:00 PM	15	10	15	13	6	14	11	373	8	12	271	15	763	0	0	0	0
5:15 PM	11	5	18	12	10	9	13	396	16	13	302	11	816	0	0	0	0
5:30 PM	12	7	9	8	4	12	18	400	12	18	272	11	783	0	0	0	0
5:45 PM	14	9	18	7	9	16	22	398	10	12	283	10	808	0	0	0	0
6:00 PM	16	13	19	10	16	16	42	379	10	17	309	12	859	0	0	0	0
6:15 PM	17	13	18	13	18	12	27	394	10	26	273	8	829	0	0	0	0
6:30 PM	11	14	18	11	15	30	25	364	18	12	247	15	780	0	0	0	0
6:45 PM	25	10	10	18	6	21	31	417	21	20	222	22	823	0	0	2	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	161	108	195	137	112	165	244	4422	138	181	3359	149	9371	0	0	3	0
APPROACH %'s :	34.70%	23.28%	42.03%	33.09%	27.05%	39.86%	5.08%	92.05%	2.87%	4.91%	91.05%	4.04%					
PEAK HR START TIME :	600 PM												TOTAL				
PEAK HR VOL :	69	50	65	52	55	79	125	1554	59	75	1051	57	3291				
PEAK HR FACTOR :	0.958			0.830			0.926			0.875			0.958				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5411-005 **Day:** Tuesday

City: Los Angeles **Date:** 6/7/2016

NOON

NS/EW Streets:	Serrano Ave			Serrano Ave			Sunset Blvd			Sunset Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	1	3	0	1	3	0	

UTURNS			
NB	SB	EB	WB

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	

NB	SB	EB	WB
0	0	0	0

PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.000

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Serrano Ave and Sunset Blvd , Los Angeles

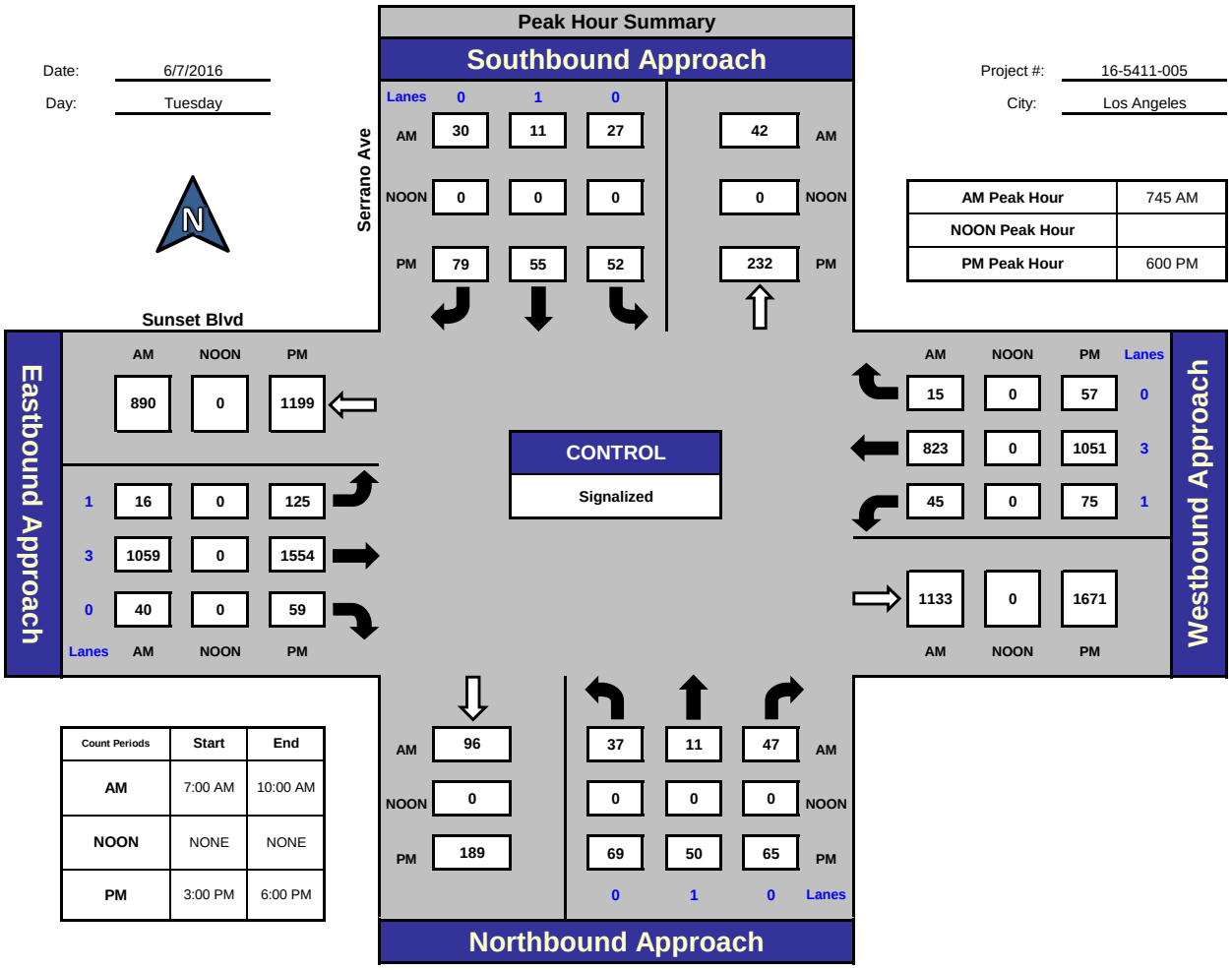
Date: 6/7/2016

Day: Tuesday

Project #: 16-5411-005

City: Los Angeles

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	600 PM



Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON	NONE	NONE
PM	3:00 PM	6:00 PM

Total Ins & Outs

North Leg	
68	42
0	0
186	232

AM / NOON / PM

West Leg			East Leg		
890	0	1199	883	0	1183
1115	0	1738	1133	0	1671

AM NOON PM

South Leg	
96	95
0	0
189	184

AM / NOON / PM

Total Volume Per Leg

North Leg	
110	AM
0	NOON
418	PM

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
2005	0	2937	2016	0	2854

South Leg	
AM	191
NOON	0
PM	373

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5411-003 **Day:** Tuesday

City: Los Angeles **Date:** 6/7/2016

AM

NS/EW Streets:	Serrano Ave			Serrano Ave			Fountain Ave			Fountain Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
7:00 AM	5	7	10	3	2	1	1	55	6	7	98	3	198
7:15 AM	11	3	6	7	7	2	1	62	7	8	121	7	242
7:30 AM	15	5	12	5	3	2	3	85	10	2	145	6	293
7:45 AM	27	8	4	6	9	5	0	93	15	5	131	8	311
8:00 AM	20	11	7	10	9	5	2	82	10	5	132	7	300
8:15 AM	11	12	6	14	4	6	2	81	1	6	116	8	267
8:30 AM	17	6	8	10	8	5	1	95	10	2	142	4	308
8:45 AM	6	8	3	8	4	14	4	84	7	12	121	4	275
9:00 AM	14	10	4	5	6	8	2	84	14	7	117	7	278
9:15 AM	12	6	9	4	6	6	3	67	2	3	132	6	256
9:30 AM	10	4	8	3	4	7	3	58	8	7	125	3	240
9:45 AM	8	10	7	2	5	9	1	59	7	4	110	10	232
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	156	90	84	77	67	70	23	905	97	68	1490	73	3200
APPROACH %'s :	47.27%	27.27%	25.45%	35.98%	31.31%	32.71%	2.24%	88.29%	9.46%	4.17%	91.35%	4.48%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	75	37	25	40	30	21	5	351	36	18	521	27	1186
PEAK HR FACTOR :		0.878			0.948			0.907			0.956		0.953

UTURNS	NB	SB	EB	WB
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	0
9:00 AM	0	0	0	0
9:15 AM	0	0	0	0
9:30 AM	0	0	0	0
9:45 AM	0	0	0	0
	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5411-003 **Day:** Tuesday

City: Los Angeles **Date:** 6/7/2016

PM

NS/EW Streets:	Serrano Ave			Serrano Ave			Fountain Ave			Fountain Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
4:00 PM	21	10	12	15	14	4	3	149	19	5	119	9	380
4:15 PM	21	9	12	5	6	16	4	162	17	5	122	7	386
4:30 PM	20	12	18	13	3	9	5	147	12	9	108	6	362
4:45 PM	21	7	8	10	4	9	2	164	11	5	112	15	368
5:00 PM	22	16	8	9	8	5	5	157	11	4	114	5	364
5:15 PM	12	8	9	17	10	12	3	187	8	6	133	8	413
5:30 PM	20	15	12	15	17	11	2	164	11	9	106	8	390
5:45 PM	17	21	15	22	7	11	2	167	16	9	109	6	402
6:00 PM	27	21	15	28	8	13	4	157	18	7	109	10	417
6:15 PM	26	17	10	16	11	9	7	174	10	5	103	14	402
6:30 PM	13	16	7	17	9	11	1	177	7	3	97	14	372
6:45 PM	17	16	16	9	8	10	2	165	13	2	90	11	359
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	237	168	142	176	105	120	40	1970	153	69	1322	113	4615
APPROACH %'s :	43.33%	30.71%	25.96%	43.89%	26.18%	29.93%	1.85%	91.08%	7.07%	4.59%	87.90%	7.51%	
PEAK HR START TIME :	515 PM												TOTAL
PEAK HR VOL :	76	65	51	82	42	47	11	675	53	31	457	32	1622
PEAK HR FACTOR :		0.762			0.872			0.933			0.884		0.972

UTURNS	NB	SB	EB	WB
	0	0	0	0
	0	0	0	0
	0	0	1	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	1
	0	0	0	0
	NB	SB	EB	WB
	0	0	1	1

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5411-003 **Day:** Tuesday

City: Los Angeles **Date:** 6/7/2016

NOON

NS/EW Streets:	Serrano Ave			Serrano Ave			Fountain Ave			Fountain Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	0	1	0	0	1	0	
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.000

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

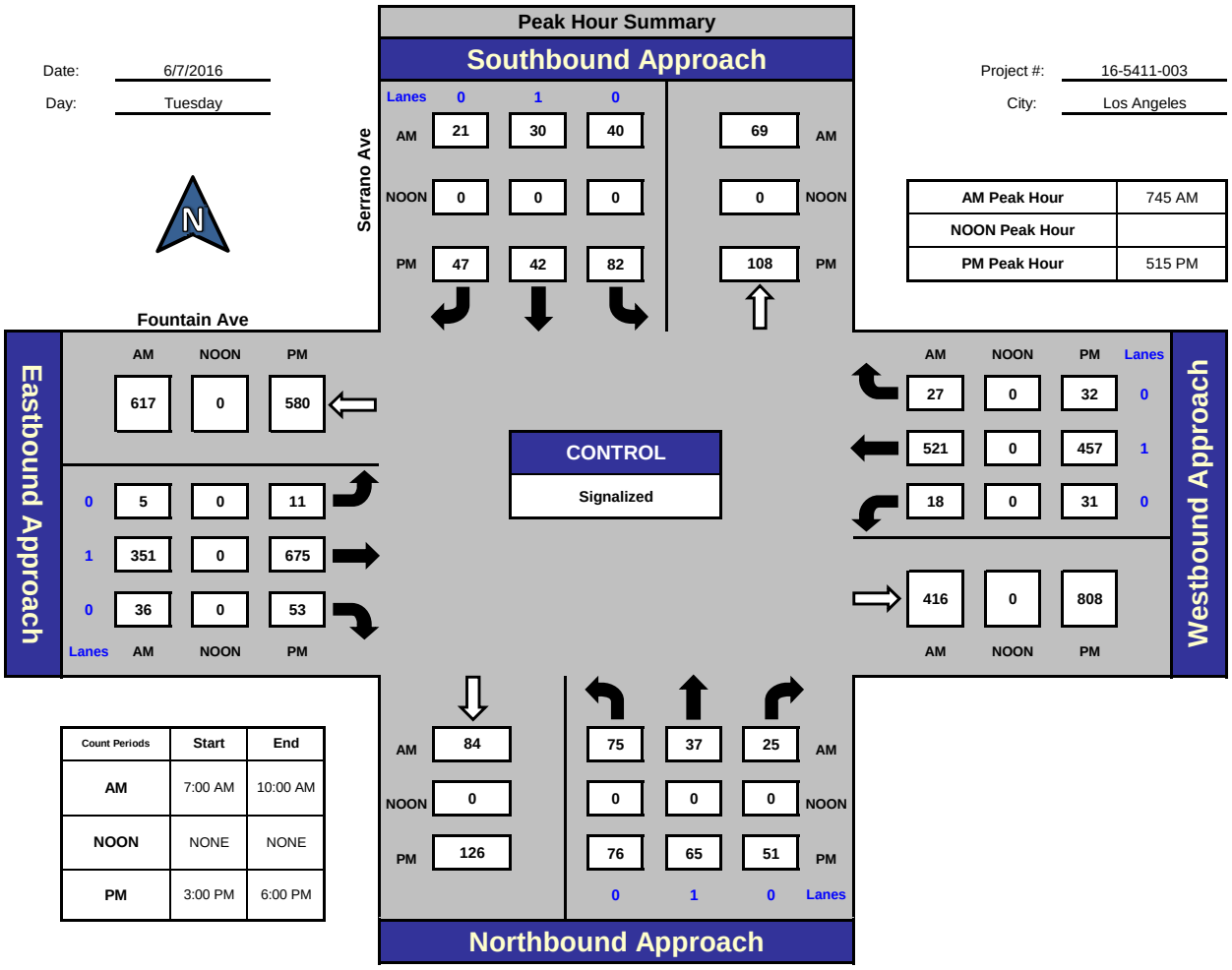
Serrano Ave and Fountain Ave , Los Angeles

Date: 6/7/2016

Day: Tuesday

Project #: 16-5411-003

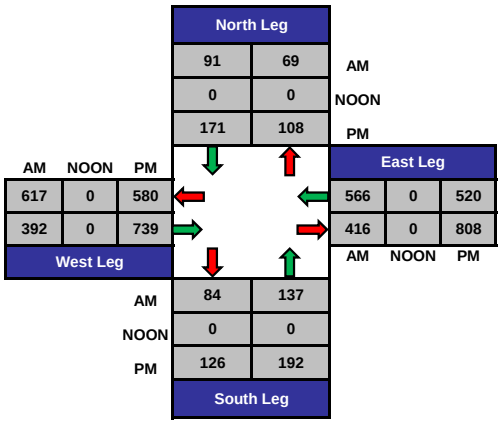
City: Los Angeles



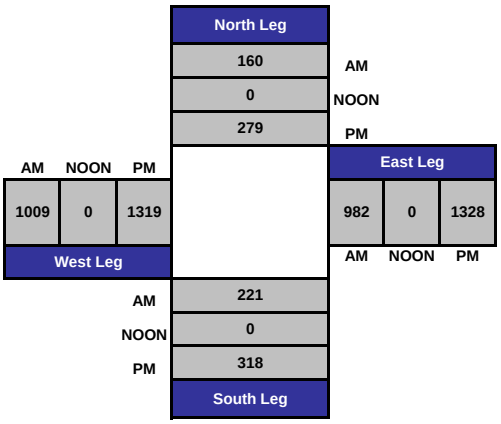
AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	515 PM

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON	NONE	NONE
PM	3:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5411-006 **Day:** Tuesday

City: Los Angeles **Date:** 6/7/2016

AM

NS/EW Streets:	Normandie Ave			Normandie Ave			Hollywood Blvd			Hollywood Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	1	2	0	1	2	0	
7:00 AM	7	9	10	5	19	4	5	137	9	11	129	2	347
7:15 AM	7	16	13	5	27	4	0	126	20	9	157	1	385
7:30 AM	7	16	19	22	28	7	4	166	12	14	164	6	465
7:45 AM	10	21	26	25	43	10	3	178	12	13	165	3	509
8:00 AM	12	12	19	8	56	6	1	179	10	21	207	5	536
8:15 AM	12	16	10	11	31	8	10	191	14	21	202	6	532
8:30 AM	18	20	16	13	44	12	9	204	19	12	181	1	549
8:45 AM	16	23	21	13	36	13	5	171	18	18	189	3	526
9:00 AM	11	13	20	11	37	12	5	140	20	24	196	5	494
9:15 AM	12	19	16	7	37	12	7	148	20	22	178	7	485
9:30 AM	11	16	13	13	32	5	6	134	14	13	181	4	442
9:45 AM	10	21	13	11	32	13	7	109	16	20	167	4	423
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	133	202	196	144	422	106	62	1883	184	198	2116	47	5693
APPROACH %'s :	25.05%	38.04%	36.91%	21.43%	62.80%	15.77%	2.91%	88.45%	8.64%	8.39%	89.62%	1.99%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	58	71	66	45	167	39	25	745	61	72	779	15	2143
PEAK HR FACTOR :		0.813			0.896			0.895			0.929		0.976

UTURNS	NB	SB	EB	WB
	0	0	0	0
	0	0	0	0
	1	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	1
	0	0	0	0
	0	0	0	0
	0	0	0	0
	NB	SB	EB	WB
	1	0	0	1

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5411-006 **Day:** Tuesday

City: Los Angeles **Date:** 6/7/2016

PM

NS/EW Streets:	Normandie Ave			Normandie Ave			Hollywood Blvd			Hollywood Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	1	2	0	1	2	0	
4:00 PM	29	32	24	21	32	5	16	221	27	18	229	9	663
4:15 PM	22	31	18	33	43	10	9	195	27	23	259	7	677
4:30 PM	27	33	30	34	40	12	5	215	29	20	223	9	677
4:45 PM	31	35	21	23	42	10	11	212	18	15	228	8	654
5:00 PM	23	36	23	27	38	9	4	209	27	20	239	8	663
5:15 PM	26	41	22	28	35	16	13	247	16	18	209	9	680
5:30 PM	25	34	17	21	45	10	7	237	30	14	201	13	654
5:45 PM	21	38	29	34	59	11	7	242	34	17	231	8	731
6:00 PM	24	52	14	20	31	15	12	238	25	23	208	6	668
6:15 PM	31	37	22	20	33	15	16	249	21	13	223	7	687
6:30 PM	31	30	24	25	38	11	13	256	20	16	229	5	698
6:45 PM	31	47	23	20	32	8	7	234	24	14	204	11	655
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	321	446	267	306	468	132	120	2755	298	211	2683	100	8107
APPROACH %'s :	31.04%	43.13%	25.82%	33.77%	51.66%	14.57%	3.78%	86.83%	9.39%	7.05%	89.61%	3.34%	
PEAK HR START TIME :	545 PM												TOTAL
PEAK HR VOL :	107	157	89	99	161	52	48	985	100	69	891	26	2784
PEAK HR FACTOR :		0.981			0.750			0.980			0.963		0.952

UTURNS	NB	SB	EB	WB
4:00 PM	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	1
5:45 PM	0	0	0	0
6:00 PM	0	0	0	1
6:15 PM	0	0	0	0
6:30 PM	0	0	0	0
6:45 PM	0	0	1	0
	NB	SB	EB	WB
TOTAL VOLUMES :	0	0	1	2

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5411-006 **Day:** Tuesday

City: Los Angeles **Date:** 6/7/2016

NOON

NS/EW Streets:	Normandie Ave			Normandie Ave			Hollywood Blvd			Hollywood Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	1	2	0	1	2	0	

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.000

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

ITM Peak Hour Summary

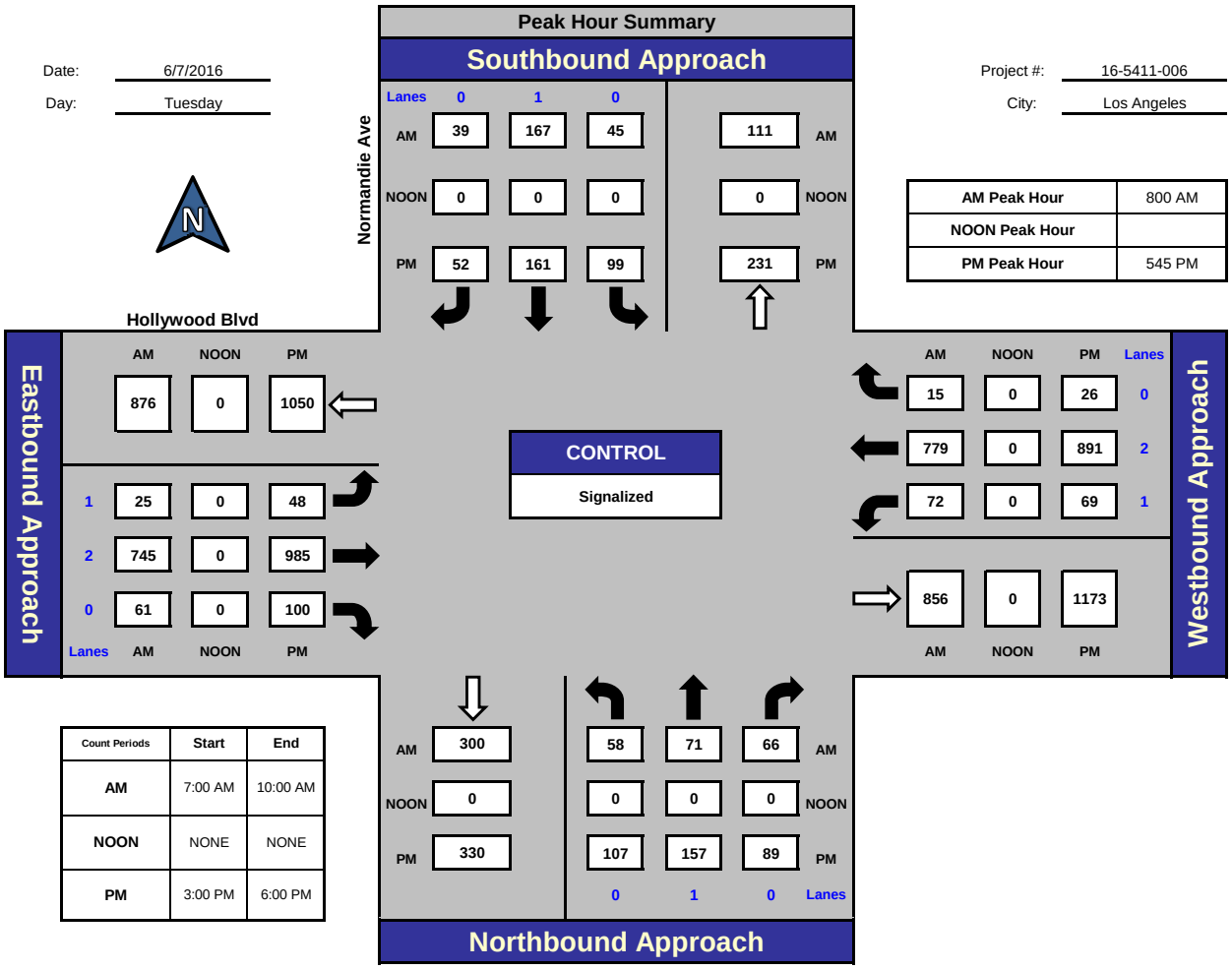
Prepared by:

National Data & Surveying Services

Normandie Ave and Hollywood Blvd , Los Angeles

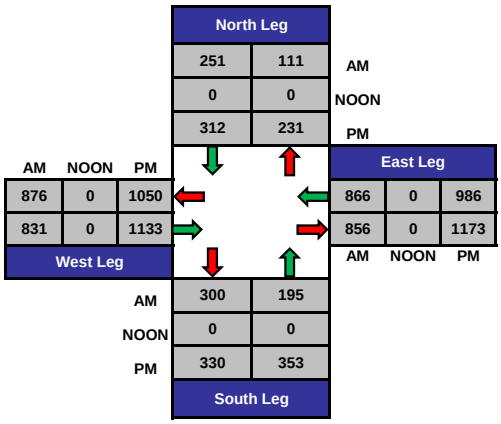
Date: 6/7/2016
Day: Tuesday
Project #: 16-5411-006
City: Los Angeles

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	545 PM

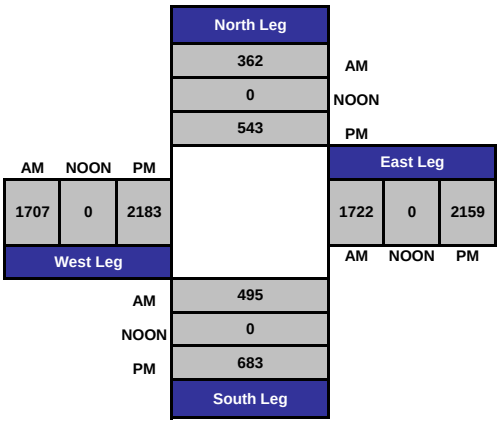


Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON	NONE	NONE
PM	3:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5411-007 **Day:** Tuesday

City: Los Angeles **Date:** 6/7/2016

AM

NS/EW Streets:	Normandie Ave			Normandie Ave			Sunset Blvd			Sunset Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	1	3	0	1	3	0	
7:00 AM	12	19	15	8	28	6	6	149	8	5	95	3	354
7:15 AM	21	20	11	9	35	17	7	169	16	12	107	4	428
7:30 AM	33	31	15	7	46	12	8	197	20	11	145	3	528
7:45 AM	21	37	11	11	59	15	15	219	15	16	140	11	570
8:00 AM	18	30	20	16	60	16	8	211	24	9	159	8	579
8:15 AM	17	18	17	14	43	13	7	246	26	12	154	7	574
8:30 AM	21	34	24	12	53	13	9	249	28	9	169	12	633
8:45 AM	13	37	30	13	62	13	9	206	21	12	147	12	575
9:00 AM	15	27	13	4	57	15	8	225	16	23	144	11	558
9:15 AM	15	29	24	13	49	19	7	166	20	14	159	4	519
9:30 AM	15	30	19	9	41	15	2	149	21	16	145	8	470
9:45 AM	11	29	26	8	43	13	8	191	34	10	171	4	548
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	212	341	225	124	576	167	94	2377	249	149	1735	87	6336
APPROACH %'s :	27.25%	43.83%	28.92%	14.30%	66.44%	19.26%	3.46%	87.39%	9.15%	7.56%	88.03%	4.41%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	69	119	91	55	218	55	33	912	99	42	629	39	2361
PEAK HR FACTOR :		0.872			0.891			0.913			0.934		0.932

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5411-007 **Day:** Tuesday

City: Los Angeles **Date:** 6/7/2016

PM

NS/EW Streets:	Normandie Ave			Normandie Ave			Sunset Blvd			Sunset Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	1	3	0	1	3	0	
4:00 PM	26	46	22	10	46	15	20	263	35	20	267	14	784
4:15 PM	19	57	24	8	63	16	22	289	24	16	262	13	813
4:30 PM	25	59	16	11	48	20	13	294	32	18	274	15	825
4:45 PM	29	59	22	9	49	17	16	281	30	21	302	16	851
5:00 PM	20	62	11	12	54	10	16	329	40	24	233	11	822
5:15 PM	27	61	19	7	57	19	19	324	33	18	248	11	843
5:30 PM	22	58	17	10	65	13	16	338	32	18	242	15	846
5:45 PM	34	55	18	17	76	17	18	335	48	13	240	13	884
6:00 PM	36	74	15	12	50	18	17	338	20	10	273	14	877
6:15 PM	30	64	13	9	43	13	17	374	23	16	197	20	819
6:30 PM	26	54	16	18	44	18	20	309	19	15	209	15	763
6:45 PM	29	84	20	9	43	21	22	353	27	12	219	21	860
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	323	733	213	132	638	197	216	3827	363	201	2966	178	9987
APPROACH %'s :	25.45%	57.76%	16.78%	13.65%	65.98%	20.37%	4.90%	86.86%	8.24%	6.01%	88.67%	5.32%	
PEAK HR START TIME :	515 PM												TOTAL
PEAK HR VOL :	119	248	69	46	248	67	70	1335	133	59	1003	53	3450
PEAK HR FACTOR :		0.872			0.820			0.959			0.939		0.976

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5411-007 **Day:** Tuesday

City: Los Angeles **Date:** 6/7/2016

NOON

NS/EW Streets:	Normandie Ave			Normandie Ave			Sunset Blvd			Sunset Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	0	1	0	1	3	0	1	3	0	

UTURNS			
NB	SB	EB	WB

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	

NB	SB	EB	WB
0	0	0	0

PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.000

CONTROL : Signalized

ITM Peak Hour Summary

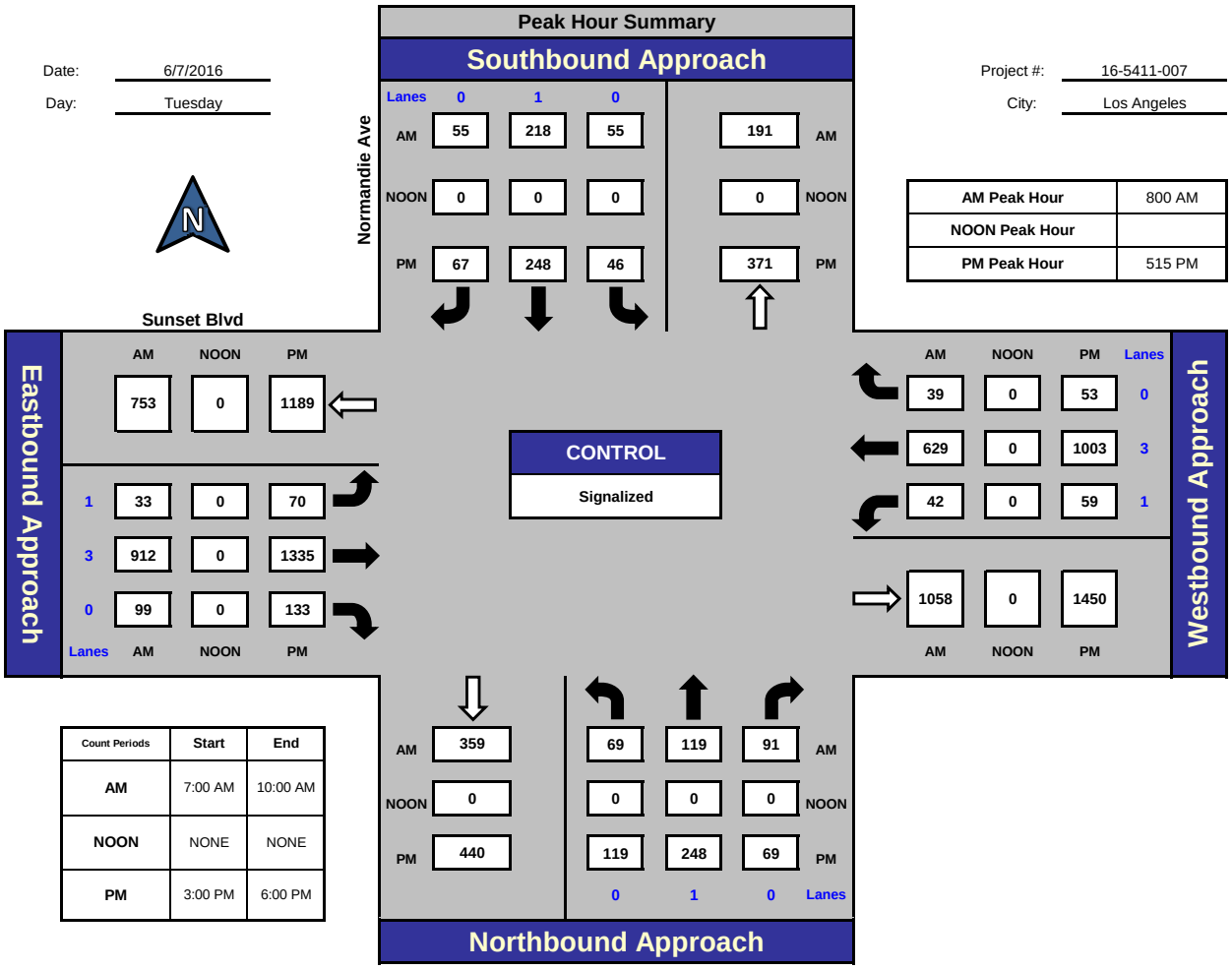
Prepared by:

National Data & Surveying Services

Normandie Ave and Sunset Blvd , Los Angeles

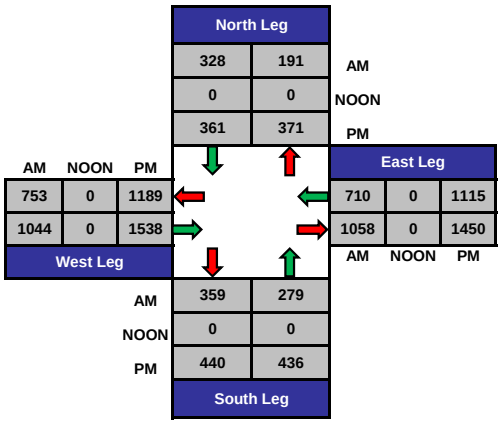
Date: 6/7/2016
Day: Tuesday
Project #: 16-5411-007
City: Los Angeles

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	515 PM

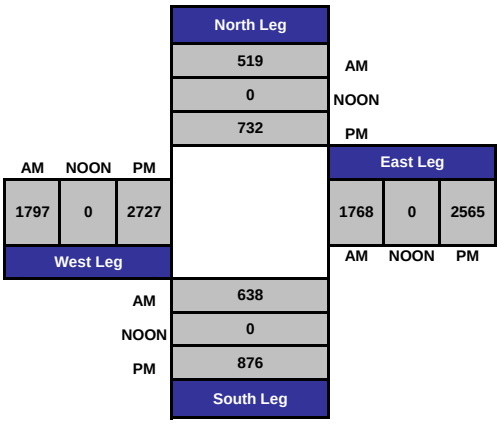


Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON	NONE	NONE
PM	3:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5411-008 **Day:** Tuesday

City: Los Angeles **Date:** 6/7/2016

AM

NS/EW Streets:	Normandie Ave			Normandie Ave			Santa Monica Blvd			Santa Monica Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	1	0	1	2	0	1	2	0	
7:00 AM	14	40	26	6	42	6	6	93	10	34	116	5	398
7:15 AM	16	40	26	8	74	5	13	125	15	33	161	12	528
7:30 AM	20	59	20	12	83	10	13	162	18	36	129	19	581
7:45 AM	9	68	14	15	95	13	23	196	22	35	178	37	705
8:00 AM	15	52	16	11	96	13	7	164	25	25	158	14	596
8:15 AM	12	42	20	15	76	9	23	194	21	39	161	9	621
8:30 AM	4	68	17	15	80	9	13	157	35	46	210	10	664
8:45 AM	11	47	15	13	92	12	25	165	21	41	159	11	612
9:00 AM	17	35	11	11	95	9	9	151	18	52	157	14	579
9:15 AM	12	45	14	11	81	6	11	131	16	43	159	8	537
9:30 AM	6	46	21	12	83	12	10	131	20	47	149	14	551
9:45 AM	16	50	17	10	71	14	14	108	23	30	133	6	492
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	152	592	217	139	968	118	167	1777	244	461	1870	159	6864
APPROACH %'s :	15.82%	61.60%	22.58%	11.35%	79.02%	9.63%	7.63%	81.22%	11.15%	18.51%	75.10%	6.39%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	40	230	67	56	347	44	66	711	103	145	707	70	2586
PEAK HR FACTOR :		0.926			0.909			0.913			0.867		0.917

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5411-008 **Day:** Tuesday

City: Los Angeles **Date:** 6/7/2016

PM

NS/EW Streets:	Normandie Ave			Normandie Ave			Santa Monica Blvd			Santa Monica Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	1	0	1	2	0	1	2	0	
4:00 PM	19	62	27	11	99	11	19	233	31	21	173	11	717
4:15 PM	17	69	35	12	92	7	16	288	36	21	174	12	779
4:30 PM	20	87	36	11	86	13	12	255	29	24	189	26	788
4:45 PM	23	97	28	18	88	11	11	255	25	20	198	18	792
5:00 PM	23	72	22	22	92	14	16	266	32	21	191	11	782
5:15 PM	18	93	37	15	119	12	15	245	23	26	197	23	823
5:30 PM	30	92	25	19	102	16	9	290	24	24	197	16	844
5:45 PM	17	99	38	15	107	13	14	280	25	23	199	15	845
6:00 PM	22	97	46	17	88	12	11	231	38	25	172	16	775
6:15 PM	16	84	29	10	81	4	13	290	20	26	165	21	759
6:30 PM	28	88	38	8	89	7	20	265	22	22	162	18	767
6:45 PM	24	83	25	12	88	9	12	255	30	23	173	16	750
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	257	1023	386	170	1131	129	168	3153	335	276	2190	203	9421
APPROACH %'s :	15.43%	61.40%	23.17%	11.89%	79.09%	9.02%	4.60%	86.24%	9.16%	10.34%	82.05%	7.61%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	88	356	122	71	420	55	54	1081	104	94	784	65	3294
PEAK HR FACTOR :		0.919			0.935			0.959			0.958		0.975

UTURNS

NB	SB	EB	WB

NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-5411-008 **Day:** Tuesday

City: Los Angeles **Date:** 6/7/2016

NOON

NS/EW Streets:	Normandie Ave			Normandie Ave			Santa Monica Blvd			Santa Monica Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	1	0	1	2	0	1	2	0	
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	0 AM												TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :		0.000			0.000			0.000			0.000		0.000

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

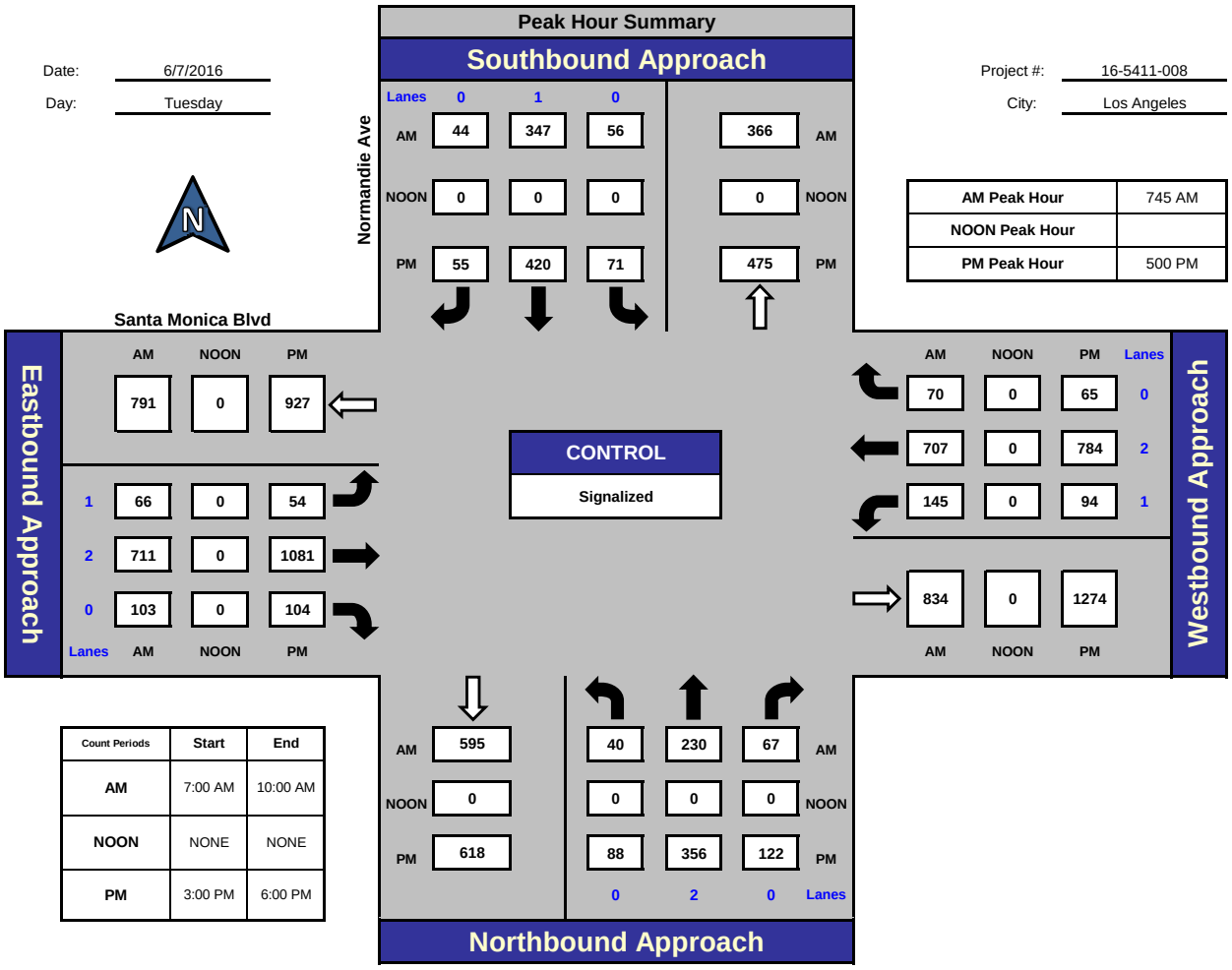
National Data & Surveying Services

Normandie Ave and Santa Monica Blvd , Los Angeles

Date: 6/7/2016
Day: Tuesday

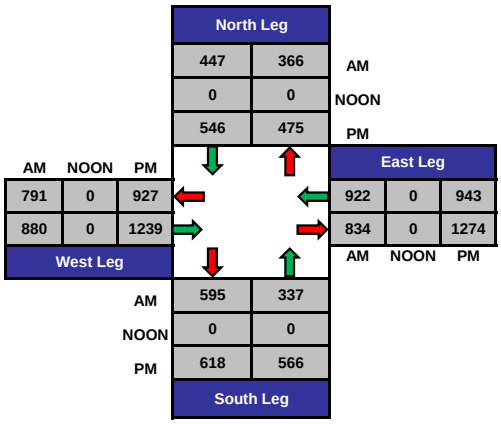
Project #: 16-5411-008
City: Los Angeles

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	500 PM

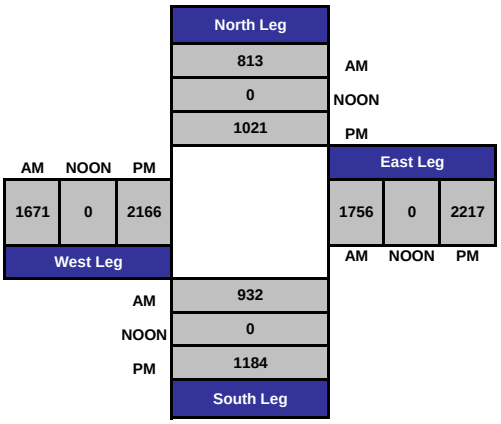


Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON	NONE	NONE
PM	3:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Prepared by NDS/ATD

VOLUME

Serrano Ave Bet. Fernwood Ave & Fountain Ave

Day: Tuesday
Date: 6/7/2016

City: Los Angeles
Project #: CA16_5412_002

DAILY TOTALS	NB	SB	EB	WB	Total
	1,205	1,493	0	0	2,698

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	6		13						19		12:00	11		11						22	
00:15	2		8						10		12:15	16		19						35	
00:30	1		5						6		12:30	16		15						31	
00:45	1	10	7	33					8	43	12:45	14	57	16	61					30	118
01:00	2		5						7		13:00	20		17						37	
01:15	0		5						5		13:15	14		23						37	
01:30	3		1						4		13:30	18		18						36	
01:45	0	5	0	11					0	16	13:45	16	68	16	74					32	142
02:00	2		1						3		14:00	14		23						37	
02:15	1		2						3		14:15	11		17						28	
02:30	2		0						2		14:30	17		14						31	
02:45	0	5	2	5					2	10	14:45	20	62	24	78					44	140
03:00	1		0						1		15:00	20		20						40	
03:15	0		0						0		15:15	15		26						41	
03:30	2		0						2		15:30	18		26						44	
03:45	0	3	4	4					4	7	15:45	28	81	27	99					55	180
04:00	2		3						5		16:00	21		29						50	
04:15	3		3						6		16:15	16		28						44	
04:30	2		3						5		16:30	22		26						48	
04:45	2	9	0	9					2	18	16:45	28	87	20	103					48	190
05:00	3		1						4		17:00	26		30						56	
05:15	2		1						3		17:15	18		32						50	
05:30	3		3						6		17:30	22		39						61	
05:45	5	13	5	10					10	23	17:45	26	92	46	147					72	239
06:00	7		2						9		18:00	31		51						82	
06:15	6		4						10		18:15	37		46						83	
06:30	4		9						13		18:30	34		33						67	
06:45	10	27	6	21					16	48	18:45	30	132	22	152					52	284
07:00	12		7						19		19:00	29		27						56	
07:15	11		15						26		19:15	27		18						45	
07:30	16		8						24		19:30	19		21						40	
07:45	13	52	18	48					31	100	19:45	11	86	29	95					40	181
08:00	20		22						42		20:00	16		8						24	
08:15	19		25						44		20:15	8		14						22	
08:30	15		23						38		20:30	13		21						34	
08:45	16	70	25	95					41	165	20:45	12	49	8	51					20	100
09:00	16		21						37		21:00	16		13						29	
09:15	15		17						32		21:15	12		12						24	
09:30	9		12						21		21:30	14		23						37	
09:45	22	62	15	65					37	127	21:45	9	51	20	68					29	119
10:00	11		11						22		22:00	12		13						25	
10:15	12		17						29		22:15	16		15						31	
10:30	9		16						25		22:30	8		14						22	
10:45	12	44	25	69					37	113	22:45	9	45	20	62					29	107
11:00	14		18						32		23:00	11		11						22	
11:15	13		19						32		23:15	9		21						30	
11:30	12		24						36		23:30	11		10						21	
11:45	13	52	20	81					33	133	23:45	12	43	10	52					22	95
TOTALS		352		451						**803**	**TOTALS**		853		1042						**1895**
SPLIT %		43.8%		56.2%						**29.8%**	**SPLIT %**		45.0%		55.0%						**70.2%**

DAILY TOTALS	NB	SB	EB	WB	Total
	1,205	1,493	0	0	2,698

AM Peak Hour	08:00	08:00			**08:00**	**PM Peak Hour**	18:00	17:30			**17:45**
AM Pk Volume	70	95			**165**	**PM Pk Volume**	132	182			**304**
Pk Hr Factor	0.875	0.950			**0.938**	**Pk Hr Factor**	0.892	0.892			**0.916**
7 - 9 Volume	122	143	0	0	**265**	**4 - 6 Volume**	179	250	0	0	**429**
7 - 9 Peak Hour	08:00	08:00			**08:00**	**4 - 6 Peak Hour**	16:30	17:00			**17:00**
7 - 9 Pk Volume	70	95	0	0	**165**	**4 - 6 Pk Volume**	94	147	0	0	**239**
Pk Hr Factor	0.875	0.950	0.000	0.000	**0.938**	**Pk Hr Factor**	0.839	0.799	0.000	0.000	**0.830**

Appendix D

Level of Service Worksheets

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Bronson Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	January 2018
1	East-West Street:	Sunset Blvd	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	64	1	**64**	0	64	**64**		64	1	**64**	0	64	1	**64**	0	64	1	**64**
Left-Through		0							0				0				0	
Through	141	0	275	0	141	275		141	0	275	0	141	1	138	0	141	1	138
Through-Right		1							1				1				1	
Right	134	0	0	0	134	0		134	0	0	0	134	0	134	0	134	0	134
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	67	1	67	0	67	67		67	1	67	0	67	1	67	0	67	1	67
Left-Through		0							0				0				0	
Through	313	0	**493**	0	313	**493**		313	0	**493**	0	313	2	157	0	313	2	157
Through-Right		1							1				0				0	
Right	180	0	0	0	180	0		180	0	0	0	180	1	**158**	0	180	1	**158**
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	45	1	**45**	0	45	**45**		45	1	**45**	0	45	1	**45**	0	45	1	**45**
Left-Through		0							0				0				0	
Through	876	2	297	1	877	297		876	2	297	1	877	2	297	-1	876	2	297
Through-Right		1							1				1				1	
Right	15	0	15	0	15	15		15	0	15	0	15	0	15	0	15	0	15
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	83	1	83	0	83	83		83	1	83	0	83	1	83	0	83	1	83
Left-Through		0							0				0				0	
Through	1583	2	**551**	20	1603	**558**		1583	2	**551**	20	1603	0	**1673**	-3	1600	0	**1670**
Through-Right		1							1				1				1	
Right	70	0	70	0	70	70		70	0	70	0	70	0	0	0	70	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		557	*North-South:*		557	*North-South:*			557	*North-South:*			222	*North-South:*			222
	East-West:		596	*East-West:*		603	*East-West:*			596	*East-West:*			1718	*East-West:*			1715
	SUM:		1153	*SUM:*		1160	*SUM:*			1153	*SUM:*			1940	*SUM:*			1937
VOLUME/CAPACITY *(V/C)* RATIO:			0.769			0.773				0.769				1.293				1.291
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.669**			**0.673**				**0.669**				**1.193**				**1.191**
LEVEL OF SERVICE (LOS):			**B**			**B**				**B**				**F**				**F**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.524	Δ*v/c* after mitigation:	0.522
Significant impacted?	YES	Fully mitigated?	NO

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Van Ness Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	January 2018
2	East-West Street:	Sunset Blvd	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	47	1	47	0	47	47		47	1	47	0	47	1	47	0	47	1	47
Left-Through		0							0				0				0	
Through	22	0	**217**	0	22	**217**		22	0	**217**	0	22	0	**217**	0	22	0	**217**
Through-Right		1							1				1				1	
Right	195	0	0	0	195	0		195	0	0	0	195	0	0	0	195	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	458	1	**458**	10	468	**468**		458	1	**458**	10	468	1	**468**	-2	466	2	**256**
Left-Through		0							0				0				0	
Through	325	0	351	0	325	351		325	0	351	0	325	0	351	0	325	0	351
Through-Right		1							1				1				1	
Right	26	0	0	0	26	0		26	0	0	0	26	0	0	0	26	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	4	1	**4**	0	4	**4**		4	1	**4**	0	4	1	**4**	0	4	1	**4**
Left-Through		0							0				0				0	
Through	998	2	352	1	999	352		998	2	352	1	999	2	352	-1	998	2	352
Through-Right		1							1				1				1	
Right	58	0	58	0	58	58		58	0	58	0	58	0	58	0	58	0	58
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	95	1	95	0	95	95		95	1	95	0	95	1	95	0	95	1	95
Left-Through		0							0				0				0	
Through	1893	2	**639**	20	1913	**646**		1893	2	**639**	20	1913	2	**646**	-3	1910	2	**645**
Through-Right		1							1				1				1	
Right	25	0	25	0	25	25		25	0	25	0	25	0	25	0	25	0	25
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*	675		*North-South:*	685		*North-South:*		675		*North-South:*		685		*North-South:*		473
		East-West:	643		*East-West:*	650		*East-West:*		643		*East-West:*		650		*East-West:*		649
		SUM:	1318		*SUM:*	1335		*SUM:*		1318		*SUM:*		1335		*SUM:*		1122
VOLUME/CAPACITY *(V/C)* RATIO:			0.879			0.890				0.879				0.890				0.748
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.779**			**0.790**				**0.779**				**0.790**				**0.648**
LEVEL OF SERVICE (LOS):			C			C				C				C				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.011	Δ*v/c* after mitigation:	-0.131
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Wilton Pl	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	January 2018
3	East-West Street:	Hollywood Blvd	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			1			1			1			1			1				1
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	347	0	347	0	347	347		347	0	347	0	347	0	347	0	347	0	347
	Left-Through		1							1				1				1	
	Through	62	0	**409**	0	62	**409**		62	0	**409**	0	62	0	**409**	0	62	0	**409**
	Through-Right		0							0				0				0	
	Right	45	1	5	0	45	5		45	1	5	0	45	1	5	0	45	1	5
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	15	0	15	0	15	15		15	0	15	0	15	0	15	0	15	0	15
	Left-Through		0							0				0				0	
	Through	188	0	**246**	0	188	**246**		188	0	**246**	0	188	0	**246**	0	188	0	**246**
	Through-Right		0							0				0				0	
	Right	43	0	0	0	43	0		43	0	0	0	43	0	0	0	43	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	25	1	**25**	0	25	**25**		25	1	**25**	0	25	1	**25**	0	25	1	**25**
	Left-Through		0							0				0				0	
	Through	786	2	393	-2	784	392		786	2	393	-2	784	2	392	0	784	2	392
	Through-Right		0							0				0				0	
	Right	156	1	0	0	156	0		156	1	0	0	156	1	0	0	156	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	81	1	81	0	81	81		81	1	81	0	81	1	81	0	81	1	81
	Left-Through		0							0				0				0	
	Through	1164	1	**591**	30	1194	**606**		1164	1	**591**	30	1194	1	**606**	-4	1190	1	**604**
	Through-Right		1							1				1				1	
	Right	17	0	17	0	17	17		17	0	17	0	17	0	17	0	17	0	17
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES			*North-South:*	655		*North-South:*	655			*North-South:*	655			*North-South:*	655			*North-South:*	655
			East-West:	616		*East-West:*	631			*East-West:*	616			*East-West:*	631			*East-West:*	629
			SUM:	1271		*SUM:*	1286			*SUM:*	1271			*SUM:*	1286			*SUM:*	1284
VOLUME/CAPACITY *(V/C)* RATIO:				0.892			0.902				0.892				0.902				0.901
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.792**			**0.802**				**0.792**				**0.802**				**0.801**
LEVEL OF SERVICE (LOS):				C			D				C				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.010 **Δ*v/c* after mitigation:** 0.009

Significant impacted? NO **Fully mitigated?** N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Wilton Pl	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	January 2018
4	East-West Street:	Sunset Blvd	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	48	1	**48**	0	48	**48**		48	1	**48**	0	48	1	**48**	0	48	1	**48**
	Left-Through		0							0				0				0	
	Through	196	1	168	0	196	168		196	1	168	0	196	1	168	0	196	1	168
	Through-Right		1							1				1				1	
	Right	139	0	139	0	139	139		139	0	139	0	139	0	139	0	139	0	139
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	172	1	172	6	178	178		172	1	172	6	178	1	178	-1	177	1	177
	Left-Through		0							0				0				0	
	Through	530	1	**337**	0	530	**337**		530	1	**337**	0	530	1	**337**	0	530	1	**337**
	Through-Right		1							1				1				1	
	Right	144	0	144	0	144	144		144	0	144	0	144	0	144	0	144	0	144
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	63	1	**63**	0	63	**63**		63	1	**63**	0	63	1	**63**	0	63	1	**63**
	Left-Through		0							0				0				0	
	Through	1120	2	438	11	1131	441		1120	2	438	11	1131	2	441	-2	1129	2	441
	Through-Right		1							1				1				1	
	Right	193	0	193	0	193	193		193	0	193	0	193	0	193	0	193	0	193
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	95	1	95	0	95	95		95	1	95	0	95	1	95	0	95	1	95
	Left-Through		0							0				0				0	
	Through	944	2	**472**	46	990	**495**		944	2	**472**	46	990	2	**495**	-5	985	2	**493**
	Through-Right		0							0				0				0	
	Right	120	1	34	0	120	31		120	1	34	0	120	1	31	0	120	1	32
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		385	*North-South:*		385		*North-South:*		385		*North-South:*		385		*North-South:*		385
		East-West:		535	*East-West:*		558		*East-West:*		535		*East-West:*		558		*East-West:*		556
		SUM:		920	*SUM:*		943		*SUM:*		920		*SUM:*		943		*SUM:*		941
VOLUME/CAPACITY *(V/C)* RATIO:				0.613			0.629				0.613				0.629				0.627
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.513**			**0.529**				**0.513**				**0.529**				**0.527**
LEVEL OF SERVICE (LOS):				**A**			**A**				**A**				**A**				**A**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.016	Δ*v/c* after mitigation:	0.014
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Wilton Pl	Year of Count:	2017	Ambient Growth (%):	1	Conducted by:	GTC	Date:	January 2018
5	East-West Street:	Fountain Ave	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	23	0	**23**	0	23	**23**		23	0	**23**	0	23	0	**23**	0	23	0	**23**
	Left-Through		1							1				1				1	
	Through	348	0	368	0	348	368		348	0	368	0	348	0	368	0	348	0	368
	Through-Right		1							1				1				1	
	Right	295	0	368	0	295	368		295	0	368	0	295	0	368	0	295	0	368
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	24	0	24	0	24	24		24	0	24	0	24	0	24	0	24	0	24
	Left-Through		1							1				1				1	
	Through	646	1	**371**	0	646	**371**		646	1	**371**	0	646	1	**371**	0	646	1	**371**
	Through-Right		0							0				0				0	
	Right	56	1	56	0	56	56		56	1	56	0	56	1	56	0	56	1	56
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	19	0	**19**	0	19	**19**		19	0	**19**	0	19	0	**19**	0	19	0	**19**
	Left-Through		0							0				0				0	
	Through	198	0	235	-3	195	232		198	0	235	-3	195	0	232	0	195	0	232
	Through-Right		0							0				0				0	
	Right	18	0	0	0	18	0		18	0	0	0	18	0	0	0	18	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	241	0	241	0	241	241		241	0	241	0	241	0	241	0	241	0	241
	Left-Through		0							0				0				0	
	Through	300	0	**566**	-2	298	**564**		300	0	**566**	-2	298	0	**564**	0	298	0	**564**
	Through-Right		0							0				0				0	
	Right	25	0	0	0	25	0		25	0	0	0	25	0	0	0	25	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		394	*North-South:*		394	*North-South:*			394	*North-South:*			394	*North-South:*			394
		East-West:		585	*East-West:*		583	*East-West:*			585	*East-West:*			583	*East-West:*			583
		SUM:		979	*SUM:*		977	*SUM:*			979	*SUM:*			977	*SUM:*			977
VOLUME/CAPACITY *(V/C)* RATIO:				0.653			0.651				0.653				0.651				0.651
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.553**			**0.551**				**0.553**				**0.551**				**0.551**
LEVEL OF SERVICE (LOS):				**A**			**A**				**A**				**A**				**A**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: -0.002 **Δ*v/c* after mitigation:** -0.002

Significant impacted? NO **Fully mitigated?** N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Wilton Pl	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	January 2018
6	East-West Street:	Santa Monica Blvd	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

		EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			2			2			2				2					2
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0					0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB--		0	NB-- 0 SB--		0	NB-- 0 SB--		0		NB-- 0 SB--		0		NB-- 0 SB--		0	
		EB-- 0 WB--		0	EB-- 0 WB--		0	EB-- 0 WB--		0		EB-- 0 WB--		0		EB-- 0 WB--		0	
	ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2					2
	Override Capacity			0			0			0				0					0
NORTHBOUND	Left	11	0	**0**	0	11	**0**		11	0	**0**	0	11	0	**0**	0	11	0	**0**
	Left-Through		0							0				0				0	
	Through	785	1	423	0	785	423		785	1	423	0	785	1	423	0	785	1	423
	Through-Right		1							1				1				1	
	Right	60	0	60	0	60	60		60	0	60	0	60	0	60	0	60	0	60
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	3	0	0	0	3	0		3	0	0	0	3	0	0	0	3	0	0
	Left-Through		0							0				0				0	
	Through	823	1	**449**	0	823	**449**		823	1	**449**	0	823	1	**449**	0	823	1	**449**
	Through-Right		1							1				1				1	
	Right	75	0	75	0	75	75		75	0	75	0	75	0	75	0	75	0	75
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	37	1	**37**	0	37	**37**		37	1	**37**	0	37	1	**37**	0	37	1	**37**
	Left-Through		0							0				0				0	
	Through	803	1	435	-2	801	434		803	1	435	-2	801	1	434	0	801	1	434
	Through-Right		1							1				1				1	
	Right	67	0	67	0	67	67		67	0	67	0	67	0	67	0	67	0	67
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	66	1	66	0	66	66		66	1	66	0	66	1	66	0	66	1	66
	Left-Through		0							0				0				0	
	Through	1012	1	**512**	8	1020	**516**		1012	1	**512**	8	1020	1	**516**	-1	1019	1	**516**
	Through-Right		1							1				1				1	
	Right	12	0	12	0	12	12		12	0	12	0	12	0	12	0	12	0	12
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	*North-South:*		449	*North-South:*		449	*North-South:*		449		*North-South:*		449		*North-South:*			449
		East-West:		549	*East-West:*		553	*East-West:*		549		*East-West:*		553		*East-West:*			553
		SUM:		998	*SUM:*		1002	*SUM:*		998		*SUM:*		1002		*SUM:*			1002
	VOLUME/CAPACITY *(V/C)* RATIO:			0.665			0.668			0.665				0.668					0.668
	V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.565**			**0.568**			**0.565**				**0.568**					**0.568**
	LEVEL OF SERVICE (LOS):			**A**			**A**			**A**				**A**					**A**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.003 **Δ*v/c* after mitigation:** 0.003

Significant impacted? NO **Fully mitigated?** N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	St Andrews Pl	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	January 2018
7	East-West Street:	Sunset Blvd	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	209	0	**209**	0	209	**209**		209	0	**209**	0	209	0	**209**	0	209	0	**209**
	Left-Through		1							1				1				1	
	Through	8	0	217	0	8	217		8	0	217	0	8	0	217	0	8	0	217
	Through-Right		0							0				0				0	
	Right	99	1	45	0	99	45		99	1	45	0	99	1	45	0	99	1	45
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	17	0	17	0	17	17		17	0	17	0	17	0	17	0	17	0	17
	Left-Through		0							0				0				0	
	Through	31	0	**58**	0	31	**58**		31	0	**58**	0	31	0	**58**	0	31	0	**58**
	Through-Right		0							0				0				0	
	Right	10	0	0	0	10	0		10	0	0	0	10	0	0	0	10	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	14	1	14	0	14	14		14	1	14	0	14	1	14	0	14	1	14
	Left-Through		0							0				0				0	
	Through	1244	2	**449**	18	1262	**455**		1244	2	**449**	18	1262	2	**455**	-3	1259	2	**454**
	Through-Right		1							1				1				1	
	Right	103	0	103	0	103	103		103	0	103	0	103	0	103	0	103	0	103
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	108	1	**108**	0	108	**108**		108	1	**108**	0	108	1	**108**	0	108	1	**108**
	Left-Through		0							0				0				0	
	Through	934	2	467	46	980	490		934	2	467	46	980	2	490	-5	975	2	488
	Through-Right		0							0				0				0	
	Right	18	1	18	0	18	18		18	1	18	0	18	1	18	0	18	1	18
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		267	*North-South:*		267	*North-South:*			267	*North-South:*			267	*North-South:*			267
		East-West:		557	*East-West:*		563	*East-West:*			557	*East-West:*			563	*East-West:*			562
		SUM:		824	*SUM:*		830	*SUM:*			824	*SUM:*			830	*SUM:*			829
VOLUME/CAPACITY *(V/C)* RATIO:				0.549			0.553				0.549				0.553				0.553
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.449**			**0.453**				**0.449**				**0.453**				**0.453**
LEVEL OF SERVICE (LOS):				**A**			**A**				**A**				**A**				**A**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.004	Δ*v/c* after mitigation:	0.004
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Western Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	January 2018
8	East-West Street:	Franklin Ave	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 3	NB--	0	SB-- 3	NB--	0	SB-- 3	NB--	0	SB-- 3	NB--	0	SB-- 3	NB--	0	SB--	3
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	91	1	**91**	0	91	**91**		91	1	**91**	0	91	1	**91**	0	91	1	**91**
Left-Through		0							0				0				0	
Through	383	1	224	10	393	229		383	1	224	10	393	1	229	-1	392	1	228
Through-Right		1							1				1				1	
Right	64	0	64	0	64	64		64	0	64	0	64	0	64	0	64	0	64
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	14	1	14	0	14	14		14	1	14	0	14	1	14	0	14	1	14
Left-Through		0							0				0				0	
Through	1034	2	517	0	1034	517		1034	2	517	0	1034	2	517	0	1034	2	517
Through-Right		0							0				0				0	
Right	908	1	**576**	0	908	**576**		908	1	**576**	0	908	1	**576**	0	908	1	**576**
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	332	1	**332**	0	332	**332**		332	1	**332**	0	332	1	**332**	0	332	1	**332**
Left-Through		0							0				0				0	
Through	622	1	366	0	622	366		622	1	366	0	622	1	366	0	622	1	366
Through-Right		1							1				1				1	
Right	110	0	110	0	110	110		110	0	110	0	110	0	110	0	110	0	110
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	101	1	101	0	101	101		101	1	101	0	101	1	101	0	101	1	101
Left-Through		0							0				0				0	
Through	766	1	**390**	0	766	**390**		766	1	**390**	0	766	1	**390**	0	766	1	**390**
Through-Right		1							1				1				1	
Right	14	0	14	0	14	14		14	0	14	0	14	0	14	0	14	0	14
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		667	*North-South:*		667	*North-South:*			667	*North-South:*			667	*North-South:*			667
	East-West:		722	*East-West:*		722	*East-West:*			722	*East-West:*			722	*East-West:*			722
	SUM:		1389	*SUM:*		1389	*SUM:*			1389	*SUM:*			1389	*SUM:*			1389
VOLUME/CAPACITY *(V/C)* RATIO:			0.975			0.975				0.975				0.975				0.975
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.875**			**0.875**				**0.875**				**0.875**				**0.875**
LEVEL OF SERVICE (LOS):			**D**			**D**				**D**				**D**				**D**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Western Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	January 2018
9	East-West Street:	Hollywood Blvd	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			4			4			4				4				4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	
	EB--	0	WB-- 3	EB--	0	WB-- 3	EB--	0	WB-- 3	EB--	0	WB-- 3	EB--	0	WB-- 3	EB--	0	WB-- 3	
ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2				2				2
Override Capacity			0			0			0				0				0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	145	1	**145**	32	177	**177**		145	1	**145**	32	177	1	**177**	-4	173	1	**173**
	Left-Through		0							0				0				0	
	Through	531	2	266	10	541	271		531	2	266	10	541	2	271	-1	540	2	270
	Through-Right		0							0				0				0	
	Right	113	1	0	0	113	0		113	1	0	0	113	1	0	0	113	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	63	1	63	0	63	63		63	1	63	0	63	1	63	0	63	1	63
	Left-Through		0							0				0				0	
	Through	972	1	**610**	0	972	**610**		972	1	**610**	0	972	1	**610**	0	972	2	**486**
	Through-Right		1							1				1				0	
	Right	248	0	248	0	248	248		248	0	248	0	248	0	248	0	248	1	183
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	130	1	130	0	130	130		130	1	130	0	130	1	130	0	130	1	130
	Left-Through		0							0				0				0	
	Through	810	1	**448**	-2	808	**447**		810	1	**448**	-2	808	1	**447**	0	808	1	**447**
	Through-Right		1							1				1				1	
	Right	86	0	86	-1	85	85		86	0	86	-1	85	0	85	0	85	0	85
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	173	1	**173**	0	173	**173**		173	1	**173**	0	173	1	**173**	0	173	1	**173**
	Left-Through		0							0				0				0	
	Through	784	2	392	-1	783	392		784	2	392	-1	783	2	392	0	783	2	392
	Through-Right		0							0				0				0	
	Right	27	1	0	0	27	0		27	1	0	0	27	1	0	0	27	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		755	North-South:		787	North-South:			755	North-South:			787	North-South:			659
		East-West:		621	East-West:		620	East-West:			621	East-West:			620	East-West:			620
		SUM:		1376	SUM:		1407	SUM:			1376	SUM:			1407	SUM:			1279
VOLUME/CAPACITY (*V/C*) RATIO:				1.001			1.023				1.001				1.023				0.930
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.901**			**0.923**				**0.901**				**0.923**				**0.830**
LEVEL OF SERVICE (LOS):				**E**			**E**				**E**				**E**				**D**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.022	Δ*v/c* after mitigation:	-0.071
Significant impacted?	YES	Fully mitigated?	YES

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Western Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	January 2018
10	East-West Street:	Sunset Blvd	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			4			4			4				4				4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	
ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2				2				2
Override Capacity			0			0			0				0				0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	119	1	**119**	46	165	**165**		119	1	**119**	46	165	1	**165**	-5	160	2	**88**
	Left-Through		0							0				0				0	
	Through	490	2	245	42	532	266		490	2	245	42	532	2	266	-5	527	2	264
	Through-Right		0							0				0				0	
	Right	100	1	39	0	100	39		100	1	39	0	100	1	39	0	100	1	39
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	112	1	112	0	112	112		112	1	112	0	112	1	112	0	112	1	112
	Left-Through		0							0				0				0	
	Through	840	1	**532**	0	840	**532**		840	1	**532**	0	840	1	**532**	-1	839	1	**532**
	Through-Right		1							1				1				1	
	Right	224	0	224	0	224	224		224	0	224	0	224	0	224	0	224	0	224
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	172	1	172	0	172	172		172	1	172	0	172	1	172	0	172	1	172
	Left-Through		0							0				0				0	
	Through	935	2	**337**	13	948	**343**		935	2	**337**	13	948	2	**343**	-1	947	2	**342**
	Through-Right		1							1				1				1	
	Right	76	0	76	5	81	81		76	0	76	5	81	0	81	-2	79	0	79
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	123	1	**123**	0	123	**123**		123	1	**123**	0	123	1	**123**	0	123	1	**123**
	Left-Through		0							0				0				0	
	Through	705	2	260	0	705	260		705	2	260	0	705	2	260	0	705	2	260
	Through-Right		1							1				1				1	
	Right	76	0	76	0	76	76		76	0	76	0	76	0	76	0	76	0	76
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		651	North-South:		697	North-South:			651	North-South:			697	North-South:			620
		East-West:		460	East-West:		466	East-West:			460	East-West:			466	East-West:			465
		SUM:		1111	SUM:		1163	SUM:			1111	SUM:			1163	SUM:			1085
VOLUME/CAPACITY (*V/C*) RATIO:				0.808			0.846				0.808				0.846				0.789
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.708			0.746				0.708				0.746				0.689
LEVEL OF SERVICE (LOS):				C			C				C				C				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.038	Δ*v/c* after mitigation:	-0.019
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Western Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	January 2018
11	East-West Street:	De Longpre Ave	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			0			0			2			2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?			0			0			2			2			2
Override Capacity			1200			1200			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	67	1	**67**	0	67	**67**		67	1	**67**	0	67	1	**67**	0	67	1	**67**
	Left-Through		0							0				0				0	
	Through	704	1	352	0	704	375		704	1	352	0	704	1	375	0	704	1	374
	Through-Right		1							1				1				1	
	Right	0	0	0	46	46	46		0	0	0	46	46	0	46	-2	44	0	44
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	1	0	61	61	61		0	1	0	61	61	1	61	-3	58	1	58
	Left-Through		0							0				0				0	
	Through	1118	1	**572**	0	1118	**572**		1118	1	**572**	0	1118	1	**572**	0	1118	1	**572**
	Through-Right		1							1				1				1	
	Right	25	0	25	0	25	25		25	0	25	0	25	0	25	0	25	0	25
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	6	0	6	0	6	6		6	1	6	0	6	1	6	0	6	1	6
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	78	0	**84**	0	78	**84**		78	1	**45**	0	78	1	**45**	0	78	1	**45**
	Left-Through-Right		0							0				0				0	
	Left-Right		1							0				0				0	
WESTBOUND	Left	0	0	**0**	131	131	**0**		0	0	**0**	131	131	0	**0**	-10	121	0	**0**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	0	0	0	121	121	0		0	0	0	121	121	0	0	-10	111	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		639	*North-South:*		639	*North-South:*			639	*North-South:*			639	*North-South:*			639
		East-West:		84	*East-West:*		84	*East-West:*			45	*East-West:*			45	*East-West:*			45
		SUM:		723	*SUM:*		723	*SUM:*			684	*SUM:*			684	*SUM:*			684
VOLUME/CAPACITY *(V/C)* RATIO:				0.603			0.603				0.456				0.456				0.456
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.603			0.603				**0.356**				**0.356**				**0.356**
LEVEL OF SERVICE (LOS):				**B**			**B**				**A**				**A**				**A**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Western Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	January 2018
12	East-West Street:	Fountain Ave	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	55	1	**55**	0	55	**55**		55	1	**55**	0	55	1	**55**	0	55	1	**55**
Left-Through		0							0				0				0	
Through	673	1	376	-4	669	374		673	1	376	-4	669	1	374	-1	668	1	373
Through-Right		1							1				1				1	
Right	78	0	78	0	78	78		78	0	78	0	78	0	78	0	78	0	78
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	60	1	60	0	60	60		60	1	60	0	60	1	60	0	60	1	60
Left-Through		0							0				0				0	
Through	878	1	**533**	84	962	**574**		878	1	**533**	84	962	1	**574**	-10	952	1	**569**
Through-Right		1							1				1				1	
Right	187	0	187	-2	185	185		187	0	187	-2	185	0	185	0	185	0	185
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	59	1	**59**	-3	56	**56**		59	1	**59**	-3	56	1	**56**	0	56	1	**56**
Left-Through		0							0				0				0	
Through	262	1	262	0	262	262		262	1	262	0	262	1	262	0	262	1	262
Through-Right		0							0				0				0	
Right	312	1	285	0	312	285		312	1	285	0	312	1	285	0	312	1	285
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	171	1	171	0	171	171		171	1	171	0	171	1	171	0	171	1	171
Left-Through		0							0				0				0	
Through	423	0	**453**	0	423	**453**		423	0	**453**	0	423	0	**453**	0	423	0	**453**
Through-Right		1							1				1				1	
Right	30	0	0	0	30	0		30	0	0	0	30	0	0	0	30	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*	588		*North-South:*	629		*North-South:*		588		*North-South:*		629		*North-South:*		624
		East-West:	512		*East-West:*	509		*East-West:*		512		*East-West:*		509		*East-West:*		509
		SUM:	1100		*SUM:*	1138		*SUM:*		1100		*SUM:*		1138		*SUM:*		1133
VOLUME/CAPACITY *(V/C)* RATIO:			0.733			0.759				0.733				0.759				0.755
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.633**			**0.659**				**0.633**				**0.659**				**0.655**
LEVEL OF SERVICE (LOS):			**B**			**B**				**B**				**B**				**B**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.026 **Δ*v/c* after mitigation:** 0.022

Significant impacted? NO **Fully mitigated?** N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Western Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	January 2018
13	East-West Street:	Santa Monica Blvd	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			4			4			4			4			4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB--	0
	EB--	3	WB-- 0	EB--	3	WB-- 0	EB--	3	WB-- 0	EB--	3	WB-- 0	EB--	3	WB-- 0	EB--	3	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	105	1	**105**	0	105	**105**		105	1	**105**	0	105	1	**105**	0	105	1	**105**
Left-Through		0							0				0				0	
Through	933	2	467	-2	931	466		933	2	467	-2	931	2	466	-1	930	2	465
Through-Right		0							0				0				0	
Right	199	1	60	0	199	60		199	1	60	0	199	1	60	0	199	1	60
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	65	1	65	23	88	88		65	1	65	23	88	1	88	-3	85	1	85
Left-Through		0							0				0				0	
Through	1002	1	**548**	18	1020	**561**		1002	1	**548**	18	1020	1	**561**	-3	1017	1	**559**
Through-Right		1							1				1				1	
Right	94	0	94	8	102	102		94	0	94	8	102	0	102	-1	101	0	101
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	65	1	**65**	-2	63	**63**		65	1	**65**	-2	63	1	**63**	0	63	1	**63**
Left-Through		0							0				0				0	
Through	794	2	397	0	794	397		794	2	397	0	794	2	397	0	794	2	397
Through-Right		0							0				0				0	
Right	94	1	0	0	94	0		94	1	0	0	94	1	0	0	94	1	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	139	1	139	0	139	139		139	1	139	0	139	1	139	0	139	1	139
Left-Through		0							0				0				0	
Through	1010	1	**527**	0	1010	**527**		1010	1	**527**	0	1010	1	**527**	0	1010	1	**527**
Through-Right		1							1				1				1	
Right	43	0	43	0	43	43		43	0	43	0	43	0	43	0	43	0	43
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*	653		*North-South:*	666		*North-South:*		653		*North-South:*		666		*North-South:*		664
		East-West:	592		*East-West:*	590		*East-West:*		592		*East-West:*		590		*East-West:*		590
		SUM:	1245		*SUM:*	1256		*SUM:*		1245		*SUM:*		1256		*SUM:*		1254
VOLUME/CAPACITY *(V/C)* RATIO:			0.905			0.913				0.905				0.913				0.912
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.805**			**0.813**				**0.805**				**0.813**				**0.812**
LEVEL OF SERVICE (LOS):			**D**			**D**				**D**				**D**				**D**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.008	Δ*v/c* after mitigation:	0.007
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Serrano Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	January 2018
14	East-West Street:	Sunset Blvd	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	37	0	37	0	37	37		37	0	37	0	37	0	37	0	37	0	37
	Left-Through		0							0				0				0	
	Through	11	0	**95**	-4	7	**99**		11	0	**95**	-4	7	0	**99**	0	7	0	**98**
	Through-Right		0							0				0				0	
	Right	47	0	0	8	55	0		47	0	0	8	55	0	0	-1	54	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	27	0	**27**	0	27	**27**		27	0	**27**	0	27	0	**27**	0	27	0	**27**
	Left-Through		0							0				0				0	
	Through	11	0	68	-4	7	64		11	0	68	-4	7	0	64	0	7	0	64
	Through-Right		0							0				0				0	
	Right	30	0	0	0	30	0		30	0	0	0	30	0	0	0	30	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	16	1	16	0	16	16		16	1	16	0	16	1	16	0	16	1	16
	Left-Through		0							0				0				0	
	Through	1070	2	**370**	13	1083	**374**		1070	2	**370**	13	1083	2	**374**	-1	1082	2	**374**
	Through-Right		1							1				1				1	
	Right	40	0	40	0	40	40		40	0	40	0	40	0	40	0	40	0	40
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	45	1	**45**	-2	43	**43**		45	1	**45**	-2	43	1	**43**	0	43	1	**43**
	Left-Through		0							0				0				0	
	Through	831	2	282	3	834	283		831	2	282	3	834	2	283	0	834	2	283
	Through-Right		1							1				1				1	
	Right	15	0	15	0	15	15		15	0	15	0	15	0	15	0	15	0	15
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		122	North-South:		126	North-South:			122	North-South:			126	North-South:			125
		East-West:		415	East-West:		417	East-West:			415	East-West:			417	East-West:			417
		SUM:		537	SUM:		543	SUM:			537	SUM:			543	SUM:			542
VOLUME/CAPACITY (V/C) RATIO:				0.358			0.362				0.358				0.362				0.361
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.258			0.262				0.258				0.262				0.261
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.004 — Δ*v/c* after mitigation: 0.003

Significant impacted? NO — Fully mitigated? N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Serrano Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	January 2018
15	East-West Street:	Fountain Ave	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			1			1			1			1			1				1
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	2	SB-- 2	NB--	2	SB-- 2	NB--	2	SB-- 2	NB--	2	SB-- 2	NB--	2	SB-- 2	NB--	2	SB-- 2
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	76	0	76	0	76	76		76	0	76	0	76	0	76	0	76	0	76
	Left-Through		0							0				0				0	
	Through	37	0	**138**	5	42	**143**		37	0	**138**	5	42	0	**143**	-1	41	0	**142**
	Through-Right		0							0				0				0	
	Right	25	0	0	0	25	0		25	0	0	0	25	0	0	0	25	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	40	0	40	-2	38	38		40	0	40	-2	38	0	38	0	38	0	38
	Left-Through		0							0				0				0	
	Through	30	0	**91**	20	50	**109**		30	0	**91**	20	50	0	**109**	-3	47	0	**106**
	Through-Right		0							0				0				0	
	Right	21	0	0	0	21	0		21	0	0	0	21	0	0	0	21	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	5	0	**5**	0	5	**5**		5	0	**5**	0	5	0	**5**	0	5	0	**5**
	Left-Through		0							0				0				0	
	Through	355	0	396	0	355	396		355	0	396	0	355	0	396	0	355	0	396
	Through-Right		0							0				0				0	
	Right	36	0	0	0	36	0		36	0	0	0	36	0	0	0	36	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	18	0	18	0	18	18		18	0	18	0	18	0	18	0	18	0	18
	Left-Through		0							0				0				0	
	Through	526	0	**571**	0	526	**568**		526	0	**571**	0	526	0	**568**	0	526	0	**568**
	Through-Right		0							0				0				0	
	Right	27	0	0	-3	24	0		27	0	0	-3	24	0	0	0	24	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		229	*North-South:*		252	*North-South:*			229	*North-South:*			252	*North-South:*			248
		East-West:		576	*East-West:*		573	*East-West:*			576	*East-West:*			573	*East-West:*			573
		SUM:		805	*SUM:*		825	*SUM:*			805	*SUM:*			825	*SUM:*			821
VOLUME/CAPACITY *(V/C)* RATIO:				0.565			0.579				0.565				0.579				0.576
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.465**			**0.479**				**0.465**				**0.479**				**0.476**
LEVEL OF SERVICE (LOS):				**A**			**A**				**A**				**A**				**A**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.014 **Δ*v/c* after mitigation:** 0.011

Significant impacted? NO **Fully mitigated?** N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Normandie Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	January 2018
16	East-West Street:	Hollywood Blvd	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	59	0	**59**	0	59	**59**		59	0	**59**	0	59	0	**59**	0	59	0	**59**
Left-Through		0							0				0				0	
Through	72	0	198	0	72	198		72	0	198	0	72	0	198	0	72	0	198
Through-Right		0							0				0				0	
Right	67	0	0	0	67	0		67	0	0	0	67	0	0	0	67	0	0
Left-Through-Right		1							1				1				1	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	45	0	45	0	45	45		45	0	45	0	45	0	45	0	45	0	45
Left-Through		0							0				0				0	
Through	169	0	**253**	0	169	**253**		169	0	**253**	0	169	0	**253**	0	169	0	**253**
Through-Right		0							0				0				0	
Right	39	0	0	0	39	0		39	0	0	0	39	0	0	0	39	0	0
Left-Through-Right		1							1				1				1	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	25	1	25	0	25	25		25	1	25	0	25	1	25	0	25	1	25
Left-Through		0							0				0				0	
Through	752	1	**407**	-2	750	**406**		752	1	**407**	-2	750	1	**406**	0	750	1	**406**
Through-Right		1							1				1				1	
Right	62	0	62	0	62	62		62	0	62	0	62	0	62	0	62	0	62
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	73	1	**73**	0	73	**73**		73	1	**73**	0	73	1	**73**	0	73	1	**73**
Left-Through		0							0				0				0	
Through	787	1	401	-3	784	400		787	1	401	-3	784	1	400	0	784	1	400
Through-Right		1							1				1				1	
Right	15	0	15	0	15	15		15	0	15	0	15	0	15	0	15	0	15
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*	312		*North-South:*	312		*North-South:*		312		*North-South:*		312		*North-South:*		312
		East-West:	480		*East-West:*	479		*East-West:*		480		*East-West:*		479		*East-West:*		479
		SUM:	792		*SUM:*	791		*SUM:*		792		*SUM:*		791		*SUM:*		791
VOLUME/CAPACITY *(V/C)* RATIO:			0.528			0.527				0.528				0.527				0.527
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.428**			**0.427**				**0.428**				**0.427**				**0.427**
LEVEL OF SERVICE (LOS):			**A**			**A**				**A**				**A**				**A**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.001	Δ*v/c* after mitigation:	-0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Normandie Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	January 2018
17	East-West Street:	Sunset Blvd	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	70	0	**70**	0	70	**70**		70	0	**70**	0	70	0	**70**	0	70	0	**70**
Left-Through		0							0				0				0	
Through	120	0	282	0	120	282		120	0	282	0	120	0	282	0	120	0	282
Through-Right		0							0				0				0	
Right	92	0	0	0	92	0		92	0	0	0	92	0	0	0	92	0	0
Left-Through-Right		1							1				1				1	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	56	0	56	0	56	56		56	0	56	0	56	0	56	0	56	0	56
Left-Through		0							0				0				0	
Through	220	0	**332**	0	220	**332**		220	0	**332**	0	220	0	**332**	0	220	0	**332**
Through-Right		0							0				0				0	
Right	56	0	0	0	56	0		56	0	0	0	56	0	0	0	56	0	0
Left-Through-Right		1							1				1				1	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	33	1	33	0	33	33		33	1	33	0	33	1	33	0	33	1	33
Left-Through		0							0				0				0	
Through	921	2	**340**	20	941	**347**		921	2	**340**	20	941	2	**347**	-3	938	2	**346**
Through-Right		1							1				1				1	
Right	100	0	100	0	100	100		100	0	100	0	100	0	100	0	100	0	100
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	42	1	**42**	0	42	**42**		42	1	**42**	0	42	1	**42**	0	42	1	**42**
Left-Through		0							0				0				0	
Through	635	2	225	1	636	225		635	2	225	1	636	2	225	-1	635	2	225
Through-Right		1							1				1				1	
Right	39	0	39	0	39	39		39	0	39	0	39	0	39	0	39	0	39
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*	402		*North-South:*	402		*North-South:*		402		*North-South:*		402		*North-South:*		402
		East-West:	382		*East-West:*	389		*East-West:*		382		*East-West:*		389		*East-West:*		388
		SUM:	784		*SUM:*	791		*SUM:*		784		*SUM:*		791		*SUM:*		790
VOLUME/CAPACITY *(V/C)* RATIO:			0.523			0.527				0.523				0.527				0.527
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.423**			**0.427**				**0.423**				**0.427**				**0.427**
LEVEL OF SERVICE (LOS):			**A**			**A**				**A**				**A**				**A**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.004 **Δ*v/c* after mitigation:** 0.004

Significant impacted? NO **Fully mitigated?** N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Normandie Ave	Year of Count:	2017	Ambient Growth (%):	1	Conducted by:	GTC	Date:	January 2018
18	East-West Street:	Santa Monica Blvd	Projection Year:	2017	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	40	0	**40**	0	40	**40**		40	0	**40**	0	40	0	**40**	0	40	0	**40**
Left-Through		1							1				1				1	
Through	232	0	190	0	232	190		232	0	190	0	232	0	190	0	232	0	190
Through-Right		1							1				1				1	
Right	68	0	190	0	68	190		68	0	190	0	68	0	190	0	68	0	190
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	57	0	57	0	57	57		57	0	57	0	57	0	57	0	57	0	57
Left-Through		0							0				0				0	
Through	350	0	**451**	0	350	**451**		350	0	**451**	0	350	0	**451**	0	350	0	**451**
Through-Right		0							0				0				0	
Right	44	0	0	0	44	0		44	0	0	0	44	0	0	0	44	0	0
Left-Through-Right		1							1				1				1	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	67	1	67	0	67	67		67	1	67	0	67	1	67	0	67	1	67
Left-Through		0							0				0				0	
Through	718	1	**411**	10	728	**416**		718	1	**411**	10	728	1	**416**	-1	727	1	**416**
Through-Right		1							1				1				1	
Right	104	0	104	0	104	104		104	0	104	0	104	0	104	0	104	0	104
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	146	1	**146**	0	146	**146**		146	1	**146**	0	146	1	**146**	0	146	1	**146**
Left-Through		0							0				0				0	
Through	714	1	393	0	714	393		714	1	393	0	714	1	393	0	714	1	393
Through-Right		1							1				1				1	
Right	71	0	71	0	71	71		71	0	71	0	71	0	71	0	71	0	71
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	North-South:		491	North-South:		491	North-South:		491		North-South:		491		North-South:			491
	East-West:		557	East-West:		562	East-West:		557		East-West:		562		East-West:			562
	SUM:		1048	SUM:		1053	SUM:		1048		SUM:		1053		SUM:			1053
VOLUME/CAPACITY (V/C) RATIO:			0.699			0.702			0.699				0.702					0.702
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.599**			**0.602**			**0.599**				**0.602**					**0.602**
LEVEL OF SERVICE (LOS):			**A**			**B**			**A**				**B**					**B**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.003	Δ*v/c* after mitigation:	0.003
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Bronson Ave	Year of Count:	2017	Ambient Growth (%):	1	Conducted by:	GTC	Date:	February 2018
1	East-West Street:	Sunset Blvd	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	39	1	39	0	39	39		39	1	39	0	39	1	39	0	39	1	39
Left-Through		0							0				0				0	
Through	323	0	**503**	0	323	**503**		323	0	**503**	0	323	0	**503**	0	323	0	**503**
Through-Right		1							1				1				1	
Right	180	0	0	0	180	0		180	0	0	0	180	0	0	0	180	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	75	1	**75**	0	75	**75**		75	1	**75**	0	75	1	**75**	0	75	1	**75**
Left-Through		0							0				0				0	
Through	211	0	277	0	211	277		211	0	277	0	211	0	277	0	211	0	277
Through-Right		1							1				1				1	
Right	66	0	0	0	66	0		66	0	0	0	66	0	0	0	66	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	83	1	83	0	83	83		83	1	83	0	83	1	83	0	83	1	83
Left-Through		0							0				0				0	
Through	1678	2	**567**	16	1694	**573**		1678	2	**567**	16	1694	2	**573**	-3	1691	2	**572**
Through-Right		1							1				1				1	
Right	24	0	24	0	24	24		24	0	24	0	24	0	24	0	24	0	24
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	45	1	**45**	0	45	**45**		45	1	**45**	0	45	1	**45**	0	45	1	**45**
Left-Through		0							0				0				0	
Through	1306	2	460	6	1312	462		1306	2	460	6	1312	2	462	-2	1310	2	461
Through-Right		1							1				1				1	
Right	74	0	74	0	74	74		74	0	74	0	74	0	74	0	74	0	74
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:	578		North-South:	578		North-South:		578		North-South:		578		North-South:		578
		East-West:	612		East-West:	618		East-West:		612		East-West:		618		East-West:		617
		SUM:	1190		SUM:	1196		SUM:		1190		SUM:		1196		SUM:		1195
VOLUME/CAPACITY (V/C) RATIO:			0.793			0.797				0.793				0.797				0.797
V/C LESS ATSAC/ATCS ADJUSTMENT:			0.693			0.697				0.693				0.697				0.697
LEVEL OF SERVICE (LOS):			B			B				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.004	Δ*v/c* after mitigation:	0.004
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Van Ness Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
2	East-West Street:	Sunset Blvd	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	83	1	83	0	83	83		83	1	83	0	83	1	83	0	83	1	83
	Left-Through		0							0				0				0	
	Through	57	0	**245**	0	57	**245**		57	0	**245**	0	57	0	**245**	0	57	0	**245**
	Through-Right		1							1				1				1	
	Right	188	0	0	0	188	0		188	0	0	0	188	0	0	0	188	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	409	1	**409**	50	459	**459**		409	1	**409**	50	459	1	**459**	-6	453	2	**249**
	Left-Through		0							0				0				0	
	Through	302	0	328	0	302	328		302	0	328	0	302	0	328	0	302	0	328
	Through-Right		1							1				1				1	
	Right	26	0	0	0	26	0		26	0	0	0	26	0	0	0	26	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	15	1	15	0	15	15		15	1	15	0	15	1	15	0	15	1	15
	Left-Through		0							0				0				0	
	Through	1828	2	**623**	16	1844	**629**		1828	2	**623**	16	1844	2	**629**	-3	1841	2	**628**
	Through-Right		1							1				1				1	
	Right	42	0	42	0	42	42		42	0	42	0	42	0	42	0	42	0	42
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	62	1	**62**	0	62	**62**		62	1	**62**	0	62	1	**62**	0	62	1	**62**
	Left-Through		0							0				0				0	
	Through	1196	2	416	6	1202	418		1196	2	416	6	1202	2	418	-2	1200	2	417
	Through-Right		1							1				1				1	
	Right	51	0	51	0	51	51		51	0	51	0	51	0	51	0	51	0	51
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		654	North-South:		704	North-South:			654	North-South:			704	North-South:			494
		East-West:		685	East-West:		691	East-West:			685	East-West:			691	East-West:			690
		SUM:		1339	SUM:		1395	SUM:			1339	SUM:			1395	SUM:			1184
VOLUME/CAPACITY (*V/C*) RATIO:				0.893			0.930				0.893				0.930				0.789
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.793**			**0.830**				**0.793**				**0.830**				**0.689**
LEVEL OF SERVICE (LOS):				C			D				C				D				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.037	Δ*v/c* after mitigation:	-0.104
Significant impacted?	YES	Fully mitigated?	YES

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Wilton Pl	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
3	East-West Street:	Hollywood Blvd	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			1			1			1			1			1				1
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	325	0	325	0	325	325		325	0	325	0	325	0	325	0	325	0	325
	Left-Through		1							1				1				1	
	Through	169	0	**494**	0	169	**494**		169	0	**494**	0	169	0	**494**	0	169	0	**494**
	Through-Right		0							0				0				0	
	Right	160	1	133	0	160	133		160	1	133	0	160	1	133	0	160	1	133
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	21	0	21	0	21	21		21	0	21	0	21	0	21	0	21	0	21
	Left-Through		0							0				0				0	
	Through	145	0	**193**	0	145	**193**		145	0	**193**	0	145	0	**193**	0	145	0	**193**
	Through-Right		0							0				0				0	
	Right	27	0	0	0	27	0		27	0	0	0	27	0	0	0	27	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	35	1	35	0	35	35		35	1	35	0	35	1	35	0	35	1	35
	Left-Through		0							0				0				0	
	Through	1051	2	**526**	5	1056	**528**		1051	2	**526**	5	1056	2	**528**	-1	1055	2	**528**
	Through-Right		0							0				0				0	
	Right	169	1	7	0	169	7		169	1	7	0	169	1	7	0	169	1	7
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	54	1	**54**	0	54	**54**		54	1	**54**	0	54	1	**54**	0	54	1	**54**
	Left-Through		0							0				0				0	
	Through	899	1	465	10	909	470		899	1	465	10	909	1	470	-2	907	1	469
	Through-Right		1							1				1				1	
	Right	30	0	30	0	30	30		30	0	30	0	30	0	30	0	30	0	30
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		687	North-South:		687	North-South:			687	North-South:			687	North-South:			687
		East-West:		580	East-West:		582	East-West:			580	East-West:			582	East-West:			582
		SUM:		1267	SUM:		1269	SUM:			1267	SUM:			1269	SUM:			1269
VOLUME/CAPACITY (V/C) RATIO:				0.889			0.891				0.889				0.891				0.891
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.789			0.791				0.789				0.791				0.791
LEVEL OF SERVICE (LOS):				C			C				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.002 — Δ*v/c* after mitigation: 0.002

Significant impacted? NO — Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Wilton Pl	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
4	East-West Street:	Sunset Blvd	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	87	1	**87**	0	87	**87**		87	1	**87**	0	87	1	**87**	0	87	1	**87**
	Left-Through		0							0				0				0	
	Through	367	1	275	0	367	275		367	1	275	0	367	1	275	0	367	1	275
	Through-Right		1							1				1				1	
	Right	182	0	182	0	182	182		182	0	182	0	182	0	182	0	182	0	182
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	82	1	82	23	105	105		82	1	82	23	105	1	105	-2	103	1	103
	Left-Through		0							0				0				0	
	Through	511	1	**310**	0	511	**310**		511	1	**310**	0	511	1	**310**	0	511	1	**310**
	Through-Right		1							1				1				1	
	Right	108	0	108	0	108	108		108	0	108	0	108	0	108	0	108	0	108
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	102	1	102	0	102	102		102	1	102	0	102	1	102	0	102	1	102
	Left-Through		0							0				0				0	
	Through	1736	2	**632**	67	1803	**654**		1736	2	**632**	67	1803	2	**654**	-9	1794	2	**651**
	Through-Right		1							1				1				1	
	Right	159	0	159	0	159	159		159	0	159	0	159	0	159	0	159	0	159
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	69	1	**69**	0	69	**69**		69	1	**69**	0	69	1	**69**	0	69	1	**69**
	Left-Through		0							0				0				0	
	Through	1041	2	521	20	1061	531		1041	2	521	20	1061	2	531	-3	1058	2	529
	Through-Right		0							0				0				0	
	Right	114	1	73	0	114	62		114	1	73	0	114	1	62	0	114	1	63
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		397	North-South:		397	North-South:			397	North-South:			397	North-South:			397
		East-West:		701	East-West:		723	East-West:			701	East-West:			723	East-West:			720
		SUM:		1098	SUM:		1120	SUM:			1098	SUM:			1120	SUM:			1117
VOLUME/CAPACITY (V/C) RATIO:				0.732			0.747				0.732				0.747				0.745
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.632			0.647				0.632				0.647				0.645
LEVEL OF SERVICE (LOS):				B			B				B				B				B

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.015 — Δ*v/c* after mitigation: 0.013

Significant impacted? NO — Fully mitigated? N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Wilton Pl	Year of Count:	2017	Ambient Growth (%):	1	Conducted by:	GTC	Date:	February 2018
5	East-West Street:	Fountain Ave	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	58	0	58	0	58	58		58	0	58	0	58	0	58	0	58	0	58
	Left-Through		1							1				1				1	
	Through	551	0	**509**	0	551	**509**		551	0	**509**	0	551	0	**509**	0	551	0	**509**
	Through-Right		1							1				1				1	
	Right	234	0	509	0	234	509		234	0	509	0	234	0	509	0	234	0	509
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	39	0	**39**	0	39	**39**		39	0	**39**	0	39	0	**39**	0	39	0	**39**
	Left-Through		1							1				1				1	
	Through	537	1	347	0	537	347		537	1	347	0	537	1	347	0	537	1	347
	Through-Right		0							0				0				0	
	Right	72	1	72	0	72	72		72	1	72	0	72	1	72	0	72	1	72
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	22	0	22	0	22	22		22	0	22	0	22	0	22	0	22	0	22
	Left-Through		0							0				0				0	
	Through	472	0	**573**	-3	469	**570**		472	0	**573**	-3	469	0	**570**	0	469	0	**570**
	Through-Right		0							0				0				0	
	Right	79	0	0	0	79	0		79	0	0	0	79	0	0	0	79	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	154	0	**154**	0	154	**154**		154	0	**154**	0	154	0	**154**	0	154	0	**154**
	Left-Through		0							0				0				0	
	Through	320	0	533	-3	317	530		320	0	533	-3	317	0	530	0	317	0	530
	Through-Right		0							0				0				0	
	Right	59	0	0	0	59	0		59	0	0	0	59	0	0	0	59	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		548	*North-South:*		548	*North-South:*			548	*North-South:*			548	*North-South:*			548
		East-West:		727	*East-West:*		724	*East-West:*			727	*East-West:*			724	*East-West:*			724
		SUM:		1275	*SUM:*		1272	*SUM:*			1275	*SUM:*			1272	*SUM:*			1272
VOLUME/CAPACITY *(V/C)* RATIO:				0.850			0.848				0.850				0.848				0.848
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.750**			**0.748**				**0.750**				**0.748**				**0.748**
LEVEL OF SERVICE (LOS):				**C**			**C**				**C**				**C**				**C**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.002	Δ*v/c* after mitigation:	-0.002
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Wilton Pl	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
6	East-West Street:	Santa Monica Blvd	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	7	0	0	0	7	0		7	0	0	0	7	0	0	0	7	0	0
Left-Through		0							0				0				0	
Through	826	1	**449**	0	826	**449**		826	1	**449**	0	826	1	**449**	0	826	1	**449**
Through-Right		1							1				1				1	
Right	72	0	72	0	72	72		72	0	72	0	72	0	72	0	72	0	72
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	4	0	**0**	0	4	**0**		4	0	**0**	0	4	0	**0**	0	4	0	**0**
Left-Through		0							0				0				0	
Through	666	1	343	0	666	343		666	1	343	0	666	1	343	0	666	1	343
Through-Right		1							1				1				1	
Right	19	0	19	0	19	19		19	0	19	0	19	0	19	0	19	0	19
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	62	1	62	0	62	62		62	1	62	0	62	1	62	0	62	1	62
Left-Through		0							0				0				0	
Through	1049	1	**559**	5	1054	**562**		1049	1	**559**	5	1054	1	**562**	-1	1053	1	**561**
Through-Right		1							1				1				1	
Right	69	0	69	0	69	69		69	0	69	0	69	0	69	0	69	0	69
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	93	1	**93**	0	93	**93**		93	1	**93**	0	93	1	**93**	0	93	1	**93**
Left-Through		0							0				0				0	
Through	1040	1	537	0	1040	537		1040	1	537	0	1040	1	537	-1	1039	1	536
Through-Right		1							1				1				1	
Right	33	0	33	0	33	33		33	0	33	0	33	0	33	0	33	0	33
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		449	*North-South:*		449	*North-South:*		449		*North-South:*		449		*North-South:*			449
	East-West:		652	*East-West:*		655	*East-West:*		652		*East-West:*		655		*East-West:*			654
	SUM:		1101	*SUM:*		1104	*SUM:*		1101		*SUM:*		1104		*SUM:*			1103
VOLUME/CAPACITY *(V/C)* RATIO:			0.734			0.736			0.734				0.736					0.735
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.634**			**0.636**			**0.634**				**0.636**					**0.635**
LEVEL OF SERVICE (LOS):			**B**			**B**			**B**				**B**					**B**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.002	Δ*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	St Andrews Pl	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
7	East-West Street:	Sunset Blvd	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	126	0	**126**	0	126	**126**		126	0	**126**	0	126	0	**126**	0	126	0	**126**
Left-Through		1							1				1				1	
Through	8	0	134	0	8	134		8	0	134	0	8	0	134	0	8	0	134
Through-Right		0							0				0				0	
Right	112	1	78	0	112	78		112	1	78	0	112	1	78	0	112	1	78
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	8	0	8	0	8	8		8	0	8	0	8	0	8	0	8	0	8
Left-Through		0							0				0				0	
Through	8	0	**23**	0	8	**23**		8	0	**23**	0	8	0	**23**	0	8	0	**23**
Through-Right		0							0				0				0	
Right	7	0	0	0	7	0		7	0	0	0	7	0	0	0	7	0	0
Left-Through-Right		1							1				1				1	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	8	1	8	0	8	8		8	1	8	0	8	1	8	0	8	1	8
Left-Through		0							0				0				0	
Through	1745	2	**595**	90	1835	**625**		1745	2	**595**	90	1835	2	**625**	-11	1824	2	**622**
Through-Right		1							1				1				1	
Right	41	0	41	0	41	41		41	0	41	0	41	0	41	0	41	0	41
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	69	1	**69**	0	69	**69**		69	1	**69**	0	69	1	**69**	0	69	1	**69**
Left-Through		0							0				0				0	
Through	1141	2	391	20	1161	398		1141	2	391	20	1161	2	398	-3	1158	2	397
Through-Right		1							1				1				1	
Right	33	0	33	0	33	33		33	0	33	0	33	0	33	0	33	0	33
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*	149		*North-South:*	149		*North-South:*		149		*North-South:*		149		*North-South:*		149
		East-West:	664		*East-West:*	694		*East-West:*		664		*East-West:*		694		*East-West:*		691
		SUM:	813		*SUM:*	843		*SUM:*		813		*SUM:*		843		*SUM:*		840
VOLUME/CAPACITY *(V/C)* RATIO:			0.542			0.562				0.542				0.562				0.560
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.442**			**0.462**				**0.442**				**0.462**				**0.460**
LEVEL OF SERVICE (LOS):			**A**			**A**				**A**				**A**				**A**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.020 — **Δ*v/c* after mitigation:** 0.018

Significant impacted? NO — **Fully mitigated?** N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Western Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
8	East-West Street:	Franklin Ave	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 3	NB--	0	SB-- 3	NB--	0	SB-- 3	NB--	0	SB-- 3	NB--	0	SB-- 3	NB--	0	SB--	3
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	157	1	**157**	0	157	**157**		157	1	**157**	0	157	1	**157**	0	157	1	**157**
Left-Through		0							0				0				0	
Through	767	1	446	3	770	448		767	1	446	3	770	1	448	-1	769	1	447
Through-Right		1							1				1				1	
Right	125	0	125	0	125	125		125	0	125	0	125	0	125	0	125	0	125
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	45	1	45	0	45	45		45	1	45	0	45	1	45	0	45	1	45
Left-Through		0							0				0				0	
Through	784	2	**392**	8	792	**396**		784	2	**392**	8	792	2	**396**	-1	791	2	**396**
Through-Right		0							0				0				0	
Right	581	1	172	0	581	172		581	1	172	0	581	1	172	0	581	1	172
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	409	1	409	0	409	409		409	1	409	0	409	1	409	0	409	1	409
Left-Through		0							0				0				0	
Through	1089	1	**613**	0	1089	**613**		1089	1	**613**	0	1089	1	**613**	0	1089	1	**613**
Through-Right		1							1				1				1	
Right	136	0	136	0	136	136		136	0	136	0	136	0	136	0	136	0	136
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	79	1	**79**	0	79	**79**		79	1	**79**	0	79	1	**79**	0	79	1	**79**
Left-Through		0							0				0				0	
Through	519	1	268	0	519	268		519	1	268	0	519	1	268	0	519	1	268
Through-Right		1							1				1				1	
Right	17	0	17	0	17	17		17	0	17	0	17	0	17	0	17	0	17
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		549	*North-South:*		553	*North-South:*			549	*North-South:*			553	*North-South:*			553
	East-West:		692	*East-West:*		692	*East-West:*			692	*East-West:*			692	*East-West:*			692
	SUM:		1241	*SUM:*		1245	*SUM:*			1241	*SUM:*			1245	*SUM:*			1245
VOLUME/CAPACITY *(V/C)* RATIO:			0.871			0.874				0.871				0.874				0.874
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.771**			**0.774**				**0.771**				**0.774**				**0.774**
LEVEL OF SERVICE (LOS):			**C**			**C**				**C**				**C**				**C**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.003	Δ*v/c* after mitigation:	0.003
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Western Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
9	East-West Street:	Hollywood Blvd	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			4			4			4			4			4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB--	0
	EB--	0	WB-- 3	EB--	0	WB-- 3	EB--	0	WB-- 3	EB--	0	WB-- 3	EB--	0	WB-- 3	EB--	0	WB--	3
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	120	1	**120**	12	132	**132**		120	1	**120**	12	132	1	**132**	-2	130	1	130
Left-Through		0							0				0				0	
Through	846	2	423	3	849	425		846	2	423	3	849	2	425	-1	848	2	**424**
Through-Right		0							0				0				0	
Right	106	1	0	0	106	0		106	1	0	0	106	1	0	0	106	1	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	136	1	136	0	136	136		136	1	136	0	136	1	136	0	136	1	**136**
Left-Through		0							0				0				0	
Through	850	1	**528**	8	858	**532**		850	1	**528**	8	858	1	**532**	-1	857	2	429
Through-Right		1							1				1				0	
Right	205	0	205	0	205	205		205	0	205	0	205	0	205	0	205	1	107
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	196	1	**196**	0	196	**196**		196	1	**196**	0	196	1	**196**	0	196	1	**196**
Left-Through		0							0				0				0	
Through	849	1	474	-2	847	476		849	1	474	-2	847	1	476	0	847	1	476
Through-Right		1							1				1				1	
Right	98	0	98	7	105	105		98	0	98	7	105	0	105	-1	104	0	104
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	113	1	113	0	113	113		113	1	113	0	113	1	113	0	113	1	113
Left-Through		0							0				0				0	
Through	846	2	**423**	-2	844	**422**		846	2	**423**	-2	844	2	**422**	0	844	2	**422**
Through-Right		0							0				0				0	
Right	72	1	0	0	72	0		72	1	0	0	72	1	0	0	72	1	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		648	*North-South:*		664	*North-South:*		648		*North-South:*		664		*North-South:*		560	
	East-West:		619	*East-West:*		618	*East-West:*		619		*East-West:*		618		*East-West:*		618	
	SUM:		1267	*SUM:*		1282	*SUM:*		1267		*SUM:*		1282		*SUM:*		1178	
VOLUME/CAPACITY *(V/C)* RATIO:			0.921			0.932			0.921				0.932				0.857	
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.821**			**0.832**			**0.821**				**0.832**				**0.757**	
LEVEL OF SERVICE (LOS):			**D**			**D**			**D**				**D**				**C**	

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.011	Δ*v/c* after mitigation:	-0.064
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Western Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
10	East-West Street:	Sunset Blvd	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			4			4			4			4			4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	139	1	**139**	20	159	**159**		139	1	**139**	20	159	1	**159**	-3	156	2	86
Left-Through		0							0				0				0	
Through	792	2	396	15	807	404		792	2	396	15	807	2	404	-3	804	2	**402**
Through-Right		0							0				0				0	
Right	154	1	93	0	154	93		154	1	93	0	154	1	93	0	154	1	93
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	124	1	124	0	124	124		124	1	124	0	124	1	124	0	124	1	**124**
Left-Through		0							0				0				0	
Through	628	1	**397**	15	643	**404**		628	1	**397**	15	643	1	**404**	-3	640	1	403
Through-Right		1							1				1				1	
Right	165	0	165	0	165	165		165	0	165	0	165	0	165	0	165	0	165
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	276	1	276	0	276	276		276	1	276	0	276	1	276	0	276	1	276
Left-Through		0							0				0				0	
Through	1632	2	**573**	45	1677	**603**		1632	2	**573**	45	1677	2	**603**	-5	1672	2	**599**
Through-Right		1							1				1				1	
Right	87	0	87	44	131	131		87	0	87	44	131	0	131	-6	125	0	125
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	123	1	**123**	0	123	**123**		123	1	**123**	0	123	1	**123**	0	123	1	**123**
Left-Through		0							0				0				0	
Through	900	2	351	0	900	351		900	2	351	0	900	2	351	0	900	2	351
Through-Right		1							1				1				1	
Right	153	0	153	0	153	153		153	0	153	0	153	0	153	0	153	0	153
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	North-South:		536	North-South:		563	North-South:		536		North-South:			563	North-South:			526
	East-West:		696	East-West:		726	East-West:		696		East-West:			726	East-West:			722
	SUM:		1232	SUM:		1289	SUM:		1232		SUM:			1289	SUM:			1248
VOLUME/CAPACITY (*V/C*) RATIO:			0.896			0.937			0.896					0.937				0.908
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.796**			**0.837**			**0.796**					**0.837**				**0.808**
LEVEL OF SERVICE (LOS):			C			D			C					D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.041	Δ*v/c* after mitigation:	0.012
Significant impacted?	YES	Fully mitigated?	YES

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Western Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
11	East-West Street:	De Longpre Ave	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			0			0			2			2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0 SB--	0	NB--	0 SB--	0	NB--	0 SB--	0	NB--	0 SB--	0	NB--	0 SB--	0	NB--	0 SB--	0	NB--	0 SB--	0
	EB--	0 WB--	0	EB--	0 WB--	0	EB--	0 WB--	0	EB--	0 WB--	0	EB--	0 WB--	0	EB--	0 WB--	0	EB--	0 WB--	0
ATSAC-1 or ATSAC+ATCS-2?			0			2			2			2			2
Override Capacity			1200			1200			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	60	0	60	0	60	60		60	0	60	0	60	1	60	0	60	1	60
	Left-Through		1							1				0				0	
	Through	1033	1	**697**	0	1033	**697**		1033	1	**697**	0	1033	1	**578**	0	1033	1	**575**
	Through-Right		0							0				1				1	
	Right	0	0	0	122	122	122		0	0	0	122	122	0	122	-5	117	0	117
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	**0**	173	173	**0**		0	0	**0**	173	173	1	**173**	-10	163	1	**163**
	Left-Through		0							0				0				0	
	Through	1024	1	521	0	1024	521		1024	1	521	0	1024	2	512	0	1024	2	512
	Through-Right		1							1				0				0	
	Right	17	0	17	0	17	17		17	0	17	0	17	1	11	0	17	1	11
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	12	0	12	0	12	12		12	1	12	0	12	1	12	0	12	1	12
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	70	0	**82**	0	70	**82**		70	1	**70**	0	70	1	**40**	0	70	1	**40**
	Left-Through-Right		0							0				0				0	
	Left-Right		1							0				0				0	
WESTBOUND	Left	0	0	**0**	164	164	**0**		0	0	**0**	164	164	1	**164**	-7	157	1	**157**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0		0	0	0	0	0	0	127	0	0	0	120
	Through-Right		0							0				1				1	
	Right	0	0	0	127	127	0		0	0	0	127	127	0	0	-7	120	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		697	*North-South:*		697	*North-South:*			697	*North-South:*			751	*North-South:*			738
		East-West:		82	*East-West:*		82	*East-West:*			70	*East-West:*			204	*East-West:*			197
		SUM:		779	*SUM:*		779	*SUM:*			767	*SUM:*			955	*SUM:*			935
VOLUME/CAPACITY *(V/C)* RATIO:				0.649			0.649				0.511				0.637				0.623
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.649			**0.549**				**0.411**				**0.537**				**0.523**
LEVEL OF SERVICE (LOS):				**B**			**A**				**A**				**A**				**A**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.126	Δ*v/c* after mitigation:	0.112
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Western Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
12	East-West Street:	Fountain Ave	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	55	1	55	0	55	55		55	1	55	0	55	1	55	0	55	1	55
	Left-Through		0							0				0				0	
	Through	811	1	**453**	18	829	**462**		811	1	**453**	18	829	1	**462**	-4	825	1	**460**
	Through-Right		1							1				1				1	
	Right	95	0	95	0	95	95		95	0	95	0	95	0	95	0	95	0	95
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	61	1	**61**	0	61	**61**		61	1	**61**	0	61	1	**61**	0	61	1	**61**
	Left-Through		0							0				0				0	
	Through	769	1	446	29	798	459		769	1	446	29	798	1	459	-6	792	1	456
	Through-Right		1							1				1				1	
	Right	123	0	123	-3	120	120		123	0	123	-3	120	0	120	0	120	0	120
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	131	1	131	-3	128	128		131	1	131	-3	128	1	128	0	128	1	128
	Left-Through		0							0				0				0	
	Through	586	1	**586**	0	586	**586**		586	1	**586**	0	586	1	**586**	0	586	1	**586**
	Through-Right		0							0				0				0	
	Right	160	1	133	0	160	133		160	1	133	0	160	1	133	0	160	1	133
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	115	1	**115**	0	115	**115**		115	1	**115**	0	115	1	**115**	0	115	1	**115**
	Left-Through		0							0				0				0	
	Through	387	0	449	0	387	449		387	0	449	0	387	0	449	0	387	0	449
	Through-Right		1							1				1				1	
	Right	62	0	0	0	62	0		62	0	0	0	62	0	0	0	62	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		514	North-South:		523	North-South:			514	North-South:			523	North-South:			521
		East-West:		701	East-West:		701	East-West:			701	East-West:			701	East-West:			701
		SUM:		1215	SUM:		1224	SUM:			1215	SUM:			1224	SUM:			1222
VOLUME/CAPACITY (*V/C*) RATIO:				0.810			0.816				0.810				0.816				0.815
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.710**			**0.716**				**0.710**				**0.716**				**0.715**
LEVEL OF SERVICE (LOS):				**C**			**C**				**C**				**C**				**C**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.006	Δ*v/c* after mitigation:	0.005
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Western Ave	Year of Count:	2017	Ambient Growth (%):	1	Conducted by:	GTC	Date:	February 2018
13	East-West Street:	Santa Monica Blvd	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			4			4			4			4			4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB--	0
	EB--	3	WB-- 0	EB--	3	WB-- 0	EB--	3	WB-- 0	EB--	3	WB-- 0	EB--	3	WB-- 0	EB--	3	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	89	1	**89**	0	89	**89**		89	1	**89**	0	89	1	**89**	0	89	1	**89**
Left-Through		0							0				0				0	
Through	1006	2	503	13	1019	510		1006	2	503	13	1019	2	510	-3	1016	2	508
Through-Right		0							0				0				0	
Right	227	1	81	0	227	81		227	1	81	0	227	1	81	0	227	1	81
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	81	1	81	10	91	91		81	1	81	10	91	1	91	-1	90	1	90
Left-Through		0							0				0				0	
Through	1027	1	**552**	3	1030	**553**		1027	1	**552**	3	1030	1	**553**	-2	1028	1	**552**
Through-Right		1							1				1				1	
Right	76	0	76	0	76	76		76	0	76	0	76	0	76	-1	75	0	75
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	88	1	88	5	93	**93**		88	1	88	5	93	1	**93**	-1	92	1	**92**
Left-Through		0							0				0				0	
Through	950	2	**475**	0	950	475		950	2	**475**	0	950	2	475	0	950	2	475
Through-Right		0							0				0				0	
Right	95	1	6	0	95	6		95	1	6	0	95	1	6	0	95	1	6
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	146	1	**146**	0	146	146		146	1	**146**	0	146	1	146	0	146	1	146
Left-Through		0							0				0				0	
Through	993	1	531	0	993	**531**		993	1	531	0	993	1	**531**	0	993	1	**531**
Through-Right		1							1				1				1	
Right	69	0	69	0	69	69		69	0	69	0	69	0	69	0	69	0	69
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		641	*North-South:*		642	*North-South:*			641	*North-South:*			642	*North-South:*			641
	East-West:		621	*East-West:*		624	*East-West:*			621	*East-West:*			624	*East-West:*			623
	SUM:		1262	*SUM:*		1266	*SUM:*			1262	*SUM:*			1266	*SUM:*			1264
VOLUME/CAPACITY *(V/C)* RATIO:			0.918			0.921				0.918				0.921				0.919
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.818**			**0.821**				**0.818**				**0.821**				**0.819**
LEVEL OF SERVICE (LOS):			**D**			**D**				**D**				**D**				**D**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.003	Δ*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Serrano Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
14	East-West Street:	Sunset Blvd	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	70	0	**70**	0	70	**70**		70	0	**70**	0	70	0	**70**	0	70	0	**70**
Left-Through		0							0				0				0	
Through	51	0	187	-5	46	182		51	0	187	-5	46	0	182	0	46	0	181
Through-Right		0							0				0				0	
Right	66	0	0	0	66	0		66	0	0	0	66	0	0	-1	65	0	0
Left-Through-Right		1							1				1				1	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	53	0	53	0	53	53		53	0	53	0	53	0	53	0	53	0	53
Left-Through		0							0				0				0	
Through	56	0	**189**	-5	51	**184**		56	0	**189**	-5	51	0	**184**	0	51	0	**184**
Through-Right		0							0				0				0	
Right	80	0	0	0	80	0		80	0	0	0	80	0	0	0	80	0	0
Left-Through-Right		1							1				1				1	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	126	1	126	0	126	126		126	1	126	0	126	1	126	0	126	1	126
Left-Through		0							0				0				0	
Through	1570	2	**543**	7	1577	**546**		1570	2	**543**	7	1577	2	**546**	-1	1576	2	**545**
Through-Right		1							1				1				1	
Right	60	0	60	0	60	60		60	0	60	0	60	0	60	0	60	0	60
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	76	1	**76**	5	81	**81**		76	1	**76**	5	81	1	**81**	-1	80	1	**80**
Left-Through		0							0				0				0	
Through	1062	2	373	11	1073	377		1062	2	373	11	1073	2	377	-1	1072	2	377
Through-Right		1							1				1				1	
Right	58	0	58	0	58	58		58	0	58	0	58	0	58	0	58	0	58
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		259	*North-South:*		254	*North-South:*		259		*North-South:*		254		*North-South:*		254	
	East-West:		619	*East-West:*		627	*East-West:*		619		*East-West:*		627		*East-West:*		625	
	SUM:		878	*SUM:*		881	*SUM:*		878		*SUM:*		881		*SUM:*		879	
VOLUME/CAPACITY *(V/C)* RATIO:			0.585			0.587			0.585				0.587				0.586	
V/C LESS ATSAC/ATCS ADJUSTMENT:			0.485			0.487			0.485				0.487				0.486	
LEVEL OF SERVICE (LOS):			A			A			A				A				A	

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.002 — **Δ*v/c* after mitigation:** 0.001

Significant impacted? NO — **Fully mitigated?** N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Serrano Ave	Year of Count:	2017	Ambient Growth (%):	1	Conducted by:	GTC	Date:	February 2018
15	East-West Street:	Fountain Ave	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			1			1			1			1			1				1
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	2	SB-- 2	NB--	2	SB-- 2	NB--	2	SB-- 2	NB--	2	SB-- 2	NB--	2	SB-- 2	NB--	2	SB-- 2
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	77	0	77	0	77	77		77	0	77	0	77	0	77	0	77	0	77
	Left-Through		0							0				0				0	
	Through	66	0	**195**	36	102	**231**		66	0	**195**	36	102	0	**231**	-5	97	0	**226**
	Through-Right		0							0				0				0	
	Right	52	0	0	0	52	0		52	0	0	0	52	0	0	0	52	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	83	0	83	-3	80	80		83	0	83	-3	80	0	80	0	80	0	80
	Left-Through		0							0				0				0	
	Through	42	0	**172**	6	48	**175**		42	0	**172**	6	48	0	**175**	-2	46	0	**173**
	Through-Right		0							0				0				0	
	Right	47	0	0	0	47	0		47	0	0	0	47	0	0	0	47	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	11	0	11	0	11	11		11	0	11	0	11	0	11	0	11	0	11
	Left-Through		0							0				0				0	
	Through	682	0	**747**	0	682	**747**		682	0	**747**	0	682	0	**747**	0	682	0	**747**
	Through-Right		0							0				0				0	
	Right	54	0	0	0	54	0		54	0	0	0	54	0	0	0	54	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	31	0	**31**	0	31	**31**		31	0	**31**	0	31	0	**31**	0	31	0	**31**
	Left-Through		0							0				0				0	
	Through	462	0	525	0	462	522		462	0	525	0	462	0	522	0	462	0	522
	Through-Right		0							0				0				0	
	Right	32	0	0	-3	29	0		32	0	0	-3	29	0	0	0	29	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		367	*North-South:*		406	*North-South:*			367	*North-South:*			406	*North-South:*			399
		East-West:		778	*East-West:*		778	*East-West:*			778	*East-West:*			778	*East-West:*			778
		SUM:		1145	*SUM:*		1184	*SUM:*			1145	*SUM:*			1184	*SUM:*			1177
VOLUME/CAPACITY (*V/C*) RATIO:				0.804			0.831				0.804				0.831				0.826
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.704**			**0.731**				**0.704**				**0.731**				**0.726**
LEVEL OF SERVICE (LOS):				**C**			**C**				**C**				**C**				**C**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.027 **Δ*v/c* after mitigation:** 0.022

Significant impacted? NO **Fully mitigated?** N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Normandie Ave	Year of Count:	2017	Ambient Growth (%):	1	Conducted by:	GTC	Date:	February 2018
16	East-West Street:	Hollywood Blvd	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	108	0	108	0	108	108		108	0	108	0	108	0	108	0	108	0	108
Left-Through		0							0				0				0	
Through	159	0	**357**	0	159	**357**		159	0	**357**	0	159	0	**357**	0	159	0	**357**
Through-Right		0							0				0				0	
Right	90	0	0	0	90	0		90	0	0	0	90	0	0	0	90	0	0
Left-Through-Right		1							1				1				1	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	100	0	**100**	0	100	**100**		100	0	**100**	0	100	0	**100**	0	100	0	**100**
Left-Through		0							0				0				0	
Through	163	0	316	0	163	316		163	0	316	0	163	0	316	0	163	0	316
Through-Right		0							0				0				0	
Right	53	0	0	0	53	0		53	0	0	0	53	0	0	0	53	0	0
Left-Through-Right		1							1				1				1	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	48	1	48	0	48	48		48	1	48	0	48	1	48	0	48	1	48
Left-Through		0							0				0				0	
Through	995	1	**548**	-3	992	**547**		995	1	**548**	-3	992	1	**547**	0	992	1	**547**
Through-Right		1							1				1				1	
Right	101	0	101	0	101	101		101	0	101	0	101	0	101	0	101	0	101
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	70	1	**70**	0	70	**70**		70	1	**70**	0	70	1	**70**	0	70	1	**70**
Left-Through		0							0				0				0	
Through	900	1	463	-3	897	462		900	1	463	-3	897	1	462	0	897	1	462
Through-Right		1							1				1				1	
Right	26	0	26	0	26	26		26	0	26	0	26	0	26	0	26	0	26
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		457	*North-South:*		457	*North-South:*			457	*North-South:*			457	*North-South:*			457
	East-West:		618	*East-West:*		617	*East-West:*			618	*East-West:*			617	*East-West:*			617
	SUM:		1075	*SUM:*		1074	*SUM:*			1075	*SUM:*			1074	*SUM:*			1074
VOLUME/CAPACITY *(V/C)* RATIO:			0.717			0.716				0.717				0.716				0.716
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.617**			**0.616**				**0.617**				**0.616**				**0.616**
LEVEL OF SERVICE (LOS):			**B**			**B**				**B**				**B**				**B**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.001	*Δv/c* after mitigation:	-0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Normandie Ave	Year of Count:	2017	Ambient Growth (%):	1	Conducted by:	GTC	Date:	February 2018
17	East-West Street:	Sunset Blvd	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

	EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
No. of Phases			2			2			2				2				2	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0				0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0	NB-- 0	SB-- 0	0		NB-- 0	SB-- 0	0		NB-- 0	SB-- 0	0	
	EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0	EB-- 0	WB-- 0	0		EB-- 0	WB-- 0	0		EB-- 0	WB-- 0	0	
ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2				2	
Override Capacity			0			0			0				0				0	

MOVEMENT		EXISTING CONDITION			EXISTING PLUS PROJECT			EXISTING CONDITION				EXISTING PLUS PROJECT				EXISTING W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	120	0	120	0	120	120		120	0	120	0	120	0	120	0	120	0	120
	Left-Through		0							0				0				0	
	Through	250	0	**440**	0	250	**440**		250	0	**440**	0	250	0	**440**	0	250	0	**440**
	Through-Right		0							0				0				0	
	Right	70	0	0	0	70	0		70	0	0	0	70	0	0	0	70	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	46	0	**46**	0	46	**46**		46	0	**46**	0	46	0	**46**	0	46	0	**46**
	Left-Through		0							0				0				0	
	Through	250	0	364	0	250	364		250	0	364	0	250	0	364	0	250	0	364
	Through-Right		0							0				0				0	
	Right	68	0	0	0	68	0		68	0	0	0	68	0	0	0	68	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	71	1	71	0	71	71		71	1	71	0	71	1	71	0	71	1	71
	Left-Through		0							0				0				0	
	Through	1348	2	**494**	6	1354	**496**		1348	2	**494**	6	1354	2	**496**	-2	1352	2	**495**
	Through-Right		1							1				1				1	
	Right	134	0	134	0	134	134		134	0	134	0	134	0	134	0	134	0	134
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	60	1	**60**	0	60	**60**		60	1	**60**	0	60	1	**60**	0	60	1	**60**
	Left-Through		0							0				0				0	
	Through	1013	2	356	16	1029	361		1013	2	356	16	1029	2	361	-3	1026	2	360
	Through-Right		1							1				1				1	
	Right	54	0	54	0	54	54		54	0	54	0	54	0	54	0	54	0	54
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		486	North-South:		486	North-South:			486	North-South:			486	North-South:			486
		East-West:		554	East-West:		556	East-West:			554	East-West:			556	East-West:			555
		SUM:		1040	SUM:		1042	SUM:			1040	SUM:			1042	SUM:			1041
VOLUME/CAPACITY (V/C) RATIO:				0.693			0.695				0.693				0.695				0.694
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.593			0.595				0.593				0.595				0.594
LEVEL OF SERVICE (LOS):				A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.002 — Δ*v/c* after mitigation: 0.001

Significant impacted? NO — Fully mitigated? N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Normandie Ave	Year of Count:	2017	Ambient Growth (%):	1	Conducted by:	GTC	Date:	February 2018
18	East-West Street:	Santa Monica Blvd	Projection Year:	2017	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

	EXISTING CONDITION		EXISTING PLUS PROJECT		EXISTING CONDITION		EXISTING PLUS PROJECT		EXISTING W/ PROJECT W/ MITIGATION	
No. of Phases	2		2		2		2		2	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?	0		0		0		0		0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB-- 0		NB-- 0 SB-- 0		NB-- 0 SB-- 0		NB-- 0 SB-- 0		NB-- 0 SB-- 0	
	EB-- 0 WB-- 0		EB-- 0 WB-- 0		EB-- 0 WB-- 0		EB-- 0 WB-- 0		EB-- 0 WB-- 0	
ATSAC-1 or ATSAC+ATCS-2?	2		2		2		2		2	
Override Capacity	0		0		0		0		0	

	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	89	0	**89**	0	89	**89**		89	0	**89**	0	89	0	**89**	0	89	0	**89**
	Left-Through		1							1				1				1	
	Through	360	0	331	0	360	331		360	0	331	0	360	0	331	0	360	0	331
	Through-Right		1							1				1				1	
	Right	123	0	331	0	123	331		123	0	331	0	123	0	331	0	123	0	331
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	72	0	72	0	72	72		72	0	72	0	72	0	72	0	72	0	72
	Left-Through		0							0				0				0	
	Through	424	0	**552**	0	424	**552**		424	0	**552**	0	424	0	**552**	0	424	0	**552**
	Through-Right		0							0				0				0	
	Right	56	0	0	0	56	0		56	0	0	0	56	0	0	0	56	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	55	1	55	0	55	55		55	1	55	0	55	1	55	0	55	1	55
	Left-Through		0							0				0				0	
	Through	1092	1	**599**	3	1095	**600**		1092	1	**599**	3	1095	1	**600**	-1	1094	1	**600**
	Through-Right		1							1				1				1	
	Right	105	0	105	0	105	105		105	0	105	0	105	0	105	0	105	0	105
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	95	1	**95**	0	95	**95**		95	1	**95**	0	95	1	**95**	0	95	1	**95**
	Left-Through		0							0				0				0	
	Through	792	1	429	8	800	433		792	1	429	8	800	1	433	-1	799	1	433
	Through-Right		1							1				1				1	
	Right	66	0	66	0	66	66		66	0	66	0	66	0	66	0	66	0	66
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES		*North-South:*	641		*North-South:*	641			*North-South:*	641			*North-South:*	641			*North-South:*	641
			East-West:	694		*East-West:*	695			*East-West:*	694			*East-West:*	695			*East-West:*	695
			SUM:	1335		*SUM:*	1336			*SUM:*	1335			*SUM:*	1336			*SUM:*	1336
	VOLUME/CAPACITY (*V/C*) RATIO:			0.890			0.891				0.890				0.891				0.891
	V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.790**			**0.791**				**0.790**				**0.791**				**0.791**
	LEVEL OF SERVICE (LOS):			**C**			**C**				**C**				**C**				**C**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.001	Δ*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Bronson Ave	Year of Count:	2017	Ambient Growth (%):	1	Conducted by:	GTC	Date:	February 2018
1	East-West Street:	Sunset Blvd	Projection Year:	2024	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2				2				2		
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0				0		
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2				2		
Override Capacity			0			0			0				0				0		

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	64	1	**64**	0	64	**64**	0	69	1	**69**	0	69	1	**69**	0	69	1	**69**
	Left-Through		0							0				0				0	
	Through	141	0	275	0	141	275	26	177	1	177	0	177	1	177	0	177	1	177
	Through-Right		1							0				0				0	
	Right	134	0	0	0	134	0	0	144	1	100	0	144	1	100	0	144	1	100
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	67	1	67	0	67	67	16	88	1	88	0	88	1	88	0	88	1	88
	Left-Through		0							0				0				0	
	Through	313	0	**493**	0	313	**493**	28	364	0	**567**	0	364	0	**567**	0	364	0	**567**
	Through-Right		1							1				1				1	
	Right	180	0	0	0	180	0	10	203	0	0	0	203	0	0	0	203	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	45	1	**45**	0	45	**45**	44	92	1	**92**	0	92	1	**92**	0	92	1	**92**
	Left-Through		0							0				0				0	
	Through	876	2	297	1	877	297	334	1273	2	430	1	1274	2	430	-1	1273	2	430
	Through-Right		1							1				1				1	
	Right	15	0	15	0	15	15	0	16	0	16	0	16	0	16	0	16	0	16
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	83	1	83	0	83	83	0	89	1	89	0	89	1	89	0	89	1	89
	Left-Through		0							0				0				0	
	Through	1583	2	**551**	20	1603	**558**	357	2054	2	**729**	20	2074	2	**735**	-3	2071	2	**734**
	Through-Right		1							1				1				1	
	Right	70	0	70	0	70	70	57	132	0	132	0	132	0	132	0	132	0	132
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		557	North-South:		557	North-South:			636	North-South:			636	North-South:			636
		East-West:		596	East-West:		603	East-West:			821	East-West:			827	East-West:			826
		SUM:		1153	SUM:		1160	SUM:			1457	SUM:			1463	SUM:			1462
VOLUME/CAPACITY (V/C) RATIO:				0.769			0.773				0.971				0.975				0.975
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.669**			**0.673**				**0.871**				**0.875**				**0.875**
LEVEL OF SERVICE (LOS):				**B**			**B**				**D**				**D**				**D**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.004 **Δ*v/c* after mitigation:** 0.004

Significant impacted? NO **Fully mitigated?** N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Van Ness Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
2	East-West Street:	Sunset Blvd	Projection Year:	2024	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	47	1	47	0	47	47	12	62	1	62	0	62	1	62	0	62	1	62
Left-Through		0							0				0				0	
Through	22	0	**217**	0	22	**217**	0	24	0	**240**	0	24	0	**240**	0	24	0	**240**
Through-Right		1							1				1				1	
Right	195	0	0	0	195	0	7	216	0	0	0	216	0	0	0	216	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	458	1	**458**	10	468	**468**	6	497	1	**497**	10	507	1	**507**	-2	505	2	**278**
Left-Through		0							0				0				0	
Through	325	0	351	0	325	351	20	368	0	396	0	368	0	396	0	368	0	396
Through-Right		1							1				1				1	
Right	26	0	0	0	26	0	0	28	0	0	0	28	0	0	0	28	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	4	1	**4**	0	4	**4**	0	4	1	**4**	0	4	1	**4**	0	4	1	**4**
Left-Through		0							0				0				0	
Through	998	2	352	1	999	352	325	1395	2	494	1	1396	2	494	-1	1395	2	494
Through-Right		1							1				1				1	
Right	58	0	58	0	58	58	25	87	0	87	0	87	0	87	0	87	0	87
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	95	1	95	0	95	95	48	150	1	150	0	150	1	150	0	150	1	150
Left-Through		0							0				0				0	
Through	1893	2	**639**	20	1913	**646**	400	2430	2	**819**	20	2450	2	**826**	-3	2447	2	**825**
Through-Right		1							1				1				1	
Right	25	0	25	0	25	25	0	27	0	27	0	27	0	27	0	27	0	27
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		675	*North-South:*		685	*North-South:*			737	*North-South:*			747	*North-South:*			518
	East-West:		643	*East-West:*		650	*East-West:*			823	*East-West:*			830	*East-West:*			829
	SUM:		1318	*SUM:*		1335	*SUM:*			1560	*SUM:*			1577	*SUM:*			1347
VOLUME/CAPACITY *(V/C)* RATIO:			0.879			0.890				1.040				1.051				0.898
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.779**			**0.790**				**0.940**				**0.951**				**0.798**
LEVEL OF SERVICE (LOS):			C			C				E				E				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.011	Δ*v/c* after mitigation:	-0.142
Significant impacted?	YES	Fully mitigated?	YES

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Wilton Pl	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
3	East-West Street:	Hollywood Blvd	Projection Year:	2024	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			1			1			1			1			1				1
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	347	0	347	0	347	347	4	376	0	376	0	376	0	376	0	376	0	376
Left-Through		1							1				1				1	
Through	62	0	**409**	0	62	**409**	1	67	0	**443**	0	67	0	**443**	0	67	0	**443**
Through-Right		0							0				0				0	
Right	45	1	5	0	45	5	1	49	1	6	0	49	1	6	0	49	1	6
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	15	0	15	0	15	15	0	16	0	16	0	16	0	16	0	16	0	16
Left-Through		0							0				0				0	
Through	188	0	**246**	0	188	**246**	2	204	0	**269**	0	204	0	**269**	0	204	0	**269**
Through-Right		0							0				0				0	
Right	43	0	0	0	43	0	3	49	0	0	0	49	0	0	0	49	0	0
Left-Through-Right		1							1				1				1	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	25	1	**25**	0	25	**25**	4	31	1	**31**	0	31	1	**31**	0	31	1	**31**
Left-Through		0							0				0				0	
Through	786	2	393	-2	784	392	130	973	2	487	-2	971	2	486	0	971	2	486
Through-Right		0							0				0				0	
Right	156	1	0	0	156	0	6	173	1	0	0	173	1	0	0	173	1	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	81	1	81	0	81	81	0	87	1	87	0	87	1	87	0	87	1	87
Left-Through		0							0				0				0	
Through	1164	1	**591**	30	1194	**606**	150	1398	1	**708**	30	1428	1	**723**	-4	1424	1	**721**
Through-Right		1							1				1				1	
Right	17	0	17	0	17	17	0	18	0	18	0	18	0	18	0	18	0	18
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		655	*North-South:*		655	*North-South:*			712	*North-South:*			712	*North-South:*			712
	East-West:		616	*East-West:*		631	*East-West:*			739	*East-West:*			754	*East-West:*			752
	SUM:		1271	*SUM:*		1286	*SUM:*			1451	*SUM:*			1466	*SUM:*			1464
VOLUME/CAPACITY *(V/C)* RATIO:			0.892			0.902				1.018				1.029				1.027
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.792**			**0.802**				**0.918**				**0.929**				**0.927**
LEVEL OF SERVICE (LOS):			**C**			**D**				**E**				**E**				**E**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.011	Δ*v/c* after mitigation:	0.009
Significant impacted?	YES	Fully mitigated?	YES

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Wilton Pl	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
4	East-West Street:	Sunset Blvd	Projection Year:	2024	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	48	1	**48**	0	48	**48**	7	58	1	**58**	0	58	1	**58**	0	58	1	**58**
Left-Through		0							0				0				0	
Through	196	1	168	0	196	168	1	211	1	181	0	211	1	181	0	211	1	181
Through-Right		1							1				1				1	
Right	139	0	139	0	139	139	1	150	0	150	0	150	0	150	0	150	0	150
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	172	1	172	6	178	178	12	196	1	196	6	202	1	202	-1	201	1	201
Left-Through		0							0				0				0	
Through	530	1	**337**	0	530	**337**	2	570	1	**364**	0	570	1	**364**	0	570	1	**364**
Through-Right		1							1				1				1	
Right	144	0	144	0	144	144	4	158	0	158	0	158	0	158	0	158	0	158
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	63	1	**63**	0	63	**63**	1	69	1	**69**	0	69	1	**69**	0	69	1	**69**
Left-Through		0							0				0				0	
Through	1120	2	438	11	1131	441	128	1329	2	512	11	1340	2	516	-2	1338	2	515
Through-Right		1							1				1				1	
Right	193	0	193	0	193	193	1	208	0	208	0	208	0	208	0	208	0	208
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	95	1	95	0	95	95	0	102	1	102	0	102	1	102	0	102	1	102
Left-Through		0							0				0				0	
Through	944	2	**472**	46	990	**495**	170	1182	2	**591**	46	1228	2	**614**	-5	1223	2	**612**
Through-Right		0							0				0				0	
Right	120	1	34	0	120	31	3	132	1	34	0	132	1	31	0	132	1	32
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		385	*North-South:*		385	*North-South:*			422	*North-South:*			422	*North-South:*			422
	East-West:		535	*East-West:*		558	*East-West:*			660	*East-West:*			683	*East-West:*			681
	SUM:		920	*SUM:*		943	*SUM:*			1082	*SUM:*			1105	*SUM:*			1103
VOLUME/CAPACITY *(V/C)* RATIO:			0.613			0.629				0.721				0.737				0.735
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.513**			**0.529**				**0.621**				**0.637**				**0.635**
LEVEL OF SERVICE (LOS):			**A**			**A**				**B**				**B**				**B**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.016	Δ*v/c* after mitigation:	0.014
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Wilton Pl	Year of Count:	2017	Ambient Growth (%):	1	Conducted by:	GTC	Date:	February 2018
5	East-West Street:	Fountain Ave	Projection Year:	2024	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	23	0	**23**	0	23	**23**	0	25	0	25	0	25	0	25	0	25	0	25
	Left-Through		1							1				1				1	
	Through	348	0	368	0	348	368	8	381	0	**400**	0	381	0	**400**	0	381	0	**400**
	Through-Right		1							1				1				1	
	Right	295	0	368	0	295	368	2	318	0	400	0	318	0	400	0	318	0	400
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	24	0	24	0	24	24	0	26	0	**26**	0	26	0	**26**	0	26	0	**26**
	Left-Through		1							1				1				1	
	Through	646	1	**371**	0	646	**371**	3	696	1	400	0	696	1	400	0	696	1	400
	Through-Right		0							0				0				0	
	Right	56	1	56	0	56	56	0	60	1	60	0	60	1	60	0	60	1	60
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	19	0	**19**	0	19	**19**	0	20	0	**20**	0	20	0	**20**	0	20	0	**20**
	Left-Through		0							0				0				0	
	Through	198	0	235	-3	195	232	5	217	0	256	-3	214	0	253	0	214	0	253
	Through-Right		0							0				0				0	
	Right	18	0	0	0	18	0	0	19	0	0	0	19	0	0	0	19	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	241	0	241	0	241	241	2	260	0	260	0	260	0	260	0	260	0	260
	Left-Through		0							0				0				0	
	Through	300	0	**566**	-2	298	**564**	13	335	0	**622**	-2	333	0	**620**	0	333	0	**620**
	Through-Right		0							0				0				0	
	Right	25	0	0	0	25	0	0	27	0	0	0	27	0	0	0	27	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		394	*North-South:*		394	*North-South:*			426	*North-South:*			426	*North-South:*			426
		East-West:		585	*East-West:*		583	*East-West:*			642	*East-West:*			640	*East-West:*			640
		SUM:		979	*SUM:*		977	*SUM:*			1068	*SUM:*			1066	*SUM:*			1066
VOLUME/CAPACITY *(V/C)* RATIO:				0.653			0.651				0.712				0.711				0.711
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.553**			**0.551**				**0.612**				**0.611**				**0.611**
LEVEL OF SERVICE (LOS):				**A**			**A**				**B**				**B**				**B**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: -0.001 **Δ*v/c* after mitigation:** -0.001

Significant impacted? NO **Fully mitigated?** N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Wilton Pl	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
6	East-West Street:	Santa Monica Blvd	Projection Year:	2024	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
Left-Through		0							0				0				0	
Through	785	1	423	0	785	423	9	851	1	461	0	851	1	461	0	851	1	461
Through-Right		1							1				1				1	
Right	60	0	60	0	60	60	7	71	0	71	0	71	0	71	0	71	0	71
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left-Through		0							0				0				0	
Through	823	1	**449**	0	823	**449**	4	886	1	**484**	0	886	1	**484**	0	886	1	**484**
Through-Right		1							1				1				1	
Right	75	0	75	0	75	75	1	81	0	81	0	81	0	81	0	81	0	81
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	37	1	**37**	0	37	**37**	2	42	1	**42**	0	42	1	**42**	0	42	1	**42**
Left-Through		0							0				0				0	
Through	803	1	435	-2	801	434	235	1096	1	584	-2	1094	1	583	0	1094	1	583
Through-Right		1							1				1				1	
Right	67	0	67	0	67	67	0	72	0	72	0	72	0	72	0	72	0	72
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	66	1	66	0	66	66	10	81	1	81	0	81	1	81	0	81	1	81
Left-Through		0							0				0				0	
Through	1012	1	**512**	8	1020	**516**	274	1359	1	**686**	8	1367	1	**690**	-1	1366	1	**690**
Through-Right		1							1				1				1	
Right	12	0	12	0	12	12	0	13	0	13	0	13	0	13	0	13	0	13
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		449	*North-South:*		449	*North-South:*			484	*North-South:*			484	*North-South:*			484
	East-West:		549	*East-West:*		553	*East-West:*			728	*East-West:*			732	*East-West:*			732
	SUM:		998	*SUM:*		1002	*SUM:*			1212	*SUM:*			1216	*SUM:*			1216
VOLUME/CAPACITY *(V/C)* RATIO:			0.665			0.668				0.808				0.811				0.811
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.565**			**0.568**				**0.708**				**0.711**				**0.711**
LEVEL OF SERVICE (LOS):			**A**			**A**				**C**				**C**				**C**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.003	Δ*v/c* after mitigation:	0.003
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	St Andrews Pl	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
7	East-West Street:	Sunset Blvd	Projection Year:	2024	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	209	0	**209**	0	209	**209**	3	227	0	**227**	0	227	0	**227**	0	227	0	**227**
	Left-Through		1							1				1				1	
	Through	8	0	217	0	8	217	0	9	0	236	0	9	0	236	0	9	0	236
	Through-Right		0							0				0				0	
	Right	99	1	45	0	99	45	4	110	1	53	0	110	1	53	0	110	1	53
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	17	0	17	0	17	17	0	18	0	18	0	18	0	18	0	18	0	18
	Left-Through		0							0				0				0	
	Through	31	0	**58**	0	31	**58**	0	33	0	**62**	0	33	0	**62**	0	33	0	**62**
	Through-Right		0							0				0				0	
	Right	10	0	0	0	10	0	0	11	0	0	0	11	0	0	0	11	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	14	1	14	0	14	14	0	15	1	15	0	15	1	15	0	15	1	15
	Left-Through		0							0				0				0	
	Through	1244	2	**449**	18	1262	**455**	148	1482	2	**528**	18	1500	2	**534**	-3	1497	2	**533**
	Through-Right		1							1				1				1	
	Right	103	0	103	0	103	103	-8	102	0	102	0	102	0	102	0	102	0	102
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	108	1	**108**	0	108	**108**	-1	115	1	**115**	0	115	1	**115**	0	115	1	**115**
	Left-Through		0							0				0				0	
	Through	934	2	467	46	980	490	170	1171	2	586	46	1217	2	609	-5	1212	2	606
	Through-Right		0							0				0				0	
	Right	18	1	18	0	18	18	0	19	1	19	0	19	1	19	0	19	1	19
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		267	*North-South:*		267	*North-South:*			289	*North-South:*			289	*North-South:*			289
		East-West:		557	*East-West:*		563	*East-West:*			643	*East-West:*			649	*East-West:*			648
		SUM:		824	*SUM:*		830	*SUM:*			932	*SUM:*			938	*SUM:*			937
VOLUME/CAPACITY *(V/C)* RATIO:				0.549			0.553				0.621				0.625				0.625
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.449**			**0.453**				**0.521**				**0.525**				**0.525**
LEVEL OF SERVICE (LOS):				**A**			**A**				**A**				**A**				**A**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.004 **Δ*v/c* after mitigation:** 0.004

Significant impacted? NO **Fully mitigated?** N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Western Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
8	East-West Street:	Franklin Ave	Projection Year:	2024	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 3	NB--	0	SB-- 3	NB--	0	SB-- 3	NB--	0	SB-- 3	NB--	0	SB-- 3	NB--	0	SB--	3
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	91	1	**91**	0	91	**91**	0	98	1	**98**	0	98	1	**98**	0	98	1	**98**
Left-Through		0							0				0				0	
Through	383	1	224	10	393	229	9	420	1	249	10	430	1	254	-1	429	1	254
Through-Right		1							1				1				1	
Right	64	0	64	0	64	64	9	78	0	78	0	78	0	78	0	78	0	78
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	14	1	14	0	14	14	0	15	1	15	0	15	1	15	0	15	1	15
Left-Through		0							0				0				0	
Through	1034	2	517	0	1034	517	14	1123	2	562	0	1123	2	562	0	1123	2	562
Through-Right		0							0				0				0	
Right	908	1	**576**	0	908	**576**	0	973	1	**617**	0	973	1	**617**	0	973	1	**617**
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	332	1	**332**	0	332	**332**	0	356	1	**356**	0	356	1	**356**	0	356	1	**356**
Left-Through		0							0				0				0	
Through	622	1	366	0	622	366	30	697	1	408	0	697	1	408	0	697	1	408
Through-Right		1							1				1				1	
Right	110	0	110	0	110	110	0	118	0	118	0	118	0	118	0	118	0	118
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	101	1	101	0	101	101	5	113	1	113	0	113	1	113	0	113	1	113
Left-Through		0							0				0				0	
Through	766	1	**390**	0	766	**390**	23	844	1	**430**	0	844	1	**430**	0	844	1	**430**
Through-Right		1							1				1				1	
Right	14	0	14	0	14	14	0	15	0	15	0	15	0	15	0	15	0	15
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		667	*North-South:*		667	*North-South:*			715	*North-South:*			715	*North-South:*			715
	East-West:		722	*East-West:*		722	*East-West:*			786	*East-West:*			786	*East-West:*			786
	SUM:		1389	*SUM:*		1389	*SUM:*			1501	*SUM:*			1501	*SUM:*			1501
VOLUME/CAPACITY *(V/C)* RATIO:			0.975			0.975				1.053				1.053				1.053
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.875**			**0.875**				**0.953**				**0.953**				**0.953**
LEVEL OF SERVICE (LOS):			D			D				E				E				E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.000	Δ*v/c* after mitigation:	0.000
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Western Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
9	East-West Street:	Hollywood Blvd	Projection Year:	2024	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			4			4			4			4			4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB--	0
	EB--	0	WB-- 3	EB--	0	WB-- 3	EB--	0	WB-- 3	EB--	0	WB-- 3	EB--	0	WB-- 3	EB--	0	WB--	3
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	145	1	**145**	32	177	**177**	1	156	1	**156**	32	188	1	**188**	-4	184	1	**184**
Left-Through		0							0				0				0	
Through	531	2	266	10	541	271	14	583	2	292	10	593	2	297	-1	592	2	296
Through-Right		0							0				0				0	
Right	113	1	0	0	113	0	1	122	1	0	0	122	1	0	0	122	1	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	63	1	63	0	63	63	0	68	1	68	0	68	1	68	0	68	1	68
Left-Through		0							0				0				0	
Through	972	1	**610**	0	972	**610**	18	1060	1	**664**	0	1060	1	**664**	0	1060	2	**530**
Through-Right		1							1				1				0	
Right	248	0	248	0	248	248	1	267	0	267	0	267	0	267	0	267	1	196
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	130	1	130	0	130	130	3	142	1	142	0	142	1	142	0	142	1	142
Left-Through		0							0				0				0	
Through	810	1	**448**	-2	808	**447**	114	982	1	**540**	-2	980	1	**538**	0	980	1	**538**
Through-Right		1							1				1				1	
Right	86	0	86	-1	85	85	5	97	0	97	-1	96	0	96	0	96	0	96
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	173	1	**173**	0	173	**173**	-1	184	1	**184**	0	184	1	**184**	0	184	1	**184**
Left-Through		0							0				0				0	
Through	784	2	392	-1	783	392	121	962	2	481	-1	961	2	481	0	961	2	481
Through-Right		0							0				0				0	
Right	27	1	0	0	27	0	0	29	1	0	0	29	1	0	0	29	1	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		755	*North-South:*		787	*North-South:*			820	*North-South:*			852	*North-South:*			714
	East-West:		621	*East-West:*		620	*East-West:*			724	*East-West:*			722	*East-West:*			722
	SUM:		1376	*SUM:*		1407	*SUM:*			1544	*SUM:*			1574	*SUM:*			1436
VOLUME/CAPACITY *(V/C)* RATIO:			1.001			1.023				1.123				1.145				1.044
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.901**			**0.923**				**1.023**				**1.045**				**0.944**
LEVEL OF SERVICE (LOS):			**E**			**E**				**F**				**F**				**E**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.022	Δ*v/c* after mitigation:	-0.079
Significant impacted?	YES	Fully mitigated?	YES

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Western Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
10	East-West Street:	Sunset Blvd	Projection Year:	2024	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			4			4			4			4			4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	119	1	**119**	46	165	**165**	23	151	1	**151**	46	197	1	**197**	-5	192	2	**106**
Left-Through		0							0				0				0	
Through	490	2	245	42	532	266	8	533	2	267	42	575	2	288	-5	570	2	285
Through-Right		0							0				0				0	
Right	100	1	39	0	100	39	4	111	1	44	0	111	1	44	0	111	1	44
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	112	1	112	0	112	112	0	120	1	120	0	120	1	120	0	120	1	120
Left-Through		0							0				0				0	
Through	840	1	**532**	0	840	**532**	6	907	1	**582**	0	907	1	**582**	-1	906	1	**582**
Through-Right		1							1				1				1	
Right	224	0	224	0	224	224	17	257	0	257	0	257	0	257	0	257	0	257
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	172	1	172	0	172	172	8	192	1	192	0	192	1	192	0	192	1	192
Left-Through		0							0				0				0	
Through	935	2	**337**	13	948	**343**	129	1131	2	**413**	13	1144	2	**419**	-1	1143	2	**418**
Through-Right		1							1				1				1	
Right	76	0	76	5	81	81	26	107	0	107	5	112	0	112	-2	110	0	110
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	123	1	**123**	0	123	**123**	2	134	1	**134**	0	134	1	**134**	0	134	1	**134**
Left-Through		0							0				0				0	
Through	705	2	260	0	705	260	127	883	2	321	0	883	2	321	0	883	2	321
Through-Right		1							1				1				1	
Right	76	0	76	0	76	76	0	81	0	81	0	81	0	81	0	81	0	81
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		651	*North-South:*		697	*North-South:*			733	*North-South:*			779	*North-South:*			688
	East-West:		460	*East-West:*		466	*East-West:*			547	*East-West:*			553	*East-West:*			552
	SUM:		1111	*SUM:*		1163	*SUM:*			1280	*SUM:*			1332	*SUM:*			1240
VOLUME/CAPACITY *(V/C)* RATIO:			0.808			0.846				0.931				0.969				0.902
V/C LESS ATSAC/ATCS ADJUSTMENT:			0.708			0.746				0.831				0.869				0.802
LEVEL OF SERVICE (LOS):			C			C				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.038	Δ*v/c* after mitigation:	-0.029
Significant impacted?	YES	Fully mitigated?	YES

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Western Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
11	East-West Street:	De Longpre Ave	Projection Year:	2024	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			0			0			2			2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?			0			0			2			2			2
Override Capacity			1200			1200			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	67	0	**67**	0	67	**67**	-4	68	1	**68**	0	68	1	**68**	0	68	1	**68**
	Left-Through		1							0				0				0	
	Through	704	1	553	0	704	553	34	789	1	395	0	789	1	418	0	789	1	417
	Through-Right		0							1				1				1	
	Right	0	0	0	46	46	46	0	0	0	0	46	46	0	46	-2	44	0	44
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	61	61	0	0	0	1	0	61	61	1	61	-3	58	1	58
	Left-Through		0							0				0				0	
	Through	1118	1	**572**	0	1118	**572**	35	1234	2	**617**	0	1234	2	**617**	0	1234	2	**617**
	Through-Right		1							0				0				0	
	Right	25	0	25	0	25	25	-2	25	1	21	0	25	1	21	0	25	1	21
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	6	0	6	0	6	6	2	8	1	8	0	8	1	8	0	8	1	8
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	78	0	**84**	0	78	**84**	7	91	1	**57**	0	91	1	**57**	0	91	1	**57**
	Left-Through-Right		0							0				0				0	
	Left-Right		1							0				0				0	
WESTBOUND	Left	0	0	**0**	131	131	**0**	0	0	0	**0**	131	131	1	**131**	-10	121	1	**121**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	121	0	0	0	111
	Through-Right		0							0				1				1	
	Right	0	0	0	121	121	0	0	0	0	0	121	121	0	0	-10	111	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		639	*North-South:*		639	*North-South:*			685	*North-South:*			685	*North-South:*			685
		East-West:		84	*East-West:*		84	*East-West:*			57	*East-West:*			188	*East-West:*			178
		SUM:		723	*SUM:*		723	*SUM:*			742	*SUM:*			873	*SUM:*			863
VOLUME/CAPACITY *(V/C)* RATIO:				0.603			0.603				0.495				0.582				0.575
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.603			0.603				**0.395**				**0.482**				**0.475**
LEVEL OF SERVICE (LOS):				**B**			**B**				**A**				**A**				**A**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.087	Δ*v/c* after mitigation:	0.080
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Western Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
12	East-West Street:	Fountain Ave	Projection Year:	2024	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	55	1	**55**	0	55	**55**	0	59	1	**59**	0	59	1	**59**	0	59	1	**59**
Left-Through		0							0				0				0	
Through	673	1	376	-4	669	374	31	753	1	419	-4	749	1	417	-1	748	1	417
Through-Right		1							1				1				1	
Right	78	0	78	0	78	78	1	85	0	85	0	85	0	85	0	85	0	85
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	60	1	60	0	60	60	4	68	1	68	0	68	1	68	0	68	1	68
Left-Through		0							0				0				0	
Through	878	1	**533**	84	962	**574**	88	1029	1	**615**	84	1113	1	**656**	-10	1103	1	**651**
Through-Right		1							1				1				1	
Right	187	0	187	-2	185	185	0	200	0	200	-2	198	0	198	0	198	0	198
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	59	1	**59**	-3	56	**56**	0	63	1	**63**	-3	60	1	**60**	0	60	1	**60**
Left-Through		0							0				0				0	
Through	262	1	262	0	262	262	2	283	1	283	0	283	1	283	0	283	1	283
Through-Right		0							0				0				0	
Right	312	1	285	0	312	285	3	338	1	309	0	338	1	309	0	338	1	309
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	171	1	171	0	171	171	1	184	1	184	0	184	1	184	0	184	1	184
Left-Through		0							0				0				0	
Through	423	0	**453**	0	423	**453**	13	467	0	**500**	0	467	0	**500**	0	467	0	**500**
Through-Right		1							1				1				1	
Right	30	0	0	0	30	0	1	33	0	0	0	33	0	0	0	33	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		588	*North-South:*		629	*North-South:*			674	*North-South:*			715	*North-South:*			710
	East-West:		512	*East-West:*		509	*East-West:*			563	*East-West:*			560	*East-West:*			560
	SUM:		1100	*SUM:*		1138	*SUM:*			1237	*SUM:*			1275	*SUM:*			1270
VOLUME/CAPACITY *(V/C)* RATIO:			0.733			0.759				0.825				0.850				0.847
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.633**			**0.659**				**0.725**				**0.750**				**0.747**
LEVEL OF SERVICE (LOS):			**B**			**B**				**C**				**C**				**C**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.025	Δ*v/c* after mitigation:	0.022
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Western Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
13	East-West Street:	Santa Monica Blvd	Projection Year:	2024	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			4			4			4			4			4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB--	0
	EB--	3	WB-- 0	EB--	3	WB-- 0	EB--	3	WB-- 0	EB--	3	WB-- 0	EB--	3	WB-- 0	EB--	3	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	105	1	**105**	0	105	**105**	6	119	1	**119**	0	119	1	**119**	0	119	1	**119**
Left-Through		0							0				0				0	
Through	933	2	467	-2	931	466	32	1032	2	516	-2	1030	2	515	-1	1029	2	515
Through-Right		0							0				0				0	
Right	199	1	60	0	199	60	1	214	1	64	0	214	1	64	0	214	1	64
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	65	1	65	23	88	88	24	94	1	94	23	117	1	117	-3	114	1	114
Left-Through		0							0				0				0	
Through	1002	1	**548**	18	1020	**561**	30	1104	1	**610**	18	1122	1	**623**	-3	1119	1	**621**
Through-Right		1							1				1				1	
Right	94	0	94	8	102	102	15	116	0	116	8	124	0	124	-1	123	0	123
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	65	1	**65**	-2	63	**63**	36	106	1	**106**	-2	104	1	**104**	0	104	1	**104**
Left-Through		0							0				0				0	
Through	794	2	397	0	794	397	274	1125	2	563	0	1125	2	563	0	1125	2	563
Through-Right		0							0				0				0	
Right	94	1	0	0	94	0	1	102	1	0	0	102	1	0	0	102	1	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	139	1	139	0	139	139	1	150	1	150	0	150	1	150	0	150	1	150
Left-Through		0							0				0				0	
Through	1010	1	**527**	0	1010	**527**	258	1341	1	**700**	0	1341	1	**700**	0	1341	1	**700**
Through-Right		1							1				1				1	
Right	43	0	43	0	43	43	12	58	0	58	0	58	0	58	0	58	0	58
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		653	*North-South:*		666	*North-South:*			729	*North-South:*			742	*North-South:*			740
	East-West:		592	*East-West:*		590	*East-West:*			806	*East-West:*			804	*East-West:*			804
	SUM:		1245	*SUM:*		1256	*SUM:*			1535	*SUM:*			1546	*SUM:*			1544
VOLUME/CAPACITY *(V/C)* RATIO:			0.905			0.913				1.116				1.124				1.123
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.805**			**0.813**				**1.016**				**1.024**				**1.023**
LEVEL OF SERVICE (LOS):			D			D				F				F				F

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.008	Δ*v/c* after mitigation:	0.007
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Serrano Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
14	East-West Street:	Sunset Blvd	Projection Year:	2024	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	37	0	37	0	37	37	0	40	0	40	0	40	0	40	0	40	0	40
Left-Through		0							0				0				0	
Through	11	0	**95**	-4	7	**99**	0	12	0	**102**	-4	8	0	**106**	0	8	0	**105**
Through-Right		0							0				0				0	
Right	47	0	0	8	55	0	0	50	0	0	8	58	0	0	-1	57	0	0
Left-Through-Right		1							1				1				1	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	27	0	**27**	0	27	**27**	0	29	0	**29**	0	29	0	**29**	0	29	0	**29**
Left-Through		0							0				0				0	
Through	11	0	68	-4	7	64	0	12	0	73	-4	8	0	69	0	8	0	69
Through-Right		0							0				0				0	
Right	30	0	0	0	30	0	0	32	0	0	0	32	0	0	0	32	0	0
Left-Through-Right		1							1				1				1	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	16	1	16	0	16	16	0	17	1	17	0	17	1	17	0	17	1	17
Left-Through		0							0				0				0	
Through	1070	2	**370**	13	1083	**374**	133	1280	2	**441**	13	1293	2	**445**	-1	1292	2	**445**
Through-Right		1							1				1				1	
Right	40	0	40	0	40	40	0	43	0	43	0	43	0	43	0	43	0	43
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	45	1	**45**	-2	43	**43**	0	48	1	**48**	-2	46	1	**46**	0	46	1	**46**
Left-Through		0							0				0				0	
Through	831	2	282	3	834	283	129	1020	2	345	3	1023	2	346	0	1023	2	346
Through-Right		1							1				1				1	
Right	15	0	15	0	15	15	0	16	0	16	0	16	0	16	0	16	0	16
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	North-South:		122	North-South:		126	North-South:			131	North-South:			135	North-South:			134
	East-West:		415	East-West:		417	East-West:			489	East-West:			491	East-West:			491
	SUM:		537	SUM:		543	SUM:			620	SUM:			626	SUM:			625
VOLUME/CAPACITY (V/C) RATIO:			0.358			0.362				0.413				0.417				0.417
V/C LESS ATSAC/ATCS ADJUSTMENT:			0.258			0.262				0.313				0.317				0.317
LEVEL OF SERVICE (LOS):			A			A				A				A				A

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.004 — Δ*v/c* after mitigation: 0.004

Significant impacted? NO — Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Serrano Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
15	East-West Street:	Fountain Ave	Projection Year:	2024	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			1			1			1			1			1				1
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	2	SB-- 2	NB--	2	SB-- 2	NB--	2	SB-- 2	NB--	2	SB-- 2	NB--	2	SB-- 2	NB--	2	SB--	2
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	76	0	76	0	76	76	0	81	0	81	0	81	0	81	0	81	0	81
	Left-Through		0							0				0				0	
	Through	37	0	**138**	5	42	**143**	0	40	0	**148**	5	45	0	**153**	-1	44	0	**152**
	Through-Right		0							0				0				0	
	Right	25	0	0	0	25	0	0	27	0	0	0	27	0	0	0	27	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	40	0	40	-2	38	38	0	43	0	43	-2	41	0	41	0	41	0	41
	Left-Through		0							0				0				0	
	Through	30	0	**91**	20	50	**109**	0	32	0	**98**	20	52	0	**116**	-3	49	0	**113**
	Through-Right		0							0				0				0	
	Right	21	0	0	0	21	0	0	23	0	0	0	23	0	0	0	23	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	5	0	**5**	0	5	**5**	0	5	0	**5**	0	5	0	**5**	0	5	0	**5**
	Left-Through		0							0				0				0	
	Through	355	0	396	0	355	396	6	387	0	431	0	387	0	431	0	387	0	431
	Through-Right		0							0				0				0	
	Right	36	0	0	0	36	0	0	39	0	0	0	39	0	0	0	39	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	18	0	18	0	18	18	0	19	0	19	0	19	0	19	0	19	0	19
	Left-Through		0							0				0				0	
	Through	526	0	**571**	0	526	**568**	15	579	0	**627**	0	579	0	**624**	0	579	0	**624**
	Through-Right		0							0				0				0	
	Right	27	0	0	-3	24	0	0	29	0	0	-3	26	0	0	0	26	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		229	*North-South:*		252	*North-South:*			246	*North-South:*			269	*North-South:*			265
		East-West:		576	*East-West:*		573	*East-West:*			632	*East-West:*			629	*East-West:*			629
		SUM:		805	*SUM:*		825	*SUM:*			878	*SUM:*			898	*SUM:*			894
VOLUME/CAPACITY *(V/C)* RATIO:				0.565			0.579				0.616				0.630				0.627
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.465**			**0.479**				**0.516**				**0.530**				**0.527**
LEVEL OF SERVICE (LOS):				**A**			**A**				**A**				**A**				**A**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.014 **Δ*v/c* after mitigation:** 0.011

Significant impacted? NO **Fully mitigated?** N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Normandie Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
16	East-West Street:	Hollywood Blvd	Projection Year:	2024	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	59	0	**59**	0	59	**59**	0	63	0	**63**	0	63	0	**63**	0	63	0	**63**
	Left-Through		0							0				0				0	
	Through	72	0	198	0	72	198	2	79	0	215	0	79	0	215	0	79	0	215
	Through-Right		0							0				0				0	
	Right	67	0	0	0	67	0	1	73	0	0	0	73	0	0	0	73	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	45	0	45	0	45	45	0	48	0	48	0	48	0	48	0	48	0	48
	Left-Through		0							0				0				0	
	Through	169	0	**253**	0	169	**253**	1	182	0	**272**	0	182	0	**272**	0	182	0	**272**
	Through-Right		0							0				0				0	
	Right	39	0	0	0	39	0	0	42	0	0	0	42	0	0	0	42	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	25	1	25	0	25	25	0	27	1	27	0	27	1	27	0	27	1	27
	Left-Through		0							0				0				0	
	Through	752	1	**407**	-2	750	**406**	115	921	1	**494**	-2	919	1	**493**	0	919	1	**493**
	Through-Right		1							1				1				1	
	Right	62	0	62	0	62	62	0	66	0	66	0	66	0	66	0	66	0	66
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	73	1	**73**	0	73	**73**	1	79	1	**79**	0	79	1	**79**	0	79	1	**79**
	Left-Through		0							0				0				0	
	Through	787	1	401	-3	784	400	121	965	1	491	-3	962	1	489	0	962	1	489
	Through-Right		1							1				1				1	
	Right	15	0	15	0	15	15	0	16	0	16	0	16	0	16	0	16	0	16
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		312	*North-South:*		312	*North-South:*			335	*North-South:*			335	*North-South:*			335
		East-West:		480	*East-West:*		479	*East-West:*			573	*East-West:*			572	*East-West:*			572
		SUM:		792	*SUM:*		791	*SUM:*			908	*SUM:*			907	*SUM:*			907
VOLUME/CAPACITY *(V/C)* RATIO:				0.528			0.527				0.605				0.605				0.605
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.428**			**0.427**				**0.505**				**0.505**				**0.505**
LEVEL OF SERVICE (LOS):				**A**			**A**				**A**				**A**				**A**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.000 **Δ*v/c* after mitigation:** 0.000

Significant impacted? NO **Fully mitigated?** N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Normandie Ave	Year of Count:	2017	Ambient Growth (%):	1	Conducted by:	GTC	Date:	February 2018
17	East-West Street:	Sunset Blvd	Projection Year:	2024	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	70	0	**70**	0	70	**70**	0	75	0	**75**	0	75	0	**75**	0	75	0	**75**
	Left-Through		0							0				0				0	
	Through	120	0	282	0	120	282	2	131	0	305	0	131	0	305	0	131	0	305
	Through-Right		0							0				0				0	
	Right	92	0	0	0	92	0	0	99	0	0	0	99	0	0	0	99	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	56	0	56	0	56	56	0	60	0	60	0	60	0	60	0	60	0	60
	Left-Through		0							0				0				0	
	Through	220	0	**332**	0	220	**332**	1	237	0	**357**	0	237	0	**357**	0	237	0	**357**
	Through-Right		0							0				0				0	
	Right	56	0	0	0	56	0	0	60	0	0	0	60	0	0	0	60	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	33	1	33	0	33	33	0	35	1	35	0	35	1	35	0	35	1	35
	Left-Through		0							0				0				0	
	Through	921	2	**340**	20	941	**347**	133	1120	2	**409**	20	1140	2	**416**	-3	1137	2	**415**
	Through-Right		1							1				1				1	
	Right	100	0	100	0	100	100	0	107	0	107	0	107	0	107	0	107	0	107
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	42	1	**42**	0	42	**42**	0	45	1	**45**	0	45	1	**45**	0	45	1	**45**
	Left-Through		0							0				0				0	
	Through	635	2	225	1	636	225	129	810	2	284	1	811	2	284	-1	810	2	284
	Through-Right		1							1				1				1	
	Right	39	0	39	0	39	39	0	42	0	42	0	42	0	42	0	42	0	42
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		402	North-South:		402	North-South:			432	North-South:			432	North-South:			432
		East-West:		382	East-West:		389	East-West:			454	East-West:			461	East-West:			460
		SUM:		784	SUM:		791	SUM:			886	SUM:			893	SUM:			892
VOLUME/CAPACITY (*V/C*) RATIO:				0.523			0.527				0.591				0.595				0.595
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.423**			**0.427**				**0.491**				**0.495**				**0.495**
LEVEL OF SERVICE (LOS):				**A**			**A**				**A**				**A**				**A**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.004 **Δ*v/c* after mitigation:** 0.004

Significant impacted? NO **Fully mitigated?** N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Normandie Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
18	East-West Street:	Santa Monica Blvd	Projection Year:	2024	Peak Hour:	AM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	40	0	**40**	0	40	**40**	1	44	0	**44**	0	44	0	**44**	0	44	0	**44**
Left-Through		1							1				1				1	
Through	232	0	190	0	232	190	0	249	0	205	0	249	0	205	0	249	0	205
Through-Right		1							1				1				1	
Right	68	0	190	0	68	190	0	73	0	205	0	73	0	205	0	73	0	205
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	57	0	57	0	57	57	0	61	0	61	0	61	0	61	0	61	0	61
Left-Through		0							0				0				0	
Through	350	0	**451**	0	350	**451**	1	376	0	**485**	0	376	0	**485**	0	376	0	**485**
Through-Right		0							0				0				0	
Right	44	0	0	0	44	0	1	48	0	0	0	48	0	0	0	48	0	0
Left-Through-Right		1							1				1				1	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	67	1	67	0	67	67	2	74	1	74	0	74	1	74	0	74	1	74
Left-Through		0							0				0				0	
Through	718	1	**411**	10	728	**416**	75	845	1	**481**	10	855	1	**486**	-1	854	1	**485**
Through-Right		1							1				1				1	
Right	104	0	104	0	104	104	4	116	0	116	0	116	0	116	0	116	0	116
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	146	1	**146**	0	146	**146**	0	157	1	**157**	0	157	1	**157**	0	157	1	**157**
Left-Through		0							0				0				0	
Through	714	1	393	0	714	393	76	842	1	459	0	842	1	459	0	842	1	459
Through-Right		1							1				1				1	
Right	71	0	71	0	71	71	0	76	0	76	0	76	0	76	0	76	0	76
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		491	*North-South:*		491	*North-South:*			529	*North-South:*			529	*North-South:*			529
	East-West:		557	*East-West:*		562	*East-West:*			638	*East-West:*			643	*East-West:*			642
	SUM:		1048	*SUM:*		1053	*SUM:*			1167	*SUM:*			1172	*SUM:*			1171
VOLUME/CAPACITY *(V/C)* RATIO:			0.699			0.702				0.778				0.781				0.781
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.599**			**0.602**				**0.678**				**0.681**				**0.681**
LEVEL OF SERVICE (LOS):			**A**			**B**				**B**				**B**				**B**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.003	Δ*v/c* after mitigation:	0.003
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Bronson Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
1	East-West Street:	Sunset Blvd	Projection Year:	2024	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	39	1	39	0	39	39	0	42	1	42	0	42	1	42	0	42	1	42
Left-Through		0							0				0				0	
Through	323	0	**503**	0	323	**503**	29	375	1	**375**	0	375	1	**375**	0	375	1	**375**
Through-Right		1							0				0				0	
Right	180	0	0	0	180	0	0	193	1	169	0	193	1	169	0	193	1	169
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	75	1	**75**	0	75	**75**	56	136	1	**136**	0	136	1	**136**	0	136	1	**136**
Left-Through		0							0				0				0	
Through	211	0	277	0	211	277	27	253	0	362	0	253	0	362	0	253	0	362
Through-Right		1							1				1				1	
Right	66	0	0	0	66	0	38	109	0	0	0	109	0	0	0	109	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	83	1	83	0	83	83	17	106	1	106	0	106	1	106	0	106	1	106
Left-Through		0							0				0				0	
Through	1678	2	**567**	16	1694	**573**	456	2255	2	**760**	16	2271	2	**766**	-3	2268	2	**765**
Through-Right		1							1				1				1	
Right	24	0	24	0	24	24	0	26	0	26	0	26	0	26	0	26	0	26
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	45	1	**45**	0	45	**45**	0	48	1	**48**	0	48	1	**48**	0	48	1	**48**
Left-Through		0							0				0				0	
Through	1306	2	460	6	1312	462	473	1873	2	659	6	1879	2	661	-2	1877	2	660
Through-Right		1							1				1				1	
Right	74	0	74	0	74	74	25	104	0	104	0	104	0	104	0	104	0	104
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	North-South:		578	North-South:		578	North-South:			511	North-South:			511	North-South:			511
	East-West:		612	East-West:		618	East-West:			808	East-West:			814	East-West:			813
	SUM:		1190	SUM:		1196	SUM:			1319	SUM:			1325	SUM:			1324
VOLUME/CAPACITY (V/C) RATIO:			0.793			0.797				0.879				0.883				0.883
V/C LESS ATSAC/ATCS ADJUSTMENT:			0.693			0.697				0.779				0.783				0.783
LEVEL OF SERVICE (LOS):			B			B				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.004 — Δ*v/c* after mitigation: 0.004

Significant impacted? NO — Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Van Ness Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
2	East-West Street:	Sunset Blvd	Projection Year:	2024	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	83	1	83	0	83	83	24	113	1	113	0	113	1	113	0	113	1	113
	Left-Through		0							0				0				0	
	Through	57	0	**245**	0	57	**245**	0	61	0	**306**	0	61	0	**306**	0	61	0	**306**
	Through-Right		1							1				1				1	
	Right	188	0	0	0	188	0	43	245	0	0	0	245	0	0	0	245	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	409	1	**409**	50	459	**459**	31	470	1	**470**	50	520	1	**520**	-6	514	2	**283**
	Left-Through		0							0				0				0	
	Through	302	0	328	0	302	328	4	328	0	356	0	328	0	356	0	328	0	356
	Through-Right		1							1				1				1	
	Right	26	0	0	0	26	0	0	28	0	0	0	28	0	0	0	28	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	15	1	15	0	15	15	0	16	1	16	0	16	1	16	0	16	1	16
	Left-Through		0							0				0				0	
	Through	1828	2	**623**	16	1844	**629**	497	2457	2	**838**	16	2473	2	**844**	-3	2470	2	**843**
	Through-Right		1							1				1				1	
	Right	42	0	42	0	42	42	13	58	0	58	0	58	0	58	0	58	0	58
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	62	1	**62**	0	62	**62**	9	75	1	**75**	0	75	1	**75**	0	75	1	**75**
	Left-Through		0							0				0				0	
	Through	1196	2	416	6	1202	418	474	1756	2	604	6	1762	2	606	-2	1760	2	605
	Through-Right		1							1				1				1	
	Right	51	0	51	0	51	51	0	55	0	55	0	55	0	55	0	55	0	55
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		654	*North-South:*		704	*North-South:*			776	*North-South:*			826	*North-South:*			589
		East-West:		685	*East-West:*		691	*East-West:*			913	*East-West:*			919	*East-West:*			918
		SUM:		1339	*SUM:*		1395	*SUM:*			1689	*SUM:*			1745	*SUM:*			1507
VOLUME/CAPACITY *(V/C)* RATIO:				0.893			0.930				1.126				1.163				1.005
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.793**			**0.830**				**1.026**				**1.063**				**0.905**
LEVEL OF SERVICE (LOS):				**C**			**D**				**F**				**F**				**E**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.037	Δ*v/c* after mitigation:	-0.121
Significant impacted?	YES	Fully mitigated?	YES

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Wilton Pl	Year of Count:	2017	Ambient Growth (%):	1	Conducted by:	GTC	Date:	February 2018
3	East-West Street:	Hollywood Blvd	Projection Year:	2024	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			3			3			3				3					3
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			1			1			1				1					1
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB--		0	NB-- 0 SB--		0	NB-- 0 SB--		0		NB-- 0 SB--		0		NB-- 0 SB--		0	
		EB-- 0 WB--		0	EB-- 0 WB--		0	EB-- 0 WB--		0		EB-- 0 WB--		0		EB-- 0 WB--		0	
	ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2					2
	Override Capacity			0			0			0				0					0
NORTHBOUND	Left	325	0	325	0	325	325	15	363	0	363	0	363	0	363	0	363	0	363
	Left-Through		1							1				1				1	
	Through	169	0	494	0	169	494	9	190	0	553	0	190	0	553	0	190	0	553
	Through-Right		0							0				0				0	
	Right	160	1	133	0	160	133	0	172	1	143	0	172	1	143	0	172	1	143
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	21	0	21	0	21	21	0	23	0	23	0	23	0	23	0	23	0	23
	Left-Through		0							0				0				0	
	Through	145	0	193	0	145	193	9	164	0	217	0	164	0	217	0	164	0	217
	Through-Right		0							0				0				0	
	Right	27	0	0	0	27	0	1	30	0	0	0	30	0	0	0	30	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	35	1	35	0	35	35	5	43	1	43	0	43	1	43	0	43	1	43
	Left-Through		0							0				0				0	
	Through	1051	2	526	5	1056	528	215	1342	2	671	5	1347	2	674	-1	1346	2	673
	Through-Right		0							0				0				0	
	Right	169	1	7	0	169	7	11	192	1	11	0	192	1	11	0	192	1	11
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	54	1	54	0	54	54	1	59	1	59	0	59	1	59	0	59	1	59
	Left-Through		0							0				0				0	
	Through	899	1	465	10	909	470	216	1180	1	606	10	1190	1	611	-2	1188	1	610
	Through-Right		1							1				1				1	
	Right	30	0	30	0	30	30	0	32	0	32	0	32	0	32	0	32	0	32
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	North-South:		687	North-South:		687	North-South:			770	North-South:			770	North-South:			770
		East-West:		580	East-West:		582	East-West:			730	East-West:			733	East-West:			732
		SUM:		1267	SUM:		1269	SUM:			1500	SUM:			1503	SUM:			1502
	VOLUME/CAPACITY (V/C) RATIO:			0.889			0.891				1.053				1.055				1.054
	V/C LESS ATSAC/ATCS ADJUSTMENT:			0.789			0.791				0.953				0.955				0.954
	LEVEL OF SERVICE (LOS):			C			C				E				E				E

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.002 — Δ*v/c* after mitigation: 0.001

Significant impacted? NO — Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Wilton Pl	Year of Count:	2017	Ambient Growth (%):	1	Conducted by:	GTC	Date:	February 2018
4	East-West Street:	Sunset Blvd	Projection Year:	2024	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			2			2			2				2					2
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0					0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB--		0	NB-- 0 SB--		0	NB-- 0 SB--		0		NB-- 0 SB--		0		NB-- 0 SB--		0	
		EB-- 0 WB--		0	EB-- 0 WB--		0	EB-- 0 WB--		0		EB-- 0 WB--		0		EB-- 0 WB--		0	
	ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2					2
	Override Capacity			0			0			0				0					0
NORTHBOUND	Left	87	1	**87**	0	87	**87**	3	96	1	96	0	96	1	96	0	96	1	96
	Left-Through		0							0				0				0	
	Through	367	1	275	0	367	275	2	395	1	**295**	0	395	1	**295**	0	395	1	**295**
	Through-Right		1							1				1				1	
	Right	182	0	182	0	182	182	0	195	0	195	0	195	0	195	0	195	0	195
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	82	1	82	23	105	105	48	136	1	**136**	23	159	1	**159**	-2	157	1	**157**
	Left-Through		0							0				0				0	
	Through	511	1	**310**	0	511	**310**	1	549	1	334	0	549	1	334	0	549	1	334
	Through-Right		1							1				1				1	
	Right	108	0	108	0	108	108	2	118	0	118	0	118	0	118	0	118	0	118
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	102	1	102	0	102	102	2	111	1	111	0	111	1	111	0	111	1	111
	Left-Through		0							0				0				0	
	Through	1736	2	**632**	67	1803	**654**	235	2096	2	**758**	67	2163	2	**780**	-9	2154	2	**777**
	Through-Right		1							1				1				1	
	Right	159	0	159	0	159	159	7	177	0	177	0	177	0	177	0	177	0	177
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	69	1	**69**	0	69	**69**	1	75	1	**75**	0	75	1	**75**	0	75	1	**75**
	Left-Through		0							0				0				0	
	Through	1041	2	521	20	1061	531	212	1328	2	664	20	1348	2	674	-3	1345	2	673
	Through-Right		0							0				0				0	
	Right	114	1	73	0	114	62	21	143	1	75	0	143	1	64	0	143	1	65
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	*North-South:*		397	*North-South:*		397	*North-South:*		431		*North-South:*		454		*North-South:*		452	
		East-West:		701	*East-West:*		723	*East-West:*		833		*East-West:*		855		*East-West:*		852	
		SUM:		1098	*SUM:*		1120	*SUM:*		1264		*SUM:*		1309		*SUM:*		1304	
	VOLUME/CAPACITY *(V/C)* RATIO:			0.732			0.747			0.843				0.873					0.869
	V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.632**			**0.647**			**0.743**				**0.773**					**0.769**
	LEVEL OF SERVICE (LOS):			**B**			**B**			**C**				**C**					**C**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.030	Δ*v/c* after mitigation:	0.026
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Wilton Pl	Year of Count:	2017	Ambient Growth (%):	1	Conducted by:	GTC	Date:	February 2018
5	East-West Street:	Fountain Ave	Projection Year:	2024	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	58	0	58	0	58	58	0	62	0	62	0	62	0	62	0	62	0	62
	Left-Through		1							1				1				1	
	Through	551	0	**509**	0	551	**509**	5	596	0	**554**	0	596	0	**554**	0	596	0	**554**
	Through-Right		1							1				1				1	
	Right	234	0	509	0	234	509	12	263	0	554	0	263	0	554	0	263	0	554
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	39	0	**39**	0	39	**39**	0	42	0	**42**	0	42	0	**42**	0	42	0	**42**
	Left-Through		1							1				1				1	
	Through	537	1	347	0	537	347	8	584	1	376	0	584	1	376	0	584	1	376
	Through-Right		0							0				0				0	
	Right	72	1	72	0	72	72	0	77	1	77	0	77	1	77	0	77	1	77
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	22	0	22	0	22	22	0	24	0	24	0	24	0	24	0	24	0	24
	Left-Through		0							0				0				0	
	Through	472	0	**573**	-3	469	**570**	29	535	0	**644**	-3	532	0	**641**	0	532	0	**641**
	Through-Right		0							0				0				0	
	Right	79	0	0	0	79	0	0	85	0	0	0	85	0	0	0	85	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
WESTBOUND	Left	154	0	**154**	0	154	**154**	11	176	0	**176**	0	176	0	**176**	0	176	0	**176**
	Left-Through		0							0				0				0	
	Through	320	0	533	-3	317	530	2	345	0	584	-3	342	0	581	0	342	0	581
	Through-Right		0							0				0				0	
	Right	59	0	0	0	59	0	0	63	0	0	0	63	0	0	0	63	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		548	*North-South:*		548	*North-South:*			596	*North-South:*			596	*North-South:*			596
		East-West:		727	*East-West:*		724	*East-West:*			820	*East-West:*			817	*East-West:*			817
		SUM:		1275	*SUM:*		1272	*SUM:*			1416	*SUM:*			1413	*SUM:*			1413
VOLUME/CAPACITY *(V/C)* RATIO:				0.850			0.848				0.944				0.942				0.942
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.750**			**0.748**				**0.844**				**0.842**				**0.842**
LEVEL OF SERVICE (LOS):				C			C				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	-0.002	Δ*v/c* after mitigation:	-0.002
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Wilton Pl	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
6	East-West Street:	Santa Monica Blvd	Projection Year:	2024	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left-Through		0							0				0				0	
Through	826	1	**449**	0	826	**449**	11	897	1	**499**	0	897	1	**499**	0	897	1	**499**
Through-Right		1							1				1				1	
Right	72	0	72	0	72	72	23	100	0	100	0	100	0	100	0	100	0	100
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
Left-Through		0							0				0				0	
Through	666	1	343	0	666	343	14	728	1	377	0	728	1	377	0	728	1	377
Through-Right		1							1				1				1	
Right	19	0	19	0	19	19	5	25	0	25	0	25	0	25	0	25	0	25
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	62	1	62	0	62	62	6	72	1	72	0	72	1	72	0	72	1	72
Left-Through		0							0				0				0	
Through	1049	1	**559**	5	1054	**562**	335	1460	1	**767**	5	1465	1	**770**	-1	1464	1	**769**
Through-Right		1							1				1				1	
Right	69	0	69	0	69	69	0	74	0	74	0	74	0	74	0	74	0	74
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	93	1	**93**	0	93	**93**	12	112	1	**112**	0	112	1	**112**	0	112	1	**112**
Left-Through		0							0				0				0	
Through	1040	1	537	0	1040	537	320	1435	1	735	0	1435	1	735	-1	1434	1	735
Through-Right		1							1				1				1	
Right	33	0	33	0	33	33	0	35	0	35	0	35	0	35	0	35	0	35
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		449	*North-South:*		449	*North-South:*			499	*North-South:*			499	*North-South:*			499
	East-West:		652	*East-West:*		655	*East-West:*			879	*East-West:*			882	*East-West:*			881
	SUM:		1101	*SUM:*		1104	*SUM:*			1378	*SUM:*			1381	*SUM:*			1380
VOLUME/CAPACITY *(V/C)* RATIO:			0.734			0.736				0.919				0.921				0.920
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.634**			**0.636**				**0.819**				**0.821**				**0.820**
LEVEL OF SERVICE (LOS):			**B**			**B**				**D**				**D**				**D**

	NB--	SB--	EB--	WB--	Existing	Existing + Project	Future W/O Project	Future W/ Project	Future W/ Project W/ Mitigation
No. of Phases					2	2	2	2	2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?					0	0	0	0	0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	0	0	0	0	0	0	0	0	0
	0	0	0	0					
ATSAC-1 or ATSAC+ATCS-2?					2	2	2	2	2
Override Capacity					0	0	0	0	0

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.002	Δ*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	St Andrews Pl	Year of Count:	2017	Ambient Growth (%):	1	Conducted by:	GTC	Date:	February 2018
7	East-West Street:	Sunset Blvd	Projection Year:	2024	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			2			2			2				2					2
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0					0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB--		0	NB-- 0 SB--		0	NB-- 0 SB--		0		NB-- 0 SB--		0		NB-- 0 SB--		0	
		EB-- 0 WB--		0	EB-- 0 WB--		0	EB-- 0 WB--		0		EB-- 0 WB--		0		EB-- 0 WB--		0	
	ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2					2
	Override Capacity			0			0			0				0					0
NORTHBOUND	Left	126	0	**126**	0	126	**126**	3	138	0	**138**	0	138	0	**138**	0	138	0	**138**
	Left-Through		1							1				1				1	
	Through	8	0	134	0	8	134	0	9	0	147	0	9	0	147	0	9	0	147
	Through-Right		0							0				0				0	
	Right	112	1	78	0	112	78	12	132	1	89	0	132	1	89	0	132	1	89
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	8	0	8	0	8	8	0	9	0	9	0	9	0	9	0	9	0	9
	Left-Through		0							0				0				0	
	Through	8	0	**23**	0	8	**23**	0	9	0	**26**	0	9	0	**26**	0	9	0	**26**
	Through-Right		0							0				0				0	
	Right	7	0	0	0	7	0	0	8	0	0	0	8	0	0	0	8	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	8	1	8	0	8	8	0	9	1	9	0	9	1	9	0	9	1	9
	Left-Through		0							0				0				0	
	Through	1745	2	**595**	90	1835	**625**	270	2141	2	**733**	90	2231	2	**763**	-11	2220	2	**759**
	Through-Right		1							1				1				1	
	Right	41	0	41	0	41	41	13	57	0	57	0	57	0	57	0	57	0	57
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	69	1	**69**	0	69	**69**	13	87	1	**87**	0	87	1	**87**	0	87	1	**87**
	Left-Through		0							0				0				0	
	Through	1141	2	391	20	1161	398	231	1454	2	496	20	1474	2	503	-3	1471	2	502
	Through-Right		1							1				1				1	
	Right	33	0	33	0	33	33	0	35	0	35	0	35	0	35	0	35	0	35
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	*North-South:*		149	*North-South:*		149	*North-South:*			164	*North-South:*			164	*North-South:*			164
		East-West:		664	*East-West:*		694	*East-West:*			820	*East-West:*			850	*East-West:*			846
		SUM:		813	*SUM:*		843	*SUM:*			984	*SUM:*			1014	*SUM:*			1010
	VOLUME/CAPACITY *(V/C)* RATIO:			0.542			0.562				0.656				0.676				0.673
	V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.442**			**0.462**				**0.556**				**0.576**				**0.573**
	LEVEL OF SERVICE (LOS):			**A**			**A**				**A**				**A**				**A**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.020 **Δ*v/c* after mitigation:** 0.017

Significant impacted? NO **Fully mitigated?** N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Western Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
8	East-West Street:	Franklin Ave	Projection Year:	2024	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 3	NB--	0	SB-- 3	NB--	0	SB-- 3	NB--	0	SB-- 3	NB--	0	SB-- 3	NB--	0	SB--	3
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	157	1	**157**	0	157	**157**	0	168	1	**168**	0	168	1	**168**	0	168	1	**168**
Left-Through		0							0				0				0	
Through	767	1	446	3	770	448	17	839	1	491	3	842	1	493	-1	841	1	492
Through-Right		1							1				1				1	
Right	125	0	125	0	125	125	9	143	0	143	0	143	0	143	0	143	0	143
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	45	1	45	0	45	45	0	48	1	48	0	48	1	48	0	48	1	48
Left-Through		0							0				0				0	
Through	784	2	**392**	8	792	**396**	12	853	2	**427**	8	861	2	**431**	-1	860	2	**430**
Through-Right		0							0				0				0	
Right	581	1	172	0	581	172	0	623	1	184	0	623	1	184	0	623	1	184
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	409	1	409	0	409	409	0	439	1	439	0	439	1	439	0	439	1	439
Left-Through		0							0				0				0	
Through	1089	1	**613**	0	1089	**613**	33	1201	1	**674**	0	1201	1	**674**	0	1201	1	**674**
Through-Right		1							1				1				1	
Right	136	0	136	0	136	136	0	146	0	146	0	146	0	146	0	146	0	146
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	79	1	**79**	0	79	**79**	13	98	1	**98**	0	98	1	**98**	0	98	1	**98**
Left-Through		0							0				0				0	
Through	519	1	268	0	519	268	45	601	1	310	0	601	1	310	0	601	1	310
Through-Right		1							1				1				1	
Right	17	0	17	0	17	17	0	18	0	18	0	18	0	18	0	18	0	18
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		549	*North-South:*		553	*North-South:*			595	*North-South:*			599	*North-South:*			598
	East-West:		692	*East-West:*		692	*East-West:*			772	*East-West:*			772	*East-West:*			772
	SUM:		1241	*SUM:*		1245	*SUM:*			1367	*SUM:*			1371	*SUM:*			1370
VOLUME/CAPACITY *(V/C)* RATIO:			0.871			0.874				0.959				0.962				0.961
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.771**			**0.774**				**0.859**				**0.862**				**0.861**
LEVEL OF SERVICE (LOS):			**C**			**C**				**D**				**D**				**D**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.003	Δ*v/c* after mitigation:	0.002
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Western Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
9	East-West Street:	Hollywood Blvd	Projection Year:	2024	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			4			4			4			4			4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB-- 0	NB--	3	SB--	0
	EB--	0	WB-- 3	EB--	0	WB-- 3	EB--	0	WB-- 3	EB--	0	WB-- 3	EB--	0	WB-- 3	EB--	0	WB--	3
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	120	1	**120**	12	132	**132**	4	133	1	**133**	12	145	1	**145**	-2	143	1	**143**
Left-Through		0							0				0				0	
Through	846	2	423	3	849	425	24	931	2	466	3	934	2	467	-1	933	2	467
Through-Right		0							0				0				0	
Right	106	1	0	0	106	0	2	116	1	0	0	116	1	0	0	116	1	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	136	1	136	0	136	136	0	146	1	146	0	146	1	146	0	146	1	146
Left-Through		0							0				0				0	
Through	850	1	**528**	8	858	**532**	21	932	1	**578**	8	940	1	**582**	-1	939	2	**470**
Through-Right		1							1				1				0	
Right	205	0	205	0	205	205	3	223	0	223	0	223	0	223	0	223	1	117
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	196	1	**196**	0	196	**196**	2	212	1	**212**	0	212	1	**212**	0	212	1	**212**
Left-Through		0							0				0				0	
Through	849	1	474	-2	847	476	172	1082	1	595	-2	1080	1	598	0	1080	1	597
Through-Right		1							1				1				1	
Right	98	0	98	7	105	105	3	108	0	108	7	115	0	115	-1	114	0	114
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	113	1	113	0	113	113	3	124	1	124	0	124	1	124	0	124	1	124
Left-Through		0							0				0				0	
Through	846	2	**423**	-2	844	**422**	190	1097	2	**549**	-2	1095	2	**548**	0	1095	2	**548**
Through-Right		0							0				0				0	
Right	72	1	0	0	72	0	0	77	1	0	0	77	1	0	0	77	1	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	North-South:		648	North-South:		664	North-South:			711	North-South:			727	North-South:			613
	East-West:		619	East-West:		618	East-West:			761	East-West:			760	East-West:			760
	SUM:		1267	SUM:		1282	SUM:			1472	SUM:			1487	SUM:			1373
VOLUME/CAPACITY (V/C) RATIO:			0.921			0.932				1.071				1.081				0.999
V/C LESS ATSAC/ATCS ADJUSTMENT:			0.821			0.832				0.971				0.981				0.899
LEVEL OF SERVICE (LOS):			D			D				E				E				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.010 — Δ*v/c* after mitigation: -0.072

Significant impacted? YES — Fully mitigated? YES

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Western Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
10	East-West Street:	Sunset Blvd	Projection Year:	2024	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			4			4			4			4			4				4
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	139	1	**139**	20	159	**159**	21	170	1	**170**	20	190	1	**190**	-3	187	2	103
Left-Through		0							0				0				0	
Through	792	2	396	15	807	404	12	861	2	431	15	876	2	438	-3	873	2	**437**
Through-Right		0							0				0				0	
Right	154	1	93	0	154	93	4	169	1	101	0	169	1	101	0	169	1	101
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	124	1	124	0	124	124	0	133	1	133	0	133	1	133	0	133	1	**133**
Left-Through		0							0				0				0	
Through	628	1	**397**	15	643	**404**	15	688	1	**439**	15	703	1	**447**	-3	700	1	445
Through-Right		1							1				1				1	
Right	165	0	165	0	165	165	13	190	0	190	0	190	0	190	0	190	0	190
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	276	1	276	0	276	276	18	314	1	314	0	314	1	314	0	314	1	314
Left-Through		0							0				0				0	
Through	1632	2	**573**	45	1677	**603**	174	1924	2	**686**	45	1969	2	**715**	-5	1964	2	**712**
Through-Right		1							1				1				1	
Right	87	0	87	44	131	131	40	133	0	133	44	177	0	177	-6	171	0	171
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	123	1	**123**	0	123	**123**	5	137	1	**137**	0	137	1	**137**	0	137	1	**137**
Left-Through		0							0				0				0	
Through	900	2	351	0	900	351	191	1156	2	440	0	1156	2	440	0	1156	2	440
Through-Right		1							1				1				1	
Right	153	0	153	0	153	153	0	164	0	164	0	164	0	164	0	164	0	164
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		536	*North-South:*		563	*North-South:*			609	*North-South:*			637	*North-South:*			570
	East-West:		696	*East-West:*		726	*East-West:*			823	*East-West:*			852	*East-West:*			849
	SUM:		1232	*SUM:*		1289	*SUM:*			1432	*SUM:*			1489	*SUM:*			1419
VOLUME/CAPACITY *(V/C)* RATIO:			0.896			0.937				1.041				1.083				1.032
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.796**			**0.837**				**0.941**				**0.983**				**0.932**
LEVEL OF SERVICE (LOS):			**C**			**D**				**E**				**E**				**E**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.042	Δ*v/c* after mitigation:	-0.009
Significant impacted?	YES	Fully mitigated?	YES

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Western Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
11	East-West Street:	De Longpre Ave	Projection Year:	2024	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			0			0			2			2			2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?			0			0			2			2			2
Override Capacity			1200			1200			0			0			0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	60	0	60	0	60	60	7	71	1	**71**	0	71	1	71	0	71	1	71
	Left-Through		1							0				0				0	
	Through	1033	1	**697**	0	1033	**697**	35	1143	1	572	0	1143	1	**633**	0	1143	1	**630**
	Through-Right		0							1				1				1	
	Right	0	0	0	122	122	122	0	0	0	0	122	122	0	122	-5	117	0	117
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	**0**	173	173	**0**	0	0	1	0	173	173	1	**173**	-10	163	1	**163**
	Left-Through		0							0				0				0	
	Through	1024	1	521	0	1024	521	56	1154	2	**577**	0	1154	2	577	0	1154	2	577
	Through-Right		1							0				0				0	
	Right	17	0	17	0	17	17	3	21	1	14	0	21	1	14	0	21	1	14
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	12	0	12	0	12	12	1	14	1	14	0	14	1	14	0	14	1	14
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Through-Right		0							0				0				0	
	Right	70	0	**82**	0	70	**82**	5	80	1	**45**	0	80	1	**45**	0	80	1	**45**
	Left-Through-Right		0							0				0				0	
	Left-Right		1							0				0				0	
WESTBOUND	Left	0	0	**0**	164	164	**0**	0	0	0	**0**	164	164	1	**164**	-7	157	1	**157**
	Left-Through		0							0				0				0	
	Through	0	0	0	0	0	0	0	0	0	0	0	0	0	127	0	0	0	120
	Through-Right		0							0				1				1	
	Right	0	0	0	127	127	0	0	0	0	0	127	127	0	0	-7	120	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		697	*North-South:*		697	*North-South:*			648	*North-South:*			806	*North-South:*			793
		East-West:		82	*East-West:*		82	*East-West:*			45	*East-West:*			209	*East-West:*			202
		SUM:		779	*SUM:*		779	*SUM:*			693	*SUM:*			1015	*SUM:*			995
VOLUME/CAPACITY *(V/C)* RATIO:				0.649			0.649				0.462				0.677				0.663
V/C LESS ATSAC/ATCS ADJUSTMENT:				0.649			0.649				**0.362**				**0.577**				**0.563**
LEVEL OF SERVICE (LOS):				**B**			**B**				**A**				**A**				**A**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.215	Δ*v/c* after mitigation:	0.201
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Western Ave	Year of Count:	2017	Ambient Growth (%):	1	Conducted by:	GTC	Date:	February 2018
12	East-West Street:	Fountain Ave	Projection Year:	2024	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			2			2			2				2				2	
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0				0	
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 0 SB--		0	NB-- 0 SB--		0	NB-- 0 SB--		0		NB-- 0 SB--		0		NB-- 0 SB--		0	
		EB-- 0 WB--		0	EB-- 0 WB--		0	EB-- 0 WB--		0		EB-- 0 WB--		0		EB-- 0 WB--		0	
	ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2				2	
	Override Capacity			0			0			0				0				0	
NORTHBOUND	Left	55	1	55	0	55	55	0	59	1	59	0	59	1	59	0	59	1	59
	Left-Through		0							0				0				0	
	Through	811	1	**453**	18	829	**462**	87	957	1	**531**	18	975	1	**540**	-4	971	1	**538**
	Through-Right		1							1				1				1	
	Right	95	0	95	0	95	95	2	104	0	104	0	104	0	104	0	104	0	104
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	61	1	**61**	0	61	**61**	2	67	1	**67**	0	67	1	**67**	0	67	1	**67**
	Left-Through		0							0				0				0	
	Through	769	1	446	29	798	459	80	904	1	518	29	933	1	531	-6	927	1	528
	Through-Right		1							1				1				1	
	Right	123	0	123	-3	120	120	0	132	0	132	-3	129	0	129	0	129	0	129
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	131	1	131	-3	128	128	0	140	1	140	-3	137	1	137	0	137	1	137
	Left-Through		0							0				0				0	
	Through	586	1	**586**	0	586	**586**	11	639	1	**639**	0	639	1	**639**	0	639	1	**639**
	Through-Right		0							0				0				0	
	Right	160	1	133	0	160	133	18	190	1	161	0	190	1	161	0	190	1	161
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	115	1	**115**	0	115	**115**	3	126	1	**126**	0	126	1	**126**	0	126	1	**126**
	Left-Through		0							0				0				0	
	Through	387	0	449	0	387	449	2	417	0	487	0	417	0	487	0	417	0	487
	Through-Right		1							1				1				1	
	Right	62	0	0	0	62	0	4	70	0	0	0	70	0	0	0	70	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	North-South:		514	North-South:		523	North-South:			598	North-South:			607	North-South:			605
		East-West:		701	East-West:		701	East-West:			765	East-West:			765	East-West:			765
		SUM:		1215	SUM:		1224	SUM:			1363	SUM:			1372	SUM:			1370
	VOLUME/CAPACITY (V/C) RATIO:			0.810			0.816				0.909				0.915				0.913
	V/C LESS ATSAC/ATCS ADJUSTMENT:			0.710			0.716				0.809				0.815				0.813
	LEVEL OF SERVICE (LOS):			C			C				D				D				D

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.006 — Δ*v/c* after mitigation: 0.004

Significant impacted? NO — Fully mitigated? N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Western Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
13	East-West Street:	Santa Monica Blvd	Projection Year:	2024	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

		EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	MOVEMENT	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
	No. of Phases			4			4			4				4					4
	Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0					0
	Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB-- 3 SB--		0	NB-- 3 SB--		0	NB-- 3 SB--		0		NB-- 3 SB--		0		NB-- 3 SB--		0	
		EB-- 3 WB--		0	EB-- 3 WB--		0	EB-- 3 WB--		0		EB-- 3 WB--		0		EB-- 3 WB--		0	
	ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2					2
	Override Capacity			0			0			0				0					0
NORTHBOUND	Left	89	1	**89**	0	89	**89**	1	96	1	**96**	0	96	1	**96**	0	96	1	**96**
	Left-Through		0							0				0				0	
	Through	1006	2	503	13	1019	510	48	1127	2	564	13	1140	2	570	-3	1137	2	569
	Through-Right		0							0				0				0	
	Right	227	1	81	0	227	81	2	245	1	85	0	245	1	85	0	245	1	85
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	81	1	81	10	91	91	35	122	1	122	10	132	1	132	-1	131	1	131
	Left-Through		0							0				0				0	
	Through	1027	1	**552**	3	1030	**553**	48	1149	1	**649**	3	1152	1	**651**	-2	1150	1	**649**
	Through-Right		1							1				1				1	
	Right	76	0	76	0	76	76	68	149	0	149	0	149	0	149	-1	148	0	148
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	88	1	88	5	93	**93**	46	140	1	**140**	5	145	1	**145**	-1	144	1	**144**
	Left-Through		0							0				0				0	
	Through	950	2	**475**	0	950	475	340	1359	2	680	0	1359	2	680	0	1359	2	680
	Through-Right		0							0				0				0	
	Right	95	1	6	0	95	6	5	107	1	11	0	107	1	11	0	107	1	11
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	146	1	**146**	0	146	146	3	160	1	160	0	160	1	160	0	160	1	160
	Left-Through		0							0				0				0	
	Through	993	1	531	0	993	**531**	392	1457	1	**784**	0	1457	1	**784**	0	1457	1	**784**
	Through-Right		1							1				1				1	
	Right	69	0	69	0	69	69	36	110	0	110	0	110	0	110	0	110	0	110
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
	CRITICAL VOLUMES	*North-South:*		641	*North-South:*		642	*North-South:*			745	*North-South:*			747	*North-South:*			745
		East-West:		621	*East-West:*		624	*East-West:*			924	*East-West:*			929	*East-West:*			928
		SUM:		1262	*SUM:*		1266	*SUM:*			1669	*SUM:*			1676	*SUM:*			1673
	VOLUME/CAPACITY *(V/C)* RATIO:			0.918			0.921				1.214				1.219				1.217
	V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.818**			**0.821**				**1.114**				**1.119**				**1.117**
	LEVEL OF SERVICE (LOS):			**D**			**D**				**F**				**F**				**F**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.005	Δ*v/c* after mitigation:	0.003
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Serrano Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
14	East-West Street:	Sunset Blvd	Projection Year:	2024	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	70	0	**70**	0	70	**70**	0	75	0	**75**	0	75	0	**75**	0	75	0	**75**
	Left-Through		0							0				0				0	
	Through	51	0	187	-5	46	182	0	55	0	201	-5	50	0	196	0	50	0	195
	Through-Right		0							0				0				0	
	Right	66	0	0	0	66	0	0	71	0	0	0	71	0	0	-1	70	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	53	0	53	0	53	53	0	57	0	57	0	57	0	57	0	57	0	57
	Left-Through		0							0				0				0	
	Through	56	0	**189**	-5	51	**184**	0	60	0	**203**	-5	55	0	**198**	0	55	0	**198**
	Through-Right		0							0				0				0	
	Right	80	0	0	0	80	0	0	86	0	0	0	86	0	0	0	86	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	126	1	126	0	126	126	0	135	1	135	0	135	1	135	0	135	1	135
	Left-Through		0							0				0				0	
	Through	1570	2	**543**	7	1577	**546**	177	1860	2	**641**	7	1867	2	**644**	-1	1866	2	**643**
	Through-Right		1							1				1				1	
	Right	60	0	60	0	60	60	0	64	0	64	0	64	0	64	0	64	0	64
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	76	1	**76**	5	81	**81**	0	81	1	**81**	5	86	1	**86**	-1	85	1	**85**
	Left-Through		0							0				0				0	
	Through	1062	2	373	11	1073	377	196	1335	2	466	11	1346	2	469	-1	1345	2	469
	Through-Right		1							1				1				1	
	Right	58	0	58	0	58	58	0	62	0	62	0	62	0	62	0	62	0	62
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		259	*North-South:*		254	*North-South:*			278	*North-South:*			273	*North-South:*			273
		East-West:		619	*East-West:*		627	*East-West:*			722	*East-West:*			730	*East-West:*			728
		SUM:		878	*SUM:*		881	*SUM:*			1000	*SUM:*			1003	*SUM:*			1001
VOLUME/CAPACITY *(V/C)* RATIO:				0.585			0.587				0.667				0.669				0.667
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.485**			**0.487**				**0.567**				**0.569**				**0.567**
LEVEL OF SERVICE (LOS):				**A**			**A**				**A**				**A**				**A**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: 0.002 **Δ*v/c* after mitigation:** 0.000

Significant impacted? NO **Fully mitigated?** N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Serrano Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
15	East-West Street:	Fountain Ave	Projection Year:	2024	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			3			3			3			3			3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			1			1			1			1			1				1
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	2	SB-- 2	NB--	2	SB-- 2	NB--	2	SB-- 2	NB--	2	SB-- 2	NB--	2	SB-- 2	NB--	2	SB--	2
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	77	0	77	0	77	77	0	83	0	83	0	83	0	83	0	83	0	83
Left-Through		0							0				0				0	
Through	66	0	**195**	36	102	**231**	0	71	0	**210**	36	107	0	**246**	-5	102	0	**241**
Through-Right		0							0				0				0	
Right	52	0	0	0	52	0	0	56	0	0	0	56	0	0	0	56	0	0
Left-Through-Right		1							1				1				1	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	83	0	83	-3	80	80	0	89	0	89	-3	86	0	86	0	86	0	86
Left-Through		0							0				0				0	
Through	42	0	**172**	6	48	**175**	0	45	0	**184**	6	51	0	**187**	-2	49	0	**185**
Through-Right		0							0				0				0	
Right	47	0	0	0	47	0	0	50	0	0	0	50	0	0	0	50	0	0
Left-Through-Right		1							1				1				1	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	11	0	11	0	11	11	0	12	0	12	0	12	0	12	0	12	0	12
Left-Through		0							0				0				0	
Through	682	0	**747**	0	682	**747**	16	747	0	**817**	0	747	0	**817**	0	747	0	**817**
Through-Right		0							0				0				0	
Right	54	0	0	0	54	0	0	58	0	0	0	58	0	0	0	58	0	0
Left-Through-Right		1							1				1				1	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	31	0	**31**	0	31	**31**	0	33	0	**33**	0	33	0	**33**	0	33	0	**33**
Left-Through		0							0				0				0	
Through	462	0	525	0	462	522	9	504	0	571	0	504	0	568	0	504	0	568
Through-Right		0							0				0				0	
Right	32	0	0	-3	29	0	0	34	0	0	-3	31	0	0	0	31	0	0
Left-Through-Right		1							1				1				1	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		367	*North-South:*		406	*North-South:*			394	*North-South:*			433	*North-South:*			426
	East-West:		778	*East-West:*		778	*East-West:*			850	*East-West:*			850	*East-West:*			850
	SUM:		1145	*SUM:*		1184	*SUM:*			1244	*SUM:*			1283	*SUM:*			1276
VOLUME/CAPACITY *(V/C)* RATIO:			0.804			0.831				0.873				0.900				0.895
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.704**			**0.731**				**0.773**				**0.800**				**0.795**
LEVEL OF SERVICE (LOS):			**C**			**C**				**C**				**D**				**C**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.027	Δ*v/c* after mitigation:	0.022
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Normandie Ave	Year of Count:	2017	Ambient Growth (%):	1	Conducted by:	GTC	Date:	February 2018
16	East-West Street:	Hollywood Blvd	Projection Year:	2024	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	108	0	108	0	108	108	0	116	0	116	0	116	0	116	0	116	0	116
	Left-Through		0							0				0				0	
	Through	159	0	**357**	0	159	**357**	2	172	0	**387**	0	172	0	**387**	0	172	0	**387**
	Through-Right		0							0				0				0	
	Right	90	0	0	0	90	0	3	99	0	0	0	99	0	0	0	99	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	100	0	**100**	0	100	**100**	0	107	0	**107**	0	107	0	**107**	0	107	0	**107**
	Left-Through		0							0				0				0	
	Through	163	0	316	0	163	316	4	179	0	343	0	179	0	343	0	179	0	343
	Through-Right		0							0				0				0	
	Right	53	0	0	0	53	0	0	57	0	0	0	57	0	0	0	57	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	48	1	48	0	48	48	0	51	1	51	0	51	1	51	0	51	1	51
	Left-Through		0							0				0				0	
	Through	995	1	**548**	-3	992	**547**	174	1241	1	**675**	-3	1238	1	**673**	0	1238	1	**673**
	Through-Right		1							1				1				1	
	Right	101	0	101	0	101	101	0	108	0	108	0	108	0	108	0	108	0	108
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	70	1	**70**	0	70	**70**	4	79	1	**79**	0	79	1	**79**	0	79	1	**79**
	Left-Through		0							0				0				0	
	Through	900	1	463	-3	897	462	192	1157	1	593	-3	1154	1	591	0	1154	1	591
	Through-Right		1							1				1				1	
	Right	26	0	26	0	26	26	0	28	0	28	0	28	0	28	0	28	0	28
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		North-South:		457	North-South:		457	North-South:			494	North-South:			494	North-South:			494
		East-West:		618	East-West:		617	East-West:			754	East-West:			752	East-West:			752
		SUM:		1075	SUM:		1074	SUM:			1248	SUM:			1246	SUM:			1246
VOLUME/CAPACITY (V/C) RATIO:				0.717			0.716				0.832				0.831				0.831
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.617**			**0.616**				**0.732**				**0.731**				**0.731**
LEVEL OF SERVICE (LOS):				B			B				C				C				C

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project: -0.001 | Δ*v/c* after mitigation: -0.001

Significant impacted? NO | Fully mitigated? N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Normandie Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
17	East-West Street:	Sunset Blvd	Projection Year:	2024	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2				2				2		
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0				0				0		
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2				2				2		
Override Capacity			0			0			0				0				0		

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	120	0	120	0	120	120	0	129	0	**129**	0	129	0	**129**	0	129	0	**129**
	Left-Through		0							0				0				0	
	Through	250	0	**440**	0	250	**440**	5	273	0	477	0	273	0	477	0	273	0	477
	Through-Right		0							0				0				0	
	Right	70	0	0	0	70	0	0	75	0	0	0	75	0	0	0	75	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	46	0	**46**	0	46	**46**	0	49	0	49	0	49	0	49	0	49	0	49
	Left-Through		0							0				0				0	
	Through	250	0	364	0	250	364	7	275	0	**397**	0	275	0	**397**	0	275	0	**397**
	Through-Right		0							0				0				0	
	Right	68	0	0	0	68	0	0	73	0	0	0	73	0	0	0	73	0	0
	Left-Through-Right		1							1				1				1	
	Left-Right		0							0				0				0	
EASTBOUND	Left	71	1	71	0	71	71	0	76	1	76	0	76	1	76	0	76	1	76
	Left-Through		0							0				0				0	
	Through	1348	2	**494**	6	1354	**496**	177	1622	2	**589**	6	1628	2	**591**	-2	1626	2	**590**
	Through-Right		1							1				1				1	
	Right	134	0	134	0	134	134	0	144	0	144	0	144	0	144	0	144	0	144
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	60	1	**60**	0	60	**60**	0	64	1	**64**	0	64	1	**64**	0	64	1	**64**
	Left-Through		0							0				0				0	
	Through	1013	2	356	16	1029	361	196	1282	2	447	16	1298	2	452	-3	1295	2	451
	Through-Right		1							1				1				1	
	Right	54	0	54	0	54	54	0	58	0	58	0	58	0	58	0	58	0	58
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		486	*North-South:*		486	*North-South:*			526	*North-South:*			526	*North-South:*			526
		East-West:		554	*East-West:*		556	*East-West:*			653	*East-West:*			655	*East-West:*			654
		SUM:		1040	*SUM:*		1042	*SUM:*			1179	*SUM:*			1181	*SUM:*			1180
VOLUME/CAPACITY *(V/C)* RATIO:				0.693			0.695				0.786				0.787				0.787
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.593**			**0.595**				**0.686**				**0.687**				**0.687**
LEVEL OF SERVICE (LOS):				**A**			**A**				**B**				**B**				**B**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.001	Δ*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Normandie Ave	Year of Count:	2017	Ambient Growth: (%):	1	Conducted by:	GTC	Date:	February 2018
18	East-West Street:	Santa Monica Blvd	Projection Year:	2024	Peak Hour:	PM	Reviewed by:		Project:	J1475 Sunset Western

No. of Phases			2			2			2			2			2				2
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB--	0
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2				2
Override Capacity			0			0			0			0			0				0

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	89	0	**89**	0	89	**89**	11	106	0	**106**	0	106	0	**106**	0	106	0	**106**
Left-Through		1							1				1				1	
Through	360	0	331	0	360	331	0	386	0	365	0	386	0	365	0	386	0	365
Through-Right		1							1				1				1	
Right	123	0	331	0	123	331	0	132	0	365	0	132	0	365	0	132	0	365
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	72	0	72	0	72	72	0	77	0	77	0	77	0	77	0	77	0	77
Left-Through		0							0				0				0	
Through	424	0	**552**	0	424	**552**	4	459	0	**600**	0	459	0	**600**	0	459	0	**600**
Through-Right		0							0				0				0	
Right	56	0	0	0	56	0	4	64	0	0	0	64	0	0	0	64	0	0
Left-Through-Right		1							1				1				1	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	55	1	55	0	55	55	5	64	1	64	0	64	1	64	0	64	1	64
Left-Through		0							0				0				0	
Through	1092	1	**599**	3	1095	**600**	103	1274	1	**697**	3	1277	1	**698**	-1	1276	1	**698**
Through-Right		1							1				1				1	
Right	105	0	105	0	105	105	6	119	0	119	0	119	0	119	0	119	0	119
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	95	1	**95**	0	95	**95**	0	102	1	**102**	0	102	1	**102**	0	102	1	**102**
Left-Through		0							0				0				0	
Through	792	1	429	8	800	433	116	965	1	518	8	973	1	522	-1	972	1	522
Through-Right		1							1				1				1	
Right	66	0	66	0	66	66	0	71	0	71	0	71	0	71	0	71	0	71
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		641	*North-South:*		641	*North-South:*			706	*North-South:*			706	*North-South:*			706
	East-West:		694	*East-West:*		695	*East-West:*			799	*East-West:*			800	*East-West:*			800
	SUM:		1335	*SUM:*		1336	*SUM:*			1505	*SUM:*			1506	*SUM:*			1506
VOLUME/CAPACITY *(V/C)* RATIO:			0.890			0.891				1.003				1.004				1.004
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.790**			**0.791**				**0.903**				**0.904**				**0.904**
LEVEL OF SERVICE (LOS):			**C**			**C**				**E**				**E**				**E**

REMARKS:

Version: 1i Beta; 8/4/2011

PROJECT IMPACT

Change in *v/c* due to project:	0.001	Δ*v/c* after mitigation:	0.001
Significant impacted?	NO	Fully mitigated?	N/A

Appendix E

NCHRP 8-51 Internal Trip Capture Estimation Tool Calculations

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	J1475 Sunset/Western Mixed-Use	**Organization:**	GTC
Project Location:	Los Angeles, CA	**Performed By:**	
Scenario Description:	Project	**Date:**	18-Dec-17
Analysis Year:	2017	**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office						
Retail	820	36,720	sf	31	22	13
Restaurant						
Cinema/Entertainment						
Residential	220	735	du	317	75	300
Hotel						
All Other Land Uses[2]	850	59,100	sf	173	300	75
Total				521	397	388

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office	1.10			1.10		
Retail	1.80			1.80		
Restaurant	1.80			1.80		
Cinema/Entertainment						
Residential	1.10			1.10		
Hotel						
All Other Land Uses[2]	1.80			1.80		

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	2	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	3	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	1,151	663	488
Internal Capture Percentage	1%	1%	1%
External Vehicle-Trips[3]	779	395	384
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	8%	9%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	2%	1%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	J1475 Sunset/Western Mixed-Use
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.10	0	0	1.10	0	0
Retail	1.80	22	40	1.80	13	23
Restaurant	1.80	0	0	1.80	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.10	75	83	1.10	300	330
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	7		3	0	3	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	7	3	66	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		13	0	0	0	0
Retail	0		0	0	2	0
Restaurant	0	3		0	4	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	7	0	0		0
Hotel	0	2	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	3	37	40	21	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	2	81	83	74	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	540	540	300	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	2	21	23	12	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	3	327	330	297	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	135	135	75	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	J1475 Sunset/Western Mixed-Use	**Organization:**	GTC
Project Location:	Los Angeles, CA	**Performed By:**	
Scenario Description:	Project	**Date:**	18-Dec-17
Analysis Year:	2017	**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office						
Retail	820	36,720	sf	120	65	71
Restaurant						
Cinema/Entertainment						
Residential	220	735	du	386	286	274
Hotel						
All Other Land Uses[2]	850	59,100	sf	484	290	279
Total				990	641	624

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office	1.10			1.10		
Retail	1.80			1.80		
Restaurant	1.80			1.80		
Cinema/Entertainment						
Residential	1.10			1.10		
Hotel						
All Other Land Uses[2]	1.80			1.80		

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	33	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	12	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	1,885	954	931
Internal Capture Percentage	5%	5%	5%
External Vehicle-Trips[3]	1,199	604	595
External Transit-Trips[4]	0	0	0
External Non-Motorized Trips[4]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	10%	26%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	10%	4%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	J1475 Sunset/Western Mixed-Use
Analysis Period:	**PM Street Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.10	0	0	1.10	0	0
Retail	1.80	65	117	1.80	71	128
Restaurant	1.80	0	0	1.80	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.10	286	315	1.10	274	301
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	3		37	5	33	6
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	12	126	63	0		9
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		9	0	0	13	0
Retail	0		0	0	145	0
Restaurant	0	59		0	50	0
Cinema/Entertainment	0	5	0		13	0
Residential	0	12	0	0		0
Hotel	0	2	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	12	105	117	58	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	33	282	315	256	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	522	522	290	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	0	0	0	0	0	0
Retail	33	95	128	53	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	12	289	301	263	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	502	502	279	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Table 7.1a Adjusted Internal Trip Capture Rates for Trip Origins within a Multi-Use Development			
Land Use Pairs		Weekday	
		AM Peak Hour	PM Peak Hour
From OFFICE	To Office	0.0%	0.0%
	To Retail	28.0%	20.0%
	To Restaurant	63.0%	4.0%
	To Cinema/Entertainment	0.0%	0.0%
	To Residential	1.0%	2.0%
	To Hotel	0.0%	0.0%
From RETAIL	To Office	29.0%	2.0%
	To Retail	0.0%	0.0%
	To Restaurant	13.0%	29.0%
	To Cinema/Entertainment	0.0%	4.0%
	To Residential	14.0%	26.0%
	To Hotel	0.0%	5.0%
From RESTAURANT	To Office	31.0%	3.0%
	To Retail	14.0%	41.0%
	To Restaurant	0.0%	0.0%
	To Cinema/Entertainment	0.0%	8.0%
	To Residential	4.0%	18.0%
	To Hotel	3.0%	7.0%
From CINEMA/ENTERTAINMENT	To Office	0.0%	2.0%
	To Retail	0.0%	21.0%
	To Restaurant	0.0%	31.0%
	To Cinema/Entertainment	0.0%	0.0%
	To Residential	0.0%	8.0%
	To Hotel	0.0%	2.0%
From RESIDENTIAL	To Office	2.0%	4.0%
	To Retail	1.0%	42.0%
	To Restaurant	20.0%	21.0%
	To Cinema/Entertainment	0.0%	0.0%
	To Residential	0.0%	0.0%
	To Hotel	0.0%	3.0%
From HOTEL	To Office	75.0%	0.0%
	To Retail	14.0%	16.0%
	To Restaurant	9.0%	68.0%
	To Cinema/Entertainment	0.0%	0.0%
	To Residential	0.0%	2.0%
	To Hotel	0.0%	0.0%

Table 7.2a Adjusted Internal Trip Capture Rates for Trip Destinations within a Multi-Use Development			
Land Use Pairs		Weekday	
		AM Peak Hour	PM Peak Hour
To OFFICE	From Office	0.0%	0.0%
	From Retail	4.0%	31.0%
	From Restaurant	14.0%	30.0%
	From Cinema/Entertainment	0.0%	6.0%
	From Residential	3.0%	57.0%
	From Hotel	3.0%	0.0%
To RETAIL	From Office	32.0%	8.0%
	From Retail	0.0%	0.0%
	From Restaurant	8.0%	50.0%
	From Cinema/Entertainment	0.0%	4.0%
	From Residential	17.0%	10.0%
	From Hotel	4.0%	2.0%
To RESTAURANT	From Office	23.0%	2.0%
	From Retail	50.0%	29.0%
	From Restaurant	0.0%	0.0%
	From Cinema/Entertainment	0.0%	3.0%
	From Residential	20.0%	14.0%
	From Hotel	6.0%	5.0%
To CINEMA/ENTERTAINMENT	From Office	0.0%	1.0%
	From Retail	0.0%	26.0%
	From Restaurant	0.0%	32.0%
	From Cinema/Entertainment	0.0%	0.0%
	From Residential	0.0%	0.0%
	From Hotel	0.0%	0.0%
To RESIDENTIAL	From Office	0.0%	4.0%
	From Retail	2.0%	46.0%
	From Restaurant	5.0%	16.0%
	From Cinema/Entertainment	0.0%	4.0%
	From Residential	0.0%	0.0%
	From Hotel	0.0%	0.0%
To HOTEL	From Office	0.0%	0.0%
	From Retail	0.0%	17.0%
	From Restaurant	4.0%	71.0%
	From Cinema/Entertainment	0.0%	1.0%
	From Residential	0.0%	12.0%
	From Hotel	0.0%	0.0%

Appendix F

Conceptual Mitigation Plans

80 0 80 160

1" =80' GRAPHIC SCALE

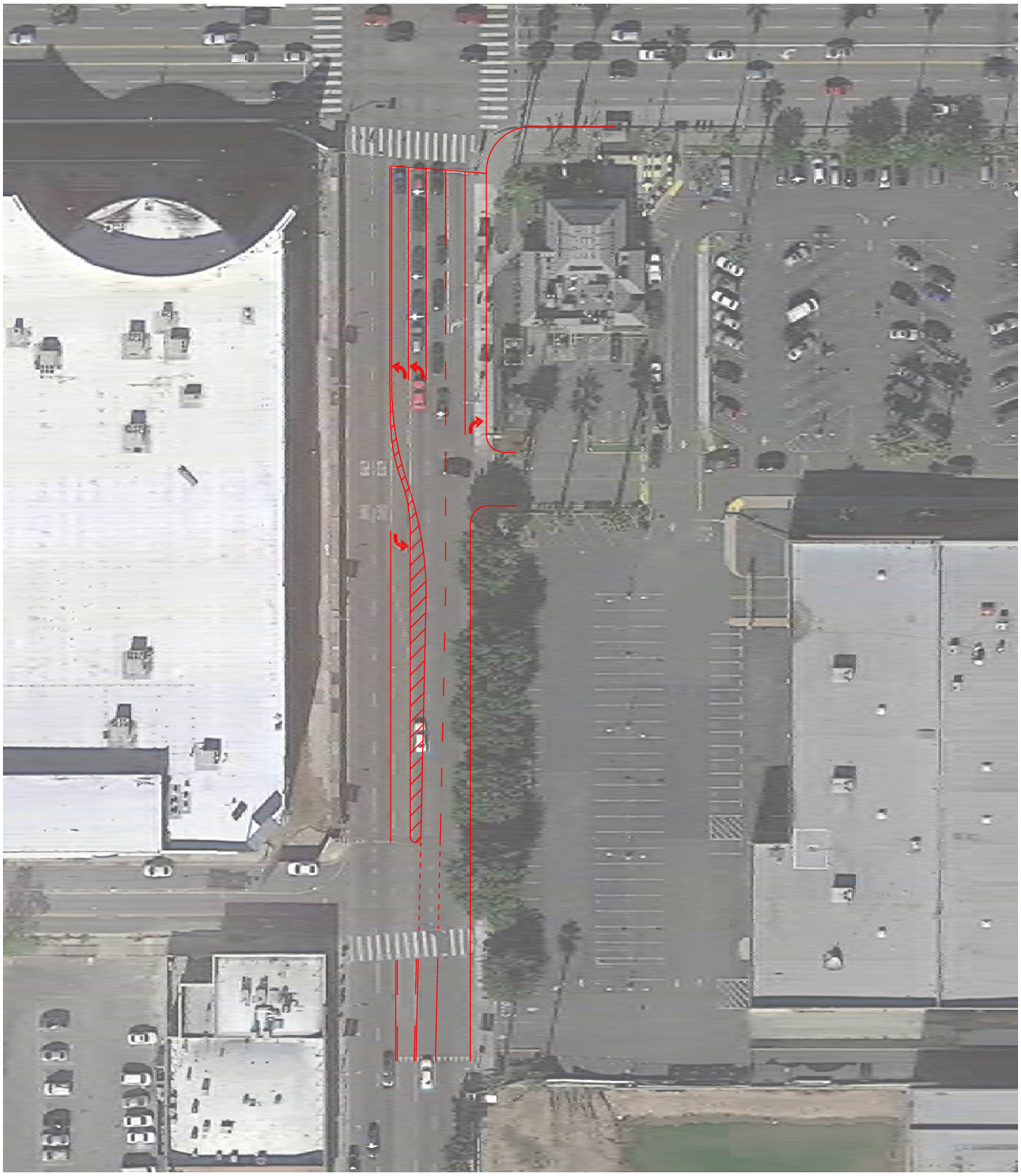
N

VAN NESS AVENUE & SUNSET BOULEVARD (INTERSECTION 2)
CONCEPTUAL MITIGATION DRAWING

FIGURE
F-1

WESTERN AVENUE & HOLLYWOOD BOULEVARD (INTERSECTION 9)
CONCEPTUAL MITIGATION DRAWING

FIGURE
F-2



WESTERN AVENUE & SUNSET BOULEVARD (INTERSECTION 10)
CONCEPTUAL MITIGATION DRAWING

FIGURE
F-3

Appendix G

Sunset Boulevard Secondary Impact Analysis

Arterial Level of Service: EB Sunset Bl

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Bronson Ave	1	13.9	26.3	0.1	16
Van Ness Ave	2	31.3	46.0	0.1	10
US 101 SB On-Ramp	1012	3.2	8.8	0.0	20
US 101 NB Off-Ramp	1025	5.9	11.9	0.0	15
Wilton Pl	4	7.9	10.2	0.0	9
St Andrews Pl	7	7.7	24.8	0.2	22
Western Ave	10	14.1	24.3	0.1	14
Serrano Ave	14	3.6	18.8	0.1	24
Total		87.6	171.1	0.7	16

Arterial Level of Service: WB Sunset Bl

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Serrano Ave	14	4.0	15.1	0.1	23
Western Ave	10	29.5	42.7	0.1	10
St Andrews Pl	7	20.4	32.2	0.1	11
Wilton Pl	4	19.4	35.6	0.2	15
US 101 NB Off-Ramp	1025	3.8	7.4	0.0	12
US 101 SB On-Ramp	1012	8.7	13.9	0.0	13
Van Ness Ave	2	17.0	22.6	0.0	8
Bronson Ave	1	5.4	19.4	0.1	23
Total		108.2	189.0	0.7	14

Arterial Level of Service: EB Sunset Bl

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Bronson Ave	1	32.4	45.4	0.1	9
Van Ness Ave	2	23.6	37.1	0.1	12
US 101 SB On-Ramp	1012	5.0	11.0	0.0	16
US 101 NB Off-Ramp	1025	9.3	15.3	0.0	12
Wilton Pl	4	7.4	10.5	0.0	9
St Andrews Pl	7	9.2	26.3	0.2	21
Western Ave	10	40.4	51.4	0.1	7
Serrano Ave	14	11.9	25.6	0.1	17
Total		139.2	222.6	0.7	12

Arterial Level of Service: WB Sunset Bl

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Serrano Ave	14	7.4	18.4	0.1	19
Western Ave	10	31.5	45.1	0.1	10
St Andrews Pl	7	7.8	18.9	0.1	19
Wilton Pl	4	11.1	28.1	0.2	20
US 101 NB Off-Ramp	1025	1.7	5.3	0.0	17
US 101 SB On-Ramp	1012	4.2	9.7	0.0	18
Van Ness Ave	2	13.9	19.4	0.0	9
Bronson Ave	1	32.3	46.3	0.1	10
Total		110.0	191.3	0.7	14

Arterial Level of Service: EB Sunset Bl

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Bronson Ave	1	12.9	25.2	0.1	16
Van Ness Ave	2	10.3	24.7	0.1	18
US 101 SB On-Ramp	1012	2.1	7.8	0.0	23
US 101 NB Off-Ramp	1025	8.6	14.6	0.0	12
Wilton Pl	4	9.1	11.5	0.0	8
St Andrews Pl	7	7.2	24.5	0.2	22
Western Ave	10	13.5	23.3	0.1	15
Serrano Ave	14	3.3	18.5	0.1	24
Total		67.0	150.1	0.7	18

Arterial Level of Service: WB Sunset Bl

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Serrano Ave	14	2.9	14.0	0.1	25
Western Ave	10	37.6	50.4	0.1	9
St Andrews Pl	7	23.5	34.8	0.1	10
Wilton Pl	4	42.2	57.8	0.2	9
US 101 NB Off-Ramp	1025	6.1	9.8	0.0	9
US 101 SB On-Ramp	1012	17.3	22.5	0.0	8
Van Ness Ave	2	14.0	19.5	0.0	9
Bronson Ave	1	17.6	31.9	0.1	14
Total		161.3	240.6	0.7	11

Arterial Level of Service: EB Sunset Bl

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Bronson Ave	1	40.6	56.9	0.1	8
Van Ness Ave	2	32.8	46.0	0.1	10
US 101 SB On-Ramp	1012	4.3	10.3	0.0	17
US 101 NB Off-Ramp	1025	8.7	14.7	0.0	12
Wilton Pl	4	7.6	10.3	0.0	9
St Andrews Pl	7	7.7	25.0	0.2	22
Western Ave	10	27.6	38.1	0.1	9
Serrano Ave	14	16.9	30.9	0.1	14
Total		146.2	232.1	0.7	12

Arterial Level of Service: WB Sunset Bl

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Serrano Ave	14	7.3	18.2	0.1	19
Western Ave	10	33.0	46.6	0.1	10
St Andrews Pl	7	6.7	18.1	0.1	19
Wilton Pl	4	9.0	25.7	0.2	21
US 101 NB Off-Ramp	1025	1.4	5.1	0.0	18
US 101 SB On-Ramp	1012	4.1	9.5	0.0	19
Van Ness Ave	2	18.8	24.2	0.0	7
Bronson Ave	1	30.1	43.9	0.1	10
Total		110.3	191.2	0.7	14

Appendix H

Caltrans Analysis

Appendix H
Caltrans Analysis

This Appendix presents an analysis of Caltrans facilities, including freeway mainline segments, Caltrans intersections, and off-ramp queuing to provide further information to the decision makers.

ANALYZED FACILITIES

As shown in Table H-1, the analyses conducted on Caltrans facilities included freeway mainline segments, signalized intersections along Santa Monica Boulevard under Caltrans jurisdiction, and off-ramp queuing.

Five freeway mainline segments on US 101 were analyzed using the HCM 2010 methodology to determine density, speed, and LOS. Five signalized intersections along Santa Monica Boulevard under Caltrans jurisdiction were also analyzed using HCM 2010 methodology to identify average vehicle delay and LOS. Three freeway off-ramps were analyzed using the Synchro software to estimate queue lengths.

IMPACT THRESHOLDS

The Caltrans TIS Guide states that Caltrans' target LOS is "at the transition between LOS C and LOS D," which is generally interpreted to mean in the lower half of the range of LOS D (where the LOS is determined based on the freeway mainline density or the intersection delay). When that threshold has already been exceeded and becomes "deficient" (worse than LOS D), the existing condition (or projected future condition) should be maintained with the addition of Project traffic.

However, Caltrans does not identify specific incremental criteria by which to measure the significance of impacts to freeway mainline segments or intersections with ramp termini and, therefore, it is not possible to identify whether a specific facility would be significantly impacted under Caltrans criteria.

Moreover, improvements to Caltrans freeway facilities tend to be beyond the feasibility of any individual project to implement; therefore, Appendix B of the Caltrans TIS Guide provides a methodology to identify a project's proportionate share of the future traffic growth on the Caltrans freeways facilities. The fair share, although not technically or legally tied to either a project impact or mitigation measure per se, is calculated by Caltrans as the percentage of the total projected traffic growth on a freeway mainline segment up to Year 2035.

FREEWAY MAINLINE SEGMENTS

The freeway mainline segments were analyzed using the HCM 2010 methodology. Per Caltrans' guidelines, a free-flow speed of 55 mph was assumed in the analysis. The LOS definitions for freeway mainline segments are presented in Table H-2.

Year 2017 Conditions

Existing freeway volumes were collected using available traffic data from Caltrans' Performance Measurement System (PeMS) database for an average weekday, summarized in Table H-3. Table H-4 summarizes the results of the HCM 2010 analysis for Existing Conditions and Existing with Project Conditions in Year 2017.

Table H-4 summarizes the Existing and Existing with Project operating conditions based on the speed, density, and LOS for each of the freeway mainline segments. As shown in Table H-4, the speed on the freeway mainline lanes will not be affected by the addition of Project traffic. Likewise, for the five segments the density increases are nominal. In addition, implementation of the mitigation program would reduce Project traffic on the freeway mainline, thereby reducing the Project-related increases in speed and density.

Year 2024 Conditions

Traffic volumes were projected for Year 2024 to reflect the Project buildout year and are summarized in Table H-3. The existing traffic volumes were increased by both ambient growth (assumed to be 1% per year) and Related Project traffic, in the same manner as Future without Project traffic volumes were developed for Year 2024 in Chapter 3. Table H-5 summarizes the results of the HCM 2010 analysis for Future without Project Conditions and Future with Project Conditions for Year 2024. Speeds stayed consistent with addition of Project traffic and density increased by up to 1.0 vehicle per lane per hour or less.

Year 2035 Conditions

Traffic volumes were projected for Year 2035 to reflect an 18-year horizon and for fair-share calculation purposes and are summarized in Table H-3. The existing traffic volumes were increased by both ambient growth (assumed to be 1% per year) and Related Project traffic, in the same manner as Future without Project traffic volumes were developed for Year 2024 in Chapter 3. Table H-6 summarizes the results of the HCM 2010 analysis for Future without Project Conditions and Future with Project Conditions for Year 2035. Speeds stayed relatively consistent with the addition of Project traffic and density increased by up to 1.0 vehicle per lane per hour or less.

As shown in Table H-3, the Project would add a maximum of 58 vehicles per hour in one direction of travel. While the Project would contribute to future cumulative traffic growth on the freeway system, the Project traffic represents an average increase in traffic of 1.42%, as shown in Table H-7. Project traffic growth at its highest segments would represent the addition of two cars every 10 minutes per lane of freeway, a nominal incremental increase.

INTERSECTIONS

As described in Chapter 2, a total of 18 signalized intersections, located in the City of Los Angeles are analyzed as part of the traffic study according to the significance thresholds established by the City (the Lead Agency). As shown in Table H-1, this Caltrans analysis

focuses on five signalized intersections located along Santa Monica Boulevard, a Caltrans facility within the City of Los Angeles.

Overview

As described in Chapter 7, in response to significant impacts identified using City significance criteria, the Project would implement various mitigation measures that would improve operations at the study intersections, including the intersections within partial Caltrans jurisdiction. The Project would implement a TDM program and participate in the Hollywood TMO, which will reduce ambient traffic and Project traffic throughout the Study Area, and generally improve intersection operating conditions. As shown in Chapter 8, the mitigation measures would reduce Project-related vehicular traffic and improve intersection operating conditions.

Caltrans does not have specific criteria to determine significance of incremental changes in intersection operations. Therefore, the significance of the traffic-related impacts on Caltrans facilities is based on the Lead Agency's significance thresholds and analyses, which is presented in Chapters 1 through 10.

The intersections under Caltrans jurisdiction were further analyzed using the HCM 2010 methodology according to Caltrans TIS Guidelines and implemented using the Synchro software. Table H-8 summarizes the LOS definitions for signalized intersections.

Year 2017 Conditions

The analysis of Year 2017 conditions was conducted using available traffic count data, provided in Appendix C. Table H-9 summarizes the results of the HCM 2010 analysis for Existing Conditions and Existing with Project Conditions in Year 2017. The incremental difference in intersection delay with and without the Project at each of the five analyzed intersections is 1.1 seconds or less.

Year 2024 Conditions

The Year 2024 traffic volumes were developed by increasing the existing traffic volumes with both ambient growth (assumed to be 1% per year) and Related Project traffic, in the same manner as Future without Project traffic volumes were developed for Year 2024 in Chapter 3. Table H-10 summarizes the results of the signalized HCM 2010 analysis for Future without Project Conditions and Future with Project Conditions for Year 2024. The incremental difference in intersection delay with and without the Project at each of the five analyzed intersections is 2.6 seconds or less.

Year 2035 Conditions

The Year 2035 traffic volumes were developed by increasing the existing traffic volumes with both ambient growth (assumed to be 1% per year) and Related Project traffic, in the same manner as Future without Project traffic volumes were developed for Year 2024 in Chapter 3.

Table H-11 summarizes the results of the HCM 2010 analysis for Future without Project Conditions and Future with Project Conditions in Year 2035. The incremental difference in intersection delay with and without the Project at each of the five analyzed intersections is 3.2 seconds or less.

OFF-RAMP QUEUES

Caltrans off-ramps were analyzed to determine whether the lengths of the ramps are sufficient to accommodate vehicle queue lengths. The queue lengths were estimated using Synchro, which reports the 95th percentile queue length, in feet, for each approach lane on the off-ramp.

The assessment of the off-ramps includes a review of the vehicle queue length as compared to the total available queuing capacity of the ramp to determine whether the vehicle queue would extend beyond the length of the ramp onto the mainline. To this end, the queuing analysis looks at two separate components of ramp capacity: the length of each approach lane to the intersection and the remaining length of the ramp, behind any approach lane delineation lines,

to the gore point where the ramp diverges from the freeway mainline. The queue may exceed the striped length of a given approach lane, but as long as there is sufficient additional queuing capacity on the ramp, it will not spill over onto the mainline.

Year 2017 Conditions

The analysis of Year 2017 conditions was conducted using available traffic count data, provided in Appendix C. Table H-12 summarizes the results of the queuing analysis for Existing Conditions and Existing with Project Conditions in Year 2017. As shown in Table H-12, none of the analyzed off-ramps exceed the capacity of the approach lanes or the ramps. The Project would not substantially worsen queuing at any location.

Year 2024 Conditions

The Year 2024 traffic volumes were developed by increasing the existing traffic volumes by both ambient growth (assumed to be 1% per year) and Related Project traffic, in the same manner as Future without Project traffic volumes were developed for Year 2024 in Chapter 3. Table H-13 summarizes the results of the queuing analysis for Future without Project Conditions and Future with Project Conditions for Year 2024. As shown in Table H-13, the US 101 Northbound Off-Ramp at Santa Monica Boulevard would have queues exceeding the available storage on the ramp during the afternoon peak hour, with and without Project traffic. The queue lengths at the remaining two off-ramps would not exceed the capacity of the approach lanes or the ramps.

Year 2035 Conditions

The Year 2035 traffic volumes were developed by increasing the existing traffic volumes by both ambient growth (assumed to be 1% per year) and Related Project traffic, in the same manner as Future without Project traffic volumes were developed for Year 2024 in Chapter 3. Table H-14 summarizes the results of the queuing analysis for Future without Project Conditions and Future with Project Conditions for Year 2035. As shown in Table H-14, the US 101 Northbound Off-Ramp at Santa Monica Boulevard would have queues exceeding the available storage on the

ramp during the afternoon peak hour, with and without Project traffic. The queue lengths at the remaining two off-ramps would not exceed the capacity of the approach lanes or the ramps.

Off-Ramp Results

The queue during the afternoon peak hour at US 101 Northbound Off-Ramp at Santa Monica Boulevard extends beyond the available capacity under Future Year 2024 and Year 2035 Conditions, with and without the addition of Project traffic. The addition of Project traffic does not substantially increase the off-ramp queue (less than one vehicle length). The queues at the remaining two off-ramps would not extend onto the freeway mainline under any of the analyzed conditions.

TABLE H-1
ANALYZED CALTRANS FACILITIES

ID	Location
Freeway Mainline Segments	
FS-1.	US 101 between Gower Street/Argyle Avenue & Hollywood Boulevard
FS-2.	US 101 between Hollywood Boulevard & Sunset Boulevard
FS-3.	US 101 between Sunset Boulevard & Western Avenue
FS-4.	US 101 between Western Avenue & Santa Monica Boulevard
FS-5.	US 101 between Santa Monica Boulevard & Melrose Avenue
Signalized Intersections	
S-1.	Wilton Place & Santa Monica Boulevard (Intersection #6)
S-2.	Western Avenue & Santa Monica Boulevard (Intersection #13)
S-3.	US 101 Southbound On-Ramp/Oxford Avenue & Santa Monica Boulevard
S-4.	US 101 Northbound Off-Ramp/Serrano Avenue & Santa Monica Boulevard
S-5.	Normandie Avenue & Santa Monica Boulevard (Intersection #18)
Off-Ramp Queues	
Q-1.	US 101 Southbound Off-Ramp/Van Ness & Harold Way
Q-2.	Wilton Place & US 101 Northbound Off-Ramp/Harold Way
Q-3.	US 101 Northbound Off-Ramp/Serrano Avenue & Santa Monica Boulevard

TABLE H-2
FREEWAY SEGMENT LEVEL OF SERVICE DEFINITIONS - DENSITY

Level of Service	Description	Density [a]
A	Free-flow speeds prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.	≤ 11
B	Free-flow speeds are maintained. The ability to maneuver with the traffic stream is only slightly restricted.	> 11 and ≤ 18
C	Flow with speeds at or near free-flow speeds. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver.	> 18 and ≤ 26
D	Speeds decline slightly with increasing flows. Freedom to maneuver with the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort.	> 26 and ≤ 35
E	Operation at capacity. There are virtually no usable gaps within the traffic stream, leaving little room to maneuver. Any disruption can be expected to produce a breakdown with queuing.	> 35 and ≤ 45
F	Represents a breakdown in flow and oversaturated conditions.	> 45

Notes

Source: *2010 Highway Capacity Manual* (Transportation Research Board, 2010) and Caltrans.

[a] Density is defined in vehicles per mile per lane and describes the proximity to other vehicles and is related to the freedom to maneuver within the traffic stream (*2010 Highway Capacity Manual,* Transportation Research Board, 2010).

TABLE H-3
FREEWAY MAINLINE SEGMENT TRAFFIC VOLUMES

Freeway Mainline Segment	Peak Hour	Direction	Vehicles per Hour (VPH)					
			Existing Conditions [a]	Existing with Project Conditions	Future without Project Conditions (Year 2024)	Future with Project Conditions (Year 2024)	Future without Project Conditions (Year 2035)	Future with Project Conditions (Year 2035)
US 101 between Gower Street/Argyle Avenue & Hollywood Boulevard	AM Peak Hour	NB	6,132	6,190	6,806	6,864	8,035	8,093
		SB	4,952	4,962	5,580	5,590	6,622	6,632
	PM Peak Hour	NB	4,419	4,445	5,116	5,142	6,177	6,203
		SB	4,612	4,662	5,284	5,334	6,462	6,512
US 101 between Hollywood Boulevard & Sunset Boulevard	AM Peak Hour	NB	7,407	7,442	8,195	8,230	9,604	9,639
		SB	4,523	4,533	5,091	5,101	6,050	6,060
	PM Peak Hour	NB	5,080	5,096	5,814	5,830	6,946	6,962
		SB	4,207	4,257	4,922	4,972	6,122	6,172
US 101 between Sunset Boulevard & Western Avenue	AM Peak Hour	NB	6,351	6,393	7,339	7,381	8,913	8,955
		SB	4,224	4,249	4,750	4,775	5,586	5,611
	PM Peak Hour	NB	4,665	4,704	5,646	5,685	7,026	7,065
		SB	3,890	3,903	4,573	4,586	5,699	5,712
US 101 between Western Avenue & Santa Monica Boulevard	AM Peak Hour	NB	6,273	6,279	7,168	7,174	8,622	8,628
		SB	4,286	4,311	4,964	4,989	5,957	5,982
	PM Peak Hour	NB	4,417	4,440	5,267	5,290	6,423	6,446
		SB	3,960	3,973	4,834	4,847	6,169	6,182
US 101 between Santa Monica Boulevard & Melrose Avenue	AM Peak Hour	NB	6,455	6,465	7,617	7,627	9,390	9,400
		SB	4,194	4,252	5,073	5,131	6,275	6,333
	PM Peak Hour	NB	4,816	4,866	6,019	6,069	7,565	7,615
		SB	3,819	3,845	4,984	5,010	6,649	6,675

Notes
[a] Existing traffic volume based on available typical weekday data for September 2016 from Caltrans *Performance Measurement System* (PeMS). An ambient growth rate of 1% per year was applied to the traffic volume data from Caltrans published volume data to reflect Existing Year 2017 traffic conditions.

TABLE H-4
EXISTING OPERATING CONDITIONS (YEAR 2017)
FREEWAY SEGMENT LEVEL OF SERVICE EVALUATION

ID	Freeway Segment	Peak Hour	Direction	Existing Conditions			Existing with Project Conditions		
				Speed [a][b]	**Density** [b][c]	**LOS**	**Speed** [a][b]	**Density** [b][c]	**LOS**
FS-1.	US 101 between Gower Street/Argyle Avenue & Hollywood Boulevard	AM	NB	55	30	D	55	31	D
			SB	55	24	C	55	25	C
		PM	NB	55	22	C	55	22	C
			SB	55	23	C	55	23	C
FS-2.	US 101 between Hollywood Boulevard & Sunset Boulevard	AM	NB	54	37	E	54	38	E
			SB	55	22	C	55	22	C
		PM	NB	55	25	C	55	25	C
			SB	55	21	C	55	21	C
FS-3.	US 101 between Sunset Boulevard & Western Avenue	AM	NB	55	31	D	55	32	D
			SB	55	21	C	55	21	C
		PM	NB	55	23	C	55	23	C
			SB	55	19	C	55	19	C
FS-4.	US 101 between Western Avenue & Santa Monica Boulevard	AM	NB	55	31	D	55	31	D
			SB	55	21	C	55	21	C
		PM	NB	55	22	C	55	22	C
			SB	55	20	C	55	20	C
FS-5.	US 101 between Santa Monica Boulevard & Melrose Avenue	AM	NB	55	32	D	55	32	D
			SB	55	21	C	55	21	C
		PM	NB	55	24	C	55	24	C
			SB	55	19	C	55	19	C

Notes

[a] Mean speed measured in miles per hour (mph).

[b] Methodology from *2010 Highway Capacity Manual* (Transportation Research Board, 2010).

[c] Measured in vehicles per mile per lane (v/m/l) for freeways with a free-flow speed of 55 mph. Free-flow speed, as defined in HCM 2010, is the theoretical speed when the density and flow rate of the freeway mainline segment are both zero.

TABLE H-5
FUTURE OPERATING CONDITIONS (YEAR 2024)
FREEWAY SEGMENT LEVEL OF SERVICE EVALUATION

ID	Freeway Segment	Peak Hour	Direction	Future without Project Conditions			Future with Project Conditions		
				Speed [a][b]	**Density** [b][c]	**LOS**	**Speed** [a][b]	**Density** [b][c]	**LOS**
FS-1.	US 101 between Gower Street/Argyle Avenue & Hollywood Boulevard	AM	NB	55	34	D	55	34	D
			SB	55	28	D	55	28	D
		PM	NB	55	25	C	55	25	C
			SB	55	26	D	55	26	D
FS-2.	US 101 between Hollywood Boulevard & Sunset Boulevard	AM	NB	51	44	E	50	44	E
			SB	55	25	C	55	25	C
		PM	NB	55	29	D	55	29	D
			SB	55	24	C	55	25	C
FS-3.	US 101 between Sunset Boulevard & Western Avenue	AM	NB	54	37	E	54	37	E
			SB	55	23	C	55	24	C
		PM	NB	55	28	D	55	28	D
			SB	55	23	C	55	23	C
FS-4.	US 101 between Western Avenue & Santa Monica Boulevard	AM	NB	54	36	E	54	36	E
			SB	55	25	C	55	25	C
		PM	NB	55	26	C	55	26	D
			SB	55	24	C	55	24	C
FS-5.	US 101 between Santa Monica Boulevard & Melrose Avenue	AM	NB	53	39	E	53	39	E
			SB	55	25	C	55	25	C
		PM	NB	55	30	D	55	30	D
			SB	55	25	C	55	25	C

Notes

[a] Mean speed measured in miles per hour (mph).

[b] Methodology from *2010 Highway Capacity Manual* (Transportation Research Board, 2010).

[c] Measured in vehicles per mile per lane (v/m/l) for freeways with a free-flow speed of 55 mph. Free-flow speed, as defined in HCM 2010, is the theoretical speed when the density and flow rate of the freeway mainline segment are both zero.

TABLE H-6
FUTURE OPERATING CONDITIONS (YEAR 2035)
FREEWAY SEGMENT LEVEL OF SERVICE EVALUATION

ID	Freeway Segment	Peak Hour	Direction	Future without Project Conditions			Future with Project Conditions		
				Speed [a][b]	**Density** [b][c]	**LOS**	**Speed** [a][b]	**Density** [b][c]	**LOS**
FS-1.	US 101 between Gower Street/Argyle Avenue & Hollywood Boulevard	AM	NB	51	42	E	51	43	E
			SB	55	33	D	55	33	D
		PM	NB	55	31	D	55	31	D
			SB	55	32	D	55	32	D
FS-2.	US 101 between Hollywood Boulevard & Sunset Boulevard	AM	NB	39	67	F	39	68	F
			SB	55	30	D	55	30	D
		PM	NB	55	34	D	55	35	D
			SB	55	30	D	55	31	D
FS-3.	US 101 between Sunset Boulevard & Western Avenue	AM	NB	46	53	F	45	54	F
			SB	55	28	D	55	28	D
		PM	NB	55	35	D	55	35	E
			SB	55	28	D	55	28	D
FS-4.	US 101 between Western Avenue & Santa Monica Boulevard	AM	NB	48	49	F	48	49	F
			SB	55	29	D	55	30	D
		PM	NB	55	32	D	55	32	D
			SB	55	30	D	55	31	D
FS-5.	US 101 between Santa Monica Boulevard & Melrose Avenue	AM	NB	41	62	F	41	62	F
			SB	55	31	D	55	31	D
		PM	NB	53	38	E	53	39	E
			SB	55	33	D	55	33	D

Notes

[a] Mean speed measured in miles per hour (mph).

[b] Methodology from *2010 Highway Capacity Manual* (Transportation Research Board, 2010).

[c] Measured in vehicles per mile per lane (v/m/l) for freeways with a free-flow speed of 55 mph. Free-flow speed, as defined in HCM 2010, is the theoretical speed when the density and flow rate of the freeway mainline segment are both zero.

TABLE H-7
PROPORTION OF PROJECTED FUTURE TRAFFIC
FUTURE YEAR 2035 CONDITIONS

Freeway Mainline Segment	Peak Hour	Direction	Vehicles per Hour (VPH)					Proportion of Projected Future Traffic Growth
			Existing	Related Projects	Ambient Growth	Project	Total Growth	
US 101 between Gower Street/Argyle Avenue & Hollywood Boulevard	AM Peak Hour	NB	6,132	701	1,202	58	1,961	3.00%
		SB	4,952	699	971	10	1,680	0.60%
	PM Peak Hour	NB	4,419	891	867	26	1,784	1.50%
		SB	4,612	946	904	50	1,900	2.60%
US 101 between Hollywood Boulevard & Sunset Boulevard	AM Peak Hour	NB	7,407	744	1,453	35	2,232	1.60%
		SB	4,523	640	887	10	1,537	0.70%
	PM Peak Hour	NB	5,080	870	996	16	1,882	0.90%
		SB	4,207	1,090	825	50	1,965	2.50%
US 101 between Sunset Boulevard & Western Avenue	AM Peak Hour	NB	6,351	1,317	1,245	42	2,604	1.60%
		SB	4,224	534	828	25	1,387	1.80%
	PM Peak Hour	NB	4,665	1,446	915	39	2,400	1.60%
		SB	3,890	1,046	763	13	1,822	0.70%
US 101 between Western Avenue & Santa Monica Boulevard	AM Peak Hour	NB	6,273	1,119	1,230	6	2,355	0.30%
		SB	4,286	831	840	25	1,696	1.50%
	PM Peak Hour	NB	4,417	1,140	866	23	2,029	1.10%
		SB	3,960	1,432	777	13	2,222	0.60%
US 101 between Santa Monica Boulevard & Melrose Avenue	AM Peak Hour	NB	6,455	1,669	1,266	10	2,945	0.30%
		SB	4,194	1,259	822	58	2,139	2.70%
	PM Peak Hour	NB	4,816	1,805	944	50	2,799	1.80%
		SB	3,819	2,081	749	26	2,856	0.90%

TABLE H-8
CALTRANS INTERSECTION LEVEL OF SERVICE DEFINITIONS

Level of Service	Description	Delay [a]
		Signalized Intersections
A	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.	≤ 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
C	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.	> 20 and ≤ 35
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
E	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.	> 55 and ≤ 80
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

Notes

Source: *2010 Highway Capacity Manual* (Transportation Research Board, 2010).

[a] Measured in seconds.

TABLE H-9
EXISTING WITH PROJECT CONDITIONS (YEAR 2017)
SIGNALIZED INTERSECTION LEVELS OF SERVICE

No.	Intersection	Peak Hour	Existing		Existing with Project	
			Delay	LOS	Delay	LOS
S-1.	Wilton Pl & Santa Monica Blvd (Intersection #6)	AM PM	22.2 20.9	C C	22.3 20.9	C C
S-2.	Western Ave & Santa Monica Blvd (Intersection #13)	AM PM	33.3 36.1	C D	34.4 36.4	C D
S-3.	US 101 Southbound On-Ramp/Oxford Ave & Santa Monica Blvd	AM PM	5.0 3.2	A A	4.7 3.2	A A
S-4.	US 101 Northbound Off-Ramp/Serrano Ave & Santa Monica Blvd	AM PM	23.8 22.5	C C	23.7 22.7	C C
S-5.	Normandie Ave & Santa Monica Blvd (intersection #18)	AM PM	13.5 20.9	B C	13.6 21.0	B C

Delay is measured in seconds per vehicle
LOS = Level of service
Results per Synchro 8 (HCM methodology).

TABLE H-10
FUTURE WITH PROJECT CONDITIONS (YEAR 2024)
SIGNALIZED INTERSECTION LEVELS OF SERVICE

No.	Intersection	Peak Hour	Future without Project		Future with Project	
			Delay	LOS	Delay	LOS
S-1.	Wilton Pl & Santa Monica Blvd (Intersection #6)	AM PM	25.8 32.7	C C	25.8 32.7	C C
S-2.	Western Ave & Santa Monica Blvd (Intersection #13)	AM PM	53.6 82.1	D F	55.7 83.1	E F
S-3.	US 101 Southbound On-Ramp/Oxford Ave & Santa Monica Blvd	AM PM	2.2 2.5	A A	2.2 2.4	A A
S-4.	US 101 Northbound Off-Ramp/Serrano Ave & Santa Monica Blvd	AM PM	27.9 44.5	C D	27.8 47.1	C D
S-5.	Normandie Ave & Santa Monica Blvd (intersection #18)	AM PM	14.7 29.5	B C	14.7 29.7	B C

Delay is measured in seconds per vehicle
LOS = Level of service
Results per Synchro 8 (HCM methodology).

TABLE H-11
FUTURE WITH PROJECT CONDITIONS (YEAR 2035)
SIGNALIZED INTERSECTION LEVELS OF SERVICE

No.	Intersection	Peak Hour	Future without Project		Future with Project	
			Delay	LOS	Delay	LOS
S-1.	Wilton Pl & Santa Monica Blvd (Intersection #6)	AM PM	43.1 79.7	D E	46.3 80.1	D F
S-2.	Western Ave & Santa Monica Blvd (Intersection #13)	AM PM	119.2 193.8	F F	122.3 195.8	F F
S-3.	US 101 Southbound On-Ramp/Oxford Ave & Santa Monica Blvd	AM PM	2.2 3.4	A A	2.2 3.4	A A
S-4.	US 101 Northbound Off-Ramp/Serrano Ave & Santa Monica Blvd	AM PM	32.0 168.3	C F	33.1 165.7	C F
S-5.	Normandie Ave & Santa Monica Blvd (intersection #18)	AM PM	22.6 76.1	C E	22.7 76.6	C E

Delay is measured in seconds per vehicle
LOS = Level of service
Results per Synchro 8 (HCM methodology).

TABLE H-12
FREEWAY OFF-RAMP QUEUE EVALUATION
EXISTING OPERATING CONDITIONS (YEAR 2017)

ID	Freeway Off-ramp	Ramp and Lane Description	Vehicle Storage Capacity [a]	Existing Conditions				Existing with Project Conditions			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Vehicle Queue Length [b]	Exceeds Capacity?	Vehicle Queue Length [b]	Exceeds Capacity?	Vehicle Queue Length [b]	Exceeds Capacity?	Vehicle Queue Length [b]	Exceeds Capacity?
Q-1.	US 101 SB Off-Ramp/Van Ness &	US 101 Southbound Off-Ramp									
	Harold Way	Through	267	215		110		230		133	
		Right	267	60		33		60		38	
		Ramp	566	0	NO	0	NO	0	NO	0	NO
Q-2.	Wilton Place &	US 101 Northbound Off-Ramp									
	US 101 NB Off-Ramp/Harold Way	Shared Left/Through	306	20		5		23		5	
		Right	306	100		8		110		13	
		Ramp	330	0	NO	0	NO	0	NO	0	NO
Q-3.	US 101 NB Off-Ramp/Serrano Avenue &	US 101 Northbound Off-Ramp									
	Santa Monica Boulevard	Left	160	160		160		160		160	
		Shared Left/Through/Right	160	0		160		0		160	
		Ramp	500	38	NO	308	NO	40	NO	345	NO

[a] Expressed in feet.

[b] 95th Percentile queue results per Synchro 8 (Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010). Synchro 8 queue results expressed in number of vehicles. Vehicle length is assumed to be 25 feet.

TABLE H-13
FREEWAY OFF-RAMP QUEUE EVALUATION
FUTURE OPERATING CONDITIONS (YEAR 2024)

ID	Freeway Off-ramp	Ramp and Lane Description	Vehicle Storage Capacity [a]	Future without Project Conditions				Future with Project Conditions			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Vehicle Queue Length [b]	Exceeds Capacity?	Vehicle Queue Length [b]	Exceeds Capacity?	Vehicle Queue Length [b]	Exceeds Capacity?	Vehicle Queue Length [b]	Exceeds Capacity?
Q-1.	US 101 SB Off-Ramp/Van Ness &	US 101 Southbound Off-Ramp									
	Harold Way	Through	267	267		148		267		175	
		Right	267	70		40		73		45	
		Ramp	566	33	NO	0	NO	46	NO	0	NO
Q-2.	Wilton Place &	US 101 Northbound Off-Ramp									
	US 101 NB Off-Ramp/Harold Way	Shared Left/Through	306	25		5		23		5	
		Right	306	143		18		143		23	
		Ramp	330	0	NO	0	NO	0	NO	0	NO
Q-3.	US 101 NB Off-Ramp/Serrano Avenue &	US 101 Northbound Off-Ramp									
	Santa Monica Boulevard	Left	160	160		160		160		160	
		Shared Left/Through/Right	160	0		160		0		160	
		Ramp	500	138	NO	1,435	**YES**	140	NO	1,533	**YES**

[a] Expressed in feet.

[b] 95th Percentile queue results per Synchro 8 (Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010). Synchro 8 queue results expressed in number of vehicles. Vehicle length is assumed to be 25 feet.

TABLE H-14
FREEWAY OFF-RAMP QUEUE EVALUATION
FUTURE OPERATING CONDITIONS (YEAR 2035)

ID	Freeway Off-ramp	Ramp and Lane Description	Vehicle Storage Capacity [a]	Future without Project Conditions				Future with Project Conditions			
				AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
				Vehicle Queue Length [b]	Exceeds Capacity?	Vehicle Queue Length [b]	Exceeds Capacity?	Vehicle Queue Length [b]	Exceeds Capacity?	Vehicle Queue Length [b]	Exceeds Capacity?
Q-1.	US 101 SB Off-Ramp/Van Ness &	US 101 Southbound Off-Ramp									
	Harold Way	Through	267	267		223		267		263	
		Right	267	93		50		93		55	
		Ramp	566	158	NO	0	NO	158	NO	0	NO
Q-2.	Wilton Place &	US 101 Northbound Off-Ramp									
	US 101 NB Off-Ramp/Harold Way	Shared Left/Through	306	30		5		30		5	
		Right	306	208		28		218		35	
		Ramp	330	0	NO	0	NO	0	NO	0	NO
Q-3.	US 101 NB Off-Ramp/Serrano Avenue &	US 101 Northbound Off-Ramp									
	Santa Monica Boulevard	Left	160	160		160		160		160	
		Shared Left/Through/Right	160	0		160		0		160	
		Ramp	500	313	NO	4,400	**YES**	298	NO	4,443	**YES**

[a] Expressed in feet.

[b] 95th Percentile queue results per Synchro 8 (Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010). Synchro 8 queue results expressed in number of vehicles. Vehicle length is assumed to be 25 feet.

Attachment

Level of Service Worksheets

EXISTING CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-1 US 101 Northbound

between Gower Street/Argyle Avenue & Hollywood Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,132	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			75.4 - f_{LW} - f_{LC}		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		- 3.22TRD^(0.84) =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ =	**1,664**	pc/h/ln	Density (D): $\frac{v_p}{S}$ =	**30.3**	pc/mi/ln
Speed (S):	**55.0**	mi/h	Level of Service (LOS):	**D**	

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-1 US 101 Southbound

between Gower Street/Argyle Avenue & Hollywood Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,952	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			75.4 - f_{LW} - f_{LC}		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		- 3.22TRD^(0.84) =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ = **1,344** pc/h/ln

Density (D): $\frac{v_p}{S}$ = **24.4** pc/mi/ln

Speed (S): **55.0** mi/h

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-1 US 101 Northbound

between Gower Street/Argyle Avenue & Hollywood Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,419	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}199} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{21.8} \text{ pc/mi/ln}$$

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-1 US 101 Southbound

between Gower Street/Argyle Avenue & Hollywood Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,612	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1,252} \text{ pc/h/ln}$$

Density (D):

$$\frac{v_p}{S} = \mathbf{22.8} \text{ pc/mi/ln}$$

Speed (S): **55.0** mi/h

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-2 US 101 Northbound

between Hollywood Boulevard & Sunset Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	7,407	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = ____ \text{ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{2{,}010} \text{ pc/h/ln}$$

Density (D):

$$\frac{v_p}{S} = \mathbf{37.3} \text{ pc/mi/ln}$$

Speed (S): **53.9** mi/h

Level of Service (LOS): **E**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-2 US 101 Southbound

between Hollywood Boulevard & Sunset Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,523	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1,227} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{22.3} \text{ pc/mi/ln}$$

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-2 US 101 Northbound

between Hollywood Boulevard & Sunset Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	5,080	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}379} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D): $\frac{v_p}{S}$ = **25.1** pc/mi/ln

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-2 US 101 Southbound

between Hollywood Boulevard & Sunset Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,207	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1,142} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{20.8} \text{ pc/mi/ln}$$

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-3 US 101 Northbound

between Sunset Boulevard & Western Avenue

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,351	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}724} \text{ pc/h/ln}$$

Density (D):

$$\frac{v_p}{S} = \mathbf{31.3} \text{ pc/mi/ln}$$

Speed (S): **55.0** mi/h

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-3 US 101 Southbound

between Sunset Boulevard & Western Avenue

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,224	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents for Trucks & Buses (E_T):	1.5		Lateral Clearance (f_{LC}):		mi/h
for RVs (E_R):	1.2		Total Ramp Density (TRD):		ramps/mi
Heavy Vehicle Factor (f_{HV}): $\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$	= 0.980		Free-Flow Speed: $75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$	=	mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ = **1,146** pc/h/ln

Density (D): $\frac{v_p}{S}$ = **20.8** pc/mi/ln

Speed (S): **55.0** mi/h

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-3 US 101 Northbound

between Sunset Boulevard & Western Avenue

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,665	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}266} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{23.0} \text{ pc/mi/ln}$$

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-3 US 101 Southbound

between Sunset Boulevard & Western Avenue

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	3,890	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1,056} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D): $\frac{v_p}{S}$ = **19.2** pc/mi/ln

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-4 US 101 Northbound

between Western Avenue & Santa Monica Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,273	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}702} \text{ pc/h/ln}$$

Density (D):

$$\frac{v_p}{S} = \mathbf{30.9} \text{ pc/mi/ln}$$

Speed (S): **55.0** mi/h

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-4 US 101 Southbound

between Western Avenue & Santa Monica Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,286	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}163} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D): $\frac{v_p}{S}$ = **21.1** pc/mi/ln

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-4 US 101 Northbound

between Western Avenue & Santa Monica Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,417	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}199} \text{ pc/h/ln}$$

Density (D):

$$\frac{v_p}{S} = \mathbf{21.8} \text{ pc/mi/ln}$$

Speed (S): **55.0** mi/h

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-4 US 101 Southbound

between Western Avenue & Santa Monica Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	3,960	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1,075} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D): $\frac{v_p}{S}$ = **19.5** pc/mi/ln

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-5 US 101 Northbound

between Santa Monica Boulevard & Melrose Avenue

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,455	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}752} \text{ pc/h/ln}$$

Density (D): $\frac{v_p}{S} = \mathbf{31.9}$ pc/mi/ln

Speed (S): **55.0** mi/h

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-5 US 101 Southbound

between Santa Monica Boulevard & Melrose Avenue

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,194	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}138} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D): $\frac{v_p}{S}$ = **20.7** pc/mi/ln

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-5 US 101 Northbound

between Santa Monica Boulevard & Melrose Avenue

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,816	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}307} \text{ pc/h/ln}$$

Density (D):

$$\frac{v_p}{S} = \mathbf{23.8} \text{ pc/mi/ln}$$

Speed (S): **55.0** mi/h

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-5 US 101 Southbound

between Santa Monica Boulevard & Melrose Avenue

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	3,819	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}036} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D): $\frac{v_p}{S}$ = **18.8** pc/mi/ln

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING WITH PROJECT CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-1 US 101 Northbound

between Gower Street/Argyle Avenue & Hollywood Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,190	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}680} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{30.5} \text{ pc/mi/ln}$$

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING WITH PROJECT CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-1 US 101 Southbound

between Gower Street/Argyle Avenue & Hollywood Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,962	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1,347} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D): $\frac{v_p}{S}$ = **24.5** pc/mi/ln

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING WITH PROJECT CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-1 US 101 Northbound

between Gower Street/Argyle Avenue & Hollywood Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,445	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}206} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{21.9} \text{ pc/mi/ln}$$

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING WITH PROJECT CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-1 US 101 Southbound

between Gower Street/Argyle Avenue & Hollywood Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,662	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents for Trucks & Buses (E_T):	1.5		Lateral Clearance (f_{LC}):		mi/h
for RVs (E_R):	1.2		Total Ramp Density (TRD):		ramps/mi
Heavy Vehicle Factor (f_{HV}): $\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$	= 0.980		Free-Flow Speed: $75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$	=	mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ = **1,265** pc/h/ln

Density (D): $\frac{v_p}{S}$ = **23.0** pc/mi/ln

Speed (S): **55.0** mi/h

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING WITH PROJECT CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-2 US 101 Northbound

between Hollywood Boulevard & Sunset Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	7,442	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{2{,}020} \text{ pc/h/ln}$$

Speed (S): **53.8** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{37.5} \text{ pc/mi/ln}$$

Level of Service (LOS): **E**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING WITH PROJECT CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-2 US 101 Southbound

between Hollywood Boulevard & Sunset Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,533	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}230} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{22.4} \text{ pc/mi/ln}$$

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING WITH PROJECT CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-2 US 101 Northbound

between Hollywood Boulevard & Sunset Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	5,096	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			$75.4 - f_{LW} - f_{LC}$		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		$- 3.22TRD^{0.84}$ =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ =	**1,383**	pc/h/ln	Density (D): $\frac{v_p}{S}$ =	**25.1**	pc/mi/ln
Speed (S):	**55.0**	mi/h	Level of Service (LOS):	**C**	

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING WITH PROJECT CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-2 US 101 Southbound

between Hollywood Boulevard & Sunset Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,257	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}155} \text{ pc/h/ln}$$

Density (D):

$$\frac{v_p}{S} = \mathbf{21.0} \text{ pc/mi/ln}$$

Speed (S): **55.0** mi/h

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING WITH PROJECT CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-3 US 101 Northbound

between Sunset Boulevard & Western Avenue

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,393	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = ____ \text{ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}735} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{31.5} \text{ pc/mi/ln}$$

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING WITH PROJECT CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-3 US 101 Southbound

between Sunset Boulevard & Western Avenue

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,249	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}153} \text{ pc/h/ln}$$

Density (D):

$$\frac{v_p}{S} = \mathbf{21.0} \text{ pc/mi/ln}$$

Speed (S): **55.0** mi/h

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING WITH PROJECT CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-3 US 101 Northbound

between Sunset Boulevard & Western Avenue

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,704	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			$75.4 - f_{LW} - f_{LC}$		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		$- 3.22TRD^{0.84}$ =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ = **1,277** pc/h/ln

Density (D): $\frac{v_p}{S}$ = **23.2** pc/mi/ln

Speed (S): **55.0** mi/h

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING WITH PROJECT CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-3 US 101 Southbound

between Sunset Boulevard & Western Avenue

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	3,903	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1,059} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D): $\frac{v_p}{S}$ = **19.3** pc/mi/ln

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

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EXISTING WITH PROJECT CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-4 US 101 Northbound

between Western Avenue & Santa Monica Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,279	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1,704} \text{ pc/h/ln}$$

Density (D): $\frac{v_p}{S}$ = **31.0** pc/mi/ln

Speed (S): **55.0** mi/h

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

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EXISTING WITH PROJECT CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-4 US 101 Southbound

between Western Avenue & Santa Monica Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,311	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}170} \text{ pc/h/ln}$$

Density (D):

$$\frac{v_p}{S} = \mathbf{21.3} \text{ pc/mi/ln}$$

Speed (S): **55.0** mi/h

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING WITH PROJECT CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-4 US 101 Northbound

between Western Avenue & Santa Monica Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,440	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1,205} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{21.9} \text{ pc/mi/ln}$$

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING WITH PROJECT CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-4 US 101 Southbound

between Western Avenue & Santa Monica Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	3,973	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}078} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{19.6} \text{ pc/mi/ln}$$

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING WITH PROJECT CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-5 US 101 Northbound

between Santa Monica Boulevard & Melrose Avenue

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,465	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = ____ \text{ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}755} \text{ pc/h/ln}$$

Density (D):

$$\frac{v_p}{S} = \mathbf{31.9} \text{ pc/mi/ln}$$

Speed (S): **55.0** mi/h

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

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EXISTING WITH PROJECT CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-5 US 101 Southbound

between Santa Monica Boulevard & Melrose Avenue

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,252	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			75.4 - f_{LW} - f_{LC}		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		- 3.22TRD^(0.84) =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ =	**1,154**	pc/h/ln	Density (D): $\frac{v_p}{S}$ =	**21.0**	pc/mi/ln
Speed (S):	**55.0**	mi/h	Level of Service (LOS):	**C**	

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING WITH PROJECT CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-5 US 101 Northbound

between Santa Monica Boulevard & Melrose Avenue

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,866	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}321} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D): $\frac{v_p}{S}$ = **24.0** pc/mi/ln

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

EXISTING WITH PROJECT CONDITIONS (YEAR 2017)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-5 US 101 Southbound

between Santa Monica Boulevard & Melrose Avenue

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	3,845	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}043} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{19.0} \text{ pc/mi/ln}$$

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-1 US 101 Northbound

between Gower Street/Argyle Avenue & Hollywood Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,806	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}847} \text{ pc/h/ln}$$

Speed (S): **54.9** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{33.6} \text{ pc/mi/ln}$$

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-1 US 101 Southbound

between Gower Street/Argyle Avenue & Hollywood Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	5,580	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}514} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D): $\frac{v_p}{S}$ = **27.5** pc/mi/ln

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-1 US 101 Northbound

between Gower Street/Argyle Avenue & Hollywood Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	5,116	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1,388} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{25.2} \text{ pc/mi/ln}$$

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-1 US 101 Southbound

between Gower Street/Argyle Avenue & Hollywood Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	5,284	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1,434} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{26.1} \text{ pc/mi/ln}$$

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-2 US 101 Northbound

between Hollywood Boulevard & Sunset Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	8,195	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{2{,}224} \text{ pc/h/ln}$$

Speed (S): **50.6** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{44.0} \text{ pc/mi/ln}$$

Level of Service (LOS): **E**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-2 US 101 Southbound

between Hollywood Boulevard & Sunset Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	5,091	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}382} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{25.1} \text{ pc/mi/ln}$$

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-2 US 101 Northbound

between Hollywood Boulevard & Sunset Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	5,814	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			75.4 - f_{LW} - f_{LC}		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		- 3.22TRD^(0.84) =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ =	**1,578**	pc/h/ln	Density (D): $\frac{v_p}{S}$ =	**28.7**	pc/mi/ln
Speed (S):	**55.0**	mi/h	Level of Service (LOS):	**D**	

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-2 US 101 Southbound

between Hollywood Boulevard & Sunset Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,922	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}336} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D): $\frac{v_p}{S}$ = **24.3** pc/mi/ln

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-3 US 101 Northbound

between Sunset Boulevard & Western Avenue

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	7,339	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			75.4 - f_{LW} - f_{LC}		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		- 3.22TRD^(0.84) =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ =	**1,992**	pc/h/ln	Density (D): $\frac{v_p}{S}$ =	**36.8**	pc/mi/ln
Speed (S):	**54.1**	mi/h	Level of Service (LOS):	**E**	

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-3 US 101 Southbound

between Sunset Boulevard & Western Avenue

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,750	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1,289} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D): $\frac{v_p}{S}$ = **23.4** pc/mi/ln

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-3 US 101 Northbound

between Sunset Boulevard & Western Avenue

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	5,646	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			75.4 - f_{LW} - f_{LC}		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		- 3.22TRD^(0.84) =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ =	**1,532**	pc/h/ln	Density (D): $\frac{v_p}{S}$ =	**27.9**	pc/mi/ln
Speed (S):	**55.0**	mi/h	Level of Service (LOS):	**D**	

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-3 US 101 Southbound

between Sunset Boulevard & Western Avenue

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,573	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			$75.4 - f_{LW} - f_{LC}$		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		$- 3.22TRD^{0.84}$ =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ =	**1,241**	pc/h/ln	Density (D): $\frac{v_p}{S}$ =	**22.6**	pc/mi/ln
Speed (S):	**55.0**	mi/h	Level of Service (LOS):	**C**	

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-4 US 101 Northbound

between Western Avenue & Santa Monica Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	7,168	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			75.4 - f_{LW} - f_{LC}		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		- 3.22TRD^(0.84) =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ =	**1,945**	pc/h/ln	Density (D): $\frac{v_p}{S}$ =	**35.7**	pc/mi/ln
Speed (S):	**54.5**	mi/h	Level of Service (LOS):	**E**	

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-4 US 101 Southbound

between Western Avenue & Santa Monica Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,964	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1,347} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D): $\frac{v_p}{S}$ = **24.5** pc/mi/ln

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-4 US 101 Northbound

between Western Avenue & Santa Monica Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	5,267	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			$75.4 - f_{LW} - f_{LC}$		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		$- 3.22TRD^{0.84}$ =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ =	**1,429**	pc/h/ln	Density (D): $\frac{v_p}{S}$ =	**26.0**	pc/mi/ln
Speed (S):	**55.0**	mi/h	Level of Service (LOS):	**C**	

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-4 US 101 Southbound

between Western Avenue & Santa Monica Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,834	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}312} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{23.9} \text{ pc/mi/ln}$$

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-5 US 101 Northbound

between Santa Monica Boulevard & Melrose Avenue

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	7,617	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{2{,}067} \text{ pc/h/ln}$$

Speed (S): **53.2** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{38.8} \text{ pc/mi/ln}$$

Level of Service (LOS): **E**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-5 US 101 Southbound

between Santa Monica Boulevard & Melrose Avenue

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	5,073	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			$75.4 - f_{LW} - f_{LC}$		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		$- 3.22TRD^{0.84}$ =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ =	**1,377**	pc/h/ln	Density (D): $\frac{v_p}{S}$ =	**25.0**	pc/mi/ln
Speed (S):	**55.0**	mi/h	Level of Service (LOS):	**C**	

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-5 US 101 Northbound

between Santa Monica Boulevard & Melrose Avenue

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,019	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			$75.4 - f_{LW} - f_{LC}$		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		$- 3.22TRD^{0.84}$ =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ =	**1,633**	pc/h/ln	Density (D): $\frac{v_p}{S}$ =	**29.7**	pc/mi/ln
Speed (S):	**55.0**	mi/h	Level of Service (LOS):	**D**	

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-5 US 101 Southbound

between Santa Monica Boulevard & Melrose Avenue

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,984	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1,353} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D): $\frac{v_p}{S}$ = **24.6** pc/mi/ln

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-1 US 101 Northbound

between Gower Street/Argyle Avenue & Hollywood Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,864	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}863} \text{ pc/h/ln}$$

Density (D):

$$\frac{v_p}{S} = \mathbf{33.9} \text{ pc/mi/ln}$$

Speed (S): **54.9** mi/h

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-1 US 101 Southbound

between Gower Street/Argyle Avenue & Hollywood Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	5,590	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = ____ \text{ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}517} \text{ pc/h/ln}$$

Density (D):

$$\frac{v_p}{S} = \mathbf{27.6} \text{ pc/mi/ln}$$

Speed (S): **55.0** mi/h

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-1 US 101 Northbound

between Gower Street/Argyle Avenue & Hollywood Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	5,142	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}395} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{25.4} \text{ pc/mi/ln}$$

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-1 US 101 Southbound

between Gower Street/Argyle Avenue & Hollywood Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	5,334	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents for Trucks & Buses (E_T):	1.5		Lateral Clearance (f_{LC}):		mi/h
			Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			75.4 - f_{LW} - f_{LC}		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		- 3.22TRD^(0.84) =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ =	**1,448**	pc/h/ln	Density (D): $\frac{v_p}{S}$ =	**26.3**	pc/mi/ln
Speed (S):	**55.0**	mi/h	Level of Service (LOS):	**D**	

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-2 US 101 Northbound

between Hollywood Boulevard & Sunset Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	8,230	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			75.4 - f_{LW} - f_{LC}		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		- 3.22TRD^(0.84) =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ =	**2,233**	pc/h/ln	Density (D): $\frac{v_p}{S}$ =	**44.3**	pc/mi/ln
Speed (S):	**50.4**	mi/h	Level of Service (LOS):	**E**	

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-2 US 101 Southbound

between Hollywood Boulevard & Sunset Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	5,101	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____}$$ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}384}$$ pc/h/ln

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{25.2}$$ pc/mi/ln

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-2 US 101 Northbound

between Hollywood Boulevard & Sunset Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	5,830	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____}$$ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}582}$$ pc/h/ln

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{28.8}$$ pc/mi/ln

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-2 US 101 Southbound

between Hollywood Boulevard & Sunset Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,972	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1,349} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{24.5} \text{ pc/mi/ln}$$

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-3 US 101 Northbound

between Sunset Boulevard & Western Avenue

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	7,381	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{2{,}003} \text{ pc/h/ln}$$

Speed (S): **54.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{37.1} \text{ pc/mi/ln}$$

Level of Service (LOS): **E**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-3 US 101 Southbound

between Sunset Boulevard & Western Avenue

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,775	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}296} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{23.6} \text{ pc/mi/ln}$$

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-3 US 101 Northbound

between Sunset Boulevard & Western Avenue

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	5,685	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			75.4 - f_{LW} - f_{LC}		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		- 3.22TRD^(0.84) =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ = **1,543** pc/h/ln

Density (D): $\frac{v_p}{S}$ = **28.1** pc/mi/ln

Speed (S): **55.0** mi/h

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-3 US 101 Southbound

between Sunset Boulevard & Western Avenue

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,586	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			$75.4 - f_{LW} - f_{LC}$		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		$- 3.22TRD^{0.84}$ =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ =	**1,245**	pc/h/ln	Density (D): $\frac{v_p}{S}$ =	**22.6**	pc/mi/ln
Speed (S):	**55.0**	mi/h	Level of Service (LOS):	**C**	

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-4 US 101 Northbound

between Western Avenue & Santa Monica Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	7,174	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1,947} \text{ pc/h/ln}$$

Speed (S): **54.5** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{35.7} \text{ pc/mi/ln}$$

Level of Service (LOS): **E**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-4 US 101 Southbound

between Western Avenue & Santa Monica Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,989	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}354} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{24.6} \text{ pc/mi/ln}$$

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-4 US 101 Northbound

between Western Avenue & Santa Monica Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	5,290	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			75.4 - f_{LW} - f_{LC}		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		- 3.22TRD^(0.84) =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ =	**1,436**	pc/h/ln	Density (D): $\frac{v_p}{S}$ =	**26.1**	pc/mi/ln
Speed (S):	**55.0**	mi/h	Level of Service (LOS):	**D**	

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-4 US 101 Southbound

between Western Avenue & Santa Monica Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	4,847	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			$75.4 - f_{LW} - f_{LC}$		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		$- 3.22TRD^{0.84}$ =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ =	**1,315**	pc/h/ln	Density (D): $\frac{v_p}{S}$ =	**23.9**	pc/mi/ln
Speed (S):	**55.0**	mi/h	Level of Service (LOS):	**C**	

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-5 US 101 Northbound

between Santa Monica Boulevard & Melrose Avenue

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	7,627	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			$75.4 - f_{LW} - f_{LC}$		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		$- 3.22TRD^{0.84}$ =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ =	**2,070**	pc/h/ln	Density (D): $\frac{v_p}{S}$ =	**38.9**	pc/mi/ln
Speed (S):	**53.2**	mi/h	Level of Service (LOS):	**E**	

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-5 US 101 Southbound

between Santa Monica Boulevard & Melrose Avenue

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	5,131	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}392} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{25.3} \text{ pc/mi/ln}$$

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-5 US 101 Northbound

between Santa Monica Boulevard & Melrose Avenue

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,069	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}647} \text{ pc/h/ln}$$

Density (D):

$$\frac{v_p}{S} = \mathbf{29.9} \text{ pc/mi/ln}$$

Speed (S): **55.0** mi/h

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2024)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-5 US 101 Southbound

between Santa Monica Boulevard & Melrose Avenue

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	5,010	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents for Trucks & Buses (E_T):	1.5		Lateral Clearance (f_{LC}):		mi/h
for RVs (E_R):	1.2		Total Ramp Density (TRD):		ramps/mi
Heavy Vehicle Factor (f_{HV}): $\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$	= 0.980		Free-Flow Speed: $75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$	=	mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ = **1,360** pc/h/ln

Density (D): $\frac{v_p}{S}$ = **24.7** pc/mi/ln

Speed (S): **55.0** mi/h

Level of Service (LOS): **C**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-1 US 101 Northbound

between Gower Street/Argyle Avenue & Hollywood Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	8,035	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{2{,}181} \text{ pc/h/ln}$$

Speed (S): **51.4** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{42.4} \text{ pc/mi/ln}$$

Level of Service (LOS): **E**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-1 US 101 Southbound

between Gower Street/Argyle Avenue & Hollywood Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,622	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}797} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{32.7} \text{ pc/mi/ln}$$

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-1 US 101 Northbound

between Gower Street/Argyle Avenue & Hollywood Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,177	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = ____ \text{ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}676} \text{ pc/h/ln}$$

Density (D):

$$\frac{v_p}{S} = \mathbf{30.5} \text{ pc/mi/ln}$$

Speed (S): **55.0** mi/h

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-1 US 101 Southbound

between Gower Street/Argyle Avenue & Hollywood Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,462	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}754} \text{ pc/h/ln}$$

Density (D):

$$\frac{v_p}{S} = \mathbf{31.9} \text{ pc/mi/ln}$$

Speed (S): **55.0** mi/h

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-2 US 101 Northbound

between Hollywood Boulevard & Sunset Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	9,604	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{2{,}606} \text{ pc/h/ln}$$

Speed (S): **39.0** mi/h

Density (D): $\frac{v_p}{S}$ = **66.9** pc/mi/ln

Level of Service (LOS): **F**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-2 US 101 Southbound

between Hollywood Boulevard & Sunset Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,050	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____}$$ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}642}$$ pc/h/ln

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{29.9}$$ pc/mi/ln

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-2 US 101 Northbound

between Hollywood Boulevard & Sunset Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,946	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1,885} \text{ pc/h/ln}$$

Speed (S): **54.8** mi/h

Density (D): $\frac{v_p}{S}$ = **34.4** pc/mi/ln

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-2 US 101 Southbound

between Hollywood Boulevard & Sunset Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,122	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			$75.4 - f_{LW} - f_{LC}$		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		$- 3.22TRD^{0.84}$ =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ =	**1,661**	pc/h/ln	Density (D): $\frac{v_p}{S}$ =	**30.2**	pc/mi/ln
Speed (S):	**55.0**	mi/h	Level of Service (LOS):	**D**	

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-3 US 101 Northbound

between Sunset Boulevard & Western Avenue

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	8,913	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			$75.4 - f_{LW} - f_{LC}$		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		$- 3.22TRD^{0.84}$ =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ =	**2,419**	pc/h/ln	Density (D): $\frac{v_p}{S}$ =	**53.1**	pc/mi/ln
Speed (S):	**45.5**	mi/h	Level of Service (LOS):	**F**	

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-3 US 101 Southbound

between Sunset Boulevard & Western Avenue

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	5,586	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}516} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{27.6} \text{ pc/mi/ln}$$

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-3 US 101 Northbound

between Sunset Boulevard & Western Avenue

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	7,026	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			75.4 - f_{LW} - f_{LC}		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		- 3.22TRD^(0.84) =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ = **1,907** pc/h/ln

Density (D): $\frac{v_p}{S}$ = **34.9** pc/mi/ln

Speed (S): **54.7** mi/h

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-3 US 101 Southbound

between Sunset Boulevard & Western Avenue

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	5,699	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			75.4 - f_{LW} - f_{LC}		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		- 3.22TRD^(0.84) =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ = **1,547** pc/h/ln

Density (D): $\frac{v_p}{S}$ = **28.1** pc/mi/ln

Speed (S): **55.0** mi/h

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-4 US 101 Northbound

between Western Avenue & Santa Monica Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	8,622	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{2{,}340} \text{ pc/h/ln}$$

Speed (S): **47.8** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{49.0} \text{ pc/mi/ln}$$

Level of Service (LOS): **F**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-4 US 101 Southbound

between Western Avenue & Santa Monica Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	5,957	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}617} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{29.4} \text{ pc/mi/ln}$$

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-4 US 101 Northbound

between Western Avenue & Santa Monica Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,423	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}743} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D): $\frac{v_p}{S}$ = **31.7** pc/mi/ln

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-4 US 101 Southbound

between Western Avenue & Santa Monica Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,169	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents for Trucks & Buses (E_T):	1.5		Lateral Clearance (f_{LC}):		mi/h
for RVs (E_R):	1.2		Total Ramp Density (TRD):		ramps/mi
Heavy Vehicle Factor (f_{HV}): $\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$	= 0.980		Free-Flow Speed: $75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$	=	mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ = **1,674** pc/h/ln

Density (D): $\frac{v_p}{S}$ = **30.4** pc/mi/ln

Speed (S): **55.0** mi/h

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-5 US 101 Northbound

between Santa Monica Boulevard & Melrose Avenue

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	9,390	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{2{,}548} \text{ pc/h/ln}$$

Speed (S): **41.2** mi/h

Density (D): $\frac{v_p}{S}$ = **61.9** pc/mi/ln

Level of Service (LOS): **F**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-5 US 101 Southbound

between Santa Monica Boulevard & Melrose Avenue

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,275	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}703} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{31.0} \text{ pc/mi/ln}$$

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-5 US 101 Northbound

between Santa Monica Boulevard & Melrose Avenue

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	7,565	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			$75.4 - f_{LW} - f_{LC}$		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		$- 3.22TRD^{0.84}$ =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ =	**2,053**	pc/h/ln	Density (D): $\frac{v_p}{S}$ =	**38.4**	pc/mi/ln
Speed (S):	**53.4**	mi/h	Level of Service (LOS):	**E**	

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITHOUT PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-5 US 101 Southbound

between Santa Monica Boulevard & Melrose Avenue

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,649	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			75.4 - f_{LW} - f_{LC}		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		- 3.22TRD^(0.84) =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ =	**1,804**	pc/h/ln	Density (D): $\frac{v_p}{S}$ =	**32.8**	pc/mi/ln
Speed (S):	**55.0**	mi/h	Level of Service (LOS):	**D**	

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-1 US 101 Northbound

between Gower Street/Argyle Avenue & Hollywood Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	8,093	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			75.4 - f_{LW} - f_{LC}		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		- 3.22TRD^(0.84) =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ =	**2,196**	pc/h/ln	Density (D): $\frac{v_p}{S}$ =	**43.0**	pc/mi/ln
Speed (S):	**51.1**	mi/h	Level of Service (LOS):	**E**	

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-1 US 101 Southbound

between Gower Street/Argyle Avenue & Hollywood Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,632	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = ____ \text{ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}800} \text{ pc/h/ln}$$

Density (D):

$$\frac{v_p}{S} = \mathbf{32.7} \text{ pc/mi/ln}$$

Speed (S): **55.0** mi/h

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-1 US 101 Northbound

between Gower Street/Argyle Avenue & Hollywood Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,203	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1,683} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{30.6} \text{ pc/mi/ln}$$

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-1 US 101 Southbound

between Gower Street/Argyle Avenue & Hollywood Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,512	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}767} \text{ pc/h/ln}$$

Density (D):

$$\frac{v_p}{S} = \mathbf{32.1} \text{ pc/mi/ln}$$

Speed (S): **55.0** mi/h

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-2 US 101 Northbound

between Hollywood Boulevard & Sunset Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	9,639	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents for Trucks & Buses (E_T):	1.5		Lateral Clearance (f_{LC}):		mi/h
for RVs (E_R):	1.2		Total Ramp Density (TRD):		ramps/mi
Heavy Vehicle Factor (f_{HV}): $\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$	= 0.980		Free-Flow Speed: $75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$	=	mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$	= **2,616**	pc/h/ln	Density (D): $\frac{v_p}{S}$	= **67.8**	pc/mi/ln
Speed (S):	**38.6**	mi/h	Level of Service (LOS):	**F**	

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-2 US 101 Southbound

between Hollywood Boulevard & Sunset Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,060	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}645} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{29.9} \text{ pc/mi/ln}$$

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-2 US 101 Northbound

between Hollywood Boulevard & Sunset Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,962	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			75.4 - f_{LW} - f_{LC}		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		- 3.22TRD^(0.84) =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ =	**1,889**	pc/h/ln	Density (D): $\frac{v_p}{S}$ =	**34.5**	pc/mi/ln
Speed (S):	**54.8**	mi/h	Level of Service (LOS):	**D**	

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-2 US 101 Southbound

between Hollywood Boulevard & Sunset Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,172	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			$75.4 - f_{LW} - f_{LC}$		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		$- 3.22TRD^{0.84}$ =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ =	**1,675**	pc/h/ln	Density (D): $\frac{v_p}{S}$ =	**30.5**	pc/mi/ln
Speed (S):	**55.0**	mi/h	Level of Service (LOS):	**D**	

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-3 US 101 Northbound

between Sunset Boulevard & Western Avenue

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	8,955	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{2{,}430} \text{ pc/h/ln}$$

Speed (S): **45.2** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{53.8} \text{ pc/mi/ln}$$

Level of Service (LOS): **F**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-3 US 101 Southbound

between Sunset Boulevard & Western Avenue

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	5,611	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}523} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{27.7} \text{ pc/mi/ln}$$

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-3 US 101 Northbound

between Sunset Boulevard & Western Avenue

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	7,065	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}917} \text{ pc/h/ln}$$

Speed (S): **54.7** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{35.1} \text{ pc/mi/ln}$$

Level of Service (LOS): **E**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-3 US 101 Southbound

between Sunset Boulevard & Western Avenue

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	5,712	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents			Lateral Clearance (f_{LC}):		mi/h
for Trucks & Buses (E_T):	1.5		Total Ramp Density (TRD):		ramps/mi
for RVs (E_R):	1.2		Free-Flow Speed:		
Heavy Vehicle Factor (f_{HV}):			$75.4 - f_{LW} - f_{LC}$		
$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$ =	0.980		$- 3.22TRD^{0.84}$ =		mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ =	**1,550**	pc/h/ln	Density (D): $\frac{v_p}{S}$ =	**28.2**	pc/mi/ln
Speed (S):	**55.0**	mi/h	Level of Service (LOS):	**D**	

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-4 US 101 Northbound

between Western Avenue & Santa Monica Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	8,628	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{2{,}342} \text{ pc/h/ln}$$

Speed (S): **47.7** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{49.1} \text{ pc/mi/ln}$$

Level of Service (LOS): **F**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-4 US 101 Southbound

between Western Avenue & Santa Monica Boulevard

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	5,982	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = ____ \text{ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}623} \text{ pc/h/ln}$$

Density (D):

$$\frac{v_p}{S} = \mathbf{29.5} \text{ pc/mi/ln}$$

Speed (S): **55.0** mi/h

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-4 US 101 Northbound

between Western Avenue & Santa Monica Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,446	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1,749} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D): $\frac{v_p}{S}$ = **31.8** pc/mi/ln

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-4 US 101 Southbound

between Western Avenue & Santa Monica Boulevard

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,182	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi			
Grade %:		%			
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1,678} \text{ pc/h/ln}$$

Density (D):

$$\frac{v_p}{S} = \mathbf{30.5} \text{ pc/mi/ln}$$

Speed (S): **55.0** mi/h

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-5 US 101 Northbound

between Santa Monica Boulevard & Melrose Avenue

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	9,400	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents for Trucks & Buses (E_T):	1.5		Lateral Clearance (f_{LC}):		mi/h
for RVs (E_R):	1.2		Total Ramp Density (TRD):		ramps/mi
Heavy Vehicle Factor (f_{HV}): $\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$	= 0.980		Free-Flow Speed: $75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$	=	mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ = **2,551** pc/h/ln

Density (D): $\frac{v_p}{S}$ = **62.1** pc/mi/ln

Speed (S): **41.1** mi/h

Level of Service (LOS): **F**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-5 US 101 Southbound

between Santa Monica Boulevard & Melrose Avenue

AM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,333	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents
for Trucks & Buses (E_T): 1.5
for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84} = \text{_____ mi/h}$$

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1{,}719} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{31.3} \text{ pc/mi/ln}$$

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-5 US 101 Northbound

between Santa Monica Boulevard & Melrose Avenue

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	7,615	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder Lateral Clearance:		ft
% RVs (P_R):	0.00	%	Number of Ramps in 6 miles Centered on Segment:		ramps
Grade Length:		mi	**Other Inputs**		
Grade %:		%	Number of Lanes:	4.0	lanes
Terrain Type:	Level				
Driver Type:	Commuter/Weekday				

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations			Speed Adjustment Calculations		
Driver Population Factor (f_p):	1.00		Lane Width (f_{LW}):		mi/h
Passenger Car Equivalents for Trucks & Buses (E_T):	1.5		Lateral Clearance (f_{LC}):		mi/h
for RVs (E_R):	1.2		Total Ramp Density (TRD):		ramps/mi
Heavy Vehicle Factor (f_{HV}): $\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)}$	= 0.980		Free-Flow Speed: $75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$	=	mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p): $\frac{V}{PHF * N * f_{HV} * f_p}$ = **2,067** pc/h/ln

Density (D): $\frac{v_p}{S}$ = **38.8** pc/mi/ln

Speed (S): **53.2** mi/h

Level of Service (LOS): **E**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.
Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

FUTURE WITH PROJECT CONDITIONS (YEAR 2035)

Sunset/Western Mixed-Use Project

Highway Capacity Manual 2010 - Basic Freeway Segments Worksheet

FS-5 US 101 Southbound

between Santa Monica Boulevard & Melrose Avenue

PM Peak Hour

SPEED AND FLOW INPUTS

Flow Inputs			Speed Inputs		
Volume (V):	6,675	veh/h	[a] Free Flow Speed:	55.0	mph
Peak Hour Factor (PHF):	0.940		Lane Width:		ft
% Trucks & Buses (P_T):	4.04	%	Right-shoulder		
% RVs (P_R):	0.00	%	Lateral Clearance:		ft
Grade Length:		mi	Number of Ramps in 6 miles		
Grade %:		%	Centered on Segment:		ramps
Terrain Type:	Level		Other Inputs		
Driver Type:	Commuter/Weekday		Number of Lanes:	4.0	lanes

SPEED AND FLOW ADJUSTMENT CALCULATIONS

Flow Adjustment Calculations

Driver Population Factor (f_p): 1.00

Passenger Car Equivalents

for Trucks & Buses (E_T): 1.5

for RVs (E_R): 1.2

Heavy Vehicle Factor (f_{HV}):

$$\frac{1}{1 + P_T(E_T - 1) + P_R(E_R - 1)} = 0.980$$

Speed Adjustment Calculations

Lane Width (f_{LW}): _____ mi/h

Lateral Clearance (f_{LC}): _____ mi/h

Total Ramp Density (TRD): _____ ramps/mi

Free-Flow Speed:

$75.4 - f_{LW} - f_{LC} - 3.22TRD^{0.84}$ = _____ mi/h

LEVEL OF SERVICE AND PERFORMANCE MEASURES

Flow Rate (v_p):

$$\frac{V}{PHF * N * f_{HV} * f_p} = \mathbf{1,811} \text{ pc/h/ln}$$

Speed (S): **55.0** mi/h

Density (D):

$$\frac{v_p}{S} = \mathbf{32.9} \text{ pc/mi/ln}$$

Level of Service (LOS): **D**

Notes: Methodology from *2010 Highway Capacity Manual*, Transportation Research Board, 2010.

Adjustment factors from HCM 2010 Chapter 11 as follows: LOS, S, FFS, v_p from Exhibits 11-5 and 11-6; E_R/E_T from Exhibits 11-10 through 11-13; f_{LW} from Exhibit 11-8; f_{LC} from Exhibit 11-9; f_p from Page 11-18.

[a] Free Flow Speed of 55 mi/h was used for segments at Caltrans' request.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	37	803	67	66	1012	12	11	785	60	3	823	75
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	40	873	73	72	1100	13	12	853	65	3	895	82
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	178	1496	125	223	1620	19	44	1506	114	37	1500	137
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	504	3307	277	590	3583	42	16	3219	243	2	3207	293
Grp Volume(v), veh/h	40	467	479	72	543	570	489	0	441	520	0	460
Grp Sat Flow(s),veh/h/ln	504	1770	1814	590	1770	1855	1826	0	1652	1859	0	1643
Q Serve(g_s), s	6.8	19.6	19.6	10.3	24.3	24.3	0.0	0.0	19.4	0.0	0.0	20.7
Cycle Q Clear(g_c), s	31.1	19.6	19.6	30.0	24.3	24.3	18.9	0.0	19.4	20.6	0.0	20.7
Prop In Lane	1.00		0.15	1.00		0.02	0.02		0.15	0.01		0.18
Lane Grp Cap(c), veh/h	178	800	820	223	800	839	891	0	773	906	0	769
V/C Ratio(X)	0.23	0.58	0.58	0.32	0.68	0.68	0.55	0.00	0.57	0.57	0.00	0.60
Avail Cap(c_a), veh/h	197	867	889	245	867	909	891	0	773	906	0	769
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)	0.75	0.75	0.75	0.31	0.31	0.31	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.9	20.4	20.4	31.5	21.6	21.6	19.2	0.0	19.3	19.7	0.0	19.7
Incr Delay (d2), s/veh	0.5	0.7	0.6	0.3	0.6	0.6	2.4	0.0	3.1	2.6	0.0	3.4
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	14.2	14.5	2.9	15.1	15.7	15.5	0.0	14.5	16.7	0.0	15.3
LnGrp Delay(d),s/veh	34.4	21.0	21.0	31.8	22.3	22.2	21.6	0.0	22.4	22.3	0.0	23.1
LnGrp LOS	C	C	C	C	C	C	C		C	C		C
Approach Vol, veh/h		986			1185			930			980	
Approach Delay, s/veh		21.6			22.8			22.0			22.7	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		50.8		49.2		50.8		49.2
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		43.0		49.0		43.0		49.0
Max Q Clear Time (g_c+I1), s		21.4		33.1		22.7		32.0
Green Ext Time (p_c), s		13.5		12.1		12.9		12.8

Intersection Summary	
HCM 2010 Ctrl Delay	22.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	65	794	94	139	1010	43	105	933	199	65	1002	94
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	71	863	102	151	1098	47	114	1014	216	71	1089	102
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	1123	502	252	1201	51	210	1470	768	220	1318	123
Arrive On Green	0.04	0.32	0.32	0.07	0.35	0.35	0.05	0.42	0.42	0.04	0.40	0.40
Sat Flow, veh/h	1774	3539	1583	1774	3458	148	1774	3539	1583	1774	3272	306
Grp Volume(v), veh/h	71	863	102	151	562	583	114	1014	216	71	589	602
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1837	1774	1770	1583	1774	1770	1809
Q Serve(g_s), s	2.7	22.0	4.7	5.6	30.4	30.4	3.8	23.5	8.1	2.3	29.8	29.8
Cycle Q Clear(g_c), s	2.7	22.0	4.7	5.6	30.4	30.4	3.8	23.5	8.1	2.3	29.8	29.8
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	164	1123	502	252	614	638	210	1470	768	220	713	729
V/C Ratio(X)	0.43	0.77	0.20	0.60	0.91	0.91	0.54	0.69	0.28	0.32	0.83	0.83
Avail Cap(c_a), veh/h	164	1133	507	252	619	643	210	1470	768	278	713	729
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)	0.72	0.72	0.72	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.9	30.8	24.9	23.4	31.2	31.2	21.9	24.0	15.3	19.2	26.7	26.7
Incr Delay (d2), s/veh	1.3	2.4	0.1	2.6	13.2	12.9	2.9	2.7	0.9	0.8	10.5	10.4
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	2.4	15.8	3.7	5.2	22.6	23.3	3.6	17.6	6.7	2.1	23.3	23.8
LnGrp Delay(d),s/veh	27.2	33.2	25.1	26.0	44.4	44.1	24.7	26.6	16.3	20.1	37.3	37.1
LnGrp LOS	C	C	C	C	D	D	C	C	B	C	D	D
Approach Vol, veh/h		1036			1296			1344			1262	
Approach Delay, s/veh		32.0			42.1			24.8			36.2	
Approach LOS		C			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	45.5	11.0	35.7	9.0	44.3	8.0	38.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	38.0	7.0	32.0	5.0	40.0	4.0	35.0
Max Q Clear Time (g_c+I1), s	4.3	25.5	7.6	24.0	5.8	31.8	4.7	32.4
Green Ext Time (p_c), s	0.0	10.5	0.0	6.6	0.0	7.1	0.0	2.3

Intersection Summary	
HCM 2010 Ctrl Delay	33.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	67	718	104	146	714	71	40	232	68	57	350	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	73	780	113	159	776	77	43	252	74	62	380	48
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	1	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	334	1525	221	319	1599	159	165	862	247	121	530	63
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	644	3103	450	620	3253	323	243	2297	657	142	1412	169
Grp Volume(v), veh/h	73	445	448	159	422	431	191	0	178	490	0	0
Grp Sat Flow(s),veh/h/ln	644	1770	1783	620	1770	1806	1618	0	1579	1723	0	0
Q Serve(g_s), s	5.1	10.2	10.2	14.0	9.6	9.6	0.0	0.0	4.8	7.2	0.0	0.0
Cycle Q Clear(g_c), s	14.7	10.2	10.2	24.3	9.6	9.6	4.3	0.0	4.8	14.6	0.0	0.0
Prop In Lane	1.00		0.25	1.00		0.18	0.22		0.42	0.13		0.10
Lane Grp Cap(c), veh/h	334	870	877	319	870	888	681	0	592	714	0	0
V/C Ratio(X)	0.22	0.51	0.51	0.50	0.49	0.49	0.28	0.00	0.30	0.69	0.00	0.00
Avail Cap(c_a), veh/h	339	885	892	324	885	903	681	0	592	714	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.62	0.62	0.62	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.1	10.4	10.4	18.6	10.2	10.2	13.1	0.0	13.2	16.1	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.3	0.3	1.2	0.4	0.4	1.0	0.0	1.3	5.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	7.9	8.0	4.5	8.2	8.4	4.3	0.0	4.1	12.6	0.0	0.0
LnGrp Delay(d),s/veh	15.3	10.7	10.7	19.8	10.6	10.6	14.1	0.0	14.5	21.4	0.0	0.0
LnGrp LOS	B	B	B	B	B	B	B		B	C		
Approach Vol, veh/h		966			1012			369			490	
Approach Delay, s/veh		11.0			12.1			14.3			21.4	
Approach LOS		B			B			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		26.5		33.5		26.5		33.5
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		22.0		30.0		22.0		30.0
Max Q Clear Time (g_c+I1), s		6.8		16.7		16.6		26.3
Green Ext Time (p_c), s		5.1		9.9		2.6		3.2

Intersection Summary	
HCM 2010 Ctrl Delay	13.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	738	381	53	1119	42	0	0	0	94	23	10
Number	7	4	14	3	8	18				1	6	16
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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	7	802	414	58	1216	46				102	25	11
Adj No. of Lanes	0	2	1	1	2	0				0	1	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				0	2	0
Cap, veh/h	40	1538	708	255	1556	59				619	152	67
Arrive On Green	0.89	0.89	0.89	0.89	0.89	0.89				0.47	0.47	0.47
Sat Flow, veh/h	8	3438	1583	457	3478	131				1310	321	141
Grp Volume(v), veh/h	431	378	414	58	618	644				138	0	0
Grp Sat Flow(s),veh/h/ln	1836	1610	1583	457	1770	1840				1772	0	0
Q Serve(g_s), s	0.0	4.7	5.8	3.4	12.2	12.3				4.5	0.0	0.0
Cycle Q Clear(g_c), s	4.5	4.7	5.8	8.0	12.2	12.3				4.5	0.0	0.0
Prop In Lane	0.02		1.00	1.00		0.07				0.74		0.08
Lane Grp Cap(c), veh/h	858	720	708	255	792	823				838	0	0
V/C Ratio(X)	0.50	0.52	0.58	0.23	0.78	0.78				0.16	0.00	0.00
Avail Cap(c_a), veh/h	1252	1079	1061	357	1186	1232				838	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.70	0.70	0.70	0.70	0.70	0.70				1.00	0.00	0.00
Uniform Delay (d), s/veh	3.1	3.2	3.2	3.9	3.6	3.6				15.1	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.4	0.5	0.3	1.4	1.3				0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.6	3.5	3.9	0.8	8.6	8.9				4.1	0.0	0.0
LnGrp Delay(d),s/veh	3.5	3.6	3.7	4.3	4.9	4.9				15.5	0.0	0.0
LnGrp LOS	A	A	A	A	A	A				B		
Approach Vol, veh/h		1223			1320						138	
Approach Delay, s/veh		3.6			4.9						15.5	
Approach LOS		A			A						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				48.7		51.3		48.7
Change Period (Y+Rc), s				4.0		4.0		4.0
Max Green Setting (Gmax), s				67.0		25.0		67.0
Max Q Clear Time (g_c+I1), s				7.8		6.5		14.3
Green Ext Time (p_c), s				32.4		0.6		30.5

Intersection Summary	
HCM 2010 Ctrl Delay	4.8
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	802	0	0	796	36	457	33	44	20	0	61
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	10	872	0	0	865	39	568	0	0	22	0	66
Adj No. of Lanes	1	2	0	0	2	0	2	1	0	0	1	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, %	2	2	0	0	2	2	2	2	2	2	2	2
Cap, veh/h	167	1297	0	0	1264	57	1639	1031	0	235	25	643
Arrive On Green	0.37	0.37	0.00	0.00	0.37	0.37	0.55	0.00	0.00	0.55	0.00	0.55
Sat Flow, veh/h	614	3632	0	0	3543	156	2660	1863	0	343	45	1161
Grp Volume(v), veh/h	10	872	0	0	444	460	568	0	0	88	0	0
Grp Sat Flow(s),veh/h/ln	614	1770	0	0	1770	1835	1330	1863	0	1548	0	0
Q Serve(g_s), s	1.4	20.7	0.0	0.0	21.2	21.2	8.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	22.6	20.7	0.0	0.0	21.2	21.2	11.0	0.0	0.0	2.5	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.08	1.00		0.00	0.25		0.75
Lane Grp Cap(c), veh/h	167	1297	0	0	648	672	1639	1031	0	902	0	0
V/C Ratio(X)	0.06	0.67	0.00	0.00	0.68	0.68	0.35	0.00	0.00	0.10	0.00	0.00
Avail Cap(c_a), veh/h	212	1557	0	0	779	808	1639	1031	0	902	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.00	0.00	0.81	0.81	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	36.4	26.6	0.0	0.0	26.8	26.8	12.3	0.0	0.0	10.5	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.8	0.0	0.0	1.6	1.5	0.6	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	15.1	0.0	0.0	15.4	15.9	7.9	0.0	0.0	2.2	0.0	0.0
LnGrp Delay(d),s/veh	36.5	27.4	0.0	0.0	28.4	28.3	12.8	0.0	0.0	10.7	0.0	0.0
LnGrp LOS	D	C			C	C	B			B		
Approach Vol, veh/h		882			904			568			88	
Approach Delay, s/veh		27.5			28.3			12.8			10.7	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		59.4		40.6		59.4		40.6
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		48.0		44.0		48.0		44.0
Max Q Clear Time (g_c+I1), s		13.0		24.6		4.5		23.2
Green Ext Time (p_c), s		3.0		12.0		3.0		12.6

Intersection Summary	
HCM 2010 Ctrl Delay	23.8
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	18.8
Intersection LOS	C

Movement	EBU	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR
Vol, veh/h	0	0	23	0	34	0	0	882	40
Peak Hour Factor	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
Mvmt Flow	0	0	25	0	37	0	0	959	43
Number of Lanes	0	0	1	0	1	0	0	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.3	8.3	19.5
HCM LOS	A	A	C

Lane	NBLn1	EBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%
Vol Thru, %	0%	0%	100%	88%
Vol Right, %	0%	100%	0%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	34	23	588	334
LT Vol	34	0	0	0
Through Vol	0	0	588	294
RT Vol	0	23	0	40
Lane Flow Rate	37	25	639	363
Geometry Grp	5	2	7	7
Degree of Util (X)	0.052	0.036	0.816	0.455
Departure Headway (Hd)	5.052	5.131	4.596	4.512
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	712	702	786	795
Service Time	3.059	3.133	2.335	2.251
HCM Lane V/C Ratio	0.052	0.036	0.813	0.457
HCM Control Delay	8.3	8.3	24.4	11
HCM Lane LOS	A	A	C	B
HCM 95th-tile Q	0.2	0.1	8.9	2.4

Intersection	
Intersection Delay, s/veh	37.5
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	62	22	260	0	174	5	71	0	13	318	31
Peak Hour Factor	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	67	24	283	0	189	5	77	0	14	346	34
Number of Lanes	0	0	1	1	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	2	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	21.3	26.3	43.6
HCM LOS	C	D	E

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	4%	74%	0%	70%	3%
Vol Thru, %	88%	26%	0%	2%	96%
Vol Right, %	9%	0%	100%	28%	2%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	362	84	260	250	391
LT Vol	13	62	0	174	10
Through Vol	318	22	0	5	375
RT Vol	31	0	260	71	6
Lane Flow Rate	393	91	283	272	425
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.862	0.231	0.627	0.648	0.923
Departure Headway (Hd)	7.886	9.091	7.981	8.586	7.816
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	456	394	452	418	463
Service Time	5.967	6.868	5.758	6.676	5.893
HCM Lane V/C Ratio	0.862	0.231	0.626	0.651	0.918
HCM Control Delay	43.6	14.6	23.4	26.3	53.4
HCM Lane LOS	E	B	C	D	F
HCM 95th-tile Q	8.8	0.9	4.2	4.4	10.6

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	10	375	6
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	11	408	7
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	53.4
HCM LOS	F

Lane

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	62	1049	69	93	1040	33	7	826	72	4	666	19
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	67	1140	75	101	1130	36	8	898	78	4	724	21
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	1652	109	177	1716	55	40	1380	119	38	1474	43
Arrive On Green	0.49	0.49	0.49	0.65	0.65	0.65	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	480	3372	222	458	3501	112	9	3209	277	4	3429	99
Grp Volume(v), veh/h	67	598	617	101	571	595	521	0	463	393	0	356
Grp Sat Flow(s),veh/h/ln	480	1770	1824	458	1770	1843	1849	0	1646	1854	0	1678
Q Serve(g_s), s	11.5	26.0	26.1	21.7	19.7	19.7	0.0	0.0	22.3	0.0	0.0	15.3
Cycle Q Clear(g_c), s	31.2	26.0	26.1	47.8	19.7	19.7	22.1	0.0	22.3	15.3	0.0	15.3
Prop In Lane	1.00		0.12	1.00		0.06	0.02		0.17	0.01		0.06
Lane Grp Cap(c), veh/h	212	867	894	177	867	903	832	0	708	834	0	721
V/C Ratio(X)	0.32	0.69	0.69	0.57	0.66	0.66	0.63	0.00	0.65	0.47	0.00	0.49
Avail Cap(c_a), veh/h	212	867	894	177	867	903	832	0	708	834	0	721
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)	0.75	0.75	0.75	0.29	0.29	0.29	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.1	19.6	19.7	30.0	12.3	12.3	22.5	0.0	22.6	20.6	0.0	20.6
Incr Delay (d2), s/veh	0.6	1.7	1.7	1.3	0.5	0.5	3.6	0.0	4.7	1.9	0.0	2.4
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	2.8	18.2	18.7	4.3	12.1	12.6	17.8	0.0	16.4	12.9	0.0	12.1
LnGrp Delay(d),s/veh	29.7	21.4	21.4	31.3	12.8	12.8	26.1	0.0	27.3	22.5	0.0	23.0
LnGrp LOS	C	C	C	C	B	B	C		C	C		C
Approach Vol, veh/h		1282			1267			984			749	
Approach Delay, s/veh		21.8			14.3			26.7			22.7	
Approach LOS		C			B			C			C	

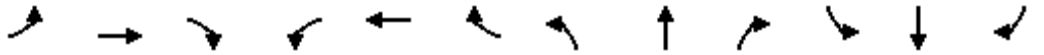
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		47.0		53.0		47.0		53.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		43.0		49.0		43.0		49.0
Max Q Clear Time (g_c+I1), s		24.3		33.2		17.3		49.8
Green Ext Time (p_c), s		11.1		13.6		13.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	20.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	88	950	95	146	993	69	89	1006	227	81	1027	76
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	96	1033	103	159	1079	75	97	1093	247	88	1116	83
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	162	1127	504	215	1170	81	206	1439	755	209	1347	100
Arrive On Green	0.04	0.32	0.32	0.07	0.35	0.35	0.05	0.41	0.41	0.04	0.40	0.40
Sat Flow, veh/h	1774	3539	1583	1774	3358	233	1774	3539	1583	1774	3340	248
Grp Volume(v), veh/h	96	1033	103	159	568	586	97	1093	247	88	591	608
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1822	1774	1770	1583	1774	1770	1819
Q Serve(g_s), s	3.7	28.1	4.7	5.9	30.8	30.9	3.2	26.5	9.7	2.9	29.9	30.0
Cycle Q Clear(g_c), s	3.7	28.1	4.7	5.9	30.8	30.9	3.2	26.5	9.7	2.9	29.9	30.0
Prop In Lane	1.00		1.00	1.00		0.13	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	162	1127	504	215	617	635	206	1439	755	209	714	733
V/C Ratio(X)	0.59	0.92	0.20	0.74	0.92	0.92	0.47	0.76	0.33	0.42	0.83	0.83
Avail Cap(c_a), veh/h	162	1133	507	215	619	638	209	1439	755	254	714	733
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.63	0.63	0.63	0.66	0.66	0.66	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.4	32.8	24.8	25.0	31.3	31.3	21.6	25.5	16.2	20.4	26.7	26.8
Incr Delay (d2), s/veh	3.6	7.9	0.1	8.7	14.0	13.8	1.7	3.8	1.2	1.3	10.7	10.5
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	3.5	19.9	3.7	5.8	23.0	23.5	2.9	19.7	7.9	2.6	23.4	24.0
LnGrp Delay(d),s/veh	30.0	40.6	25.0	33.7	45.3	45.1	23.3	29.3	17.4	21.7	37.4	37.2
LnGrp LOS	C	D	C	C	D	D	C	C	B	C	D	D
Approach Vol, veh/h		1232			1313			1437			1287	
Approach Delay, s/veh		38.5			43.8			26.8			36.3	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	44.7	11.0	35.9	8.8	44.3	8.0	38.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	38.0	7.0	32.0	5.0	40.0	4.0	35.0
Max Q Clear Time (g_c+I1), s	4.9	28.5	7.9	30.1	5.2	32.0	5.7	32.9
Green Ext Time (p_c), s	0.0	8.3	0.0	1.8	0.0	7.2	0.0	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	36.1
HCM 2010 LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	55	1092	105	95	792	66	89	360	123	72	424	56
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	60	1187	114	103	861	72	97	391	134	78	461	61
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	1	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	287	1523	146	188	1543	129	193	683	232	113	453	56
Arrive On Green	0.47	0.47	0.47	0.47	0.47	0.47	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	598	3264	313	422	3307	277	275	1707	579	114	1133	141
Grp Volume(v), veh/h	60	643	658	103	461	472	253	0	369	600	0	0
Grp Sat Flow(s),veh/h/ln	598	1770	1808	422	1770	1814	968	0	1593	1388	0	0
Q Serve(g_s), s	4.8	18.2	18.3	9.7	11.3	11.3	0.0	0.0	10.8	13.2	0.0	0.0
Cycle Q Clear(g_c), s	16.1	18.2	18.3	28.0	11.3	11.3	10.1	0.0	10.8	24.0	0.0	0.0
Prop In Lane	1.00		0.17	1.00		0.15	0.38		0.36	0.13		0.10
Lane Grp Cap(c), veh/h	287	826	844	188	826	847	470	0	637	623	0	0
V/C Ratio(X)	0.21	0.78	0.78	0.55	0.56	0.56	0.54	0.00	0.58	0.96	0.00	0.00
Avail Cap(c_a), veh/h	287	826	844	188	826	847	470	0	637	623	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.52	0.52	0.52	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.3	13.4	13.4	26.8	11.5	11.5	13.1	0.0	14.1	19.1	0.0	0.0
Incr Delay (d2), s/veh	0.2	2.5	2.5	3.3	0.8	0.8	4.4	0.0	3.8	28.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	12.9	13.2	3.4	9.4	9.6	6.7	0.0	9.2	21.0	0.0	0.0
LnGrp Delay(d),s/veh	17.5	15.9	16.0	30.1	12.4	12.4	17.4	0.0	17.9	47.2	0.0	0.0
LnGrp LOS	B	B	B	C	B	B	B		B	D		
Approach Vol, veh/h		1361			1036			622			600	
Approach Delay, s/veh		16.0			14.1			17.7			47.2	
Approach LOS		B			B			B			D	

Timer	1	2	3	4	5	6	7	8
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		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		24.0		28.0		24.0		28.0
Max Q Clear Time (g_c+I1), s		12.8		20.3		26.0		30.0
Green Ext Time (p_c), s		6.2		6.9		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	20.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	11	910	345	46	1227	72	0	0	0	110	34	15
Number	7	4	14	3	8	18				1	6	16
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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	12	989	375	50	1334	78				120	37	16
Adj No. of Lanes	0	2	1	1	2	0				0	1	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				0	2	0
Cap, veh/h	44	1639	763	253	1638	96				539	166	72
Arrive On Green	0.96	0.96	0.96	0.96	0.96	0.96				0.44	0.44	0.44
Sat Flow, veh/h	14	3402	1583	397	3399	198				1229	379	164
Grp Volume(v), veh/h	531	470	375	50	693	719				173	0	0
Grp Sat Flow(s),veh/h/ln	1806	1610	1583	397	1770	1828				1772	0	0
Q Serve(g_s), s	0.0	2.6	1.6	1.5	6.6	6.7				6.1	0.0	0.0
Cycle Q Clear(g_c), s	2.4	2.6	1.6	4.0	6.6	6.7				6.1	0.0	0.0
Prop In Lane	0.02		1.00	1.00		0.11				0.69		0.09
Lane Grp Cap(c), veh/h	907	776	763	253	853	881				777	0	0
V/C Ratio(X)	0.59	0.61	0.49	0.20	0.81	0.82				0.22	0.00	0.00
Avail Cap(c_a), veh/h	1246	1095	1077	332	1203	1243				777	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.54	0.54	0.54	0.76	0.76	0.76				1.00	0.00	0.00
Uniform Delay (d), s/veh	1.0	1.0	1.0	1.2	1.1	1.1				17.5	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.4	0.3	0.3	2.3	2.3				0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.2	1.5	0.8	0.3	3.7	3.8				5.6	0.0	0.0
LnGrp Delay(d),s/veh	1.3	1.4	1.2	1.5	3.3	3.3				18.1	0.0	0.0
LnGrp LOS	A	A	A	A	A	A				B		
Approach Vol, veh/h		1376			1462						173	
Approach Delay, s/veh		1.3			3.3						18.1	
Approach LOS		A			A						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				52.2		47.8		52.2
Change Period (Y+Rc), s				4.0		4.0		4.0
Max Green Setting (Gmax), s				68.0		24.0		68.0
Max Q Clear Time (g_c+I1), s				4.6		8.1		8.7
Green Ext Time (p_c), s				41.2		0.8		39.5

Intersection Summary	
HCM 2010 Ctrl Delay	3.2
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	19	986	0	0	759	36	522	105	56	23	0	57
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	21	1072	0	0	825	39	371	388	61	25	0	62
Adj No. of Lanes	1	2	0	0	2	0	1	1	0	0	1	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, %	2	2	0	0	2	2	2	2	2	2	2	2
Cap, veh/h	193	1358	0	0	1320	62	685	843	133	192	24	421
Arrive On Green	0.51	0.51	0.00	0.00	0.38	0.38	0.54	0.54	0.54	0.54	0.00	0.54
Sat Flow, veh/h	638	3632	0	0	3534	163	1335	1572	247	272	44	784
Grp Volume(v), veh/h	21	1072	0	0	424	440	371	0	449	87	0	0
Grp Sat Flow(s),veh/h/ln	638	1770	0	0	1770	1834	1335	0	1819	1100	0	0
Q Serve(g_s), s	2.6	24.8	0.0	0.0	19.4	19.4	12.6	0.0	15.2	0.7	0.0	0.0
Cycle Q Clear(g_c), s	22.0	24.8	0.0	0.0	19.4	19.4	28.5	0.0	15.2	15.9	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.09	1.00		0.14	0.29		0.71
Lane Grp Cap(c), veh/h	193	1358	0	0	679	704	685	0	976	637	0	0
V/C Ratio(X)	0.11	0.79	0.00	0.00	0.62	0.63	0.54	0.00	0.46	0.14	0.00	0.00
Avail Cap(c_a), veh/h	222	1522	0	0	761	789	685	0	976	637	0	0
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.00	0.00	0.78	0.78	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	28.1	21.2	0.0	0.0	25.0	25.0	19.1	0.0	14.3	11.9	0.0	0.0
Incr Delay (d2), s/veh	0.2	2.2	0.0	0.0	1.1	1.0	3.1	0.0	1.6	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	17.6	0.0	0.0	14.1	14.6	12.9	0.0	12.7	2.2	0.0	0.0
LnGrp Delay(d),s/veh	28.3	23.4	0.0	0.0	26.0	26.0	22.1	0.0	15.8	12.3	0.0	0.0
LnGrp LOS	C	C			C	C	C		B	B		
Approach Vol, veh/h		1093			864			820			87	
Approach Delay, s/veh		23.5			26.0			18.7			12.3	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		57.6		42.4		57.6		42.4
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		49.0		43.0		49.0		43.0
Max Q Clear Time (g_c+I1), s		30.5		26.8		17.9		21.4
Green Ext Time (p_c), s		4.6		11.5		5.3		14.2

Intersection Summary	
HCM 2010 Ctrl Delay	22.5
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	12.5
Intersection LOS	B

Movement	EBU	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR
Vol, veh/h	0	0	25	0	111	0	0	671	3
Peak Hour Factor	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
Mvmt Flow	0	0	27	0	121	0	0	729	3
Number of Lanes	0	0	1	0	1	0	0	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.2	8.9	13.2
HCM LOS	A	A	B

Lane	NBLn1	EBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%
Vol Thru, %	0%	0%	100%	99%
Vol Right, %	0%	100%	0%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	111	25	447	227
LT Vol	111	0	0	0
Through Vol	0	0	447	224
RT Vol	0	25	0	3
Lane Flow Rate	121	27	486	246
Geometry Grp	5	2	7	7
Degree of Util (X)	0.165	0.038	0.627	0.317
Departure Headway (Hd)	4.927	4.996	4.641	4.632
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	731	720	773	771
Service Time	2.934	3.005	2.403	2.393
HCM Lane V/C Ratio	0.166	0.037	0.629	0.319
HCM Control Delay	8.9	8.2	15	9.6
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.6	0.1	4.5	1.4

Intersection	
Intersection Delay, s/veh	38.9
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	14	9	48	0	78	2	31	0	27	556	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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	15	10	52	0	85	2	34	0	29	604	43
Number of Lanes	0	0	1	1	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	2	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	10.8	12.4	57.8
HCM LOS	B	B	F

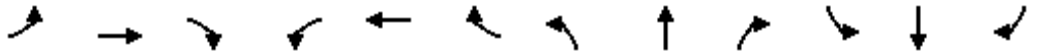
Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	4%	61%	0%	70%	3%
Vol Thru, %	89%	39%	0%	2%	94%
Vol Right, %	6%	0%	100%	28%	2%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	623	23	48	111	437
LT Vol	27	14	0	78	15
Through Vol	556	9	0	2	412
RT Vol	40	0	48	31	10
Lane Flow Rate	677	25	52	121	475
Geometry Grp	2	7	7	5	2
Degree of Util (X)	1	0.056	0.103	0.241	0.744
Departure Headway (Hd)	5.353	8.126	7.09	7.181	5.641
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	677	446	510	507	646
Service Time	3.423	5.779	4.775	5.136	3.642
HCM Lane V/C Ratio	1	0.056	0.102	0.239	0.735
HCM Control Delay	57.8	11.3	10.6	12.4	23.2
HCM Lane LOS	F	B	B	B	C
HCM 95th-tile Q	15.8	0.2	0.3	0.9	6.6

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	15	412	10
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	16	448	11
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	23.2
HCM LOS	C

Lane



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	37	801	67	66	1020	12	11	785	60	3	823	75
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	40	871	73	72	1109	13	12	853	65	3	895	82
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	176	1500	126	225	1626	19	44	1501	113	37	1495	137
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	500	3306	277	591	3583	42	16	3219	243	2	3207	293
Grp Volume(v), veh/h	40	466	478	72	548	574	489	0	441	520	0	460
Grp Sat Flow(s),veh/h/ln	500	1770	1814	591	1770	1855	1826	0	1652	1859	0	1643
Q Serve(g_s), s	6.9	19.5	19.5	10.3	24.5	24.5	0.0	0.0	19.5	0.0	0.0	20.7
Cycle Q Clear(g_c), s	31.4	19.5	19.5	29.8	24.5	24.5	19.0	0.0	19.5	20.7	0.0	20.7
Prop In Lane	1.00		0.15	1.00		0.02	0.02		0.15	0.01		0.18
Lane Grp Cap(c), veh/h	176	803	823	225	803	842	888	0	770	903	0	766
V/C Ratio(X)	0.23	0.58	0.58	0.32	0.68	0.68	0.55	0.00	0.57	0.58	0.00	0.60
Avail Cap(c_a), veh/h	195	867	889	246	867	909	888	0	770	903	0	766
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.75	0.75	0.75	0.31	0.31	0.31	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.0	20.3	20.3	31.3	21.6	21.6	19.3	0.0	19.4	19.8	0.0	19.8
Incr Delay (d2), s/veh	0.5	0.6	0.6	0.3	0.6	0.6	2.4	0.0	3.1	2.7	0.0	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	14.0	14.3	2.9	15.2	15.8	15.7	0.0	14.5	16.7	0.0	15.3
LnGrp Delay(d),s/veh	34.5	20.9	20.9	31.6	22.2	22.2	21.8	0.0	22.5	22.4	0.0	23.2
LnGrp LOS	C	C	C	C	C	C	C		C	C		C
Approach Vol, veh/h		984			1194			930			980	
Approach Delay, s/veh		21.4			22.8			22.1			22.8	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		50.6		49.4		50.6		49.4
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		43.0		49.0		43.0		49.0
Max Q Clear Time (g_c+I1), s		21.5		33.4		22.7		31.8
Green Ext Time (p_c), s		13.4		12.0		12.9		12.9

Intersection Summary	
HCM 2010 Ctrl Delay	22.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	63	794	94	139	1010	43	105	931	199	88	1020	102
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	68	863	102	151	1098	47	114	1012	216	96	1109	111
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	162	1118	500	252	1201	51	204	1437	754	233	1313	131
Arrive On Green	0.04	0.32	0.32	0.07	0.35	0.35	0.05	0.41	0.41	0.05	0.40	0.40
Sat Flow, veh/h	1774	3539	1583	1774	3458	148	1774	3539	1583	1774	3250	325
Grp Volume(v), veh/h	68	863	102	151	562	583	114	1012	216	96	603	617
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1837	1774	1770	1583	1774	1770	1805
Q Serve(g_s), s	2.6	22.1	4.7	5.6	30.4	30.4	3.7	23.8	8.3	3.1	30.8	30.9
Cycle Q Clear(g_c), s	2.6	22.1	4.7	5.6	30.4	30.4	3.7	23.8	8.3	3.1	30.8	30.9
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		0.18
Lane Grp Cap(c), veh/h	162	1118	500	252	614	638	204	1437	754	233	715	729
V/C Ratio(X)	0.42	0.77	0.20	0.60	0.91	0.91	0.56	0.70	0.29	0.41	0.84	0.85
Avail Cap(c_a), veh/h	164	1133	507	252	619	643	204	1437	754	272	715	729
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)	0.73	0.73	0.73	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.0	30.9	25.0	23.5	31.2	31.2	22.3	24.7	15.9	19.4	26.9	27.0
Incr Delay (d2), s/veh	1.3	2.4	0.1	2.6	13.2	12.9	3.4	2.9	1.0	1.2	11.7	11.6
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	15.8	3.7	5.2	22.6	23.3	3.6	17.8	6.9	2.9	24.0	24.7
LnGrp Delay(d),s/veh	27.2	33.4	25.1	26.1	44.4	44.1	25.7	27.6	16.9	20.6	38.6	38.6
LnGrp LOS	C	C	C	C	D	D	C	C	B	C	D	D
Approach Vol, veh/h		1033			1296			1342			1316	
Approach Delay, s/veh		32.1			42.2			25.7			37.3	
Approach LOS		C			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	44.6	11.0	35.6	9.0	44.4	7.9	38.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	38.0	7.0	32.0	5.0	40.0	4.0	35.0
Max Q Clear Time (g_c+I1), s	5.1	25.8	7.6	24.1	5.7	32.9	4.6	32.4
Green Ext Time (p_c), s	0.0	10.3	0.0	6.6	0.0	6.3	0.0	2.3

Intersection Summary	
HCM 2010 Ctrl Delay	34.4
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	67	728	104	146	714	71	40	232	68	57	350	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	73	791	113	159	776	77	43	252	74	62	380	48
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	1	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	335	1532	219	316	1603	159	164	859	246	121	528	63
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	644	3110	444	614	3253	323	242	2297	657	142	1412	169
Grp Volume(v), veh/h	73	450	454	159	422	431	191	0	178	490	0	0
Grp Sat Flow(s),veh/h/ln	644	1770	1784	614	1770	1806	1618	0	1579	1723	0	0
Q Serve(g_s), s	5.1	10.4	10.4	14.3	9.5	9.5	0.0	0.0	4.8	7.3	0.0	0.0
Cycle Q Clear(g_c), s	14.6	10.4	10.4	24.6	9.5	9.5	4.3	0.0	4.8	14.6	0.0	0.0
Prop In Lane	1.00		0.25	1.00		0.18	0.22		0.42	0.13		0.10
Lane Grp Cap(c), veh/h	335	872	879	316	872	890	678	0	591	712	0	0
V/C Ratio(X)	0.22	0.52	0.52	0.50	0.48	0.48	0.28	0.00	0.30	0.69	0.00	0.00
Avail Cap(c_a), veh/h	340	885	892	321	885	903	678	0	591	712	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.62	0.62	0.62	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.0	10.4	10.4	18.7	10.1	10.1	13.1	0.0	13.2	16.2	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.3	0.3	1.2	0.4	0.4	1.0	0.0	1.3	5.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.6	8.0	8.1	4.5	8.2	8.4	4.3	0.0	4.1	12.6	0.0	0.0
LnGrp Delay(d),s/veh	15.2	10.7	10.7	20.0	10.6	10.5	14.1	0.0	14.6	21.6	0.0	0.0
LnGrp LOS	B	B	B	B	B	B	B		B	C		
Approach Vol, veh/h		977			1012			369			490	
Approach Delay, s/veh		11.0			12.0			14.3			21.6	
Approach LOS		B			B			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		26.4		33.6		26.4		33.6
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		22.0		30.0		22.0		30.0
Max Q Clear Time (g_c+I1), s		6.8		16.6		16.6		26.6
Green Ext Time (p_c), s		5.1		10.0		2.6		2.9

Intersection Summary	
HCM 2010 Ctrl Delay	13.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	738	404	63	1119	42	0	0	0	94	23	10
Number	7	4	14	3	8	18				1	6	16
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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	7	802	439	68	1216	46				102	25	11
Adj No. of Lanes	0	2	1	1	2	0				0	1	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				0	2	0
Cap, veh/h	40	1547	712	253	1565	59				616	151	66
Arrive On Green	0.90	0.90	0.90	0.90	0.90	0.90				0.47	0.47	0.47
Sat Flow, veh/h	8	3439	1583	447	3478	131				1310	321	141
Grp Volume(v), veh/h	431	378	439	68	618	644				138	0	0
Grp Sat Flow(s),veh/h/ln	1836	1610	1583	447	1770	1840				1772	0	0
Q Serve(g_s), s	0.0	4.4	6.2	4.1	11.6	11.7				4.5	0.0	0.0
Cycle Q Clear(g_c), s	4.3	4.4	6.2	8.6	11.6	11.7				4.5	0.0	0.0
Prop In Lane	0.02		1.00	1.00		0.07				0.74		0.08
Lane Grp Cap(c), veh/h	863	725	712	253	796	828				833	0	0
V/C Ratio(X)	0.50	0.52	0.62	0.27	0.78	0.78				0.17	0.00	0.00
Avail Cap(c_a), veh/h	1252	1079	1061	351	1186	1232				833	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.69	0.69	0.69	0.70	0.70	0.70				1.00	0.00	0.00
Uniform Delay (d), s/veh	3.0	3.0	3.1	3.8	3.3	3.3				15.2	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.4	0.6	0.4	1.4	1.3				0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.5	3.1	4.6	0.9	8.2	8.4				4.1	0.0	0.0
LnGrp Delay(d),s/veh	3.3	3.4	3.7	4.2	4.7	4.6				15.7	0.0	0.0
LnGrp LOS	A	A	A	A	A	A				B		
Approach Vol, veh/h		1248			1330						138	
Approach Delay, s/veh		3.4			4.6						15.7	
Approach LOS		A			A						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				49.0		51.0		49.0
Change Period (Y+Rc), s				4.0		4.0		4.0
Max Green Setting (Gmax), s				67.0		25.0		67.0
Max Q Clear Time (g_c+I1), s				8.2		6.5		13.7
Green Ext Time (p_c), s				33.0		0.6		31.3

Intersection Summary	
HCM 2010 Ctrl Delay	4.7
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	802	0	0	796	36	457	37	44	30	0	71
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	10	872	0	0	865	39	570	0	0	33	0	77
Adj No. of Lanes	1	2	0	0	2	0	2	1	0	0	1	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, %	2	2	0	0	2	2	2	2	2	2	2	2
Cap, veh/h	167	1297	0	0	1264	57	1631	1031	0	279	23	596
Arrive On Green	0.37	0.37	0.00	0.00	0.37	0.37	0.55	0.00	0.00	0.55	0.00	0.55
Sat Flow, veh/h	614	3632	0	0	3543	156	2634	1863	0	420	42	1077
Grp Volume(v), veh/h	10	872	0	0	444	460	570	0	0	110	0	0
Grp Sat Flow(s),veh/h/ln	614	1770	0	0	1770	1835	1317	1863	0	1539	0	0
Q Serve(g_s), s	1.4	20.7	0.0	0.0	21.2	21.2	7.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	22.6	20.7	0.0	0.0	21.2	21.2	10.9	0.0	0.0	3.2	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.08	1.00		0.00	0.30		0.70
Lane Grp Cap(c), veh/h	167	1297	0	0	648	672	1631	1031	0	899	0	0
V/C Ratio(X)	0.06	0.67	0.00	0.00	0.68	0.68	0.35	0.00	0.00	0.12	0.00	0.00
Avail Cap(c_a), veh/h	212	1557	0	0	779	808	1631	1031	0	899	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.00	0.00	0.81	0.81	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	36.4	26.6	0.0	0.0	26.8	26.8	12.2	0.0	0.0	10.7	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.8	0.0	0.0	1.6	1.5	0.6	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	15.1	0.0	0.0	15.4	15.9	8.0	0.0	0.0	2.7	0.0	0.0
LnGrp Delay(d),s/veh	36.5	27.4	0.0	0.0	28.4	28.3	12.8	0.0	0.0	10.9	0.0	0.0
LnGrp LOS	D	C			C	C	B			B		
Approach Vol, veh/h		882			904			570			110	
Approach Delay, s/veh		27.5			28.3			12.8			10.9	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		59.4		40.6		59.4		40.6
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		48.0		44.0		48.0		44.0
Max Q Clear Time (g_c+I1), s		12.9		24.6		5.2		23.2
Green Ext Time (p_c), s		3.2		12.0		3.2		12.6

Intersection Summary	
HCM 2010 Ctrl Delay	23.7
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	19.4
Intersection LOS	C

Movement	EBU	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR
Vol, veh/h	0	0	23	0	34	0	0	892	40
Peak Hour Factor	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
Mvmt Flow	0	0	25	0	37	0	0	970	43
Number of Lanes	0	0	1	0	1	0	0	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.3	8.3	20.1
HCM LOS	A	A	C

Lane	NBLn1	EBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%
Vol Thru, %	0%	0%	100%	88%
Vol Right, %	0%	100%	0%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	34	23	595	337
LT Vol	34	0	0	0
Through Vol	0	0	595	297
RT Vol	0	23	0	40
Lane Flow Rate	37	25	646	367
Geometry Grp	5	2	7	7
Degree of Util (X)	0.052	0.036	0.825	0.46
Departure Headway (Hd)	5.056	5.141	4.596	4.513
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	711	700	789	796
Service Time	3.064	3.144	2.335	2.252
HCM Lane V/C Ratio	0.052	0.036	0.819	0.461
HCM Control Delay	8.3	8.3	25.2	11.1
HCM Lane LOS	A	A	D	B
HCM 95th-tile Q	0.2	0.1	9.2	2.4

Intersection	
Intersection Delay, s/veh	38.3
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	61	22	266	0	174	5	71	0	13	318	31
Peak Hour Factor	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	66	24	289	0	189	5	77	0	14	346	34
Number of Lanes	0	0	1	1	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	2	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	21.9	26.7	44.5
HCM LOS	C	D	E

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	4%	73%	0%	70%	3%
Vol Thru, %	88%	27%	0%	2%	96%
Vol Right, %	9%	0%	100%	28%	2%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	362	83	266	250	391
LT Vol	13	61	0	174	10
Through Vol	318	22	0	5	375
RT Vol	31	0	266	71	6
Lane Flow Rate	393	90	289	272	425
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.867	0.228	0.643	0.652	0.928
Departure Headway (Hd)	7.93	9.11	8.002	8.632	7.859
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	456	393	451	416	459
Service Time	6.014	6.894	5.785	6.726	5.94
HCM Lane V/C Ratio	0.862	0.229	0.641	0.654	0.926
HCM Control Delay	44.5	14.6	24.2	26.7	54.6
HCM Lane LOS	E	B	C	D	F
HCM 95th-tile Q	8.9	0.9	4.4	4.5	10.7

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	10	375	6
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	11	408	7
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	54.6
HCM LOS	F

Lane

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	62	1054	69	93	1040	33	7	826	72	4	666	19
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	67	1146	75	101	1130	36	8	898	78	4	724	21
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	1653	108	175	1716	55	40	1380	119	38	1474	43
Arrive On Green	0.49	0.49	0.49	0.65	0.65	0.65	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	480	3373	221	455	3501	112	9	3209	277	4	3429	99
Grp Volume(v), veh/h	67	601	620	101	571	595	521	0	463	393	0	356
Grp Sat Flow(s),veh/h/ln	480	1770	1824	455	1770	1843	1849	0	1646	1854	0	1678
Q Serve(g_s), s	11.5	26.2	26.3	22.0	19.7	19.7	0.0	0.0	22.3	0.0	0.0	15.3
Cycle Q Clear(g_c), s	31.2	26.2	26.3	48.2	19.7	19.7	22.1	0.0	22.3	15.3	0.0	15.3
Prop In Lane	1.00		0.12	1.00		0.06	0.02		0.17	0.01		0.06
Lane Grp Cap(c), veh/h	212	867	894	175	867	903	832	0	708	834	0	721
V/C Ratio(X)	0.32	0.69	0.69	0.58	0.66	0.66	0.63	0.00	0.65	0.47	0.00	0.49
Avail Cap(c_a), veh/h	212	867	894	175	867	903	832	0	708	834	0	721
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)	0.75	0.75	0.75	0.29	0.29	0.29	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.1	19.7	19.7	30.3	12.3	12.3	22.5	0.0	22.6	20.6	0.0	20.6
Incr Delay (d2), s/veh	0.6	1.8	1.8	1.3	0.5	0.5	3.6	0.0	4.7	1.9	0.0	2.4
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	2.8	18.3	18.7	4.3	12.1	12.6	17.8	0.0	16.4	12.9	0.0	12.1
LnGrp Delay(d),s/veh	29.7	21.5	21.5	31.6	12.8	12.8	26.1	0.0	27.3	22.5	0.0	23.0
LnGrp LOS	C	C	C	C	B	B	C		C	C		C
Approach Vol, veh/h		1288			1267			984			749	
Approach Delay, s/veh		21.9			14.3			26.7			22.7	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		47.0		53.0		47.0		53.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		43.0		49.0		43.0		49.0
Max Q Clear Time (g_c+I1), s		24.3		33.2		17.3		50.2
Green Ext Time (p_c), s		11.1		13.6		13.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	20.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	93	950	95	146	993	69	89	1019	227	91	1030	76
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	101	1033	103	159	1079	75	97	1108	247	99	1120	83
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	162	1127	504	215	1170	81	205	1423	747	211	1347	100
Arrive On Green	0.04	0.32	0.32	0.07	0.35	0.35	0.05	0.40	0.40	0.05	0.40	0.40
Sat Flow, veh/h	1774	3539	1583	1774	3358	233	1774	3539	1583	1774	3341	247
Grp Volume(v), veh/h	101	1033	103	159	568	586	97	1108	247	99	593	610
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1822	1774	1770	1583	1774	1770	1819
Q Serve(g_s), s	3.9	28.1	4.7	5.9	30.8	30.9	3.2	27.3	9.8	3.2	30.1	30.1
Cycle Q Clear(g_c), s	3.9	28.1	4.7	5.9	30.8	30.9	3.2	27.3	9.8	3.2	30.1	30.1
Prop In Lane	1.00		1.00	1.00		0.13	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	162	1127	504	215	617	635	205	1423	747	211	713	733
V/C Ratio(X)	0.62	0.92	0.20	0.74	0.92	0.92	0.47	0.78	0.33	0.47	0.83	0.83
Avail Cap(c_a), veh/h	162	1133	507	215	619	638	208	1423	747	248	713	733
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.63	0.63	0.63	0.66	0.66	0.66	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	32.8	24.8	25.0	31.3	31.3	21.7	26.0	16.5	20.9	26.8	26.8
Incr Delay (d2), s/veh	4.6	7.9	0.1	8.7	14.0	13.8	1.7	4.3	1.2	1.6	10.9	10.7
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	3.8	19.9	3.7	5.8	23.0	23.5	2.9	20.2	8.0	3.0	23.5	24.1
LnGrp Delay(d),s/veh	31.1	40.7	25.0	33.7	45.3	45.1	23.4	30.3	17.7	22.5	37.6	37.5
LnGrp LOS	C	D	C	C	D	D	C	C	B	C	D	D
Approach Vol, veh/h		1237			1313			1452			1302	
Approach Delay, s/veh		38.6			43.8			27.7			36.4	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	44.2	11.0	35.9	8.8	44.3	8.0	38.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	7.0	38.0	7.0	32.0	5.0	40.0	4.0	35.0
Max Q Clear Time (g_c+I1), s	5.2	29.3	7.9	30.1	5.2	32.1	5.9	32.9
Green Ext Time (p_c), s	0.0	7.8	0.0	1.8	0.0	7.0	0.0	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	36.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	55	1095	105	95	800	66	89	360	123	72	424	56
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	60	1190	114	103	870	72	97	391	134	78	461	61
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	1	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	284	1524	146	187	1545	128	193	683	232	113	453	56
Arrive On Green	0.47	0.47	0.47	0.47	0.47	0.47	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	593	3265	312	420	3310	274	275	1707	579	114	1133	141
Grp Volume(v), veh/h	60	644	660	103	465	477	253	0	369	600	0	0
Grp Sat Flow(s),veh/h/ln	593	1770	1808	420	1770	1814	968	0	1593	1388	0	0
Q Serve(g_s), s	4.9	18.3	18.4	9.6	11.4	11.4	0.0	0.0	10.8	13.2	0.0	0.0
Cycle Q Clear(g_c), s	16.3	18.3	18.4	28.0	11.4	11.4	10.1	0.0	10.8	24.0	0.0	0.0
Prop In Lane	1.00		0.17	1.00		0.15	0.38		0.36	0.13		0.10
Lane Grp Cap(c), veh/h	284	826	844	187	826	847	470	0	637	623	0	0
V/C Ratio(X)	0.21	0.78	0.78	0.55	0.56	0.56	0.54	0.00	0.58	0.96	0.00	0.00
Avail Cap(c_a), veh/h	284	826	844	187	826	847	470	0	637	623	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.52	0.52	0.52	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.5	13.4	13.4	26.9	11.6	11.6	13.1	0.0	14.1	19.1	0.0	0.0
Incr Delay (d2), s/veh	0.2	2.6	2.6	3.4	0.9	0.9	4.4	0.0	3.8	28.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	13.0	13.3	3.4	9.7	9.9	6.7	0.0	9.2	21.0	0.0	0.0
LnGrp Delay(d),s/veh	17.7	16.0	16.0	30.3	12.5	12.4	17.4	0.0	17.9	47.2	0.0	0.0
LnGrp LOS	B	B	B	C	B	B	B		B	D		
Approach Vol, veh/h		1364			1045			622			600	
Approach Delay, s/veh		16.1			14.2			17.7			47.2	
Approach LOS		B			B			B			D	

Timer	1	2	3	4	5	6	7	8
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		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		24.0		28.0		24.0		28.0
Max Q Clear Time (g_c+I1), s		12.8		20.4		26.0		30.0
Green Ext Time (p_c), s		6.2		6.8		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	21.0
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	11	910	355	49	1227	72	0	0	0	110	34	15
Number	7	4	14	3	8	18				1	6	16
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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	12	989	386	53	1334	78				120	37	16
Adj No. of Lanes	0	2	1	1	2	0				0	1	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				0	2	0
Cap, veh/h	44	1642	764	252	1640	96				538	166	72
Arrive On Green	0.97	0.97	0.97	0.97	0.97	0.97				0.44	0.44	0.44
Sat Flow, veh/h	14	3402	1583	393	3399	198				1229	379	164
Grp Volume(v), veh/h	531	470	386	53	693	719				173	0	0
Grp Sat Flow(s),veh/h/ln	1806	1610	1583	393	1770	1828				1772	0	0
Q Serve(g_s), s	0.0	2.4	1.7	1.5	6.3	6.4				6.1	0.0	0.0
Cycle Q Clear(g_c), s	2.3	2.4	1.7	4.0	6.3	6.4				6.1	0.0	0.0
Prop In Lane	0.02		1.00	1.00		0.11				0.69		0.09
Lane Grp Cap(c), veh/h	909	777	764	252	854	882				775	0	0
V/C Ratio(X)	0.58	0.61	0.51	0.21	0.81	0.81				0.22	0.00	0.00
Avail Cap(c_a), veh/h	1246	1095	1077	330	1203	1243				775	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.54	0.54	0.54	0.75	0.75	0.75				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.9	0.9	0.9	1.1	1.0	1.0				17.5	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.4	0.3	0.3	2.2	2.2				0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.2	1.1	0.9	0.3	3.7	3.8				5.6	0.0	0.0
LnGrp Delay(d),s/veh	1.3	1.4	1.2	1.4	3.2	3.2				18.2	0.0	0.0
LnGrp LOS	A	A	A	A	A	A				B		
Approach Vol, veh/h		1387			1465						173	
Approach Delay, s/veh		1.3			3.2						18.2	
Approach LOS		A			A						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				52.3		47.7		52.3
Change Period (Y+Rc), s				4.0		4.0		4.0
Max Green Setting (Gmax), s				68.0		24.0		68.0
Max Q Clear Time (g_c+I1), s				4.4		8.1		8.4
Green Ext Time (p_c), s				41.5		0.8		39.9

Intersection Summary	
HCM 2010 Ctrl Delay	3.2
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	19	986	0	0	759	44	522	133	56	26	0	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	21	1072	0	0	825	48	386	398	61	28	0	65
Adj No. of Lanes	1	2	0	0	2	0	1	1	0	0	1	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, %	2	2	0	0	2	2	2	2	2	2	2	2
Cap, veh/h	190	1359	0	0	1305	76	681	846	130	196	23	400
Arrive On Green	0.51	0.51	0.00	0.00	0.38	0.38	0.54	0.54	0.54	0.54	0.00	0.54
Sat Flow, veh/h	632	3632	0	0	3493	198	1331	1578	242	278	43	747
Grp Volume(v), veh/h	21	1072	0	0	429	444	386	0	459	93	0	0
Grp Sat Flow(s),veh/h/ln	632	1770	0	0	1770	1828	1331	0	1820	1069	0	0
Q Serve(g_s), s	2.6	24.8	0.0	0.0	19.7	19.7	13.5	0.0	15.6	0.8	0.0	0.0
Cycle Q Clear(g_c), s	22.4	24.8	0.0	0.0	19.7	19.7	30.0	0.0	15.6	16.5	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.11	1.00		0.13	0.30		0.70
Lane Grp Cap(c), veh/h	190	1359	0	0	679	702	681	0	976	620	0	0
V/C Ratio(X)	0.11	0.79	0.00	0.00	0.63	0.63	0.57	0.00	0.47	0.15	0.00	0.00
Avail Cap(c_a), veh/h	219	1522	0	0	761	786	681	0	976	620	0	0
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.00	0.00	0.78	0.78	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	28.3	21.1	0.0	0.0	25.1	25.1	19.6	0.0	14.4	12.1	0.0	0.0
Incr Delay (d2), s/veh	0.2	2.2	0.0	0.0	1.1	1.1	3.4	0.0	1.6	0.5	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	17.6	0.0	0.0	14.4	14.8	13.7	0.0	12.9	2.4	0.0	0.0
LnGrp Delay(d),s/veh	28.5	23.3	0.0	0.0	26.2	26.1	23.0	0.0	16.0	12.6	0.0	0.0
LnGrp LOS	C	C			C	C	C		B	B		
Approach Vol, veh/h		1093			873			845			93	
Approach Delay, s/veh		23.4			26.2			19.2			12.6	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		57.6		42.4		57.6		42.4
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		49.0		43.0		49.0		43.0
Max Q Clear Time (g_c+I1), s		32.0		26.8		18.5		21.7
Green Ext Time (p_c), s		4.7		11.6		5.5		14.1

Intersection Summary	
HCM 2010 Ctrl Delay	22.7
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	13.4
Intersection LOS	B

Movement	EBU	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR
Vol, veh/h	0	0	25	0	111	0	0	721	3
Peak Hour Factor	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
Mvmt Flow	0	0	27	0	121	0	0	784	3
Number of Lanes	0	0	1	0	1	0	0	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.3	9	14.3
HCM LOS	A	A	B

Lane	NBLn1	EBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%
Vol Thru, %	0%	0%	100%	99%
Vol Right, %	0%	100%	0%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	111	25	481	243
LT Vol	111	0	0	0
Through Vol	0	0	481	240
RT Vol	0	25	0	3
Lane Flow Rate	121	27	522	264
Geometry Grp	5	2	7	7
Degree of Util (X)	0.166	0.038	0.674	0.34
Departure Headway (Hd)	4.96	5.07	4.641	4.632
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	726	709	773	770
Service Time	2.967	3.078	2.403	2.395
HCM Lane V/C Ratio	0.167	0.038	0.675	0.343
HCM Control Delay	9	8.3	16.6	9.8
HCM Lane LOS	A	A	C	A
HCM 95th-tile Q	0.6	0.1	5.3	1.5

Intersection	
Intersection Delay, s/veh	39.4
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	14	9	71	0	78	2	31	0	27	556	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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	15	10	77	0	85	2	34	0	29	604	43
Number of Lanes	0	0	1	1	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	2	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	11.1	12.6	58.6
HCM LOS	B	B	F

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	4%	61%	0%	70%	3%
Vol Thru, %	89%	39%	0%	2%	94%
Vol Right, %	6%	0%	100%	28%	2%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	623	23	71	111	437
LT Vol	27	14	0	78	15
Through Vol	556	9	0	2	412
RT Vol	40	0	71	31	10
Lane Flow Rate	677	25	77	121	475
Geometry Grp	2	7	7	5	2
Degree of Util (X)	1	0.057	0.153	0.246	0.762
Departure Headway (Hd)	5.474	8.179	7.143	7.33	5.775
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	657	444	508	497	632
Service Time	3.564	5.814	4.81	5.271	3.768
HCM Lane V/C Ratio	1.03	0.056	0.152	0.243	0.752
HCM Control Delay	58.6	11.3	11.1	12.6	24.8
HCM Lane LOS	F	B	B	B	C
HCM 95th-tile Q	15.6	0.2	0.5	1	7

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	15	412	10
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	16	448	11
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	24.8
HCM LOS	C

Lane

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	42	1096	72	81	1359	13	12	851	71	3	886	81
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	46	1191	78	88	1477	14	13	925	77	3	963	88
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	146	1808	118	195	1925	18	42	1166	101	37	1232	112
Arrive On Green	0.54	0.54	0.54	0.54	0.54	0.54	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	352	3373	221	435	3592	34	13	3036	263	2	3208	292
Grp Volume(v), veh/h	46	624	645	88	727	764	533	0	482	559	0	495
Grp Sat Flow(s),veh/h/ln	352	1770	1824	435	1770	1857	1664	0	1649	1858	0	1644
Q Serve(g_s), s	11.9	25.3	25.4	18.2	32.4	32.4	3.2	0.0	25.5	0.0	0.0	26.5
Cycle Q Clear(g_c), s	44.3	25.3	25.4	43.6	32.4	32.4	29.7	0.0	25.5	26.4	0.0	26.5
Prop In Lane	1.00		0.12	1.00		0.02	0.02		0.16	0.01		0.18
Lane Grp Cap(c), veh/h	146	948	978	195	948	995	676	0	633	750	0	631
V/C Ratio(X)	0.31	0.66	0.66	0.45	0.77	0.77	0.79	0.00	0.76	0.75	0.00	0.78
Avail Cap(c_a), veh/h	148	956	985	196	956	1003	676	0	633	750	0	631
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)	0.75	0.75	0.75	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.7	16.6	16.7	32.3	18.3	18.3	26.9	0.0	26.8	27.1	0.0	27.1
Incr Delay (d2), s/veh	0.9	1.2	1.2	0.1	0.3	0.3	9.1	0.0	8.4	6.7	0.0	9.4
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	2.1	17.7	18.2	2.9	17.8	18.6	21.4	0.0	18.9	21.2	0.0	19.7
LnGrp Delay(d),s/veh	36.7	17.9	17.9	32.4	18.6	18.6	35.9	0.0	35.2	33.8	0.0	36.6
LnGrp LOS	D	B	B	C	B	B	D		D	C		D
Approach Vol, veh/h		1315			1579			1015			1054	
Approach Delay, s/veh		18.5			19.4			35.6			35.1	
Approach LOS		B			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		42.4		57.6		42.4		57.6
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		38.0		54.0		38.0		54.0
Max Q Clear Time (g_c+I1), s		31.7		46.3		28.5		45.6
Green Ext Time (p_c), s		5.3		7.3		7.6		8.0

Intersection Summary	
HCM 2010 Ctrl Delay	25.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	106	1125	102	150	1341	58	119	1032	214	94	1104	116
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	115	1223	111	163	1458	63	129	1122	233	102	1200	126
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	143	1345	602	222	1417	61	143	1239	665	162	1132	119
Arrive On Green	0.05	0.51	0.51	0.07	0.41	0.41	0.04	0.35	0.35	0.04	0.35	0.35
Sat Flow, veh/h	1774	3539	1583	1774	3457	149	1774	3539	1583	1774	3234	339
Grp Volume(v), veh/h	115	1223	111	163	745	776	129	1122	233	102	655	671
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1836	1774	1770	1583	1774	1770	1803
Q Serve(g_s), s	4.0	31.6	3.8	5.5	41.0	41.0	4.0	30.2	10.0	3.7	35.0	35.0
Cycle Q Clear(g_c), s	4.0	31.6	3.8	5.5	41.0	41.0	4.0	30.2	10.0	3.7	35.0	35.0
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	143	1345	602	222	726	753	143	1239	665	162	619	631
V/C Ratio(X)	0.80	0.91	0.18	0.73	1.03	1.03	0.90	0.91	0.35	0.63	1.06	1.06
Avail Cap(c_a), veh/h	143	1345	602	222	726	753	143	1239	665	162	619	631
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)	0.65	0.65	0.65	0.64	0.64	0.64	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.2	23.2	16.3	23.2	29.5	29.5	29.6	30.9	19.7	25.4	32.5	32.5
Incr Delay (d2), s/veh	19.3	6.5	0.1	7.8	33.7	34.5	47.4	11.1	1.5	7.5	52.5	53.6
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	4.8	21.8	3.0	5.4	48.1	50.3	6.3	23.2	8.1	3.8	46.9	48.2
LnGrp Delay(d),s/veh	44.5	29.7	16.4	31.0	63.2	64.0	77.0	42.0	21.2	32.9	85.0	86.1
LnGrp LOS	D	C	B	C	F	F	E	D	C	C	F	F
Approach Vol, veh/h		1449			1684			1484			1428	
Approach Delay, s/veh		29.8			60.5			41.8			81.8	
Approach LOS		C			E			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	39.0	11.0	42.0	8.0	39.0	8.0	45.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	35.0	7.0	38.0	4.0	35.0	4.0	41.0
Max Q Clear Time (g_c+I1), s	5.7	32.2	7.5	33.6	6.0	37.0	6.0	43.0
Green Ext Time (p_c), s	0.0	2.7	0.0	4.2	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	53.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	74	845	116	157	842	76	44	249	73	61	376	48
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	80	918	126	171	915	83	48	271	79	66	409	52
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	1	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	318	1668	229	303	1750	159	149	738	211	116	467	56
Arrive On Green	0.53	0.53	0.53	0.53	0.53	0.53	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	562	3127	429	538	3282	298	224	2215	633	146	1400	169
Grp Volume(v), veh/h	80	519	525	171	493	505	201	0	197	527	0	0
Grp Sat Flow(s),veh/h/ln	562	1770	1787	538	1770	1810	1490	0	1583	1714	0	0
Q Serve(g_s), s	6.4	11.6	11.6	18.5	10.8	10.8	0.0	0.0	5.7	11.6	0.0	0.0
Cycle Q Clear(g_c), s	17.3	11.6	11.6	30.1	10.8	10.8	4.8	0.0	5.7	17.7	0.0	0.0
Prop In Lane	1.00		0.24	1.00		0.16	0.24		0.40	0.13		0.10
Lane Grp Cap(c), veh/h	318	944	953	303	944	965	571	0	528	639	0	0
V/C Ratio(X)	0.25	0.55	0.55	0.56	0.52	0.52	0.35	0.00	0.37	0.82	0.00	0.00
Avail Cap(c_a), veh/h	318	944	953	303	944	965	571	0	528	639	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.54	0.54	0.54	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.6	9.2	9.2	19.2	9.1	9.1	14.9	0.0	15.2	19.0	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.4	0.4	2.4	0.5	0.5	1.7	0.0	2.0	11.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	8.6	8.7	5.2	9.1	9.3	4.9	0.0	5.0	15.7	0.0	0.0
LnGrp Delay(d),s/veh	14.9	9.6	9.6	21.6	9.6	9.6	16.6	0.0	17.3	30.6	0.0	0.0
LnGrp LOS	B	A	A	C	A	A	B		B	C		
Approach Vol, veh/h		1124			1169			398			527	
Approach Delay, s/veh		10.0			11.3			16.9			30.6	
Approach LOS		A			B			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		24.0		36.0		24.0		36.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		20.0		32.0		20.0		32.0
Max Q Clear Time (g_c+I1), s		7.7		19.3		19.7		32.1
Green Ext Time (p_c), s		4.9		10.6		0.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	14.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	868	631	65	1471	45	0	0	0	101	25	11
Number	7	4	14	3	8	18				1	6	16
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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	7	943	686	71	1599	49				110	27	12
Adj No. of Lanes	0	2	1	1	2	0				0	1	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				0	2	0
Cap, veh/h	40	1920	886	244	1961	60				472	116	51
Arrive On Green	1.00	1.00	1.00	1.00	1.00	1.00				0.36	0.36	0.36
Sat Flow, veh/h	7	3432	1583	308	3506	107				1308	321	143
Grp Volume(v), veh/h	507	443	686	71	805	843				149	0	0
Grp Sat Flow(s),veh/h/ln	1829	1610	1583	308	1770	1844				1772	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0				5.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0				5.9	0.0	0.0
Prop In Lane	0.01		1.00	1.00		0.06				0.74		0.08
Lane Grp Cap(c), veh/h	1059	901	886	244	990	1031				639	0	0
V/C Ratio(X)	0.48	0.49	0.77	0.29	0.81	0.82				0.23	0.00	0.00
Avail Cap(c_a), veh/h	1321	1143	1124	290	1256	1309				639	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.49	0.49	0.49	0.57	0.57	0.57				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				22.3	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.2	1.3	0.4	1.9	1.9				0.9	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
%ile BackOfQ(95%),veh/ln	0.1	0.1	0.6	0.0	1.0	1.0				5.4	0.0	0.0
LnGrp Delay(d),s/veh	0.2	0.2	1.3	0.4	1.9	1.9				23.2	0.0	0.0
LnGrp LOS	A	A	A	A	A	A				C		
Approach Vol, veh/h		1636			1719						149	
Approach Delay, s/veh		0.7			1.9						23.2	
Approach LOS		A			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				59.9		40.1		59.9
Change Period (Y+Rc), s				4.0		4.0		4.0
Max Green Setting (Gmax), s				71.0		21.0		71.0
Max Q Clear Time (g_c+I1), s				2.0		7.9		2.0
Green Ext Time (p_c), s				53.9		0.6		53.9

Intersection Summary	
HCM 2010 Ctrl Delay	2.2
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	937	0	0	952	39	670	40	50	21	0	65
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	11	1018	0	0	1035	42	809	0	0	23	0	71
Adj No. of Lanes	1	2	0	0	2	0	2	1	0	0	1	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, %	2	2	0	0	2	2	2	2	2	2	2	2
Cap, veh/h	134	1353	0	0	1325	54	1593	1002	0	224	25	629
Arrive On Green	0.26	0.26	0.00	0.00	0.38	0.38	0.54	0.00	0.00	0.54	0.00	0.54
Sat Flow, veh/h	522	3632	0	0	3560	141	2648	1863	0	333	46	1171
Grp Volume(v), veh/h	11	1018	0	0	528	549	809	0	0	94	0	0
Grp Sat Flow(s),veh/h/ln	522	1770	0	0	1770	1838	1324	1863	0	1550	0	0
Q Serve(g_s), s	2.0	26.5	0.0	0.0	26.3	26.3	16.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	28.3	26.5	0.0	0.0	26.3	26.3	19.0	0.0	0.0	2.8	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.08	1.00		0.00	0.24		0.76
Lane Grp Cap(c), veh/h	134	1353	0	0	676	703	1593	1002	0	878	0	0
V/C Ratio(X)	0.08	0.75	0.00	0.00	0.78	0.78	0.51	0.00	0.00	0.11	0.00	0.00
Avail Cap(c_a), veh/h	144	1416	0	0	708	735	1593	1002	0	878	0	0
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.00	0.00	0.80	0.80	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	45.8	32.8	0.0	0.0	27.2	27.2	14.8	0.0	0.0	11.3	0.0	0.0
Incr Delay (d2), s/veh	0.2	2.0	0.0	0.0	4.4	4.2	1.2	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	19.1	0.0	0.0	19.0	19.6	11.9	0.0	0.0	2.4	0.0	0.0
LnGrp Delay(d),s/veh	46.0	34.8	0.0	0.0	31.6	31.4	16.0	0.0	0.0	11.6	0.0	0.0
LnGrp LOS	D	C			C	C	B			B		
Approach Vol, veh/h		1029			1077			809			94	
Approach Delay, s/veh		35.0			31.5			16.0			11.6	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		57.8		42.2		57.8		42.2
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		52.0		40.0		52.0		40.0
Max Q Clear Time (g_c+I1), s		21.0		30.3		4.8		28.3
Green Ext Time (p_c), s		4.3		8.0		4.4		9.3

Intersection Summary	
HCM 2010 Ctrl Delay	27.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	24.8
Intersection LOS	C

Movement	EBU	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR
Vol, veh/h	0	0	25	0	37	0	0	972	43
Peak Hour Factor	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
Mvmt Flow	0	0	27	0	40	0	0	1057	47
Number of Lanes	0	0	1	0	1	0	0	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.4	8.4	25.8
HCM LOS	A	A	D

Lane	NBLn1	EBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%
Vol Thru, %	0%	0%	100%	88%
Vol Right, %	0%	100%	0%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	37	25	648	367
LT Vol	37	0	0	0
Through Vol	0	0	648	324
RT Vol	0	25	0	43
Lane Flow Rate	40	27	704	399
Geometry Grp	5	2	7	7
Degree of Util (X)	0.057	0.039	0.9	0.501
Departure Headway (Hd)	5.103	5.232	4.602	4.52
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	705	688	789	794
Service Time	3.108	3.235	2.344	2.262
HCM Lane V/C Ratio	0.057	0.039	0.892	0.503
HCM Control Delay	8.4	8.4	33.7	11.8
HCM Lane LOS	A	A	D	B
HCM 95th-tile Q	0.2	0.1	12	2.8

Intersection	
Intersection Delay, s/veh	53.1
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	65	24	287	0	187	5	76	0	14	347	33
Peak Hour Factor	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	71	26	312	0	203	5	83	0	15	377	36
Number of Lanes	0	0	1	1	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	2	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	26.8	33.4	69.3
HCM LOS	D	D	F

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	4%	73%	0%	70%	3%
Vol Thru, %	88%	27%	0%	2%	96%
Vol Right, %	8%	0%	100%	28%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	394	89	287	268	429
LT Vol	14	65	0	187	11
Through Vol	347	24	0	5	412
RT Vol	33	0	287	76	6
Lane Flow Rate	428	97	312	291	466
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.986	0.254	0.725	0.733	1
Departure Headway (Hd)	8.289	9.47	8.361	9.063	8.559
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	437	379	431	399	429
Service Time	6.388	7.218	6.151	7.137	6.559
HCM Lane V/C Ratio	0.979	0.256	0.724	0.729	1.086
HCM Control Delay	69.3	15.4	30.4	33.4	73.6
HCM Lane LOS	F	C	D	D	F
HCM 95th-tile Q	12.2	1	5.7	5.7	12.6

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	11	412	6
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	12	448	7
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	73.6
HCM LOS	F

Lane

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	72	1460	74	112	1435	35	8	897	100	4	728	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	78	1587	80	122	1560	38	9	975	109	4	791	27
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	209	2126	107	158	2189	53	39	906	104	36	896	35
Arrive On Green	0.62	0.62	0.62	0.82	0.82	0.82	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	317	3430	172	297	3531	86	8	3021	347	0	2987	116
Grp Volume(v), veh/h	78	816	851	122	780	818	580	0	513	431	0	391
Grp Sat Flow(s),veh/h/ln	317	1770	1832	297	1770	1848	1743	0	1634	1428	0	1675
Q Serve(g_s), s	18.6	32.5	33.0	29.0	18.7	18.9	8.7	0.0	30.0	0.0	0.0	21.3
Cycle Q Clear(g_c), s	37.4	32.5	33.0	62.0	18.7	18.9	30.0	0.0	30.0	30.0	0.0	21.3
Prop In Lane	1.00		0.09	1.00		0.05	0.02		0.21	0.01		0.07
Lane Grp Cap(c), veh/h	209	1097	1136	158	1097	1146	559	0	490	465	0	502
V/C Ratio(X)	0.37	0.74	0.75	0.77	0.71	0.71	1.04	0.00	1.05	0.93	0.00	0.78
Avail Cap(c_a), veh/h	209	1097	1136	158	1097	1146	559	0	490	465	0	502
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)	0.75	0.75	0.75	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.4	13.4	13.5	29.5	5.0	5.0	35.6	0.0	35.0	32.1	0.0	32.0
Incr Delay (d2), s/veh	0.8	2.1	2.1	2.2	0.2	0.2	47.8	0.0	53.6	27.0	0.0	11.3
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	3.0	22.0	23.1	4.4	10.2	10.7	41.0	0.0	37.4	20.4	0.0	17.0
LnGrp Delay(d),s/veh	22.3	15.5	15.6	31.7	5.2	5.2	83.3	0.0	88.6	59.1	0.0	43.3
LnGrp LOS	C	B	B	C	A	A	F		F	E		D
Approach Vol, veh/h		1745			1720			1093			822	
Approach Delay, s/veh		15.8			7.1			85.8			51.6	
Approach LOS		B			A			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		34.0		66.0		34.0		66.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		30.0		62.0		30.0		62.0
Max Q Clear Time (g_c+I1), s		32.0		39.4		32.0		64.0
Green Ext Time (p_c), s		0.0		21.7		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	32.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	140	1359	107	160	1457	110	96	1127	245	122	1149	149
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	152	1477	116	174	1584	120	104	1225	266	133	1249	162
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	143	1345	602	161	1301	98	143	1310	665	156	1167	151
Arrive On Green	0.08	0.76	0.76	0.05	0.39	0.39	0.04	0.37	0.37	0.04	0.37	0.37
Sat Flow, veh/h	1774	3539	1583	1774	3337	251	1774	3539	1583	1774	3153	407
Grp Volume(v), veh/h	152	1477	116	174	835	869	104	1225	266	133	699	712
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1818	1774	1770	1583	1774	1770	1791
Q Serve(g_s), s	4.0	38.0	2.1	5.0	39.0	39.0	3.7	33.3	11.7	4.0	37.0	37.0
Cycle Q Clear(g_c), s	4.0	38.0	2.1	5.0	39.0	39.0	3.7	33.3	11.7	4.0	37.0	37.0
Prop In Lane	1.00		1.00	1.00		0.14	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	143	1345	602	161	690	709	143	1310	665	156	655	663
V/C Ratio(X)	1.06	1.10	0.19	1.08	1.21	1.23	0.73	0.94	0.40	0.85	1.07	1.08
Avail Cap(c_a), veh/h	143	1345	602	161	690	709	143	1310	665	156	655	663
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.56	0.56	0.56	0.53	0.53	0.53	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.7	12.0	7.7	27.6	30.5	30.5	25.3	30.3	20.2	29.0	31.5	31.5
Incr Delay (d2), s/veh	73.9	51.4	0.1	75.8	101.7	108.5	16.9	13.6	1.8	34.2	54.4	56.9
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	8.9	48.2	1.5	9.7	69.3	73.6	4.4	25.7	9.3	5.8	50.2	51.7
LnGrp Delay(d),s/veh	103.7	63.4	7.8	103.4	132.2	139.0	42.2	43.9	22.0	63.2	85.9	88.4
LnGrp LOS	F	F	A	F	F	F	D	D	C	E	F	F
Approach Vol, veh/h		1745			1878			1595			1544	
Approach Delay, s/veh		63.2			132.7			40.2			85.1	
Approach LOS		E			F			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	41.0	9.0	42.0	8.0	41.0	8.0	43.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	37.0	5.0	38.0	4.0	37.0	4.0	39.0
Max Q Clear Time (g_c+I1), s	6.0	35.3	7.0	40.0	5.7	39.0	6.0	41.0
Green Ext Time (p_c), s	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	82.1
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	64	1274	119	102	965	71	106	386	132	77	459	64
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	70	1385	129	111	1049	77	115	420	143	84	499	70
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	1	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	207	1419	132	125	1449	106	215	682	231	114	464	61
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	498	3275	304	344	3344	245	293	1575	533	106	1070	141
Grp Volume(v), veh/h	70	745	769	111	555	571	249	0	429	653	0	0
Grp Sat Flow(s),veh/h/ln	498	1770	1809	344	1770	1819	800	0	1601	1317	0	0
Q Serve(g_s), s	8.1	24.7	25.1	0.9	15.5	15.5	0.0	0.0	12.5	13.5	0.0	0.0
Cycle Q Clear(g_c), s	23.7	24.7	25.1	26.0	15.5	15.5	12.9	0.0	12.5	26.0	0.0	0.0
Prop In Lane	1.00		0.17	1.00		0.13	0.46		0.33	0.13		0.11
Lane Grp Cap(c), veh/h	207	767	784	125	767	788	434	0	694	639	0	0
V/C Ratio(X)	0.34	0.97	0.98	0.89	0.72	0.72	0.57	0.00	0.62	1.02	0.00	0.00
Avail Cap(c_a), veh/h	207	767	784	125	767	788	434	0	694	639	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.23	0.23	0.23	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.8	16.6	16.8	30.0	14.0	14.0	12.3	0.0	13.2	18.7	0.0	0.0
Incr Delay (d2), s/veh	0.2	10.0	11.3	48.1	3.4	3.3	5.4	0.0	4.1	41.5	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	2.0	17.1	17.9	6.3	13.0	13.3	6.9	0.0	10.4	32.1	0.0	0.0
LnGrp Delay(d),s/veh	24.0	26.6	28.1	78.1	17.4	17.4	17.7	0.0	17.3	60.2	0.0	0.0
LnGrp LOS	C	C	C	E	B	B	B		B	F		
Approach Vol, veh/h		1584			1237			678			653	
Approach Delay, s/veh		27.2			22.8			17.4			60.2	
Approach LOS		C			C			B			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		30.0		30.0		30.0		30.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		26.0		26.0		26.0		26.0
Max Q Clear Time (g_c+I1), s		14.9		27.1		28.0		28.0
Green Ext Time (p_c), s		6.8		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	1111	613	60	1746	77	0	0	0	118	36	16
Number	7	4	14	3	8	18				1	6	16
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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	13	1208	666	65	1898	84				128	39	17
Adj No. of Lanes	0	2	1	1	2	0				0	1	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				0	2	0
Cap, veh/h	45	2250	1057	234	2306	101				311	95	41
Arrive On Green	1.00	1.00	1.00	1.00	1.00	1.00				0.25	0.25	0.25
Sat Flow, veh/h	12	3370	1583	243	3454	152				1233	376	164
Grp Volume(v), veh/h	653	568	666	65	966	1016				184	0	0
Grp Sat Flow(s),veh/h/ln	1771	1610	1583	243	1770	1836				1772	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0				8.7	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0				8.7	0.0	0.0
Prop In Lane	0.02		1.00	1.00		0.08				0.70		0.09
Lane Grp Cap(c), veh/h	1220	1075	1057	234	1182	1226				447	0	0
V/C Ratio(X)	0.54	0.53	0.63	0.28	0.82	0.83				0.41	0.00	0.00
Avail Cap(c_a), veh/h	1320	1176	1156	249	1292	1340				447	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.14	0.14	0.14	0.47	0.47	0.47				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				31.2	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.1	0.1	0.3	1.9	2.0				2.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.1	0.0	1.1	1.2				8.1	0.0	0.0
LnGrp Delay(d),s/veh	0.1	0.1	0.1	0.3	1.9	2.0				34.0	0.0	0.0
LnGrp LOS	A	A	A	A	A	A				C		
Approach Vol, veh/h		1887			2047						184	
Approach Delay, s/veh		0.1			1.9						34.0	
Approach LOS		A			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				70.8		29.2		70.8
Change Period (Y+Rc), s				4.0		4.0		4.0
Max Green Setting (Gmax), s				73.0		19.0		73.0
Max Q Clear Time (g_c+I1), s				2.0		10.7		2.0
Green Ext Time (p_c), s				64.8		0.6		64.8

Intersection Summary	
HCM 2010 Ctrl Delay	2.5
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	1192	0	0	955	39	861	138	84	25	0	61
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	22	1296	0	0	1038	42	588	636	91	27	0	66
Adj No. of Lanes	1	2	0	0	2	0	1	1	0	0	1	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, %	2	2	0	0	2	2	2	2	2	2	2	2
Cap, veh/h	139	1377	0	0	1349	55	523	847	121	122	23	241
Arrive On Green	0.39	0.39	0.00	0.00	0.39	0.39	0.53	0.53	0.53	0.53	0.00	0.53
Sat Flow, veh/h	520	3632	0	0	3560	140	1330	1594	228	142	44	454
Grp Volume(v), veh/h	22	1296	0	0	530	550	588	0	727	93	0	0
Grp Sat Flow(s),veh/h/ln	520	1770	0	0	1770	1838	1330	0	1822	640	0	0
Q Serve(g_s), s	3.9	35.3	0.0	0.0	26.1	26.1	19.7	0.0	31.1	2.2	0.0	0.0
Cycle Q Clear(g_c), s	30.0	35.3	0.0	0.0	26.1	26.1	53.1	0.0	31.1	33.4	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.08	1.00		0.13	0.29		0.71
Lane Grp Cap(c), veh/h	139	1377	0	0	688	715	523	0	968	386	0	0
V/C Ratio(X)	0.16	0.94	0.00	0.00	0.77	0.77	1.13	0.00	0.75	0.24	0.00	0.00
Avail Cap(c_a), veh/h	139	1380	0	0	690	717	523	0	968	386	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.00	0.00	0.60	0.60	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	39.7	29.4	0.0	0.0	26.6	26.6	31.9	0.0	18.3	15.4	0.0	0.0
Incr Delay (d2), s/veh	0.4	11.2	0.0	0.0	3.2	3.1	78.5	0.0	5.4	1.5	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	1.0	25.8	0.0	0.0	17.9	18.5	46.4	0.0	23.8	2.6	0.0	0.0
LnGrp Delay(d),s/veh	40.1	40.6	0.0	0.0	29.9	29.7	110.4	0.0	23.7	16.9	0.0	0.0
LnGrp LOS	D	D			C	C	F		C	B		
Approach Vol, veh/h		1318			1080			1315			93	
Approach Delay, s/veh		40.6			29.8			62.5			16.9	
Approach LOS		D			C			E			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		57.1		42.9		57.1		42.9
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		53.0		39.0		53.0		39.0
Max Q Clear Time (g_c+I1), s		55.1		37.3		35.4		28.1
Green Ext Time (p_c), s		0.0		1.6		7.9		9.4

Intersection Summary	
HCM 2010 Ctrl Delay	44.5
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	14.2
Intersection LOS	B

Movement	EBU	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR
Vol, veh/h	0	0	28	0	120	0	0	753	3
Peak Hour Factor	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
Mvmt Flow	0	0	30	0	130	0	0	818	3
Number of Lanes	0	0	1	0	1	0	0	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.4	9.1	15.2
HCM LOS	A	A	C

Lane	NBLn1	EBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%
Vol Thru, %	0%	0%	100%	99%
Vol Right, %	0%	100%	0%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	120	28	502	254
LT Vol	120	0	0	0
Through Vol	0	0	502	251
RT Vol	0	28	0	3
Lane Flow Rate	130	30	546	276
Geometry Grp	5	2	7	7
Degree of Util (X)	0.181	0.043	0.705	0.356
Departure Headway (Hd)	4.993	5.135	4.652	4.644
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	721	700	769	768
Service Time	3	3.145	2.422	2.414
HCM Lane V/C Ratio	0.18	0.043	0.71	0.359
HCM Control Delay	9.1	8.4	17.9	10
HCM Lane LOS	A	A	C	A
HCM 95th-tile Q	0.7	0.1	5.9	1.6

Intersection	
Intersection Delay, s/veh	43.8
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	15	10	83	0	84	2	33	0	29	621	43
Peak Hour Factor	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	16	11	90	0	91	2	36	0	32	675	47
Number of Lanes	0	0	1	1	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	2	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	11.6	13.2	59.9
HCM LOS	B	B	F

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	4%	60%	0%	71%	3%
Vol Thru, %	90%	40%	0%	2%	94%
Vol Right, %	6%	0%	100%	28%	2%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	693	25	83	119	489
LT Vol	29	15	0	84	16
Through Vol	621	10	0	2	462
RT Vol	43	0	83	33	11
Lane Flow Rate	753	27	90	129	532
Geometry Grp	2	7	7	5	2
Degree of Util (X)	1	0.062	0.182	0.269	0.868
Departure Headway (Hd)	5.775	8.308	7.277	7.475	5.881
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	633	434	494	481	617
Service Time	3.809	6.008	5.008	5.506	3.898
HCM Lane V/C Ratio	1.19	0.062	0.182	0.268	0.862
HCM Control Delay	59.9	11.6	11.6	13.2	35.6
HCM Lane LOS	F	B	B	B	E
HCM 95th-tile Q	15.2	0.2	0.7	1.1	9.9

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	16	462	11
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	17	502	12
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	35.6
HCM LOS	E

Lane

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	42	1094	72	81	1367	13	12	851	71	3	886	81
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	46	1189	78	88	1486	14	13	925	77	3	963	88
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	145	1809	119	196	1927	18	42	1164	101	37	1230	112
Arrive On Green	0.54	0.54	0.54	0.54	0.54	0.54	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	348	3372	221	436	3593	34	13	3034	263	2	3208	292
Grp Volume(v), veh/h	46	623	644	88	732	768	533	0	482	559	0	495
Grp Sat Flow(s),veh/h/ln	348	1770	1824	436	1770	1857	1662	0	1649	1858	0	1644
Q Serve(g_s), s	12.0	25.2	25.3	18.1	32.7	32.7	3.3	0.0	25.5	0.0	0.0	26.5
Cycle Q Clear(g_c), s	44.8	25.2	25.3	43.4	32.7	32.7	29.8	0.0	25.5	26.5	0.0	26.5
Prop In Lane	1.00		0.12	1.00		0.02	0.02		0.16	0.01		0.18
Lane Grp Cap(c), veh/h	145	949	978	196	949	996	674	0	632	749	0	630
V/C Ratio(X)	0.32	0.66	0.66	0.45	0.77	0.77	0.79	0.00	0.76	0.75	0.00	0.78
Avail Cap(c_a), veh/h	146	956	985	197	956	1003	674	0	632	749	0	630
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)	0.75	0.75	0.75	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.0	16.6	16.6	32.2	18.3	18.3	26.9	0.0	26.8	27.2	0.0	27.2
Incr Delay (d2), s/veh	0.9	1.2	1.2	0.1	0.4	0.3	9.2	0.0	8.5	6.7	0.0	9.5
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	2.1	17.7	18.1	2.9	17.9	18.8	21.6	0.0	18.9	21.2	0.0	19.7
LnGrp Delay(d),s/veh	37.0	17.8	17.8	32.3	18.7	18.7	36.1	0.0	35.3	33.8	0.0	36.7
LnGrp LOS	D	B	B	C	B	B	D		D	C		D
Approach Vol, veh/h		1313			1588			1015			1054	
Approach Delay, s/veh		18.5			19.4			35.7			35.2	
Approach LOS		B			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		42.4		57.6		42.4		57.6
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		38.0		54.0		38.0		54.0
Max Q Clear Time (g_c+I1), s		31.8		46.8		28.5		45.4
Green Ext Time (p_c), s		5.2		6.9		7.6		8.1

Intersection Summary	
HCM 2010 Ctrl Delay	25.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	104	1125	102	150	1341	58	119	1030	214	117	1122	124
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	113	1223	111	163	1458	63	129	1120	233	127	1220	135
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	143	1345	602	222	1417	61	143	1239	665	163	1125	124
Arrive On Green	0.05	0.51	0.51	0.07	0.41	0.41	0.04	0.35	0.35	0.04	0.35	0.35
Sat Flow, veh/h	1774	3539	1583	1774	3457	149	1774	3539	1583	1774	3215	355
Grp Volume(v), veh/h	113	1223	111	163	745	776	129	1120	233	127	670	685
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1836	1774	1770	1583	1774	1770	1800
Q Serve(g_s), s	4.0	31.6	3.8	5.5	41.0	41.0	4.0	30.1	10.0	4.0	35.0	35.0
Cycle Q Clear(g_c), s	4.0	31.6	3.8	5.5	41.0	41.0	4.0	30.1	10.0	4.0	35.0	35.0
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	143	1345	602	222	726	753	143	1239	665	163	619	630
V/C Ratio(X)	0.79	0.91	0.18	0.73	1.03	1.03	0.90	0.90	0.35	0.78	1.08	1.09
Avail Cap(c_a), veh/h	143	1345	602	222	726	753	143	1239	665	163	619	630
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)	0.66	0.66	0.66	0.64	0.64	0.64	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.8	23.2	16.3	23.2	29.5	29.5	29.6	30.9	19.7	28.9	32.5	32.5
Incr Delay (d2), s/veh	17.7	6.5	0.1	7.8	33.7	34.6	47.4	10.9	1.5	21.3	60.2	61.9
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	4.7	21.8	3.0	5.4	48.1	50.3	6.3	23.2	8.1	5.7	49.3	50.7
LnGrp Delay(d),s/veh	42.5	29.7	16.4	31.0	63.2	64.1	77.0	41.8	21.2	50.2	92.7	94.4
LnGrp LOS	D	C	B	C	F	F	E	D	C	D	F	F
Approach Vol, veh/h		1447			1684			1482			1482	
Approach Delay, s/veh		29.7			60.5			41.7			89.9	
Approach LOS		C			E			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	39.0	11.0	42.0	8.0	39.0	8.0	45.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	35.0	7.0	38.0	4.0	35.0	4.0	41.0
Max Q Clear Time (g_c+I1), s	6.0	32.1	7.5	33.6	6.0	37.0	6.0	43.0
Green Ext Time (p_c), s	0.0	2.8	0.0	4.2	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	55.7
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	74	855	116	157	842	76	44	249	73	61	376	48
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	80	929	126	171	915	83	48	271	79	66	409	52
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	1	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	318	1671	227	299	1750	159	149	738	211	116	467	56
Arrive On Green	0.53	0.53	0.53	0.53	0.53	0.53	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	562	3133	425	533	3282	298	224	2215	633	146	1400	169
Grp Volume(v), veh/h	80	525	530	171	493	505	201	0	197	527	0	0
Grp Sat Flow(s),veh/h/ln	562	1770	1788	533	1770	1810	1490	0	1583	1714	0	0
Q Serve(g_s), s	6.4	11.8	11.8	18.8	10.8	10.8	0.0	0.0	5.7	11.6	0.0	0.0
Cycle Q Clear(g_c), s	17.3	11.8	11.8	30.6	10.8	10.8	4.8	0.0	5.7	17.7	0.0	0.0
Prop In Lane	1.00		0.24	1.00		0.16	0.24		0.40	0.13		0.10
Lane Grp Cap(c), veh/h	318	944	953	299	944	965	571	0	528	639	0	0
V/C Ratio(X)	0.25	0.56	0.56	0.57	0.52	0.52	0.35	0.00	0.37	0.82	0.00	0.00
Avail Cap(c_a), veh/h	318	944	953	299	944	965	571	0	528	639	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.54	0.54	0.54	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.6	9.3	9.3	19.4	9.1	9.1	14.9	0.0	15.2	19.0	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.4	0.4	2.6	0.5	0.5	1.7	0.0	2.0	11.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	8.7	8.8	5.3	9.1	9.3	4.9	0.0	5.0	15.7	0.0	0.0
LnGrp Delay(d),s/veh	14.9	9.7	9.7	22.0	9.6	9.6	16.6	0.0	17.3	30.6	0.0	0.0
LnGrp LOS	B	A	A	C	A	A	B		B	C		
Approach Vol, veh/h		1135			1169			398			527	
Approach Delay, s/veh		10.0			11.4			16.9			30.6	
Approach LOS		B			B			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		24.0		36.0		24.0		36.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		20.0		32.0		20.0		32.0
Max Q Clear Time (g_c+I1), s		7.7		19.3		19.7		32.6
Green Ext Time (p_c), s		4.9		10.6		0.2		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	14.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	868	654	75	1471	45	0	0	0	101	25	11
Number	7	4	14	3	8	18				1	6	16
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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	7	943	711	82	1599	49				110	27	12
Adj No. of Lanes	0	2	1	1	2	0				0	1	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				0	2	0
Cap, veh/h	40	1949	899	243	1991	61				461	113	50
Arrive On Green	1.00	1.00	1.00	1.00	1.00	1.00				0.35	0.35	0.35
Sat Flow, veh/h	7	3433	1583	300	3506	107				1308	321	143
Grp Volume(v), veh/h	507	443	711	82	805	843				149	0	0
Grp Sat Flow(s),veh/h/ln	1829	1610	1583	300	1770	1844				1772	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0				5.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0				5.9	0.0	0.0
Prop In Lane	0.01		1.00	1.00		0.06				0.74		0.08
Lane Grp Cap(c), veh/h	1075	914	899	243	1005	1047				624	0	0
V/C Ratio(X)	0.47	0.48	0.79	0.34	0.80	0.81				0.24	0.00	0.00
Avail Cap(c_a), veh/h	1322	1143	1124	285	1256	1309				624	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.47	0.47	0.47	0.56	0.56	0.56				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				22.9	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.2	1.5	0.5	1.7	1.7				0.9	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
%ile BackOfQ(95%),veh/ln	0.1	0.1	0.7	0.1	0.9	0.9				5.5	0.0	0.0
LnGrp Delay(d),s/veh	0.2	0.2	1.5	0.5	1.7	1.7				23.8	0.0	0.0
LnGrp LOS	A	A	A	A	A	A				C		
Approach Vol, veh/h		1661			1730						149	
Approach Delay, s/veh		0.7			1.7						23.8	
Approach LOS		A			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				60.8		39.2		60.8
Change Period (Y+Rc), s				4.0		4.0		4.0
Max Green Setting (Gmax), s				71.0		21.0		71.0
Max Q Clear Time (g_c+I1), s				2.0		7.9		2.0
Green Ext Time (p_c), s				54.8		0.6		54.8

Intersection Summary	
HCM 2010 Ctrl Delay	2.2
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	937	0	0	952	39	670	44	50	31	0	75
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	11	1018	0	0	1035	42	813	0	0	34	0	82
Adj No. of Lanes	1	2	0	0	2	0	2	1	0	0	1	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, %	2	2	0	0	2	2	2	2	2	2	2	2
Cap, veh/h	134	1353	0	0	1325	54	1586	1002	0	266	23	586
Arrive On Green	0.26	0.26	0.00	0.00	0.38	0.38	0.54	0.00	0.00	0.54	0.00	0.54
Sat Flow, veh/h	522	3632	0	0	3560	141	2622	1863	0	408	44	1089
Grp Volume(v), veh/h	11	1018	0	0	528	549	813	0	0	116	0	0
Grp Sat Flow(s),veh/h/ln	522	1770	0	0	1770	1838	1311	1863	0	1540	0	0
Q Serve(g_s), s	2.0	26.5	0.0	0.0	26.3	26.3	15.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	28.3	26.5	0.0	0.0	26.3	26.3	19.0	0.0	0.0	3.5	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.08	1.00		0.00	0.29		0.71
Lane Grp Cap(c), veh/h	134	1353	0	0	676	703	1586	1002	0	875	0	0
V/C Ratio(X)	0.08	0.75	0.00	0.00	0.78	0.78	0.51	0.00	0.00	0.13	0.00	0.00
Avail Cap(c_a), veh/h	144	1416	0	0	708	735	1586	1002	0	875	0	0
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.00	0.00	0.80	0.80	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	45.8	32.8	0.0	0.0	27.2	27.2	14.8	0.0	0.0	11.5	0.0	0.0
Incr Delay (d2), s/veh	0.2	2.0	0.0	0.0	4.4	4.2	1.2	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	19.1	0.0	0.0	19.0	19.6	12.0	0.0	0.0	3.0	0.0	0.0
LnGrp Delay(d),s/veh	46.0	34.8	0.0	0.0	31.6	31.4	16.0	0.0	0.0	11.8	0.0	0.0
LnGrp LOS	D	C			C	C	B			B		
Approach Vol, veh/h		1029			1077			813			116	
Approach Delay, s/veh		35.0			31.5			16.0			11.8	
Approach LOS		C			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		57.8		42.2		57.8		42.2
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		52.0		40.0		52.0		40.0
Max Q Clear Time (g_c+I1), s		21.0		30.3		5.5		28.3
Green Ext Time (p_c), s		4.5		8.0		4.6		9.3

Intersection Summary	
HCM 2010 Ctrl Delay	27.8
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	25.7
Intersection LOS	D

Movement	EBU	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR
Vol, veh/h	0	0	25	0	37	0	0	982	43
Peak Hour Factor	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
Mvmt Flow	0	0	27	0	40	0	0	1067	47
Number of Lanes	0	0	1	0	1	0	0	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.5	8.4	26.7
HCM LOS	A	A	D

Lane	NBLn1	EBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%
Vol Thru, %	0%	0%	100%	88%
Vol Right, %	0%	100%	0%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	37	25	655	370
LT Vol	37	0	0	0
Through Vol	0	0	655	327
RT Vol	0	25	0	43
Lane Flow Rate	40	27	712	403
Geometry Grp	5	2	7	7
Degree of Util (X)	0.057	0.04	0.91	0.505
Departure Headway (Hd)	5.108	5.242	4.602	4.52
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	705	687	783	793
Service Time	3.115	3.245	2.346	2.264
HCM Lane V/C Ratio	0.057	0.039	0.909	0.508
HCM Control Delay	8.4	8.5	35.2	11.8
HCM Lane LOS	A	A	E	B
HCM 95th-tile Q	0.2	0.1	12.5	2.9

Intersection	
Intersection Delay, s/veh	54
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	65	24	293	0	187	5	76	0	14	347	33
Peak Hour Factor	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	71	26	318	0	203	5	83	0	15	377	36
Number of Lanes	0	0	1	1	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	2	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	28.1	34	71
HCM LOS	D	D	F

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	4%	73%	0%	70%	3%
Vol Thru, %	88%	27%	0%	2%	96%
Vol Right, %	8%	0%	100%	28%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	394	89	293	268	429
LT Vol	14	65	0	187	11
Through Vol	347	24	0	5	412
RT Vol	33	0	293	76	6
Lane Flow Rate	428	97	318	291	466
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.992	0.255	0.742	0.738	1
Departure Headway (Hd)	8.336	9.496	8.386	9.116	8.618
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	433	379	430	396	424
Service Time	6.433	7.239	6.173	7.185	6.618
HCM Lane V/C Ratio	0.988	0.256	0.74	0.735	1.099
HCM Control Delay	71	15.5	31.9	34	73.9
HCM Lane LOS	F	C	D	D	F
HCM 95th-tile Q	12.4	1	6	5.8	12.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	11	412	6
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	12	448	7
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	73.9
HCM LOS	F

Lane

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	72	1465	74	112	1435	35	8	897	100	4	728	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	78	1592	80	122	1560	38	9	975	109	4	791	27
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	209	2127	106	157	2189	53	39	906	104	36	896	35
Arrive On Green	0.62	0.62	0.62	0.82	0.82	0.82	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	317	3430	172	295	3531	86	8	3021	347	0	2987	116
Grp Volume(v), veh/h	78	818	854	122	780	818	580	0	513	431	0	391
Grp Sat Flow(s),veh/h/ln	317	1770	1832	295	1770	1848	1743	0	1634	1428	0	1675
Q Serve(g_s), s	18.6	32.7	33.2	28.8	18.7	18.9	8.7	0.0	30.0	0.0	0.0	21.3
Cycle Q Clear(g_c), s	37.4	32.7	33.2	62.0	18.7	18.9	30.0	0.0	30.0	30.0	0.0	21.3
Prop In Lane	1.00		0.09	1.00		0.05	0.02		0.21	0.01		0.07
Lane Grp Cap(c), veh/h	209	1097	1136	157	1097	1146	559	0	490	465	0	502
V/C Ratio(X)	0.37	0.75	0.75	0.78	0.71	0.71	1.04	0.00	1.05	0.93	0.00	0.78
Avail Cap(c_a), veh/h	209	1097	1136	157	1097	1146	559	0	490	465	0	502
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)	0.75	0.75	0.75	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.4	13.4	13.5	29.7	5.0	5.0	35.6	0.0	35.0	32.1	0.0	32.0
Incr Delay (d2), s/veh	0.8	2.1	2.1	2.3	0.2	0.2	47.8	0.0	53.6	27.0	0.0	11.3
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	3.0	22.1	23.2	4.4	10.2	10.7	41.0	0.0	37.4	20.4	0.0	17.0
LnGrp Delay(d),s/veh	22.3	15.5	15.7	32.0	5.2	5.2	83.3	0.0	88.6	59.1	0.0	43.3
LnGrp LOS	C	B	B	C	A	A	F		F	E		D
Approach Vol, veh/h		1750			1720			1093			822	
Approach Delay, s/veh		15.9			7.1			85.8			51.6	
Approach LOS		B			A			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		34.0		66.0		34.0		66.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		30.0		62.0		30.0		62.0
Max Q Clear Time (g_c+I1), s		32.0		39.4		32.0		64.0
Green Ext Time (p_c), s		0.0		21.7		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	32.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	145	1359	107	160	1457	110	96	1140	245	132	1152	149
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	158	1477	116	174	1584	120	104	1239	266	143	1252	162
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	143	1345	602	161	1301	98	143	1310	665	154	1167	150
Arrive On Green	0.08	0.76	0.76	0.05	0.39	0.39	0.04	0.37	0.37	0.04	0.37	0.37
Sat Flow, veh/h	1774	3539	1583	1774	3337	251	1774	3539	1583	1774	3154	406
Grp Volume(v), veh/h	158	1477	116	174	835	869	104	1239	266	143	700	714
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1818	1774	1770	1583	1774	1770	1791
Q Serve(g_s), s	4.0	38.0	2.1	5.0	39.0	39.0	3.7	33.9	11.7	4.0	37.0	37.0
Cycle Q Clear(g_c), s	4.0	38.0	2.1	5.0	39.0	39.0	3.7	33.9	11.7	4.0	37.0	37.0
Prop In Lane	1.00		1.00	1.00		0.14	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	143	1345	602	161	690	709	143	1310	665	154	655	663
V/C Ratio(X)	1.11	1.10	0.19	1.08	1.21	1.23	0.73	0.95	0.40	0.93	1.07	1.08
Avail Cap(c_a), veh/h	143	1345	602	161	690	709	143	1310	665	154	655	663
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.55	0.55	0.55	0.53	0.53	0.53	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.7	12.0	7.7	27.6	30.5	30.5	25.3	30.5	20.2	30.5	31.5	31.5
Incr Delay (d2), s/veh	87.2	51.3	0.1	75.8	101.7	108.5	16.9	14.9	1.8	52.5	55.1	57.7
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	9.8	48.2	1.5	9.7	69.3	73.6	4.4	26.4	9.3	7.6	50.4	51.9
LnGrp Delay(d),s/veh	116.9	63.3	7.8	103.4	132.2	139.0	42.2	45.5	22.0	83.0	86.6	89.2
LnGrp LOS	F	F	A	F	F	F	D	D	C	F	F	F
Approach Vol, veh/h		1751			1878			1609			1557	
Approach Delay, s/veh		64.5			132.7			41.4			87.5	
Approach LOS		E			F			D			F	

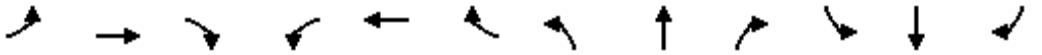
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	41.0	9.0	42.0	8.0	41.0	8.0	43.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	37.0	5.0	38.0	4.0	37.0	4.0	39.0
Max Q Clear Time (g_c+I1), s	6.0	35.9	7.0	40.0	5.7	39.0	6.0	41.0
Green Ext Time (p_c), s	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	83.1
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	64	1277	119	102	973	71	106	386	132	77	459	64
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	70	1388	129	111	1058	77	115	420	143	84	499	70
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	1	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	205	1420	131	125	1450	105	215	682	231	114	464	61
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	494	3276	303	343	3346	243	293	1575	533	106	1070	141
Grp Volume(v), veh/h	70	747	770	111	559	576	249	0	429	653	0	0
Grp Sat Flow(s),veh/h/ln	494	1770	1809	343	1770	1820	800	0	1601	1317	0	0
Q Serve(g_s), s	8.2	24.8	25.2	0.8	15.7	15.7	0.0	0.0	12.5	13.5	0.0	0.0
Cycle Q Clear(g_c), s	23.9	24.8	25.2	26.0	15.7	15.7	12.9	0.0	12.5	26.0	0.0	0.0
Prop In Lane	1.00		0.17	1.00		0.13	0.46		0.33	0.13		0.11
Lane Grp Cap(c), veh/h	205	767	784	125	767	789	434	0	694	639	0	0
V/C Ratio(X)	0.34	0.97	0.98	0.89	0.73	0.73	0.57	0.00	0.62	1.02	0.00	0.00
Avail Cap(c_a), veh/h	205	767	784	125	767	789	434	0	694	639	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.23	0.23	0.23	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	24.0	16.7	16.8	30.0	14.1	14.1	12.3	0.0	13.2	18.7	0.0	0.0
Incr Delay (d2), s/veh	0.2	10.3	11.7	49.1	3.5	3.5	5.4	0.0	4.1	41.5	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	2.0	17.2	18.0	6.3	13.1	13.4	6.9	0.0	10.4	32.1	0.0	0.0
LnGrp Delay(d),s/veh	24.2	27.0	28.4	79.1	17.6	17.5	17.7	0.0	17.3	60.2	0.0	0.0
LnGrp LOS	C	C	C	E	B	B	B		B	F		
Approach Vol, veh/h		1587			1246			678			653	
Approach Delay, s/veh		27.6			23.1			17.4			60.2	
Approach LOS		C			C			B			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		30.0		30.0		30.0		30.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		26.0		26.0		26.0		26.0
Max Q Clear Time (g_c+I1), s		14.9		27.2		28.0		28.0
Green Ext Time (p_c), s		6.8		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	29.7
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	1111	623	63	1746	77	0	0	0	118	36	16
Number	7	4	14	3	8	18				1	6	16
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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	13	1208	677	68	1898	84				128	39	17
Adj No. of Lanes	0	2	1	1	2	0				0	1	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				0	2	0
Cap, veh/h	45	2255	1060	233	2312	102				309	94	41
Arrive On Green	1.00	1.00	1.00	1.00	1.00	1.00				0.25	0.25	0.25
Sat Flow, veh/h	12	3370	1583	240	3454	152				1233	376	164
Grp Volume(v), veh/h	653	568	677	68	966	1016				184	0	0
Grp Sat Flow(s),veh/h/ln	1771	1610	1583	240	1770	1836				1772	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0				8.7	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0				8.7	0.0	0.0
Prop In Lane	0.02		1.00	1.00		0.08				0.70		0.09
Lane Grp Cap(c), veh/h	1222	1078	1060	233	1184	1229				444	0	0
V/C Ratio(X)	0.53	0.53	0.64	0.29	0.82	0.83				0.41	0.00	0.00
Avail Cap(c_a), veh/h	1321	1176	1156	247	1292	1340				444	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.13	0.13	0.13	0.44	0.44	0.44				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				31.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.1	0.3	1.8	1.9				2.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.1	0.0	1.0	1.2				8.1	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.1	0.1	0.3	1.8	1.9				34.2	0.0	0.0
LnGrp LOS	A	A	A	A	A	A				C		
Approach Vol, veh/h		1898			2050						184	
Approach Delay, s/veh		0.1			1.8						34.2	
Approach LOS		A			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				70.9		29.1		70.9
Change Period (Y+Rc), s				4.0		4.0		4.0
Max Green Setting (Gmax), s				73.0		19.0		73.0
Max Q Clear Time (g_c+I1), s				2.0		10.7		2.0
Green Ext Time (p_c), s				64.9		0.6		64.9

Intersection Summary	
HCM 2010 Ctrl Delay	2.4
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	1192	0	0	955	47	861	166	84	28	0	64
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	22	1296	0	0	1038	51	604	645	91	30	0	70
Adj No. of Lanes	1	2	0	0	2	0	1	1	0	0	1	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, %	2	2	0	0	2	2	2	2	2	2	2	2
Cap, veh/h	136	1377	0	0	1336	66	519	848	120	121	23	228
Arrive On Green	0.39	0.39	0.00	0.00	0.39	0.39	0.53	0.53	0.53	0.53	0.00	0.53
Sat Flow, veh/h	516	3632	0	0	3527	169	1325	1598	225	140	44	429
Grp Volume(v), veh/h	22	1296	0	0	535	554	604	0	736	100	0	0
Grp Sat Flow(s),veh/h/ln	516	1770	0	0	1770	1833	1325	0	1823	613	0	0
Q Serve(g_s), s	3.9	35.3	0.0	0.0	26.5	26.5	18.8	0.0	31.8	2.5	0.0	0.0
Cycle Q Clear(g_c), s	30.4	35.3	0.0	0.0	26.5	26.5	53.1	0.0	31.8	34.3	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.09	1.00		0.12	0.30		0.70
Lane Grp Cap(c), veh/h	136	1377	0	0	688	713	519	0	968	372	0	0
V/C Ratio(X)	0.16	0.94	0.00	0.00	0.78	0.78	1.16	0.00	0.76	0.27	0.00	0.00
Avail Cap(c_a), veh/h	137	1380	0	0	690	715	519	0	968	372	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.00	0.00	0.59	0.59	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	40.0	29.4	0.0	0.0	26.7	26.8	31.8	0.0	18.4	15.7	0.0	0.0
Incr Delay (d2), s/veh	0.5	11.2	0.0	0.0	3.4	3.3	92.9	0.0	5.6	1.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	25.8	0.0	0.0	18.2	18.8	49.8	0.0	24.3	2.8	0.0	0.0
LnGrp Delay(d),s/veh	40.5	40.6	0.0	0.0	30.1	30.0	124.7	0.0	24.1	17.5	0.0	0.0
LnGrp LOS	D	D			C	C	F		C	B		
Approach Vol, veh/h		1318			1089			1340			100	
Approach Delay, s/veh		40.6			30.1			69.4			17.5	
Approach LOS		D			C			E			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		57.1		42.9		57.1		42.9
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		53.0		39.0		53.0		39.0
Max Q Clear Time (g_c+I1), s		55.1		37.3		36.3		28.5
Green Ext Time (p_c), s		0.0		1.6		7.9		9.2

Intersection Summary	
HCM 2010 Ctrl Delay	47.1
HCM 2010 LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	15.7
Intersection LOS	C

Movement	EBU	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR
Vol, veh/h	0	0	28	0	120	0	0	803	3
Peak Hour Factor	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
Mvmt Flow	0	0	30	0	130	0	0	873	3
Number of Lanes	0	0	1	0	1	0	0	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.5	9.1	16.9
HCM LOS	A	A	C

Lane	NBLn1	EBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%
Vol Thru, %	0%	0%	100%	99%
Vol Right, %	0%	100%	0%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	120	28	535	271
LT Vol	120	0	0	0
Through Vol	0	0	535	268
RT Vol	0	28	0	3
Lane Flow Rate	130	30	582	294
Geometry Grp	5	2	7	7
Degree of Util (X)	0.182	0.044	0.752	0.38
Departure Headway (Hd)	5.024	5.202	4.652	4.645
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	717	691	768	768
Service Time	3.033	3.212	2.425	2.417
HCM Lane V/C Ratio	0.181	0.043	0.758	0.383
HCM Control Delay	9.1	8.5	20.3	10.3
HCM Lane LOS	A	A	C	B
HCM 95th-tile Q	0.7	0.1	7	1.8

Intersection	
Intersection Delay, s/veh	44.7
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	15	10	106	0	84	2	33	0	29	621	43
Peak Hour Factor	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	16	11	115	0	91	2	36	0	32	675	47
Number of Lanes	0	0	1	1	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	2	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	12.2	13.5	60.7
HCM LOS	B	B	F

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	4%	60%	0%	71%	3%
Vol Thru, %	90%	40%	0%	2%	94%
Vol Right, %	6%	0%	100%	28%	2%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	693	25	106	119	489
LT Vol	29	15	0	84	16
Through Vol	621	10	0	2	462
RT Vol	43	0	106	33	11
Lane Flow Rate	753	27	115	129	532
Geometry Grp	2	7	7	5	2
Degree of Util (X)	1	0.062	0.233	0.272	0.883
Departure Headway (Hd)	5.875	8.279	7.279	7.583	5.978
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	618	432	492	473	606
Service Time	3.947	6.036	5.036	5.646	4.019
HCM Lane V/C Ratio	1.218	0.063	0.234	0.273	0.878
HCM Control Delay	60.7	11.6	12.3	13.5	38.2
HCM Lane LOS	F	B	B	B	E
HCM 95th-tile Q	15.1	0.2	0.9	1.1	10.4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	16	462	11
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	17	502	12
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	38.2
HCM LOS	E

Lane

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	47	1430	80	99	1759	14	13	956	85	4	992	92
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	51	1554	87	108	1912	15	14	1039	92	4	1078	100
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	94	1909	106	129	2016	16	38	939	100	37	1082	106
Arrive On Green	0.56	0.56	0.56	0.74	0.74	0.74	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	230	3409	190	304	3599	28	4	2607	277	1	3005	295
Grp Volume(v), veh/h	51	803	838	108	939	988	598	0	547	625	0	557
Grp Sat Flow(s),veh/h/ln	230	1770	1829	304	1770	1858	1241	0	1646	1658	0	1643
Q Serve(g_s), s	9.6	36.6	37.2	18.8	46.0	46.4	3.2	0.0	31.9	4.1	0.0	32.8
Cycle Q Clear(g_c), s	56.0	36.6	37.2	56.0	46.0	46.4	36.0	0.0	31.9	36.0	0.0	32.8
Prop In Lane	1.00		0.10	1.00		0.02	0.02		0.17	0.01		0.18
Lane Grp Cap(c), veh/h	94	991	1024	129	991	1040	484	0	593	633	0	591
V/C Ratio(X)	0.54	0.81	0.82	0.84	0.95	0.95	1.24	0.00	0.92	0.99	0.00	0.94
Avail Cap(c_a), veh/h	94	991	1024	129	991	1040	484	0	593	633	0	591
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)	0.75	0.75	0.75	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.9	17.7	17.9	35.8	11.5	11.5	29.2	0.0	30.7	31.4	0.0	31.0
Incr Delay (d2), s/veh	4.7	3.9	4.0	4.4	2.4	2.5	122.9	0.0	22.3	32.9	0.0	25.1
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	24.8	26.1	4.0	24.6	25.8	53.7	0.0	25.1	30.8	0.0	26.1
LnGrp Delay(d),s/veh	52.6	21.6	21.9	40.2	13.9	14.0	152.1	0.0	53.0	64.3	0.0	56.0
LnGrp LOS	D	C	C	D	B	B	F		D	E		E
Approach Vol, veh/h		1692			2035			1145			1182	
Approach Delay, s/veh		22.7			15.4			104.7			60.4	
Approach LOS		C			B			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		40.0		60.0		40.0		60.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		36.0		56.0		36.0		56.0
Max Q Clear Time (g_c+I1), s		38.0		58.0		38.0		58.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	43.1
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	149	1498	113	168	1723	75	137	1180	240	126	1259	142
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	162	1628	123	183	1873	82	149	1283	261	137	1368	154
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	143	1451	649	143	1417	62	143	1239	617	143	1123	126
Arrive On Green	0.05	0.55	0.55	0.04	0.41	0.41	0.04	0.35	0.35	0.04	0.35	0.35
Sat Flow, veh/h	1774	3539	1583	1774	3456	150	1774	3539	1583	1774	3210	359
Grp Volume(v), veh/h	162	1628	123	183	952	1003	149	1283	261	137	751	771
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1836	1774	1770	1583	1774	1770	1799
Q Serve(g_s), s	4.0	41.0	3.9	4.0	41.0	41.0	4.0	35.0	12.0	4.0	35.0	35.0
Cycle Q Clear(g_c), s	4.0	41.0	3.9	4.0	41.0	41.0	4.0	35.0	12.0	4.0	35.0	35.0
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	143	1451	649	143	726	753	143	1239	617	143	619	630
V/C Ratio(X)	1.13	1.12	0.19	1.28	1.31	1.33	1.04	1.04	0.42	0.96	1.21	1.23
Avail Cap(c_a), veh/h	143	1451	649	143	726	753	143	1239	617	143	619	630
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)	0.44	0.44	0.44	0.49	0.49	0.49	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.6	22.7	14.3	28.7	29.5	29.5	31.6	32.5	22.3	30.8	32.5	32.5
Incr Delay (d2), s/veh	91.1	59.5	0.1	149.9	145.7	153.8	86.9	35.3	2.1	62.5	109.7	115.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.1	56.9	3.1	10.7	88.8	95.2	6.2	41.6	9.5	7.7	64.6	67.4
LnGrp Delay(d),s/veh	119.7	82.3	14.4	178.5	175.2	183.3	118.9	67.8	24.4	93.3	142.2	147.5
LnGrp LOS	F	F	B	F	F	F	F	F	C	F	F	F
Approach Vol, veh/h		1913			2138			1693			1659	
Approach Delay, s/veh		81.1			179.3			65.6			140.6	
Approach LOS		F			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	39.0	8.0	45.0	8.0	39.0	8.0	45.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	35.0	4.0	41.0	4.0	35.0	4.0	41.0
Max Q Clear Time (g_c+I1), s	6.0	37.0	6.0	43.0	6.0	37.0	6.0	43.0
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 2010 Ctrl Delay	119.2
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	84	1008	132	175	1006	85	50	278	81	68	420	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	91	1096	143	190	1093	92	54	302	88	74	457	59
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	1	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	274	1732	226	258	1818	153	142	687	196	110	401	49
Arrive On Green	0.55	0.55	0.55	0.55	0.55	0.55	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	471	3150	410	447	3305	278	212	2170	620	133	1266	155
Grp Volume(v), veh/h	91	615	624	190	585	600	219	0	225	590	0	0
Grp Sat Flow(s),veh/h/ln	471	1770	1790	447	1770	1814	1415	0	1586	1555	0	0
Q Serve(g_s), s	9.7	14.4	14.4	18.6	13.3	13.4	0.0	0.0	6.8	12.2	0.0	0.0
Cycle Q Clear(g_c), s	23.0	14.4	14.4	33.0	13.3	13.4	5.5	0.0	6.8	19.0	0.0	0.0
Prop In Lane	1.00		0.23	1.00		0.15	0.25		0.39	0.13		0.10
Lane Grp Cap(c), veh/h	274	973	985	258	973	998	523	0	502	560	0	0
V/C Ratio(X)	0.33	0.63	0.63	0.74	0.60	0.60	0.42	0.00	0.45	1.05	0.00	0.00
Avail Cap(c_a), veh/h	274	973	985	258	973	998	523	0	502	560	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.42	0.42	0.42	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.8	9.3	9.3	23.2	9.1	9.1	15.9	0.0	16.3	21.7	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.6	0.6	10.4	1.0	1.0	2.5	0.0	2.9	53.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.3	9.8	9.9	7.0	10.8	11.1	5.7	0.0	6.0	31.4	0.0	0.0
LnGrp Delay(d),s/veh	17.1	9.9	9.9	33.7	10.1	10.1	18.3	0.0	19.2	74.8	0.0	0.0
LnGrp LOS	B	A	A	C	B	B	B		B	F		
Approach Vol, veh/h		1330			1375			444			590	
Approach Delay, s/veh		10.4			13.4			18.8			74.8	
Approach LOS		B			B			B			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		23.0		37.0		23.0		37.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		19.0		33.0		19.0		33.0
Max Q Clear Time (g_c+I1), s		8.8		25.0		21.0		35.0
Green Ext Time (p_c), s		4.9		7.5		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	22.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	1036	901	79	1879	50	0	0	0	112	28	12
Number	7	4	14	3	8	18				1	6	16
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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	8	1126	979	86	2042	54				122	30	13
Adj No. of Lanes	0	2	1	1	2	0				0	1	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				0	2	0
Cap, veh/h	41	2407	1117	208	2485	65				281	69	30
Arrive On Green	1.00	1.00	1.00	1.00	1.00	1.00				0.21	0.21	0.21
Sat Flow, veh/h	6	3413	1583	193	3523	93				1311	322	140
Grp Volume(v), veh/h	608	526	979	86	1021	1075				165	0	0
Grp Sat Flow(s),veh/h/ln	1809	1610	1583	193	1770	1846				1773	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0				8.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0				8.1	0.0	0.0
Prop In Lane	0.01		1.00	1.00		0.05				0.74		0.08
Lane Grp Cap(c), veh/h	1312	1136	1117	208	1248	1302				380	0	0
V/C Ratio(X)	0.46	0.46	0.88	0.41	0.82	0.83				0.43	0.00	0.00
Avail Cap(c_a), veh/h	1370	1192	1172	215	1310	1366				380	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.33	0.33	0.33				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				34.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.8	0.4	1.4	1.4				3.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.4	0.0	0.9	0.9				7.7	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.8	0.4	1.4	1.4				37.6	0.0	0.0
LnGrp LOS	A	A	A	A	A	A				D		
Approach Vol, veh/h		2113			2182						165	
Approach Delay, s/veh		0.4			1.4						37.6	
Approach LOS		A			A						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				74.5		25.5		74.5
Change Period (Y+Rc), s				4.0		4.0		4.0
Max Green Setting (Gmax), s				74.0		18.0		74.0
Max Q Clear Time (g_c+I1), s				2.0		10.1		2.0
Green Ext Time (p_c), s				68.5		0.5		68.5

Intersection Summary	
HCM 2010 Ctrl Delay	2.2
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	11	1112	0	0	1149	43	907	49	58	24	0	73
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	12	1209	0	0	1249	47	1083	0	0	26	0	79
Adj No. of Lanes	1	2	0	0	2	0	2	1	0	0	1	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, %	2	2	0	0	2	2	2	2	2	2	2	2
Cap, veh/h	104	1445	0	0	1420	53	1520	953	0	217	25	597
Arrive On Green	0.27	0.27	0.00	0.00	0.41	0.41	0.51	0.00	0.00	0.51	0.00	0.51
Sat Flow, veh/h	424	3632	0	0	3572	131	2629	1863	0	335	48	1166
Grp Volume(v), veh/h	12	1209	0	0	635	661	1083	0	0	105	0	0
Grp Sat Flow(s),veh/h/ln	424	1770	0	0	1770	1840	1314	1863	0	1550	0	0
Q Serve(g_s), s	2.7	32.2	0.0	0.0	33.1	33.2	28.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	35.9	32.2	0.0	0.0	33.1	33.2	32.2	0.0	0.0	3.3	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.07	1.00		0.00	0.25		0.75
Lane Grp Cap(c), veh/h	104	1445	0	0	722	751	1520	953	0	838	0	0
V/C Ratio(X)	0.12	0.84	0.00	0.00	0.88	0.88	0.71	0.00	0.00	0.13	0.00	0.00
Avail Cap(c_a), veh/h	105	1451	0	0	726	754	1520	953	0	838	0	0
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.00	0.00	0.75	0.75	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	50.6	33.2	0.0	0.0	27.3	27.3	19.4	0.0	0.0	12.7	0.0	0.0
Incr Delay (d2), s/veh	0.4	4.0	0.0	0.0	9.4	9.2	2.9	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	22.8	0.0	0.0	24.0	24.8	18.5	0.0	0.0	2.9	0.0	0.0
LnGrp Delay(d),s/veh	51.0	37.1	0.0	0.0	36.7	36.5	22.2	0.0	0.0	13.0	0.0	0.0
LnGrp LOS	D	D			D	D	C			B		
Approach Vol, veh/h		1221			1296			1083			105	
Approach Delay, s/veh		37.3			36.6			22.2			13.0	
Approach LOS		D			D			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		55.2		44.8		55.2		44.8
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		51.0		41.0		51.0		41.0
Max Q Clear Time (g_c+I1), s		34.2		37.9		5.3		35.2
Green Ext Time (p_c), s		5.2		2.9		6.4		5.4

Intersection Summary	
HCM 2010 Ctrl Delay	32.0
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	37
Intersection LOS	E

Movement	EBU	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR
Vol, veh/h	0	0	28	0	43	0	0	1107	48
Peak Hour Factor	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
Mvmt Flow	0	0	30	0	47	0	0	1203	52
Number of Lanes	0	0	1	0	1	0	0	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.5	8.5	38.8
HCM LOS	A	A	E

Lane	NBLn1	EBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%
Vol Thru, %	0%	0%	100%	88%
Vol Right, %	0%	100%	0%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	43	28	738	417
LT Vol	43	0	0	0
Through Vol	0	0	738	369
RT Vol	0	28	0	48
Lane Flow Rate	47	30	802	453
Geometry Grp	5	2	7	7
Degree of Util (X)	0.066	0.045	1	0.57
Departure Headway (Hd)	5.118	5.291	4.611	4.53
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	703	681	786	793
Service Time	3.125	3.292	2.361	2.28
HCM Lane V/C Ratio	0.067	0.044	1.02	0.571
HCM Control Delay	8.5	8.5	53.2	13.2
HCM Lane LOS	A	A	F	B
HCM 95th-tile Q	0.2	0.1	17	3.7

Intersection	
Intersection Delay, s/veh	60.8
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	73	26	326	0	208	6	85	0	16	391	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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	79	28	354	0	226	7	92	0	17	425	40
Number of Lanes	0	0	1	1	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	2	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	38.4	47.1	75.4
HCM LOS	E	E	F

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	4%	74%	0%	70%	2%
Vol Thru, %	88%	26%	0%	2%	96%
Vol Right, %	8%	0%	100%	28%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	444	99	326	299	487
LT Vol	16	73	0	208	12
Through Vol	391	26	0	6	468
RT Vol	37	0	326	85	7
Lane Flow Rate	483	108	354	325	529
Geometry Grp	2	7	7	5	2
Degree of Util (X)	1	0.291	0.854	0.847	1
Departure Headway (Hd)	8.857	9.743	8.675	9.387	8.896
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	410	370	418	387	408
Service Time	6.94	7.479	6.41	7.426	6.979
HCM Lane V/C Ratio	1.178	0.292	0.847	0.84	1.297
HCM Control Delay	75.4	16.4	45.1	47.1	75.5
HCM Lane LOS	F	C	E	E	F
HCM 95th-tile Q	12.3	1.2	8.3	8	12.3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	12	468	7
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	13	509	8
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	75.5
HCM LOS	F

Lane

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	85	1924	83	134	1884	39	8	1010	132	5	825	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	92	2091	90	146	2048	42	9	1098	143	5	897	35
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	72	1833	78	72	1880	38	40	1196	155	37	1232	51
Arrive On Green	0.53	0.53	0.53	0.53	0.53	0.53	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	196	3458	148	179	3547	72	8	3066	397	2	3160	132
Grp Volume(v), veh/h	92	1063	1118	146	1018	1072	664	0	586	492	0	445
Grp Sat Flow(s),veh/h/ln	196	1770	1837	179	1770	1850	1846	0	1625	1621	0	1672
Q Serve(g_s), s	0.0	53.0	53.0	0.0	53.0	53.0	8.0	0.0	34.4	1.8	0.0	22.1
Cycle Q Clear(g_c), s	53.0	53.0	53.0	53.0	53.0	53.0	34.1	0.0	34.4	36.2	0.0	22.1
Prop In Lane	1.00		0.08	1.00		0.04	0.01		0.24	0.01		0.08
Lane Grp Cap(c), veh/h	72	938	973	72	938	980	756	0	634	669	0	652
V/C Ratio(X)	1.28	1.13	1.15	2.03	1.09	1.09	0.88	0.00	0.92	0.74	0.00	0.68
Avail Cap(c_a), veh/h	72	938	973	72	938	980	756	0	634	669	0	652
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)	0.75	0.75	0.75	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.0	23.5	23.5	50.0	23.5	23.5	28.9	0.0	29.1	25.5	0.0	25.4
Incr Delay (d2), s/veh	183.6	70.2	76.4	466.9	40.6	43.8	13.7	0.0	21.3	7.1	0.0	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.2	78.9	84.9	20.4	63.4	67.6	27.6	0.0	26.2	18.3	0.0	16.6
LnGrp Delay(d),s/veh	233.6	93.7	99.9	516.9	64.1	67.3	42.7	0.0	50.4	32.5	0.0	31.1
LnGrp LOS	F	F	F	F	F	F	D		D	C		C
Approach Vol, veh/h		2273			2236			1250			937	
Approach Delay, s/veh		102.4			95.2			46.3			31.8	
Approach LOS		F			F			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		43.0		57.0		43.0		57.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		39.0		53.0		39.0		53.0
Max Q Clear Time (g_c+I1), s		36.4		55.0		38.2		55.0
Green Ext Time (p_c), s		2.4		0.0		0.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	79.7
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	196	1815	123	180	1972	154	108	1298	276	167	1324	226
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	213	1973	134	196	2143	167	117	1411	300	182	1439	246
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	143	1522	681	143	1432	110	143	1168	586	143	1000	168
Arrive On Green	0.04	0.43	0.43	0.04	0.43	0.43	0.04	0.33	0.33	0.04	0.33	0.33
Sat Flow, veh/h	1774	3539	1583	1774	3331	256	1774	3539	1583	1774	3032	510
Grp Volume(v), veh/h	213	1973	134	196	1125	1185	117	1411	300	182	831	854
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1818	1774	1770	1583	1774	1770	1773
Q Serve(g_s), s	4.0	43.0	5.3	4.0	43.0	43.0	4.0	33.0	14.7	4.0	33.0	33.0
Cycle Q Clear(g_c), s	4.0	43.0	5.3	4.0	43.0	43.0	4.0	33.0	14.7	4.0	33.0	33.0
Prop In Lane	1.00		1.00	1.00		0.14	1.00		1.00	1.00		0.29
Lane Grp Cap(c), veh/h	143	1522	681	143	761	782	143	1168	586	143	584	585
V/C Ratio(X)	1.49	1.30	0.20	1.37	1.48	1.52	0.82	1.21	0.51	1.27	1.42	1.46
Avail Cap(c_a), veh/h	143	1522	681	143	761	782	143	1168	586	143	584	585
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)	0.09	0.09	0.09	0.14	0.14	0.14	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.7	28.5	17.7	27.7	28.5	28.5	28.8	33.5	24.5	32.6	33.5	33.5
Incr Delay (d2), s/veh	223.9	133.9	0.0	173.2	216.5	233.0	29.8	101.9	3.2	166.3	200.0	216.5
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	16.0	85.5	3.1	12.4	115.9	125.1	4.4	58.7	11.3	11.9	87.3	92.3
LnGrp Delay(d),s/veh	251.5	162.4	17.8	200.9	245.0	261.5	58.5	135.4	27.7	198.9	233.5	250.0
LnGrp LOS	F	F	B	F	F	F	E	F	C	F	F	F
Approach Vol, veh/h		2320			2506			1828			1867	
Approach Delay, s/veh		162.2			249.4			112.8			237.7	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	37.0	8.0	47.0	8.0	37.0	8.0	47.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	33.0	4.0	43.0	4.0	33.0	4.0	43.0
Max Q Clear Time (g_c+I1), s	6.0	35.0	6.0	45.0	6.0	35.0	6.0	45.0
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 2010 Ctrl Delay	193.8
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	76	1512	137	114	1178	79	127	431	147	86	514	74
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	83	1643	149	124	1280	86	138	468	160	93	559	80
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	1	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	154	1424	128	120	1459	98	225	653	222	103	383	51
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	396	3286	295	263	3367	226	308	1507	512	81	884	118
Grp Volume(v), veh/h	83	877	915	124	672	694	265	0	501	732	0	0
Grp Sat Flow(s),veh/h/ln	396	1770	1811	263	1770	1823	722	0	1605	1084	0	0
Q Serve(g_s), s	5.1	26.0	26.0	0.0	20.8	20.9	0.0	0.0	15.4	10.6	0.0	0.0
Cycle Q Clear(g_c), s	26.0	26.0	26.0	26.0	20.8	20.9	18.2	0.0	15.4	26.0	0.0	0.0
Prop In Lane	1.00		0.16	1.00		0.12	0.52		0.32	0.13		0.11
Lane Grp Cap(c), veh/h	154	767	785	120	767	790	404	0	695	537	0	0
V/C Ratio(X)	0.54	1.14	1.17	1.03	0.88	0.88	0.66	0.00	0.72	1.36	0.00	0.00
Avail Cap(c_a), veh/h	154	767	785	120	767	790	404	0	695	537	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	29.0	17.0	17.0	30.0	15.5	15.6	13.6	0.0	14.0	19.0	0.0	0.0
Incr Delay (d2), s/veh	0.3	66.2	76.3	91.4	11.1	11.1	8.1	0.0	6.4	175.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.0	47.1	51.9	9.0	18.2	18.7	8.2	0.0	12.5	62.8	0.0	0.0
LnGrp Delay(d),s/veh	29.3	83.2	93.3	121.8	26.7	26.7	21.7	0.0	20.4	194.0	0.0	0.0
LnGrp LOS	C	F	F	F	C	C	C		C	F		
Approach Vol, veh/h		1875			1490			766			732	
Approach Delay, s/veh		85.7			34.6			20.8			194.0	
Approach LOS		F			C			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		30.0		30.0		30.0		30.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		26.0		26.0		26.0		26.0
Max Q Clear Time (g_c+I1), s		20.2		28.0		28.0		28.0
Green Ext Time (p_c), s		4.4		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	76.1
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	13	1357	898	77	2328	86	0	0	0	132	41	18
Number	7	4	14	3	8	18				1	6	16
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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	14	1475	976	84	2530	93				143	45	20
Adj No. of Lanes	0	2	1	1	2	0				0	1	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				0	2	0
Cap, veh/h	44	2503	1197	176	2632	96				200	63	28
Arrive On Green	1.00	1.00	1.00	1.00	1.00	1.00				0.16	0.16	0.16
Sat Flow, veh/h	10	3312	1583	137	3483	127				1218	383	170
Grp Volume(v), veh/h	799	690	976	84	1278	1345				208	0	0
Grp Sat Flow(s),veh/h/ln	1712	1610	1583	137	1770	1840				1772	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0				11.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0				11.1	0.0	0.0
Prop In Lane	0.02		1.00	1.00		0.07				0.69		0.10
Lane Grp Cap(c), veh/h	1330	1217	1197	176	1337	1391				291	0	0
V/C Ratio(X)	0.60	0.57	0.82	0.48	0.96	0.97				0.71	0.00	0.00
Avail Cap(c_a), veh/h	1336	1224	1203	176	1345	1399				291	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33				1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.09	0.09	0.09				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				39.6	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.1	0.4	0.2	2.2	2.7				14.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.3	0.0	1.2	1.6				10.8	0.0	0.0
LnGrp Delay(d),s/veh	0.1	0.1	0.4	0.2	2.2	2.7				53.6	0.0	0.0
LnGrp LOS	A	A	A	A	A	A				D		
Approach Vol, veh/h		2465			2707						208	
Approach Delay, s/veh		0.2			2.4						53.6	
Approach LOS		A			A						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				79.6		20.4		79.6
Change Period (Y+Rc), s				4.0		4.0		4.0
Max Green Setting (Gmax), s				76.0		16.0		76.0
Max Q Clear Time (g_c+I1), s				2.0		13.1		2.0
Green Ext Time (p_c), s				73.6		0.3		73.6

Intersection Summary	
HCM 2010 Ctrl Delay	3.4
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	23	1448	0	0	1189	43	1225	176	115	28	0	68
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	25	1574	0	0	1292	47	824	902	125	30	0	74
Adj No. of Lanes	1	2	0	0	2	0	1	1	0	0	1	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, %	2	2	0	0	2	2	2	2	2	2	2	2
Cap, veh/h	72	1310	0	0	1289	47	369	881	122	46	24	58
Arrive On Green	0.37	0.37	0.00	0.00	0.37	0.37	0.55	0.55	0.55	0.55	0.00	0.55
Sat Flow, veh/h	407	3632	0	0	3577	127	1320	1602	222	0	43	106
Grp Volume(v), veh/h	25	1574	0	0	656	683	824	0	1027	104	0	0
Grp Sat Flow(s),veh/h/ln	407	1770	0	0	1770	1840	1320	0	1824	148	0	0
Q Serve(g_s), s	0.0	37.0	0.0	0.0	37.0	37.0	0.0	0.0	55.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	37.0	37.0	0.0	0.0	37.0	37.0	55.0	0.0	55.0	55.0	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.07	1.00		0.12	0.29		0.71
Lane Grp Cap(c), veh/h	72	1310	0	0	655	681	369	0	1003	128	0	0
V/C Ratio(X)	0.35	1.20	0.00	0.00	1.00	1.00	2.23	0.00	1.02	0.81	0.00	0.00
Avail Cap(c_a), veh/h	72	1310	0	0	655	681	369	0	1003	128	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.60	0.60	0.00	0.00	0.32	0.32	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	50.0	31.5	0.0	0.0	31.5	31.5	27.9	0.0	22.5	26.0	0.0	0.0
Incr Delay (d2), s/veh	1.7	95.6	0.0	0.0	20.4	20.4	563.1	0.0	34.6	41.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.3	63.7	0.0	0.0	39.1	40.7	122.2	0.0	66.5	5.4	0.0	0.0
LnGrp Delay(d),s/veh	51.7	127.1	0.0	0.0	51.9	52.0	591.0	0.0	57.1	67.0	0.0	0.0
LnGrp LOS	D	F			F	F	F		F	E		
Approach Vol, veh/h		1599			1339			1851			104	
Approach Delay, s/veh		125.9			51.9			294.8			67.0	
Approach LOS		F			D			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		59.0		41.0		59.0		41.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		55.0		37.0		55.0		37.0
Max Q Clear Time (g_c+I1), s		57.0		39.0		57.0		39.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	168.3
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	18.5
Intersection LOS	C

Movement	EBU	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR
Vol, veh/h	0	0	32	0	134	0	0	871	4
Peak Hour Factor	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
Mvmt Flow	0	0	35	0	146	0	0	947	4
Number of Lanes	0	0	1	0	1	0	0	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.6	9.4	20.2
HCM LOS	A	A	C

Lane	NBLn1	EBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%
Vol Thru, %	0%	0%	100%	99%
Vol Right, %	0%	100%	0%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	134	32	581	294
LT Vol	134	0	0	0
Through Vol	0	0	581	290
RT Vol	0	32	0	4
Lane Flow Rate	146	35	631	320
Geometry Grp	5	2	7	7
Degree of Util (X)	0.206	0.051	0.818	0.414
Departure Headway (Hd)	5.08	5.317	4.668	4.658
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	709	676	764	765
Service Time	3.089	3.33	2.454	2.444
HCM Lane V/C Ratio	0.206	0.052	0.826	0.418
HCM Control Delay	9.4	8.6	25	10.8
HCM Lane LOS	A	A	C	B
HCM 95th-tile Q	0.8	0.2	8.9	2

Intersection	
Intersection Delay, s/veh	53.9
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	17	11	120	0	93	2	37	0	32	715	48
Peak Hour Factor	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	18	12	130	0	101	2	40	0	35	777	52
Number of Lanes	0	0	1	1	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	2	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	12.9	14.6	62.1
HCM LOS	B	B	F

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	4%	61%	0%	70%	3%
Vol Thru, %	90%	39%	0%	2%	95%
Vol Right, %	6%	0%	100%	28%	2%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	795	28	120	132	563
LT Vol	32	17	0	93	18
Through Vol	715	11	0	2	533
RT Vol	48	0	120	37	12
Lane Flow Rate	864	30	130	143	612
Geometry Grp	2	7	7	5	2
Degree of Util (X)	1	0.072	0.274	0.316	1
Departure Headway (Hd)	6.161	8.573	7.57	7.925	6.182
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	596	419	476	455	587
Service Time	4.213	6.298	5.295	5.95	4.235
HCM Lane V/C Ratio	1.45	0.072	0.273	0.314	1.043
HCM Control Delay	62.1	12	13.1	14.6	62.2
HCM Lane LOS	F	B	B	B	F
HCM 95th-tile Q	14.7	0.2	1.1	1.3	14.7

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	18	533	12
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	20	579	13
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	62.2
HCM LOS	F

Lane

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	47	1428	80	99	1767	14	13	956	85	4	992	92
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	51	1552	87	108	1921	15	14	1039	92	4	1078	100
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	85	1909	107	130	2016	16	38	939	100	37	1082	106
Arrive On Green	0.56	0.56	0.56	0.56	0.56	0.56	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	228	3409	190	305	3599	28	4	2607	277	1	3005	295
Grp Volume(v), veh/h	51	802	837	108	943	993	598	0	547	625	0	557
Grp Sat Flow(s),veh/h/ln	228	1770	1829	305	1770	1858	1241	0	1646	1658	0	1643
Q Serve(g_s), s	5.5	36.5	37.1	18.9	50.2	50.5	3.2	0.0	31.9	4.1	0.0	32.8
Cycle Q Clear(g_c), s	56.0	36.5	37.1	56.0	50.2	50.5	36.0	0.0	31.9	36.0	0.0	32.8
Prop In Lane	1.00		0.10	1.00		0.02	0.02		0.17	0.01		0.18
Lane Grp Cap(c), veh/h	85	991	1024	130	991	1040	484	0	593	633	0	591
V/C Ratio(X)	0.60	0.81	0.82	0.83	0.95	0.95	1.24	0.00	0.92	0.99	0.00	0.94
Avail Cap(c_a), veh/h	85	991	1024	130	991	1040	484	0	593	633	0	591
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)	0.75	0.75	0.75	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	49.3	17.7	17.8	44.9	20.7	20.8	29.2	0.0	30.7	31.4	0.0	31.0
Incr Delay (d2), s/veh	8.7	3.9	4.0	4.3	2.7	2.7	122.9	0.0	22.3	32.9	0.0	25.1
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	2.9	24.8	26.0	4.0	27.6	28.9	53.7	0.0	25.1	30.8	0.0	26.1
LnGrp Delay(d),s/veh	58.0	21.6	21.8	49.3	23.4	23.5	152.1	0.0	53.0	64.3	0.0	56.0
LnGrp LOS	E	C	C	D	C	C	F		D	E		E
Approach Vol, veh/h		1690			2044			1145			1182	
Approach Delay, s/veh		22.8			24.8			104.7			60.4	
Approach LOS		C			C			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		40.0		60.0		40.0		60.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		36.0		56.0		36.0		56.0
Max Q Clear Time (g_c+I1), s		38.0		58.0		38.0		58.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	46.3
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	147	1498	113	168	1723	75	137	1178	240	149	1277	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	160	1628	123	183	1873	82	149	1280	261	162	1388	163
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	143	1451	649	143	1417	62	143	1239	617	143	1118	130
Arrive On Green	0.05	0.55	0.55	0.04	0.41	0.41	0.04	0.35	0.35	0.04	0.35	0.35
Sat Flow, veh/h	1774	3539	1583	1774	3456	150	1774	3539	1583	1774	3194	373
Grp Volume(v), veh/h	160	1628	123	183	952	1003	149	1280	261	162	765	786
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1836	1774	1770	1583	1774	1770	1797
Q Serve(g_s), s	4.0	41.0	3.9	4.0	41.0	41.0	4.0	35.0	12.0	4.0	35.0	35.0
Cycle Q Clear(g_c), s	4.0	41.0	3.9	4.0	41.0	41.0	4.0	35.0	12.0	4.0	35.0	35.0
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	143	1451	649	143	726	753	143	1239	617	143	619	629
V/C Ratio(X)	1.12	1.12	0.19	1.28	1.31	1.33	1.04	1.03	0.42	1.13	1.23	1.25
Avail Cap(c_a), veh/h	143	1451	649	143	726	753	143	1239	617	143	619	629
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)	0.44	0.44	0.44	0.49	0.49	0.49	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.6	22.7	14.3	28.7	29.5	29.5	31.6	32.5	22.3	31.6	32.5	32.5
Incr Delay (d2), s/veh	86.3	59.5	0.1	149.9	145.7	153.8	86.9	34.6	2.1	115.5	119.1	125.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.8	56.9	3.1	10.7	88.8	95.2	6.2	41.4	9.5	8.3	67.6	70.6
LnGrp Delay(d),s/veh	114.8	82.3	14.4	178.5	175.2	183.3	118.9	67.1	24.4	147.1	151.6	157.9
LnGrp LOS	F	F	B	F	F	F	F	F	C	F	F	F
Approach Vol, veh/h		1911			2138			1690			1713	
Approach Delay, s/veh		80.6			179.3			65.0			154.1	
Approach LOS		F			F			E			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	39.0	8.0	45.0	8.0	39.0	8.0	45.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	35.0	4.0	41.0	4.0	35.0	4.0	41.0
Max Q Clear Time (g_c+I1), s	6.0	37.0	6.0	43.0	6.0	37.0	6.0	43.0
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 2010 Ctrl Delay	122.3
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	84	1018	132	175	1006	85	50	278	81	68	420	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	91	1107	143	190	1093	92	54	302	88	74	457	59
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	1	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	274	1735	224	255	1818	153	142	687	196	110	401	49
Arrive On Green	0.55	0.55	0.55	0.55	0.55	0.55	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	471	3154	407	443	3305	278	212	2170	620	133	1266	155
Grp Volume(v), veh/h	91	620	630	190	585	600	219	0	225	590	0	0
Grp Sat Flow(s),veh/h/ln	471	1770	1791	443	1770	1814	1415	0	1586	1555	0	0
Q Serve(g_s), s	9.7	14.6	14.6	18.4	13.3	13.4	0.0	0.0	6.8	12.2	0.0	0.0
Cycle Q Clear(g_c), s	23.0	14.6	14.6	33.0	13.3	13.4	5.5	0.0	6.8	19.0	0.0	0.0
Prop In Lane	1.00		0.23	1.00		0.15	0.25		0.39	0.13		0.10
Lane Grp Cap(c), veh/h	274	973	985	255	973	998	523	0	502	560	0	0
V/C Ratio(X)	0.33	0.64	0.64	0.74	0.60	0.60	0.42	0.00	0.45	1.05	0.00	0.00
Avail Cap(c_a), veh/h	274	973	985	255	973	998	523	0	502	560	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.39	0.39	0.39	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.8	9.4	9.4	23.5	9.1	9.1	15.9	0.0	16.3	21.7	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.6	0.6	11.2	1.0	1.0	2.5	0.0	2.9	53.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.3	10.0	10.1	7.0	10.8	11.1	5.7	0.0	6.0	31.4	0.0	0.0
LnGrp Delay(d),s/veh	17.1	9.9	9.9	34.6	10.1	10.1	18.3	0.0	19.2	74.8	0.0	0.0
LnGrp LOS	B	A	A	C	B	B	B		B	F		
Approach Vol, veh/h		1341			1375			444			590	
Approach Delay, s/veh		10.4			13.5			18.8			74.8	
Approach LOS		B			B			B			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		23.0		37.0		23.0		37.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		19.0		33.0		19.0		33.0
Max Q Clear Time (g_c+I1), s		8.8		25.0		21.0		35.0
Green Ext Time (p_c), s		4.9		7.5		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	22.7
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	1036	924	89	1879	50	0	0	0	112	28	12
Number	7	4	14	3	8	18				1	6	16
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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	8	1126	1004	97	2042	54				122	30	13
Adj No. of Lanes	0	2	1	1	2	0				0	1	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				0	2	0
Cap, veh/h	41	2419	1122	206	2497	66				277	68	29
Arrive On Green	1.00	1.00	1.00	1.00	1.00	1.00				0.21	0.21	0.21
Sat Flow, veh/h	6	3413	1583	189	3523	93				1311	322	140
Grp Volume(v), veh/h	608	526	1004	97	1021	1075				165	0	0
Grp Sat Flow(s),veh/h/ln	1809	1610	1583	189	1770	1846				1773	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0				8.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0				8.1	0.0	0.0
Prop In Lane	0.01		1.00	1.00		0.05				0.74		0.08
Lane Grp Cap(c), veh/h	1318	1141	1122	206	1254	1309				374	0	0
V/C Ratio(X)	0.46	0.46	0.89	0.47	0.81	0.82				0.44	0.00	0.00
Avail Cap(c_a), veh/h	1371	1192	1172	212	1310	1366				374	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.30	0.30	0.30				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				34.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.9	0.5	1.2	1.2				3.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.5	0.1	0.8	0.8				7.7	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.9	0.5	1.2	1.2				38.0	0.0	0.0
LnGrp LOS	A	A	A	A	A	A				D		
Approach Vol, veh/h		2138			2193						165	
Approach Delay, s/veh		0.5			1.2						38.0	
Approach LOS		A			A						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				74.9		25.1		74.9
Change Period (Y+Rc), s				4.0		4.0		4.0
Max Green Setting (Gmax), s				74.0		18.0		74.0
Max Q Clear Time (g_c+I1), s				2.0		10.1		2.0
Green Ext Time (p_c), s				68.9		0.5		68.9

Intersection Summary	
HCM 2010 Ctrl Delay	2.2
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	11	1112	0	0	1149	43	907	53	58	34	0	83
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	12	1209	0	0	1249	47	1086	0	0	37	0	90
Adj No. of Lanes	1	2	0	0	2	0	2	1	0	0	1	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, %	2	2	0	0	2	2	2	2	2	2	2	2
Cap, veh/h	98	1413	0	0	1389	52	1532	970	0	257	23	569
Arrive On Green	0.27	0.27	0.00	0.00	0.40	0.40	0.52	0.00	0.00	0.52	0.00	0.52
Sat Flow, veh/h	424	3632	0	0	3572	131	2603	1863	0	404	45	1092
Grp Volume(v), veh/h	12	1209	0	0	635	661	1086	0	0	127	0	0
Grp Sat Flow(s),veh/h/ln	424	1770	0	0	1770	1840	1301	1863	0	1541	0	0
Q Serve(g_s), s	2.8	32.4	0.0	0.0	33.6	33.7	28.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	36.5	32.4	0.0	0.0	33.6	33.7	32.2	0.0	0.0	4.0	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.07	1.00		0.00	0.29		0.71
Lane Grp Cap(c), veh/h	98	1413	0	0	707	735	1532	970	0	849	0	0
V/C Ratio(X)	0.12	0.86	0.00	0.00	0.90	0.90	0.71	0.00	0.00	0.15	0.00	0.00
Avail Cap(c_a), veh/h	99	1416	0	0	708	736	1532	970	0	849	0	0
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.00	0.00	0.75	0.75	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	51.8	33.9	0.0	0.0	28.1	28.2	18.8	0.0	0.0	12.4	0.0	0.0
Incr Delay (d2), s/veh	0.5	4.8	0.0	0.0	11.4	11.2	2.8	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	23.2	0.0	0.0	24.8	25.6	18.3	0.0	0.0	3.4	0.0	0.0
LnGrp Delay(d),s/veh	52.3	38.7	0.0	0.0	39.6	39.4	21.6	0.0	0.0	12.8	0.0	0.0
LnGrp LOS	D	D			D	D	C			B		
Approach Vol, veh/h		1221			1296			1086			127	
Approach Delay, s/veh		38.8			39.5			21.6			12.8	
Approach LOS		D			D			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		56.1		43.9		56.1		43.9
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		52.0		40.0		52.0		40.0
Max Q Clear Time (g_c+I1), s		34.2		38.5		6.0		35.7
Green Ext Time (p_c), s		5.6		1.5		6.7		4.0

Intersection Summary	
HCM 2010 Ctrl Delay	33.1
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	37.1
Intersection LOS	E

Movement	EBU	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR
Vol, veh/h	0	0	28	0	43	0	0	1117	48
Peak Hour Factor	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
Mvmt Flow	0	0	30	0	47	0	0	1214	52
Number of Lanes	0	0	1	0	1	0	0	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.5	8.5	38.8
HCM LOS	A	A	E

Lane	NBLn1	EBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%
Vol Thru, %	0%	0%	100%	89%
Vol Right, %	0%	100%	0%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	43	28	745	420
LT Vol	43	0	0	0
Through Vol	0	0	745	372
RT Vol	0	28	0	48
Lane Flow Rate	47	30	809	457
Geometry Grp	5	2	7	7
Degree of Util (X)	0.066	0.045	1	0.575
Departure Headway (Hd)	5.118	5.291	4.611	4.531
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	703	681	785	795
Service Time	3.125	3.292	2.361	2.281
HCM Lane V/C Ratio	0.067	0.044	1.031	0.575
HCM Control Delay	8.5	8.5	53.2	13.3
HCM Lane LOS	A	A	F	B
HCM 95th-tile Q	0.2	0.1	17	3.7

Intersection	
Intersection Delay, s/veh	61.4
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	73	26	332	0	208	6	85	0	16	391	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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	79	28	361	0	226	7	92	0	17	425	40
Number of Lanes	0	0	1	1	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	2	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	40.4	47.7	75.5
HCM LOS	E	E	F

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	4%	74%	0%	70%	2%
Vol Thru, %	88%	26%	0%	2%	96%
Vol Right, %	8%	0%	100%	28%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	444	99	332	299	487
LT Vol	16	73	0	208	12
Through Vol	391	26	0	6	468
RT Vol	37	0	332	85	7
Lane Flow Rate	483	108	361	325	529
Geometry Grp	2	7	7	5	2
Degree of Util (X)	1	0.291	0.87	0.85	1
Departure Headway (Hd)	8.894	9.749	8.681	9.416	8.933
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	410	369	419	387	408
Service Time	6.977	7.485	6.417	7.455	7.016
HCM Lane V/C Ratio	1.178	0.293	0.862	0.84	1.297
HCM Control Delay	75.5	16.5	47.5	47.7	75.7
HCM Lane LOS	F	C	E	E	F
HCM 95th-tile Q	12.3	1.2	8.7	8	12.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	12	468	7
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	13	509	8
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	75.7
HCM LOS	F

Lane

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	85	1929	83	134	1884	39	8	1010	132	5	825	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	92	2097	90	146	2048	42	9	1098	143	5	897	35
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	72	1833	78	72	1880	38	40	1196	155	37	1232	51
Arrive On Green	0.53	0.53	0.53	0.53	0.53	0.53	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	196	3459	147	178	3547	72	8	3066	397	2	3160	132
Grp Volume(v), veh/h	92	1065	1122	146	1018	1072	664	0	586	492	0	445
Grp Sat Flow(s),veh/h/ln	196	1770	1837	178	1770	1850	1846	0	1625	1621	0	1672
Q Serve(g_s), s	0.0	53.0	53.0	0.0	53.0	53.0	8.0	0.0	34.4	1.8	0.0	22.1
Cycle Q Clear(g_c), s	53.0	53.0	53.0	53.0	53.0	53.0	34.1	0.0	34.4	36.2	0.0	22.1
Prop In Lane	1.00		0.08	1.00		0.04	0.01		0.24	0.01		0.08
Lane Grp Cap(c), veh/h	72	938	973	72	938	980	756	0	634	669	0	652
V/C Ratio(X)	1.28	1.14	1.15	2.03	1.09	1.09	0.88	0.00	0.92	0.74	0.00	0.68
Avail Cap(c_a), veh/h	72	938	973	72	938	980	756	0	634	669	0	652
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)	0.75	0.75	0.75	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.0	23.5	23.5	50.0	23.5	23.5	28.9	0.0	29.1	25.5	0.0	25.4
Incr Delay (d2), s/veh	183.6	71.5	77.7	466.9	40.6	43.8	13.7	0.0	21.3	7.1	0.0	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.2	79.5	85.5	20.4	63.4	67.6	27.6	0.0	26.2	18.3	0.0	16.6
LnGrp Delay(d),s/veh	233.6	95.0	101.2	516.9	64.1	67.3	42.7	0.0	50.4	32.5	0.0	31.1
LnGrp LOS	F	F	F	F	F	F	D		D	C		C
Approach Vol, veh/h		2279			2236			1250			937	
Approach Delay, s/veh		103.6			95.2			46.3			31.8	
Approach LOS		F			F			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		43.0		57.0		43.0		57.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		39.0		53.0		39.0		53.0
Max Q Clear Time (g_c+I1), s		36.4		55.0		38.2		55.0
Green Ext Time (p_c), s		2.4		0.0		0.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	80.1
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	201	1815	123	180	1972	154	108	1311	276	177	1327	226
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	218	1973	134	196	2143	167	117	1425	300	192	1442	246
Adj No. of Lanes	1	2	1	1	2	0	1	2	1	1	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	143	1522	681	143	1432	110	143	1168	586	143	1001	168
Arrive On Green	0.04	0.43	0.43	0.04	0.43	0.43	0.04	0.33	0.33	0.04	0.33	0.33
Sat Flow, veh/h	1774	3539	1583	1774	3331	256	1774	3539	1583	1774	3033	510
Grp Volume(v), veh/h	218	1973	134	196	1125	1185	117	1425	300	192	832	856
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1818	1774	1770	1583	1774	1770	1773
Q Serve(g_s), s	4.0	43.0	5.3	4.0	43.0	43.0	4.0	33.0	14.7	4.0	33.0	33.0
Cycle Q Clear(g_c), s	4.0	43.0	5.3	4.0	43.0	43.0	4.0	33.0	14.7	4.0	33.0	33.0
Prop In Lane	1.00		1.00	1.00		0.14	1.00		1.00	1.00		0.29
Lane Grp Cap(c), veh/h	143	1522	681	143	761	782	143	1168	586	143	584	585
V/C Ratio(X)	1.52	1.30	0.20	1.37	1.48	1.52	0.82	1.22	0.51	1.34	1.42	1.46
Avail Cap(c_a), veh/h	143	1522	681	143	761	782	143	1168	586	143	584	585
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)	0.09	0.09	0.09	0.14	0.14	0.14	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.7	28.5	17.7	27.7	28.5	28.5	28.8	33.5	24.5	32.6	33.5	33.5
Incr Delay (d2), s/veh	239.4	133.9	0.0	173.2	216.5	233.0	29.8	107.0	3.2	193.7	201.0	217.7
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	17.1	85.5	3.1	12.4	115.9	125.1	4.4	60.1	11.3	13.8	87.6	92.6
LnGrp Delay(d),s/veh	267.1	162.4	17.8	200.9	245.0	261.5	58.5	140.5	27.7	226.3	234.5	251.2
LnGrp LOS	F	F	B	F	F	F	E	F	C	F	F	F
Approach Vol, veh/h		2325			2506			1842			1880	
Approach Delay, s/veh		163.8			249.4			116.9			241.3	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	37.0	8.0	47.0	8.0	37.0	8.0	47.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	33.0	4.0	43.0	4.0	33.0	4.0	43.0
Max Q Clear Time (g_c+I1), s	6.0	35.0	6.0	45.0	6.0	35.0	6.0	45.0
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 2010 Ctrl Delay	195.8
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	76	1515	137	114	1186	79	127	431	147	86	514	74
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	83	1647	149	124	1289	86	138	468	160	93	559	80
Adj No. of Lanes	1	2	0	1	2	0	0	2	0	0	1	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	152	1424	127	120	1460	97	225	653	222	103	383	51
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	393	3286	294	262	3368	224	308	1507	512	81	884	118
Grp Volume(v), veh/h	83	879	917	124	676	699	265	0	501	732	0	0
Grp Sat Flow(s),veh/h/ln	393	1770	1811	262	1770	1823	722	0	1605	1084	0	0
Q Serve(g_s), s	4.9	26.0	26.0	0.0	21.0	21.1	0.0	0.0	15.4	10.6	0.0	0.0
Cycle Q Clear(g_c), s	26.0	26.0	26.0	26.0	21.0	21.1	18.2	0.0	15.4	26.0	0.0	0.0
Prop In Lane	1.00		0.16	1.00		0.12	0.52		0.32	0.13		0.11
Lane Grp Cap(c), veh/h	152	767	785	120	767	790	404	0	695	537	0	0
V/C Ratio(X)	0.55	1.15	1.17	1.03	0.88	0.88	0.66	0.00	0.72	1.36	0.00	0.00
Avail Cap(c_a), veh/h	152	767	785	120	767	790	404	0	695	537	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	29.1	17.0	17.0	30.0	15.6	15.6	13.6	0.0	14.0	19.0	0.0	0.0
Incr Delay (d2), s/veh	0.4	67.2	77.5	91.4	11.7	11.7	8.1	0.0	6.4	175.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.0	47.5	52.4	9.0	18.5	19.0	8.2	0.0	12.5	62.8	0.0	0.0
LnGrp Delay(d),s/veh	29.4	84.2	94.5	121.8	27.3	27.3	21.7	0.0	20.4	194.0	0.0	0.0
LnGrp LOS	C	F	F	F	C	C	C		C	F		
Approach Vol, veh/h		1879			1499			766			732	
Approach Delay, s/veh		86.8			35.1			20.8			194.0	
Approach LOS		F			D			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		30.0		30.0		30.0		30.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		26.0		26.0		26.0		26.0
Max Q Clear Time (g_c+I1), s		20.2		28.0		28.0		28.0
Green Ext Time (p_c), s		4.4		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	76.6
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	13	1357	908	80	2328	86	0	0	0	132	41	18
Number	7	4	14	3	8	18				1	6	16
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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	14	1475	987	87	2530	93				143	45	20
Adj No. of Lanes	0	2	1	1	2	0				0	1	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				0	2	0
Cap, veh/h	44	2504	1197	175	2633	96				200	63	28
Arrive On Green	1.00	1.00	1.00	1.00	1.00	1.00				0.16	0.16	0.16
Sat Flow, veh/h	10	3312	1583	136	3483	127				1218	383	170
Grp Volume(v), veh/h	799	690	987	87	1278	1345				208	0	0
Grp Sat Flow(s),veh/h/ln	1712	1610	1583	136	1770	1840				1772	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0				11.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0				11.1	0.0	0.0
Prop In Lane	0.02		1.00	1.00		0.07				0.69		0.10
Lane Grp Cap(c), veh/h	1330	1217	1197	175	1338	1391				291	0	0
V/C Ratio(X)	0.60	0.57	0.82	0.50	0.96	0.97				0.72	0.00	0.00
Avail Cap(c_a), veh/h	1336	1224	1203	175	1345	1399				291	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33				1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.09	0.09	0.09				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				39.6	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.1	0.5	0.2	2.2	2.7				14.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.3	0.0	1.2	1.5				10.8	0.0	0.0
LnGrp Delay(d),s/veh	0.1	0.1	0.5	0.2	2.2	2.7				53.6	0.0	0.0
LnGrp LOS	A	A	A	A	A	A				D		
Approach Vol, veh/h		2476			2710						208	
Approach Delay, s/veh		0.2			2.4						53.6	
Approach LOS		A			A						D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				79.6		20.4		79.6
Change Period (Y+Rc), s				4.0		4.0		4.0
Max Green Setting (Gmax), s				76.0		16.0		76.0
Max Q Clear Time (g_c+I1), s				2.0		13.1		2.0
Green Ext Time (p_c), s				73.6		0.3		73.6

Intersection Summary	
HCM 2010 Ctrl Delay	3.4
HCM 2010 LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	23	1448	0	0	1189	51	1225	204	115	31	0	71
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1900	1863	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	25	1574	0	0	1292	55	840	911	125	34	0	77
Adj No. of Lanes	1	2	0	0	2	0	1	1	0	0	1	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, %	2	2	0	0	2	2	2	2	2	2	2	2
Cap, veh/h	72	1310	0	0	1280	54	387	882	121	47	23	52
Arrive On Green	0.37	0.37	0.00	0.00	0.37	0.37	0.55	0.55	0.55	0.55	0.00	0.55
Sat Flow, veh/h	404	3632	0	0	3552	147	1317	1604	220	0	42	95
Grp Volume(v), veh/h	25	1574	0	0	660	687	840	0	1036	111	0	0
Grp Sat Flow(s),veh/h/ln	404	1770	0	0	1770	1837	1317	0	1824	137	0	0
Q Serve(g_s), s	0.0	37.0	0.0	0.0	37.0	37.0	0.0	0.0	55.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	37.0	37.0	0.0	0.0	37.0	37.0	55.0	0.0	55.0	55.0	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.08	1.00		0.12	0.31		0.69
Lane Grp Cap(c), veh/h	72	1310	0	0	655	680	387	0	1003	122	0	0
V/C Ratio(X)	0.35	1.20	0.00	0.00	1.01	1.01	2.17	0.00	1.03	0.91	0.00	0.00
Avail Cap(c_a), veh/h	72	1310	0	0	655	680	387	0	1003	122	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.60	0.60	0.00	0.00	0.31	0.31	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	50.0	31.5	0.0	0.0	31.5	31.5	27.6	0.0	22.5	27.5	0.0	0.0
Incr Delay (d2), s/veh	1.7	95.6	0.0	0.0	21.7	21.9	535.2	0.0	37.2	59.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.3	63.7	0.0	0.0	39.5	41.1	122.7	0.0	67.8	6.8	0.0	0.0
LnGrp Delay(d),s/veh	51.7	127.1	0.0	0.0	53.3	53.4	562.9	0.0	59.7	87.2	0.0	0.0
LnGrp LOS	D	F			F	F	F		F	F		
Approach Vol, veh/h		1599			1347			1876			111	
Approach Delay, s/veh		125.9			53.3			285.0			87.2	
Approach LOS		F			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		59.0		41.0		59.0		41.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		55.0		37.0		55.0		37.0
Max Q Clear Time (g_c+I1), s		57.0		39.0		57.0		39.0
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	165.7
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	21.2
Intersection LOS	C

Movement	EBU	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR
Vol, veh/h	0	0	32	0	134	0	0	921	4
Peak Hour Factor	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
Mvmt Flow	0	0	35	0	146	0	0	1001	4
Number of Lanes	0	0	1	0	1	0	0	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.7	9.4	23.4
HCM LOS	A	A	C

Lane	NBLn1	EBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%
Vol Thru, %	0%	0%	100%	99%
Vol Right, %	0%	100%	0%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	134	32	614	311
LT Vol	134	0	0	0
Through Vol	0	0	614	307
RT Vol	0	32	0	4
Lane Flow Rate	146	35	667	338
Geometry Grp	5	2	7	7
Degree of Util (X)	0.207	0.052	0.865	0.437
Departure Headway (Hd)	5.106	5.374	4.668	4.659
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	705	669	767	764
Service Time	3.118	3.386	2.456	2.447
HCM Lane V/C Ratio	0.207	0.052	0.87	0.442
HCM Control Delay	9.4	8.7	29.7	11.1
HCM Lane LOS	A	A	D	B
HCM 95th-tile Q	0.8	0.2	10.5	2.2

Intersection	
Intersection Delay, s/veh	54
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	17	11	143	0	93	2	37	0	32	715	48
Peak Hour Factor	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	18	12	155	0	101	2	40	0	35	777	52
Number of Lanes	0	0	1	1	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	2	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	13.7	14.9	62.8
HCM LOS	B	B	F

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	4%	61%	0%	70%	3%
Vol Thru, %	90%	39%	0%	2%	95%
Vol Right, %	6%	0%	100%	28%	2%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	795	28	143	132	563
LT Vol	32	17	0	93	18
Through Vol	715	11	0	2	533
RT Vol	48	0	143	37	12
Lane Flow Rate	864	30	155	143	612
Geometry Grp	2	7	7	5	2
Degree of Util (X)	1	0.073	0.327	0.321	1
Departure Headway (Hd)	6.287	8.583	7.58	8.048	6.308
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	579	418	476	448	575
Service Time	4.345	6.309	5.305	6.08	4.367
HCM Lane V/C Ratio	1.492	0.072	0.326	0.319	1.064
HCM Control Delay	62.8	12	14	14.9	62.9
HCM Lane LOS	F	B	B	B	F
HCM 95th-tile Q	14.6	0.2	1.4	1.4	14.6

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	18	533	12
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	20	579	13
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	62.9
HCM LOS	F

Lane