IVY STATION, CULVER CITY

Mixed-Use Transit Oriented Development (TOD) At Washington Blvd. and National Blvd.

Traffic Impact Analysis

Prepared for

LOWE ENTERPRISES

Prepared by

Kimley»Horn

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FINAL REPORT
TRAFFIC IMPACT ANALYSIS

Ivy Station
Washington and National Mixed Use
Transit Oriented Development

Prepared for:

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EXECUTIVE SUMMARY

This report documents a Traffic Impact and Parking Analysis conducted for the proposed Washington/National Mixed-Use project. The proposed project is located at the northwest corner of Washington Boulevard and National Boulevard in the cities of Culver City and Los Angeles, with a small portion of the project site located within the City of Los Angeles. The project is approximately 6.2 acres and is expected to be constructed and operational in 2019. The key findings and conclusions of the analysis are as follows:

- As per the proposed site plan, the project site includes 10,000 square feet of High Turnover Restaurant, 10,000 of Quality Restaurant, 200 Mid-Rise Apartment Units, a Hotel with 148 Rooms, 201 ksf of General Office space and 24 ksf of Retail Center. The proposed project site includes the conversion of existing 30,000 square feet of Mixed-Use land (10,000 square feet of Automobile Care Center, 8,000 square feet of Apparel Store and 12,000 square feet of Furniture Store) and Expo Light Rail Station 600 space surface parking lot.

- The project site will include three levels of subterranean parking, including up to 300 spaces that will be provided to the Metro (Expo) Light Rail Station transit use.

- As per the project site plan, there are 4 driveways proposed for the project - one along Venice Boulevard, two along National Boulevard, and one along Washington Boulevard. In addition, two truck delivery driveways are also proposed on Venice Boulevard. A review of the proposed driveways indicates that the driveway configurations are adequate for the project traffic circulation.

- This traffic impact analysis includes an analysis of 15 intersections within the cities of Culver City and City of Los Angeles. These intersections were selected for analysis based on the discussions with LADOT and Culver City staff. Roadway improvements are currently being constructed in the project vicinity as part of the Expo Line Phase II project and these improvements were considered and included in this analysis.

- Trip credits were applied based on the existing land use for:
  - 30,000 square feet for existing Mixed-Use land
  - 300 parking spaces for Light Rail Transit Station
  - 10% Internal Capture (based upon ITE – 10% for Daily Trips, 10% for AM and 10% for PM peak)
  - 25% of Transit Credits (based on the high land use density on the project site and 10-12 minute headways on Exposition Line)

- As per the site plan, the project is estimated to generate approximately 4,124 new daily trips, 256 new trips during the AM peak hour and 301 new trips during the PM peak hour.

- Weekday peak hour intersection operations analysis was conducted for (4) scenarios including Existing (2014), Existing With Project (2014), Cumulative (2019), and Cumulative With Project (2019).

- For the Existing (2014) base conditions, one intersection operates at LOS F, 2 intersections operate at LOS D while the remaining 12 intersections operate at LOS C or better during the AM peak period. During the PM peak period, 2 intersections operate at LOS D while the remaining 13 intersections operate at LOS C or better.

- For the Existing (2014) With Project conditions, one intersection is projected to operate at LOS F, 2 intersections would operate at LOS D while the remaining 12 intersections would operate at LOS C or better during the AM peak period. During the PM peak period, 3 intersections are projected to operate at LOS D while the remaining 12 intersections would operate at LOS C or better.

- For the Cumulative (2019) base conditions, 2 intersections are projected to operate at LOS E, 2 intersections are projected to operate at LOS D while the remaining 11 intersections are projected to operate at LOS C or better during the AM peak period. During the PM peak period, 4 intersections are projected to operate LOS D while the remaining 11 intersections would operate at LOS C or better.

- For the Cumulative (2019) With Project conditions, 2 intersections are projected to operate at LOS E, 3 intersections are projected to operate at LOS D while the remaining 11 intersections (including the main project driveway) would operate at LOS C or better in the AM peak period. In the PM peak period, one intersection is projected to operate at LOS E, 3 intersections are projected to operate at LOS D while the remaining 12 intersections (including the main project driveway) would operate at LOS C or better. This scenario reflects that there is an increase in volume to capacity (V/C) ratio at the intersection of Robertson Boulevard and National Boulevard as well as National Boulevard and Venice Boulevard resulting in a significant impact.

- Based on City of Los Angeles significant impact criteria, the project would cause a significant impact at the intersections of National/Robertson. A Transportation Demand Management (TDM) plan with a cumulative target goal of 20% reduction in project traffic will increase capacity but does not fully mitigate the project's impact. The recommended mitigation includes re-striping the eastbound approach to provide two left-turn, one through and one through-right lanes. The available roadway width would allow for an additional left-turn lane in the eastbound direction by re-striping without additional physical improvements to the intersection. Geometric constraints may exist for the eastbound left-turn movement and will be investigated during the design phase.

- Based on City of Los Angeles significant impact criteria, the project would cause a significant impact at the intersection of National/Venice. The recommended mitigation includes re-striping the northbound approach to provide two left-turn, two through and one right-turn lanes. The available roadway width along with the widening along the project frontage would allow for an additional right-turn lane in the northbound direction by re-striping without additional physical improvements to the intersection. This may require minor striping re-alignment for the north leg of National Boulevard. Upon mitigation, this intersection is projected to operate at an acceptable LOS B in the PM peak period.

- As a result of the recommended mitigation for National/Robertson and National/Venice, a total of 35 on-street parking spaces will be removed and 8 on-street spaces will be added.

- The proposed development would construct a Class II bicycle lane on National Boulevard between Washington Boulevard and Venice Boulevard in both directions and will serve as a key connection for bicyclists traveling between Washington Boulevard and Venice Boulevard. The proposed development would also be responsible for restriping Washington Boulevard and National Boulevard, including bicycle lanes on both sides of Washington Boulevard and National Boulevard.

- Based on the project trip generation and distribution patterns in the With Project conditions, the LOS at the study intersections and the LOS at Higuera Street/Robertson Boulevard and Washington Boulevard intersection, the project is not expected to result in impacts to the residential streets.

- A CMP intersection impact screening analysis was conducted as per LADOT Traffic Study Guidelines. The project is expected to contribute less than 50 peak hour trips to the CMP monitored intersection of Venice Blvd and La Cienega Blvd and therefore no additional analysis of the CMP monitored intersection is required.

- A freeway impact screening analysis was conducted as per LADOT Traffic Study Guidelines. The project is expected to add less than 1% traffic to I-10 mainline and therefore no additional mainline analysis was required. For the intersection of I-10 westbound freeway off-ramp at Robertson Boulevard, the project would result in less than 2% increase in traffic during AM peak hour and PM peak hour and therefore no additional ramp analysis was required.

- The report also documents the findings of parking, access and circulation for the project site and proposed driveways. The analysis indicates that the proposed parking spaces and driveways are adequate.

- A driveway queueing analysis was conducted due to close spacing between two (2) proposed site driveways on National Boulevard and nearby interactions of National Boulevard/Venice Boulevard and National Boulevard/Washington Boulevard. The queueing at the signalized driveway is not expected to cause blockage at nearby intersections under Future With Project conditions peak hour traffic. The analysis also indicates that the addition of a signalized driveway between the two existing signalized intersections on National Boulevard will not adversely impact the traffic operations on the corridor if appropriate turn pockets lengths and signal timing treatment are provided.

- The location of bus stops adjacent to the proposed driveways was reviewed to mitigate any conflicts with the proposed site driveways. Only one of the 3 bus stops would have to be relocated to accommodate the proposed driveway located at Venice Boulevard south of Ellis Avenue.

I. INTRODUCTION

Project Description

This Report documents the results of the Traffic Impact Analysis of the proposed Mixed-Use Development for Lowe Enterprises Real Estate Group. The proposed project is located at the northwest corner of Washington Boulevard and National Boulevard in the cities of Culver City and Los Angeles. The project includes 6.2 acres and is bounded by Venice Boulevard to the northwest, National Boulevard to the northeast, Exposition Boulevard to the south, and Robertson Boulevard to the west. **Figure 1** illustrates the study area and project location. The project is expected to be constructed by the year 2019.

The proposed project site includes a mix of land uses including a 10,000 SF of High Turnover Restaurant, 10,000 SF of Quality Restaurant, 200 Mid-Rise Apartment Units, a Hotel with 148 Rooms, 201 KSF of General Office space and 24 KSF of Retail Center. The proposed project site includes the conversion of existing 30,000 square feet of Mixed-Use land (10,000 square feet of Automobile Care Center, 8,000 square feet of Apparel Store and 12,000 square feet of Furniture Store) and Expo Light Rail Station 600 space surface parking lot.

The proposed project would require a minimum of 1,567 parking spaces based on the parking requirements. The project would provide a total of 1,634 or more parking spaces which exceeds the parking requirements based on the Straight ULI (Urban Land Institute) Shared Parking Manual 2nd Edition.

The access to the project site will be provided by one right-in/right-out access driveway along Venice Boulevard, a full access signalized driveway along National Boulevard, a secondary right-in/right-out access driveway along National Boulevard, and one right-in/right-out access driveway along Washington Boulevard. In addition, two service/delivery driveways are provided along Venice Boulevard. The driveway located along Washington Boulevard will provide access to the valet drop-off/pick-up for the hotel. The project site plan and driveway locations are provided in **Figure 2**.

Study Methodology

A traffic impact analysis was conducted to analyze the traffic conditions in the project area under the following four scenarios:

1. Existing (2014) Conditions
2. Existing With Project (2014) Conditions
3. Cumulative (2019) Conditions
4. Cumulative With Project (2019) Conditions

The project study area, future analysis and study intersections were defined in consultation with City of Culver City and LADOT staff. A Memorandum of Understanding (MOU) which outlined all the study assumptions, growth rate, project trip generation and distribution, was submitted and approved by both cities and is attached in **Appendix A**.

Existing (2014) conditions were analyzed using traffic count data collected during the month of November 2014 and May 2015. A growth rate of 1%, approved in the MOU, was applied to Cumulative (2019) scenarios.

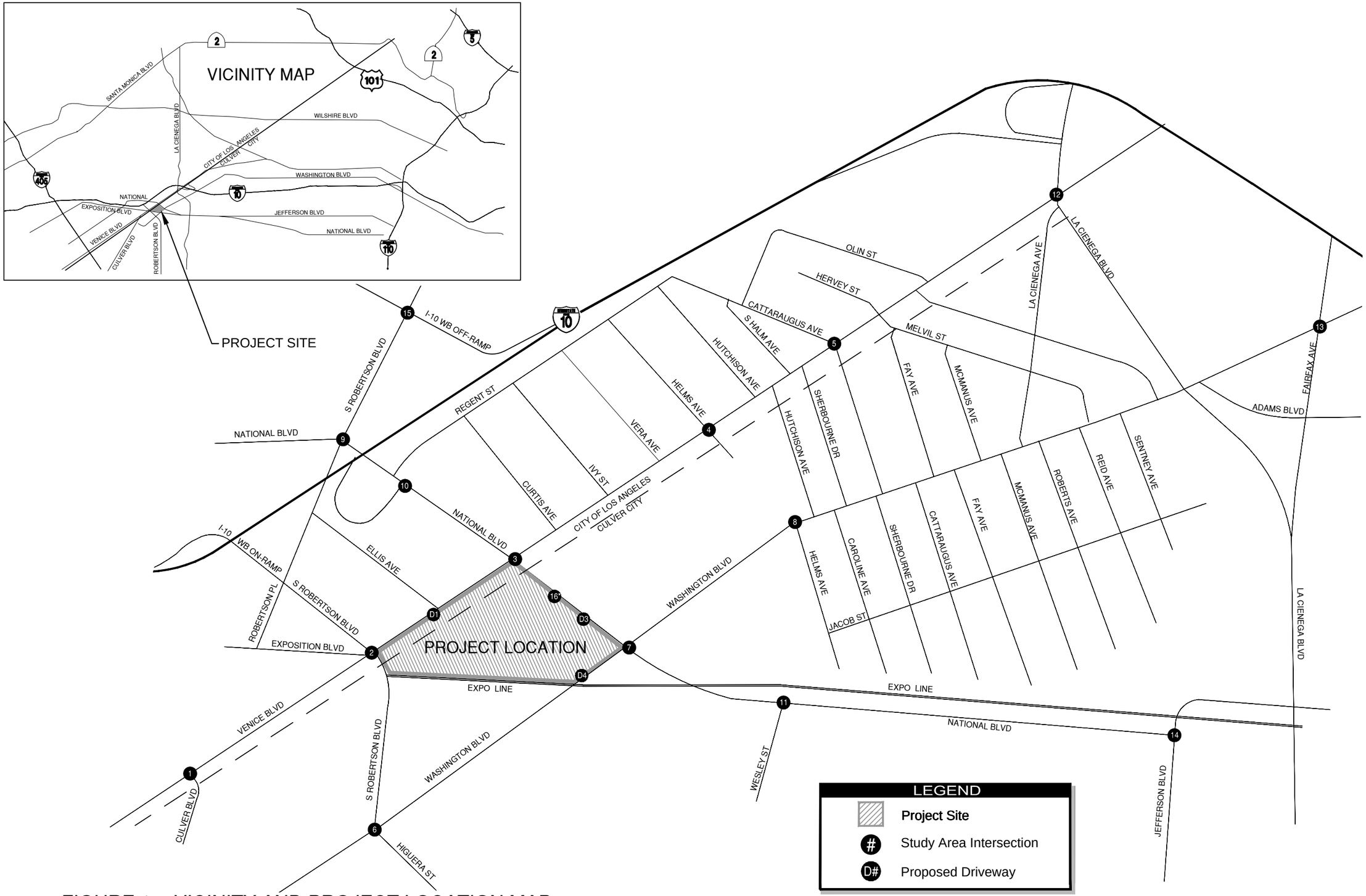

FIGURE 1 - VICINITY AND PROJECT LOCATION MAP

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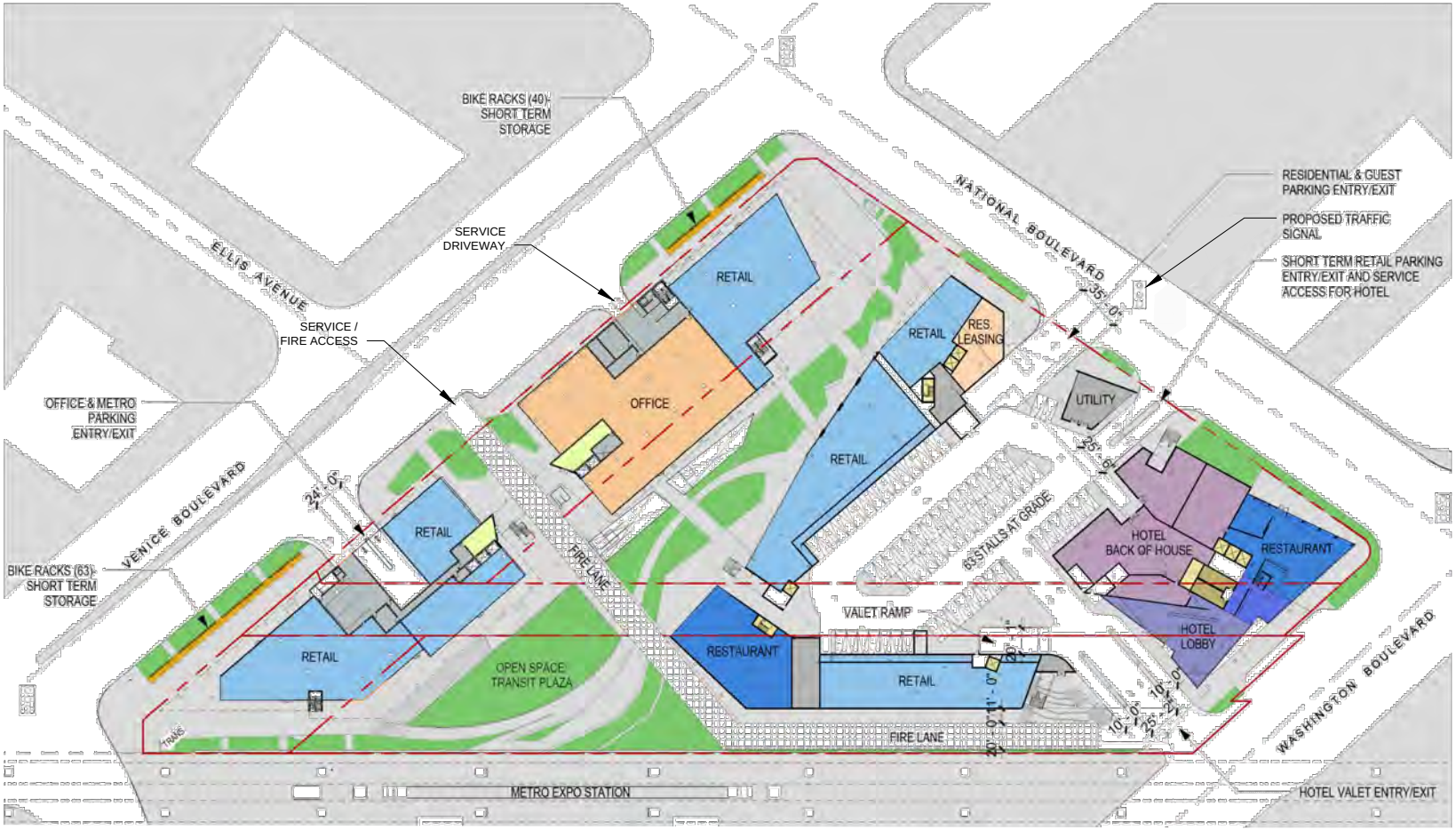

FIGURE 2 - PROJECT SITE PLAN

NO SCALE

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II. EXISTING CONDITIONS

Study Area

The project site is located on the northwest corner of Washington Boulevard and National Boulevard in the cities of Culver City and Los Angeles. The San Diego Freeway (I-405) is located approximately two miles west of the project site and the Santa Monica Freeway (I-10) is located less than half a mile north of the project site. The study area is bounded by Fairfax Avenue to the east, Culver Boulevard to the west, I-10 Westbound Off-Ramp to the north and Jefferson Boulevard to the south.

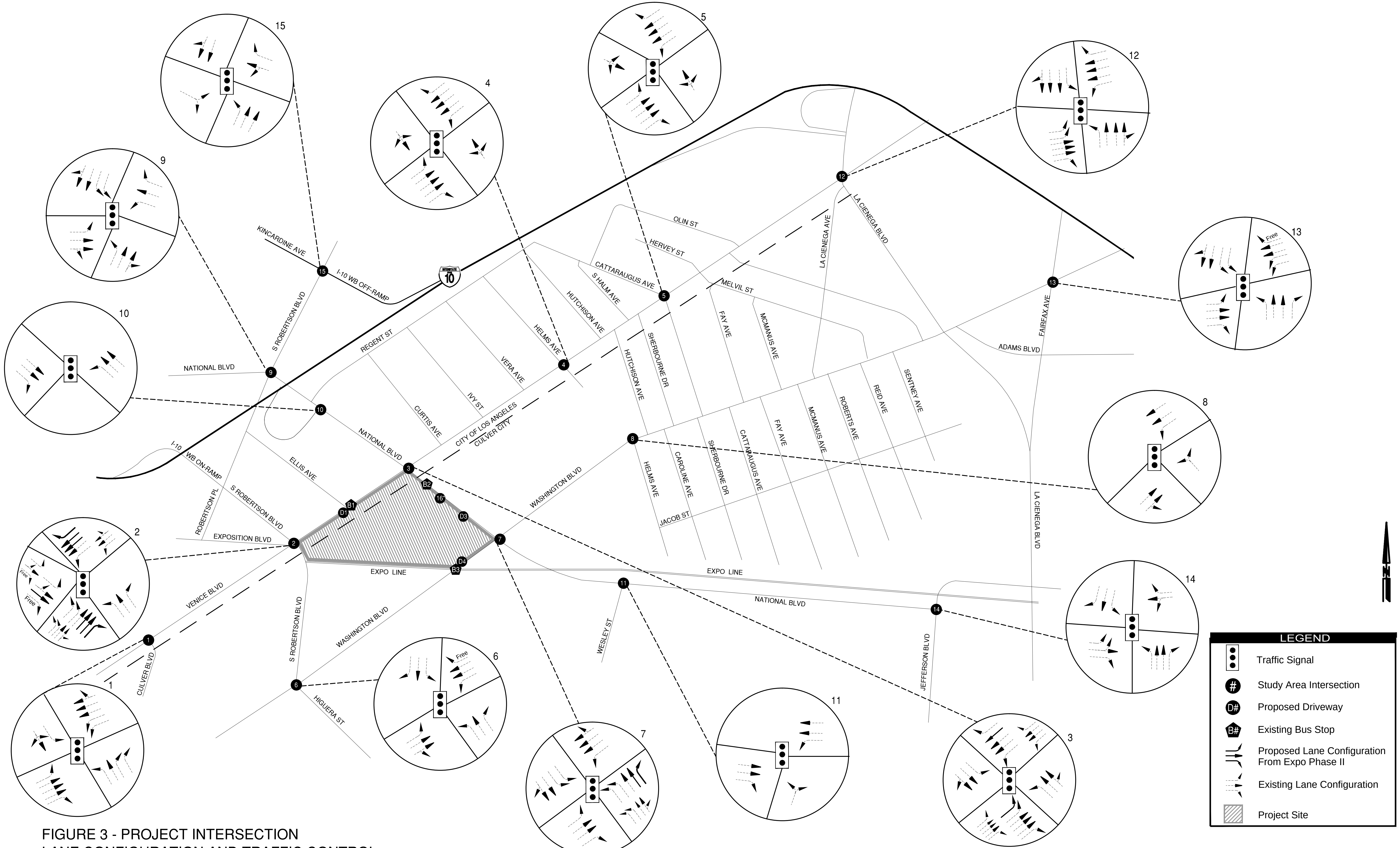
The 15 study intersections identified in conjunction with City staff for the purpose of this Traffic Impact Analysis are listed in **Table 1** below.

Table 1 – Study Area Intersections

Intersection #	*Northbound/ Southbound*	*Eastbound/ Westbound*	*Jurisdiction*	*Signalized*	*Signal System*
1	Culver Boulevard	Venice Boulevard	City of Los Angeles	Yes	ATSAC/ATCS
2	Robertson Boulevard	Venice Boulevard	City of Los Angeles	Yes	ATSAC/ATCS
3	National Boulevard	Venice Boulevard	City of Los Angeles	Yes	ATSAC/ATCS
4	Helms Avenue	Venice Boulevard	City of Los Angeles	Yes	ATSAC/ATCS
5	Cattaraugus Avenue	Venice Boulevard	City of Los Angeles	Yes	ATSAC/ATCS
6	Robertson Boulevard/ Higuera Street	Washington Boulevard	Culver City	Yes	ATSAC
7	National Boulevard	Washington Boulevard	Culver City	Yes	ATSAC
8	Helms Avenue	Washington Boulevard	Culver City	Yes	ATSAC
9	Robertson Boulevard	National Boulevard	City of Los Angeles	Yes	ATSAC/ATCS
10	National Boulevard	I-10 Eastbound On-Ramp	Caltrans	Yes	ATSAC/ATCS
11	Wesley Street	National Boulevard	Culver City	Yes	ATSAC
12	La Cienega Boulevard	Venice Boulevard	City of Los Angeles	Yes	ATSAC/ATCS
13	Fairfax Boulevard	Washington Boulevard	City of Los Angeles	Yes	ATSAC/ATCS
14	Jefferson Boulevard	National Boulevard	City of Los Angeles	Yes	ATSAC/ATCS
15	Robertson Boulevard	I-10 Westbound Off-ramp	Caltrans	Yes	ATSAC/ATCS

An intersection level of service (LOS) analysis was performed at the study intersections to assess significant impacts resulting from the proposed project.

Figure 3 on the following page illustrates the existing lane configuration and traffic control for each study intersection.



LEGEND
Traffic Signal
Study Area Intersection
Proposed Driveway
Existing Bus Stop
Proposed Lane Configuration From Expo Phase II
Existing Lane Configuration
Project Site
KINCARDINE AVE
I-10 WB OFF-RAMP
S ROBERTSON BLVD
NATIONAL BLVD
REGENT ST
CURTIS AVE
IVY ST
VERA AVE
HELMS AVE
HUTCHISON AVE
S HALM AVE
CATTARAUGUS AVE
HERVEY ST
OLIN ST
MELVIL ST
LA CIENEGA AVE
LA CIENEGA BLVD
FAY AVE
MCMANUS AVE
SHERBOURNE DR
ADAMS BLVD
FAIRFAX AVE
SENTNEY AVE
REID AVE
ROBERTS AVE
CITY OF LOS ANGELES
CULVER CITY
I-10
WB ON-RAMP
ELLIS AVE
ROBERTSON PL
EXPOSITION BLVD
WASHINGTON BLVD
CAROLINE AVE
JACOB ST
EXPO LINE
VENICE BLVD
CULVER BLVD
HIGUERA ST
WESLEY ST
JEFFERSON BLVD
Free

FIGURE 3 - PROJECT INTERSECTION
LANE CONFIGURATION AND TRAFFIC CONTROL

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Existing Street System

The project site is located on the northwest corner of Washington Boulevard and National Boulevard in the City of Culver City and City of Los Angeles. The San Diego (I-405) Freeway is located approximately two miles west of the Project site and the Santa Monica (I-10) Freeway is located less than a half mile north of the Project site. The key roadways in the vicinity of the site are described below:

Santa Monica (I-10) Freeway – The I-10 provides access to the regional interstate system and runs in the east-west direction from Pacific Coast Highway in the west to San Bernardino County in the east. Within the study area, the Santa Monica Freeway provides four lanes in each direction. It connects at the interchanges of Robertson Boulevard, National Boulevard, La Cienega Boulevard/Venice Boulevard and Washington Boulevard/Fairfax Avenue within the vicinity of the study area.

San Diego (I-405) Freeway – The I-405 also provides access to the regional interstate system and runs in the north-south direction from the I-5 Freeway in the City of Irvine at the south to the northern terminus at the I-5 Freeway in Sylmar. The freeway provides five lanes in the northbound direction and six lanes in the southbound direction, including an HOV lane in both directions north of the SR-90. The freeway has interchanges at Culver Boulevard and Venice Boulevard/Washington Boulevard in the vicinity of the study area.

Venice Boulevard – Venice Boulevard is a primary arterial/major highway. Venice Boulevard runs in the east-west direction across several jurisdictions and has three lanes in each direction. Venice Boulevard provides left turn lanes at key intersections and a large raised median island. Venice Boulevard has parking on both sides of the street within the limits of the project area and provides access to the I-10 (Santa Monica) Freeway.

Washington Boulevard – Washington Boulevard is a primary arterial roadway within the City of Culver City and a major highway within the City of Los Angeles. Washington Boulevard runs in the east-west direction across several jurisdictions. Washington Boulevard provides parking on both sides of the street and has two travel lanes in each direction within the project limit area.

Culver Boulevard – Culver Boulevard is classified as a primary arterial in the City of Culver City and a major highway in the City of Los Angeles. Culver Boulevard runs in the east-west direction from Playa del Rey to Venice Boulevard. It provides two travel lanes in each direction and on-street parking is allowed on both sides of the street within the project area. Culver Boulevard provides access to the I-405 (San Diego Freeway) at the north.

Jefferson Boulevard – Jefferson Boulevard is a primary/major highway located west of La Cienega Boulevard and runs in the east-west direction. Jefferson Boulevard is classified as a secondary highway east of La Cienega Boulevard. It has two-travel lanes in each direction, and provides on-street parking on both sides of the street within the study area.

Robertson Boulevard/Higuera Street – Robertson Boulevard runs in a north-south direction and it is classified as a secondary highway by the City of Los Angeles. South of Venice Boulevard, Robertson Boulevard/Higuera Street is classified as a primary arterial by City of Culver City and has two travel lanes in each direction. There is on-street parking allowed on both sides of the street within the project area with some parking restrictions and prohibitions along some segments. Robertson Boulevard provides access to the I-10 (Santa Monica) Freeway.

National Boulevard – National Boulevard runs in the east-west direction and is considered a secondary arterial/highway. National Boulevard has two lanes in each direction and provides a connection to the I-10 (Santa Monica) Freeway north of the project site. On-street parking is allowed at some limited segments along this arterial.

Hughes Avenue – Hughes Avenue is classified as a collector street and travels in the north-south direction. This roadway provides one travel lane in each direction and on-street parking is generally allowed throughout the study area. Parking is prohibited between Venice Boulevard and Washington Boulevard.

Wesley Street – Wesley Street is a local roadway that runs in the north-south direction. A segment of Wesley Street extends from Washington Boulevard and ends at a cul-de-sac. The other portion of Wesley Street runs from National Boulevard to Higuera Street. This street provides one travel lane in each direction and on-street parking is allowed on both sides of the street.

Cattaraugus Avenue – Cattaraugus Avenue is classified as a local roadway within the City of Culver City and as a collector street within the City of Los Angeles. Cattaraugus Avenue runs in the north-south direction and has one lane in each direction within the project area. On-street parking is allowed on both sides of the street.

Existing Traffic Volumes

The sections below include the peak hour traffic volumes, methodology utilized for this analysis, and existing operating conditions at each study intersection.

Weekday traffic counts were conducted during the morning peak hours (7:00 to 9:00 AM) and evening peak hours (4:00 to 6:00 PM) at 11 intersections on November 19 and November 20, 2014. Weekday morning and afternoon traffic counts were also conducted at 4 additional intersections on May 13, 2015. Due to the on-going construction related to Metro Expositions Light Rail Project, the lane geometry utilized for the purpose of this analysis represents the future lane configuration at some study intersections as noted in the following section of this report. Based upon our recent field check on July 2, 2015, these improvements have already been completed.

Level of Service Methodology

LADOT and Culver City traffic analysis guidelines require the use of the Transportation Research Board's Critical Movement Analysis (CMA), Circular 212 Planning Method, to analyze traffic operating conditions at the study intersections. CMA is a method which determines the volume to capacity (V/C) ratio on a critical lane basis and Level of Service (LOS) associated with each V/C ratio at a signalized intersection. V/C ratios are measured on a scale of 0 to 1.000. LOS describes the quality of traffic flow and is a measure of such factors as travel speed, travel time, and flow interruptions. LOS ranges from "A" to "F". **Table 2** presents the volume to capacity ratio using the Circular 212 method. CMA calculation (CMAC) spreadsheets were utilized in this analysis to determine the LOS at the study intersections.

Table 2 – Intersection Level of Service (LOS) Definitions

V/C Value Signalized [1]	Related LOS Rating
0 to 0.600	A – Excellent free flow conditions
0.601 to 0.700	B – Unconstrained flow
0.701 to 0.800	C – Somewhat constrained flow, maneuverability is reduced
0.801 to 0.900	D – Constrained flow, little maneuverability
0.901 to 1.000	E – Significant vehicle queuing; not all vehicles clear intersection in one cycle
Greater than 1.000	F – Excessive delay; vehicles require more than one signal cycle to clear the intersection

[1] *Based upon Circular 212 methodology for signalized intersections*

The City of Los Angeles and the City of Culver City defines a significant traffic impact at a signalized intersection as an increase in demand according to the indices found on the following page.

City of Culver City Significant Impact Criteria

The threshold criteria for City of Culver City determines that a project impact is considered significant if the following conditions are met:

Intersection Condition With Project Traffic		Project-related Increase in V/C Ratio
LOS	V/C Ratio	
C	0.701-0.800	equal to or greater than 0.050
D	0.801-0.900	equal to or greater than 0.040
E,F	> 0.900	equal to or greater than 0.020

Using this criteria, a project would not have a significant impact at an intersection if it operates at LOS D after the addition of the proposed project traffic and the incremental change in V/C is less than 0.040. However, if the intersection is operating at LOS F after the addition of the proposed project traffic and the V/C ratio is 0.020 or greater, the project would be considered to have a significant impact.

City of Los Angeles Significant Impact Criteria

The threshold criteria for City of Los Angeles, considers a project to have a significant impact if the following conditions are met:

Intersection Condition With Project Traffic		Project-related Increase in V/C Ratio
LOS	V/C Ratio	
C	0.701-0.800	equal to or greater than 0.040
D	0.801-0.900	equal to or greater than 0.020
E,F	> 0.900	equal to or greater than 0.010

Existing (2014) Conditions LOS Analysis

Existing traffic conditions were analyzed using new peak hour count data collected on November 19 and 20, 2014 and, May 13, 2015. The existing weekday peak hour (7:00 to 9:00 AM and 4:00 to 6:00 PM) traffic counts were used to calculate the Existing (2014) conditions LOS. Traffic count worksheets are provided in **Appendix B** of this report. **Figure 4** illustrates the AM and PM peak hour traffic volumes for the Existing (2014) conditions at each of the study intersections.

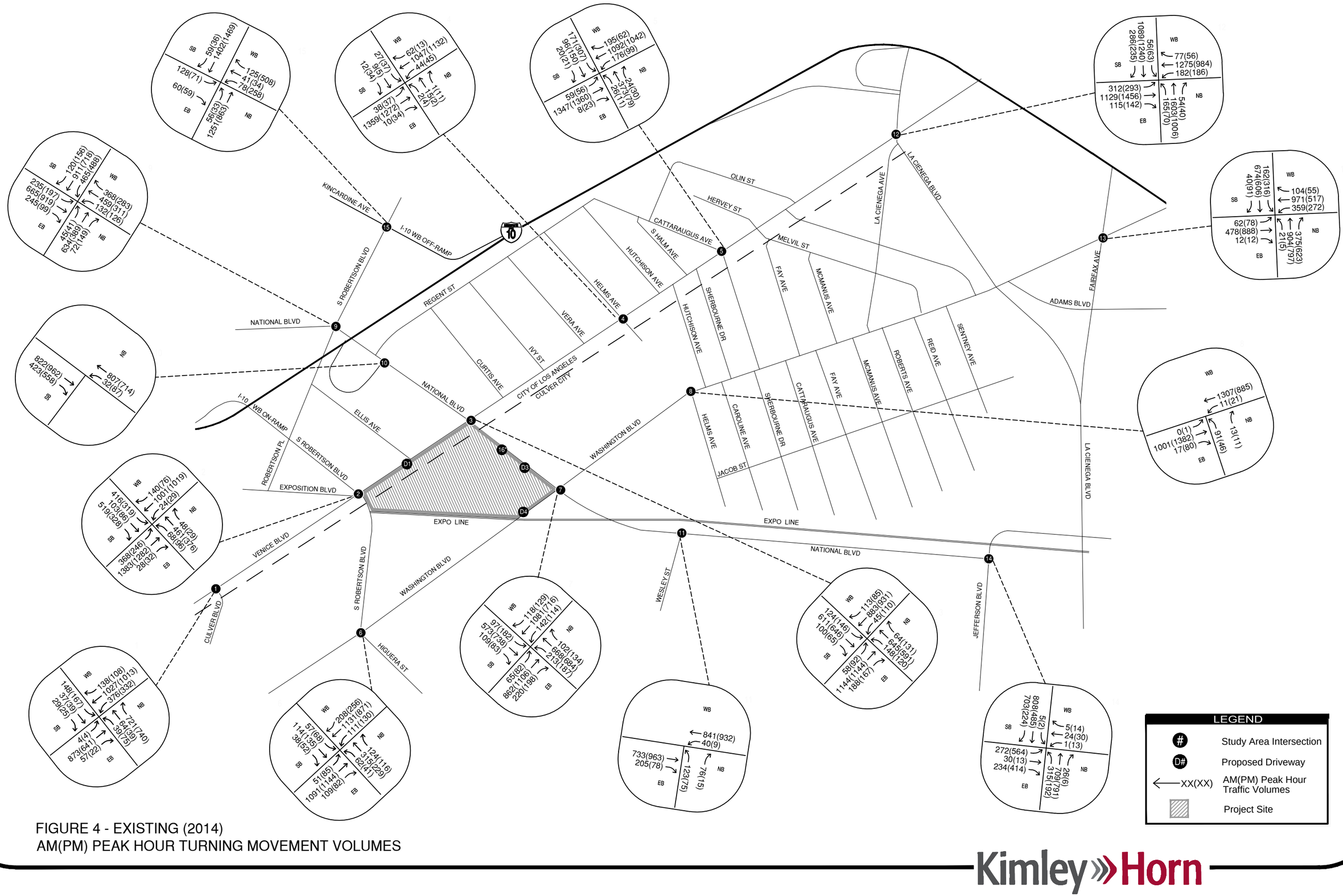

FIGURE 4 - EXISTING (2014)
AM(PM) PEAK HOUR TURNING MOVEMENT VOLUMES

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Table 3 presents the Existing (2014) conditions peak hour V/C ratio and the corresponding LOS for each intersection.

Table 3 – Existing (2014) Conditions Intersection LOS

Signalized Intersection		LOS Analysis Results			
		A.M. Peak Hour		P.M. Peak Hour	
		V/C Ratio	LOS	V/C Ratio	LOS
1	Culver Boulevard at Venice Boulevard	0.548	A	0.491	A
2	Robertson Boulevard at Venice Boulevard	1.041	F	0.839	D
3	National Boulevard at Venice Boulevard	0.604	B	0.647	B
4	Helms Avenue at Venice Boulevard	0.265	A	0.271	A
5	Cattaraugus Avenue at Venice Boulevard	0.713	C	0.607	B
6	Robertson Boulevard/Higuera Street at Washington Boulevard	0.690	B	0.660	B
7	National Boulevard at Washington Boulevard	0.680	B	0.788	C
8	Helms Avenue at Washington Boulevard	0.435	A	0.469	A
9	Robertson Boulevard at National Boulevard	0.847	D	0.753	C
10	National Boulevard at I-10 Eastbound On-Ramp	0.219	A	0.353	A
11	Wesley Street at National Boulevard	0.343	A	0.317	A
12	La Cienega Boulevard at Venice Boulevard	0.787	C	0.797	C
13	Fairfax Boulevard at Washington Boulevard	0.692	B	0.658	B
14	Jefferson Boulevard and National Boulevard	0.846	D	0.655	B
15	Robertson Boulevard and I-10 WB Offramp	0.593	A	0.810	D

Source: Kimley-Horn, July 2015

Table 3 indicates that during the AM peak period, one intersection operates at LOS F, 2 intersections operate at LOS D while the remaining 12 intersections operate at LOS C or better. During the PM peak period, 2 intersections operate at LOS D and the remaining 13 intersections operate at LOS C or better.

The following section provides an overview of transit lines that serve the study area.

Existing Transit Lines

In the existing transit system, eighteen bus lines operate under three different transportation agencies that currently serve the study area. Four bus lines are operated by the Culver City Bus (CC), ten bus lines are operated by the Los Angeles County Metropolitan Transportation Authority (MTA), three bus lines are operated by the Santa Monica Big Blue Bus (SM) and one bus is operated by the Los Angeles Department of Transportation (LADOT CE). A map of existing transit lanes is shown in **Figure 5.** These transit lines are described below.

CC Line 1 – Line 1 travels along Washington Boulevard within the study area in the east-west direction. This line runs every day, including holidays. The frequency of service during peak commute hours is approximately 12 minutes. The western terminus is at the intersection of Windward Avenue and Main Street in Venice. The eastern terminus is at the West Los Angeles Transit Center located at the intersection of Apple Street/Fairfax Avenue in West Los Angeles.

CC Line 4 – Line 4 is a local line that runs in the north-south direction providing service from the Fox Hills Mall in Culver City to West Los Angeles travelling primarily along Washington Boulevard within the study area. Line 4 runs Monday through Friday approximately every 60 minutes during peak commute hours. No weekend or holiday service is provided. Line 4 terminates at the Fox Hills Mall Transit Center at the south and at West Los Angeles Transit Center located at the north at the intersection of Apple Street/Fairfax Avenue in West Los Angeles.

CC Line 5 – Line 5 travels primarily along Washington Boulevard and Higuera Street within the project study area. This line travels in the east-west direction and operates Monday through Friday approximately every 60 minutes during commute hours. No weekend or holiday service is provided. This line ends at the intersection of Washington Boulevard/Inglewood Boulevard at the west and at La Cienega Boulevard/Rodeo Road at the east.

CC Line 7 – Line 7 is a local east-west line that provides service from Marina Del Rey to Culver City and travels primarily along Culver Boulevard within the study area. This line runs Monday through Saturday approximately every 40 minutes. No service is provided on Sundays and holidays. CC Line 7 ends at the at Fisherman's Village located at the west in Marina Del Rey and at the intersection of Culver Boulevard/Venice Boulevard in Culver City at the east. Hayden Tract Extension was recently added to this transit line.

MTA Line 33 - Line 33 is a local east-west line that provides service from Santa Monica to Downtown Los Angeles and travels primarily along Venice Boulevard within the study area. This line runs every day, including holidays. MTA Line 33 travels approximately every 5-15 minutes during peak commute hours. The western end is at the intersection of 2nd Street/Santa Monica Boulevard in Santa Monica. The eastern end is at the Patsaouras Transit Plaza (Union Station) in Downtown Los Angeles.

MTA Line 35/335 - Line 35/335 is a local east-west line that provides service from West Los Angeles to Downtown Los Angeles and travels primarily along Washington Boulevard within the study area. This line runs every day, including holidays, and runs approximately every 12 minutes during peak commute hours. The line route ends at the West Los Angeles Transit Center located at the intersection of Apple Street/Fairfax Avenue in West Los Angeles. The eastern line route end is at the intersection of Main Street/17th Street in Downtown Los Angeles. Line 335 provides limited stop service Monday through Friday and does not operate on weekends/holidays.

PROJECT SITE

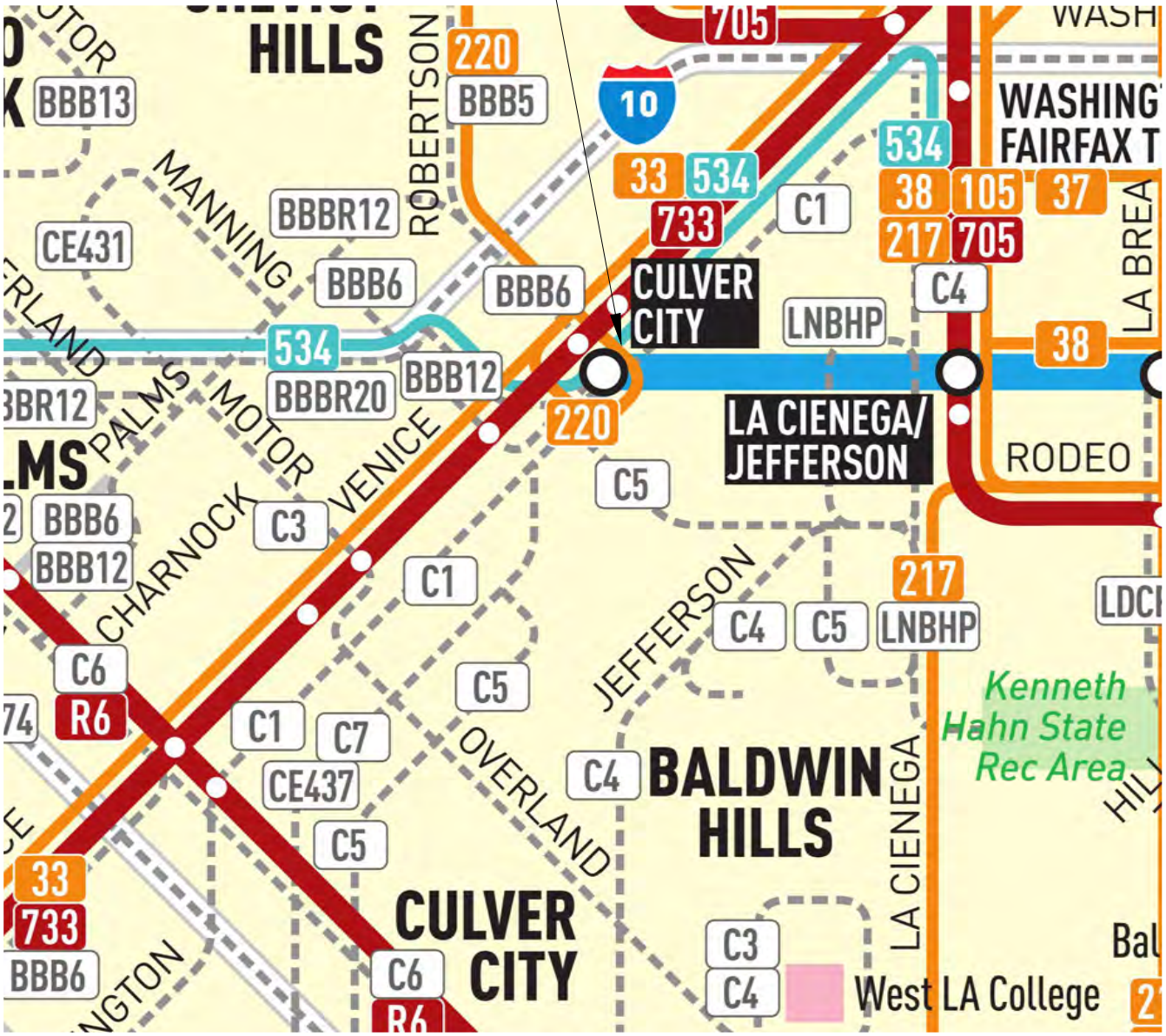

FIGURE 5 - PROJECT AREA
EXISTING TRANSIT SERVICE MAP

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MTA Line 38 - Line 38 is a local line that runs east-west and provides service from West Los Angeles to Downtown Los Angeles. It travels primarily along Venice Boulevard within the study area. This line runs every day, including holidays, at a frequency of approximately 30 minutes during peak commute hours. Line 38 ends at the West Los Angeles Transit Center located at the intersection of Apple Street/Fairfax Avenue in West Los Angeles and at the intersection of Broadway/17th Street in Downtown Los Angeles.

MTA 105 - Line 105 runs in the north-south direction and is a local line that provides service from West Hollywood to Vernon and travels primarily along La Cienega Boulevard within the study area. This line runs every day, including holidays approximately every 10-12 minutes during peak commute hours. The northern terminus is at the intersection of San Vicente Boulevard/Santa Monica Boulevard in West Hollywood. The southern terminus is at the intersection of Santa Fe Avenue/Vernon Avenue in the Vernon.

MTA Line 217 – Line 217 runs in the north-south direction and it is a local line that provides service from West Los Angeles to Hollywood and travels primarily along Fairfax Avenue and Washington Boulevard within the study area. This line runs every day, including holidays, at a frequency of approximately 10-12 minutes during peak commute hours. West Los Angeles Transit Center located at the intersection of Apple Street/Fairfax Avenue is the southern terminus for Line 217. The northern terminus is at Vermont/Sunset Metro Station in Hollywood.

MTA Line 220 – This line runs in the north-south direction and it is a local line that provides service from Los Angeles International Airport (LAX) to West Hollywood and travels primarily along Venice Boulevard and National Boulevard within the study area. MTA Line 220 runs every day, including holidays, at a frequency of approximately 55 minutes during peak commute hours. LAX City Bus Center is the southern terminus for this line. The northern terminus is at intersection of Santa Monica Boulevard/San Vicente Boulevard in West Hollywood.

MTA 439 - Line 439 is an express service that travels in the north-south direction and provides service from Los Angeles International Airport to Downtown Los Angeles and travels primarily along La Cienega Boulevard within the study area. This line runs every day, including holidays and runs approximately every 45 minutes during peak commute hours. The southern terminus is at the Aviation/I-105 Green Line Station. The northern terminus is at the Patsaouras Transit Plaza (Union Station) in Downtown Los Angeles.

MTA 705 – MTA line 705 “Rapid Bus” runs in the north-south direction. This line provides service from West Hollywood to Vernon and travels primarily along La Cienega Boulevard within the study area. This line runs Monday through Friday approximately every 10 minutes during peak commute hours. No service is provided on weekends or holidays. San Vicente Boulevard/Santa Monica Boulevard in West Hollywood is the northern terminus for MTA Line 705. The southern terminus is at the intersection of Santa Fe Avenue/Vernon Avenue in the Vernon.

MTA 733 – Line 733 “Rapid Bus” line runs in the east-west direction and provides service from Santa Monica to Downtown Los Angeles and travels primarily along Venice Boulevard within the study area. This line runs Monday through Friday at a frequency of approximately 10 minutes during peak commute hours. MTA Line 733 also provides service on weekends and holidays. The line route ends at the intersection of Ocean Avenue/Arizona Avenue in Santa Monica and at the Patsaouras Transit Plaza (Union Station) in Downtown Los Angeles to the east.

MTA 780 – MTA Line 780 "Rapid Bus" travels in the east-west direction and provides service from Pasadena to West Los Angeles and travels primarily along Washington Boulevard within the study area. This line runs Monday through Friday approximately every 8-10 minutes during peak commute hours. No service is provided on weekends and holidays. MTA Line 780 route ends at the West Los Angeles Transit Center located at the intersection of Apple Street/Fairfax Avenue in West Los Angeles and at the east at the intersection of Hill Avenue/Colorado Boulevard in Pasadena.

CE 437 – Line 437 is a commuter express service that runs in the east-west direction and provides service from Downtown Los Angeles to Venice and travels primarily along Culver Boulevard within the study area. Line 437 runs Monday through Friday approximately every 25 minutes during peak commute hours. Line 437 route ends at Pacific Avenue/Washington Boulevard in Venice to the west and at the intersection of San Pedro Street/Temple Street Drive in Los Angeles to the east.

SM 6 – Santa Monica Big Blue Bus Line 6 is a commuter line providing service in the east-west direction from Santa Monica College to the Palms Community of Los Angeles and travels primarily along Venice Boulevard and National Boulevard within the study area. This line runs Monday through Friday at a peak frequency of approximately 25-30 minutes during peak commute hours. Santa Monica College in Santa Monica is the end of the Big Blue Bus Line 6 to the west and the intersection of Venice Boulevard/Culver Boulevard in Palms is the end of this Line's route to the east.

SM 12 – Santa Monica Big Blue Bus Line 12 is a local line providing service in the east-west direction from Westwood to Palms Community of Los Angeles and travels primarily along Venice Boulevard, National Boulevard and Robertson Boulevard within the study area. This line runs Monday through Friday at a peak frequency of approximately 15 minutes during peak commute hours. Line 12 also provides service on weekends and holidays. Big Blue Bus Line 12 ends at the University of California Los Angeles (UCLA) Ackerman Terminal in Westwood and at the intersection of Robertson Boulevard/Pico Boulevard in Palms.

SM Super 12 – Santa Monica Bus Blue Bus Line Super 12 is a commuter line that travels in the north-south direction. This UCLA commuter line provides service from Westwood to West Los Angeles and travels primarily along National Boulevard within the study area. This line runs Monday through Friday at a frequency of approximately 10-15 minutes with no midday service. Line Super 12 does not provide service on weekends and holidays. Super Line 12 route ends at the University of California Los Angeles (UCLA) Ackerman Terminal in Westwood and at the south at the intersection of National Boulevard/Venice Boulevard in West Los Angeles.

III. PROJECT CONDITIONS

Project Trip Generation

The proposed Mixed-Use Development includes a total site area of approximately 6.2 acres and includes 10,000 SF of High Turnover Restaurant, 10,000 SF of Quality Restaurant, 200 Mid-Rise Apartment Units, a Hotel with 148 Rooms, 201,000 SF of General Office space and 24,000 square feet of Retail Center. The proposed project site includes the conversion of existing 30,000 square feet of Mixed-Use land (10,000 square feet of Automobile Care Center, 8,000 square feet of Apparel Store and 12,000 square feet of Furniture Store. The project provides approximately 1,634 total parking spaces for the proposed land uses.

Weekday daily, a.m. and p.m. peak hour trips were estimated for the project using trip generation rates from the ITE publication entitled *Trip Generation, 9th Edition*. Trip generation rates and the resulting trips that would be generated by the proposed project are presented in **Table 4** on the following page. The project is estimated to generate approximately 4,124 new daily trips, 256 new trips during the AM peak hour and 301 new trips during the PM peak hour.

Project Trip Credits

Trip credits were applied to the estimated project trip generation to account for internal capture and pass-by trips based upon the guidelines approved by the City of Culver City and LADOT. Additionally, the proposed project will result in a net reduction of 300 light rail station parking spaces that would require project trip generation adjustments. ITE trip generation estimates allow for 1 trip credit per parking space; however to represent a conservative scenario and due to limited data available from ITE trip generation manual, only a 0.5 trip per parking space adjustment was taken into account based upon consultation with LADOT. The trip credits that were applied are shown in **Table 4.** The estimated trip generation was submitted to and approved by City of Culver City and LADOT staff as part of the MOU process. The approved MOU is attached in **Appendix A** of this report.

Project Trip Distribution

Development of future traffic forecasts for the proposed project consisted of a three-step process that includes project's potential trip generation, trip distribution and traffic assignment to the street system within the study area. **Figure 6** provides the Project Trip Distribution approved by City of Culver City utilized for all proposed project land uses. **Figure 7** illustrates the Project peak hour volumes.

Table 4 – Traffic Trip Generation Table

ITE Code	Land Use Description	Unit	No. of Units	Daily Rate	AM Rate	PM Rate	Daily Trips	% AM Trips In	% AM Trips Out	% PM Trips In	% PM Trips Out	AM Trips In	AM Trips Out	AM Trips	PM Trips In	PM Trips Out	PM Trips
932	High-Turnover (Sit-Down) Restaurant	1,000 Sq Ft	10	127.15	10.81	9.85	1272	55%	45%	60%	40%	59	49	108	59	40	99
	Pass-by credit for High turnover (25%)*						-318					-15	-12	-27	-15	-10	-25
931	Quality Restaurant	1,000 Sq Ft	10	89.95	0.81	7.49	900	82%	18%	67%	33%	7	1	8	50	25	75
223	Mid-Rise Apartment	Dwelling Unit(s)	200		0.30	0.39	840	31%	69%	58%	42%	19	41	60	45	33	78
310	Hotel	Room(s)	148	8.17	0.53	0.60	1210	59%	41%	51%	49%	46	32	78	45	44	89
710	General Office Building (1)	1,000 Sq Ft	201	11.03	1.56	1.49	2218	88%	12%	17%	83%	276	38	314	51	248	299
826	Specialty Retail Center (PM)	1,000 Sq Ft	24	44.32		2.71	1064			44%	56%				29	36	65
	Specialty Retail Center (AM) ***	1,000 Sq Ft	24		1.20		960	60%	40%			17	12	29			
	Pass-by credit for retail under 300 ksf (25%)*						-506					-4	-3	-7	-7	-9	-16
093	Credit for Existing Use (Light Rail Transit Station w/ Parking)	Parking Space(s)	-300	2.51	0.50	0.50	-754	80%	20%	58%	42%	-125	-25	-150	-36	-114	-150
942	Automobile Care Center	1,000 Sq Ft	-10		2.25	3.11	-180	66%	34%	48%	52%	-15	-8	-23	-15	-16	-31
876	Apparel Store	1000 Sq Ft	-8	66.4	1.00	3.83	-532	80%	20%	50%	50%	-6	-2	-8	-15	-16	-31
890	Furniture Store (1)	1000 Sq Ft	-6	5.06	0.17	0.45	-32	69%	31%	48%	52%	-1	0	-1	-1	-2	-3
890	Furniture Store (2)	1000 Sq Ft	-6	5.06	0.17	0.45	-32	69%	31%	48%	52%	-1	0	-1	-1	-2	-3
	Subtotal of Trips						6110					257	123	380	188	258	446
	Internal Capture Credits (based upon ITE - 10% for Daily, 10% for AM, and 10% for PM peak)						-611					-26	-12	-38	-19	-26	-45
	Transit Credits (25% - adjacent to Expo light rail station)**						-1359					-58	-28	-85	-42	-58	-100
	Total trip generation						4,124					173	83	256	127	174	301

* Credit determined based upon Attachment I in LADOT Guidelines
** 25% max transit credit is based on the high land use density on the project site and 10-12 minute headways on Expo line
***AM Trips determined based on SANDAG Trip Generation Manual

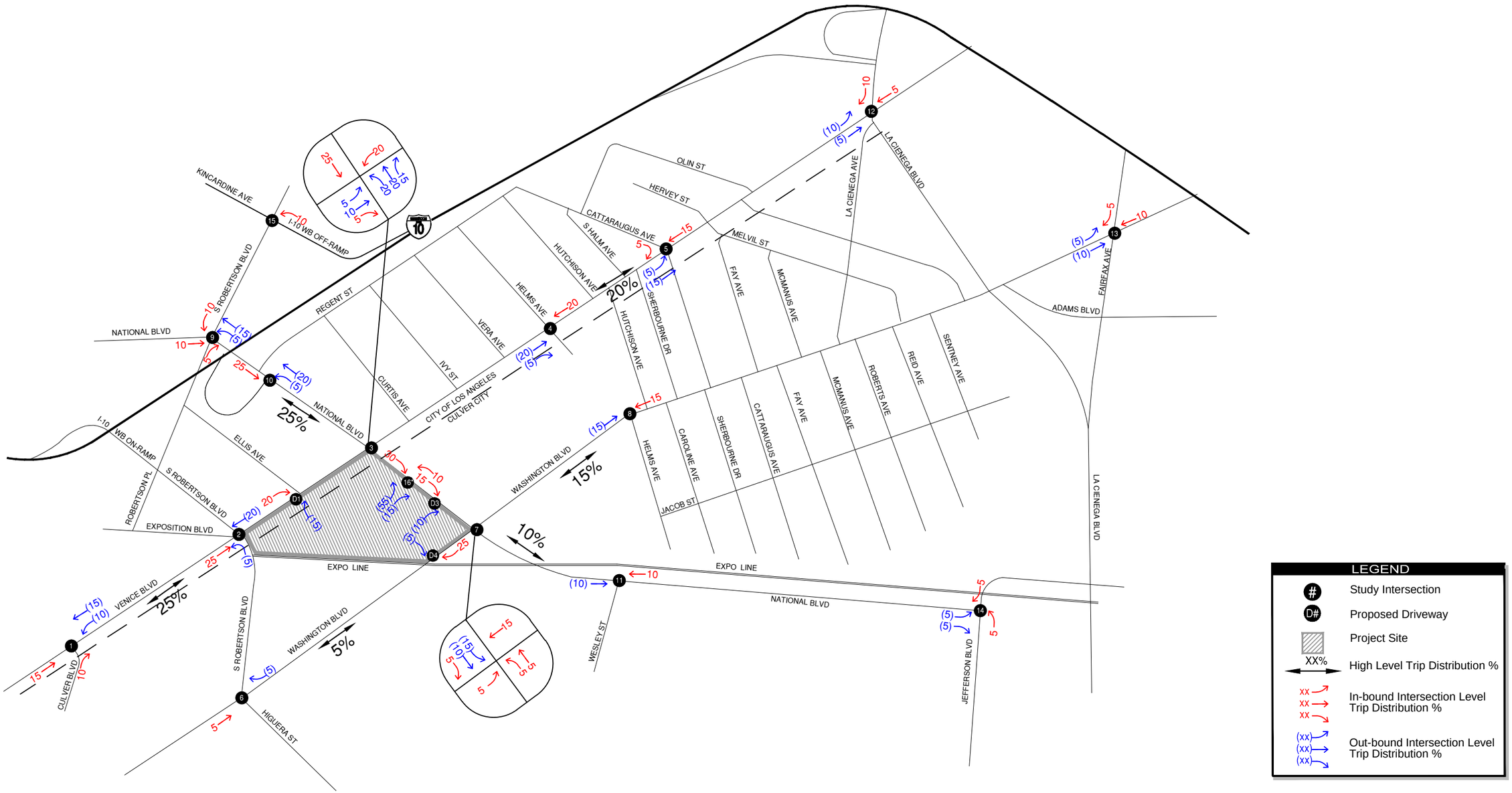

FIGURE 6 - PROJECT TRIP DISTRIBUTION PERCENTAGES FOR ALL LAND USES

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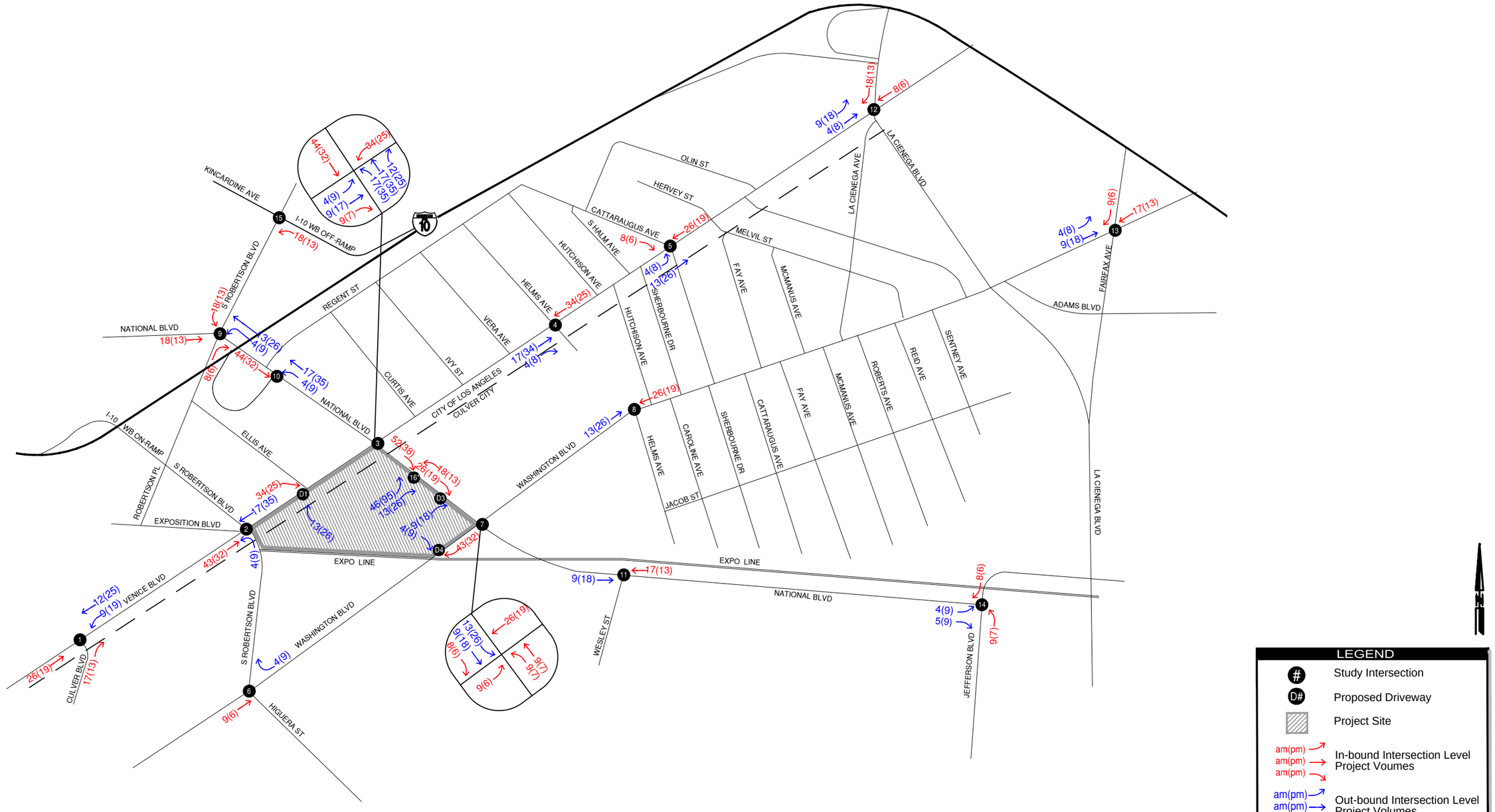

FIGURE 7 - PROJECT AM(PM) PEAK HOUR TURNING MOVEMENT VOLUMES

Kimley»Horn

Existing (2014) With Project Conditions LOS

Existing (2014) With Project traffic volumes represent the sum of the Existing (2014) traffic volumes plus the project trips. **Table 5** presents the Existing (2014) With Project conditions peak hour V/C ratio and the corresponding LOS for each intersection.

Table 5 – Existing (2014) With Project Conditions Intersection LOS

	Signalized Intersection	Existing (2014) Without Project LOS Analysis Results				Existing (2014) With Project LOS Analysis Results				Change	
		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour			
		V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	AM	PM
1	Culver Blvd at Venice Blvd	0.548	A	0.491	A	0.562	A	0.503	A	0.014	0.012
2	Robertson Blvd at Venice Blvd	1.041	F	0.839	D	1.048	F	0.853	D	0.007	0.014
3	National Blvd at Venice Blvd	0.604	B	0.647	B	0.637	B	0.676	B	0.033	0.029
4	Helms Avenue at Venice Blvd	0.265	A	0.271	A	0.268	A	0.278	A	0.003	0.007
5	Cattaraugus Avenue at Venice Blvd	0.713	C	0.607	B	0.746	C	0.647	B	0.003	0.010
6	Robertson Blvd/Higuera Street at Washington Blvd	0.690	B	0.660	B	0.693	B	0.662	B	0.003	0.002
7	National Blvd at Washington Blvd	0.680	B	0.788	C	0.690	B	0.800	C	0.010	0.012
8	Helms Avenue at Washington Blvd	0.435	A	0.469	A	0.444	A	0.478	A	0.009	0.009
9	Robertson Blvd at National Blvd	0.847	D	0.753	C	**0.867**	D	0.771	C	**0.020**	0.018
10	National Blvd at I-10 Eastbound On-Ramp	0.219	A	0.353	A	0.229	A	0.359	A	0.010	0.006
11	Wesley Street at National Blvd	0.343	A	0.317	A	0.349	A	0.323	A	0.006	0.006
12	La Cienega Blvd at Venice Blvd	0.787	C	0.797	C	0.797	C	0.802	D	0.010	0.005
13	Fairfax Blvd at Washington Blvd	0.692	B	0.658	B	0.701	C	0.662	B	0.009	0.004
14	Jefferson Blvd and National Blvd	0.846	D	0.655	B	0.854	D	0.664	B	0.008	0.009
15	Robertson Blvd and I-10 WB Offramp	0.593	A	0.810	D	0.601	B	0.818	D	0.008	0.008

Source: Kimley-Horn, July 2015
Significant impacts shown in bold.

Table 5 indicates that during the AM peak period, one intersection is projected to operate at LOS F, 2 intersections would operate at LOS D while the remaining 12 intersections would operate at LOS C or better. During the PM peak period, 3 intersections are projected to operate at LOS D while the remaining 12 intersections would operate at LOS C or better. In the AM peak period, there is an increase from 0.847 to **0.867** in volume to capacity ratio at the intersection Robertson Boulevard at National Boulevard when compared against the Existing (2014) Without Project conditions. Peak hour analysis worksheets for the Existing (2014) With Project conditions are provided in **Appendix C** of this report. The peak hour traffic volumes for the Existing (2014) With Project conditions at each of the study intersections are illustrated in **Figure 8.**

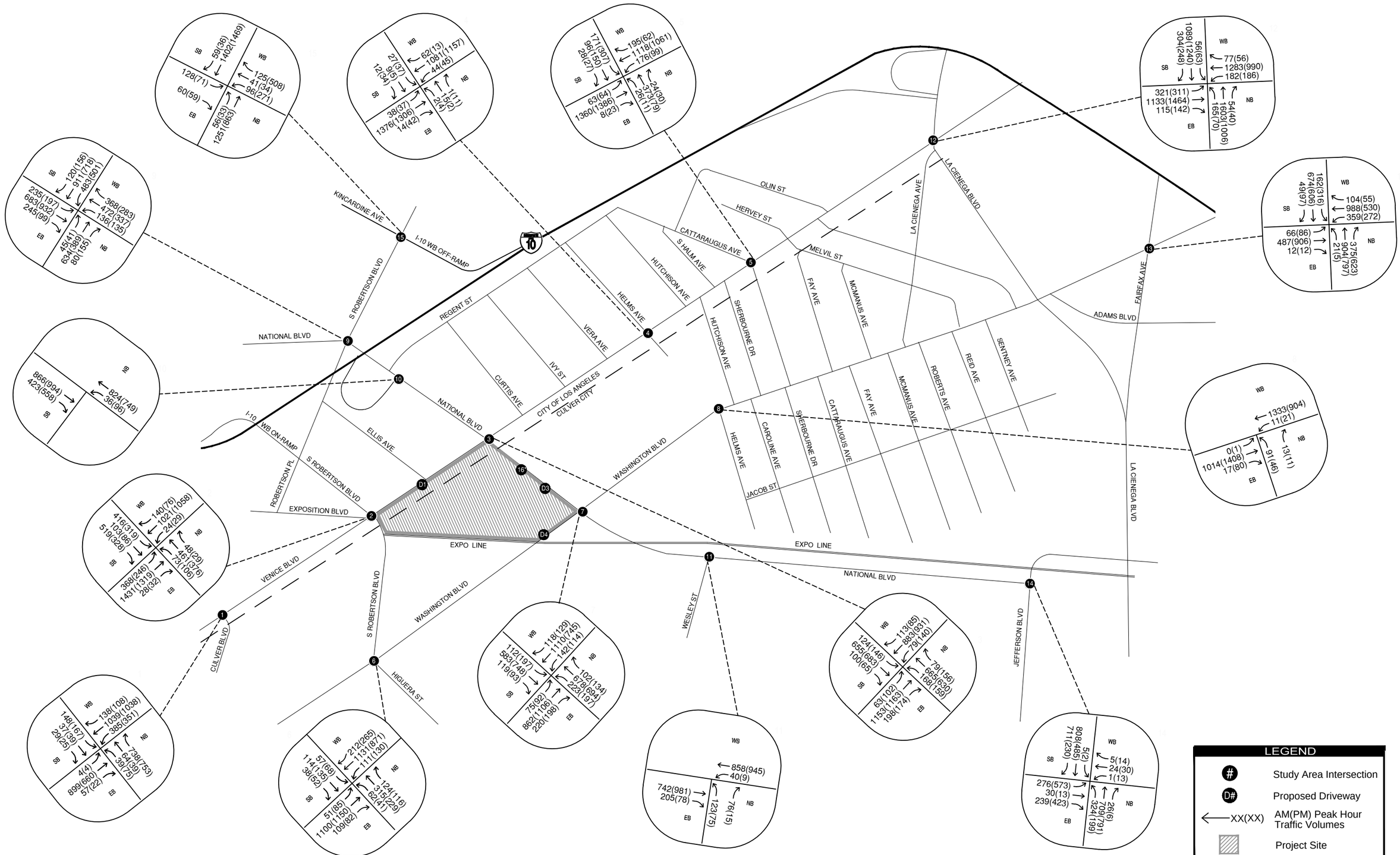

FIGURE 8 - EXISTING (2014) WITH PROJECT
AM(PM) PEAK HOUR TURNING MOVEMENT VOLUMES

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Related Projects Trip Generation and Assignment

Traffic volumes from related projects (approved or pending projects expected to be built by the year 2019 in the proposed project vicinity) were added to the study intersections to simulate future traffic conditions with expected new growth in development in the area. The list of related projects was obtained from City of Culver City. Related projects that were constructed and operational were not included as part of the related projects analysis.

Table 6 lists the related projects and the trips generated by each related project based upon trip generation rates from the ITE publication entitled *Trip Generation, 9th Edition*. **Figure 9** illustrates the location of these related projects and **Figure 10** provides the projected peak hour trips for these related projects.

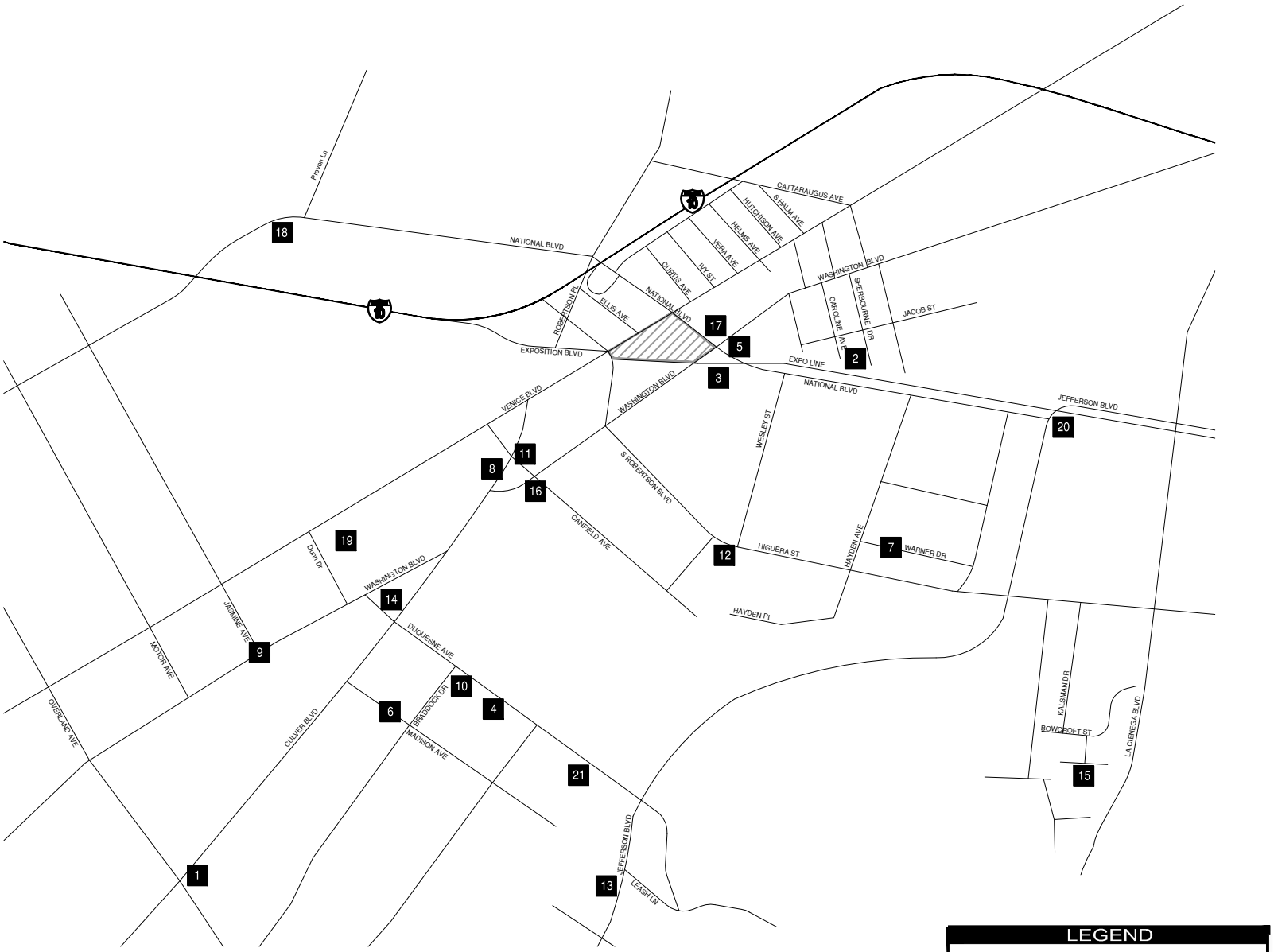
Table 6 – Estimated Weekday Trip Generation of Related Projects

ITE #	Map #	Project Name	Address	Description	Project Phase	Daily	AM Peak Hour			PM Peak Hour		
							IN	OUT	TOTAL	IN	OUT	TOTAL
945	1	Union 76	10638 Culver Blvd.	Gas station and convenience store; 2,676 G.S.F.	Building Permit	2,700	101	97	198	122	121	243
230	2	Caroline Condominiums	3440 Caroline Avenue	Two (2) new single family dwellings, resulting in one (1) net new dwelling unit	Building Permit	12	0	1	1	1	0	1
710, 826	3	Washington/Landmark Mixed Use TOD(Platform)	8810, 8840, 8850 Washington Blvd. and 3920 Landmark	New commercial development consisting of 41,745 G.S.F. of restaurant and retail use, and 38,732 G.S.F. of office use.	Construction	3946	83	27	110	60	111	171
230	4	Duquesne Ave condominiums Dana Syles	4139-4145 Duquesne Avenue	Seven (7) condominiums units	Construction	41	1	2	3	3	1	4
270	5	Legado Mixed Use TOD	8770 Washington Blvd.	New mixed use development consisting of 115 residential units, retail (market & café) 31,240 G.S.F.	Construction	2,914	69	85	154	150	125	275
230	6	4 Unit Condo	4058 Madison Avenue	New four unit condominium. 7,422 s.f. total.	Construction	23	0	2	2	1	1	2
820	7	Warner Parking Structure	8511 Warner Drive	51,520 G.S.F. Retail/Restaurant; 784 parking spaces, five levels	Pre-Building Permit	3,112	94	76	170	116	109	225
715	8	Fresh Paint	9355 Culver Boulevard	Three story mixed use building consisting of a ground level gallery, second story office, and one appartment unit on the third floor.	Entitlement	63	8	1	9	2	7	9
770	9	Sony 8-story office building, production services, and Culver parking expansion, Comprehensive Plan Conformance Review	10202 Washington Blvd.	Construction of an 8-story 218,450 sq. ft. office building, 51,716 sq. ft. support building, and explansion of an existing parking structure. TOTAL demolition of 57,642 sq. ft. Net new square feet is 212,524 sq. ft.	Building Permit	1,334	165	23	188	32	159	191
210	10	4109-4111 Duquesne Avenue	4109-4111 Duquesne Avenue	Addition of two (2) new dwelling units to existing duplex	Entitlement	20	1	1	2	1	1	2
932, 710	11	Parcel B	9300 Culver Blvd.	18,000 G.S.F. of office, retail, and restaurant space	Pre-Building Permit	4,766	249	155	404	199	225	424

Table 6 – Estimated Weekday Trip Generation of Related Projects (Cont'd)

ITE #	Map #	Project Name	Address	Description	Project Phase	Daily	AM Peak Hour			PM Peak Hour		
							IN	OUT	TOTAL	IN	OUT	TOTAL
710	12	Greg Reitz Rethink Development	8665 Hayden Place	Construct 62,765 G.S.F. of Office	Pre-Building Permit. Entitlements but no Building Permits.	705	87	12	99	16	79	95
710	13	Office Building	9919 Jefferson Blvd.	New 91,660 s.f. office building with tandem parking	Entitlement	1,470	183	25	208	35	171	206
441	14	Jazz Bakery	9814 Washington Blvd.	200 seat Performance Theatre with a museum and bakery/café 2-stories & estimated 7,500 square feet.	Pre-Application					2	2	4
254	15	Lenawee-Culver Plaza	3814 Lenawee Ave.	New 8 single family dwelling units and 89 units of assisted living and memory care.	Pre-Application	216	3	5	8	6	4	10
710	16	Culver Studios Amend. No. 6	9336 Washington Blvd.	Phase 1 - net increase of 38,727 square feet of office and support facilities. Phase 2 - net increase of 68,711 square feet of office and support facilities.	Entitlement	1,445	180	24	204	35	168	203
220, 710, 930, 931	17	Mixed-Use Development	8777 Washington Blvd.	New mixed use development consisting of 80 residential units, 9,989 square feet of retail, 5,444 square feet of restaurant, and 29,399 square feet of office.	Entitlement	561	43	26	69	35	64	99
945	18	United Oil	9825 W. National Blvd.	Gas Station with 6 fuel pumps	Construction	978	31	30	61	41	40	81
220	19	New 7 Story Apartment Complex	3822 S. Dunn Dr	New apartment complex with 86 dwelling units	Entitlement	572	9	35	44	34	19	53
710	20	Wrapper Office Building	5790 W. Jefferson Blvd.	151,000 s.f. office building	Entitlement	1,666	208	28	236	38	187	225
231	21	Condominium/ Townhouse Redevelopment	4241 Duquesne Ave.	Condominium with 2 dwelling units	Entitlement	13	0	1	1	1	1	2
TOTAL RELATED PROJECT TRIPS						26,557	1,515	656	2,171	930	1,595	2,525

Source: Kimley-Horn, July 2015 and based on related projects from City of Culver City



LEGEND

#	Related Project
	Project Site

FIGURE 9 - 1-MILE RADIUS RELATED PROJECTS LOCATION

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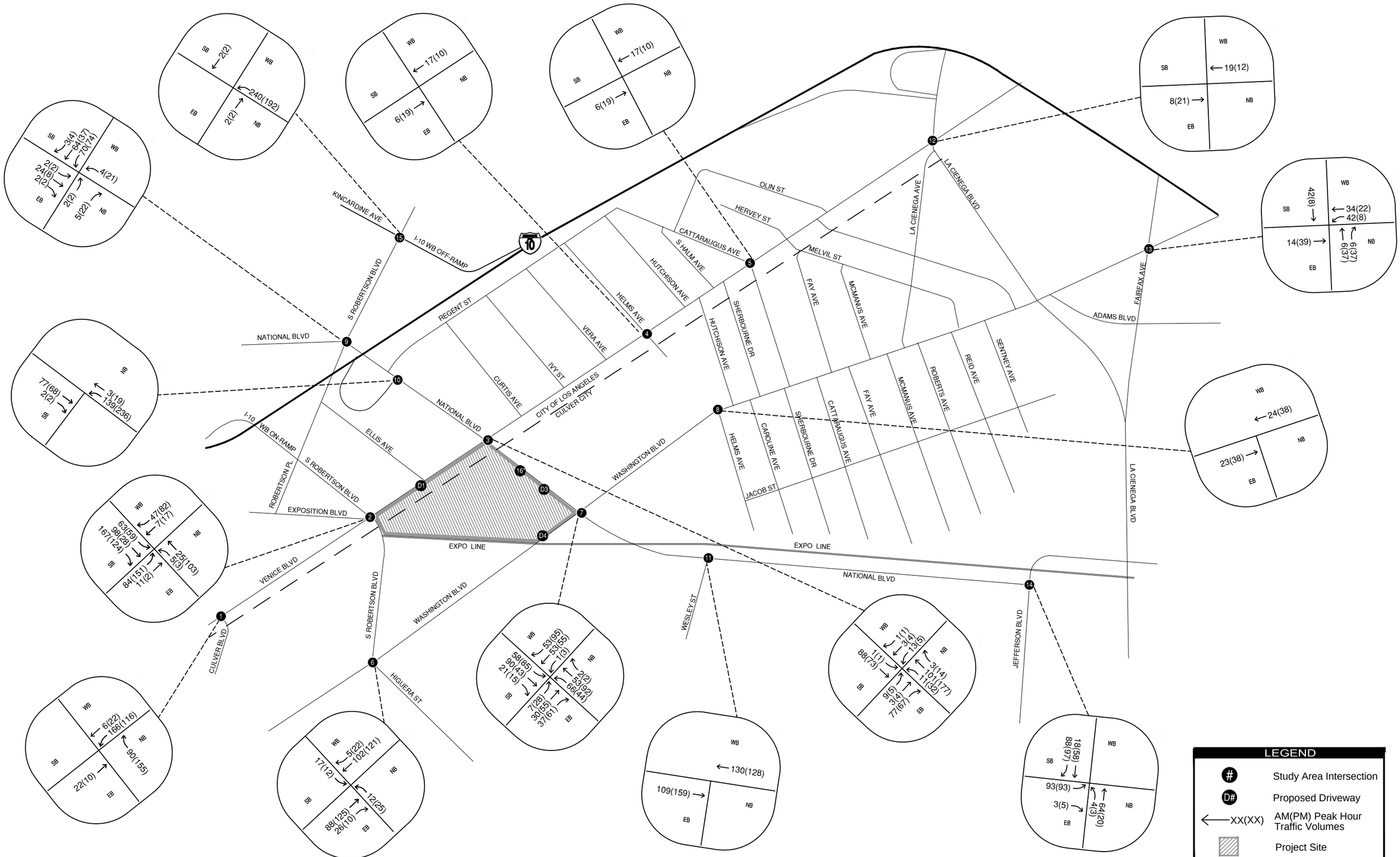


FIGURE 10 - RELATED PROJECTS
AM(PM) PEAK HOUR TURNING MOVEMENT VOLUMES

Kimley»Horn

Cumulative (2019) Base Conditions

The Cumulative (2019) Base Conditions traffic represents the sum of existing volumes, ambient growth and the traffic estimated from related projects. These volumes were assigned to the future baseline network that will be in place at the time the project is completed. As per the information and direction provided by LADOT and Culver City staff, 21 approved projects within a one-mile radius were included in this traffic impact analysis.

Regional ambient traffic growth was estimated as an annual percentage increase over the existing traffic volumes. A growth rate of 1.0% per year was applied to the peak hour traffic volumes to represent year 2019 traffic volumes, in accordance with discussions with LADOT and Culver City staff. The 1.0% increase per year is anticipated to account for projects that will be built by 2019 within the project vicinity. While this rate is slightly higher than the annual growth rate of 0.5% identified in *Congestion Management Program for Los Angeles County* (CMP) (Los Angeles County Metropolitan Transportation Authority, 2010), it was used to provide for a more a conservative analysis of Cumulative traffic conditions. Due to the fact that this project is located in an urban setting, it is unlikely that there will be a higher percentage of growth.

Cumulative (2019) Without Project Conditions LOS

Table 7 below presents a summary of the Cumulative (2019) Without Project conditions V/C ratio and the corresponding LOS for each intersection.

Table 7 – Cumulative (2019) Without Project Conditions Intersection LOS

Signalized Intersection		LOS Analysis Results			
		A.M. Peak Hour		P.M. Peak Hour	
		V/C Ratio	LOS	V/C Ratio	LOS
1	Culver Boulevard at Venice Boulevard	0.639	B	0.597	A
2	Robertson Boulevard at Venice Boulevard	0.883*	D	0.703*	C
3	National Boulevard at Venice Boulevard	0.634	B	0.708	C
4	Helms Avenue at Venice Boulevard	0.285	A	0.294	A
5	Cattaraugus Avenue at Venice Boulevard	0.785	C	0.677	B
6	Robertson Boulevard/Higuera Street at Washington Boulevard	0.781	C	0.753	C
7	National Boulevard at Washington Boulevard	0.797	C	0.893	D
8	Helms Avenue at Washington Boulevard	0.469	A	0.510	A
9	Robertson Boulevard at National Boulevard	0.930	E	0.837	D
10	National Boulevard at I-10 Eastbound On-Ramp	0.351	A	0.543	A
11	Wesley Street at National Boulevard	0.407	A	0.390	A
12	La Cienega Boulevard at Venice Boulevard	0.837	D	0.848	D
13	Fairfax Boulevard at Washington Boulevard	0.747	C	0.732	C
14	Jefferson Boulevard and National Boulevard	0.945	E	0.769	C
15	Robertson Boulevard and I-10 WB Offramp	0.785	C	0.857	D

**Lane configuration from Expo Line Phase 2 was used in the analysis of Robertson Blvd and Venice Blvd.*

Source: Kimley-Horn, July 2015 and based on individual agency standards

Table 7 indicates that 2 intersections are projected to operate at LOS E, 2 intersections would operate at LOS D while the remaining 11 intersections would operate at LOS C or better during the AM peak period. During the PM peak period, 4 intersections would operate at LOS D while the remaining 11 intersections would operate at LOS C or better. The peak hour analysis worksheets for the Cumulative (2019) Without Project conditions are provided in **Appendix C** of this report.

The peak hour traffic volumes for the Cumulative (2019) Without Project conditions at each of the study intersections are illustrated in **Figure 11**.

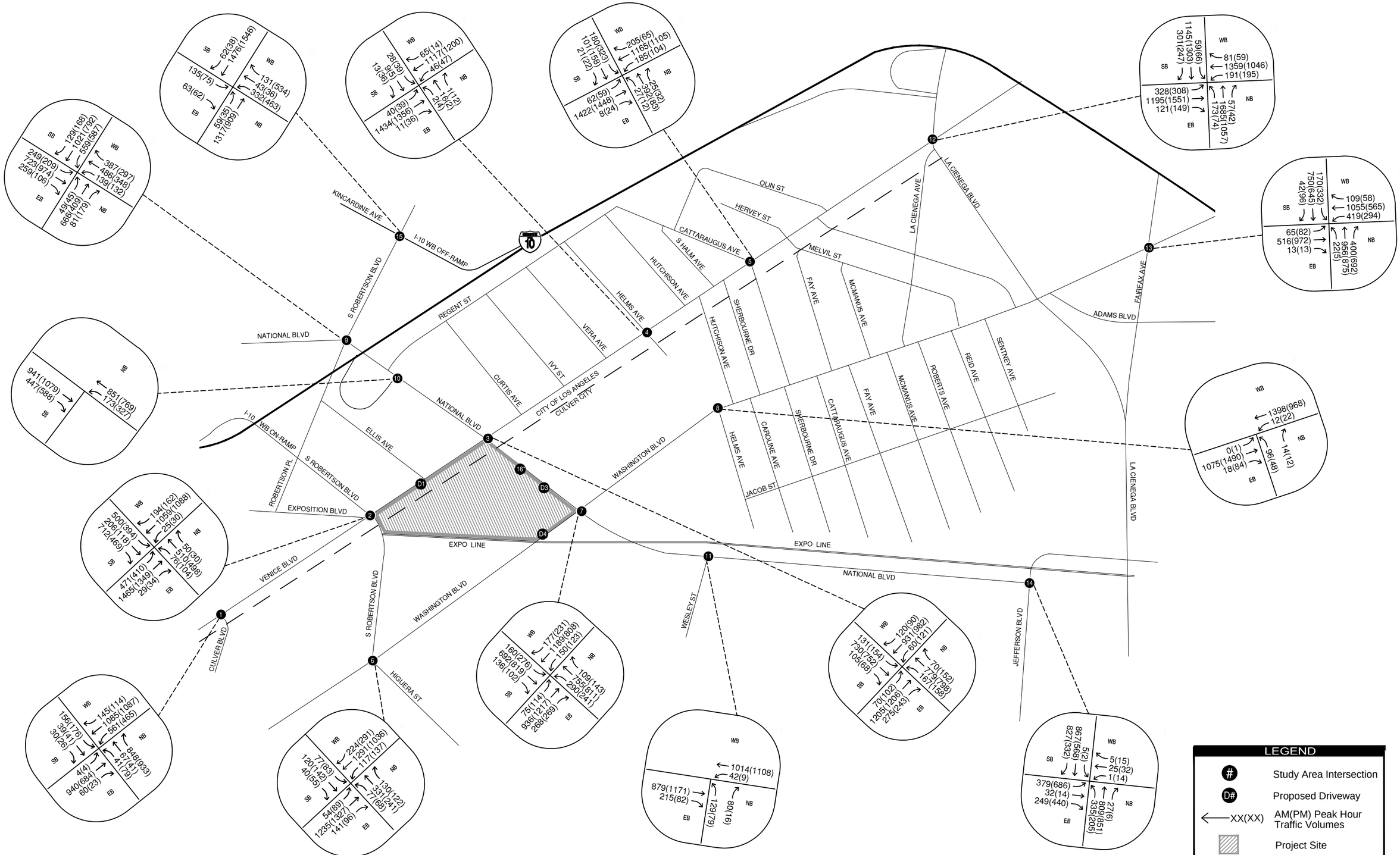


FIGURE 11 - CUMULATIVE (2019)
AM(PM) PEAK HOUR TURNING MOVEMENT VOLUMES

Kimley»Horn

Cumulative (2019) With Project Conditions LOS

Cumulative (2019) With Project traffic conditions add the estimated project traffic to the Cumulative Base conditions and are used to evaluate the net change in the traffic conditions and to identify potential traffic impacts associated with the proposed project. The Cumulative (2019) With Project traffic volumes represent the sum of existing traffic volumes raised by ambient growth factor, the traffic estimated from related projects, and the project trips. These volumes were assigned to the future baseline network that will be in place at the time the project is completed in 2019. **Table 8** presents the Cumulative (2019) With Project conditions peak hour V/C ratio and the corresponding LOS for each of the 15 project study intersections. For this scenario, the main project driveway was also analyzed as a full access signalized intersection.

Table 8 – Cumulative (2019) With Project Conditions Intersection LOS

Signalized Intersection		Cumulative Without Project LOS Analysis Results				Cumulative With Project LOS Analysis Results				Change	
		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour			
		V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	AM	PM
1	Culver Blvd at Venice Blvd	0.639	B	0.597	A	0.653	B	0.609	B	0.014	0.012
2	Robertson Blvd at Venice Blvd	0.883	D	0.703	C	0.888	D	0.713	C	0.005	0.010
3	National Blvd at Venice Blvd	0.634	B	0.708	C	0.690	B	**0.756**	C	0.056	**0.048**
4	Helms Avenue at Venice Blvd	0.285	A	0.294	A	0.288	A	0.301	A	0.003	0.007
5	Cattaraugus Avenue at Venice Blvd	0.785	C	0.677	B	0.788	C	0.687	B	0.003	0.010
6	Robertson Blvd/Higuera Street at Washington Blvd	0.781	C	0.753	C	0.784	C	0.755	C	0.003	0.002
7	National Blvd at Washington Blvd	0.797	C	0.893	D	0.806	D	0.904	E	0.009	0.011**
8	Helms Avenue at Washington Blvd	0.469	A	0.510	A	0.477	A	0.518	A	0.008	0.008
9	Robertson Blvd at National Blvd	0.930	E	0.837	D	**0.950**	E	0.856	D	**0.020**	0.019
10	National Blvd at I-10 Eastbound On-Ramp	0.351	A	0.543	A	0.370	A	0.549	A	0.019	0.006
11	Wesley Street at National Blvd	0.407	A	0.390	A	0.413	A	0.396	A	0.006	0.006
12	La Cienega Blvd at Venice Blvd	0.837	D	0.848	D	0.847	D	0.853	D	0.010	0.005
13	Fairfax Blvd at Washington Blvd	0.747	C	0.732	C	0.756	C	0.737	C	0.009	0.005
14	Jefferson Blvd and National Blvd	0.945	E	0.769	C	0.953	E	0.778	C	0.008	0.009
15	Robertson Blvd and I-10 WB Offramp	0.785	C	0.857	D	0.797	C	0.865	D	0.012	0.008
16	Main Project Dwy	*	*	*	*	0.383	A	0.474	A	*	*

Source: Kimley-Horn, July 2015.
Significant impacts identified in bold.
** This is the Project's Main Driveway and Analysis was conducted only for the Cumulative (2019) With Project Conditions.*
***Based on City of Culver City significant threshold criteria, a V/C change does not result in a significant impact.*

Table 8 indicates that for Cumulative (2019) With Project conditions, 2 intersections are projected to operate at LOS E, 3 intersections would operate at LOS D while the remaining 11 intersections would operate at LOS C or better in the AM peak period. In the PM peak period, one intersection would operate

at LOS E, 3 intersections are projected to operate at LOS D while the remaining 12 intersections would operate at LOS C or better. In the AM peak period, there is an increase from 0.930 to **0.950** in volume to capacity ratio at the intersection of Robertson Boulevard at National Boulevard when compared against the Cumulative (2019) Without Project conditions, resulting in a significant impact. In the PM peak period, there is an increase from 0.708 to **0.756** in volume to capacity at the intersection of National Boulevard at Venice Boulevard, resulting in a significant impact. Although there is an increase from 0.893 to **0.904** in volume to capacity at the intersection of Washington Boulevard at National Boulevard in the PM peak period, the intersection is located in the City of Culver City and based on the City of Culver City significance threshold criteria, the increase in volume to capacity does not result in a significant impact. Peak hour analysis worksheets for the Cumulative (2019) With Project conditions are provided in **Appendix C** of this report.

The peak hour traffic volumes for the Cumulative (2019) With Project conditions at each of the study intersections are illustrated in **Figure 12.**

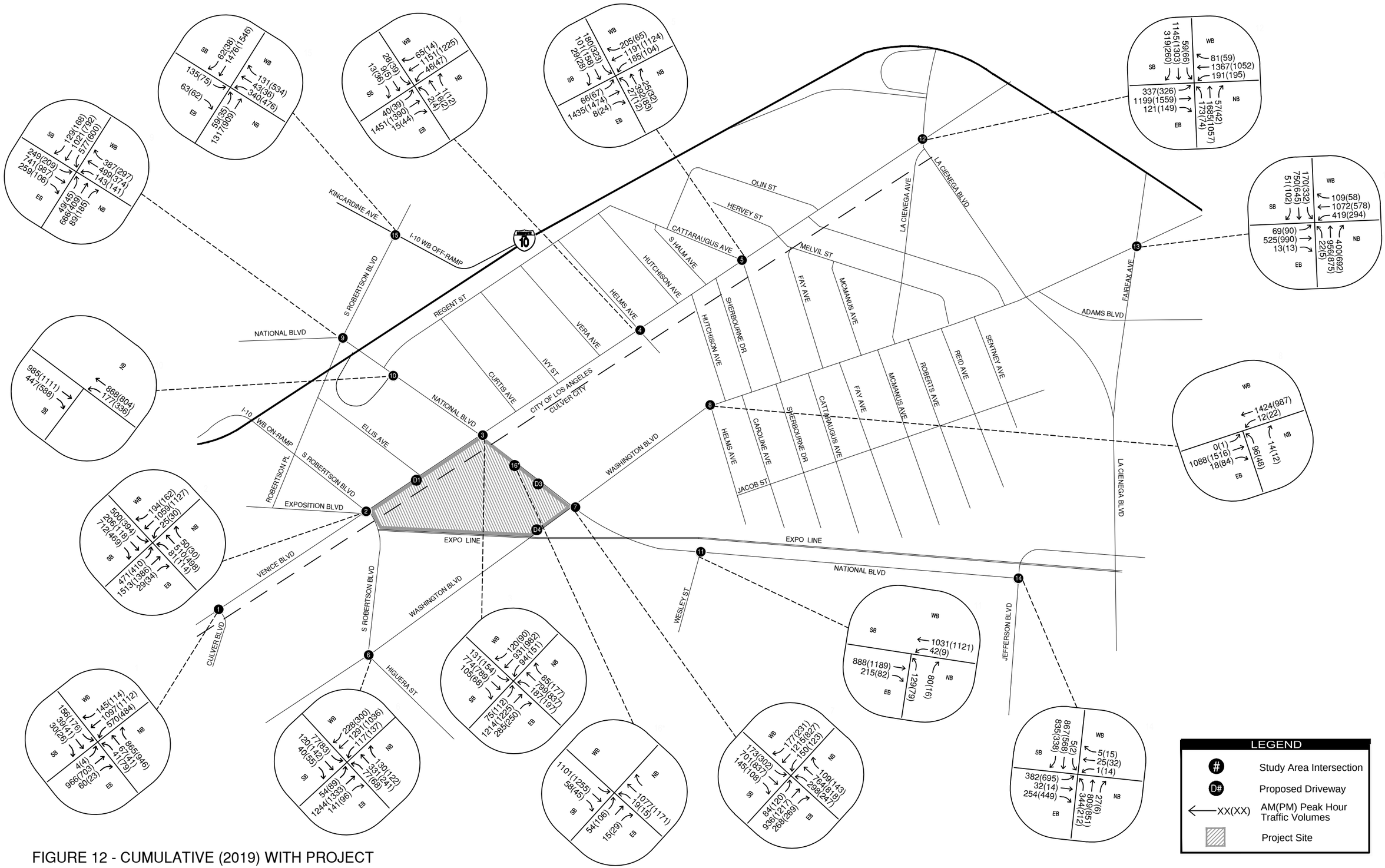


FIGURE 12 - CUMULATIVE (2019) WITH PROJECT
AM(PM) PEAK HOUR TURNING MOVEMENT VOLUMES

Kimley»Horn

Driveway Access Review

As per the site plan, 4 driveways are proposed for providing access to the site. One driveway would be located along Venice Boulevard and would provide right-in right-out access to/from the project site for parking and delivery. One driveway located along Venice Boulevard, north of Ellis Avenue, would provide access and parking to service and delivery trucks. A service and fire access driveway are also provided along Venice Boulevard frontage. One driveway located along National Boulevard, adjacent to Venice Boulevard, would provide full signalized access to/from the project site. Another driveway along National Boulevard, adjacent to Washington Boulevard would provide right-in right-out access to the project site. The 4th driveway will be located along Washington Boulevard and would provide in/out right-turn-only access to the project site main parking area as well as valet parking for the proposed hotel.

Driveway Queueing Analysis

Due to close spacing between the two (2) proposed site driveways on National Boulevard and nearby intersections of National Boulevard/Venice Boulevard and National Boulevard/Washington Boulevard, the queue lengths along National Boulevard under Future With Project conditions peak hour traffic were calculated. One of the driveways is proposed to be a signalized intersection. A Synchro microsimulation analysis was completed to determine these queue lengths as well as to determine any traffic operational issues at the adjacent intersections. The results indicated that the 85th percentile queue in the southbound direction at the signalized driveway is 106 feet in the PM peak. In the northbound direction, the 85th percentile queue is 46 feet in the PM peak. A supplemental memo with additional details are included in **Appendix D**.

Bicycle Network

There is a Class II dedicated bicycle lane along Venice Boulevard in both east and west directions. The City of Los Angeles Pedestrian and Bicycle Plan is found in **Appendix G.** A bicycle path (Class I) was constructed along most of the Expo Light Rail alignment except between National Boulevard/Wesley Street and Venice Boulevard/Robertson Boulevard. The city of Culver City is proposing to include a Class III (bike route) on Wesley Street and stripe Class II bike lanes on Washington Boulevard between Wesley Street and National Boulevard. The proposed development would construct a Class II bicycle lane on National Boulevard between Washington Boulevard and Venice Boulevard in both directions and will serve as a key connection for bicyclists traveling between Washington Boulevard and Venice Boulevard. These improvements combined with the City proposed improvements would result in a well-connected bicycle network in this area. The proposed development would also be responsible for restriping Washington Boulevard and National Boulevard, including bicycle lanes on both sides of Washington Boulevard and National Boulevard.

Project Impacts

Based on the significant impact criteria as defined by City of Los Angeles, the proposed project would have a significant impact at the intersections of National Boulevard/Robertson Boulevard and National Boulevard/Venice Boulevard. In the AM peak period, there is an increase from 0.930 to 0.950 in volume to capacity at the intersection of Robertson Boulevard at National Boulevard when compared against the Cumulative Without Project conditions. In the PM peak period, there is an increase from 0.708 to 0.756 in volume to capacity at the intersection of National Boulevard at Venice Boulevard. Mitigation measures and other needed improvements as outlined in the following section were needed to bring the LOS at these two intersections to a minimum acceptable LOS D as well as to mitigate any queueing issues at these intersections.

Recommended Mitigation Measures

The significant impact at National/Robertson intersection can be mitigated by re-striping the eastbound approach to provide two left-turn, one through and one through-right lanes. The available roadway width would allow for an additional left-turn lane in the eastbound direction by re-striping without additional physical improvements to the intersection. Reduced lane widths for eastbound through and left turns lanes are proposed to allow sufficient width for the westbound receiving lane. This is expected to mitigate the LOS from D to an acceptable LOS C in the AM peak period for Existing (2014) With Project conditions at from LOS E to an acceptable LOS D in the AM peak period for Cumulative (2019) With Project conditions. Mitigation for National/Robertson is shown in **Appendix F**.

The significant impact at National/Venice intersection can be mitigated by re-striping the northbound approach to provide two left-turn, two through and one right-turn lanes. The available roadway width along with the widening along the project frontage would allow for an additional right-turn lane in the northbound direction by re-striping without additional physical improvements to the intersection. This may require minor striping re-alignment for the north leg of National Boulevard. Upon mitigation, this intersection is projected to operate at an acceptable LOS B in the PM peak period. A full size exhibit showing the proposed lane configuration as well on-street parking changes is included at the end of the report. Mitigation for National/Venice is shown in **Appendix F**.

Additionally, a southbound right turn lane is recommended at the intersection of Washington/National and Main Project Driveway/National to mitigate queuing issues at these intersections. These mitigation improvements are also shown in **Appendix F**.

As a result of the recommended mitigation for National/Robertson and National/Venice, a total of 35 on-street parking spaces will be removed and 8 on-street spaces will be added. **Table 9** presents the location of both removed and added on-street parking in Culver City and the City of Los Angeles.

Table 9 – On-Street Parking with Mitigation

Street Name	Parking Space Location	Jurisdiction	Number of Spaces Added/ Removed
Venice Boulevard	National Boulevard and Robertson Boulevard	City of Los Angeles	7
National Boulevard	Venice Boulevard and Washington Boulevard	City of Culver City	18
National Boulevard	I-10 EB On-Ramp and Venice Boulevard	City of Los Angeles	3
National Boulevard	Livonia Avenue and Robertson Boulevard	City of Los Angeles	7
Venice Boulevard	National Boulevard and Robertson Boulevard	City of Los Angeles	-8

Source: Kimely-Horn, July 2015

Neighborhood Traffic Assessment

Based upon the input from local community, potential impacts to neighboring residential streets were qualitatively assessed to see if the proposed project would result in increased cut-through traffic on residential streets, specifically Higuera Street. Residential streets typically experience cut-through traffic when the adjacent intersections operate at or exceed their capacity levels. Higuera Street is the primary collector street that connects several residential streets southeast of the project site.

A review of the "With Project" LOS at the intersections of Higuera Street/Washington Boulevard/ Robertson Boulevard and Washington Boulevard/National Boulevard indicate "D" or better conditions. The increase in project related traffic at the intersection of Higuera Street/Washington Boulevard/Robertson Boulevard is fairly minor. Because of the additional available capacity at these intersections as well as the minimal amount of project traffic that would be going through Higuera Street/Washington Boulevard/National Boulevard, the project is not expected to result in or increase any cut-through traffic through these residential streets.

Congestion Management Plan (CMP) Compliance

The Los Angeles County Congestion Management Program (CMP) was developed in response to California Proposition 111, approved June 1990, and is intended to address regional congestion by linking land use, transportation, and air quality decisions.

Among the elements of the CMP is a land use analysis program which "requires local jurisdictions to analyze the impacts of land use decisions on the regional transportation system, for projects preparing an Environmental Impact Report (EIR)."

The CMP document identifies the County's CMP Highway System, and requires that Level of Service E or better be maintained on this network. The I-10 Freeway and the intersection of Venice/La Cienega Blvd are the nearest CMP facilities in the study area.

Analysis of a project's impact on a freeway segment would be required of any project that would add 150 trips or more in either direction during the AM or PM weekday peak hours. The project will not generate this level of traffic in either peak hour. Therefore, further analysis of CMP facilities is not required for CMP purposes.

An analysis of CMP monitored intersections is required if a project contributes 50 or more peak hour trips to the CMP monitored intersections. The project will not contribute 50 or more peak hour trips to this intersection, and therefore, additional evaluation for CMP purposes is not needed.

Freeway Impact Screening Analysis

A freeway impact screening analysis was conducted as per LADOT Traffic Study Guidelines. The methodology from the agreement between City of Los Angeles and Caltrans District 7 on freeway impact analysis procedures was used for the freeway impact screening analysis. As per the criteria provided by the agreement, if the proposed project meets any of the following criteria, the applicant will be directed to work with Caltrans and to prepare freeway impact analysis, utilizing Caltrans' "Guide for the Preparation of Traffic Impact Studies".

- The project's peak hour trips would result in a 1% or more increase to the freeway mainline capacity of a freeway segment operating at LOS E or F (based on an assumed capacity of 2,000 vehicles per hour per lane); or
- The project's peak hour trips would result in a 2% or more increase to the freeway mainline capacity of a freeway segment operating at LOS D (based on an assumed capacity of 2,000 vehicles per hour per lane); or
- The project's peak hour trips would result in a 1% or more increase to the capacity of a freeway off-ramp operating at LOS E or F (based on an assumed ramp capacity of 1,500 vehicles per hour per lane); or

- The project's peak hour trips would result in a 2% or more increase to the capacity of a freeway off-ramp operating at LOS D (based on an assumed ramp capacity of 1,500 vehicles per hour per lane).

Freeway Mainline Analysis

The above criteria was used for the freeway mainline analysis for this project. Based on the available freeway mainline traffic data from Caltrans, the project is expected to add less than 1% traffic to I-10 mainline capacity and therefore does not meet the mainline capacity criteria provided above. Project trips on the I-10 mainline freeway in the study area during the AM and PM peak hours are shown in the following table. The existing I-10 freeway in the study area is operating at LOS E based upon Highway Capacity Software (HCS) software. The LOS worksheets are attached to **Appendix E**. Per the 1% criteria on freeway mainline, the project would need to add 80 trips in the eastbound (EB) and westbound (WB) directions during the AM and PM peak hours to meet the traffic impact analysis requirement.

As shown in **Table 10**, the project is projected to add between 4 to 18 trips to the freeway mainline in each direction. Because the project trips are less than the required 80 trips, a freeway impact analysis is not required.

Table 10 – Freeway Mainline Analysis

Location	Peak Hour	Project Trips		Facility Capacity*		1% Criteria for Impact Analysis**		Impact Analysis Required?
		EB	WB	EB	WB	EB	WB	
I-10 Freeway Mainline at Venice Boulevard	AM	4	18	8,000	8,000	80	80	NO
	PM	9	13	8,000	8,000	80	80	NO

Source: Kimley-Horn, July 2015
* The freeway capacity is 2,000 vehicles per hour per lane.
** The project's peak hour trips resulting in a 1% or more increase to the freeway mainline capacity for a freeway segment operating at LOS E or F would require a freeway impact analysis.

Freeway Ramp Analysis

The above criteria was used for the freeway off-ramp analysis for this project. Project trips on the I-10 freeway off-ramp at Robertson Boulevard during the AM and PM peak hours are shown in the following table. The freeway off-ramp is currently operating and projected to operate at LOS C in the AM peak hour and LOS B in the PM peak hour based upon Highway Capacity Software (HCS) software. The LOS worksheets are attached to **Appendix E**.

As shown in **Table 11** on the following page, the project would need to add 30 new trips on the freeway off-ramp during the AM and PM peak hours if the 2% criteria for the freeway off-ramp was used, the project would need to add 15 new trips on the freeway off-ramp during the AM and PM peak hours to meet the traffic impact analysis requirements. The project is projected to add 18 new trips during the AM peak hour and 13 new trips during the PM peak hour. Because the new trips during the AM peak hour or PM peak hour does not meet the 2% criteria for the off-ramp, further freeway off-ramp is not required.

Table 11 – Freeway Off-Ramp Analysis

Location	Peak Hour	Project Trips	Freeway Off-Ramp Capacity*	2% Criteria for Impact Analysis**	Significant Impact Criteria Met?	Impact Analysis Required?
I-10 Westbound Off-Ramp at Robertson Boulevard	AM	18	1,500	30	NO	NO
	PM	13	1,500	30	NO	NO

Source: Kimley-Horn, July 2015

* The freeway off-ramp capacity is 1,500 vehicles per hour per lane.

** The project's peak hour trips resulting in a 2% or more increase to the capacity of a freeway off-ramp operating at LOS D would require a freeway impact analysis.

IV. CONCLUSION

This report documents the results of a traffic impact analysis completed for the proposed Mixed-Use Development project located at the northwest corner of Washington Boulevard and National Boulevard in the cities of Culver City and Los Angeles. The project will replace existing land uses that include Automobile Care Center, Apparel Store, and two Furniture Stores. The following summarizes our key findings and conclusions:

- The proposed project site includes a mix of uses including a 10,000 square feet of High Turnover Restaurant, 10,000 square feet of Quality Restaurant, 200 Mid-Rise Apartment Units, a Hotel with 148 Rooms, 201,000 square feet of General Office space and 24,000 square feet of Retail Center. The proposed project site includes the conversion of existing 30,000 square feet of Mixed-Use land (10,000 square feet of Automobile Care Center, 8,000 square feet of Apparel Store and 12,000 square feet of Furniture Store) and Expo Light Rail Station 600 space surface parking lot.

- The project site will include three levels of subterranean parking, including up to 300 spaces that will be provided to the Metro (Expo) Light Rail Station transit use.

- The project will provide access to the site via 4 driveways - one along Venice Boulevard, two along National Boulevard, and one along Washington Boulevard in addition to two truck delivery and fire access driveways located on Venice Boulevard. The driveway analysis indicates that the proposed driveways are adequate for the project traffic circulation.

- A driveway queueing analysis was conducted due to close spacing between two (2) proposed site driveways on National Boulevard and nearby interactions of National Boulevard/Venice Boulevard and National Boulevard/Washington Boulevard. The queuing at the main signalized driveway is not expected to cause blockage at nearby intersections under Future With Project conditions peak hour traffic.

- This traffic impact analysis analyzed 15 intersections within the cities of Culver City and Los Angeles.

- The project is estimated to generate approximately 4,124 new daily trips, 256 new trips during the AM peak hour and 301 new trips during the PM peak hour.

- This Traffic Impact Analysis concludes that the proposed project would generate a significant impact at the intersections of National Boulevard and Robertson Boulevard as well as National Boulevard and Venice Boulevard based on City of Los Angeles significant traffic impact criteria.

- The significant impact at National/Robertson intersection cannot be mitigated by a TDM plan with a cumulative goal of 20% reduction in project traffic. The significant impact can be mitigated by re-striping the eastbound approach to provide two left-turn, one through and one through-right lanes. The available roadway width would allow for an additional left-turn lane in the eastbound direction by re-striping without additional physical improvements to the intersection. Geometric constraints may exist for the eastbound left-turn movement and will be investigated during the design phase.

- The significant impact at National/Venice intersection can be mitigated by re-striping the northbound approach to provide two left-turn, two through and one right-turn lanes. The available roadway width would allow for an additional right-turn lane in the northbound direction by re-striping without additional physical improvements to the intersection. This may require minor striping re-alignment for the north leg of National Boulevard. Upon mitigation, this intersection is expected to operate at an acceptable LOS B in the PM peak period.

- As a result of the recommended mitigation for National/Robertson and National/Venice, a total of 35 on-street parking spaces will be removed and 8 on-street parking spaces will be added.

- The proposed development would construct a Class II bicycle lane on National Boulevard between Washington Boulevard and Venice Boulevard in both directions and will serve as a key connection for bicyclists traveling between Washington Boulevard and Venice Boulevard. The proposed development would also be responsible for restriping Washington Boulevard and National Boulevard, including bicycle lanes on both sides of Washington Boulevard and National Boulevard.

- Based on the project trip generation and distribution patterns in the With Project conditions, the LOS at the study intersections and the LOS at Higuera Street/Robertson Boulevard and Washington Boulevard intersection, the project is not expected to result in impacts to the residential streets.

- A CMP intersection impact screening analysis was conducted as per LADOT Traffic Study Guidelines. The project is expected to contribute less than 50 peak hour trips to the CMP monitored intersection of Venice Blvd and La Cienega Blvd and therefore no additional analysis of the CMP monitored intersection is required.

- A freeway impact screening analysis was conducted as per LADOT Traffic Study Guidelines. The project is expected to add less than 1% traffic to I-10 mainline and therefore no additional mainline analysis was required. For the intersection of I-10 westbound freeway off-ramp at Robertson Boulevard, the project would result in less than 2% increase in traffic during AM peak hour and PM peak hour and therefore no additional ramp analysis was required.

APPENDIX A

MEMORANDUM OF UNDERSTANDING (MOU)

Attachment A

Memorandum Of Understanding For a Traffic Study

This Memorandum Of Understanding (MOU) acknowledges and agrees to all of the City of Culver City requirements and fees for the review of a traffic study for the following project:

Project Name: Washington and National Traffic and Parking Services
Project Address: _____
Project Description: 200,000 Sq Ft GFA* Office / _____ GFA Industrial
20,000 Sq Ft GFA Retail / 200 Residential Units
18,000 Sq Ft GFA Rest./ 148 Hotel Rooms

Project Horizon Year: 2017 Ambient Growth Rate: One (1.0) % Per Year
Directional Distribution:* N: 25 % S: 10 % E: 35 % W: 30 %
*Assuming same travel distributions for all Land Uses

Trip Generation Rate(s): ITE Latest Edition (See attached Trip Generation Table)
(Show AM, PM and daily trip generation rates for each land use)
Land Use: _____ _____

	ITE Code #: ____ In / Out	ITE Code #: ____ In / Out	Total In / Total Out
AM Trips:	____ / ____	____ / ____	____ / ____
PM Trips:	____ / ____	____ / ____	____ / ____

Attach Total Daily Trips Generation Calculations.

Prior to the start of any proposed project analysis, the Traffic Consultant shall:
1. Obtain a list of related projects from the Planning Division of Culver City and other affected jurisdictions;
2. Prepare a draft list of "related projects specific to the proposed project"; and
3. Obtain written approval from the City of the "related projects specific to the proposed project" list.

Study Intersections: See Attached list of Study Intersections
No. Intersection: / Jurisdiction:

Residential Streets To Be Studied: See Attached list of Study Intersections
No. Street Name: / Limits: / Jurisdiction:

* Gross Floor Area (GFA) shall be as defined in the most recent ITE publication.
** Indicate intersections subject to capacity analysis credit for advanced traffic signal control synchronization.
*** Indicate non-signalized intersections to be studied.
**** Use the same numbering system for all lists of intersections and figures in the traffic study.

- The traffic study will include a Synchro Analysis with dynamic simulation to show LOS (levels of service) and queuing for the 50th and 90th percentile for build-out conditon in the horizon year. The Synchro analysis will include three traffic signals on National Blvd between Venice Blvd and Washington Blvd, including the main driveway entrance on National Blvd. This analysis will be used to determine if dual left-turn lanes are needed for northbound National Blvd at Venice Blvd, northbound National Blvd at the project's main driveway on National Blvd, and for westbound Venice Blvd at National Blvd. It will also be used to determine if a southbound right-turn lane is needed at the project's main driveway.

-The traffic study will show how each of the project's loading zones will be accessed using truck turn templates.
-The traffic study will show how parking for the Expositon Line will be serparated from parking from other uses at the project site.
-The traffic study will discuss the potential impact of the project on parking and traffic in the Hayden Tract.
-The traffic study will also show bus stops and all pedestrian drop-off locations and indicate if the proposed driveways are compatible with the existing bus stops and any required bus stop relocations required as a result of the proposed project.

Indicate Trip Credits To Be Requested (Amount Subject To City Approval):		Yes	No
1.	Existing Uses:	☒	☐
2.	Pass-By Trips:	☒	☐
3.	Internal Trip Capture:	☒	☐
4.	Transit Oriented Developments (TOD):	☒	☐
5.	Transportation Demand Management (TDM):	☐	☒

Maps:
The following maps shall be attached to the MOU:

1. A map showing the project's trip distribution percentages for each land use (inbound and outbound) at the study intersections and project driveways; and
2. A map showing the project's trips at the study intersections and project driveways.

Proposed Traffic Mitigation:
Any proposed traffic mitigation measure shall be listed and accompanied by a drawing of the existing and proposed improvements [including city boundary lines and existing / proposed property lines] and plans shall be of a minimum scale of one inch (1") equal to forty feet (40'-0").

Post-Occupancy Traffic Counts:
By signing below, the Property Owner / Developer / Applicant hereby agrees to pay for and submit to the City a post-occupancy traffic count analysis of the development to the satisfaction of the City. The analysis shall determine the amount of actual traffic (motor vehicle, bicycle and pedestrian) generated by the development compared to the ITE trip generation rates. The analysis shall include a traffic count of all onsite driveways taken upon reaching eighty five percent (85.0%) occupancy of the total building gross floor area or within one (1) year of the issuance of the first Temporary Certificate of Occupancy (TCO), as determined by the City. The data shall be used to confirm the findings in the approved traffic study, and shall not result in any additional traffic mitigation measures and/or conditions of approval on the subject project.

Congestion Management Plan (CMP):
This project shall also be subject to all City imposed CMP developer fees if the Planning Commission approval date is on or after the effective date of any City Council imposed CMP developer fees or as may be otherwise imposed by the City.

Fee:
Payment of a fee to the Engineering Division for the City's processing of a traffic study shall be required prior to the City's approval of the MOU. Said fee shall be in accordance with the most recent Fee Schedule as approved by the City Council.

Signatures:

	Property Owner / Applicant:	Developer / Applicant:
Name [Signed]:		
Name [Printed]:		Thomas Wulf
Title:		Development SVP
Company:		Lowe Enterprises Real Estate Group
Address:		11777 San Vicente Blvd.
City / State / Zip:		Los Angeles, CA 90049
Office:	( )	(310) 571 - 4275
Fax:	( )	(310) 207 - 1132
Cell:	( )	( )
E-Mail:		twulf@loweenterprises.com

Traffic Consultant:

Name:	Sri Chakravarthy, P.E., T.E.
Title:	Traffic Engineer
Company:	Kimley-Horn & Associates
Address:	660 S. Figueroa St, Suite 1040
City / State / Zip:	Los Angeles, CA 90014
Office:	(213) 261 - 4037
Fax:	( )
Cell:	(310) 621 - 2778
E-Mail:	srikanth.chakravarth@kimley-horn.com

If any of the intersection(s) to be studied as part of this traffic study are located within the City of Los Angeles, the unincorporated areas of Los Angeles County and/or impact any other public agency [i.e., CalTrans], then this MOU shall also be approved by the reviewing staff representative from each agency:

	City of Los Angeles:	County of Los Angeles:
Name [Signed]:		
Name [Printed]:	Edward Guerrero Jr.	
Title:	Trans. Engr.	
Department:	Transportation	
	City of Los Angeles	County of Los Angeles
Address:	7166 W Manchester Av	
City / State / Zip:	L.A./CA/90045	
Office:	(213) 485-1062	( )
Fax:	( )	( )
Cell:	( )	( )
E-Mail:		

	Other Public Agency:	Other Public Agency:
Name [Signed]:		
Name [Printed]:		
Title:		
Department:		
Name:		
Address:		
City / State / Zip:		
Office:	( )	( )
Fax:	( )	( )
Cell:	( )	( )
E-Mail:		

Approved By:

_____ /_____
Property Owner – Applicant Date

_____ /_____
Developer – Applicant Date

_____ /_____
Traffic Consultant Date

_____ / 12/23/2014
City of Culver City Date

Approved subject to changes specified in my 12/23/2014 email.

Note: This MOU shall become valid as of the date of the City's signature and shall expire one (1) year thereafter. If the "administrative draft" of the traffic study has not been filed with the City by the expiration date, this MOU shall also expire and a new MOU filing, fee, review and approval process shall be required.

BK-JM/abn

Study Intersections

No. 1 **Intersection:** Venice Blvd. - Culver Blvd, Los Angeles
No. 2 **Intersection:** Venice Blvd. – Exposition Blvd/Robertson Blvd, Los Angeles, CA
No. 3 **Intersection:** Venice Blvd. - National Blvd, Los Angeles, CA
No. 4 I**ntersection:** Venice Blvd. - Helms Ave, Los Angeles, CA
No. 5 **Intersection:** Venice Blvd. - Cattaraugus Ave, Los Angeles, CA
No. 6 **Intersection:** Washington Blvd. – Robertson Blvd, Culver City, CA
No. 7 **Intersection:** Washington Blvd. – National Blvd, Culver City, CA
No. 8 **Intersection:** Washington Blvd. – Helms Ave, Culver City, CA
No. 9 **Intersection:** National Blvd. – Robertson Blvd, Los Angeles, CA
No. 10 **Intersection:** National Blvd. – I-10 EB Ramps, Los Angeles, CA
No. 11 **Intersection:** National Blvd. - Wesley St, Culver City, CA
No. 12 **Intersection:** Venice Blvd. – La Cienega Blvd, Los Angeles, CA
No. 13 **Intersection:** Washington Blvd. – Fairfax Ave, Los Angeles, CA
No. 14 **Intersection:** National Blvd. – Jefferson Blvd, Los Angeles, CA
No. 15 **Intersection:** Robertson Blvd. – I-10 WB Off-Ramp, Los Angeles, CA

Future Study Intersections

No. 16 **Intersection:** National Blvd. – Main Driveway, Culver City, CA

Residential Streets to Be Studied

No. 1 **Segment:** Wesley St –Between National Blvd and Higuera St, Culver City, CA

WASHINGTON AND NATIONAL TRAFFIC AND PARKING SERVICES TRIP GENERATION TABLE

ITE Code	Land Use Description	Unit	No. of Units	Daily Rate	AM Rate	PM Rate	Daily Trips	% AM Trips In	% AM Trips Out	% PM Trips In	% PM Trips Out	AM Trips In	AM Trips Out	AM Trips	PM Trips In	PM Trips Out	PM Trips
932	High-Turnover (Sit-Down) Restaurant	1,000 Sq Ft	10	127.15	10.81	9.85	1272	55%	45%	60%	40%	59	49	108	59	40	99
	Pass-by credit for High turnover (25%)*						-318					-15	-12	-27	-15	-10	-25
931	Quality Restaurant	1,000 Sq Ft	10	89.95	0.81	7.49	900	82%	18%	67%	33%	7	1	8	50	25	75
223	Mid-Rise Apartment	Dwelling Unit(s)	200		0.30	0.39	840	31%	69%	58%	42%	19	41	60	45	33	78
310	Hotel	Room(s)	148	8.17	0.53	0.60	1210	59%	41%	51%	49%	46	32	78	45	44	89
710	General Office Building (1)	1,000 Sq Ft	201	11.03	1.56	1.49	2218	88%	12%	17%	83%	276	38	314	51	248	299
826	Specialty Retail Center (PM)	1,000 Sq Ft	24	44.32		2.71	1064			44%	56%				29	36	65
	Specialty Retail Center (AM) ***	1,000 Sq Ft	24		1.2		960	60%	40%			17	12	29			
	Pass-by credit for retail under 300 ksf (25%)*						-506					-4	-3	-7	-7	-9	-16
093	Credit for Existing Use (Light Rail Transit Station w/ Parking)	Parking Space(s)	-300	2.51	0.5	0.5	-754	80%	20%	58%	42%	-125	-25	-150	-36	-114	-150
942	Automobile Care Center	1,000 Sq Ft	-10		2.25	3.11	-180	66%	34%	48%	52%	-15	-8	-23	-15	-16	-31
876	Apparel Store	1000 Sq Ft	-8	66.4	1.00	3.83	-532	80%	20%	50%	50%	-6	-2	-8	-15	-16	-31
890	Furniture Store (1)	1000 Sq Ft	-6	5.06	0.17	0.45	-32	69%	31%	48%	52%	-1	0	-1	-1	-2	-3
890	Furniture Store (2)	1000 Sq Ft	-6	5.06	0.17	0.45	-32	69%	31%	48%	52%	-1	0	-1	-1	-2	-3
	Subtotal of Trips						6110					257	123	380	188	258	446
	Internal Capture Credits (based upon ITE - 10% for Daily, 10% for AM, and 10% for PM peak)						-611					-26	-12	-38	-19	-26	-45
	Subtotal of Trips						5499					231	111	342	169	232	402
	Transit Credits (25% - adjacent to Expo light rail station)**						-1375					-58	-28	-85	-42	-58	-100
	Total trip generation						**4124**					173	83	256	127	174	301
	Without pass-by						4948					192	98	290	149	193	342

* Credit determined based upon City of Culver City Guidelines

** 25% max transit credit is based on the high land use density on the project site and 10-12 minute headways on Expo line

*** AM Trips determined based on SANDAG Trip Generation Manual

5/26/2015

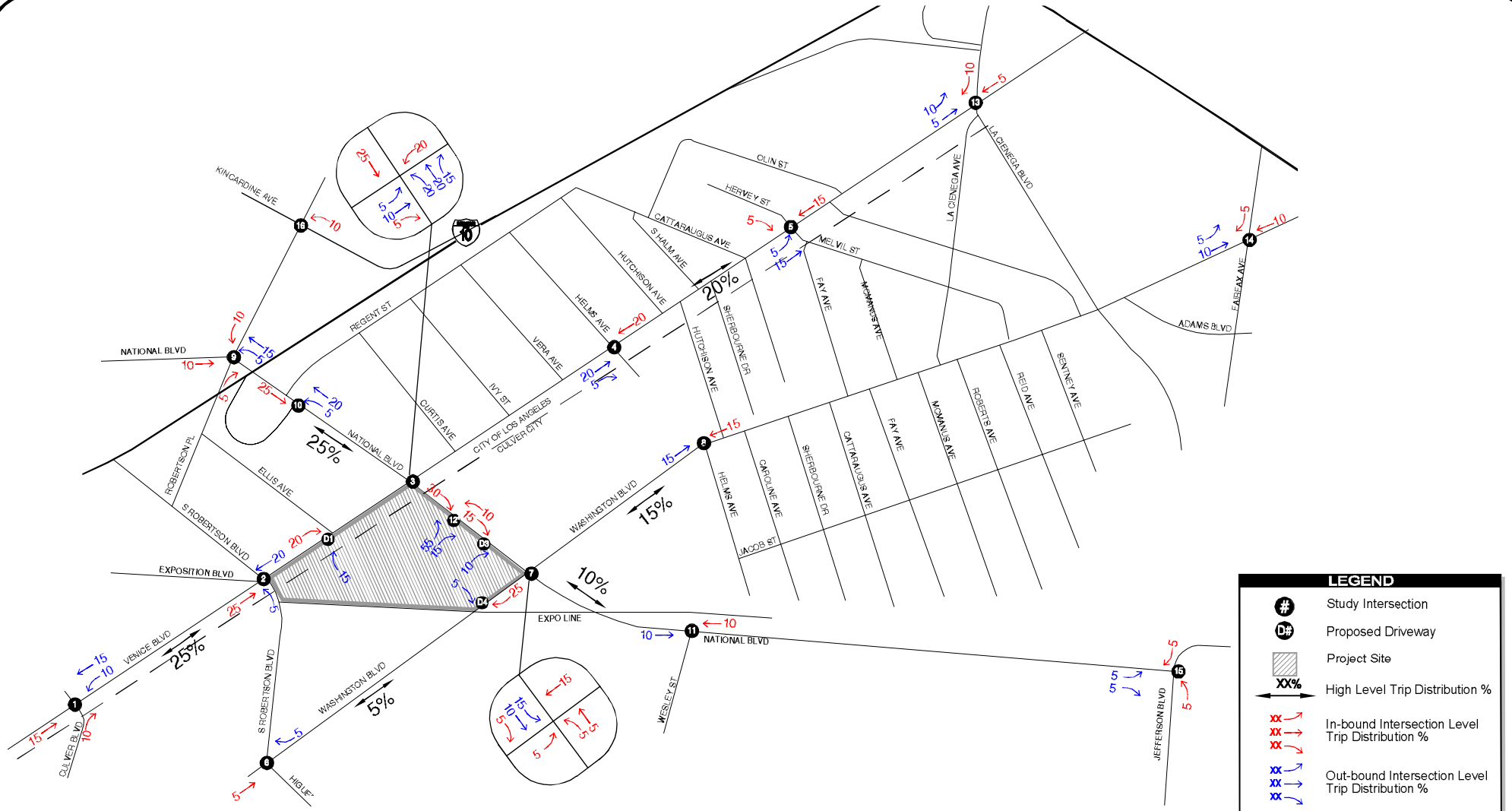


FIGURE 1- PROJECT TRIP DISTRIBUTION PERCENTAGES FOR ALL LAND USES

Kimley»Horn

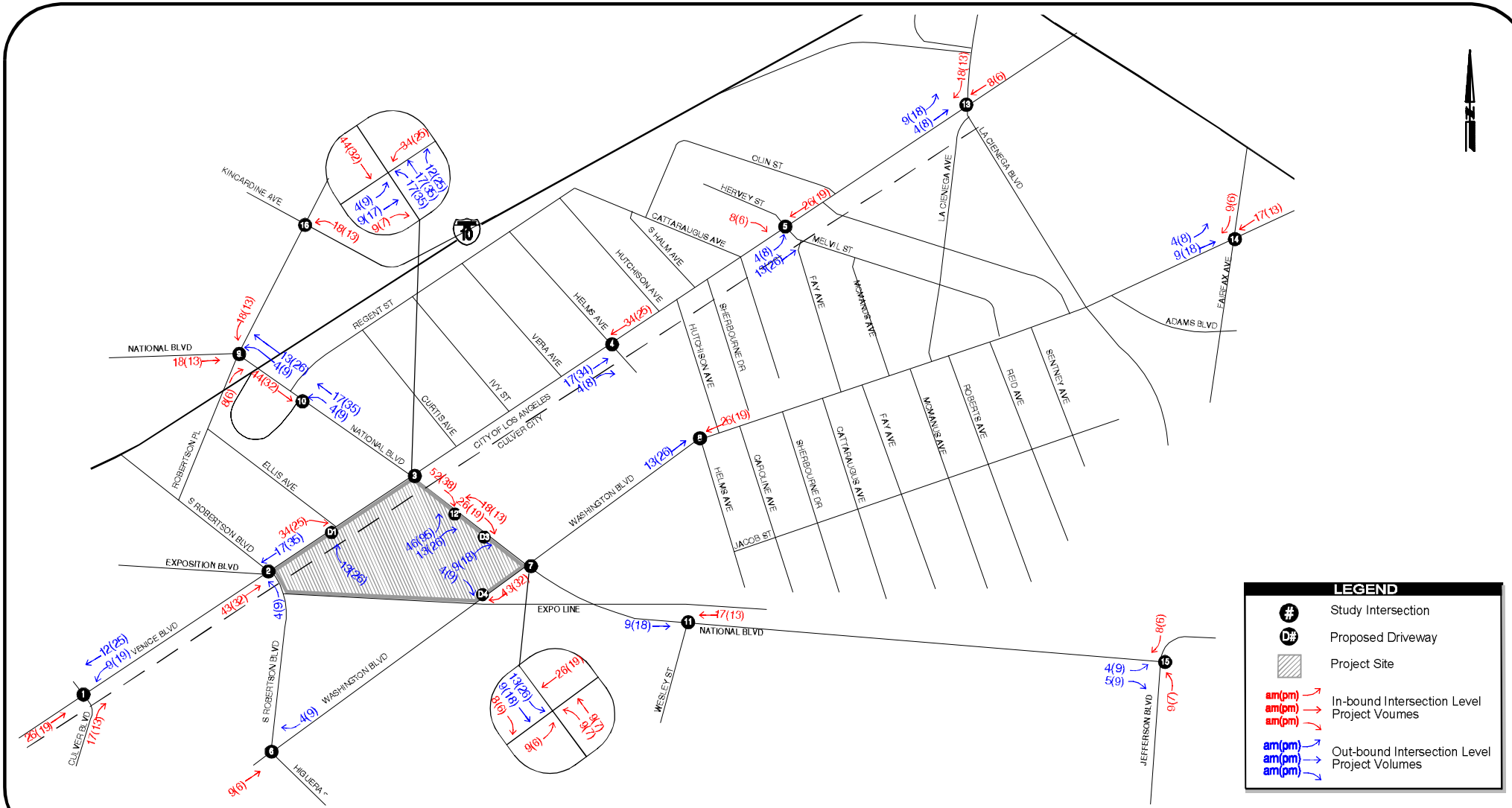


FIGURE 2- PROJECT AM(PM) PEAK HOUR TURNING MOVEMENT VOLUMES

Kimley»Horn

APPENDIX B

TRAFFIC COUNT WORKSHEETS

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

LOCATION: Culver Blvd -- Venice Blvd

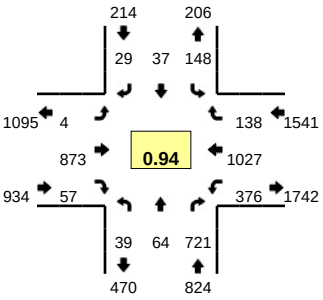
CITY/STATE: Los Angeles, CA

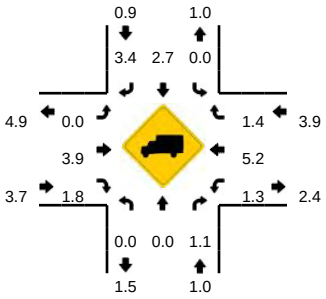
QC JOB #: 13149821

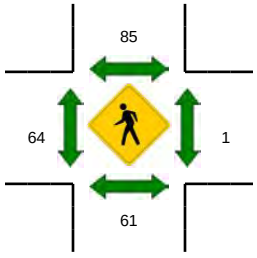
DATE: Thu, Nov 20 2014

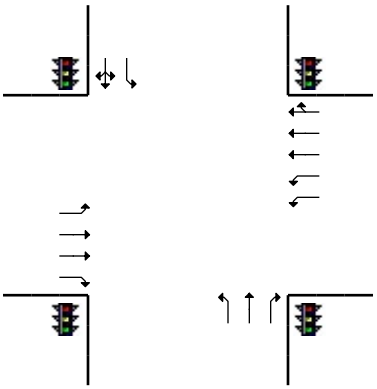
Peak-Hour: 8:00 AM -- 9:00 AM

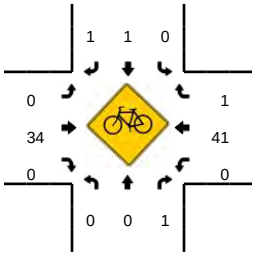
Peak 15-Min: 8:40 AM -- 8:55 AM

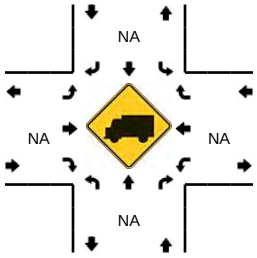


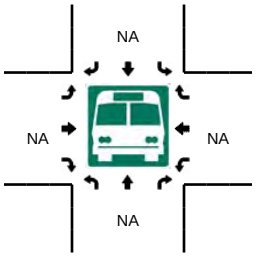












5-Min Count Period Beginning At	Culver Blvd (Northbound)				Culver Blvd (Southbound)				Venice Blvd (Eastbound)				Venice Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	1	22	0	3	0	0	0	0	51	0	0	19	69	11	0	176	
7:05 AM	2	4	29	0	12	3	2	0	0	73	1	0	14	78	13	0	231	
7:10 AM	0	0	37	0	13	2	1	0	1	82	1	0	22	63	11	0	233	
7:15 AM	0	3	50	0	6	3	1	0	1	71	2	0	22	81	11	0	251	
7:20 AM	0	3	40	0	5	0	1	0	1	68	1	0	17	104	13	0	253	
7:25 AM	2	3	56	0	16	4	1	0	1	55	2	0	21	79	5	0	245	
7:30 AM	1	4	59	0	8	3	3	0	0	95	1	0	14	118	5	0	311	
7:35 AM	3	5	56	0	14	3	1	0	1	87	0	0	11	70	14	0	265	
7:40 AM	3	2	47	0	7	3	3	0	1	106	2	0	33	85	9	0	301	
7:45 AM	4	3	60	0	14	3	1	0	0	102	4	0	18	70	9	0	288	
7:50 AM	3	0	61	0	8	3	2	0	0	83	1	0	35	101	9	0	306	
7:55 AM	1	1	59	0	10	3	2	0	0	79	5	0	25	72	4	0	261	3121
8:00 AM	1	5	51	0	12	3	1	0	0	84	7	0	34	85	11	0	294	3239
8:05 AM	1	4	57	0	12	4	1	0	1	71	9	0	20	84	8	0	272	3280
8:10 AM	1	3	54	0	10	3	1	0	0	81	2	0	36	84	8	0	283	3330
8:15 AM	3	4	68	0	11	2	3	0	0	70	3	0	29	81	8	0	282	3361
8:20 AM	3	6	70	0	7	2	1	0	0	57	3	0	44	92	18	0	303	3411
8:25 AM	4	10	63	0	20	3	4	0	0	71	2	0	17	76	8	0	278	3444
8:30 AM	2	5	63	0	2	5	2	0	0	66	4	0	41	86	10	0	286	3419
8:35 AM	7	8	67	0	12	2	5	0	0	68	5	0	30	78	20	0	302	3456
8:40 AM	4	8	56	0	19	0	3	0	2	69	3	0	41	114	16	0	335	3490
8:45 AM	8	8	53	0	21	3	2	0	0	87	7	0	21	68	11	0	289	3491
8:50 AM	3	2	64	0	7	3	2	0	1	81	7	0	40	99	6	0	315	3500
8:55 AM	2	1	55	0	15	7	4	0	0	68	5	0	23	80	14	0	274	3513

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	60	72	692	0	188	24	28	0	12	948	68	0	408	1124	132	0	3756
Heavy Trucks	0	0	16		0	0	0		0	40	0		8	48	4		116
Pedestrians		60				88				36				4			188
Bicycles	0	0	0		0	0	0		0	9	0		0	10	0		19
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/25/2014 5:27 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

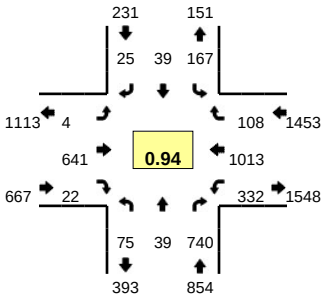
LOCATION: Culver Blvd -- Venice Blvd

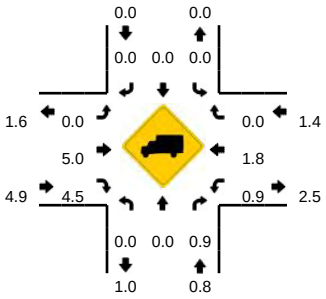
QC JOB #: 13149822

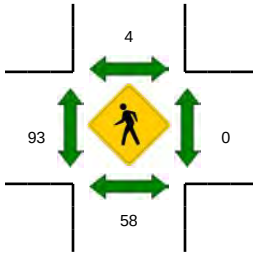
CITY/STATE: Los Angeles, CA

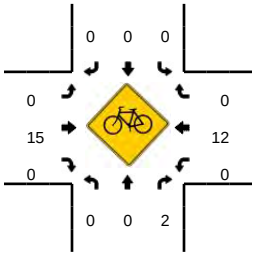
DATE: Wed, Nov 19 2014

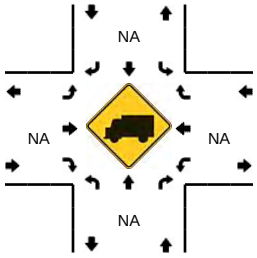
Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

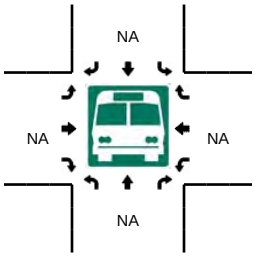


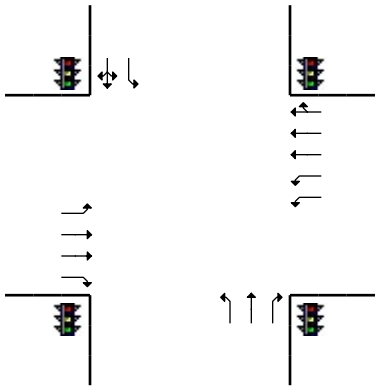












5-Min Count Period Beginning At	Culver Blvd (Northbound)				Culver Blvd (Southbound)				Venice Blvd (Eastbound)				Venice Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	5	12	43	0	9	6	1	0	0	71	3	0	31	80	12	0	273	
4:05 PM	4	5	60	0	17	1	1	0	0	37	0	0	25	56	4	0	210	
4:10 PM	5	6	25	0	14	1	2	0	0	76	3	0	12	62	8	0	214	
4:15 PM	5	5	74	0	18	8	0	0	0	28	0	0	31	60	5	0	234	
4:20 PM	2	5	37	0	9	3	1	0	0	63	5	0	20	70	11	0	226	
4:25 PM	5	6	46	0	19	5	0	0	0	44	3	0	33	71	10	0	242	
4:30 PM	5	2	44	0	12	5	1	0	0	70	10	0	26	89	11	0	275	
4:35 PM	4	4	53	0	23	3	0	0	0	49	3	0	27	67	2	0	235	
4:40 PM	4	5	39	0	15	3	1	0	1	64	1	0	29	93	7	0	262	
4:45 PM	2	2	64	0	21	7	0	0	0	61	3	0	31	50	6	0	247	
4:50 PM	1	2	54	0	11	0	0	0	0	51	4	0	26	84	8	0	241	
4:55 PM	7	7	74	0	20	4	2	0	0	45	1	0	29	67	6	0	262	2921
5:00 PM	5	3	62	0	13	5	0	0	0	37	3	0	28	80	5	0	241	2889
5:05 PM	12	9	85	0	16	6	3	0	0	38	0	0	21	86	11	0	287	2966
5:10 PM	8	1	53	0	17	5	0	0	0	82	6	0	35	81	7	0	295	3047
5:15 PM	7	2	85	0	14	4	5	0	0	36	0	0	33	70	11	0	267	3080
5:20 PM	8	1	64	0	12	4	1	0	0	52	4	0	21	93	9	0	269	3123
5:25 PM	6	4	76	0	18	1	3	0	0	37	0	0	25	80	5	0	255	3136
5:30 PM	6	1	50	0	5	2	1	0	0	34	1	0	38	95	9	0	242	3103
5:35 PM	6	5	63	0	19	4	5	0	0	72	1	0	30	62	5	0	272	3140
5:40 PM	1	2	27	0	14	0	2	0	3	72	3	0	22	105	13	0	264	3142
5:45 PM	8	6	63	0	19	1	4	0	0	60	2	0	28	81	8	0	280	3175
5:50 PM	4	3	48	0	10	7	0	0	0	57	1	0	23	99	11	0	263	3197
5:55 PM	4	2	64	0	10	0	1	0	1	64	1	0	28	81	14	0	270	3205

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	108	48	892	0	188	60	32	0	0	624	24	0	356	948	116	0	3396
Heavy Trucks	0	0	8		0	0	0		0	16	0		4	16	0		44
Pedestrians		56				4				60				0			120
Bicycles	0	0	0		0	0	0		0	8	0		0	4	0		12
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/26/2014 9:49 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES

7409 SW Tech Center Dr, Ste B150
Tigard, OR 97223
503-620-4242
www.qualitycounts.net

Site Code: 13149819
Location: S Robertson Blvd/ Exposition Blvd & Venice Blvd
Date: 11/20/2014

Peak Hour: 8:00 AM - 9:00 AM
Peak 15-minutes: 8:30 AM - 8:45 AM
Peak Hour Factor: 0.943

	Exposition Blvd (Southbound)					S Robertson Blvd (Southbound)					Venice Blvd (Westbound)					S Robertson Blvd (Northbound)					Venice Blvd (Eastbound)							
	U-Turns	Right to Venice Blvd	Thru to S Robertson Blvd	Left to Venice Blvd	Left to S Robertson Blvd	U-Turns	Right to Exposition Blvd	Right	Thru	Left	U-Turns	Right	Right to Exposition Blvd	Thru	Left	U-Turns	Right	Thru	Thru to Exposition Blvd	Left	U-Turns	Right	Thru	Left	Left to Exposition Blvd	Interval Totals	Hourly Totals	15-minute Totals
7:00 AM	0	22	4	11	21	0	0	0	0	0	0	19	0	93	0	0	1	15	0	3	0	2	63	19	0	273		
7:05 AM	0	21	7	7	22	0	0	0	0	0	0	10	0	58	1	0	0	35	0	4	0	4	78	26	0	273		
7:10 AM	0	29	7	9	21	0	0	0	0	0	0	20	0	91	2	0	5	18	0	4	0	1	122	22	0	351		897
7:15 AM	0	25	7	8	29	0	0	0	0	0	0	15	0	63	0	0	2	38	0	10	0	1	83	20	0	301		925
7:20 AM	0	22	7	12	27	0	0	0	0	0	0	13	0	97	1	0	1	31	0	4	0	4	101	23	0	343		995
7:25 AM	0	41	8	8	26	0	0	0	0	0	0	14	0	68	2	0	4	41	0	2	0	1	87	40	0	342		986
7:30 AM	0	25	7	11	30	0	0	0	0	0	0	12	0	107	0	0	0	32	0	3	0	3	140	25	0	395		1080
7:35 AM	0	43	5	9	18	0	0	0	0	0	0	10	0	67	0	0	2	30	0	1	0	6	106	32	0	329		1066
7:40 AM	0	22	8	8	26	0	0	0	0	0	0	14	0	89	1	0	0	24	0	0	0	4	139	24	0	359		1083
7:45 AM	0	46	6	8	26	0	0	0	0	0	0	9	0	68	0	0	1	37	0	13	0	0	119	40	0	373		1061
7:50 AM	0	45	8	12	15	0	0	0	0	0	0	20	0	78	1	0	1	31	0	0	0	5	138	29	0	383		1115
7:55 AM	0	51	6	9	24	0	0	0	0	0	0	15	0	49	2	0	2	33	0	7	0	2	97	33	0	330	4052	1086
8:00 AM	0	40	7	9	23	0	0	0	0	0	0	17	0	91	1	0	3	36	0	6	0	2	148	27	0	410	4189	1123
8:05 AM	0	45	6	8	18	0	0	0	0	0	0	11	0	70	1	0	1	40	0	7	0	0	105	33	0	345	4261	1085
8:10 AM	0	29	7	11	23	0	0	0	0	0	0	11	0	99	2	0	2	32	0	1	0	3	127	23	0	370	4280	1125
8:15 AM	0	58	7	11	26	0	0	0	0	0	0	14	0	64	3	0	3	41	0	9	0	0	98	38	0	372	4351	1087
8:20 AM	0	37	12	8	22	0	0	0	0	0	0	13	0	94	3	0	3	43	0	5	0	2	118	32	0	392	4400	1134
8:25 AM	0	33	10	4	16	0	0	0	0	0	0	11	0	70	0	0	5	41	0	11	0	1	117	31	0	350	4408	1114
8:30 AM	0	44	8	12	31	0	0	0	0	0	0	12	0	102	1	0	5	23	0	7	0	4	128	22	0	399	4412	1141
8:35 AM	0	58	5	8	22	0	0	0	0	0	0	13	0	65	3	0	9	55	0	4	0	3	87	37	0	369	4452	1118
8:40 AM	0	46	14	11	41	0	0	0	0	0	0	9	0	102	1	0	5	36	0	2	0	7	142	25	0	441	4534	1209
8:45 AM	0	51	7	11	24	0	0	0	0	0	0	9	0	65	4	0	4	41	0	9	0	0	92	33	0	350	4511	1160
8:50 AM	0	35	12	9	33	0	0	0	0	0	0	10	0	106	3	0	2	33	0	5	0	2	125	26	0	401	4529	1192
8:55 AM	0	43	8	13	22	0	0	0	0	0	0	10	0	73	2	0	6	40	0	2	1	4	96	40	0	360	4559	1111
Totals	0	911	183	227	586	0	0	0	0	0	0	311	0	1929	34	0	67	826	0	119	1	61	2656	700	0			

Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES

7409 SW Tech Center Dr, Ste B150
Tigard, OR 97223
503-620-4242
www.qualitycounts.net

Site Code: 13149819
Location: S Robertson Blvd/ Exposition Blvd & Venice Blvd
Date: 11/20/2014

	Exposition Blvd (Southbound)					S Robertson Blvd (Southbound)					Venice Blvd (Westbound)					S Robertson Blvd (Northbound)					Venice Blvd (Eastbound)						
	U-Turns	Right to Venice Blvd	Thru to S Robertson Blvd	Left to Venice Blvd	Left to S Robertson Blvd	U-Turns	Right to Exposition Blvd	Right	Thru	Left	U-Turns	Right	Right to Exposition Blvd	Thru	Left	U-Turns	Right	Thru	Thru to Exposition Blvd	Left	U-Turns	Right	Thru	Left	Left to Exposition Blvd	Interval Totals	Hourly Totals
7:00 AM	0	22	4	9	21	0	0	0	0	0	0	18	0	88	0	0	1	15	0	3	0	2	61	19	0	263	
7:05 AM	0	21	7	7	21	0	0	0	0	0	0	8	0	54	1	0	0	35	0	3	0	4	76	25	0	262	
7:10 AM	0	28	6	7	21	0	0	0	0	0	0	19	0	86	2	0	3	17	0	4	0	1	121	22	0	337	
7:15 AM	0	25	7	8	28	0	0	0	0	0	0	14	0	58	0	0	1	37	0	10	0	1	81	20	0	290	
7:20 AM	0	22	7	11	27	0	0	0	0	0	0	11	0	93	1	0	1	30	0	3	0	4	98	23	0	331	
7:25 AM	0	41	8	7	26	0	0	0	0	0	0	14	0	66	2	0	2	41	0	2	0	1	87	40	0	337	
7:30 AM	0	25	7	10	29	0	0	0	0	0	0	11	0	101	0	0	0	31	0	3	0	3	134	25	0	379	
7:35 AM	0	41	5	7	18	0	0	0	0	0	0	10	0	65	0	0	2	28	0	1	0	5	103	31	0	316	
7:40 AM	0	22	8	7	23	0	0	0	0	0	0	12	0	84	1	0	0	24	0	0	0	4	136	24	0	345	
7:45 AM	0	46	6	7	26	0	0	0	0	0	0	9	0	64	0	0	0	36	0	10	0	0	118	40	0	362	
7:50 AM	0	45	8	12	15	0	0	0	0	0	0	20	0	75	1	0	0	31	0	0	0	5	135	29	0	376	
7:55 AM	0	51	6	9	23	0	0	0	0	0	0	13	0	46	2	0	1	32	0	6	0	2	95	32	0	318	3916
8:00 AM	0	39	5	9	23	0	0	0	0	0	0	17	0	85	1	0	2	35	0	4	0	2	148	25	0	395	4048
8:05 AM	0	45	6	6	18	0	0	0	0	0	0	11	0	66	1	0	0	39	0	6	0	0	102	33	0	333	4119
8:10 AM	0	29	7	10	23	0	0	0	0	0	0	10	0	94	2	0	2	31	0	1	0	2	126	23	0	360	4142
8:15 AM	0	57	7	10	24	0	0	0	0	0	0	13	0	61	3	0	2	41	0	8	0	0	95	38	0	359	4211
8:20 AM	0	37	12	8	22	0	0	0	0	0	0	13	0	88	2	0	2	41	0	5	0	2	114	32	0	378	4258
8:25 AM	0	33	10	4	16	0	0	0	0	0	0	11	0	68	0	0	3	41	0	11	0	1	115	31	0	344	4265
8:30 AM	0	43	8	11	29	0	0	0	0	0	0	11	0	99	1	0	3	23	0	7	0	4	124	22	0	385	4271
8:35 AM	0	56	5	7	21	0	0	0	0	0	0	12	0	65	3	0	3	50	0	1	0	3	82	37	0	345	4300
8:40 AM	0	44	14	11	41	0	0	0	0	0	0	9	0	96	1	0	1	28	0	2	0	7	138	25	0	417	4372
8:45 AM	0	50	6	11	24	0	0	0	0	0	0	8	0	63	4	0	3	38	0	8	0	0	89	32	0	336	4346
8:50 AM	0	34	12	8	32	0	0	0	0	0	0	10	0	101	2	0	1	30	0	5	0	2	120	26	0	383	4353
8:55 AM	0	43	8	11	22	0	0	0	0	0	0	10	0	71	2	0	3	37	0	2	1	4	88	39	0	341	4376
Totals	0	899	179	207	573	0	0	0	0	0	0	294	0	1837	32	0	36	791	0	105	1	59	2586	693	0		

7409 SW Tech Center Dr, Ste B150
Tigard, OR 97223
503-620-4242
www.qualitycounts.net

Site Code: 13149819
Location: S Robertson Blvd/ Exposition Blvd & Venice Blvd
Date: 11/20/2014

	Exposition Blvd (Southbound)					S Robertson Blvd (Southbound)					Venice Blvd (Westbound)					S Robertson Blvd (Northbound)					Venice Blvd (Eastbound)						
		Right to Venice Blvd	Thru to S Robertson Blvd	Left to Venice Blvd	Left to S Robertson Blvd		Right to Exposition Blvd	Right	Thru	Left		Right	Right to Exposition Blvd	Thru	Left		Right	Thru	Thru to Exposition Blvd	Left		Right	Thru	Left	Left to Exposition Blvd	Interval Totals	Hourly Totals
7:00 AM		0	0	2	0		0	0	0	0		1	0	5	0		0	0	0	0		0	2	0	0	10	
7:05 AM		0	0	0	1		0	0	0	0		2	0	4	0		0	0	0	1		0	2	1	0	11	
7:10 AM		1	1	2	0		0	0	0	0		1	0	5	0		2	1	0	0		0	1	0	0	14	
7:15 AM		0	0	0	1		0	0	0	0		1	0	5	0		1	1	0	0		0	2	0	0	11	
7:20 AM		0	0	1	0		0	0	0	0		2	0	4	0		0	1	0	1		0	3	0	0	12	
7:25 AM		0	0	1	0		0	0	0	0		0	0	2	0		2	0	0	0		0	0	0	0	5	
7:30 AM		0	0	1	1		0	0	0	0		1	0	6	0		0	1	0	0		0	6	0	0	16	
7:35 AM		2	0	2	0		0	0	0	0		0	0	2	0		0	2	0	0		1	3	1	0	13	
7:40 AM		0	0	1	3		0	0	0	0		2	0	5	0		0	0	0	0		0	3	0	0	14	
7:45 AM		0	0	1	0		0	0	0	0		0	0	4	0		1	1	0	3		0	1	0	0	11	
7:50 AM		0	0	0	0		0	0	0	0		0	0	3	0		1	0	0	0		0	3	0	0	7	
7:55 AM		0	0	0	1		0	0	0	0		2	0	3	0		1	1	0	1		0	2	1	0	12	136
8:00 AM		1	2	0	0		0	0	0	0		0	0	6	0		1	1	0	2		0	0	2	0	15	141
8:05 AM		0	0	2	0		0	0	0	0		0	0	4	0		1	1	0	1		0	3	0	0	12	142
8:10 AM		0	0	1	0		0	0	0	0		1	0	5	0		0	1	0	0		1	1	0	0	10	138
8:15 AM		1	0	1	2		0	0	0	0		1	0	3	0		1	0	0	1		0	3	0	0	13	140
8:20 AM		0	0	0	0		0	0	0	0		0	0	6	1		1	2	0	0		0	4	0	0	14	142
8:25 AM		0	0	0	0		0	0	0	0		0	0	2	0		2	0	0	0		0	2	0	0	6	143
8:30 AM		1	0	1	2		0	0	0	0		1	0	3	0		2	0	0	0		0	4	0	0	14	141
8:35 AM		2	0	1	1		0	0	0	0		1	0	0	0		6	5	0	3		0	5	0	0	24	152
8:40 AM		2	0	0	0		0	0	0	0		0	0	6	0		4	8	0	0		0	4	0	0	24	162
8:45 AM		1	1	0	0		0	0	0	0		1	0	2	0		1	3	0	1		0	3	1	0	14	165
8:50 AM		1	0	1	1		0	0	0	0		0	0	5	1		1	3	0	0		0	5	0	0	18	176
8:55 AM		0	0	2	0		0	0	0	0		0	0	2	0		3	3	0	0		0	8	1	0	19	183
Totals		12	4	20	13		0	0	0	0		17	0	92	2		31	35	0	14		2	70	7	0		

Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES

7409 SW Tech Center Dr, Ste B150
Tigard, OR 97223
503-620-4242
www.qualitycounts.net

Site Code: 13149819
Location: S Robertson Blvd/ Exposition Blvd & Venice Blvd
Date: 11/20/2014

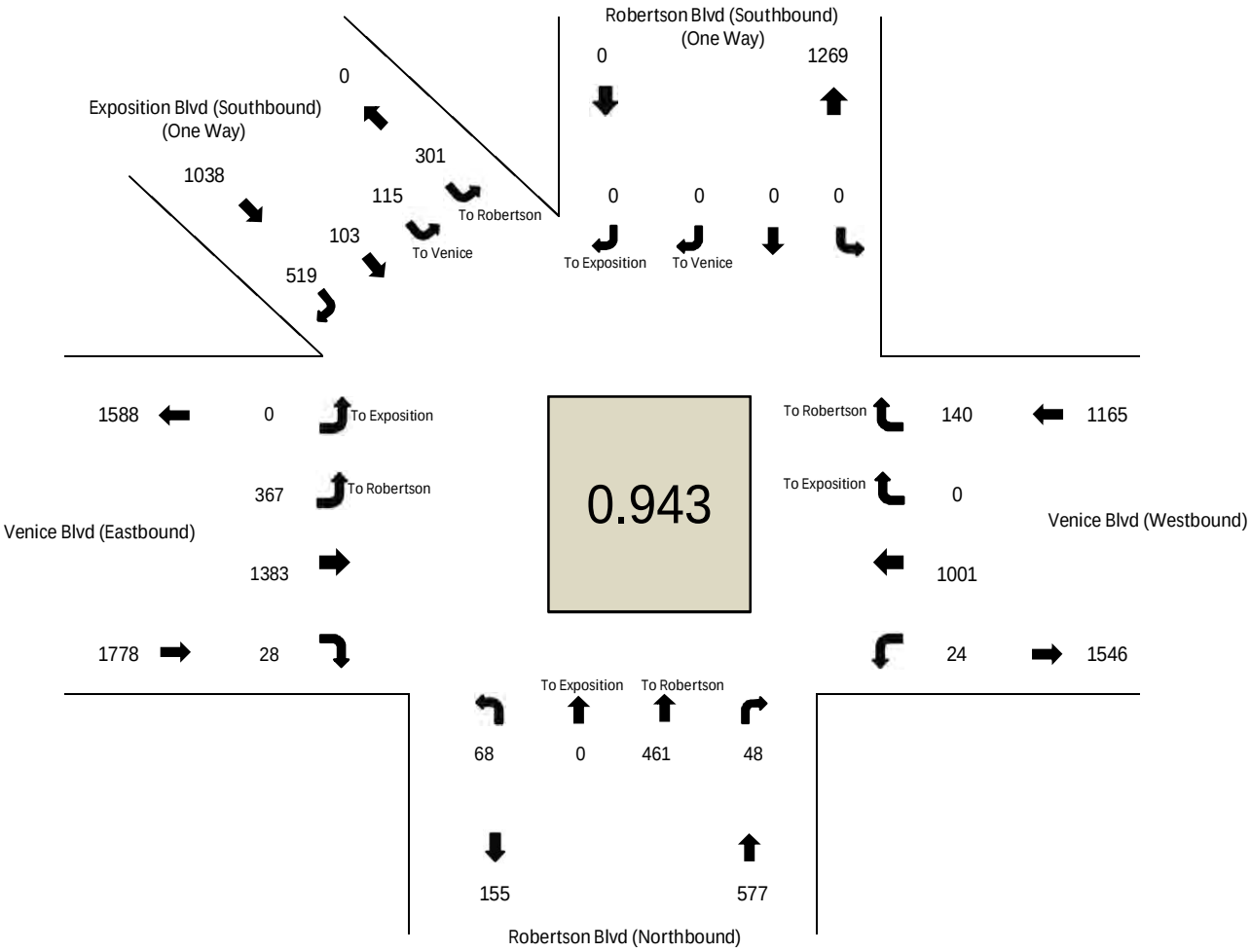
	Exposition Blvd (Southbound)					S Robertson Blvd (Southbound)					Venice Blvd (Westbound)					S Robertson Blvd (Northbound)					Venice Blvd (Eastbound)						
	Peds	Right to Venice Blvd	Thru to S Robertson Blvd	Left to Venice Blvd	Left to S Robertson Blvd	Peds	Right to Exposition Blvd	Right	Thru	Left	Peds	Right	Right to Exposition Blvd	Thru	Left	Peds	Right	Thru	Thru to Exposition Blvd	Left	Peds	Right	Thru	Left	Left to Exposition Blvd	Interval Totals	Hourly Totals
7:00 AM	18	0	0	0	0	18	0	0	0	0	4	1	0	2	0	0	0	0	0	0	0	0	3	0	0	46	
7:05 AM	0	0	0	0	0	0	0	0	0	0	5	2	0	1	0	0	0	0	0	1	0	0	1	0	0	10	
7:10 AM	12	0	0	0	0	12	0	0	0	0	16	1	0	2	0	0	0	0	0	0	0	0	1	0	0	44	
7:15 AM	14	0	0	0	0	14	0	0	0	0	18	1	0	4	0	0	0	0	0	0	0	0	1	0	0	52	
7:20 AM	14	0	0	0	0	14	0	0	0	0	23	2	0	4	0	0	0	1	0	0	0	0	0	1	0	59	
7:25 AM	3	0	0	0	0	3	0	0	0	0	3	0	0	1	0	0	0	1	0	0	0	0	3	0	0	14	
7:30 AM	1	0	0	0	0	1	0	0	0	0	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	6	
7:35 AM	0	0	0	0	0	0	0	0	0	0	25	0	0	7	0	0	0	3	0	1	0	0	2	0	0	38	
7:40 AM	2	0	0	0	0	2	0	0	0	0	2	2	0	3	0	0	0	0	0	0	0	0	3	0	0	14	
7:45 AM	12	0	0	0	0	12	0	0	0	0	32	0	0	6	0	0	0	0	0	0	0	0	2	0	0	64	
7:50 AM	8	0	0	0	0	8	0	0	0	0	6	0	0	2	0	0	0	0	0	0	0	0	2	0	0	26	
7:55 AM	4	0	0	0	0	4	0	0	0	0	6	2	0	4	0	0	0	0	0	0	0	0	2	0	0	22	395
8:00 AM	17	0	0	0	0	17	0	0	0	0	19	0	0	7	0	0	0	0	0	0	0	0	3	0	0	63	412
8:05 AM	8	0	0	0	0	8	0	0	0	0	7	0	0	3	0	1	0	0	0	0	0	0	4	0	0	31	433
8:10 AM	31	0	0	0	0	31	0	0	0	0	17	1	0	3	0	0	0	1	0	0	0	0	1	0	0	85	474
8:15 AM	6	0	0	0	0	6	0	0	0	0	6	1	0	1	0	3	0	0	0	0	0	0	2	0	0	25	447
8:20 AM	35	0	0	0	0	35	0	0	0	0	28	0	0	3	0	2	0	0	0	0	0	0	2	0	0	105	493
8:25 AM	9	0	0	0	0	9	0	0	0	0	9	0	0	0	0	1	0	0	0	0	0	0	3	0	0	31	510
8:30 AM	21	0	0	0	0	21	0	0	0	0	17	1	0	9	0	0	0	0	0	0	0	0	1	0	0	70	574
8:35 AM	22	0	0	0	0	22	0	0	0	0	19	1	0	4	0	0	0	0	0	0	0	0	1	0	0	69	605
8:40 AM	5	0	0	0	0	5	0	0	0	0	4	0	0	6	0	0	0	0	0	0	1	0	3	0	0	24	615
8:45 AM	1	0	0	0	0	1	0	0	0	0	22	1	0	3	0	1	0	1	0	0	0	0	4	0	0	34	585
8:50 AM	33	0	0	0	0	33	0	0	0	0	8	0	0	8	0	0	0	0	0	0	0	0	2	0	0	84	643
8:55 AM	3	0	0	0	0	3	0	0	0	0	13	0	0	1	0	0	0	2	0	0	0	0	6	0	0	28	649
Totals	279	0	0	0	0	279	0	0	0	0	311	17	0	85	0	8	0	9	0	2	1	0	52	1	0		

7409 SW Tech Center Dr, Ste B150
Tigard, OR 97224
971-223-0003
www.qualitycounts.net

Site Code: 13149819
Location: S Robertson Blvd/ Exposition Blvd & Venice Blvd
Date: 11/20/2014

Peak Hour: 8:00 AM - 9:00 AM
Peak 15-minutes: 8:30 AM - 8:45 AM
Peak Hour Factor: 0.943

	Exposition Blvd (Southbound)					S Robertson Blvd (Southbound)					Venice Blvd (Westbound)					S Robertson Blvd (Northbound)					Venice Blvd (Eastbound)						
	U-Turns	Right to Venice Blvd	Thru to S Robertson Blvd	Left to Venice Blvd	Left to S Robertson Blvd	U-Turns	Right to Exposition Blvd	Right	Thru	Left	U-Turns	Right	Right to Exposition Blvd	Thru	Left	U-Turns	Right	Thru	Thru to Exposition Blvd	Left	U-Turns	Right	Thru	Left	Left to Exposition Blvd	Interval Totals	Hourly Totals
7:00 AM	0	72	18	27	64	0	0	0	0	0	0	49	0	242	3	0	6	68	0	11	0	7	263	67	0	897	
7:15 AM	0	88	22	28	82	0	0	0	0	0	0	42	0	228	3	0	7	110	0	16	0	6	271	83	0	986	
7:30 AM	0	90	20	28	74	0	0	0	0	0	0	36	0	263	1	0	2	86	0	4	0	13	385	81	0	1083	
7:45 AM	0	142	20	29	65	0	0	0	0	0	0	44	0	195	3	0	4	101	0	20	0	7	354	102	0	1086	4052
8:00 AM	0	114	20	28	64	0	0	0	0	0	0	39	0	260	4	0	6	108	0	14	0	5	380	83	0	1125	4280
8:15 AM	0	128	29	23	64	0	0	0	0	0	0	38	0	228	6	0	11	125	0	25	0	3	333	101	0	1114	4408
8:30 AM	0	148	27	31	94	0	0	0	0	0	0	34	0	269	5	0	19	114	0	13	0	14	357	84	0	1209	4534
8:45 AM	0	129	27	33	79	0	0	0	0	0	0	29	0	244	9	0	12	114	0	16	1	6	313	99	0	1111	4559
Totals	0	911	183	227	586	0	0	0	0	0	0	311	0	1929	34	0	67	826	0	119	1	61	2656	700	0		


Robertson Blvd (Southbound)
(One Way)
0
1269
Exposition Blvd (Southbound)
(One Way)
0
301
1038
115
To Robertson
0
0
0
0
103
To Venice
To Exposition
To Venice
519
1588
0
To Exposition
To Robertson
140
1165
367
To Robertson
To Exposition
0
0.943
Venice Blvd (Eastbound)
Venice Blvd (Westbound)
1383
1001
1778
28
24
1546
To Exposition
To Robertson
68
0
461
48
155
577
Robertson Blvd (Northbound)

Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES

7409 SW Tech Center Dr, Ste B150
Tigard, OR 97223
503-620-4242
www.qualitycounts.net

Site Code: 13149819
Location: S Robertson Blvd/ Exposition Blvd & Venice Blvd
Date: 11/19/2014

Peak Hour: 5:00 PM - 6:00 PM
Peak 15-minutes: 5:45 PM - 6:00 PM
Peak Hour Factor: 0.966

	Exposition Blvd (Southbound)					S Robertson Blvd (Southbound)					Venice Blvd (Westbound)					S Robertson Blvd (Northbound)					Venice Blvd (Eastbound)							
	U-Turns	Right to Venice Blvd	Thru to S Robertson Blvd	Left to Venice Blvd	Left to S Robertson Blvd	U-Turns	Right to Exposition Blvd	Right	Thru	Left	U-Turns	Right	Right to Exposition Blvd	Thru	Left	U-Turns	Right	Thru	Thru to Exposition Blvd	Left	U-Turns	Right	Thru	Left	Left to Exposition Blvd	Interval Totals	Hourly Totals	15-minute Totals
4:00 PM	0	22	11	11	16	0	0	0	0	0	0	6	0	94	4	0	4	18	0	2	0	5	120	9	0	322		
4:05 PM	0	22	1	5	10	0	0	0	0	0	0	4	0	58	4	0	3	41	0	5	0	3	96	16	0	268		
4:10 PM	0	23	9	9	17	0	0	0	0	0	0	2	0	56	3	0	3	12	0	2	0	1	94	14	0	245		835
4:15 PM	0	29	4	11	18	0	0	0	0	0	0	8	0	57	3	0	3	21	0	6	0	2	98	22	0	282		795
4:20 PM	0	24	8	14	13	0	0	0	0	0	0	5	0	77	3	0	5	15	0	8	0	1	92	15	0	280		807
4:25 PM	0	41	3	4	11	0	0	0	0	0	0	5	0	81	2	0	6	24	0	5	0	1	109	14	0	306		868
4:30 PM	0	27	3	7	11	0	0	0	0	0	0	5	0	100	4	0	2	19	0	4	0	3	112	14	0	311		897
4:35 PM	0	28	6	7	2	0	0	0	0	0	0	8	0	69	2	0	9	23	0	8	0	4	109	15	0	290		907
4:40 PM	0	18	6	13	7	0	0	0	0	0	0	7	0	103	2	0	2	27	0	4	0	3	110	13	0	315		916
4:45 PM	0	24	5	9	9	0	0	0	0	0	0	8	0	70	0	0	2	23	0	5	0	3	118	34	0	310		915
4:50 PM	0	20	8	6	12	0	0	0	0	0	0	10	0	96	4	0	3	20	0	5	0	2	113	12	0	311		936
4:55 PM	0	38	7	7	5	0	0	0	0	0	0	4	0	71	1	0	9	17	0	5	0	6	105	13	0	288	3528	909
5:00 PM	0	15	3	11	13	0	0	0	0	0	0	12	0	92	3	0	3	22	0	3	0	1	104	14	0	296	3502	895
5:05 PM	0	31	2	5	9	0	0	0	0	0	0	3	0	77	0	0	0	38	0	15	0	3	100	31	0	314	3548	898
5:10 PM	0	20	3	11	23	0	0	0	0	0	0	6	0	99	0	0	3	26	0	6	0	7	131	22	0	357	3660	967
5:15 PM	0	27	1	6	21	0	0	0	0	0	0	6	0	69	1	0	5	34	0	8	0	2	112	15	0	307	3685	978
5:20 PM	0	26	8	13	31	0	0	0	0	0	0	10	0	89	6	0	3	24	0	6	0	5	100	15	0	336	3741	1000
5:25 PM	0	33	8	12	11	0	0	0	0	0	0	4	0	68	2	0	4	36	0	7	0	3	86	23	0	297	3732	940
5:30 PM	0	32	11	3	17	0	0	0	0	0	0	4	0	96	8	0	4	27	0	8	0	2	100	14	0	326	3747	959
5:35 PM	0	28	7	14	20	0	0	0	0	0	0	5	0	73	0	0	2	27	0	6	0	2	112	24	0	320	3777	943
5:40 PM	0	27	18	13	19	0	0	0	0	0	0	3	0	103	0	0	2	27	0	7	0	0	116	16	0	351	3813	997
5:45 PM	0	34	9	5	18	0	0	0	0	0	0	4	0	75	0	0	1	44	0	12	0	4	106	23	0	335	3838	1006
5:50 PM	0	22	6	5	15	0	0	0	0	0	0	9	0	92	5	0	1	25	0	12	0	2	102	21	0	317	3844	1003
5:55 PM	0	33	10	7	17	0	0	0	0	0	0	10	0	86	4	0	1	46	0	6	0	1	113	28	0	362	3918	1014
Totals	0	644	157	208	345	0	0	0	0	0	0	148	0	1951	61	0	80	636	0	155	0	66	2558	437	0			

Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES

7409 SW Tech Center Dr, Ste B150
Tigard, OR 97223
503-620-4242
www.qualitycounts.net

Site Code: 13149819
Location: S Robertson Blvd/ Exposition Blvd & Venice Blvd
Date: 11/19/2014

	Exposition Blvd (Southbound)					S Robertson Blvd (Southbound)					Venice Blvd (Westbound)					S Robertson Blvd (Northbound)					Venice Blvd (Eastbound)						
	U-Turns	Right to Venice Blvd	Thru to S Robertson Blvd	Left to Venice Blvd	Left to S Robertson Blvd	U-Turns	Right to Exposition Blvd	Right	Thru	Left	U-Turns	Right	Right to Exposition Blvd	Thru	Left	U-Turns	Right	Thru	Thru to Exposition Blvd	Left	U-Turns	Right	Thru	Left	Left to Exposition Blvd	Interval Totals	Hourly Totals
4:00 PM	0	22	11	10	16	0	0	0	0	0	0	6	0	91	4	0	4	18	0	2	0	5	114	9	0	312	
4:05 PM	0	22	1	5	10	0	0	0	0	0	0	4	0	57	3	0	3	41	0	4	0	3	95	15	0	263	
4:10 PM	0	23	7	6	16	0	0	0	0	0	0	2	0	55	3	0	3	12	0	2	0	1	89	13	0	232	
4:15 PM	0	28	4	10	18	0	0	0	0	0	0	8	0	56	3	0	2	21	0	5	0	2	96	22	0	275	
4:20 PM	0	24	7	14	13	0	0	0	0	0	0	5	0	75	2	0	2	15	0	8	0	0	89	15	0	269	
4:25 PM	0	40	3	4	11	0	0	0	0	0	0	5	0	79	1	0	6	24	0	4	0	1	106	14	0	298	
4:30 PM	0	27	3	5	11	0	0	0	0	0	0	5	0	98	3	0	2	19	0	4	0	3	110	14	0	304	
4:35 PM	0	28	6	6	2	0	0	0	0	0	0	7	0	68	2	0	9	23	0	8	0	4	109	15	0	287	
4:40 PM	0	17	6	13	7	0	0	0	0	0	0	7	0	101	2	0	2	27	0	3	0	3	105	12	0	305	
4:45 PM	0	24	5	8	9	0	0	0	0	0	0	8	0	68	0	0	2	23	0	5	0	2	115	34	0	303	
4:50 PM	0	20	8	6	12	0	0	0	0	0	0	10	0	94	2	0	2	20	0	5	0	2	112	12	0	305	
4:55 PM	0	38	5	7	5	0	0	0	0	0	0	3	0	69	1	0	7	17	0	4	0	6	104	13	0	279	3432
5:00 PM	0	15	3	9	12	0	0	0	0	0	0	11	0	90	3	0	2	22	0	3	0	1	97	14	0	282	3402
5:05 PM	0	31	2	5	9	0	0	0	0	0	0	3	0	77	0	0	0	37	0	14	0	3	96	31	0	308	3447
5:10 PM	0	19	3	11	22	0	0	0	0	0	0	6	0	97	0	0	2	26	0	6	0	7	127	22	0	348	3563
5:15 PM	0	27	1	6	21	0	0	0	0	0	0	6	0	69	1	0	5	33	0	7	0	2	112	15	0	305	3593
5:20 PM	0	25	8	12	30	0	0	0	0	0	0	10	0	84	6	0	3	24	0	6	0	5	96	15	0	324	3648
5:25 PM	0	33	8	11	11	0	0	0	0	0	0	4	0	68	2	0	4	34	0	7	0	3	82	23	0	290	3640
5:30 PM	0	32	11	3	16	0	0	0	0	0	0	4	0	96	8	0	4	25	0	7	0	2	97	14	0	319	3655
5:35 PM	0	28	7	14	20	0	0	0	0	0	0	5	0	71	0	0	2	27	0	6	0	2	111	24	0	317	3685
5:40 PM	0	27	18	13	19	0	0	0	0	0	0	3	0	101	0	0	1	27	0	6	0	0	112	16	0	343	3723
5:45 PM	0	34	9	5	18	0	0	0	0	0	0	4	0	75	0	0	0	43	0	12	0	4	105	23	0	332	3752
5:50 PM	0	22	6	5	15	0	0	0	0	0	0	8	0	90	3	0	1	25	0	12	0	2	96	21	0	306	3753
5:55 PM	0	33	10	7	17	0	0	0	0	0	0	10	0	86	4	0	1	46	0	5	0	1	110	28	0	358	3832
Totals	0	639	152	195	340	0	0	0	0	0	0	144	0	1915	53	0	69	629	0	145	0	64	2485	434	0		

7409 SW Tech Center Dr, Ste B150
Tigard, OR 97223
503-620-4242
www.qualitycounts.net

Site Code: 13149819
Location: S Robertson Blvd/ Exposition Blvd & Venice Blvd
Date: 11/19/2014

	Exposition Blvd (Southbound)					S Robertson Blvd (Southbound)					Venice Blvd (Westbound)					S Robertson Blvd (Northbound)					Venice Blvd (Eastbound)						
	Right to Venice Blvd	Thru to S Robertson Blvd	Left to Venice Blvd	Left to S Robertson Blvd		Right to Exposition Blvd	Right	Thru	Left		Right	Right to Exposition Blvd	Thru	Left		Right	Thru	Thru to Exposition Blvd	Left		Right	Thru	Left	Left to Exposition Blvd	Interval Totals	Hourly Totals
4:00 PM	0	0	1	0		0	0	0	0		0	0	3	0		0	0	0	0		0	6	0	0	10	
4:05 PM	0	0	0	0		0	0	0	0		0	0	1	1		0	0	0	1		0	1	1	0	5	
4:10 PM	0	2	3	1		0	0	0	0		0	0	1	0		0	0	0	0		0	5	1	0	13	
4:15 PM	1	0	1	0		0	0	0	0		0	0	1	0		1	0	0	1		0	2	0	0	7	
4:20 PM	0	1	0	0		0	0	0	0		0	0	2	1		3	0	0	0		1	3	0	0	11	
4:25 PM	1	0	0	0		0	0	0	0		0	0	2	1		0	0	0	1		0	3	0	0	8	
4:30 PM	0	0	2	0		0	0	0	0		0	0	2	1		0	0	0	0		0	2	0	0	7	
4:35 PM	0	0	1	0		0	0	0	0		1	0	1	0		0	0	0	0		0	0	0	0	3	
4:40 PM	1	0	0	0		0	0	0	0		0	0	2	0		0	0	0	1		0	5	1	0	10	
4:45 PM	0	0	1	0		0	0	0	0		0	0	2	0		0	0	0	0		1	3	0	0	7	
4:50 PM	0	0	0	0		0	0	0	0		0	0	2	2		1	0	0	0		0	1	0	0	6	
4:55 PM	0	2	0	0		0	0	0	0		1	0	2	0		2	0	0	1		0	1	0	0	9	96
5:00 PM	0	0	2	1		0	0	0	0		1	0	2	0		1	0	0	0		0	7	0	0	14	100
5:05 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	1	0	1		0	4	0	0	6	101
5:10 PM	1	0	0	1		0	0	0	0		0	0	2	0		1	0	0	0		0	4	0	0	9	97
5:15 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	1	0	1		0	0	0	0	2	92
5:20 PM	1	0	1	1		0	0	0	0		0	0	5	0		0	0	0	0		0	4	0	0	12	93
5:25 PM	0	0	1	0		0	0	0	0		0	0	0	0		0	2	0	0		0	4	0	0	7	92
5:30 PM	0	0	0	1		0	0	0	0		0	0	0	0		0	2	0	1		0	3	0	0	7	92
5:35 PM	0	0	0	0		0	0	0	0		0	0	2	0		0	0	0	0		0	1	0	0	3	92
5:40 PM	0	0	0	0		0	0	0	0		0	0	2	0		1	0	0	1		0	4	0	0	8	90
5:45 PM	0	0	0	0		0	0	0	0		0	0	0	0		1	1	0	0		0	1	0	0	3	86
5:50 PM	0	0	0	0		0	0	0	0		1	0	2	2		0	0	0	0		0	6	0	0	11	91
5:55 PM	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	1		0	3	0	0	4	86
Totals	5	5	13	5		0	0	0	0		4	0	36	8		11	7	0	10		2	73	3	0		

7409 SW Tech Center Dr, Ste B150
Tigard, OR 97223
503-620-4242
www.qualitycounts.net

Site Code: 13149819
Location: S Robertson Blvd/ Exposition Blvd & Venice Blvd
Date: 11/19/2014

	Exposition Blvd (Southbound)					S Robertson Blvd (Southbound)					Venice Blvd (Westbound)					S Robertson Blvd (Northbound)					Venice Blvd (Eastbound)					Interval Totals	Hourly Totals
	Peds	Right to Venice Blvd	Thru to S Robertson Blvd	Left to Venice Blvd	Left to S Robertson Blvd	Peds	Right to Exposition Blvd	Right	Thru	Left	Peds	Right	Right to Exposition Blvd	Thru	Left	Peds	Right	Thru	Thru to Exposition Blvd	Left	Peds	Right	Thru	Left	Left to Exposition Blvd		
4:00 PM	12	0	0	0	0	12	0	0	0	0	15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	40	
4:05 PM	5	0	0	0	0	5	0	0	0	0	5	0	0	0	0	0	0	0	0	0	1	0	5	0	0	21	
4:10 PM	8	0	0	0	0	8	0	0	0	0	11	0	0	4	0	0	0	0	0	0	0	0	5	0	0	36	
4:15 PM	6	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	13	
4:20 PM	4	0	0	0	0	4	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	4	0	0	15	
4:25 PM	6	0	0	0	0	6	0	0	0	0	14	0	0	0	0	0	0	0	0	0	1	0	1	0	0	28	
4:30 PM	3	0	0	0	0	3	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2	0	0	12	
4:35 PM	13	0	0	0	0	13	0	0	0	0	18	0	0	5	0	0	0	0	0	0	0	0	0	0	0	49	
4:40 PM	12	0	0	0	0	12	0	0	0	0	4	0	0	1	0	0	0	0	0	0	0	0	3	0	0	32	
4:45 PM	10	0	0	0	0	10	0	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	3	0	0	37	
4:50 PM	9	0	0	0	0	9	0	0	0	0	6	0	0	1	0	0	0	0	0	0	0	1	3	0	0	29	
4:55 PM	10	0	0	0	0	10	0	0	0	0	14	0	0	3	0	0	0	0	0	0	0	1	3	0	0	41	353
5:00 PM	8	0	0	0	0	8	0	0	0	0	4	0	0	2	0	0	0	0	0	0	0	0	1	0	0	23	336
5:05 PM	7	0	0	0	0	7	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	4	0	0	24	339
5:10 PM	3	0	0	0	0	3	0	0	0	0	7	0	0	1	0	0	0	0	0	0	0	0	1	0	0	15	318
5:15 PM	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	1	0	0	8	313
5:20 PM	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	1	0	0	8	306
5:25 PM	15	0	0	0	0	15	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	321
5:30 PM	0	0	0	0	0	0	0	0	0	0	7	0	0	1	0	0	0	0	0	0	0	0	0	0	0	8	317
5:35 PM	4	0	0	0	0	4	0	0	0	0	7	0	0	1	0	0	0	0	0	0	0	0	7	0	0	23	291
5:40 PM	6	0	0	0	0	6	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	5	0	0	20	279
5:45 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	1	0	0	0	0	0	0	0	0	4	0	0	9	251
5:50 PM	12	0	0	0	0	12	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	1	0	0	31	253
5:55 PM	1	0	0	0	0	1	0	0	0	0	3	0	0	1	0	0	0	0	0	0	0	0	2	0	0	8	220
Totals	154	0	0	0	0	154	0	0	0	0	179	0	0	25	0	0	0	0	0	0	2	2	57	0	0		

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

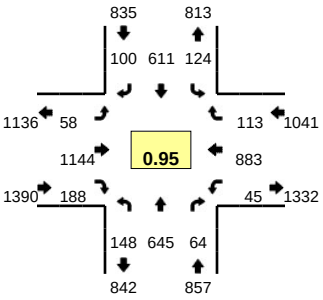
LOCATION: National Blvd -- Venice Blvd

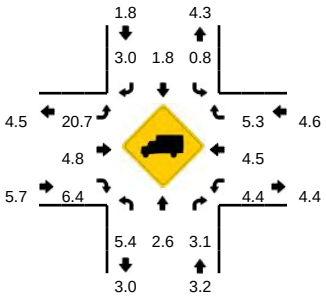
QC JOB #: 13149817

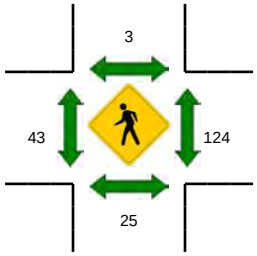
CITY/STATE: Los Angeles, CA

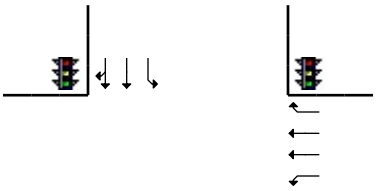
DATE: Thu, Nov 20 2014

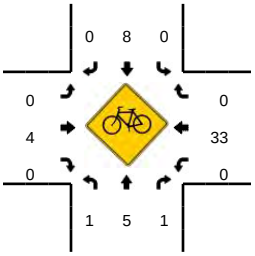
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

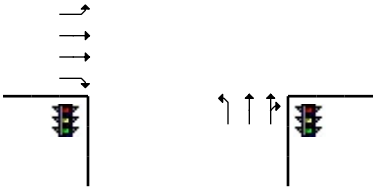


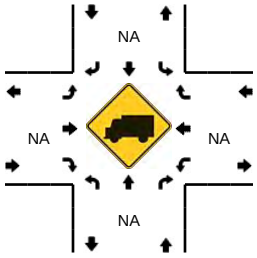


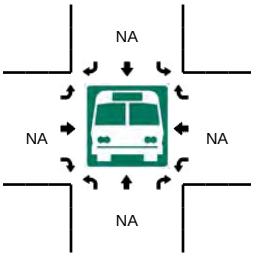












5-Min Count Period Beginning At	National Blvd (Northbound)				National Blvd (Southbound)				Venice Blvd (Eastbound)				Venice Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	8	74	2	0	3	17	2	0	6	26	11	0	0	60	10	0	219	
7:05 AM	24	86	3	0	1	20	5	0	8	74	9	0	5	76	13	0	324	
7:10 AM	16	63	0	0	6	24	5	0	7	70	25	0	1	57	10	0	284	
7:15 AM	14	38	1	0	2	13	0	0	8	119	19	0	4	90	14	0	322	
7:20 AM	20	104	2	0	2	13	1	0	9	54	9	0	1	53	17	0	285	
7:25 AM	18	87	3	0	6	34	4	0	6	89	15	0	3	90	8	0	363	
7:30 AM	22	87	1	0	7	39	3	0	8	87	12	0	5	62	7	0	340	
7:35 AM	9	74	4	0	3	25	4	0	7	110	22	0	5	92	8	0	363	
7:40 AM	17	77	5	0	7	52	12	0	7	79	8	3	3	41	10	0	321	
7:45 AM	9	40	2	1	8	30	8	0	2	131	27	1	0	73	11	0	343	
7:50 AM	15	51	2	0	6	68	15	0	7	78	21	0	5	61	4	0	333	
7:55 AM	20	38	2	0	8	57	4	0	3	102	24	0	6	54	4	0	322	3819
8:00 AM	15	59	2	0	8	59	7	0	6	83	28	1	4	53	4	0	329	3929
8:05 AM	10	43	2	0	14	39	8	0	5	103	19	0	0	88	14	0	345	3950
8:10 AM	6	44	2	0	7	68	5	1	3	98	18	0	2	83	16	0	353	4019
8:15 AM	15	56	4	0	2	48	6	0	0	90	21	0	7	72	5	1	327	4024
8:20 AM	9	46	2	0	6	61	9	0	7	78	16	0	3	76	13	0	326	4065
8:25 AM	15	59	8	0	12	46	9	1	9	105	13	0	4	75	11	0	367	4069
8:30 AM	15	57	6	0	13	56	12	0	1	90	13	2	4	59	4	0	332	4061
8:35 AM	14	48	1	0	13	37	4	0	6	110	13	0	6	92	7	0	351	4049
8:40 AM	12	47	4	0	7	44	11	0	2	101	13	1	1	60	7	1	311	4039
8:45 AM	6	47	7	0	12	43	11	0	3	113	16	0	3	76	11	0	348	4044
8:50 AM	14	68	12	0	18	66	13	0	4	76	6	0	4	76	10	0	367	4078
8:55 AM	17	71	14	0	10	44	5	0	7	97	12	1	5	73	11	0	367	4123

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	148	744	132	0	160	612	116	0	56	1144	136	4	48	900	128	0	4328
Heavy Trucks	4	24	0		0	8	0		8	80	20		0	36	8		188
Pedestrians		28				0				44				60			132
Bicycles	0	2	1		0	2	0		0	0	0		0	9	0		14
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/25/2014 5:27 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

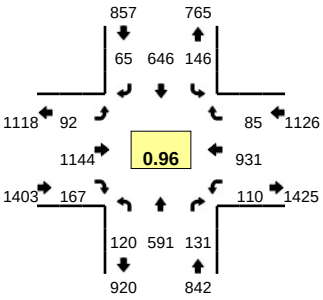
LOCATION: National Blvd -- Venice Blvd

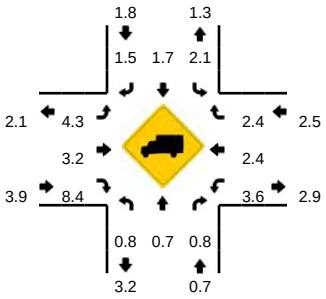
QC JOB #: 13149818

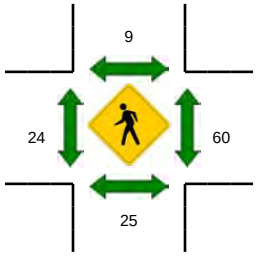
CITY/STATE: Los Angeles, CA

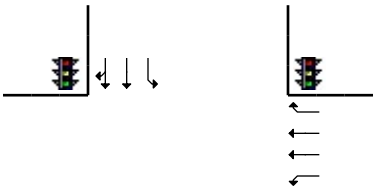
DATE: Wed, Nov 19 2014

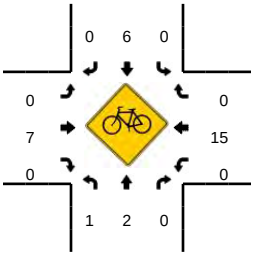
Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:45 PM -- 6:00 PM

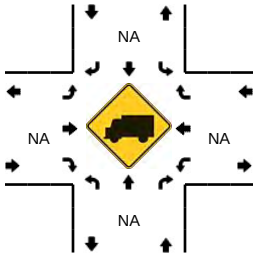


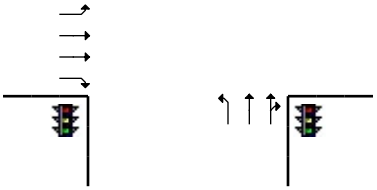


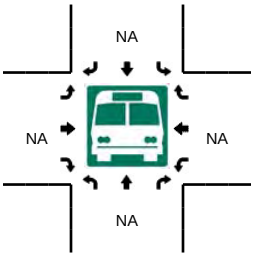












5-Min Count Period Beginning At	National Blvd (Northbound)				National Blvd (Southbound)				Venice Blvd (Eastbound)				Venice Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	9	38	5	0	11	73	2	0	1	101	12	1	7	64	8	0	332	
4:05 PM	8	45	15	0	10	34	1	0	2	90	11	3	7	66	6	1	299	
4:10 PM	9	60	4	0	8	49	13	0	6	66	6	0	0	45	4	0	270	
4:15 PM	8	49	8	0	16	35	10	0	6	111	13	0	6	64	6	1	333	
4:20 PM	11	61	5	0	11	69	4	0	12	88	12	0	10	80	6	0	369	
4:25 PM	9	29	9	0	22	57	3	0	3	118	30	0	12	79	7	0	378	
4:30 PM	5	55	6	0	7	57	3	0	1	80	17	1	8	72	6	2	320	
4:35 PM	13	39	14	0	14	65	3	0	0	119	14	1	11	80	13	0	386	
4:40 PM	8	44	17	0	10	57	2	0	10	88	10	1	16	80	5	0	348	
4:45 PM	12	33	8	0	10	40	4	0	4	104	17	1	9	76	9	0	327	
4:50 PM	9	51	13	0	11	64	10	0	1	108	16	0	16	82	9	0	390	
4:55 PM	7	32	9	0	21	51	6	0	7	101	15	1	10	73	8	0	341	4093
5:00 PM	8	57	14	0	7	50	10	0	5	91	15	0	6	74	9	1	347	4108
5:05 PM	11	47	10	0	6	48	2	0	8	101	10	0	6	77	7	0	333	4142
5:10 PM	10	72	13	0	10	64	11	0	12	98	15	0	6	70	3	1	385	4257
5:15 PM	10	46	7	0	11	53	1	0	7	112	14	1	13	81	8	0	364	4288
5:20 PM	5	62	8	0	10	66	3	0	6	86	8	0	2	65	4	0	325	4244
5:25 PM	15	36	14	0	15	48	6	0	9	90	10	1	12	82	8	0	346	4212
5:30 PM	9	57	12	0	8	34	2	0	9	77	8	0	15	75	5	0	311	4203
5:35 PM	9	32	5	0	15	53	3	0	6	93	24	1	11	82	12	1	347	4164
5:40 PM	11	52	13	1	12	69	8	0	4	100	12	0	6	78	5	0	371	4187
5:45 PM	6	33	9	0	17	53	10	0	12	103	15	0	14	83	6	1	362	4222
5:50 PM	15	61	9	0	17	63	3	0	4	78	16	0	6	71	12	0	355	4187
5:55 PM	10	36	17	0	18	45	6	0	7	115	20	0	9	93	6	0	382	4228

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	124	520	140	0	208	644	76	0	92	1184	204	0	116	988	96	4	4396
Heavy Trucks	0	0	4		0	4	4		0	28	24		0	32	8		104
Pedestrians		24				0				12				12			48
Bicycles	0	1	0		0	1	0		0	4	0		0	4	0		10
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/25/2014 5:29 PM

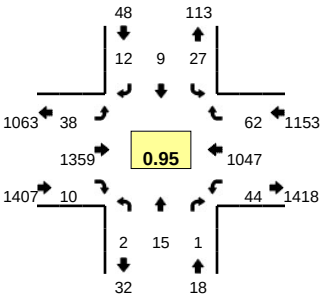
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: User-Defined

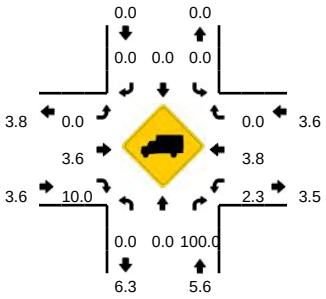
Method for determining peak hour: Total Entering Volume

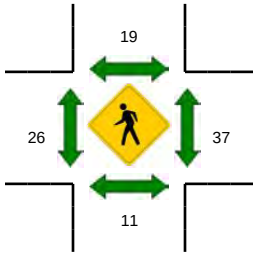
LOCATION: Helms Ave -- Venice Blvd
CITY/STATE: Los Angeles, CA

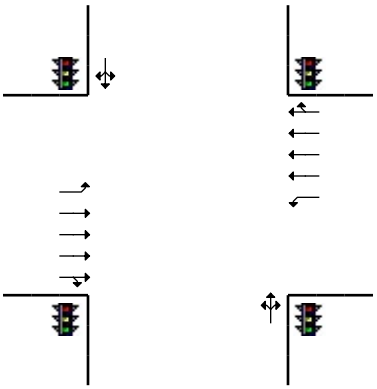
QC JOB #: 13149815
DATE: Thu, Nov 20 2014

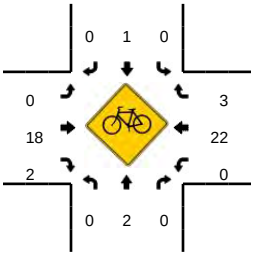


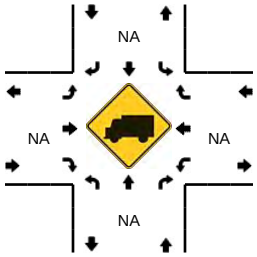
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

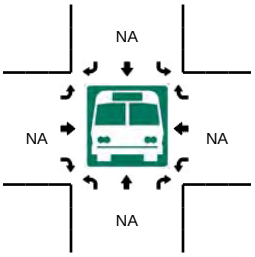












5-Min Count Period Beginning At	Helms Ave (Northbound)				Helms Ave (Southbound)				Venice Blvd (Eastbound)				Venice Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	0	0	0	1	44	1	1	0	68	0	0	115	
7:05 AM	0	1	0	0	0	0	0	0	1	62	2	0	0	99	0	0	165	
7:10 AM	0	1	0	0	1	0	2	0	0	89	1	0	1	88	1	0	184	
7:15 AM	0	1	0	0	1	0	1	0	0	85	1	0	1	116	4	2	212	
7:20 AM	0	0	0	0	1	0	1	0	2	86	0	1	0	103	1	0	195	
7:25 AM	0	0	0	0	0	0	0	1	4	68	0	0	1	97	5	1	177	
7:30 AM	0	1	0	0	2	1	0	0	1	124	1	0	0	100	7	1	238	
7:35 AM	0	3	1	0	1	1	1	0	2	94	1	0	1	92	8	1	206	
7:40 AM	0	1	1	0	1	0	0	0	1	122	0	0	2	89	7	2	226	
7:45 AM	0	0	0	0	1	1	0	0	5	101	1	0	0	77	8	3	197	
7:50 AM	0	1	0	0	6	0	2	0	5	108	0	0	1	50	14	0	187	
7:55 AM	0	0	1	0	2	0	0	0	3	88	0	0	0	80	7	0	181	2283
8:00 AM	0	1	1	0	4	0	1	0	3	134	0	0	0	78	5	1	228	2396
8:05 AM	1	1	0	0	2	1	0	0	1	83	0	1	1	93	4	4	192	2423
8:10 AM	0	0	0	0	0	0	2	0	0	118	0	0	1	81	4	2	208	2447
8:15 AM	0	1	0	0	3	0	3	0	1	101	1	0	0	107	8	4	229	2464
8:20 AM	1	0	0	0	4	0	0	0	4	119	0	0	2	77	5	3	215	2484
8:25 AM	0	2	0	0	3	2	0	0	2	103	0	0	0	99	4	1	216	2523
8:30 AM	0	2	0	0	4	0	1	0	6	127	0	0	0	66	14	1	221	2506
8:35 AM	0	0	0	0	2	1	0	0	4	103	2	0	2	87	8	3	212	2512
8:40 AM	0	2	0	0	0	2	1	0	2	130	0	0	0	72	3	1	213	2499
8:45 AM	0	1	0	0	3	2	1	0	4	112	2	0	1	94	3	4	227	2529
8:50 AM	0	1	0	0	2	1	2	0	0	113	2	0	3	79	2	4	209	2551
8:55 AM	0	4	0	0	0	0	1	0	9	116	3	1	3	114	2	3	256	2626

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	24	0	0	20	12	16	0	52	1364	28	4	28	1148	28	44	2768
Heavy Trucks	0	0	0		0	0	0		0	60	4		0	52	0		116
Pedestrians		12				36				48				44			140
Bicycles	0	1	0		0	0	0		0	8	1		0	7	0		17
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/25/2014 5:27 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

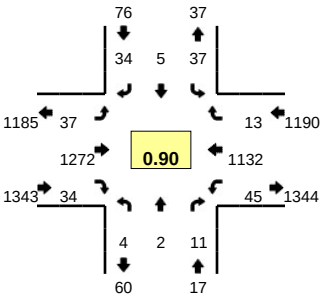
LOCATION: Helms Ave -- Venice Blvd

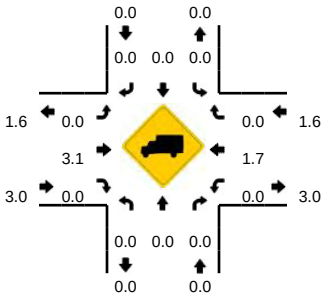
QC JOB #: 13149816

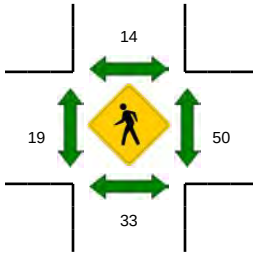
CITY/STATE: Los Angeles, CA

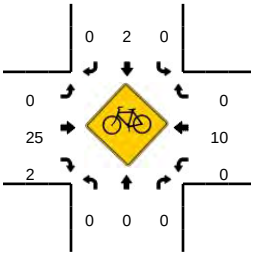
DATE: Wed, Nov 19 2014

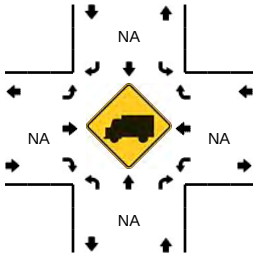
Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:25 PM -- 5:40 PM

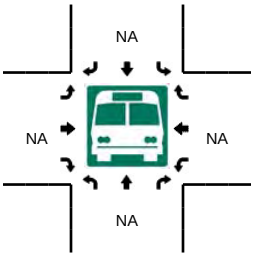


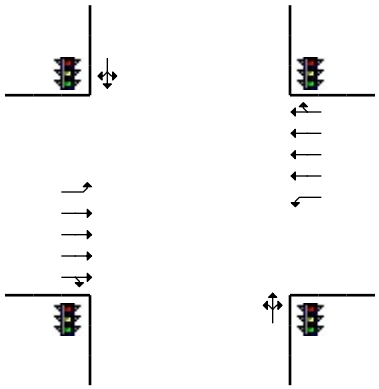












5-Min Count Period Beginning At	Helms Ave (Northbound)				Helms Ave (Southbound)				Venice Blvd (Eastbound)				Venice Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	1	2	0	2	0	2	0	1	114	2	0	2	64	0	1	192	
4:05 PM	0	0	1	0	1	0	2	0	1	134	1	2	1	74	0	1	218	
4:10 PM	0	0	0	0	1	0	1	0	2	99	2	3	0	68	1	1	178	
4:15 PM	2	0	2	0	1	1	7	0	1	82	2	1	1	82	0	0	182	
4:20 PM	0	0	2	0	1	1	3	0	4	137	1	1	0	84	2	0	236	
4:25 PM	0	0	2	0	0	0	3	0	3	124	1	2	2	108	2	2	249	
4:30 PM	1	1	0	0	1	1	2	0	1	118	1	1	2	57	1	2	189	
4:35 PM	2	0	2	0	2	0	1	0	1	126	0	1	0	96	1	2	234	
4:40 PM	1	0	1	0	3	0	1	0	1	152	1	1	1	79	0	1	242	
4:45 PM	2	0	0	0	4	0	3	0	0	126	2	1	1	96	0	1	236	
4:50 PM	0	1	0	0	0	0	5	0	1	130	2	2	0	84	1	3	229	
4:55 PM	1	0	1	0	4	1	2	0	3	128	4	1	1	83	1	1	231	2616
5:00 PM	0	0	1	0	1	0	1	0	2	106	3	2	3	95	0	2	216	2640
5:05 PM	0	0	0	0	4	1	2	0	3	125	2	2	3	96	1	3	242	2664
5:10 PM	2	0	0	0	0	1	3	0	0	142	3	0	3	53	4	2	213	2699
5:15 PM	0	1	1	0	2	0	1	0	1	115	2	0	1	97	2	1	224	2741
5:20 PM	0	0	1	0	5	1	1	0	1	96	1	1	0	83	2	2	194	2699
5:25 PM	0	0	3	0	2	1	3	0	5	118	3	1	2	108	0	3	249	2699
5:30 PM	0	1	2	0	4	1	6	0	2	99	10	0	2	101	1	2	231	2741
5:35 PM	1	0	1	0	2	0	3	0	1	117	1	3	2	118	1	2	252	2759
5:40 PM	1	0	0	0	5	0	7	0	1	119	3	1	0	77	0	0	214	2731
5:45 PM	0	0	1	0	1	0	2	0	4	141	3	1	1	109	0	3	266	2761
5:50 PM	0	0	1	0	7	0	4	0	2	93	3	2	1	72	1	2	188	2720
5:55 PM	0	0	0	0	4	0	1	0	0	1	0	2	3	123	1	2	137	2626

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	4	24	0	32	8	48	0	32	1336	56	16	24	1308	8	28	2928
Heavy Trucks	0	0	0		0	0	0		0	28	0		0	20	0		48
Pedestrians		40				16				36				56			148
Bicycles	0	0	0		0	1	0		0	5	0		0	3	0		9
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/25/2014 5:29 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

LOCATION: Cattaraugus Ave -- Venice Blvd

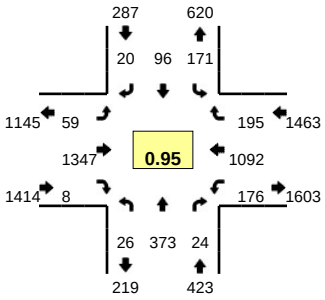
CITY/STATE: Los Angeles, CA

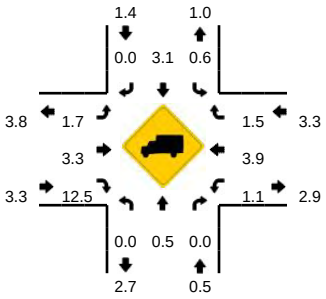
QC JOB #: 13149813

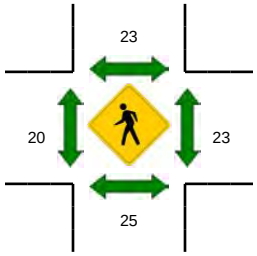
DATE: Thu, Nov 20 2014

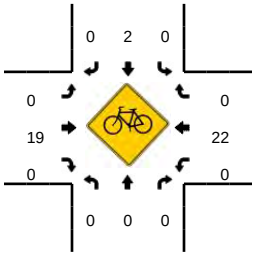
Peak-Hour: 8:00 AM -- 9:00 AM

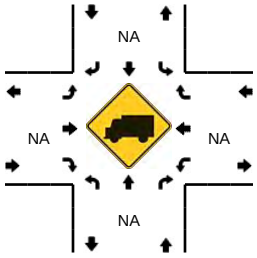
Peak 15-Min: 8:05 AM -- 8:20 AM

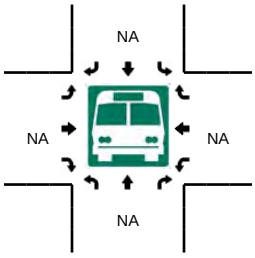


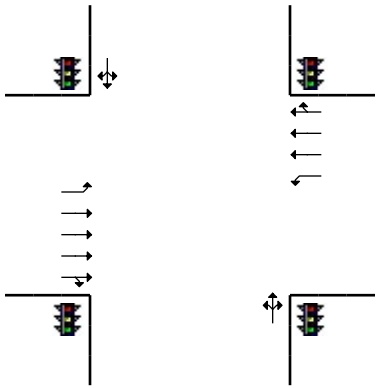












5-Min Count Period Beginning At	Cattaraugus Ave (Northbound)				Cattaraugus Ave (Southbound)				Venice Blvd (Eastbound)				Venice Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	12	0	0	9	1	2	0	2	56	0	1	0	66	8	3	161	
7:05 AM	1	16	0	0	6	1	0	0	5	49	0	0	1	97	7	4	187	
7:10 AM	2	15	1	0	15	1	0	0	4	81	0	0	1	83	12	1	216	
7:15 AM	2	19	1	0	4	4	1	0	4	99	0	1	0	132	13	1	281	
7:20 AM	2	33	1	0	15	5	2	0	2	72	0	0	4	106	17	5	264	
7:25 AM	1	31	0	0	12	7	0	0	5	66	0	2	4	126	31	3	288	
7:30 AM	2	25	2	0	23	6	3	0	7	120	0	0	6	88	14	2	298	
7:35 AM	3	19	0	0	10	8	1	0	3	102	0	1	10	111	18	3	289	
7:40 AM	9	30	1	0	15	4	0	0	5	93	0	1	4	91	17	6	276	
7:45 AM	2	22	3	0	14	7	4	0	6	119	1	0	12	98	15	7	310	
7:50 AM	4	40	4	0	25	11	2	0	6	91	0	0	9	74	20	5	291	
7:55 AM	2	17	0	0	11	5	0	0	7	103	0	1	15	92	20	5	278	3139
8:00 AM	6	42	2	0	20	13	0	0	2	95	1	0	6	68	17	5	277	3255
8:05 AM	4	22	3	0	15	5	4	0	3	122	1	0	16	103	17	4	319	3387
8:10 AM	4	38	1	0	25	22	5	0	4	91	1	0	11	76	14	3	295	3466
8:15 AM	3	24	3	0	4	11	1	0	8	121	0	0	17	115	19	7	333	3518
8:20 AM	2	38	3	0	21	11	2	0	3	82	0	0	11	75	9	2	259	3513
8:25 AM	1	25	5	0	15	6	0	0	5	141	0	1	11	101	15	8	334	3559
8:30 AM	1	39	2	0	12	7	0	0	3	98	1	1	6	73	12	8	263	3524
8:35 AM	0	19	3	0	7	4	1	0	6	128	1	0	6	129	14	6	324	3559
8:40 AM	1	30	0	0	14	5	1	0	6	103	0	2	2	77	18	5	264	3547
8:45 AM	3	24	1	0	13	3	3	0	2	140	1	0	11	99	22	3	325	3562
8:50 AM	1	52	0	0	15	7	1	0	1	93	0	2	9	66	14	5	266	3537
8:55 AM	0	20	1	0	10	2	2	0	9	133	2	1	9	110	24	5	328	3587

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	44	336	28	0	176	152	40	0	60	1336	8	0	176	1176	200	56	3788
Heavy Trucks	0	0	0		0	12	0		0	32	0		4	44	4		96
Pedestrians		20				20				8				24			72
Bicycles	0	0	0		0	2	0		0	4	0		0	3	0		9
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/25/2014 5:27 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

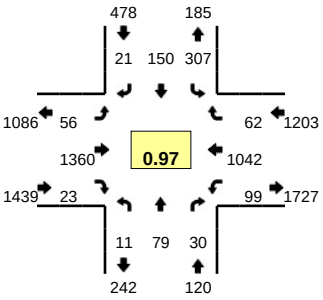
LOCATION: Cattaraugus Ave -- Venice Blvd

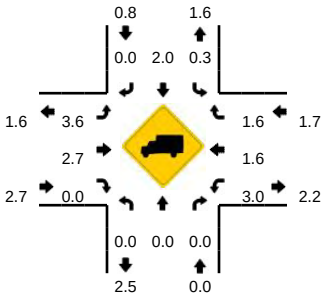
QC JOB #: 13149814

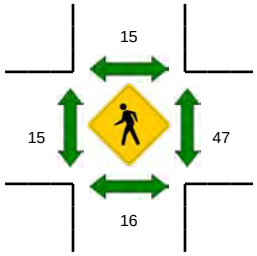
CITY/STATE: Los Angeles, CA

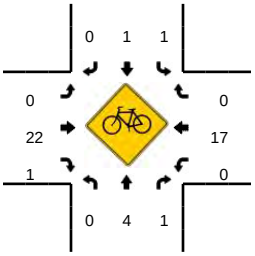
DATE: Wed, Nov 19 2014

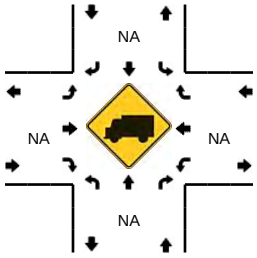
Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:25 PM -- 5:40 PM

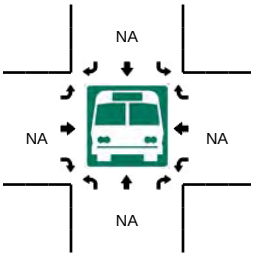


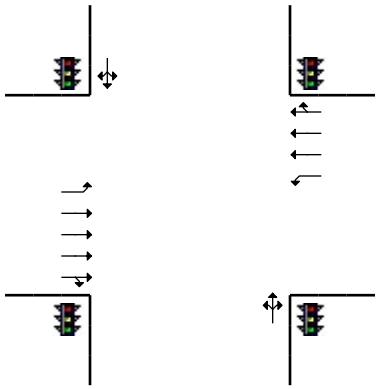












5-Min Count Period Beginning At	Cattaraugus Ave (Northbound)				Cattaraugus Ave (Southbound)				Venice Blvd (Eastbound)				Venice Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	4	3	0	20	10	1	0	2	109	1	0	2	85	5	3	246	
4:05 PM	1	4	1	0	20	7	1	0	2	133	2	2	3	48	7	1	232	
4:10 PM	1	9	0	0	20	14	0	0	5	101	0	2	4	70	9	5	240	
4:15 PM	2	5	0	0	21	5	0	0	1	83	2	0	3	78	7	11	218	
4:20 PM	1	6	3	0	35	5	0	0	7	132	1	0	1	99	7	1	298	
4:25 PM	0	11	4	0	18	11	1	0	7	122	1	0	4	82	8	6	275	
4:30 PM	0	4	2	0	44	7	1	0	4	117	3	0	2	83	5	1	273	
4:35 PM	0	4	0	0	30	7	1	0	2	127	1	1	7	62	2	6	250	
4:40 PM	0	1	2	0	35	19	4	0	4	142	1	0	3	86	7	8	312	
4:45 PM	1	2	2	0	32	14	3	0	5	134	1	1	5	82	3	6	291	
4:50 PM	2	10	0	0	28	16	4	0	2	123	0	1	9	92	1	2	290	
4:55 PM	0	9	0	0	20	8	2	0	2	140	0	0	7	61	3	4	256	3181
5:00 PM	0	2	1	0	34	11	2	0	1	98	1	2	3	102	9	2	268	3203
5:05 PM	0	14	2	0	27	11	0	0	3	121	2	3	6	74	4	5	272	3243
5:10 PM	0	5	1	0	34	15	0	0	5	118	2	0	5	80	8	2	275	3278
5:15 PM	1	11	1	0	10	12	2	0	7	116	4	1	8	70	9	1	253	3313
5:20 PM	3	4	2	0	36	15	2	0	3	90	0	0	5	91	6	2	259	3274
5:25 PM	1	6	2	0	17	12	1	0	9	135	3	1	3	81	3	4	278	3277
5:30 PM	2	2	3	0	21	18	4	0	5	99	3	2	4	106	1	1	271	3275
5:35 PM	0	7	3	0	17	13	2	0	1	132	2	1	5	90	5	5	283	3308
5:40 PM	2	11	4	0	30	8	2	0	3	88	1	1	8	89	3	2	252	3248
5:45 PM	0	1	1	0	24	8	2	0	1	133	2	0	8	82	7	2	271	3228
5:50 PM	1	12	7	0	31	18	1	0	4	92	2	0	6	87	2	2	265	3203
5:55 PM	1	4	3	0	26	9	3	0	2	138	1	1	8	90	5	2	293	3240

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	12	60	32	0	220	172	28	0	60	1464	32	16	48	1108	36	40	3328
Heavy Trucks	0	0	0		4	4	0		0	32	0		0	12	0		52
Pedestrians		12				8				28				36			84
Bicycles	0	0	1		0	1	0		0	5	0		0	4	0		11
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/25/2014 5:29 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

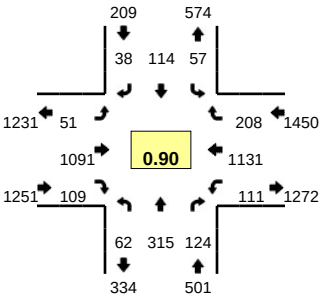
LOCATION: Robertson Blvd -- Washington Blvd

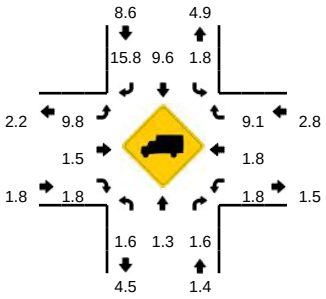
QC JOB #: 13149811

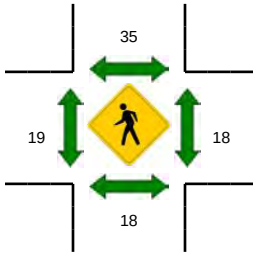
CITY/STATE: Culver City, CA

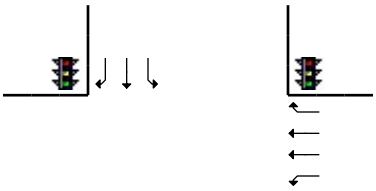
DATE: Thu, Nov 20 2014

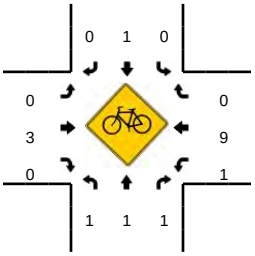
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:10 AM -- 8:25 AM

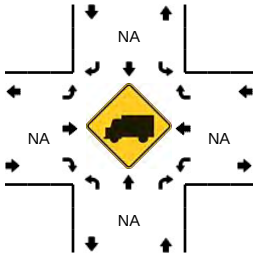


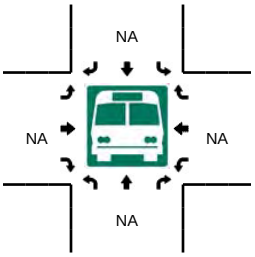












5-Min Count Period Beginning At	Robertson Blvd (Northbound)				Robertson Blvd (Southbound)				Washington Blvd (Eastbound)				Washington Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	3	11	4	0	1	5	0	0	5	46	3	0	6	85	13	0	182	
7:05 AM	4	23	6	0	6	8	2	0	1	33	2	0	1	75	18	0	179	
7:10 AM	2	26	9	0	3	6	0	0	5	46	3	0	2	83	14	0	199	
7:15 AM	5	21	3	0	3	7	1	0	4	51	8	0	8	116	17	0	244	
7:20 AM	10	23	7	0	5	7	1	0	1	65	2	0	3	80	10	0	214	
7:25 AM	4	27	5	0	2	7	3	0	2	55	0	0	1	102	23	0	231	
7:30 AM	5	18	6	0	5	4	2	0	1	63	8	0	2	101	21	0	236	
7:35 AM	3	17	10	0	6	5	2	0	6	62	4	0	4	117	12	0	248	
7:40 AM	2	36	6	0	5	5	1	0	4	57	5	0	1	93	11	0	226	
7:45 AM	4	22	5	0	2	7	2	0	4	98	8	0	4	109	13	0	278	
7:50 AM	4	16	7	0	6	7	3	0	3	61	8	0	5	96	13	0	229	
7:55 AM	6	33	13	0	4	13	4	0	5	87	6	0	5	96	13	0	285	2751
8:00 AM	4	30	12	0	4	6	1	0	3	95	4	0	8	85	15	0	267	2836
8:05 AM	7	16	4	0	5	0	4	0	3	84	11	0	11	79	17	0	241	2898
8:10 AM	2	35	12	0	3	7	3	0	4	94	6	0	4	104	13	0	287	2986
8:15 AM	5	26	14	0	9	4	2	0	6	106	18	0	8	101	25	0	324	3066
8:20 AM	7	29	14	0	8	15	3	0	6	105	9	0	12	101	23	0	332	3184
8:25 AM	5	32	6	0	4	11	4	0	3	85	6	0	10	80	11	0	257	3210
8:30 AM	5	23	12	0	4	8	2	0	2	96	8	0	11	111	25	0	307	3281
8:35 AM	6	26	14	0	6	15	3	0	4	97	8	0	7	103	13	0	302	3335
8:40 AM	1	24	12	0	5	16	5	0	6	79	12	0	7	74	16	0	257	3366
8:45 AM	7	26	8	0	1	9	4	0	6	100	9	0	4	116	15	0	305	3393
8:50 AM	8	23	8	0	5	14	5	0	5	82	14	0	12	95	13	0	284	3448
8:55 AM	5	25	8	0	3	9	2	0	3	68	4	0	17	82	22	0	248	3411

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	56	360	160	0	80	104	32	0	64	1220	132	0	96	1224	244	0	3772
Heavy Trucks	0	8	0		0	4	4		12	20	4		4	24	20		100
Pedestrians		8				36				8				8			60
Bicycles	0	0	0		0	0	0		0	0	0		0	1	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/25/2014 5:27 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

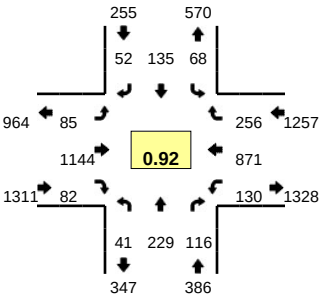
LOCATION: Robertson Blvd -- Washington Blvd

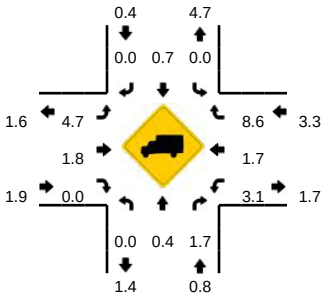
QC JOB #: 13149812

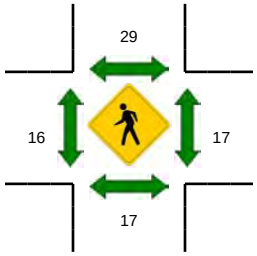
CITY/STATE: Culver City, CA

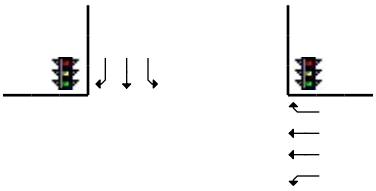
DATE: Wed, Nov 19 2014

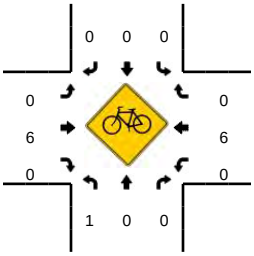
Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:40 PM -- 5:55 PM

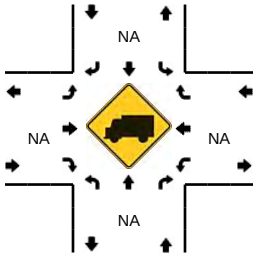


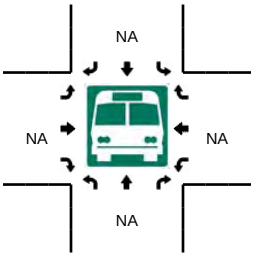












5-Min Count Period Beginning At	Robertson Blvd (Northbound)				Robertson Blvd (Southbound)				Washington Blvd (Eastbound)				Washington Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	3	14	9	0	5	10	5	0	4	120	6	0	2	70	19	0	267	
4:05 PM	4	8	2	0	3	8	4	0	8	84	5	0	5	61	11	0	203	
4:10 PM	1	9	4	0	1	6	4	0	5	105	6	0	7	77	13	0	238	
4:15 PM	4	4	5	0	7	10	2	0	9	88	5	0	9	57	11	0	211	
4:20 PM	2	7	15	0	4	8	2	0	9	114	11	0	7	66	14	0	259	
4:25 PM	6	14	8	0	6	13	7	0	5	72	1	0	9	58	8	0	207	
4:30 PM	2	9	8	0	9	3	7	0	2	96	10	0	10	70	17	0	243	
4:35 PM	3	18	13	0	7	6	2	0	6	122	3	0	5	73	19	0	277	
4:40 PM	4	16	11	0	10	5	7	0	6	121	6	0	7	64	20	0	277	
4:45 PM	3	10	9	0	3	1	2	0	3	118	5	0	6	73	14	0	247	
4:50 PM	0	9	1	0	7	10	3	0	2	88	11	0	10	75	8	0	224	
4:55 PM	2	16	6	0	15	5	7	0	4	90	5	0	7	52	7	0	216	2869
5:00 PM	4	13	3	0	4	12	6	0	7	100	6	0	9	74	24	0	262	2864
5:05 PM	7	15	8	0	7	2	4	0	3	101	2	0	16	78	32	0	275	2936
5:10 PM	2	19	5	0	14	6	6	0	5	97	6	0	11	62	23	0	256	2954
5:15 PM	4	18	15	0	1	8	2	0	9	115	5	0	13	71	16	0	277	3020
5:20 PM	3	24	8	0	7	21	2	0	1	100	10	0	14	71	15	0	276	3037
5:25 PM	4	21	13	0	4	9	3	0	5	80	5	0	7	80	16	0	247	3077
5:30 PM	3	13	6	0	8	13	6	0	11	81	10	0	13	71	20	0	255	3089
5:35 PM	4	13	12	0	4	5	4	0	8	93	3	0	12	69	18	0	245	3057
5:40 PM	5	21	13	0	8	19	5	0	6	96	6	0	8	90	19	0	296	3076
5:45 PM	1	19	11	0	2	11	6	0	12	98	11	0	13	72	22	0	278	3107
5:50 PM	3	23	9	0	4	12	4	0	9	105	9	0	11	75	31	0	295	3178
5:55 PM	1	30	13	0	5	17	4	0	9	78	9	0	3	58	20	0	247	3209

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	36	252	132	0	56	168	60	0	108	1196	104	0	128	948	288	0	3476
Heavy Trucks	0	0	4		0	0	0		4	16	0		4	16	20		64
Pedestrians		8				56				32				28			124
Bicycles	0	0	0		0	0	0		0	0	0		0	3	0		3
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/25/2014 5:29 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

LOCATION: National Blvd -- Washington Blvd

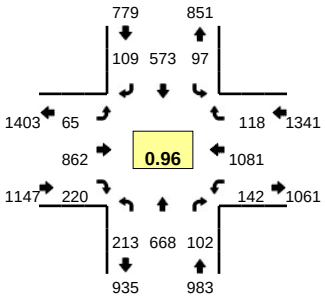
CITY/STATE: Culver City, CA

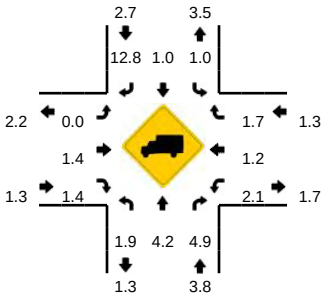
QC JOB #: 13149809

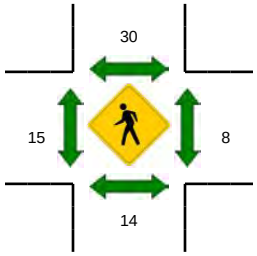
DATE: Thu, Nov 20 2014

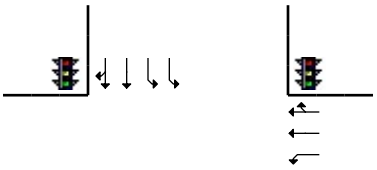
Peak-Hour: 8:00 AM -- 9:00 AM

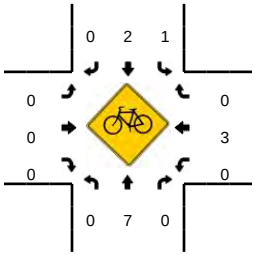
Peak 15-Min: 8:20 AM -- 8:35 AM

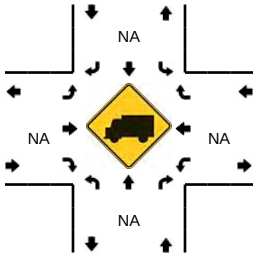


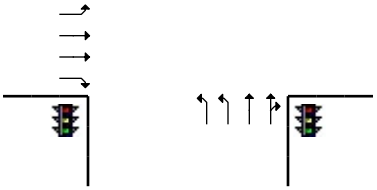


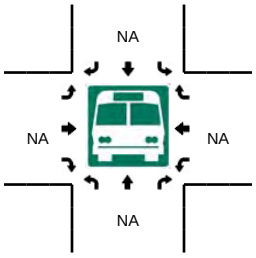












5-Min Count Period Beginning At	National Blvd (Northbound)				National Blvd (Southbound)				Washington Blvd (Eastbound)				Washington Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	19	67	2	0	5	17	2	0	0	27	7	0	4	86	12	0	248	
7:05 AM	18	92	9	0	3	26	7	0	3	33	5	0	2	82	16	0	296	
7:10 AM	22	62	4	0	2	21	5	0	0	40	9	0	4	89	19	0	277	
7:15 AM	24	61	2	0	3	27	7	0	2	33	4	0	4	101	24	0	292	
7:20 AM	32	86	3	0	4	14	2	0	1	48	7	0	3	84	16	0	300	
7:25 AM	24	96	6	0	7	39	5	0	5	41	9	0	5	80	23	0	340	
7:30 AM	33	86	3	0	7	19	7	0	1	49	11	0	7	126	13	0	362	
7:35 AM	22	89	8	0	4	49	9	0	5	53	7	0	9	68	10	0	333	
7:40 AM	28	68	3	0	1	39	5	0	1	43	15	0	6	118	19	0	346	
7:45 AM	20	62	9	0	7	52	11	0	7	56	17	0	9	88	15	0	353	
7:50 AM	16	46	8	0	3	60	2	0	3	50	14	0	15	108	10	0	335	
7:55 AM	19	61	4	0	6	66	6	0	5	56	42	0	7	71	8	0	351	3833
8:00 AM	20	42	3	0	8	38	11	0	2	70	24	0	21	115	13	0	367	3952
8:05 AM	20	61	17	0	12	60	6	0	8	48	24	0	11	57	6	0	330	3986
8:10 AM	14	38	5	0	2	43	5	0	4	73	22	0	16	109	6	0	337	4046
8:15 AM	16	50	9	0	7	62	17	0	5	68	21	0	9	71	7	0	342	4096
8:20 AM	19	64	10	0	4	39	9	0	4	86	25	0	12	103	12	0	387	4183
8:25 AM	14	61	8	0	8	52	9	0	5	79	12	0	11	76	8	0	343	4186
8:30 AM	23	55	8	0	5	32	8	0	4	84	11	0	18	118	10	0	376	4200
8:35 AM	13	63	12	0	11	52	12	0	8	79	11	0	9	76	11	0	357	4224
8:40 AM	19	53	6	0	2	36	4	0	3	65	25	0	12	105	12	0	342	4220
8:45 AM	9	49	4	0	14	54	9	0	11	65	13	0	6	60	6	0	300	4167
8:50 AM	31	68	10	0	9	38	6	0	6	78	16	0	9	103	18	0	392	4224
8:55 AM	15	64	10	0	15	67	13	0	5	67	16	0	8	88	9	0	377	4250

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	224	720	104	0	68	492	104	0	52	996	192	0	164	1188	120	0	4424
Heavy Trucks	8	20	4		0	4	16		0	16	0		4	12	8		92
Pedestrians		20				36				12				8			76
Bicycles	0	1	0		1	1	0		0	0	0		0	3	0		6
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/25/2014 5:27 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

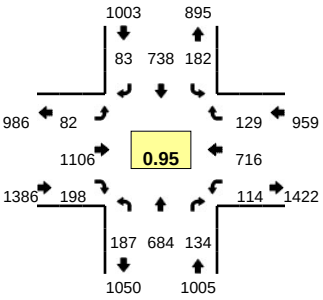
LOCATION: National Blvd -- Washington Blvd

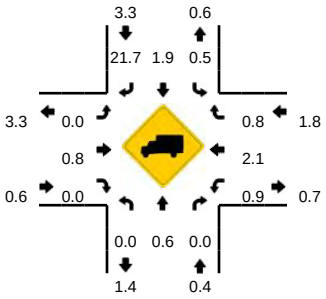
QC JOB #: 13149810

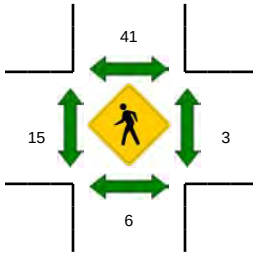
CITY/STATE: Culver City, CA

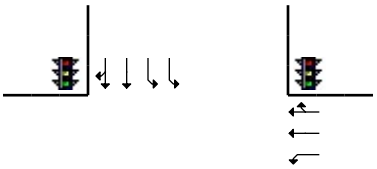
DATE: Thu, Nov 20 2014

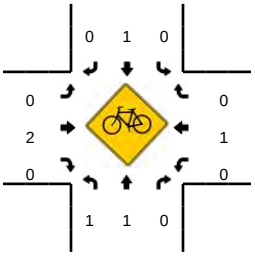
Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

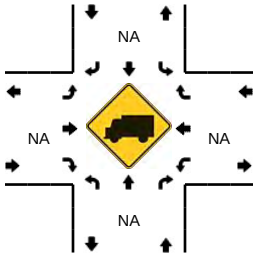


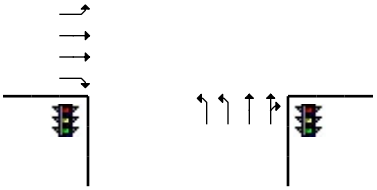


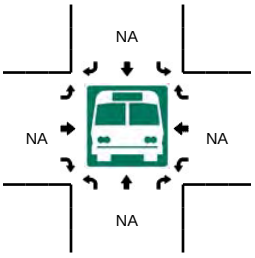












5-Min Count Period Beginning At	National Blvd (Northbound)				National Blvd (Southbound)				Washington Blvd (Eastbound)				Washington Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	7	36	9	0	25	64	9	0	10	76	14	0	12	35	7	0	304	
4:05 PM	17	40	10	0	13	45	8	0	5	94	19	0	11	69	16	0	347	
4:10 PM	16	42	7	0	21	65	5	0	7	79	11	0	5	46	7	0	311	
4:15 PM	15	47	13	0	11	42	2	0	7	108	17	0	12	90	13	0	377	
4:20 PM	11	49	4	0	18	71	12	0	6	90	16	0	6	44	6	0	333	
4:25 PM	18	51	6	0	10	49	7	0	5	110	20	0	12	71	12	0	371	
4:30 PM	18	39	5	0	24	61	9	0	9	98	20	0	7	35	6	0	331	
4:35 PM	22	61	12	0	10	50	7	0	4	119	24	0	10	78	10	0	407	
4:40 PM	19	64	17	0	17	75	12	0	12	80	23	0	6	36	6	0	367	
4:45 PM	23	49	15	0	15	51	10	0	12	83	19	0	18	70	9	0	374	
4:50 PM	15	44	10	0	12	86	10	0	9	56	13	0	10	46	6	0	317	
4:55 PM	15	48	6	0	11	56	5	0	4	81	19	0	13	68	9	0	335	4174
5:00 PM	17	70	14	0	17	66	10	0	5	76	10	0	12	42	8	0	347	4217
5:05 PM	25	54	15	0	20	51	2	0	3	113	22	0	8	81	13	0	407	4277
5:10 PM	17	60	14	0	20	69	9	0	8	95	12	0	5	46	9	0	364	4330
5:15 PM	16	39	9	0	16	51	8	0	4	108	19	0	10	77	19	0	376	4329
5:20 PM	12	56	18	0	18	79	9	0	6	93	15	0	7	59	7	0	379	4375
5:25 PM	15	55	5	0	13	60	6	0	9	92	21	0	13	43	6	0	338	4342
5:30 PM	17	75	8	0	22	84	7	0	10	89	20	0	8	33	9	0	382	4393
5:35 PM	16	49	10	0	10	60	6	0	4	100	25	0	9	74	15	0	378	4364
5:40 PM	11	66	16	0	8	67	8	0	9	89	11	0	6	55	8	0	354	4351
5:45 PM	17	48	9	0	12	43	3	0	4	87	13	0	16	68	17	0	337	4314
5:50 PM	12	66	9	0	12	63	9	0	15	76	12	0	12	68	7	0	361	4358
5:55 PM	12	46	7	0	14	45	6	0	5	88	18	0	8	70	11	0	330	4353

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	232	612	152	0	224	684	76	0	60	1264	212	0	92	816	164	0	4588
Heavy Trucks	0	0	0		0	16	12		0	8	0		0	16	0		52
Pedestrians		8				44				28				4			84
Bicycles	0	0	0		0	0	0		0	1	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/25/2014 5:29 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

LOCATION: Helms Ave -- Washington Blvd

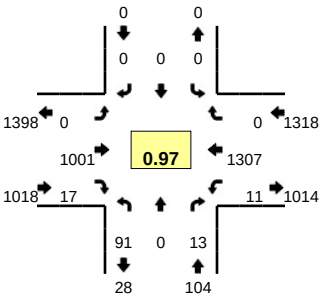
CITY/STATE: Culver City, CA

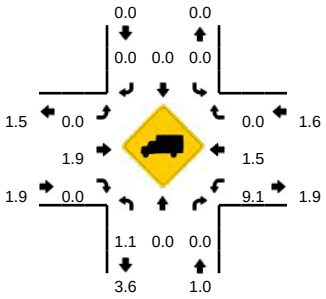
QC JOB #: 13149807

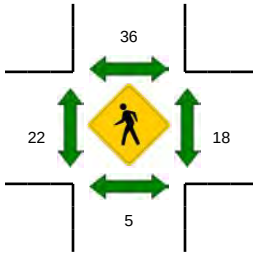
DATE: Thu, Nov 20 2014

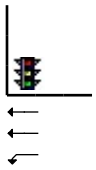
Peak-Hour: 8:00 AM -- 9:00 AM

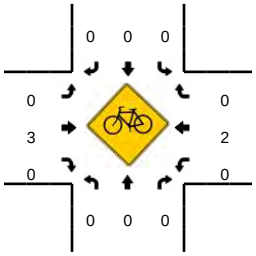
Peak 15-Min: 8:15 AM -- 8:30 AM

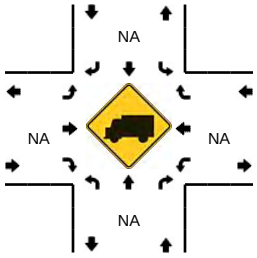


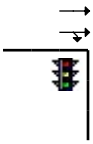


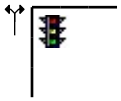


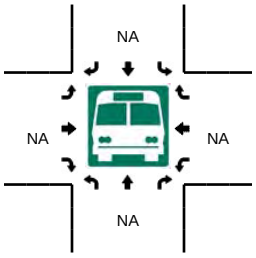












5-Min Count Period Beginning At	Helms Ave (Northbound)				Helms Ave (Southbound)				Washington Blvd (Eastbound)				Washington Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	0	0	0	0	0	0	0	0	43	1	0	1	97	0	0	143	
7:05 AM	5	0	0	0	0	0	0	0	0	39	0	0	0	111	0	0	155	
7:10 AM	3	0	0	0	0	0	0	0	0	42	0	0	1	93	0	0	139	
7:15 AM	4	0	1	0	0	0	0	0	0	35	2	0	1	135	0	0	178	
7:20 AM	4	0	0	0	0	0	0	0	0	59	5	0	0	99	0	0	167	
7:25 AM	3	0	0	0	0	0	0	0	0	39	2	0	0	121	0	0	165	
7:30 AM	11	0	0	0	0	0	0	0	0	70	0	0	0	138	0	0	219	
7:35 AM	5	0	1	0	0	0	0	0	0	53	0	0	0	136	0	0	195	
7:40 AM	5	0	2	0	0	0	0	0	0	51	2	0	0	94	0	0	154	
7:45 AM	7	0	1	0	0	0	0	0	0	63	3	1	1	129	0	0	205	
7:50 AM	10	0	4	0	0	0	0	0	0	80	3	0	1	113	0	0	211	
7:55 AM	14	0	2	0	0	0	0	0	0	49	1	0	2	103	0	0	171	2102
8:00 AM	7	0	0	0	0	0	0	0	0	73	2	0	1	132	0	0	215	2174
8:05 AM	2	0	0	0	0	0	0	0	0	80	0	0	3	123	0	0	208	2227
8:10 AM	6	0	0	0	0	0	0	0	0	74	0	0	1	91	0	0	172	2260
8:15 AM	11	0	0	0	0	0	0	0	0	76	2	0	1	117	0	0	207	2289
8:20 AM	10	0	1	0	0	0	0	0	0	103	1	0	1	112	0	0	228	2350
8:25 AM	16	0	2	0	0	0	0	0	0	73	7	0	0	97	0	0	195	2380
8:30 AM	11	0	4	0	0	0	0	0	0	77	0	0	0	103	0	0	195	2356
8:35 AM	6	0	2	0	0	0	0	0	0	113	0	0	2	116	0	0	239	2400
8:40 AM	8	0	1	0	0	0	0	0	0	68	0	0	0	81	0	0	158	2404
8:45 AM	5	0	1	0	0	0	0	0	0	77	2	0	1	105	0	0	191	2390
8:50 AM	7	0	0	0	0	0	0	0	0	111	2	0	0	126	0	0	246	2425
8:55 AM	2	0	2	0	0	0	0	0	0	76	1	0	1	104	0	0	186	2440

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	148	0	12	0	0	0	0	0	0	1008	40	0	8	1304	0	0	2520
Heavy Trucks	0	0	0		0	0	0		0	24	0		0	20	0		44
Pedestrians		4				4				24				32			64
Bicycles	0	0	0		0	0	0		0	1	0		0	2	0		3
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/25/2014 5:27 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

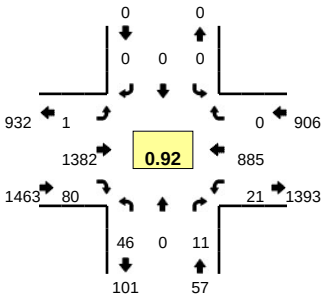
LOCATION: Helms Ave -- Washington Blvd

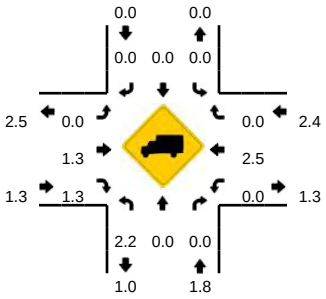
QC JOB #: 13149808

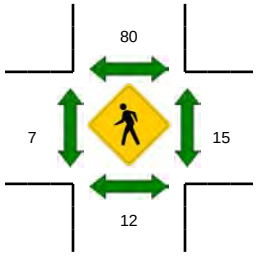
CITY/STATE: Culver City, CA

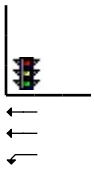
DATE: Thu, Nov 20 2014

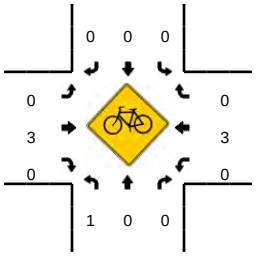
Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

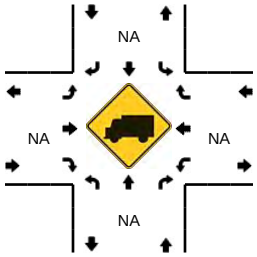


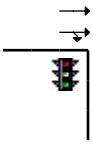


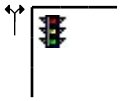


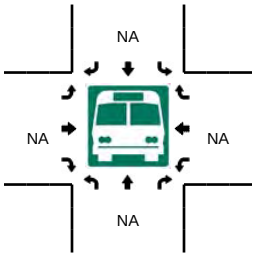












5-Min Count Period Beginning At	Helms Ave (Northbound)				Helms Ave (Southbound)				Washington Blvd (Eastbound)				Washington Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	7	0	3	0	0	0	0	0	0	118	2	0	1	65	0	0	196	
4:05 PM	3	0	2	0	0	0	0	0	0	122	4	0	0	67	0	0	198	
4:10 PM	5	0	1	0	0	0	0	0	0	111	3	0	2	73	0	0	195	
4:15 PM	4	0	2	0	0	0	0	0	0	129	1	0	0	87	0	0	223	
4:20 PM	5	0	0	0	0	0	0	0	0	124	0	0	2	76	0	0	207	
4:25 PM	3	0	1	0	0	0	0	0	0	130	3	0	1	71	0	0	209	
4:30 PM	2	0	0	0	0	0	0	0	0	137	0	0	0	63	0	0	202	
4:35 PM	3	0	0	0	0	0	0	0	0	136	4	0	1	77	0	0	221	
4:40 PM	4	0	0	0	0	0	0	0	0	114	2	0	1	68	0	0	189	
4:45 PM	7	0	1	0	0	0	0	0	0	118	1	1	2	71	0	0	201	
4:50 PM	3	0	2	0	0	0	0	0	0	80	0	0	0	80	0	0	165	
4:55 PM	2	0	0	0	0	0	0	0	0	92	1	0	2	70	0	0	167	2373
5:00 PM	4	0	2	0	0	0	0	0	0	110	3	0	0	81	0	0	200	2377
5:05 PM	6	0	2	0	0	0	0	0	0	151	1	1	2	72	0	0	235	2414
5:10 PM	3	0	1	0	0	0	0	0	0	130	3	0	2	66	0	0	205	2424
5:15 PM	3	0	0	0	0	0	0	0	0	117	6	0	1	95	0	0	222	2423
5:20 PM	3	0	1	0	0	0	0	0	0	116	3	0	5	69	0	0	197	2413
5:25 PM	3	0	2	0	0	0	0	0	0	101	11	0	4	55	0	0	176	2380
5:30 PM	6	0	1	0	0	0	0	0	0	113	11	0	1	65	0	0	197	2375
5:35 PM	6	0	0	0	0	0	0	0	0	105	9	0	1	81	0	0	202	2356
5:40 PM	3	0	1	0	0	0	0	0	0	109	10	0	0	79	0	0	202	2369
5:45 PM	3	0	0	0	0	0	0	0	0	99	10	0	2	65	0	0	179	2347
5:50 PM	3	0	1	0	0	0	0	0	0	115	11	0	0	95	0	0	225	2407
5:55 PM	3	0	0	0	0	0	0	0	0	116	2	0	3	62	0	0	186	2426

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	48	0	12	0	0	0	0	0	0	1592	40	4	20	932	0	0	2648
Heavy Trucks	0	0	0		0	0	0		0	16	0		0	20	0		36
Pedestrians		4				92				0				8			104
Bicycles	0	0	0		0	0	0		0	2	0		0	1	0		3
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/25/2014 5:29 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

LOCATION: S Robertson Blvd -- National Blvd

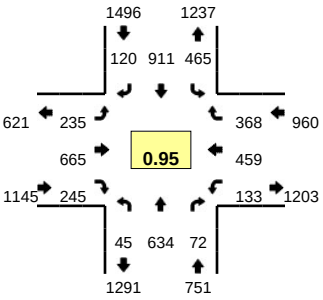
CITY/STATE: Los Angeles, CA

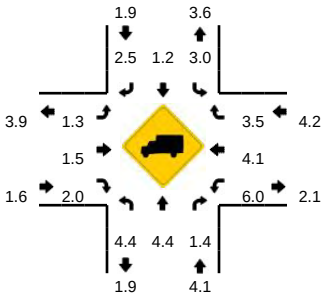
QC JOB #: 13149805

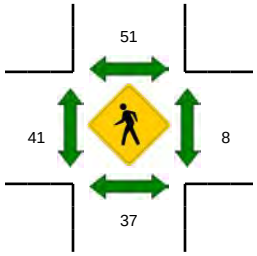
DATE: Thu, Nov 20 2014

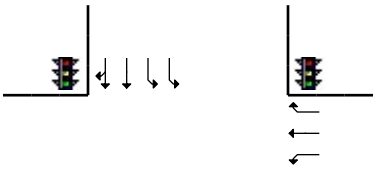
Peak-Hour: 8:00 AM -- 9:00 AM

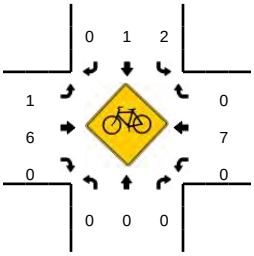
Peak 15-Min: 8:45 AM -- 9:00 AM

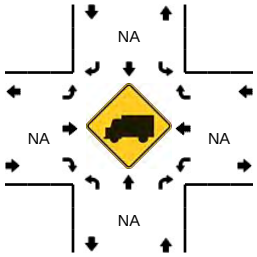


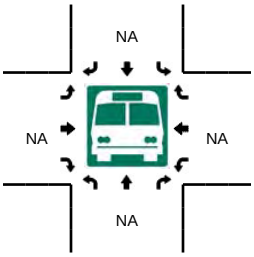












5-Min Count Period Beginning At	S Robertson Blvd (Northbound)				S Robertson Blvd (Southbound)				National Blvd (Eastbound)				National Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	3	49	7	0	28	46	14	0	9	27	11	0	18	27	20	0	259	
7:05 AM	4	28	12	0	29	47	14	0	12	39	13	0	26	36	27	0	287	
7:10 AM	0	43	5	0	42	66	22	0	12	28	15	0	22	44	33	0	332	
7:15 AM	6	40	6	1	34	76	21	0	11	19	13	0	19	35	17	0	298	
7:20 AM	6	42	3	0	33	51	19	0	20	34	17	0	20	44	33	0	322	
7:25 AM	3	49	5	0	46	75	23	0	11	30	15	0	19	45	42	0	363	
7:30 AM	5	65	3	2	38	84	21	0	16	24	25	0	18	38	36	0	375	
7:35 AM	4	40	3	0	32	59	14	0	26	45	24	0	11	44	48	0	350	
7:40 AM	9	48	3	0	50	73	11	0	19	47	11	0	15	39	31	0	356	
7:45 AM	6	79	5	0	34	86	16	0	20	39	20	0	13	29	29	0	376	
7:50 AM	3	31	5	0	30	84	20	0	25	74	18	0	8	39	35	0	372	
7:55 AM	0	48	4	0	46	86	11	0	18	59	20	0	15	42	18	0	367	4057
8:00 AM	3	65	7	0	39	80	15	0	19	67	16	0	8	28	36	0	383	4181
8:05 AM	5	44	3	1	32	52	6	0	25	63	20	0	13	38	29	0	331	4225
8:10 AM	3	35	5	0	43	75	14	0	20	38	30	0	12	42	30	0	347	4240
8:15 AM	3	66	9	0	36	81	13	0	15	48	21	0	10	32	24	0	358	4300
8:20 AM	5	50	2	0	35	61	5	0	24	66	20	0	11	43	32	0	354	4332
8:25 AM	2	28	4	1	43	75	17	0	15	64	17	0	12	41	35	0	354	4323
8:30 AM	1	66	6	1	41	88	8	0	18	51	14	0	10	35	19	0	358	4306
8:35 AM	2	54	5	0	38	69	5	0	24	52	20	0	8	37	29	0	343	4299
8:40 AM	4	66	5	0	42	83	3	0	19	47	21	0	14	43	30	0	377	4320
8:45 AM	7	72	11	0	32	83	8	0	18	55	16	0	11	40	24	0	377	4321
8:50 AM	4	43	7	0	36	76	13	0	23	74	23	0	11	46	35	0	391	4340
8:55 AM	3	45	8	0	48	88	13	0	15	40	27	0	12	34	45	1	379	4352

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	56	640	104	0	464	988	136	0	224	676	264	0	136	480	416	4	4588
Heavy Trucks	4	48	0		16	8	4		0	4	4		0	28	16		132
Pedestrians		40				52				28				12			132
Bicycles	0	0	0		0	0	0		0	0	0		0	3	0		3
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/25/2014 5:27 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

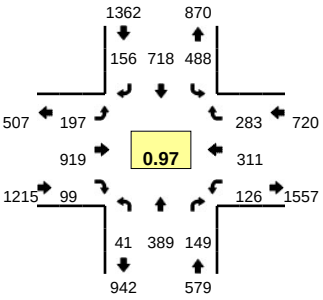
LOCATION: S Robertson Blvd -- National Blvd

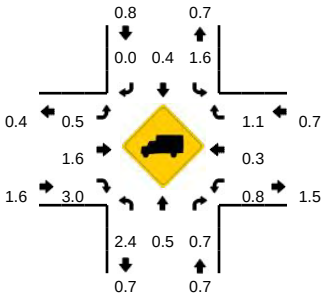
QC JOB #: 13149806

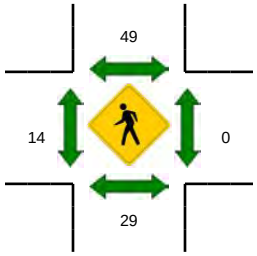
CITY/STATE: Los Angeles, CA

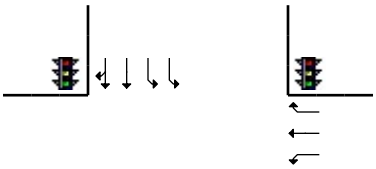
DATE: Wed, Nov 19 2014

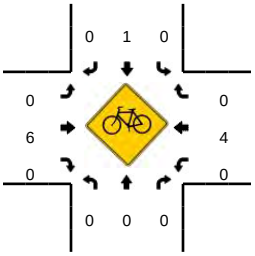
Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:40 PM -- 5:55 PM

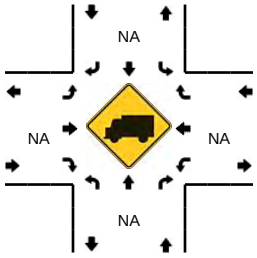


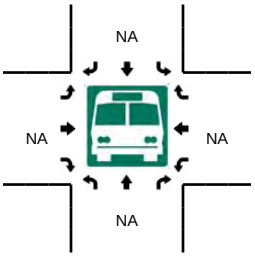












5-Min Count Period Beginning At	S Robertson Blvd (Northbound)				S Robertson Blvd (Southbound)				National Blvd (Eastbound)				National Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	6	20	10	0	33	44	17	0	17	68	9	0	9	27	11	1	272	
4:05 PM	1	39	7	0	41	50	12	0	9	54	6	0	9	22	25	1	276	
4:10 PM	1	23	12	0	36	53	13	0	27	73	7	0	7	21	11	0	284	
4:15 PM	0	44	17	0	37	47	16	0	12	77	7	0	9	23	30	0	319	
4:20 PM	3	32	7	0	47	59	19	0	12	69	3	0	5	29	25	1	311	
4:25 PM	3	30	10	0	35	45	15	0	22	85	5	0	7	20	12	0	289	
4:30 PM	1	28	9	0	34	55	17	0	16	70	9	0	12	26	17	0	294	
4:35 PM	4	16	12	0	46	57	7	0	7	66	8	0	7	23	22	0	275	
4:40 PM	3	23	15	0	36	43	13	0	18	90	6	0	7	24	24	0	302	
4:45 PM	2	35	9	0	38	57	13	0	20	82	11	0	7	31	15	0	320	
4:50 PM	2	31	11	0	50	58	14	0	19	73	4	0	12	20	14	0	308	
4:55 PM	2	25	16	0	38	53	11	0	21	83	11	0	9	27	18	0	314	3564
5:00 PM	5	16	13	0	37	52	20	0	19	83	10	0	10	26	30	0	321	3613
5:05 PM	3	45	12	1	46	68	12	0	12	70	7	0	9	29	24	0	338	3675
5:10 PM	2	31	22	0	30	36	9	1	25	78	5	0	10	23	24	0	296	3687
5:15 PM	1	36	17	0	34	54	20	0	14	74	11	0	17	41	32	0	351	3719
5:20 PM	4	33	10	0	45	74	14	0	17	70	3	0	7	23	18	0	318	3726
5:25 PM	2	41	11	0	37	53	13	0	17	77	13	0	7	18	18	0	307	3744
5:30 PM	4	28	12	0	40	64	7	0	9	81	9	0	15	26	26	0	321	3771
5:35 PM	6	32	9	0	47	61	12	0	10	65	11	0	8	26	20	1	308	3804
5:40 PM	6	24	9	0	39	54	19	0	25	77	10	0	10	22	25	0	320	3822
5:45 PM	1	25	11	0	45	65	8	0	16	87	6	0	10	35	26	1	336	3838
5:50 PM	1	45	12	0	46	77	15	0	14	67	9	0	10	22	22	0	340	3870
5:55 PM	5	33	11	0	41	60	7	0	19	90	5	0	11	20	18	0	320	3876

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	32	376	128	0	520	784	168	0	220	924	100	0	120	316	292	4	3984
Heavy Trucks	0	0	0		8	0	0		4	12	0		0	0	0		24
Pedestrians		32				56				16				0			104
Bicycles	0	0	0		0	1	0		0	1	0		0	0	0		2
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/25/2014 5:29 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

LOCATION: National Blvd -- I-10 EB on Ramp

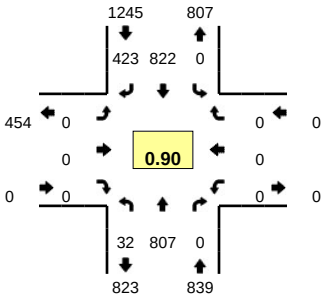
CITY/STATE: Los Angeles, CA

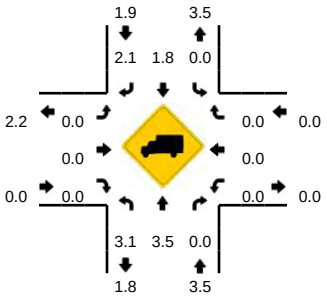
QC JOB #: 13149803

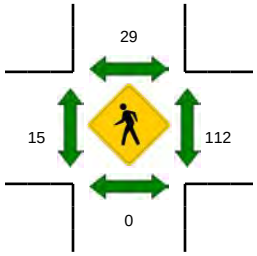
DATE: Thu, Nov 20 2014

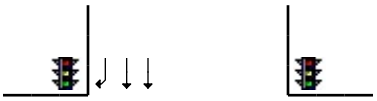
Peak-Hour: 8:00 AM -- 9:00 AM

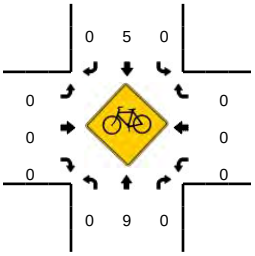
Peak 15-Min: 8:45 AM -- 9:00 AM

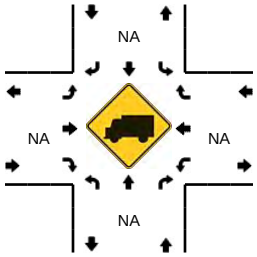


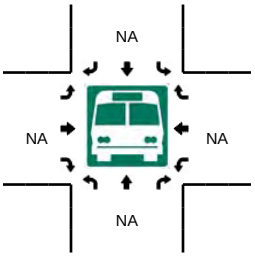












5-Min Count Period Beginning At	National Blvd (Northbound)				National Blvd (Southbound)				I-10 EB on Ramp (Eastbound)				I-10 EB on Ramp (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	4	88	0	0	0	21	43	0	0	0	0	0	0	0	0	0	156	
7:05 AM	8	82	0	0	0	30	49	0	0	0	0	0	0	0	0	0	169	
7:10 AM	3	87	0	0	0	35	35	0	0	0	0	0	0	0	0	0	160	
7:15 AM	7	59	0	0	0	23	48	0	0	0	0	0	0	0	0	0	137	
7:20 AM	2	100	0	0	0	25	42	0	0	0	0	0	0	0	0	0	169	
7:25 AM	4	99	0	0	0	45	32	0	0	0	0	0	0	0	0	0	180	
7:30 AM	3	93	0	0	0	45	28	0	0	0	0	0	0	0	0	0	169	
7:35 AM	6	90	0	0	0	46	31	0	0	0	0	0	0	0	0	0	173	
7:40 AM	4	72	0	0	0	64	30	0	0	0	0	0	0	0	0	0	170	
7:45 AM	1	67	0	0	0	63	31	0	0	0	0	0	0	0	0	0	162	
7:50 AM	1	51	0	0	0	75	34	0	0	0	0	0	0	0	0	0	161	
7:55 AM	1	50	0	0	0	77	29	0	0	0	0	0	0	0	0	0	157	1963
8:00 AM	1	68	0	0	0	78	48	0	0	0	0	0	0	0	0	0	195	2002
8:05 AM	2	59	0	0	0	67	35	0	0	0	0	0	0	0	0	0	163	1996
8:10 AM	1	65	0	0	0	62	25	0	0	0	0	0	0	0	0	0	153	1989
8:15 AM	3	59	0	0	0	62	37	0	0	0	0	0	0	0	0	0	161	2013
8:20 AM	2	59	0	0	0	66	35	0	0	0	0	0	0	0	0	0	162	2006
8:25 AM	7	75	0	0	0	72	30	0	0	0	0	0	0	0	0	0	184	2010
8:30 AM	1	67	0	0	0	76	46	0	0	0	0	0	0	0	0	0	190	2031
8:35 AM	1	62	0	0	0	55	37	0	0	0	0	0	0	0	0	0	155	2013
8:40 AM	7	49	0	0	0	51	33	0	0	0	0	0	0	0	0	0	140	1983
8:45 AM	1	85	0	0	0	79	36	0	0	0	0	0	0	0	0	0	201	2022
8:50 AM	1	64	0	0	0	86	32	0	0	0	0	0	0	0	0	0	183	2044
8:55 AM	4	95	0	1	0	68	29	0	0	0	0	0	0	0	0	0	197	2084

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	24	976	0	4	0	932	388	0	0	0	0	0	0	0	0	0	2324
Heavy Trucks	4	28	0		0	8	12		0	0	0		0	0	0		52
Pedestrians		0				20				8				56			84
Bicycles	0	4	0		0	1	0		0	0	0		0	0	0		5
Railroad																	
Stopped Buses																	

Comments: National/I-10 EB Ramps

Report generated on 11/25/2014 5:27 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

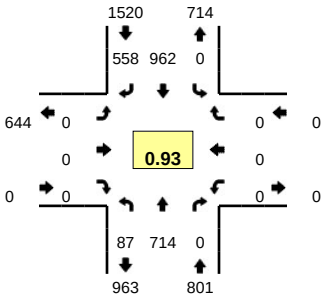
LOCATION: National Blvd -- I-10 EB on Ramp

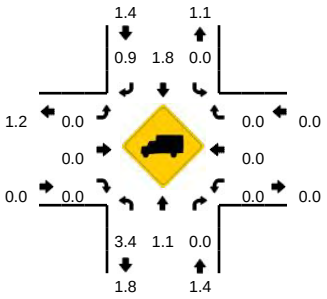
QC JOB #: 13149804

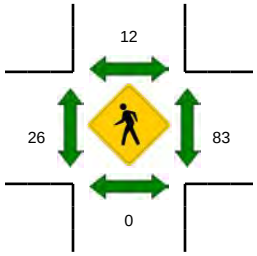
CITY/STATE: Los Angeles, CA

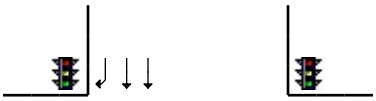
DATE: Wed, Nov 19 2014

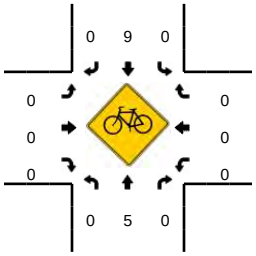
Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

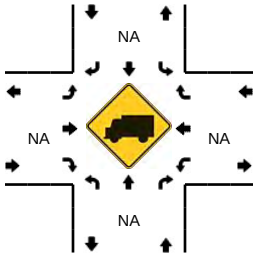


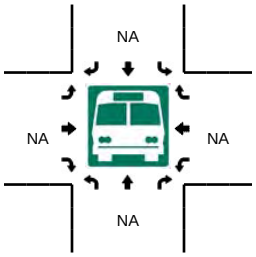












5-Min Count Period Beginning At	National Blvd (Northbound)				National Blvd (Southbound)				I-10 EB on Ramp (Eastbound)				I-10 EB on Ramp (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	41	0	0	0	85	37	0	0	0	0	0	0	0	0	0	164	
4:05 PM	1	61	0	0	0	68	36	1	0	0	0	0	0	0	0	0	167	
4:10 PM	5	28	0	0	0	74	40	0	0	0	0	0	0	0	0	0	147	
4:15 PM	3	67	0	0	0	88	48	0	0	0	0	0	0	0	0	0	206	
4:20 PM	3	62	0	0	0	79	38	0	0	0	0	0	0	0	0	0	182	
4:25 PM	4	57	0	0	0	81	31	1	0	0	0	0	0	0	0	0	174	
4:30 PM	3	34	0	0	0	80	31	0	0	0	0	0	0	0	0	0	148	
4:35 PM	1	70	0	0	0	98	42	0	0	0	0	0	0	0	0	0	211	
4:40 PM	5	47	0	0	0	79	50	0	0	0	0	0	0	0	0	0	181	
4:45 PM	4	51	0	0	0	74	46	0	0	0	0	0	0	0	0	0	175	
4:50 PM	0	50	0	0	0	86	51	0	0	0	0	0	0	0	0	0	187	
4:55 PM	4	60	0	0	0	70	38	0	0	0	0	0	0	0	0	0	172	2114
5:00 PM	4	54	0	0	0	96	48	0	0	0	0	0	0	0	0	0	202	2152
5:05 PM	10	82	0	0	0	81	42	0	0	0	0	0	0	0	0	0	215	2200
5:10 PM	9	54	0	0	0	74	51	0	0	0	0	0	0	0	0	0	188	2241
5:15 PM	7	79	0	0	0	82	50	0	0	0	0	0	0	0	0	0	218	2253
5:20 PM	7	45	0	0	0	75	49	0	0	0	0	0	0	0	0	0	176	2247
5:25 PM	5	53	0	0	0	75	40	0	0	0	0	0	0	0	0	0	173	2246
5:30 PM	6	53	0	0	0	74	45	0	0	0	0	0	0	0	0	0	178	2276
5:35 PM	2	67	0	0	0	87	49	0	0	0	0	0	0	0	0	0	205	2270
5:40 PM	4	46	0	1	0	81	40	0	0	0	0	0	0	0	0	0	172	2261
5:45 PM	14	65	0	0	0	85	45	0	0	0	0	0	0	0	0	0	209	2295
5:50 PM	8	53	0	0	0	74	55	0	0	0	0	0	0	0	0	0	190	2298
5:55 PM	10	63	0	0	0	78	44	0	0	0	0	0	0	0	0	0	195	2321

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	104	860	0	0	0	948	572	0	0	0	0	0	0	0	0	0	2484
Heavy Trucks	0	12	0		0	8	4		0	0	0		0	0	0		24
Pedestrians		0				36				32				68			136
Bicycles	0	1	0		0	3	0		0	0	0		0	0	0		4
Railroad																	
Stopped Buses																	

Comments: National/I-10 EB Ramps

Report generated on 11/25/2014 5:29 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

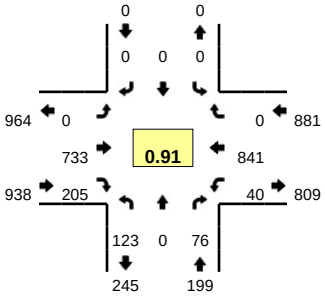
Type of peak hour being reported: User-Defined

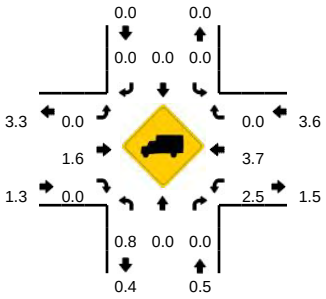
Method for determining peak hour: Total Entering Volume

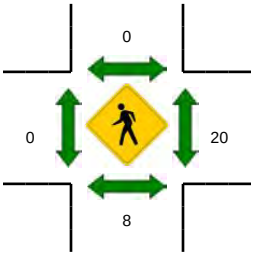
LOCATION: Wesley St -- National Blvd
CITY/STATE: Culver City, CA

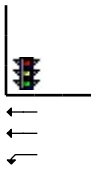
QC JOB #: 13149801
DATE: Thu, Nov 20 2014

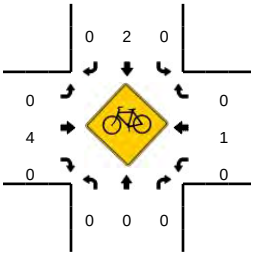
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:15 AM -- 8:30 AM

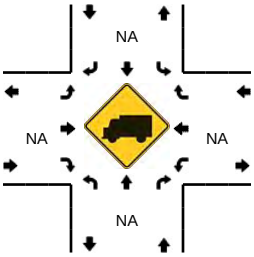


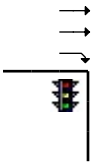


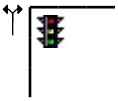


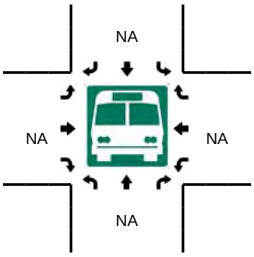












5-Min Count Period Beginning At	Wesley St (Northbound)				Wesley St (Southbound)				National Blvd (Eastbound)				National Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	0	0	0	0	0	0	0	0	27	1	0	0	92	0	0	121	
7:05 AM	1	0	2	0	0	0	0	0	0	33	1	0	4	120	0	0	161	
7:10 AM	1	0	1	0	0	0	0	0	0	29	1	0	0	112	0	0	144	
7:15 AM	1	0	3	0	0	0	0	0	0	31	3	0	3	83	0	0	124	
7:20 AM	2	0	0	0	0	0	0	0	0	22	0	0	3	106	0	0	133	
7:25 AM	4	0	4	0	0	0	0	0	0	48	5	0	10	120	0	0	191	
7:30 AM	2	0	1	0	0	0	0	0	0	30	4	0	5	107	0	0	149	
7:35 AM	6	0	1	0	0	0	0	0	0	52	9	0	5	122	0	0	195	
7:40 AM	3	0	2	0	0	0	0	0	0	45	12	0	4	82	0	0	148	
7:45 AM	11	0	1	0	0	0	0	0	0	53	13	0	8	86	0	0	172	
7:50 AM	11	0	4	0	0	0	0	0	0	61	26	0	6	81	0	0	189	
7:55 AM	14	0	5	0	0	0	0	0	0	87	30	0	6	81	0	0	223	1950
8:00 AM	21	0	6	0	0	0	0	0	0	52	29	0	2	40	0	0	150	1979
8:05 AM	19	0	9	0	0	0	0	0	0	62	29	0	1	90	0	0	210	2028
8:10 AM	16	0	14	0	0	0	0	0	0	54	25	0	4	38	0	0	151	2035
8:15 AM	15	0	10	0	0	0	0	0	0	77	20	0	6	67	0	0	195	2106
8:20 AM	19	0	12	0	0	0	0	0	0	49	28	0	5	69	0	0	182	2155
8:25 AM	9	0	13	0	0	0	0	0	0	55	19	0	3	81	0	0	180	2144
8:30 AM	10	0	4	0	0	0	0	0	0	48	18	0	1	67	0	0	148	2143
8:35 AM	4	0	2	0	0	0	0	0	0	62	13	0	5	94	0	0	180	2128
8:40 AM	4	0	1	0	0	0	0	0	0	69	7	0	5	76	0	0	162	2142
8:45 AM	4	0	3	0	0	0	0	0	0	69	4	0	0	57	0	0	137	2107
8:50 AM	0	0	2	0	0	0	0	0	0	56	7	0	6	89	0	0	160	2078
8:55 AM	2	0	0	0	0	0	0	0	0	80	6	0	2	73	0	0	163	2018

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	172	0	140	0	0	0	0	0	0	724	268	0	56	868	0	0	2228
Heavy Trucks	0	0	0		0	0	0		0	8	0		0	16	0		24
Pedestrians		16				0				0				24			40
Bicycles	0	0	0		0	1	0		0	1	0		0	0	0		2
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/25/2014 5:27 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

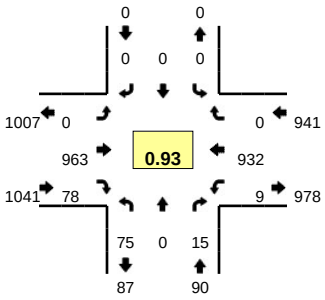
Type of peak hour being reported: User-Defined

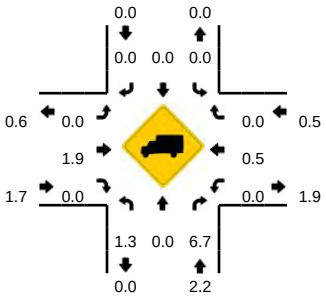
Method for determining peak hour: Total Entering Volume

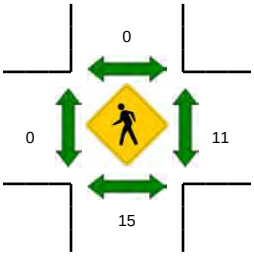
LOCATION: Wesley St -- National Blvd
CITY/STATE: Culver City, CA

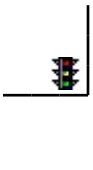
QC JOB #: 13149802
DATE: Thu, Nov 20 2014

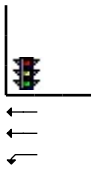
Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:30 PM -- 5:45 PM

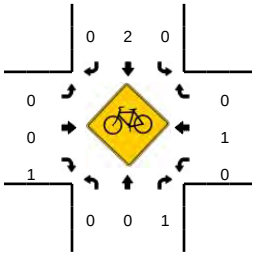


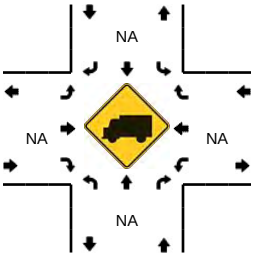


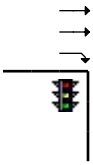


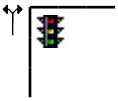


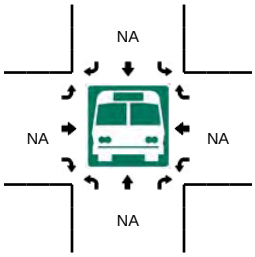












5-Min Count Period Beginning At	Wesley St (Northbound)				Wesley St (Southbound)				National Blvd (Eastbound)				National Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	2	0	2	0	0	0	0	0	0	86	7	0	0	52	0	0	149	
4:05 PM	0	0	2	0	0	0	0	0	0	78	3	1	1	74	0	0	159	
4:10 PM	0	0	2	0	0	0	0	0	0	80	8	0	0	58	0	0	148	
4:15 PM	13	0	2	0	0	0	0	0	0	61	9	0	4	61	0	0	150	
4:20 PM	12	0	4	0	0	0	0	0	0	92	7	0	3	57	0	0	175	
4:25 PM	12	0	5	0	0	0	0	0	0	74	7	0	0	54	0	0	152	
4:30 PM	9	0	1	0	0	0	0	0	0	86	6	0	1	72	0	0	175	
4:35 PM	19	0	3	0	0	0	0	0	0	84	4	0	1	79	0	0	190	
4:40 PM	13	0	5	0	0	0	0	0	0	105	5	0	2	82	0	0	212	
4:45 PM	5	0	0	0	0	0	0	0	0	81	7	0	2	77	0	0	172	
4:50 PM	6	0	1	0	0	0	0	0	0	98	3	0	2	63	0	0	173	
4:55 PM	3	0	4	0	0	0	0	0	0	91	3	0	3	79	0	0	183	2038
5:00 PM	6	0	1	0	0	0	0	0	0	86	7	0	0	95	0	0	195	2084
5:05 PM	13	0	4	0	0	0	0	0	0	77	6	0	0	83	0	0	183	2108
5:10 PM	6	0	2	0	0	0	0	0	0	79	7	0	0	72	0	0	166	2126
5:15 PM	5	0	1	0	0	0	0	0	0	69	1	0	0	68	0	0	144	2120
5:20 PM	4	0	2	0	0	0	0	0	0	92	5	0	0	73	0	0	176	2121
5:25 PM	12	0	0	0	0	0	0	0	0	83	8	0	1	65	0	0	169	2138
5:30 PM	3	0	1	0	0	0	0	0	0	108	5	0	2	92	0	0	211	2174
5:35 PM	5	0	1	0	0	0	0	0	0	78	9	0	1	82	0	0	176	2160
5:40 PM	5	0	0	0	0	0	0	0	0	77	11	0	0	79	0	0	172	2120
5:45 PM	2	0	1	0	0	0	0	0	0	67	10	0	2	74	0	0	156	2104
5:50 PM	5	0	0	0	0	0	0	0	0	89	3	0	3	85	0	0	185	2116
5:55 PM	9	0	2	0	0	0	0	0	0	58	6	0	0	64	0	0	139	2072

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	52	0	8	0	0	0	0	0	0	1052	100	0	12	1012	0	0	2236
Heavy Trucks	0	0	0		0	0	0		0	28	0		0	8	0		36
Pedestrians		12				0				0				8			20
Bicycles	0	0	0		0	1	0		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/25/2014 5:29 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

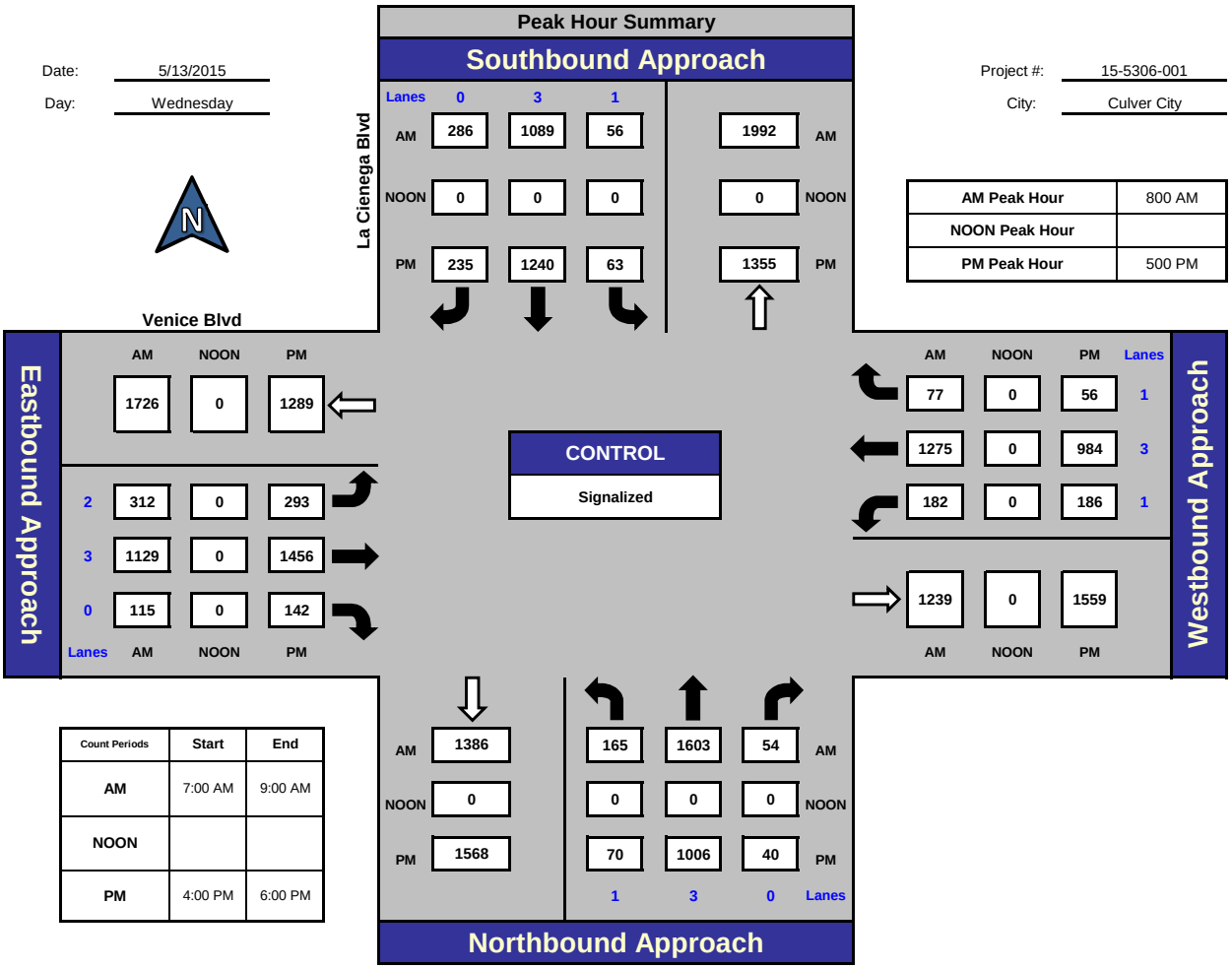
La Cienega Blvd and Venice Blvd , Culver City

Date: 5/13/2015

Day: Wednesday

Project #: 15-5306-001

City: Culver City



AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
AM	1431	1992	AM
NOON	0	0	NOON
PM	1538	1355	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
1726	0	1289		1534	0	1226
1556	0	1891		1239	0	1559

	South Leg	
AM	1386	1822
NOON	0	0
PM	1568	1116

Total Volume Per Leg

	North Leg	
AM	3423	AM
NOON	0	NOON
PM	2893	PM

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
3282	0	3180	2773	0	2785

	South Leg
AM	3208
NOON	0
PM	2684

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

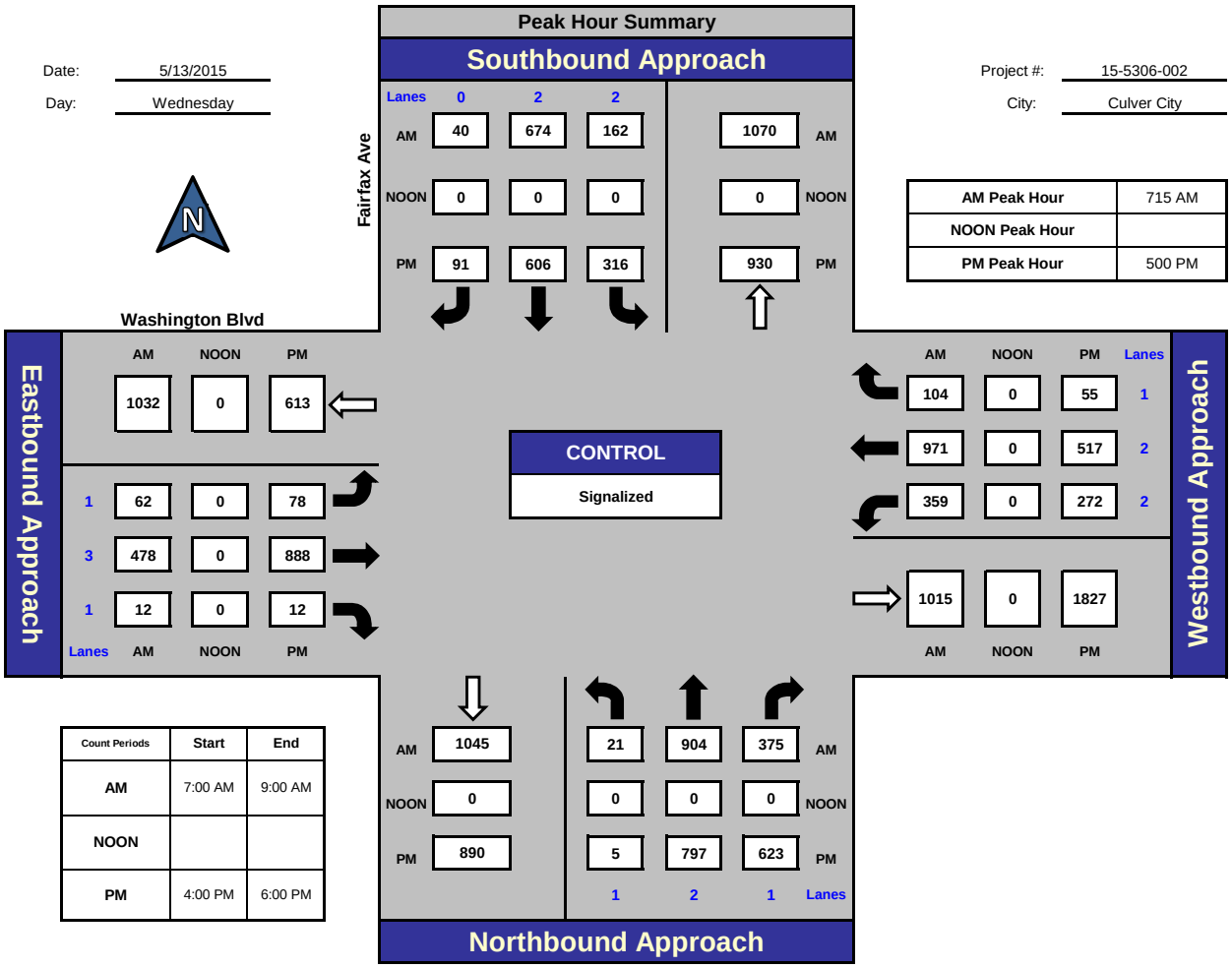
Fairfax Ave and Washington Blvd , Culver City

Date: 5/13/2015

Day: Wednesday

Project #: 15-5306-002

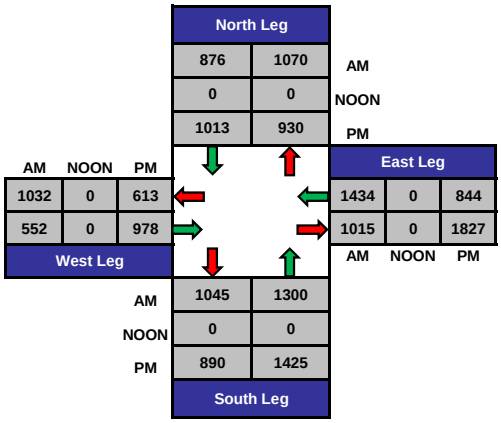
City: Culver City



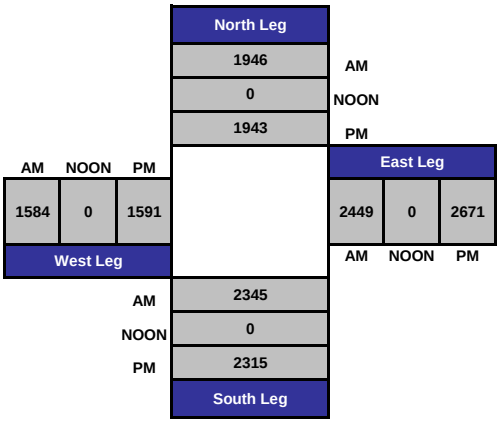
AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Jefferson Blvd and National Blvd , Culver City

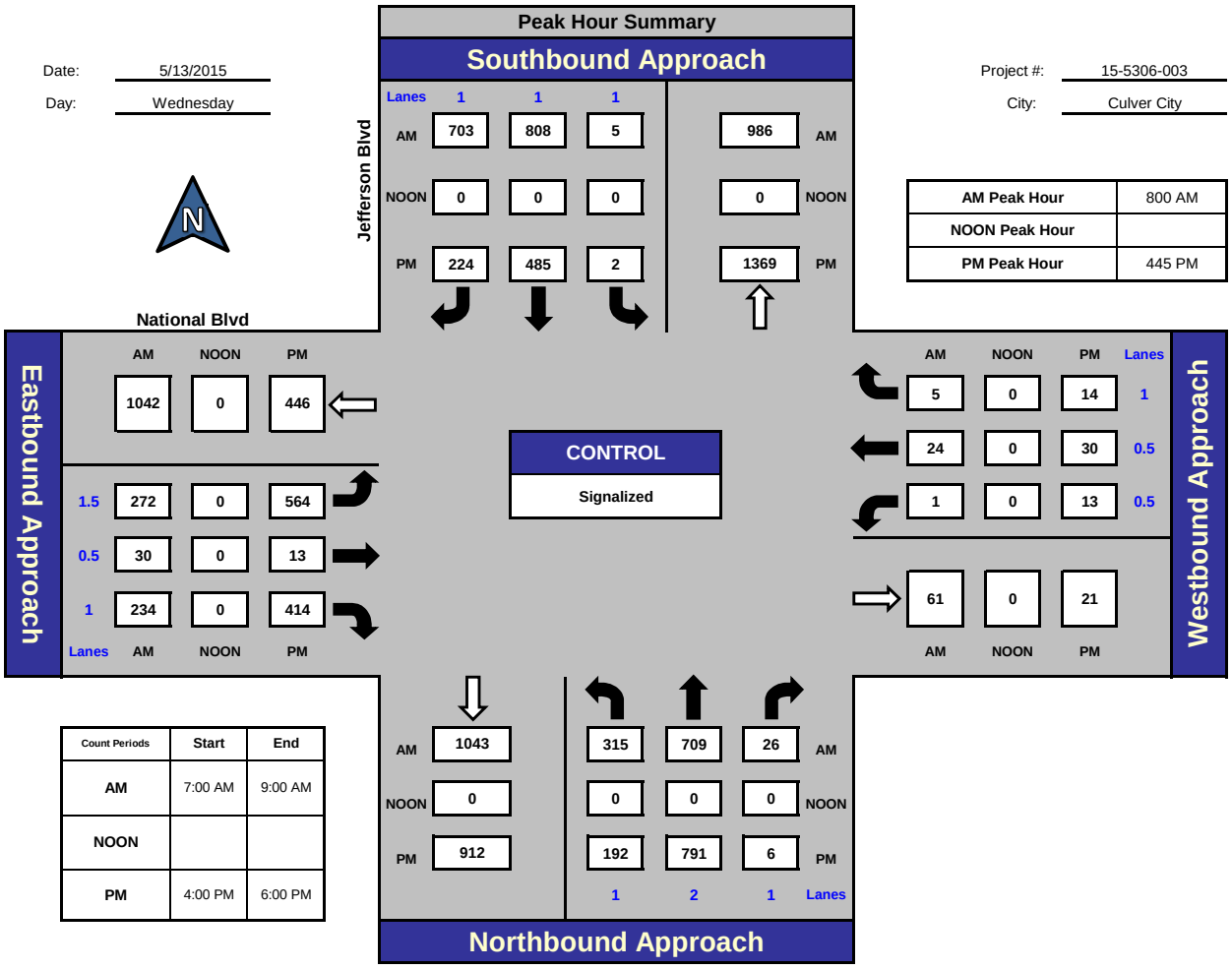
Date: 5/13/2015

Day: Wednesday

Project #: 15-5306-003

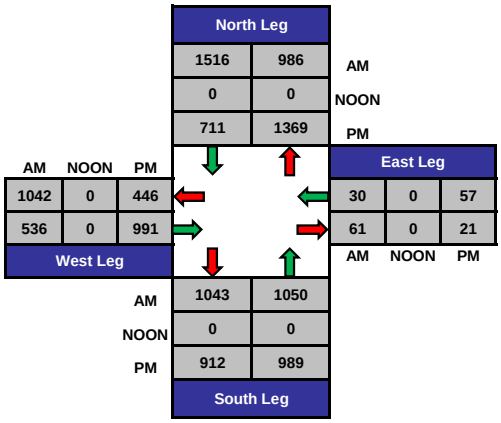
City: Culver City

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	445 PM

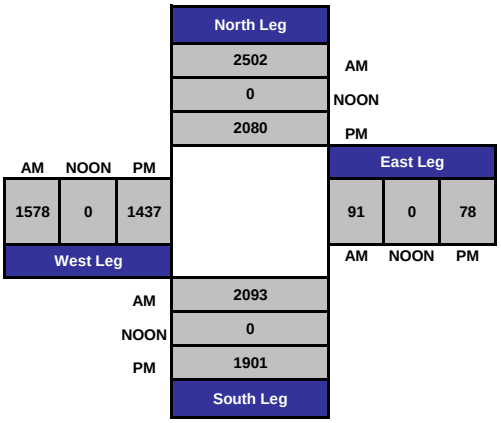


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Robertson Blvd and I-10 WB Off Ramp , Culver City

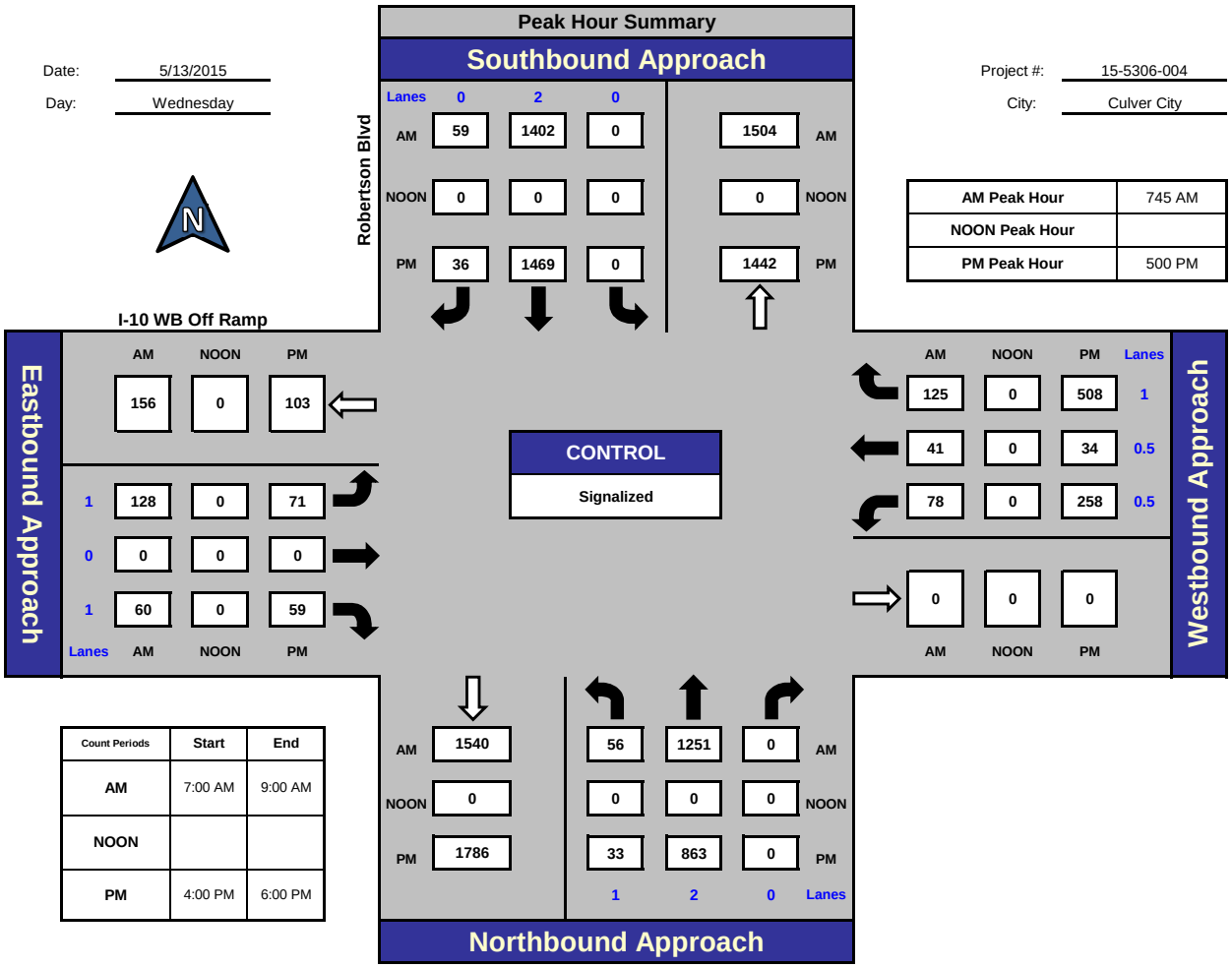
Date: 5/13/2015

Day: Wednesday

Project #: 15-5306-004

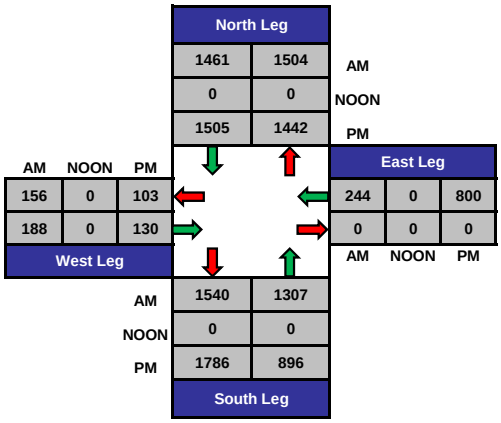
City: Culver City

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

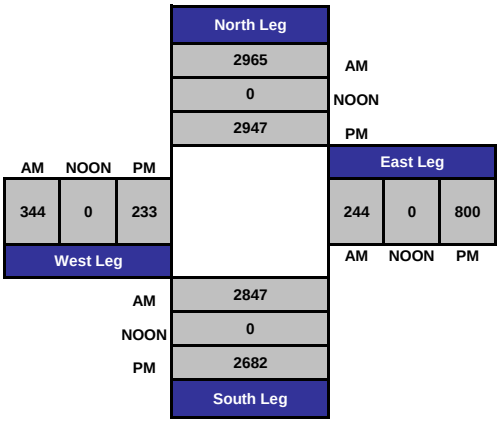


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



LOCATION: Wesley St south of National
SPECIFIC LOCATION: 500 ft from National
CITY/STATE: Culver City, CA

QC JOB #: 13149823
DIRECTION: NB
DATE: Nov 19 2014 - Nov 21 2014

Start Time	Mon	Tue	Wed 19-Nov-14	Thu 20-Nov-14	Fri 21-Nov-14	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				0	0	0			0	
1:00 AM				1	1	1			1	
2:00 AM				2	1	2			2	
3:00 AM				2	1	2			2	
4:00 AM				1	1	1			1	
5:00 AM				1	3	2			2	
6:00 AM				9	11	10			10	
7:00 AM				28	17	23			23	
8:00 AM				**39**	**32**	**36**			**36**	
9:00 AM				28	25	27			27	
10:00 AM				15		15			15	
11:00 AM				22		22			22	
12:00 PM				19		19			19	
1:00 PM				27		27			27	
2:00 PM				20		20			20	
3:00 PM				37		37			37	
4:00 PM				54		54			54	
5:00 PM			61	71		66			66	
6:00 PM			**85**	**73**		**79**			**79**	
7:00 PM			34	64		49			49	
8:00 PM			11	16		14			14	
9:00 PM			7	15		11			11	
10:00 PM			7	2		5			5	
11:00 PM			0	5		3			3	
Day Total			205	551	92	525			525	
% Weekday Average			39.0%	105.0%	17.5%					
% Week Average			39.0%	105.0%	17.5%	100.0%				
AM Peak Volume				8:00 AM 39	8:00 AM 32	8:00 AM 36			8:00 AM 36	
PM Peak Volume			6:00 PM 85	6:00 PM 73		6:00 PM 79			6:00 PM 79	

Comments:

LOCATION: Wesley St south of National
SPECIFIC LOCATION: 500 ft from National
CITY/STATE: Culver City, CA

QC JOB #: 13149823
DIRECTION: NB/SB
DATE: Nov 19 2014 - Nov 21 2014

Start Time	Mon	Tue	Wed 19-Nov-14	Thu 20-Nov-14	Fri 21-Nov-14	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				2	5	4			4	
1:00 AM				1	2	2			2	
2:00 AM				2	2	2			2	
3:00 AM				3	1	2			2	
4:00 AM				3	3	3			3	
5:00 AM				4	6	5			5	
6:00 AM				18	22	20			20	
7:00 AM				111	73	92			92	
8:00 AM				**118**	**99**	**109**			**109**	
9:00 AM				83	70	77			77	
10:00 AM				35		35			35	
11:00 AM				40		40			40	
12:00 PM				52		52			52	
1:00 PM				54		54			54	
2:00 PM				56		56			56	
3:00 PM				66		66			66	
4:00 PM				86		86			86	
5:00 PM			114	**155**		135			135	
6:00 PM			**159**	150		**155**			**155**	
7:00 PM			76	95		86			86	
8:00 PM			22	27		25			25	
9:00 PM			13	28		21			21	
10:00 PM			14	11		13			13	
11:00 PM			4	7		6			6	
Day Total			402	1207	283	1146			1146	
% Weekday Average			35.1%	105.3%	24.7%					
% Week Average			35.1%	105.3%	24.7%	100.0%				
AM Peak Volume				8:00 AM 118	8:00 AM 99	8:00 AM 109			8:00 AM 109	
PM Peak Volume			6:00 PM 159	5:00 PM 155		6:00 PM 155			6:00 PM 155	

Comments:

LOCATION: Wesley St south of National
SPECIFIC LOCATION: 500 ft from National
CITY/STATE: Culver City, CA

QC JOB #: 13149823
DIRECTION: SB
DATE: Nov 19 2014 - Nov 21 2014

Start Time	Mon	Tue	Wed 19-Nov-14	Thu 20-Nov-14	Fri 21-Nov-14	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM				2	5	4			4	
1:00 AM				0	1	1			1	
2:00 AM				0	1	1			1	
3:00 AM				1	0	1			1	
4:00 AM				2	2	2			2	
5:00 AM				3	3	3			3	
6:00 AM				9	11	10			10	
7:00 AM				**83**	56	70			70	
8:00 AM				79	**67**	**73**			**73**	
9:00 AM				55	45	50			50	
10:00 AM				20		20			20	
11:00 AM				18		18			18	
12:00 PM				33		33			33	
1:00 PM				27		27			27	
2:00 PM				36		36			36	
3:00 PM				29		29			29	
4:00 PM				32		32			32	
5:00 PM			53	**84**		69			69	
6:00 PM			**74**	77		**76**			**76**	
7:00 PM			42	31		37			37	
8:00 PM			11	11		11			11	
9:00 PM			6	13		10			10	
10:00 PM			7	9		8			8	
11:00 PM			4	2		3			3	
Day Total			197	656	191	624			624	
% Weekday Average			31.6%	105.1%	30.6%					
% Week Average			31.6%	105.1%	30.6%	100.0%				
AM Peak Volume				7:00 AM 83	8:00 AM 67	8:00 AM 73			8:00 AM 73	
PM Peak Volume			6:00 PM 74	5:00 PM 84		6:00 PM 76			6:00 PM 76	

Comments:

CLIENT: Kimley-Horn & Associates, Inc. / Lowe's
PROJECT: TOD - Washington & National
DATE: Wednesday, February 18, 2015
PERIOD: 6:00 AM to 9:00 AM
LOCATION: Culver City Station - Park & Ride Lot
(Washington Blvd. & National Blvd., Culver City)

(15-min)	National Blvd				W Washington Blvd				Sub-Totals		TOTAL
Time Period	IN	N/A	OUT	N/A	IN	N/A	OUT	N/A	IN	OUT	
6:00 - 6:15 AM	11		2		8		3		19	5	24
6:15 - 6:30 AM	17		2		10		8		27	10	37
6:30 - 6:45 AM	21		0		16		8		37	8	45
6:45 - 7:00 AM	20		0		29		7		49	7	56
7:00 - 7:15 AM	50		0		21		18		71	18	89
7:15 - 7:30 AM	37		0		21		12		58	12	70
7:30 - 7:45 AM	51		2		25		13		76	15	91
7:45 - 8:00 AM	62		0		27		10		89	10	99
8:00 - 8:15 AM	75		2		27		20		102	22	124
8:15 - 8:30 AM	53		3		16		15		69	18	87
8:30 - 8:45 AM	33		2		20		14		53	16	69
8:45 - 9:00 AM	19		5		11		19		30	24	54

(1-hour)	National Blvd				W Washington Blvd				Sub-Totals		TOTAL
Time Period	R-IN	L-IN	R-OUT	L-OUT	R-IN	L-IN	R-OUT	L-OUT	IN	OUT	
9:00 - 7:00 AM	69	0	4	0	63	0	26	0	132	30	162
9:15 - 7:15 AM	108	0	2	0	76	0	41	0	184	43	227
9:30 - 7:30 AM	128	0	0	0	87	0	45	0	215	45	260
9:45 - 7:45 AM	158	0	2	0	96	0	50	0	254	52	306
7:00 - 8:00 AM	200	0	2	0	94	0	53	0	294	55	349
7:15 - 8:15 AM	225	0	4	0	100	0	55	0	325	59	384
7:30 - 8:30 AM	241	0	7	0	95	0	58	0	336	65	401
7:45 - 8:45 AM	223	0	7	0	90	0	59	0	313	66	379
8:00 - 9:00 AM	180	0	12	0	74	0	68	0	254	80	334

NOTES:
(1) Venice Blvd Entrance/Exit Closed.
(2) National Driveway is Enter Only. (Vehicles only premitted to exit via Washington)
(3) Lot was full by 8:45 AM
(4) 3 Motorcycles / 1 Tow truck / 1 Shuttle was recorded
(5) Approximately 90-100 drop-offs occurred
(6) Vehicles also utilized on-street parking on National Blvd.
(7) Approximately (90 - 100) Drop-Off/Pick-Ups occurred within the parking lot.
(8) 2 Maintence vehicles entered the lot.
(9) 3 occasions occurred where two vehicles entered the lot, 1 driver parked, entered the other vehicle, and left the
(10) Only 1 to 2 Handicapped spaces were used.

CLIENT: Kimley-Horn & Associates, Inc. / Lowe's
PROJECT: TOD - Washington & National
DATE: Wednesday, February 18, 2015 AND Wednesday, March, 4, 2015
PERIOD: 3:00 PM to 6:00 PM
LOCATION: Culver City Station - Park & Ride Lot
(Washington Blvd. & National Blvd., Culver City)

(15-min)	National Blvd				W Washington Blvd				Sub-Totals		TOTAL
Time Period	R-IN	L-IN	R-OUT	L-OUT	R-IN	L-IN	R-OUT	L-OUT	IN	OUT	
3:00 - 3:15 PM	9	0	3	0	0	2	8	1	11	12	23
3:15 - 3:30 PM	1	0	1	1	0	2	9	3	3	14	17
3:30 - 3:45 PM	9	0	6	0	4	2	18	5	15	29	44
3:45 - 4:00 PM	1	0	3	0	5	2	15	3	8	21	29
4:00 - 4:15 PM	12	0	2	0	1	8	19	3	21	24	45
4:15 - 4:30 PM	10	1	3	0	3	3	16	1	17	20	37
4:30 - 4:45 PM	11	0	0	1	5	3	21	5	19	27	46
4:45 - 5:00 PM	5	0	4	0	3	3	38	9	11	51	62
5:00 - 5:15 PM	19	0	2	0	2	6	29	4	27	35	62
5:15 - 5:30 PM	19	2	3	0	5	8	28	4	34	35	69
5:30 - 5:45 PM	11	1	0	1	4	4	48	11	20	60	80
*5:45 - 6:00 PM	10	1	4	0	6	6	37	4	23	45	68
6:00 - 6:15 PM	15	1	3	3	8	15	74	3	39	83	122
6:15 - 6:30 PM	19	0	3	2	8	15	74	4	42	83	125
6:30 - 6:45 PM	17	1	7	2	4	14	39	7	36	55	91
6:45 - 7:00 PM	15	2	4	2	2	2	35	8	21	49	70

(1-hour)	National Blvd				W Washington Blvd				Sub-Totals		TOTAL
Time Period	R-IN	L-IN	R-OUT	L-OUT	R-IN	L-IN	R-OUT	L-OUT	IN	OUT	
3:00 - 4:00 PM	20	0	13	1	9	8	50	12	37	76	113
3:15 - 4:15 PM	23	0	12	1	10	14	61	14	47	88	135
3:30 - 4:30 PM	32	1	14	0	13	15	68	12	61	94	155
3:45 - 4:45 PM	34	1	8	1	14	16	71	12	65	92	157
4:00 - 5:00 PM	38	1	9	1	12	17	94	18	68	122	190
4:15 - 5:15 PM	45	1	9	1	13	15	104	19	74	133	207
4:30 - 5:30 PM	54	2	9	1	15	20	116	22	91	148	239
4:45 - 5:45 PM	54	3	9	1	14	21	143	28	92	181	273
5:00 - 6:00 PM	59	4	9	1	17	24	142	23	104	175	279
5:15 - 6:15 PM	55	5	10	4	23	33	187	22	116	223	339
5:30 - 6:30 PM	55	3	10	6	26	40	233	22	124	271	395
5:45 - 6:45 PM	61	3	17	7	26	50	224	18	140	266	406
6:00 - 7:00 PM	66	4	17	9	22	46	222	22	138	270	408

NOTES:

(1) Venice Blvd Entrance/Exit Closed.
(2) National Driveway is Enter Only. (Vehicles only premitted to exit via Washington)
(3) Scheduled Garbage Truck entered lot (between 4-5 pm)
(4) Tow-Truck entered to service a parked vehicle (around 5 pm)
(5) 2 Police Vehicles entered to patrol lot (around 5pm)
(6) *Interval is an average of two counts rounded up to whole digits
(7) 5:45-7:00PM uses count data from 3/4/15
(8) (1st Run) Train arrived prior to 6:00pm on 2/18/15
(9) (2nd Run) Train arrived right after 6:00pm on 3/4/15

APPENDIX C

CRITICAL MOVEMENT ANALYSIS (CMA) WORKSHEETS

Project: Washington Blvd - National Blvd Traffic and Parking Services

DOT Case Number:
Year of counts: 2014
Project buildout: 2014
Ambient growth: 0.0% per year
Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_Ex+Proj.xls

Project Trip Generation		Adjacent to Project			Not Adjacent		
		In	Out	Total	In	Out	Total
Trip Gen	AM Peak	192	98	290	173	83	256
	PM Peak	149	193	342	127	174	301

Level of Service and Volume to Capacity Ratio Summary

No.	Intersection	Peak Hour	Existing (2014) v/c	Existing (2014) LOS	Existing with project v/c	Existing with project LOS	Project Impact Δ v/c	Project Impact significant?	After mitigation v/c	After mitigation Δ v/c	After mitigation mitigated?
1	Culver Boulevard &	AM	0.548	A	0.562	A	0.014	NO	--	--	N/A
	Venice Boulevard	PM	0.491	A	0.503	A	0.012	NO	--	--	N/A
2	Robertson Blvd/Exposition &	AM	1.041	F	1.048	F	0.007	NO	--	--	N/A
	Venice Boulevard	PM	0.839	D	0.853	D	0.014	NO	--	--	N/A
3	National Boulevard &	AM	0.604	B	0.637	B	0.033	NO	--	--	N/A
	Venice Boulevard	PM	0.647	B	0.676	B	0.029	NO	--	--	N/A
4	Helms Avenue &	AM	0.265	A	0.268	A	0.003	NO	--	--	N/A
	Venice Boulevard	PM	0.271	A	0.278	A	0.007	NO	--	--	N/A
5	Cattaraugus Avenue &	AM	0.713	C	0.746	C	0.003	NO	--	--	N/A
	Venice Boulevard	PM	0.607	B	0.647	B	0.010	NO	--	--	N/A
6	Robertson Blvd/Higuera &	AM	0.690	B	0.693	B	0.003	NO	--	--	N/A
	Washington Boulevard	PM	0.660	B	0.662	B	0.002	NO	--	--	N/A
7	National Boulevard &	AM	0.680	B	0.690	B	0.010	NO	--	--	N/A
	Washington Boulevard	PM	0.788	C	0.800	C	0.012	NO	--	--	N/A
8	Helms Avenue &	AM	0.435	A	0.444	A	0.009	NO	--	--	N/A
	Washington Boulevard	PM	0.469	A	0.478	A	0.009	NO	--	--	N/A
9	Robertson Boulevard &	AM	0.847	D	0.867	D	0.020	YES	0.790	-0.057	YES
	National Boulevard	PM	0.753	C	0.771	C	0.018	NO	0.771	0.018	N/A
10	National Boulevard &	AM	0.219	A	0.229	A	0.010	NO	--	--	N/A
	I-10 EB Ramp	PM	0.353	A	0.359	A	0.006	NO	--	--	N/A
11	Wesley Street &	AM	0.343	A	0.349	A	0.006	NO	--	--	N/A
	National Boulevard	PM	0.317	A	0.323	A	0.006	NO	--	--	N/A
12	La Cienega Boulevard &	AM	0.787	C	0.797	C	0.010	NO	--	--	N/A
	Venice Boulevard	PM	0.797	C	0.802	D	0.005	NO	--	--	N/A
13	Fairfax Blvd &	AM	0.692	B	0.701	C	0.009	NO	--	--	N/A
	Washington Blvd	PM	0.658	B	0.662	B	0.004	NO	--	--	N/A
14	Jefferson Blvd &	AM	0.846	D	0.854	D	0.008	NO	--	--	N/A
	National Blvd	PM	0.655	B	0.664	B	0.009	NO	--	--	N/A
15	Robertson Blvd &	AM	0.593	A	0.601	B	0.008	NO	--	--	N/A
	I-10 WB Offramp	PM	0.810	D	0.818	D	0.008	NO	--	--	N/A

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 1		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT					2014, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	4		Ambient Growth		Critical Phases:	4	☐ Adjacent		In	Out	Total			Critical Phases:	4
Culver Boulevard		Capacity:	1375		from:	2014	Capacity:	1375	Trip	AM	173	83	256			Capacity:	1375
East/West Street:		Signal System:	3		to:	2014	Signal System:	3	Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	3
Venice Boulevard		v/c reduction:	10%		at:	1.0%	v/c reduction:	10%	Trip	AM	0	0	0			v/c reduction:	10%
Analysis Date:	10/29/2015	Opposed Phasing:	1				Opposed Phasing:	1	Gen 2	PM	0	0	0			Opposed Phasing:	1
AM Peak:	8:00 AM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	39	1	39	0		39	1	39	0%	0	39	1	39	0	39	1	39
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	64	1	64	0		64	1	64	0%	0	64	1	64	0	64	1	64
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	721	2	**241**	0		721	2	**241**	10%	17	738	2	**247**	0	738	2	**247**
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	148	1	81	0		148	1	81	0%	0	148	1	81	0	148	1	81
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	37	0	0	0		37	0	0	0%	0	37	0	0	0	37	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	29	0	0	0		29	0	0	0%	0	29	0	0	0	29	0	0
	Shared		1	**133**				1	**133**	0%			1	**133**			1	**133**
Eastbound	Left	4	1	4	0		4	1	4	0%	0	4	1	4	0	4	1	4
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	873	2	**310**	0		873	2	**310**	15%	26	899	2	**319**	0	899	2	**319**
	Th-Rt		1	**310**				1	**310**	0%			1	**319**			1	**319**
	Right	57	0	0	0		57	0	0	0%	0	57	0	0	0	57	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	376	2	**207**	0		376	2	**207**	(10%)	9	385	2	**212**	0	385	2	**212**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1027	2	388	0		1027	2	388	(15%)	12	1039	2	392	0	1039	2	392
	Th-Rt		1	388				1	388	0%			1	392			1	392
	Right	138	0	0	0		138	0	0	0%	0	138	0	0	0	138	0	0
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 75% Projected: 75% Mitigated: 75%																		
S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
Critical Volumes:		North-South:		374			North-South:		374			North-South:		380		North-South:		380
		East-West:		517			East-West:		517			East-West:		530		East-West:		530
		Total:		891			Total:		891			Total:		910		Total:		910
Volume/capacity (*v/c*) ratio:				0.648					0.648					0.662				0.662
v/c less ATSAC adjustment:				0.548					0.548					0.562				0.562
Level of Service (LOS):				A					A					A				A

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_Ex+Pro

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 1		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT					2014, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	4		Ambient Growth		Critical Phases:	4	☐ Adjacent		In	Out	Total			Critical Phases:	4
Culver Boulevard		Capacity:	1375		from:	2014	Capacity:	1375	Trip	AM	173	83	256			Capacity:	1375
East/West Street:		Signal System:	3		to:	2014	Signal System:	3	Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	3
Venice Boulevard		v/c reduction:	10%		at:	1.0%	v/c reduction:	10%	Trip	AM	0	0	0			v/c reduction:	10%
Analysis Date:	10/29/2015	Opposed Phasing:	1				Opposed Phasing:	1	Gen 2	PM	0	0	0			Opposed Phasing:	1
PM Peak:	5:00 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	75	1	75	0		75	1	75	0%	0	75	1	75	0	75	1	75
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	39	1	39	0		39	1	39	0%	0	39	1	39	0	39	1	39
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	740	2	**270**	0		740	2	**270**	10%	13	753	2	**270**	0	753	2	**270**
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	167	1	92	0		167	1	92	0%	0	167	1	92	0	167	1	92
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	39	0	0	0		39	0	0	0%	0	39	0	0	0	39	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	25	0	0	0		25	0	0	0%	0	25	0	0	0	25	0	0
	Shared		1	**139**				1	**139**	0%			1	**139**			1	**139**
Eastbound	Left	4	1	4	0		4	1	4	0%	0	4	1	4	0	4	1	4
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	641	2	**221**	0		641	2	**221**	15%	19	660	2	**227**	0	660	2	**227**
	Th-Rt		1	**221**				1	**221**	0%			1	**227**			1	**227**
	Right	22	0	0	0		22	0	0	0%	0	22	0	0	0	22	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	332	2	**183**	0		332	2	**183**	(10%)	19	351	2	**193**	0	351	2	**193**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1013	2	374	0		1013	2	374	(15%)	25	1038	2	382	0	1038	2	382
	Th-Rt		1	374				1	374	0%			1	382			1	382
	Right	108	0	0	0		108	0	0	0%	0	108	0	0	0	108	0	0
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 75% Projected: 75% Mitigated: 75%																		
S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
Critical Volumes:		North-South:		409			North-South:		409			North-South:		409		North-South:		409
		East-West:		404			East-West:		404			East-West:		420		East-West:		420
		Total:		813			Total:		813			Total:		829		Total:		829
Volume/capacity (*v/c*) ratio:				0.591					0.591					0.603				0.603
v/c less ATSAC adjustment:				0.491					0.491					0.503				0.503
Level of Service (LOS):				A					A					A				A

PROJECT IMPACT

Change in *v/c* due to project: 0.012 — Δ*v/c* after mitigation: 0.012

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_Ex+Pro

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 2		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT				2014, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	4		Ambient Growth	Critical Phases:	4		☑ Adjacent		In	Out	Total		Critical Phases:	4
Robertson Blvd/Exposition		Capacity:	1375		from: 2014	Capacity:	1375		Trip	AM	192	98	290		Capacity:	1375
East/West Street:		Signal System:	3		to: 2014	Signal System:	3		Gen 1	PM	149	193	342	☐ Use Dist 2:	Signal System:	3
Venice Boulevard		v/c reduction:	10%		at: 0.0%	v/c reduction:	10%		Trip	AM	0	0	0		v/c reduction:	10%
Analysis Date:	10/29/2015	Opposed Phasing:	1			Opposed Phasing:	1		Gen 2	PM	0	0	0		Opposed Phasing:	1
AM Peak:	8:00 AM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	68	1	68	0		68	1	68	(5%)	5	73	1	73	0	73	1	73
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	461	1	**461**	0		461	1	**461**	0%	0	461	1	**461**	0	461	1	**461**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	48	1	30	0		48	1	30	0%	0	48	1	30	0	48	1	30
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	416	1	229	0		416	1	229	0%	0	416	1	229	0	416	1	229
	Lt-Th		1	290				1	290	0%			1	290			1	290
	Thru	103		0	0		103	0	0	0%	0	103	0	0	0	103	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	519	1	**335**	0		519	1	**335**	0%	0	519	1	**335**	0	519	1	**335**
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	368	2	**202**	0		368	2	**202**	0%	0	368	2	**202**	0	368	2	**202**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1383	1	706	0		1383	1	706	25%	48	1431	1	730	0	1431	1	730
	Th-Rt		1	706				1	706	0%			1	730			1	730
	Right	28	0	0	0		28	0	0	0%	0	28	0	0	0	28	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	24	1	24	0		24	1	24	0%	0	24	1	24	0	24	1	24
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1001	1	**571**	0		1001	1	**571**	(20%)	20	1021	1	**581**	0	1021	1	**581**
	Th-Rt		1	**571**				1	**571**	0%			1	**581**			1	**581**
	Right	140	0	0	0		140	0	0	0%	0	140	0	0	0	140	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Critical Volumes:		North-South:		796					796			North-South:		796			North-South:	796
		East-West:		773			East-West:		773			East-West:		783			East-West:	783
		Total:		1569			Total:		1569			Total:		1579			Total:	1579
Volume/capacity (*v/c*) ratio:				1.141					1.141					1.148				1.148
v/c less ATSAC adjustment:				1.041					1.041					1.048				1.048
Level of Service (LOS):				F					F					F				F

Northbound — N/B RTOR: Existing: 75% Projected: 75% Mitigated: 75%

Southbound — S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%

Eastbound — E/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%

Westbound — W/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%

PROJECT IMPACT

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

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_Ex+Pro

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 2		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT					2014, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	4		Ambient Growth		Critical Phases:	4	☑ Adjacent		In	Out	Total			Critical Phases:	4
Robertson Blvd/Exposition		Capacity:	1375		from:	2014	Capacity:	1375	Trip	AM	192	98	290			Capacity:	1375
East/West Street:		Signal System:	3		to:	2014	Signal System:	3	Gen 1	PM	149	193	342	☐ Use Dist 2:		Signal System:	3
Venice Boulevard		v/c reduction:	10%		at:	0.0%	v/c reduction:	10%	Trip	AM	0	0	0			v/c reduction:	10%
Analysis Date:	10/29/2015	Opposed Phasing:	1				Opposed Phasing:	1	Gen 2	PM	0	0	0			Opposed Phasing:	1
PM Peak:	5:00 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	96	1	96	0		96	1	96	(5%)	10	106	1	106	0	106	1	106
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	376	1	**376**	0		376	1	**376**	0%	0	376	1	**376**	0	376	1	**376**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	29	1	15	0		29	1	15	0%	0	29	1	15	0	29	1	15
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	319	1	175	0		319	1	175	0%	0	319	1	175	0	319	1	175
	Lt-Th		1	**230**				1	**230**	0%			1	**230**			1	**230**
	Thru	86	0	0	0		86	0	0	0%	0	86	0	0	0	86	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	328	1	205	0		328	1	205	0%	0	328	1	205	0	328	1	205
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	246	2	135	0		246	2	135	0%	0	246	2	135	0	246	2	135
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1282	1	**657**	0		1282	1	**657**	25%	37	1319	1	**676**	0	1319	1	**676**
	Th-Rt		1	**657**				1	**657**	0%			1	**676**			1	**676**
	Right	32	0	0	0		32	0	0	0%	0	32	0	0	0	32	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	29	1	**29**	0		29	1	**29**	0%	0	29	1	**29**	0	29	1	**29**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1019	1	548	0		1019	1	548	(20%)	39	1058	1	567	0	1058	1	567
	Th-Rt		1	548				1	548	0%			1	567			1	567
	Right	76	0	0	0		76	0	0	0%	0	76	0	0	0	76	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Critical Volumes:		North-South:		606			North-South:		606			North-South:		606		North-South:		606
		East-West:		686			East-West:		686			East-West:		705		East-West:		705
		Total:		1292			Total:		1292			Total:		1310		Total:		1310
Volume/capacity (*v/c*) ratio:				0.939					0.939					0.953				0.953
v/c less ATSAC adjustment:				0.839					0.839					0.853				0.853
Level of Service (LOS):				D					D					D				D

N/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%

S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%

E/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%

W/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_Ex+Pro

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 3		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT					2014, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	3		Ambient Growth	Critical Phases:	3		☑ Adjacent		In	Out	Total		Critical Phases:	3	
National Boulevard		Capacity:	1425		from: 2014	Capacity:	1425		Trip	AM	192	98	290		Capacity:	1425	
East/West Street:		Signal System:	3		to: 2014	Signal System:	3		Gen 1	PM	149	193	342	☐ Use Dist 2:	Signal System:	3	
Venice Boulevard		v/c reduction:	10%		at: 0.0%	v/c reduction:	10%		Trip	AM	0	0	0		v/c reduction:	10%	
Analysis Date:	10/29/2015	Opposed Phasing:	0			Opposed Phasing:	0		Gen 2	PM	0	0	0		Opposed Phasing:	0	
AM Peak:	8:00 AM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	148	1	**148**	0		148	1	**148**	(20%)	20	168	1	**168**	0	168	1	**168**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	645	1	355	0		645	1	355	(20%)	20	665	1	372	0	665	2	333
	Th-Rt		1	355				1	355	0%			1	372			0	0
	Right	64	0	0	0		64	0	0	(15%)	15	79	0	0	0	79	1	39
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	124	1	124	0		124	1	124	0%	0	124	1	124	0	124	1	124
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	611	1	**356**	0		611	1	**356**	25%	44	655	1	**378**	0	655	1	**378**
	Th-Rt		1	**356**				1	**356**	0%			1	**378**			1	**378**
	Right	100	0	0	0		100	0	0	0%	0	100	0	0	0	100	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	58	1	**58**	0		58	1	**58**	(5%)	5	63	1	**63**	0	63	1	**63**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1144	3	381	0		1144	3	381	(10%)	9	1153	3	384	0	1153	3	384
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	188	1	188	0		188	1	188	5%	10	198	1	198	0	198	1	198
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	45	1	45	0		45	1	45	20%	34	79	1	79	0	79	1	79
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	883	2	**442**	0		883	2	**442**	0%	0	883	2	**442**	0	883	2	**442**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	113	1	113	0		113	1	113	0%	0	113	1	113	0	113	1	113
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
E/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
W/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
Critical Volumes:		North-South:		504			North-South:		504			North-South:		546			North-South:	546
		East-West:		500			East-West:		500			East-West:		505			East-West:	505
		Total:		1003			Total:		1003			Total:		1050			Total:	1050
Volume/capacity (*v/c*) ratio:				0.704					0.704					0.737				0.737
v/c less ATSAC adjustment:				0.604					0.604					0.637				0.637
Level of Service (LOS):				B					B					B				B

PROJECT IMPACT

Change in *v/c* due to project: 0.033 — Δ*v/c* after mitigation: 0.033

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_Ex+Pro

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 3		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT				2014, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	3		Ambient Growth	Critical Phases:	3		☑ Adjacent		In	Out	Total		Critical Phases:	3
National Boulevard		Capacity:	1425		from: 2014	Capacity:	1425		Trip	AM	192	98	290		Capacity:	1425
East/West Street:		Signal System:	3		to: 2014	Signal System:	3		Gen 1	PM	149	193	342	☐ Use Dist 2:	Signal System:	3
Venice Boulevard		v/c reduction:	10%		at: 0.0%	v/c reduction:	10%		Trip	AM	0	0	0		v/c reduction:	10%
Analysis Date:	10/29/2015	Opposed Phasing:	0			Opposed Phasing:	0		Gen 2	PM	0	0	0		Opposed Phasing:	0
PM Peak:	5:45 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	120	1	120	0		120	1	120	(20%)	39	159	1	159	0	159	1	**159**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	591	1	**361**	0		591	1	**361**	(20%)	39	630	1	**393**	0	630	2	315
	Th-Rt		1	**361**				1	**361**	0%			1	**393**			0	0
	Right	131	0	0	0		131	0	0	(15%)	25	156	0	0	0	156	1	86
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	146	1	**146**	0		146	1	**146**	0%	0	146	1	**146**	0	146	1	146
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	646	1	356	0		646	1	356	25%	37	683	1	374	0	683	1	**374**
	Th-Rt		1	356				1	356	0%			1	374			1	**374**
	Right	65	0	0	0		65	0	0	0%	0	65	0	0	0	65	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	92	1	**92**	0		92	1	**92**	(5%)	10	102	1	**102**	0	102	1	**102**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1144	3	381	0		1144	3	381	(10%)	19	1163	3	388	0	1163	3	388
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	167	1	167	0		167	1	167	5%	7	174	1	174	0	174	1	174
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	110	1	110	0		110	1	110	20%	30	140	1	140	0	140	1	140
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	931	2	**466**	0		931	2	**466**	0%	0	931	2	**466**	0	931	2	**466**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	85	1	85	0		85	1	85	0%	0	85	1	85	0	85	1	85
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
E/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
W/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
Critical Volumes:		North-South:		507			North-South:		507			North-South:		539		North-South:		533
		East-West:		558			East-West:		558			East-West:		568		East-West:		568
		Total:		1065			Total:		1065			Total:		1107		Total:		1101
Volume/capacity (*v/c*) ratio:				0.747					0.747					0.776				0.772
v/c less ATSAC adjustment:				0.647					0.647					0.676				0.672
Level of Service (LOS):				B					B					B				B

PROJECT IMPACT

Change in *v/c* due to project: 0.029 — Δ*v/c* after mitigation: 0.025

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_Ex+Pro

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 4		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT					2014, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases: 2			Ambient Growth		Critical Phases: 2		☐ Adjacent		In	Out	Total			Critical Phases: 2	
Helms Avenue		Capacity: 1500			from: 2014		Capacity: 1500		Trip	AM	173	83	256			Capacity: 1500	
East/West Street:		Signal System: 3			to: 2014		Signal System: 3		Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System: 3	
Venice Boulevard		v/c reduction: 10%			at: 0.0%		v/c reduction: 10%		Trip	AM	0	0	0			v/c reduction: 10%	
Analysis Date: 10/29/2015		Opposed Phasing: 0					Opposed Phasing: 0		Gen 2	PM	0	0	0			Opposed Phasing: 0	
AM Peak: 8:00 AM		Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	2	0	**2**	0		2	0	**2**	0%	0	2	0	**2**	0	2	0	**2**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	15	0	0	0		15	0	0	0%	0	15	0	0	0	15	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	1	0	1	0		1	0	1	0%	0	1	0	1	0	1	0	1
	Shared		1	18				1	18	0%			1	18			1	18
Southbound	Left	27	0	27	0		27	0	27	0%	0	27	0	27	0	27	0	27
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	9	0	0	0		9	0	0	0%	0	9	0	0	0	9	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	12	0	12	0		12	0	12	0%	0	12	0	12	0	12	0	12
	Shared		1	**48**				1	**48**	0%			1	**48**			1	**48**
Eastbound	Left	38	1	38	0		38	1	38	0%	0	38	1	38	0	38	1	38
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1359	3	**453**	0		1359	3	**453**	(20%)	17	1376	3	**459**	0	1376	3	**459**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	10	1	10	0		10	1	10	(5%)	4	14	1	14	0	14	1	14
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	44	1	**44**	0		44	1	**44**	0%	0	44	1	**44**	0	44	1	**44**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1047	3	349	0		1047	3	349	20%	34	1081	3	360	0	1081	3	360
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	62	1	62	0		62	1	62	0%	0	62	1	62	0	62	1	62
	Shared		0	0				0	0	0%			0	0			0	0
Critical Volumes:		North-South:		50			North-South:		50			North-South:		50			North-South:	50
		East-West:		497			East-West:		497			East-West:		503			East-West:	503
		Total:		547			Total:		547			Total:		553			Total:	553
Volume/capacity (*v/c*) ratio:				0.365					0.365					0.368				0.368
v/c less ATSAC adjustment:				0.265					0.265					0.268				0.268
Level of Service (LOS):				A					A					A				A

N/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%

S/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%

E/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%

W/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_Ex+Pro

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 4		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT					2014, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	2		Ambient Growth		Critical Phases:	2	☐ Adjacent		In	Out	Total			Critical Phases:	2
Helms Avenue		Capacity:	1500		from:	2014	Capacity:	1500	Trip	AM	173	83	256			Capacity:	1500
East/West Street:		Signal System:	3		to:	2014	Signal System:	3	Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	3
Venice Boulevard		v/c reduction:	10%		at:	0.0%	v/c reduction:	10%	Trip	AM	0	0	0			v/c reduction:	10%
Analysis Date:	10/29/2015	Opposed Phasing:	0				Opposed Phasing:	0	Gen 2	PM	0	0	0			Opposed Phasing:	0
PM Peak:	5:25 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	4	0	4	0		4	0	4	0%	0	4	0	4	0	4	0	4
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	2	0	0	0		2	0	0	0%	0	2	0	0	0	2	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	11	0	**11**	0		11	0	**11**	0%	0	11	0	**11**	0	11	0	**11**
	Shared		1	17				1	17	0%			1	17			1	17
Southbound	Left	37	0	37	0		37	0	37	0%	0	37	0	37	0	37	0	37
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	5	0	0	0		5	0	0	0%	0	5	0	0	0	5	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	34	0	34	0		34	0	34	0%	0	34	0	34	0	34	0	34
	Shared		1	76				1	76	0%			1	76			1	76
Eastbound	Left	37	1	37	0		37	1	37	0%	0	37	1	37	0	37	1	37
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1272	3	**424**	0		1272	3	**424**	(20%)	34	1306	3	**435**	0	1306	3	**435**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	34	1	34	0		34	1	34	(5%)	8	42	1	42	0	42	1	42
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	45	1	**45**	0		45	1	**45**	0%	0	45	1	**45**	0	45	1	**45**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1132	3	377	0		1132	3	377	20%	25	1157	3	386	0	1157	3	386
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	13	1	13	0		13	1	13	0%	0	13	1	13	0	13	1	13
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
S/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
E/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
W/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
Critical Volumes:		North-South:		87			North-South:		87			North-South:		87		North-South:		87
		East-West:		469			East-West:		469			East-West:		480		East-West:		480
		Total:		556			Total:		556			Total:		567		Total:		567
Volume/capacity (*v/c*) ratio:				0.371					0.371					0.378				0.378
v/c less ATSAC adjustment:				0.271					0.271					0.278				0.278
Level of Service (LOS):				A					A					A				A

PROJECT IMPACT

Change in *v/c* due to project: 0.007 — Δ*v/c* after mitigation: 0.007

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_Ex+Pro

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 5		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT					2014, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases: 2			Ambient Growth		Critical Phases: 2		☐ Adjacent		In	Out	Total			Critical Phases: 2	
Cattaraugus Avenue		Capacity: 1500			from: 2014		Capacity: 1500		Trip	AM	173	83	256			Capacity: 1500	
East/West Street:		Signal System: 3			to: 2014		Signal System: 2		Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System: 2	
Venice Boulevard		v/c reduction: 10%			at: 0.0%		v/c reduction: 7%		Trip	AM	0	0	0			v/c reduction: 7%	
Analysis Date: 10/29/2015		Opposed Phasing: 0					Opposed Phasing: 0		Gen 2	PM	0	0	0			Opposed Phasing: 0	
AM Peak: 8:00 AM		Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	26	0	26	0		26	0	26	0%	0	26	0	26	0	26	0	26
	Lt-Th	N/B RTOR:	0	0				0	0	0%			0	0			0	0
	Thru	373	0	0	0		373	0	0	0%	0	373	0	0	0	373	0	0
	Th-Rt	Existing: 0%	0	0				0	0	0%			0	0			0	0
	Right	24	0	24	0		24	0	24	0%	0	24	0	24	0	24	0	24
	Shared	Projected: 0%	1	**423**				1	**423**	0%			1	**423**			1	**423**
		Mitigated: 0%																
Southbound	Left	171	0	**171**	0		171	0	**171**	0%	0	171	0	**171**	0	171	0	**171**
	Lt-Th	S/B RTOR:	0	0				0	0	0%			0	0			0	0
	Thru	96	0	0	0		96	0	0	0%	0	96	0	0	0	96	0	0
	Th-Rt	Existing: 0%	0	0				0	0	0%			0	0			0	0
	Right	20	0	20	0		20	0	20	5%	8	28	0	28	0	28	0	28
	Shared	Projected: 0%	1	287				1	287	0%			1	295			1	295
		Mitigated: 0%																
Eastbound	Left	59	1	59	0		59	1	59	(5%)	4	63	1	63	0	63	1	63
	Lt-Th	E/B RTOR:	0	0				0	0	0%			0	0			0	0
	Thru	1347	3	**449**	0		1347	3	**449**	(15%)	13	1360	3	**453**	0	1360	3	**453**
	Th-Rt	Existing: 0%	0	0				0	0	0%			0	0			0	0
	Right	8	1	8	0		8	1	8	0%	0	8	1	8	0	8	1	8
	Shared	Projected: 0%	0	0				0	0	0%			0	0			0	0
		Mitigated: 0%																
Westbound	Left	176	1	**176**	0		176	1	**176**	0%	0	176	1	**176**	0	176	1	**176**
	Lt-Th	W/B RTOR:	0	0				0	0	0%			0	0			0	0
	Thru	1092	3	364	0		1092	3	364	15%	26	1118	3	373	0	1118	3	373
	Th-Rt	Existing: 0%	0	0				0	0	0%			0	0			0	0
	Right	195	1	195	0		195	1	195	0%	0	195	1	195	0	195	1	195
	Shared	Projected: 0%	0	0				0	0	0%			0	0			0	0
		Mitigated: 0%																
Critical Volumes:		North-South:		594			North-South:		594			North-South:		594		North-South:		594
		East-West:		625			East-West:		625			East-West:		629		East-West:		629
		Total:		1219			Total:		1219			Total:		1223		Total:		1223
Volume/capacity (*v/c*) ratio:				0.813					0.813					0.816				0.816
v/c less ATSAC adjustment:				0.713					0.743					0.746				0.746
Level of Service (LOS):				C					C					C				C

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_Ex+Pro

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 5		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT					2014, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	2		Ambient Growth		Critical Phases:	2	☐ Adjacent		In	Out	Total			Critical Phases:	2
Cattaraugus Avenue		Capacity:	1500		from:	2014	Capacity:	1500	Trip	AM	173	83	256			Capacity:	1500
East/West Street:		Signal System:	3		to:	2014	Signal System:	2	Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	2
Venice Boulevard		v/c reduction:	10%		at:	0.0%	v/c reduction:	7%	Trip	AM	0	0	0			v/c reduction:	7%
Analysis Date:	10/29/2015	Opposed Phasing:	0				Opposed Phasing:	0	Gen 2	PM	0	0	0			Opposed Phasing:	0
PM Peak:	5:25 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	11	0	11	0		11	0	11	0%	0	11	0	11	0	11	0	11
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	79	0	0	0		79	0	0	0%	0	79	0	0	0	79	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	30	0	**30**	0		30	0	**30**	0%	0	30	0	**30**	0	30	0	**30**
	Shared		1	120				1	120	0%			1	120			1	120
Southbound	Left	307	0	307	0		307	0	307	0%	0	307	0	307	0	307	0	307
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	150	0	0	0		150	0	0	0%	0	150	0	0	0	150	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	21	0	21	0		21	0	21	5%	6	27	0	27	0	27	0	27
	Shared		1	478				1	478	0%			1	484			1	484
Eastbound	Left	56	1	56	0		56	1	56	(5%)	8	64	1	64	0	64	1	64
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1360	3	**453**	0		1360	3	**453**	(15%)	26	1386	3	**462**	0	1386	3	**462**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	23	1	23	0		23	1	23	0%	0	23	1	23	0	23	1	23
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	99	1	99	0		99	1	99	0%	0	99	1	**99**	0	99	1	**99**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1042	3	347	0		1042	3	347	15%	19	1061	3	354	0	1061	3	354
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	62	1	62	0		62	1	62	0%	0	62	1	62	0	62	1	62
	Shared		0	0				0	0	0%			0	0			0	0
Critical Volumes:		North-South:		508			North-South:		508			North-South:		514		North-South:		514
		East-West:		552			East-West:		552			East-West:		561		East-West:		561
		Total:		1060			Total:		1060			Total:		1075		Total:		1075
Volume/capacity (*v/c*) ratio:				0.707					0.707					0.717				0.717
v/c less ATSAC adjustment:				0.607					0.637					0.647				0.647
Level of Service (LOS):				B					B					B				B

Northbound — N/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%

Southbound — S/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%

Eastbound — E/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%

Westbound — W/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_Ex+Pro

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 6		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT				2014, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases: 3			Ambient Growth	Critical Phases: 3			☐ Adjacent		In	Out	Total		Critical Phases: 3	
Robertson Blvd/Higuera		Capacity: 1425			from: 2014	Capacity: 1425			Trip	AM	173	83	256		Capacity: 1425	
East/West Street:		Signal System: 2			to: 2014	Signal System: 2			Gen 1	PM	127	174	301	☐ Use Dist 2:	Signal System: 2	
Washington Boulevard		v/c reduction: 7%			at: 0.0%	v/c reduction: 7%			Trip	AM	0	0	0		v/c reduction: 7%	
Analysis Date: 10/29/2015		Opposed Phasing: 0				Opposed Phasing: 0			Gen 2	PM	0	0	0		Opposed Phasing: 0	
AM Peak: 8:00 AM		Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	62	1	62	0		62	1	62	0%	0	62	1	62	0	62	1	62
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	315	1	**315**	0		315	1	**315**	0%	0	315	1	**315**	0	315	1	**315**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	124	1	124	0		124	1	124	0%	0	124	1	124	0	124	1	124
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	57	1	**57**	0		57	1	**57**	0%	0	57	1	**57**	0	57	1	**57**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	114	1	114	0		114	1	114	0%	0	114	1	114	0	114	1	114
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	38	1	38	0		38	1	38	0%	0	38	1	38	0	38	1	38
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	51	1	51	0		51	1	51	0%	0	51	1	51	0	51	1	51
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1091	1	**600**	0		1091	1	**600**	5%	9	1100	1	**605**	0	1100	1	**605**
	Th-Rt		1	**600**				1	**600**	0%			1	**605**			1	**605**
	Right	109	0	0	0		109	0	0	0%	0	109	0	0	0	109	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	111	1	**111**	0		111	1	**111**	0%	0	111	1	**111**	0	111	1	**111**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1131	2	566	0		1131	2	566	0%	0	1131	2	566	0	1131	2	566
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	208	1	180	0		208	1	180	(5%)	4	212	1	184	0	212	1	184
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
S/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
Critical Volumes:		North-South:		372			North-South:		372			North-South:		372		North-South:		372
		East-West:		711			East-West:		711			East-West:		716		East-West:		716
		Total:		1083			Total:		1083			Total:		1088		Total:		1088
Volume/capacity (*v/c*) ratio:				0.760					0.760					0.763				0.763
v/c less ATSAC adjustment:				0.690					0.690					0.693				0.693
Level of Service (LOS):				B					B					B				B

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

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Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 6		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT				2014, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	3		Ambient Growth	Critical Phases:	3		☐ Adjacent		In	Out	Total		Critical Phases:	3
Robertson Blvd/Higuera		Capacity:	1425		from: 2014	Capacity:	1425		Trip	AM	173	83	256		Capacity:	1425
East/West Street:		Signal System:	2		to: 2014	Signal System:	2		Gen 1	PM	127	174	301	☐ Use Dist 2:	Signal System:	2
Washington Boulevard		v/c reduction:	7%		at: 0.0%	v/c reduction:	7%		Trip	AM	0	0	0		v/c reduction:	7%
Analysis Date:	10/29/2015	Opposed Phasing:	0			Opposed Phasing:	0		Gen 2	PM	0	0	0		Opposed Phasing:	0
PM Peak:	5:00 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	41	1	41	0		41	1	41	0%	0	41	1	41	0	41	1	41
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	229	1	**229**	0		229	1	**229**	0%	0	229	1	**229**	0	229	1	**229**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	116	1	116	0		116	1	116	0%	0	116	1	116	0	116	1	116
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	68	1	**68**	0		68	1	**68**	0%	0	68	1	**68**	0	68	1	**68**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	135	1	135	0		135	1	135	0%	0	135	1	135	0	135	1	135
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	52	1	52	0		52	1	52	0%	0	52	1	52	0	52	1	52
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	85	1	85	0		85	1	85	0%	0	85	1	85	0	85	1	85
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1144	1	**613**	0		1144	1	**613**	5%	6	1150	1	**616**	0	1150	1	**616**
	Th-Rt		1	**613**				1	**613**	0%			1	**616**			1	**616**
	Right	82	0	0	0		82	0	0	0%	0	82	0	0	0	82	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	130	1	**130**	0		130	1	**130**	0%	0	130	1	**130**	0	130	1	**130**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	871	2	436	0		871	2	436	0%	0	871	2	436	0	871	2	436
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	256	1	222	0		256	1	222	(5%)	9	265	1	231	0	265	1	231
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
S/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
Critical Volumes:		North-South:		297			North-South:		297			North-South:		297		North-South:		297
		East-West:		743			East-West:		743			East-West:		746		East-West:		746
		Total:		1040			Total:		1040			Total:		1043		Total:		1043
Volume/capacity (*v/c*) ratio:				0.730					0.730					0.732				0.732
v/c less ATSAC adjustment:				0.660					0.660					0.662				0.662
Level of Service (LOS):				B					B					B				B

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 7		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT					2014, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	4		Ambient Growth		Critical Phases:	4	☐ Adjacent		In	Out	Total			Critical Phases:	4
National Boulevard		Capacity:	1375		from:	2014	Capacity:	1375	Trip	AM	173	83	256			Capacity:	1375
East/West Street:		Signal System:	2		to:	2014	Signal System:	2	Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	2
Washington Boulevard		v/c reduction:	7%		at:	0.0%	v/c reduction:	7%	Trip	AM	0	0	0			v/c reduction:	7%
Analysis Date:	10/29/2015	Opposed Phasing:	0				Opposed Phasing:	0	Gen 2	PM	0	0	0			Opposed Phasing:	0
AM Peak:	8:00 AM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	213	2	**117**	0		213	2	**117**	5%	8	221	2	**122**	0	221	2	**122**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	668	1	385	0		668	1	385	5%	9	677	1	390	0	677	1	390
	Th-Rt		1	385				1	385	0%			1	390			1	390
	Right	102	0	0	0		102	0	0	0%	0	102	0	0	0	102	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	97	2	53	0		97	2	53	(15%)	13	110	2	61	0	110	2	61
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	573	1	**341**	0		573	1	**341**	(10%)	9	582	1	**350**	0	582	1	**350**
	Th-Rt		1	**341**				1	**341**	0%			1	**350**			1	**350**
	Right	109	0	0	0		109	0	0	5%	9	118	0	0	0	118	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	65	1	65	0		65	1	65	5%	9	74	1	74	0	74	1	74
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	862	2	**431**	0		862	2	**431**	0%	0	862	2	**431**	0	862	2	**431**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	220	1	114	0		220	1	114	0%	0	220	1	110	0	220	1	110
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	142	1	**142**	0		142	1	**142**	0%	0	142	1	**142**	0	142	1	**142**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1081	2	400	0		1081	2	400	15%	26	1107	2	408	0	1107	2	408
	Th-Rt		1	400				1	400	0%			1	408			1	408
	Right	118	0	0	0		118	0	0	0%	0	118	0	0	0	118	0	0
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR:	Existing: 50%																	
	Projected: 50%																	
	Mitigated: 50%																	
S/B RTOR:	Existing: 50%																	
	Projected: 50%																	
	Mitigated: 50%																	
E/B RTOR:	Existing: 50%																	
	Projected: 50%																	
	Mitigated: 50%																	
W/B RTOR:	Existing: 0%																	
	Projected: 0%																	
	Mitigated: 0%																	
Critical Volumes:		North-South:		458			North-South:		458			North-South:		472			North-South:	472
		East-West:		573			East-West:		573			East-West:		573			East-West:	573
		Total:		1031			Total:		1031			Total:		1045			Total:	1045
Volume/capacity (*v/c*) ratio:				0.750					0.750					0.760				0.760
v/c less ATSAC adjustment:				0.680					0.680					0.690				0.690
Level of Service (LOS):				B					B					B				B

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 7		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT					2014, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	4		Ambient Growth	Critical Phases:	4		☐ Adjacent		In	Out	Total		Critical Phases:	4	
National Boulevard		Capacity:	1375		from: 2014	Capacity:	1375		Trip	AM	173	83	256		Capacity:	1375	
East/West Street:		Signal System:	2		to: 2014	Signal System:	2		Gen 1	PM	127	174	301	☐ Use Dist 2:	Signal System:	2	
Washington Boulevard		v/c reduction:	7%		at: 0.0%	v/c reduction:	7%		Trip	AM	0	0	0		v/c reduction:	7%	
Analysis Date:	10/29/2015	Opposed Phasing:	0			Opposed Phasing:	0		Gen 2	PM	0	0	0		Opposed Phasing:	0	
PM Peak:	5:00 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	187	2	**103**	0		187	2	**103**	5%	6	193	2	**106**	0	193	2	**106**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	684	1	409	0		684	1	409	5%	7	691	1	413	0	691	1	413
	Th-Rt		1	409				1	409	0%			1	413			1	413
	Right	134	0	0	0		134	0	0	0%	0	134	0	0	0	134	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	182	2	100	0		182	2	100	(15%)	26	208	2	114	0	208	2	114
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	738	1	**411**	0		738	1	**411**	(10%)	18	756	1	**423**	0	756	1	**423**
	Th-Rt		1	**411**				1	**411**	0%			1	**423**			1	**423**
	Right	83	0	0	0		83	0	0	5%	6	89	0	0	0	89	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	82	1	82	0		82	1	82	5%	6	88	1	88	0	88	1	88
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1106	2	**553**	0		1106	2	**553**	0%	0	1106	2	**553**	0	1106	2	**553**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	198	1	104	0		198	1	104	0%	0	198	1	102	0	198	1	102
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	114	1	**114**	0		114	1	**114**	0%	0	114	1	**114**	0	114	1	**114**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	716	2	282	0		716	2	282	15%	19	735	2	288	0	735	2	288
	Th-Rt		1	282				1	282	0%			1	288			1	288
	Right	129	0	0	0		129	0	0	0%	0	129	0	0	0	129	0	0
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR:	Existing: 50%																	
	Projected: 50%																	
	Mitigated: 50%																	
S/B RTOR:	Existing: 50%																	
	Projected: 50%																	
	Mitigated: 50%																	
E/B RTOR:	Existing: 50%																	
	Projected: 50%																	
	Mitigated: 50%																	
W/B RTOR:	Existing: 0%																	
	Projected: 0%																	
	Mitigated: 0%																	
Critical Volumes:	North-South:			513					513					529				529
	East-West:			667					667					667				667
	Total:			1180					1180					1196				1196
Volume/capacity (*v/c*) ratio:				0.858					0.858					0.870				0.870
v/c less ATSAC adjustment:				0.788					0.788					0.800				0.800
Level of Service (LOS):				C					C					C				C

PROJECT IMPACT

Change in *v/c* due to project: 0.012 — Δ*v/c* after mitigation: 0.012

Significantly impacted? NO — Fully mitigated? N/A

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 8		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT				2014, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases: 2			Ambient Growth		Critical Phases: 2		☐ Adjacent		In	Out	Total			
Helms Avenue		Capacity: 1500			from: 2014		Capacity: 1500		Trip AM		173	83	256		Critical Phases: 2	
East/West Street:		Signal System: 2			to: 2014		Signal System: 2		Gen 1 PM		127	174	301	☐ Use Dist 2:	Capacity: 1500	
Washington Boulevard		v/c reduction: 7%			at: 0.0%		v/c reduction: 7%		Trip AM		0	0	0		Signal System: 2	
Analysis Date: 10/29/2015		Opposed Phasing: 0					Opposed Phasing: 0		Gen 2 PM		0	0	0		v/c reduction: 7%	
AM Peak: 8:00 AM		Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume		
Northbound	Left	91	0	0	0		91	0	0	0%	0	91	0	0	0	91	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	13	0	0	0		13	0	0	0%	0	13	0	0	0	13	0	0
	Shared		1	**104**				1	**104**	0%			1	**104**			1	**104**
Southbound	Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1001	1	509	0		1001	1	509	(15%)	13	1014	1	516	0	1014	1	516
	Th-Rt		1	509				1	509	0%			1	516			1	516
	Right	17	0	0	0		17	0	0	0%	0	17	0	0	0	17	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	11	1	11	0		11	1	11	0%	0	11	1	11	0	11	1	11
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1307	2	**654**	0		1307	2	**654**	15%	26	1333	2	**667**	0	1333	2	**667**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Critical Volumes:		North-South:		104			North-South:		104			North-South:		104		North-South:		104
		East-West:		654			East-West:		654			East-West:		667		East-West:		667
		Total:		758			Total:		758			Total:		771		Total:		771
Volume/capacity (*v/c*) ratio:				0.505					0.505					0.514				0.514
v/c less ATSAC adjustment:				0.435					0.435					0.444				0.444
Level of Service (LOS):				A					A					A				A

N/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%

S/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%

E/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%

W/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%

PROJECT IMPACT

Change in *v/c* due to project:	0.009	Δ*v/c* after mitigation:	0.009
Significantly impacted?	NO	Fully mitigated?	N/A

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Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 8		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT					2014, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	2		Ambient Growth		Critical Phases:	2	☐ Adjacent		In	Out	Total			Critical Phases:	2
Helms Avenue		Capacity:	1500		from:	2014	Capacity:	1500	Trip	AM	173	83	256			Capacity:	1500
East/West Street:		Signal System:	2		to:	2014	Signal System:	2	Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	2
Washington Boulevard		v/c reduction:	7%		at:	0.0%	v/c reduction:	7%	Trip	AM	0	0	0			v/c reduction:	7%
Analysis Date:	10/29/2015	Opposed Phasing:	0				Opposed Phasing:	0	Gen 2	PM	0	0	0			Opposed Phasing:	0
PM Peak:	5:00 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	46	0	0	0		46	0	0	0%	0	46	0	0	0	46	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	11	0	0	0		11	0	0	0%	0	11	0	0	0	11	0	0
	Shared		1	**57**				1	**57**	0%			1	**57**			1	**57**
Southbound	Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	1	0	0	0		1	0	0	0%	0	1	0	0	0	1	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1382	1	**731**	0		1382	1	**731**	(15%)	26	1408	1	**744**	0	1408	1	**744**
	Th-Rt		1	**731**				1	**731**	0%			1	**744**			1	**744**
	Right	80	0	0	0		80	0	0	0%	0	80	0	0	0	80	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	21	1	**21**	0		21	1	**21**	0%	0	21	1	**21**	0	21	1	**21**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	885	2	443	0		885	2	443	15%	19	904	2	452	0	904	2	452
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
S/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
E/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
W/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
Critical Volumes:		North-South:	57				North-South:	57				North-South:	57				North-South:	57
		East-West:	752				East-West:	752				East-West:	765				East-West:	765
		Total:	809				Total:	809				Total:	822				Total:	822
Volume/capacity (*v/c*) ratio:			0.539					0.539					0.548					0.548
v/c less ATSAC adjustment:			0.469					0.469					0.478					0.478
Level of Service (LOS):			A					A					A					A

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_Ex+Pro

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 9		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT				2014, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases: 4			Ambient Growth	Critical Phases: 4			☐ Adjacent		In	Out	Total			
Robertson Boulevard		Capacity: 1375			from: 2014	Capacity: 1375			Trip	AM	173	83	256		Capacity: 1375	
East/West Street:		Signal System: 3			to: 2014	Signal System: 3			Gen 1	PM	127	174	301	☐ Use Dist 2:	Signal System: 3	
National Boulevard		v/c reduction: 10%			at: 0.0%	v/c reduction: 10%			Trip	AM	0	0	0		v/c reduction: 10%	
Analysis Date: 10/29/2015		Opposed Phasing: 0				Opposed Phasing: 0			Gen 2	PM	0	0	0		Opposed Phasing: 0	
AM Peak: 8:00 AM		Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	45	1	45	0		45	1	45	0%	0	45	1	45	0	45	1	45
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	634	1	**353**	0		634	1	**353**	0%	0	634	1	**357**	0	634	1	**357**
	Th-Rt		1	**353**				1	**353**	0%			1	**357**			1	**357**
	Right	72	0	0	0		72	0	0	5%	8	80	0	0	0	80	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	465	2	**256**	0		465	2	**256**	10%	18	483	2	**266**	0	483	2	**266**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	911	1	516	0		911	1	516	0%	0	911	1	516	0	911	1	516
	Th-Rt		1	516				1	516	0%			1	516			1	516
	Right	120	0	0	0		120	0	0	0%	0	120	0	0	0	120	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	235	1	**235**	0		235	1	**235**	0%	0	235	1	**235**	0	235	**2**	**129**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	665	1	455	0		665	1	455	10%	18	683	1	464	0	683	1	464
	Th-Rt		1	455				1	455	0%			1	464			1	464
	Right	245	0	0	0		245	0	0	0%	0	245	0	0	0	245	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	132	1	132	0		132	1	132	(5%)	4	136	1	136	0	136	1	136
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	459	1	**459**	0		459	1	**459**	(15%)	13	472	1	**472**	0	472	1	**472**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	368	1	19	0		368	1	19	0%	0	368	1	6	0	368	1	6
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
S/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
E/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
W/B RTOR: Existing: 75% Projected: 75% Mitigated: 75%																		
Critical Volumes:		North-South:		609			North-South:		609			North-South:		623		North-South:		623
		East-West:		694			East-West:		694			East-West:		707		East-West:		601
		Total:		1303			Total:		1303			Total:		1330		Total:		1224
Volume/capacity (*v/c*) ratio:				0.947					0.947					0.967				0.890
v/c less ATSAC adjustment:				0.847					0.847					0.867				0.790
Level of Service (LOS):				D					D					D				C

PROJECT IMPACT

Change in *v/c* due to project: 0.020 — Significantly impacted? YES

Δ*v/c* after mitigation: -0.057 — Fully mitigated? YES

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 9		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT				2014, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases: 4			Ambient Growth	Critical Phases: 4			☐ Adjacent		In	Out	Total			
Robertson Boulevard		Capacity: 1375			from: 2014	Capacity: 1375			Trip	AM	173	83	256		Capacity: 1375	
East/West Street:		Signal System: 3			to: 2014	Signal System: 3			Gen 1	PM	127	174	301	☐ Use Dist 2:	Signal System: 3	
National Boulevard		v/c reduction: 10%			at: 0.0%	v/c reduction: 10%			Trip	AM	0	0	0		v/c reduction: 10%	
Analysis Date:	10/29/2015	Opposed Phasing: 0				Opposed Phasing: 0			Gen 2	PM	0	0	0		Opposed Phasing: 0	
PM Peak:	5:00 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	+ Project Volume		Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	41	1	41	0		41	1	41	0%	0	41	1	41	0	41	1	41
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	389	1	**269**	0		389	1	**269**	0%	0	389	1	**272**	0	389	1	**272**
	Th-Rt		1	**269**				1	**269**	0%			1	**272**			1	**272**
	Right	149	0	0	0		149	0	0	5%	6	155	0	0	0	155	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	488	2	**268**	0		488	2	**268**	10%	13	501	2	**276**	0	501	2	**276**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	718	1	437	0		718	1	437	0%	0	718	1	437	0	718	1	437
	Th-Rt		1	437				1	437	0%			1	437			1	437
	Right	156	0	0	0		156	0	0	0%	0	156	0	0	0	156	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	197	1	197	0		197	1	197	0%	0	197	1	197	0	197	**2**	108
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	919	1	**509**	0		919	1	**509**	10%	13	932	1	**516**	0	932	1	**516**
	Th-Rt		1	**509**				1	**509**	0%			1	**516**			1	**516**
	Right	99	0	0	0		99	0	0	0%	0	99	0	0	0	99	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	126	1	**126**	0		126	1	**126**	(5%)	9	135	1	**135**	0	135	1	**135**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	311	1	311	0		311	1	311	(15%)	26	337	1	337	0	337	1	337
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	283	1	0	0		283	1	0	0%	0	283	1	0	0	283	1	0
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR:	Existing: 50%																	
	Projected: 50%																	
	Mitigated: 50%																	
S/B RTOR:	Existing: 0%																	
	Projected: 0%																	
	Mitigated: 0%																	
E/B RTOR:	Existing: 0%																	
	Projected: 0%																	
	Mitigated: 0%																	
W/B RTOR:	Existing: 75%																	
	Projected: 75%																	
	Mitigated: 75%																	
Critical Volumes:		North-South:		537			North-South:		537			North-South:		548		North-South:		548
		East-West:		635			East-West:		635			East-West:		651		East-West:		651
		Total:		1172			Total:		1172			Total:		1198		Total:		1198
Volume/capacity (*v/c*) ratio:				0.853					0.853					0.871				0.871
v/c less ATSAC adjustment:				0.753					0.753					0.771				0.771
Level of Service (LOS):				C					C					C				C

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 10		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT				2014, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases: 3			Ambient Growth		Critical Phases: 3		☐ Adjacent		In	Out	Total			
National Boulevard		Capacity: 1425			from: 2014		Capacity: 1425		Trip AM		173	83	256		Critical Phases: 3	
East/West Street:		Signal System: 3			to: 2014		Signal System: 3		Gen 1 PM		127	174	301	☐ Use Dist 2:	Capacity: 1425	
I-10 EB Ramp		v/c reduction: 10%			at: 0.0%		v/c reduction: 10%		Trip AM		0	0	0		Signal System: 3	
Analysis Date: 10/29/2015		Opposed Phasing: 0					Opposed Phasing: 0		Gen 2 PM		0	0	0		v/c reduction: 10%	
AM Peak: 8:00 AM		Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume				
															Opposed Phasing: 0			
															Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	32	1	**32**	0		32	1	**32**	(5%)	4	36	1	**36**	0	36	1	**36**
	Lt-Th	N/B RTOR:	0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	2	404				2	404	(20%)			2	412			2	412
	Th-Rt	Projected: 50%	807	0	0		807	0	0	0%	17	824	0	0	0	824	0	0
	Right	Mitigated: 50%	0	0				0	0	0%			0	0			0	0
	Shared		0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:	0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	2	411				2	411	25%			2	**433**			2	**433**
	Th-Rt	Projected: 50%	822	0	0		822	0	0	0%	44	866	0	0	0	866	0	0
	Right	Mitigated: 50%	1	**423**				1	**423**	0%			1	423			1	423
	Shared		423	0	0		423	0	0	0%	0	423	0	0	0	423	0	0
			0	0				0	0	0%			0	0			0	0
Eastbound	Left		0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:	0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0				0	0	0%			0	0			0	0
	Th-Rt	Projected: 50%	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Right	Mitigated: 50%	0	0				0	0	0%			0	0			0	0
	Shared		0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
			0	0				0	0	0%			0	0			0	0
Westbound	Left		0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	W/B RTOR:	0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0				0	0	0%			0	0			0	0
	Th-Rt	Projected: 50%	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Right	Mitigated: 50%	0	0				0	0	0%			0	0			0	0
	Shared		0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
			0	0				0	0	0%			0	0			0	0
Critical Volumes:		North-South:		455			North-South:		455			North-South:		469			North-South:	469
		East-West:		0			East-West:		0			East-West:		0			East-West:	0
		Total:		455			Total:		455			Total:		469			Total:	469
Volume/capacity (*v/c*) ratio:				0.319					0.319					0.329				0.329
v/c less ATSAC adjustment:				0.219					0.219					0.229				0.229
Level of Service (LOS):				A					A					A				A

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 10		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT				2014, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases: 3			Ambient Growth	Critical Phases: 3			☐ Adjacent		In	Out	Total			
National Boulevard		Capacity: 1425			from: 2014	Capacity: 1425			Trip	AM	173	83	256		Capacity: 1425	
East/West Street:		Signal System: 3			to: 2014	Signal System: 3			Gen 1	PM	127	174	301	☐ Use Dist 2:	Signal System: 3	
I-10 EB Ramp		v/c reduction: 10%			at: 0.0%	v/c reduction: 10%			Trip	AM	0	0	0		v/c reduction: 10%	
Analysis Date: 10/29/2015		Opposed Phasing: 0				Opposed Phasing: 0			Gen 2	PM	0	0	0		Opposed Phasing: 0	
PM Peak: 5:00 PM		Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	87	1	**87**	0		87	1	**87**	(5%)	9	96	1	**96**	0	96	1	**96**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	714	2	357	0		714	2	357	(20%)	35	749	2	375	0	749	2	375
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	962	2	481	0		962	2	481	25%	32	994	2	497	0	994	2	497
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	558	1	**558**	0		558	1	**558**	0%	0	558	1	**558**	0	558	1	**558**
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
Critical Volumes:		North-South:		645			North-South:		645			North-South:		654		North-South:		654
		East-West:		0			East-West:		0			East-West:		0		East-West:		0
		Total:		645			Total:		645			Total:		654		Total:		654
Volume/capacity (*v/c*) ratio:				0.453					0.453					0.459				0.459
v/c less ATSAC adjustment:				0.353					0.353					0.359				0.359
Level of Service (LOS):				A					A					A				A

PROJECT IMPACT

Change in *v/c* due to project: 0.006 — Δ*v/c* after mitigation: 0.006

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_Ex+Pro

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 11		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT					2014, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases: 2			Ambient Growth		Critical Phases: 2		☐ Adjacent		In	Out	Total			Critical Phases: 2	
Wesley Street		Capacity: 1500			from: 2014		Capacity: 1500		Trip	AM	173	83	256			Capacity: 1500	
East/West Street:		Signal System: 2			to: 2014		Signal System: 2		Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System: 2	
National Boulevard		v/c reduction: 7%			at: 0.0%		v/c reduction: 7%		Trip	AM	0	0	0			v/c reduction: 7%	
Analysis Date: 10/29/2015		Opposed Phasing: 1					Opposed Phasing: 1		Gen 2	PM	0	0	0			Opposed Phasing: 1	
AM Peak: 8:00 AM		Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	123	0	0	0		123	0	0	0%	0	123	0	0	0	123	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	76	0	0	0		76	0	0	0%	0	76	0	0	0	76	0	0
	Shared		1	**199**				1	**199**	0%			1	**199**			1	**199**
Southbound	Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	733	2	367	0		733	2	367	(10%)	9	742	2	371	0	742	2	371
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	205	1	143	0		205	1	143	0%	0	205	1	143	0	205	1	143
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	40	1	40	0		40	1	40	0%	0	40	1	40	0	40	1	40
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	841	2	**421**	0		841	2	**421**	10%	17	858	2	**429**	0	858	2	**429**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
Critical Volumes:		North-South:		199			North-South:		199			North-South:		199			North-South:	199
		East-West:		421			East-West:		421			East-West:		429			East-West:	429
		Total:		620			Total:		620			Total:		628			Total:	628
Volume/capacity (*v/c*) ratio:				0.413					0.413					0.419				0.419
v/c less ATSAC adjustment:				0.343					0.343					0.349				0.349
Level of Service (LOS):				A					A					A				A

PROJECT IMPACT

Change in *v/c* due to project: 0.006 — Δ*v/c* after mitigation: 0.006

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_Ex+Pro

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 11		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE					2014, WITH PROJECT					2014, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases: 2			Ambient Growth		Critical Phases: 2			☐ Adjacent		In	Out	Total			Critical Phases: 2	
Wesley Street		Capacity: 1500			from: 2014		Capacity: 1500			Trip	AM	173	83	256			Capacity: 1500	
East/West Street:		Signal System: 2			to: 2014		Signal System: 2			Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System: 2	
National Boulevard		v/c reduction: 7%			at: 0.0%		v/c reduction: 7%			Trip	AM	0	0	0			v/c reduction: 7%	
Analysis Date: 10/29/2015		Opposed Phasing: 1					Opposed Phasing: 1			Gen 2	PM	0	0	0			Opposed Phasing: 1	
PM Peak: 5:30 PM		Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	75	0	0	0		75	0	0	0%	0	75	0	0	0	75	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	15	0	0	0		15	0	0	0%	0	15	0	0	0	15	0	0
	Shared		1	**90**				1	**90**	0%			1	**90**			1	**90**
Southbound	Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	963	2	**482**	0		963	2	**482**	(10%)	18	981	2	**491**	0	981	2	**491**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	78	1	40	0		78	1	40	0%	0	78	1	40	0	78	1	40
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	9	1	**9**	0		9	1	**9**	0%	0	9	1	**9**	0	9	1	**9**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	932	2	466	0		932	2	466	10%	13	945	2	473	0	945	2	473
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
Critical Volumes:		North-South:		90			North-South:		90			North-South:		90		North-South:		90
		East-West:		491			East-West:		491			East-West:		500		East-West:		500
		Total:		581			Total:		581			Total:		590		Total:		590
Volume/capacity (*v/c*) ratio:				0.387					0.387					0.393				0.393
v/c less ATSAC adjustment:				0.317					0.317					0.323				0.323
Level of Service (LOS):				A					A					A				A

PROJECT IMPACT

Change in *v/c* due to project: 0.006 — Δ*v/c* after mitigation: 0.006

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_Ex+Pro

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 12		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT					2014, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	4		Ambient Growth		Critical Phases:	4	☐ Adjacent		In	Out	Total			Critical Phases:	4
La Cienega Boulevard		Capacity:	1375		from:	2014	Capacity:	1375	Trip	AM	173	83	256			Capacity:	1375
East/West Street:		Signal System:	3		to:	2014	Signal System:	3	Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	3
Venice Boulevard		v/c reduction:	10%		at:	1.0%	v/c reduction:	10%	Trip	AM	0	0	0			v/c reduction:	10%
Analysis Date:	10/29/2015	Opposed Phasing:	0				Opposed Phasing:	0	Gen 2	PM	0	0	0			Opposed Phasing:	0
AM Peak:	8:00 AM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	165	1	**165**	0		165	1	**165**	0%	0	165	1	**165**	0	165	1	**165**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1603	2	552	0		1603	2	552	0%	0	1603	2	552	0	1603	2	552
	Th-Rt		1	552				1	552	0%			1	552			1	552
	Right	54	0	0	0		54	0	0	0%	0	54	0	0	0	54	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	56	1	56	0		56	1	56	0%	0	56	1	56	0	56	1	56
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1089	2	**458**	0		1089	2	**458**	0%	0	1089	2	**464**	0	1089	2	**464**
	Th-Rt		1	**458**				1	**458**	0%			1	**464**			1	**464**
	Right	286	0	0	0		286	0	0	10%	18	304	0	0	0	304	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	312	2	**172**	0		312	2	**172**	(10%)	9	321	2	**177**	0	321	2	**177**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1129	3	376	0		1129	3	376	(5%)	4	1133	3	378	0	1133	3	378
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	115	1	33	0		115	1	33	0%	0	115	1	33	0	115	1	33
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	182	1	182	0		182	1	182	0%	0	182	1	182	0	182	1	182
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1275	3	**425**	0		1275	3	**425**	5%	8	1283	3	**428**	0	1283	3	**428**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	77	1	49	0		77	1	49	0%	0	77	1	49	0	77	1	49
	Shared		0	0				0	0	0%			0	0			0	0
Critical Volumes:		North-South:		623			North-South:		623			North-South:		629			North-South:	629
		East-West:		597			East-West:		597			East-West:		604			East-West:	604
		Total:		1220			Total:		1220			Total:		1234			Total:	1234
Volume/capacity (*v/c*) ratio:				0.887					0.887					0.897				0.897
v/c less ATSAC adjustment:				0.787					0.787					0.797				0.797
Level of Service (LOS):				C					C					C				C

Northbound — N/B RTOR: Existing: 75% Projected: 75% Mitigated: 75%

Southbound — S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%

Eastbound — E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%

Westbound — W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%

PROJECT IMPACT

Change in *v/c* due to project:	0.010	Δ*v/c* after mitigation:	0.010
Significantly impacted?	NO	Fully mitigated?	N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_Ex+Pro

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 12		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE					2014, WITH PROJECT					2014, WITH TRAFFIC MITIGATION			
North/South Street: La Cienega Boulevard		Critical Phases: 4			Ambient Growth	Critical Phases: 4				☐ Adjacent		In	Out	Total				
East/West Street: Venice Boulevard		Capacity: 1375			from: 2014	Capacity: 1375				Trip	AM	173	83	256				
Analysis Date: 10/29/2015		Signal System: 3			to: 2014	Signal System: 3				Gen 1	PM	127	174	301	☐ Use Dist 2:	Signal System: 3		
PM Peak: 5:00 PM		v/c reduction: 10%			at: 1.0%	v/c reduction: 10%				Trip	AM	0	0	0		v/c reduction: 10%		
		Opposed Phasing: 0				Opposed Phasing: 0				Gen 2	PM	0	0	0		Opposed Phasing: 0		
		Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	70	1	70	0		70	1	70	0%	0	70	1	**70**	0	70	1	**70**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1006	2	349	0		1006	2	349	0%	0	1006	2	349	0	1006	2	349
	Th-Rt		1	349				1	349	0%			1	349			1	349
	Right	40	0	0	0		40	0	0	0%	0	40	0	0	0	40	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	63	1	63	0		63	1	63	0%	0	63	1	63	0	63	1	63
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1240	2	**492**	0		1240	2	**492**	0%	0	1240	2	**496**	0	1240	2	**496**
	Th-Rt		1	**492**				1	**492**	0%			1	**496**			1	**496**
	Right	235	0	0	0		235	0	0	10%	13	248	0	0	0	248	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	293	2	161	0		293	2	161	(10%)	18	311	2	171	0	311	2	171
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1456	3	**485**	0		1456	3	**485**	(5%)	8	1464	3	**488**	0	1464	3	**488**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	142	1	107	0		142	1	107	0%	0	142	1	107	0	142	1	107
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	186	1	**186**	0		186	1	**186**	0%	0	186	1	**186**	0	186	1	**186**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	984	3	328	0		984	3	328	5%	6	990	3	330	0	990	3	330
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	56	1	24	0		56	1	24	0%	0	56	1	24	0	56	1	24
	Shared		0	0				0	0	0%			0	0			0	0
Critical Volumes:		North-South:		562			North-South:		562			North-South:		566		North-South:		566
		East-West:		671			East-West:		671			East-West:		674		East-West:		674
		Total:		1233			Total:		1233			Total:		1240		Total:		1240
Volume/capacity (*v/c*) ratio:				0.897					0.897					0.902				0.902
v/c less ATSAC adjustment:				0.797					0.797					0.802				0.802
Level of Service (LOS):				C					C					D				D

Northbound — N/B RTOR: Existing: 75% Projected: 75% Mitigated: 75%

Southbound — S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%

Eastbound — E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%

Westbound — W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%

PROJECT IMPACT

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

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 13		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE					2014, WITH PROJECT					2014, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	4		Ambient Growth		Critical Phases:	4		☐ Adjacent		In	Out	Total			Critical Phases:	4
Fairfax Blvd		Capacity:	1375		from:	2014	Capacity:	1375		Trip	AM	173	83	256			Capacity:	1375
East/West Street:		Signal System:	3		to:	2014	Signal System:	3		Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	3
Washington Blvd		v/c reduction:	10%		at:	1.0%	v/c reduction:	10%		Trip	AM	0	0	0			v/c reduction:	10%
Analysis Date:	10/29/2015	Opposed Phasing:	0				Opposed Phasing:	0		Gen 2	PM	0	0	0			Opposed Phasing:	0
AM Peak:	8:00 AM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume			+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	21	1	21	0		21	1	21	0%	0	21	1	21	0	21	1	21
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	904	2	**452**	0		904	2	**452**	0%	0	904	2	**452**	0	904	2	**452**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	375	1	106	0		375	1	106	0%	0	375	1	106	0	375	1	106
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	162	2	**89**	0		162	2	**89**	0%	0	162	2	**89**	0	162	2	**89**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	674	1	357	0		674	1	357	0%	0	674	1	362	0	674	1	362
	Th-Rt		1	357				1	357	0%			1	362			1	362
	Right	40	0	0	0		40	0	0	5%	9	49	0	0	0	49	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	62	1	**62**	0		62	1	**62**	(5%)	4	66	1	**66**	0	66	1	**66**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	478	2	163	0		478	2	163	(10%)	9	487	2	166	0	487	2	166
	Th-Rt		1	163				1	163	0%			1	166			1	166
	Right	12	0	0	0		12	0	0	0%	0	12	0	0	0	12	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	359	2	197	0		359	2	197	0%	0	359	2	197	0	359	2	197
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	971	2	**486**	0		971	2	**486**	10%	17	988	2	**494**	0	988	2	**494**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	104	1	23	0		104	1	23	0%	0	104	1	23	0	104	1	23
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR:	Existing: 75%																	
	Projected: 75%																	
	Mitigated: 75%																	
S/B RTOR:	Existing: 50%																	
	Projected: 50%																	
	Mitigated: 50%																	
E/B RTOR:	Existing: 50%																	
	Projected: 50%																	
	Mitigated: 50%																	
W/B RTOR:	Existing: 50%																	
	Projected: 50%																	
	Mitigated: 50%																	
Critical Volumes:	North-South:			541				North-South:	541				North-South:	541				North-South:	541
	East-West:			548				East-West:	548				East-West:	560				East-West:	560
	Total:			1089				Total:	1089				Total:	1101				Total:	1101
Volume/capacity (*v/c*) ratio:				0.792					0.792					0.801					0.801
v/c less ATSAC adjustment:				0.692					0.692					0.701					0.701
Level of Service (LOS):				B					B					C					C

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_Ex+Pro

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 13		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT				2014, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	4		Ambient Growth	Critical Phases:	4		☐ Adjacent	In	Out	Total		Critical Phases:	4	
Fairfax Blvd		Capacity:	1375		from: 2014	Capacity:	1375		Trip AM	173	83	256		Capacity:	1375	
East/West Street:		Signal System:	3		to: 2014	Signal System:	3		Gen 1 PM	127	174	301	☐ Use Dist 2:	Signal System:	3	
Washington Blvd		v/c reduction:	10%		at: 1.0%	v/c reduction:	10%		Trip AM	0	0	0		v/c reduction:	10%	
Analysis Date:	10/29/2015	Opposed Phasing:	0			Opposed Phasing:	0		Gen 2 PM	0	0	0		Opposed Phasing:	0	
PM Peak:	5:00 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	5	1	5	0		5	1	5	0%	0	5	1	5	0	5	1	5
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	797	2	399	0		797	2	399	0%	0	797	2	399	0	797	2	399
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	623	1	**419**	0		623	1	**419**	0%	0	623	1	**419**	0	623	1	**419**
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	316	2	**174**	0		316	2	**174**	0%	0	316	2	**174**	0	316	2	**174**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	606	1	349	0		606	1	349	0%	0	606	1	352	0	606	1	352
	Th-Rt		1	349				1	349	0%			1	352			1	352
	Right	91	0	0	0		91	0	0	5%	6	97	0	0	0	97	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	78	1	78	0		78	1	78	(5%)	8	86	1	86	0	86	1	86
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	888	2	**300**	0		888	2	**300**	(10%)	18	906	2	**306**	0	906	2	**306**
	Th-Rt		1	**300**				1	**300**	0%			1	**306**			1	**306**
	Right	12	0	0	0		12	0	0	0%	0	12	0	0	0	12	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	272	2	**150**	0		272	2	**150**	0%	0	272	2	**150**	0	272	2	**150**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	517	2	259	0		517	2	259	10%	13	530	2	265	0	530	2	265
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	55	1	0	0		55	1	0	0%	0	55	1	0	0	55	1	0
	Shared		0	0				0	0	0%			0	0			0	0
Critical Volumes:		North-South:		593			North-South:		593			North-South:		593		North-South:		593
		East-West:		450			East-West:		450			East-West:		456		East-West:		456
		Total:		1042			Total:		1042			Total:		1048		Total:		1048
Volume/capacity (*v/c*) ratio:				0.758					0.758					0.762				0.762
v/c less ATSAC adjustment:				0.658					0.658					0.662				0.662
Level of Service (LOS):				B					B					B				B

Northbound: N/B RTOR: Existing: 75% Projected: 75% Mitigated: 75%

Southbound: S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%

Eastbound: E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%

Westbound: W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_Ex+Pro

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 14		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT				2014, WITH TRAFFIC MITIGATION			
North/South Street: Jefferson Blvd		Critical Phases: 4			Ambient Growth	Critical Phases: 4			☐ Adjacent		In	Out	Total			
East/West Street: National Blvd		Capacity: 1375			from: 2014	Capacity: 1375			Trip	AM	173	83	256			
Analysis Date: 10/29/2015		Signal System: 3			to: 2014	Signal System: 3			Gen 1	PM	127	174	301	☐ Use Dist 2:	Signal System: 3	
AM Peak: 8:00 AM		v/c reduction: 10%			at: 1.0%	v/c reduction: 10%			Trip	AM	0	0	0		v/c reduction: 10%	
		Opposed Phasing: 2				Opposed Phasing: 2			Gen 2	PM	0	0	0		Opposed Phasing: 2	
		Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	315	1	**315**	0		315	1	**315**	5%	9	324	1	**324**	0	324	1	**324**
	Lt-Th	N/B RTOR:	0	0				0	0	0%			0	0			0	0
	Thru	709	2	355	0		709	2	355	0%	0	709	2	355	0	709	2	355
	Th-Rt	Existing: 75%	0	0				0	0	0%			0	0			0	0
	Right	26	1	25	0		26	1	25	0%	0	26	1	25	0	26	1	25
	Shared	Projected: 75%	0	0				0	0	0%			0	0			0	0
Southbound	Left	5	1	5	0		5	1	5	0%	0	5	1	5	0	5	1	5
	Lt-Th	S/B RTOR:	0	0				0	0	0%			0	0			0	0
	Thru	808	1	**808**	0		808	1	**808**	0%	0	808	1	**808**	0	808	1	**808**
	Th-Rt	Existing: 50%	0	0				0	0	0%			0	0			0	0
	Right	703	1	567	0		703	1	567	5%	8	711	1	573	0	711	1	573
	Shared	Projected: 50%	0	0				0	0	0%			0	0			0	0
Eastbound	Left	272	1	150	0		272	1	150	(5%)	4	276	1	152	0	276	1	152
	Lt-Th	E/B RTOR:	1	**152**				1	**152**	0%			1	**154**			1	**154**
	Thru	30	0	0	0		30	0	0	0%	0	30	0	0	0	30	0	0
	Th-Rt	Existing: 50%	0	0				0	0	0%			0	0			0	0
	Right	234	1	76	0		234	1	76	(5%)	5	239	1	77	0	239	1	77
	Shared	Projected: 50%	0	0				0	0	0%			0	0			0	0
Westbound	Left	1	0	0	0		1	0	0	0%	0	1	0	0	0	1	0	0
	Lt-Th	W/B RTOR:	1	**25**				1	**25**	0%			1	**25**			1	**25**
	Thru	24	0	0	0		24	0	0	0%	0	24	0	0	0	24	0	0
	Th-Rt	Existing: 50%	0	0				0	0	0%			0	0			0	0
	Right	5	1	3	0		5	1	3	0%	0	5	1	3	0	5	1	3
	Shared	Projected: 50%	0	0				0	0	0%			0	0			0	0
Critical Volumes:		North-South:		1123			North-South:		1123			North-South:		1132		North-South:		1132
		East-West:		177			East-West:		177			East-West:		179		East-West:		179
		Total:		1300			Total:		1300			Total:		1311		Total:		1311
Volume/capacity (*v/c*) ratio:				0.946					0.946					0.954				0.954
v/c less ATSAC adjustment:				0.846					0.846					0.854				0.854
Level of Service (LOS):				D					D					D				D

PROJECT IMPACT

Change in *v/c* due to project: 0.008 — Δ*v/c* after mitigation: 0.008

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_Ex+Pro

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 14		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT					2014, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	4		Ambient Growth	Critical Phases:	4		☐ Adjacent		In	Out	Total		Critical Phases:	4	
Jefferson Blvd		Capacity:	1375		from: 2014	Capacity:	1375		Trip	AM	173	83	256		Capacity:	1375	
East/West Street:		Signal System:	3		to: 2014	Signal System:	3		Gen 1	PM	127	174	301	☐ Use Dist 2:	Signal System:	3	
National Blvd		v/c reduction:	10%		at: 1.0%	v/c reduction:	10%		Trip	AM	0	0	0		v/c reduction:	10%	
Analysis Date:	10/29/2015	Opposed Phasing:	2			Opposed Phasing:	2		Gen 2	PM	0	0	0		Opposed Phasing:	2	
PM Peak:	5:00 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	192	1	**192**	0		192	1	**192**	5%	7	199	1	**199**	0	199	1	**199**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	791	2	396	0		791	2	396	0%	0	791	2	396	0	791	2	396
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	6	1	0	0		6	1	0	0%	0	6	1	0	0	6	1	0
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	2	1	2	0		2	1	2	0%	0	2	1	2	0	2	1	2
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	485	1	**485**	0		485	1	**485**	0%	0	485	1	**485**	0	485	1	**485**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	224	1	0	0		224	1	0	5%	6	230	1	0	0	230	1	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	564	1	310	0		564	1	310	(5%)	9	573	1	315	0	573	1	315
	Lt-Th		1	267				1	267	0%			1	271			1	271
	Thru	13	0	0	0		13	0	0	0%	0	13	0	0	0	13	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	414	1	**318**	0		414	1	**318**	(5%)	9	423	1	**323**	0	423	1	**323**
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	13	0	0	0		13	0	0	0%	0	13	0	0	0	13	0	0
	Lt-Th		1	**43**				1	**43**	0%			1	**43**			1	**43**
	Thru	30	0	0	0		30	0	0	0%	0	30	0	0	0	30	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	14	1	13	0		14	1	13	0%	0	14	1	13	0	14	1	13
	Shared		0	0				0	0	0%			0	0			0	0
Critical Volumes:		North-South:		677			North-South:		677			North-South:		684		North-South:		684
		East-West:		361			East-West:		361			East-West:		366		East-West:		366
		Total:		1038			Total:		1038			Total:		1050		Total:		1050
Volume/capacity (*v/c*) ratio:				0.755					0.755					0.764				0.764
v/c less ATSAC adjustment:				0.655					0.655					0.664				0.664
Level of Service (LOS):				B					B					B				B

Northbound — N/B RTOR: Existing: 75% Projected: 75% Mitigated: 75%

Southbound — S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%

Eastbound — E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%

Westbound — W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%

PROJECT IMPACT

Change in *v/c* due to project:	0.009	Δ*v/c* after mitigation:	0.009
Significantly impacted?	NO	Fully mitigated?	N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_Ex+Pro

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 15		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT					2014, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	2		Ambient Growth		Critical Phases:	2	☐ Adjacent		In	Out	Total			Critical Phases:	2
Robertson Blvd		Capacity:	1500		from:	2014	Capacity:	1500	Trip	AM	173	83	256			Capacity:	1500
East/West Street:		Signal System:	3		to:	2014	Signal System:	3	Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	3
I-10 WB Offramp		v/c reduction:	10%		at:	1.0%	v/c reduction:	10%	Trip	AM	0	0	0			v/c reduction:	10%
Analysis Date:	10/29/2015	Opposed Phasing:	2				Opposed Phasing:	2	Gen 2	PM	0	0	0			Opposed Phasing:	2
AM Peak:	8:00 AM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	56	1	**56**	0		56	1	**56**	0%	0	56	1	**56**	0	56	1	**56**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1251	2	626	0		1251	2	626	0%	0	1251	2	626	0	1251	2	626
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1402	1	**731**	0		1402	1	**731**	0%	0	1402	1	**731**	0	1402	1	**731**
	Th-Rt		1	**731**				1	**731**	0%			1	**731**			1	**731**
	Right	59	0	0	0		59	0	0	0%	0	59	0	0	0	59	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	128	1	**128**	0		128	1	**128**	0%	0	128	1	**128**	0	128	1	**128**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	60	1	32	0		60	1	32	0%	0	60	1	32	0	60	1	32
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	78	0	0	0		78	0	0	10%	18	96	0	0	0	96	0	0
	Lt-Th		1	119				1	119	0%			1	**137**			1	**137**
	Thru	41	0	0	0		41	0	0	0%	0	41	0	0	0	41	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	125	1	**125**	0		125	1	**125**	0%	0	125	1	125	0	125	1	125
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 75% Projected: 75% Mitigated: 75%																		
S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
Critical Volumes:		North-South:		787			North-South:		787			North-South:		787		North-South:		787
		East-West:		253			East-West:		253			East-West:		265		East-West:		265
		Total:		1040			Total:		1040			Total:		1052		Total:		1052
Volume/capacity (*v/c*) ratio:				0.693					0.693					0.701				0.701
v/c less ATSAC adjustment:				0.593					0.593					0.601				0.601
Level of Service (LOS):				A					A					B				B

PROJECT IMPACT

Change in *v/c* due to project: 0.008 — Δ*v/c* after mitigation: 0.008

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_Ex+Pro

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 15		2014, EXISTING			2014, PROJECTED CUMULATIVE BASE				2014, WITH PROJECT					2014, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	2		Ambient Growth		Critical Phases:	2	☐ Adjacent		In	Out	Total			Critical Phases:	2
Robertson Blvd		Capacity:	1500		from:	2014	Capacity:	1500	Trip	AM	173	83	256			Capacity:	1500
East/West Street:		Signal System:	3		to:	2014	Signal System:	3	Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	3
I-10 WB Offramp		v/c reduction:	10%		at:	1.0%	v/c reduction:	10%	Trip	AM	0	0	0			v/c reduction:	10%
Analysis Date:	10/29/2015	Opposed Phasing:	2				Opposed Phasing:	2	Gen 2	PM	0	0	0			Opposed Phasing:	2
PM Peak:	5:00 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	33	1	**33**	0		33	1	**33**	0%	0	33	1	**33**	0	33	1	**33**
	Lt-Th	N/B RTOR:	0	0				0	0	0%			0	0			0	0
	Thru	863	2	432	0		863	2	432	0%	0	863	2	432	0	863	2	432
	Th-Rt	Existing: 75%	0	0				0	0	0%			0	0			0	0
	Right	Projected: 75%	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared	Mitigated: 75%	0	0				0	0	0%			0	0			0	0
Southbound	Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:	0	0				0	0	0%			0	0			0	0
	Thru	1469	1	**753**	0		1469	1	**753**	0%	0	1469	1	**753**	0	1469	1	**753**
	Th-Rt	Existing: 50%	1	**753**				1	**753**	0%			1	**753**			1	**753**
	Right	Projected: 50%	0	0	0		36	0	0	0%	0	36	0	0	0	36	0	0
	Shared	Mitigated: 50%	0	0				0	0	0%			0	0			0	0
Eastbound	Left	71	1	**71**	0		71	1	**71**	0%	0	71	1	71	0	71	1	**71**
	Lt-Th	E/B RTOR:	0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Existing: 50%	0	0				0	0	0%			0	0			0	0
	Right	Projected: 50%	1	43	0		59	1	43	0%	0	59	1	43	0	59	1	43
	Shared	Mitigated: 50%	0	0				0	0	0%			0	0			0	0
Westbound	Left	258	0	0	0		258	0	0	10%	13	271	0	0	0	271	0	0
	Lt-Th	W/B RTOR:	1	292				1	292	0%			1	305			1	305
	Thru	34	0	0	0		34	0	0	0%	0	34	0	0	0	34	0	0
	Th-Rt	Existing: 50%	0	0				0	0	0%			0	0			0	0
	Right	Projected: 50%	1	**508**	0		508	1	**508**	0%	0	508	1	508	0	508	1	**508**
	Shared	Mitigated: 50%	0	0				0	0	0%			0	0			0	0
Critical Volumes:		North-South:		786			North-South:		786			North-South:		786		North-South:		786
		East-West:		579			East-West:		579			East-West:		592		East-West:		579
		Total:		1365			Total:		1365			Total:		1378		Total:		1365
Volume/capacity (*v/c*) ratio:				0.910					0.910					0.918				0.910
v/c less ATSAC adjustment:				0.810					0.810					0.818				0.810
Level of Service (LOS):				D					D					D				D

PROJECT IMPACT

Change in *v/c* due to project: 0.008 — Δ*v/c* after mitigation: 0.000

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_Ex+Pro

Developed 2005-2007 by Ken Aitchison

Project: Washington Blvd - National Blvd Traffic and Parking Services

DOT Case Number:
Year of counts: 2014
Project buildout: 2019
Ambient growth: 1.0% per year
Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_2019.xls

Project Trip Generation		Adjacent to Project			Not Adjacent		
		In	Out	Total	In	Out	Total
Trip Gen	AM Peak	192	98	290	173	83	256
	PM Peak	149	193	342	127	174	301

Level of Service and Volume to Capacity Ratio Summary

No.	Intersection	Peak Hour	Existing (2014)		Cumulative Base		Future with project		Project Impact		After mitigation		
			v/c	LOS	*v/c*	LOS	*v/c*	LOS	Δ *v/c*	significant?	*v/c*	Δ *v/c*	mitigated?
1	Culver Boulevard &	AM	0.548	A	0.639	B	0.653	B	0.014	NO	--	--	N/A
	Venice Boulevard	PM	0.491	A	0.597	A	0.609	B	0.012	NO	--	--	N/A
2	Robertson Blvd/Exposition &	AM	1.041	F	0.883	D	0.888	D	0.005	NO	--	--	N/A
	Venice Boulevard	PM	0.839	D	0.703	C	0.713	C	0.010	NO	--	--	N/A
3	National Boulevard &	AM	0.604	B	0.634	B	0.690	B	0.056	NO	0.631	-0.003	N/A
	Venice Boulevard	PM	0.647	B	0.708	C	0.756	C	0.048	YES	0.694	-0.014	YES
4	Helms Avenue &	AM	0.265	A	0.285	A	0.288	A	0.003	NO	--	--	N/A
	Venice Boulevard	PM	0.271	A	0.294	A	0.301	A	0.007	NO	--	--	N/A
5	Cattaraugus Avenue &	AM	0.713	C	0.785	C	0.788	C	0.003	NO	--	--	N/A
	Venice Boulevard	PM	0.607	B	0.677	B	0.687	B	0.010	NO	--	--	N/A
6	Robertson Blvd/Higuera &	AM	0.690	B	0.781	C	0.784	C	0.003	NO	--	--	N/A
	Washington Boulevard	PM	0.660	B	0.753	C	0.755	C	0.002	NO	--	--	N/A
7	National Boulevard &	AM	0.680	B	0.797	C	0.806	D	0.009	NO	0.754	-0.043	N/A
	Washington Boulevard	PM	0.788	C	0.893	D	0.904	E	0.011	YES	0.880	-0.013	YES
8	Helms Avenue &	AM	0.435	A	0.469	A	0.477	A	0.008	NO	--	--	N/A
	Washington Boulevard	PM	0.469	A	0.510	A	0.518	A	0.008	NO	--	--	N/A
9	Robertson Boulevard &	AM	0.847	D	0.930	E	0.950	E	0.020	YES	0.873	-0.057	YES
	National Boulevard	PM	0.753	C	0.837	D	0.856	D	0.019	NO	0.856	0.019	N/A
10	National Boulevard &	AM	0.219	A	0.351	A	0.370	A	0.019	NO	--	--	N/A
	I-10 EB Ramp	PM	0.353	A	0.543	A	0.549	A	0.006	NO	--	--	N/A
11	Wesley Street &	AM	0.343	A	0.407	A	0.413	A	0.006	NO	--	--	N/A
	National Boulevard	PM	0.317	A	0.390	A	0.396	A	0.006	NO	--	--	N/A
12	La Cienega Boulevard &	AM	0.787	C	0.837	D	0.847	D	0.010	NO	--	--	N/A
	Venice Boulevard	PM	0.797	C	0.848	D	0.853	D	0.005	NO	--	--	N/A
13	Fairfax Blvd &	AM	0.692	B	0.747	C	0.756	C	0.009	NO	--	--	N/A
	Washington Blvd	PM	0.658	B	0.732	C	0.737	C	0.005	NO	--	--	N/A
14	Jefferson Blvd &	AM	0.846	D	0.945	E	0.953	E	0.008	NO	--	--	N/A
	National Blvd	PM	0.655	B	0.769	C	0.778	C	0.009	NO	--	--	N/A
15	Robertson Blvd &	AM	0.593	A	0.785	C	0.797	C	0.012	NO	--	--	N/A
	I-10 WB Offramp	PM	0.810	D	0.857	D	0.865	D	0.008	NO	--	--	N/A
16	National Boulevard &	AM	0.000	A	0.000	A	0.383	A	0.383	NO	--	--	N/A
	Project Main Dwy	PM	0.000	A	0.000	A	0.474	A	0.474	NO	--	--	N/A

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 1		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION			
North/South Street: Culver Boulevard		Critical Phases: 4			Ambient Growth		Critical Phases: 4			☐ Adjacent		In	Out	Total			Critical Phases: 4	
		Capacity: 1375			from: 2014		Capacity: 1375			Trip	AM	173	83	256			Capacity: 1375	
East/West Street: Venice Boulevard		Signal System: 3			to: 2019		Signal System: 3			Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System: 3	
		v/c reduction: 10%			at: 1.0%		v/c reduction: 10%			Trip	AM	0	0	0			v/c reduction: 10%	
Analysis Date: 10/29/2015		Opposed Phasing: 1					Opposed Phasing: 1			Gen 2	PM	0	0	0			Opposed Phasing: 1	
AM Peak: 8:00 AM		Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	39	1	39	2		41	1	41	0%	0	41	1	41	0	41	1	41
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	64	1	64	3		67	1	67	0%	0	67	1	67	0	67	1	67
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	721	2	**241**	37	90	848	2	**235**	10%	17	865	2	**240**	0	865	2	**240**
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	148	1	81	8		156	1	86	0%	0	156	1	86	0	156	1	86
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	37	0	0	2		39	0	0	0%	0	39	0	0	0	39	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	29	0	0	1		30	0	0	0%	0	30	0	0	0	30	0	0
	Shared		1	**133**				1	**139**	0%			1	**139**			1	**139**
Eastbound	Left	4	1	4	0		4	1	4	0%	0	4	1	4	0	4	1	4
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	873	2	**310**	45	22	940	2	**333**	15%	26	966	2	**342**	0	966	2	**342**
	Th-Rt		1	**310**				1	**333**	0%			1	**342**			1	**342**
	Right	57	0	0	3		60	0	0	0%	0	60	0	0	0	60	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	376	2	**207**	19	166	561	2	**309**	(10%)	9	570	2	**314**	0	570	2	**314**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1027	2	388	52	6	1085	2	410	(15%)	12	1097	2	414	0	1097	2	414
	Th-Rt		1	388				1	410	0%			1	414			1	414
	Right	138	0	0	7		145	0	0	0%	0	145	0	0	0	145	0	0
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 75% Projected: 75% Mitigated: 75%																		
S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
Critical Volumes:		North-South:		374			North-South:		374			North-South:		380			North-South:	380
		East-West:		517			East-West:		642			East-West:		655			East-West:	655
		Total:		891			Total:		1016			Total:		1035			Total:	1035
Volume/capacity (*v/c*) ratio:				0.648					0.739					0.753				0.753
v/c less ATSAC adjustment:				0.548					0.639					0.653				0.653
Level of Service (LOS):				A					B					B				B

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_2019.xls

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 1		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	4		Ambient Growth		Critical Phases:	4		☐ Adjacent		In	Out	Total			Critical Phases:	4
Culver Boulevard		Capacity:	1375		from:	2014	Capacity:	1375		Trip	AM	173	83	256			Capacity:	1375
East/West Street:		Signal System:	3		to:	2019	Signal System:	3		Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	3
Venice Boulevard		v/c reduction:	10%		at:	1.0%	v/c reduction:	10%		Trip	AM	0	0	0			v/c reduction:	10%
Analysis Date:	10/29/2015	Opposed Phasing:	1				Opposed Phasing:	1		Gen 2	PM	0	0	0			Opposed Phasing:	1
PM Peak:	5:00 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	75	1	75	4		79	1	79	0%	0	79	1	79	0	79	1	79
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	39	1	39	2		41	1	41	0%	0	41	1	41	0	41	1	41
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	740	2	**270**	38	155	933	2	**321**	10%	13	946	2	**321**	0	946	2	**321**
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	167	1	92	9		176	1	97	0%	0	176	1	97	0	176	1	97
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	39	0	0	2		41	0	0	0%	0	41	0	0	0	41	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	25	0	0	1		26	0	0	0%	0	26	0	0	0	26	0	0
	Shared		1	**139**				1	**146**	0%			1	**146**			1	**146**
Eastbound	Left	4	1	4	0		4	1	4	0%	0	4	1	4	0	4	1	4
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	641	2	**221**	33	10	684	2	**236**	15%	19	703	2	**242**	0	703	2	**242**
	Th-Rt		1	**221**				1	**236**	0%			1	**242**			1	**242**
	Right	22	0	0	1		23	0	0	0%	0	23	0	0	0	23	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	332	2	**183**	17	116	465	2	**256**	(10%)	19	484	2	**266**	0	484	2	**266**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1013	2	374	52	22	1087	2	400	(15%)	25	1112	2	408	0	1112	2	408
	Th-Rt		1	374				1	400	0%			1	408			1	408
	Right	108	0	0	6		114	0	0	0%	0	114	0	0	0	114	0	0
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 75% Projected: 75% Mitigated: 75%																		
S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
Critical Volumes:		North-South:		409			North-South:		467			North-South:		467		North-South:		467
		East-West:		404			East-West:		491			East-West:		508		East-West:		508
		Total:		813			Total:		959			Total:		975		Total:		975
Volume/capacity (*v/c*) ratio:				0.591					0.697					0.709				0.709
v/c less ATSAC adjustment:				0.491					0.597					0.609				0.609
Level of Service (LOS):				A					A					B				B

PROJECT IMPACT

Change in *v/c* due to project: 0.012 — Δ*v/c* after mitigation: 0.012

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_2019.xls

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 2		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION				
North/South Street:		Critical Phases:	4		Ambient Growth		Critical Phases:	4		☑ Adjacent		In	Out	Total			Critical Phases:	4	
Robertson Blvd/Exposition		Capacity:	1375		from:	2014	Capacity:	1375		Trip	AM	192	98	290			Capacity:	1375	
East/West Street:		Signal System:	3		to:	2019	Signal System:	3		Gen 1	PM	149	193	342	☐ Use Dist 2:		Signal System:	3	
Venice Boulevard		v/c reduction:	10%		at:	1.0%	v/c reduction:	10%		Trip	AM	0	0	0			v/c reduction:	10%	
Analysis Date:	10/29/2015	Opposed Phasing:	1				Opposed Phasing:	1		Gen 2	PM	0	0	0			Opposed Phasing:	1	
AM Peak:	8:00 AM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume	
Northbound	Left	68	1	68	3	5	76	1	76	(5%)	5	81	1	81	0	81	1	81	
	Lt-Th		0	0				0	0	0%			0	0			0	0	
	Thru	461	1	**461**	24	25	510	1	**262**	0%	0	510	1	**262**	0	510	1	**262**	
	Th-Rt		0	0				**1**	**262**	0%			1	**262**			1	**262**	
	Right	48	1	30	2		50	1	17	0%	0	50	1	17	0	50	1	17	
	Shared		0	0				0	0	0%			0	0			0	0	
Southbound	Left	416	1	229	21	63	500	**2**	275	0%	0	500	2	275	0	500	2	275	
	Lt-Th		1	290				**0**	0	0%			0	0			0	0	
	Thru	103		0	5	98	206	**1**	206	0%	0	206	1	206	0	206	1	206	
	Th-Rt		0	0				0	0	0%			0	0			0	0	
	Right	519	1	**335**	26	167	712	1	**477**	0%	0	712	1	**477**	0	712	1	**477**	
	Shared		0	0				0	0	0%			0	0			0	0	
Eastbound	Left	368	2	**202**	19	84	471	2	**259**	0%	0	471	2	**259**	0	471	2	**259**	
	Lt-Th		0	0				0	0	0%			0	0			0	0	
	Thru	1383	1	706	71	11	1465	**3**	488	25%	48	1513	3	504	0	1513	3	504	
	Th-Rt		1	706				**0**	0	0%			0	0			0	0	
	Right	28	0	0	1		29	**1**	29	0%	0	29	1	29	0	29	1	29	
	Shared		0	0				0	0	0%			0	0			0	0	
Westbound	Left	24	1	24	1		25	1	25	0%	0	25	1	25	0	25	1	25	
	Lt-Th		0	0				0	0	0%			0	0			0	0	
	Thru	1001	1	**571**	51	7	1059	**3**	**353**	(20%)	20	1079	3	**360**	0	1079	3	**360**	
	Th-Rt		1	**571**				**0**	0	0%			0	0			0	0	
	Right	140	0	0	7	47	194	1	194	0%	0	194	1	194	0	194	1	194	
	Shared		0	0				0	0	0%			0	0			0	0	
N/B RTOR:	Existing: 75%																		
	Projected: 75%																		
	Mitigated: 75%																		
S/B RTOR:	Existing: 50%																		
	Projected: 50%																		
	Mitigated: 50%																		
E/B RTOR:	Existing: 0%																		
	Projected: 0%																		
	Mitigated: 0%																		
W/B RTOR:	Existing: 0%																		
	Projected: 0%																		
	Mitigated: 0%																		
Critical Volumes:		North-South:		796					739			North-South:		739			North-South:		739
		East-West:		773			East-West:		612			East-West:		619			East-West:		619
		Total:		1569			Total:		1351			Total:		1358			Total:		1358
Volume/capacity (*v/c*) ratio:				1.141					0.983					0.988					0.988
v/c less ATSAC adjustment:				1.041					0.883					0.888					0.888
Level of Service (LOS):				F					D					D					D

PROJECT IMPACT

Change in *v/c* due to project: 0.005 — Δ*v/c* after mitigation: 0.005

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_2019.xls

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 2		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION				
North/South Street:		Critical Phases:	4		Ambient Growth		Critical Phases:	4		☑ Adjacent		In	Out	Total			Critical Phases:	4	
Robertson Blvd/Exposition		Capacity:	1375		from:	2014	Capacity:	1375		Trip	AM	192	98	290			Capacity:	1375	
East/West Street:		Signal System:	3		to:	2019	Signal System:	3		Gen 1	PM	149	193	342	☐ Use Dist 2:		Signal System:	3	
Venice Boulevard		v/c reduction:	10%		at:	1.0%	v/c reduction:	10%		Trip	AM	0	0	0			v/c reduction:	10%	
Analysis Date:	10/29/2015	Opposed Phasing:	1				Opposed Phasing:	1		Gen 2	PM	0	0	0			Opposed Phasing:	1	
PM Peak:	5:00 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume	
Northbound	Left	96	1	96	5	3	104	1	104	(5%)	10	114	1	114	0	114	1	114	
	Lt-Th		0	0				0	0	0%			0	0			0	0	
	Thru	376	1	**376**	19	103	498	1	**253**	0%	0	498	1	**253**	0	498	1	**253**	
	Th-Rt		0	0				**1**	**253**	0%			1	**253**			1	**253**	
	Right	29	1	15	1		30	1	9	0%	0	30	1	9	0	30	1	9	
	Shared		0	0				0	0	0%			0	0			0	0	
Southbound	Left	319	1	175	16	59	394	**2**	217	0%	0	394	2	217	0	394	2	217	
	Lt-Th		1	**230**				**0**	0	0%			0	0			0	0	
	Thru	86	0	0	4	28	118	**1**	118	0%	0	118	1	118	0	118	1	118	
	Th-Rt		0	0				0	0	0%			0	0			0	0	
	Right	328	1	205	17	124	469	1	**264**	0%	0	469	1	**264**	0	469	1	**264**	
	Shared		0	0				0	0	0%			0	0			0	0	
Eastbound	Left	246	2	135	13	151	410	2	**225**	0%	0	410	2	**225**	0	410	2	**225**	
	Lt-Th		0	0				0	0	0%			0	0			0	0	
	Thru	1282	1	**657**	65	2	1349	**3**	450	25%	37	1386	3	462	0	1386	3	462	
	Th-Rt		1	**657**				**0**	0	0%			0	0			0	0	
	Right	32	0	0	2		34	1	34	0%	0	34	1	34	0	34	1	34	
	Shared		0	0				0	0	0%			0	0			0	0	
Westbound	Left	29	1	**29**	1	0	30	1	30	0%	0	30	1	30	0	30	1	30	
	Lt-Th		0	0				0	0	0%			0	0			0	0	
	Thru	1019	1	548	52	17	1088	**3**	**363**	(20%)	39	1127	3	**376**	0	1127	3	**376**	
	Th-Rt		1	548				**0**	0	0%			0	0			0	0	
	Right	76	0	0	4	82	162	1	162	0%	0	162	1	162	0	162	1	162	
	Shared		0	0				0	0	0%			0	0			0	0	
Critical Volumes:		North-South:		606			North-South:		516			North-South:		516		North-South:		516	
		East-West:		686			East-West:		588			East-West:		601		East-West:		601	
		Total:		1292			Total:		1104			Total:		1117		Total:		1117	
Volume/capacity (*v/c*) ratio:				0.939					0.803					0.813				0.813	
v/c less ATSAC adjustment:				0.839					0.703					0.713				0.713	
Level of Service (LOS):				D					C					C				C	

Northbound	N/B RTOR:
	Existing: 50%
	Projected: 50%
	Mitigated: 50%

Southbound	S/B RTOR:
	Existing: 50%
	Projected: 50%
	Mitigated: 50%

Eastbound	E/B RTOR:
	Existing: 0%
	Projected: 0%
	Mitigated: 0%

Westbound	W/B RTOR:
	Existing: 0%
	Projected: 0%
	Mitigated: 0%

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_2019.xls

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 3		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	3		Ambient Growth		Critical Phases:	3		☑ Adjacent		In	Out	Total			Critical Phases:	3
National Boulevard		Capacity:	1425		from:	2014	Capacity:	1425		Trip	AM	192	98	290			Capacity:	1425
East/West Street:		Signal System:	3		to:	2019	Signal System:	3		Gen 1	PM	149	193	342	☐ Use Dist 2:		Signal System:	3
Venice Boulevard		v/c reduction:	10%		at:	1.0%	v/c reduction:	10%		Trip	AM	0	0	0			v/c reduction:	10%
Analysis Date:	10/29/2015	Opposed Phasing:	0				Opposed Phasing:	0		Gen 2	PM	0	0	0			Opposed Phasing:	0
AM Peak:	8:00 AM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	148	1	**148**	8	11	167	1	**167**	(20%)	20	187	1	**187**	0	187	2	**103**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	645	1	355	33	101	779	1	425	(20%)	20	799	1	442	0	799	2	399
	Th-Rt		1	355				1	425	0%			1	442			0	0
	Right	64	0	0	3	3	70	0	0	(15%)	15	85	0	0	0	85	1	38
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	124	1	124	6	1	131	1	131	0%	0	131	1	131	0	131	1	131
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	611	1	**356**	31	88	730	1	**418**	25%	44	774	1	**440**	0	774	1	**440**
	Th-Rt		1	**356**				1	**418**	0%			1	**440**			1	**440**
	Right	100	0	0	5	0	105	0	0	0%	0	105	0	0	0	105	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	58	1	**58**	3	9	70	2	38	(5%)	5	75	2	41	0	75	2	41
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1144	3	381	58	3	1205	3	**402**	(10%)	9	1214	3	**405**	0	1214	3	**405**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	188	1	188	10	77	275	1	275	5%	10	285	1	285	0	285	1	285
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	45	1	45	2	13	60	1	**60**	20%	34	94	1	**94**	0	94	1	**94**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	883	2	**442**	45	3	931	3	310	0%	0	931	3	310	0	931	3	310
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	113	1	113	6	1	120	1	120	0%	0	120	1	120	0	120	1	120
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR:	Existing: 50%																	
	Projected: 50%																	
	Mitigated: 50%																	
S/B RTOR:	Existing: 50%																	
	Projected: 50%																	
	Mitigated: 50%																	
E/B RTOR:	Existing: 0%																	
	Projected: 0%																	
	Mitigated: 0%																	
W/B RTOR:	Existing: 0%																	
	Projected: 0%																	
	Mitigated: 0%																	
Critical Volumes:		North-South:		504			North-South:		584			North-South:		626			North-South:	542
		East-West:		500			East-West:		462			East-West:		499			East-West:	499
		Total:		1003			Total:		1046			Total:		1125			Total:	1041
Volume/capacity (*v/c*) ratio:				0.704					0.734					0.790				0.731
v/c less ATSAC adjustment:				0.604					0.634					0.690				0.631
Level of Service (LOS):				B					B					B				B

PROJECT IMPACT

Change in *v/c* due to project: 0.056 — Δ*v/c* after mitigation: -0.003

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_2019.xls

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 3		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION				
North/South Street:		Critical Phases:	3		Ambient Growth		Critical Phases:	3		☑ Adjacent		In	Out	Total			Critical Phases:	3	
National Boulevard		Capacity:	1425		from:	2014	Capacity:	1425		Trip	AM	192	98	290			Capacity:	1425	
East/West Street:		Signal System:	3		to:	2019	Signal System:	3		Gen 1	PM	149	193	342	☐ Use Dist 2:		Signal System:	3	
Venice Boulevard		v/c reduction:	10%		at:	1.0%	v/c reduction:	10%		Trip	AM	0	0	0			v/c reduction:	10%	
Analysis Date:	10/29/2015	Opposed Phasing:	0				Opposed Phasing:	0		Gen 2	PM	0	0	0			Opposed Phasing:	0	
PM Peak:	5:45 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume	
Northbound	Left	120	1	120	6	32	158	1	158	(20%)	39	197	1	197	0	197	2	108	
	Lt-Th		0	0				0	0	0%			0	0			0	0	
	Thru	591	1	**361**	30	177	798	1	**475**	(20%)	39	837	1	**507**	0	837	2	**419**	
	Th-Rt		1	**361**				1	**475**	0%			1	**507**			0	0	
	Right	131	0	0	7	14	152	0	0	(15%)	25	177	0	0	0	177	1	102	
	Shared		0	0				0	0	0%			0	0			0	0	
Southbound	Left	146	1	**146**	7	1	154	1	**154**	0%	0	154	1	**154**	0	154	1	**154**	
	Lt-Th		0	0				0	0	0%			0	0			0	0	
	Thru	646	1	356	33	73	752	1	410	25%	37	789	1	429	0	789	1	429	
	Th-Rt		1	356				1	410	0%			1	429			1	429	
	Right	65	0	0	3	0	68	0	0	0%	0	68	0	0	0	68	0	0	
	Shared		0	0				0	0	0%			0	0			0	0	
Eastbound	Left	92	1	**92**	5	5	102	2	56	(5%)	10	112	2	61	0	112	2	61	
	Lt-Th		0	0				0	0	0%			0	0			0	0	
	Thru	1144	3	381	58	4	1206	3	**402**	(10%)	19	1225	3	**408**	0	1225	3	**408**	
	Th-Rt		0	0				0	0	0%			0	0			0	0	
	Right	167	1	167	9	67	243	1	243	5%	7	250	1	250	0	250	1	250	
	Shared		0	0				0	0	0%			0	0			0	0	
Westbound	Left	110	1	110	6	5	121	1	**121**	20%	30	151	1	**151**	0	151	1	**151**	
	Lt-Th		0	0				0	0	0%			0	0			0	0	
	Thru	931	2	**466**	47	4	982	3	328	0%	0	982	3	328	0	982	3	328	
	Th-Rt		0	0				0	0	0%			0	0			0	0	
	Right	85	1	85	4	1	90	1	90	0%	0	90	1	90	0	90	1	90	
	Shared		0	0				0	0	0%			0	0			0	0	
Critical Volumes:		North-South:		507			North-South:		629			North-South:		661		North-South:		573	
		East-West:		558			East-West:		523			East-West:		559		East-West:		559	
		Total:		1065			Total:		1152			Total:		1220		Total:		1132	
Volume/capacity (*v/c*) ratio:				0.747					0.808					0.856				0.794	
v/c less ATSAC adjustment:				0.647					0.708					0.756				0.694	
Level of Service (LOS):				B					C					C				B	

Northbound: N/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%

Southbound: S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%

Eastbound: E/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%

Westbound: W/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%

PROJECT IMPACT

Change in *v/c* due to project:	0.048	Δ*v/c* after mitigation:	-0.014
Significantly impacted?	YES	Fully mitigated?	YES

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_2019.xls

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 4		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE				2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	2		Ambient Growth		Critical Phases:	2	☐ Adjacent		In	Out	Total			Critical Phases:	2
Helms Avenue		Capacity:	1500		from:	2014	Capacity:	1500	Trip	AM	173	83	256			Capacity:	1500
East/West Street:		Signal System:	3		to:	2019	Signal System:	3	Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	3
Venice Boulevard		v/c reduction:	10%		at:	1.0%	v/c reduction:	10%	Trip	AM	0	0	0			v/c reduction:	10%
Analysis Date:	10/29/2015	Opposed Phasing:	0				Opposed Phasing:	0	Gen 2	PM	0	0	0			Opposed Phasing:	0
AM Peak:	8:00 AM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	2	0	**2**	0		2	0	**2**	0%	0	2	0	**2**	0	2	0	**2**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	15	0	0	1		16	0	0	0%	0	16	0	0	0	16	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	1	0	1	0		1	0	1	0%	0	1	0	1	0	1	0	1
	Shared		1	18				1	19	0%			1	19			1	19
Southbound	Left	27	0	27	1		28	0	28	0%	0	28	0	28	0	28	0	28
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	9	0	0	0		9	0	0	0%	0	9	0	0	0	9	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	12	0	12	1		13	0	13	0%	0	13	0	13	0	13	0	13
	Shared		1	**48**				1	**50**	0%			1	**50**			1	**50**
Eastbound	Left	38	1	38	2		40	1	40	0%	0	40	1	40	0	40	1	40
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1359	3	**453**	69	6	1434	3	**478**	(20%)	17	1451	3	**484**	0	1451	3	**484**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	10	1	10	1		11	1	11	(5%)	4	15	1	15	0	15	1	15
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	44	1	**44**	2		46	1	**46**	0%	0	46	1	**46**	0	46	1	**46**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1047	3	349	53	17	1117	3	372	20%	34	1151	3	384	0	1151	3	384
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	62	1	62	3		65	1	65	0%	0	65	1	65	0	65	1	65
	Shared		0	0				0	0	0%			0	0			0	0
Critical Volumes:		North-South:		50			North-South:		53			North-South:		53		North-South:		53
		East-West:		497			East-West:		524			East-West:		530		East-West:		530
		Total:		547			Total:		577			Total:		583		Total:		583
Volume/capacity (*v/c*) ratio:				0.365					0.385					0.388				0.388
v/c less ATSAC adjustment:				0.265					0.285					0.288				0.288
Level of Service (LOS):				A					A					A				A

N/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%

S/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%

E/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%

W/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 4	2014, EXISTING	2019, PROJECTED CUMULATIVE BASE		2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION
North/South Street:	Critical Phases: 2	Ambient Growth	Critical Phases: 2	☐ Adjacent		In	Out	Total	Critical Phases: 2
Helms Avenue	Capacity: 1500	from: 2014	Capacity: 1500	Trip	AM	173	83	256	Capacity: 1500
East/West Street:	Signal System: 3	to: 2019	Signal System: 3	Gen 1	PM	127	174	301	☐ Use Dist 2: Signal System: 3
Venice Boulevard	v/c reduction: 10%	at: 1.0%	v/c reduction: 10%	Trip	AM	0	0	0	v/c reduction: 10%
Analysis Date: 10/29/2015	Opposed Phasing: 0		Opposed Phasing: 0	Gen 2	PM	0	0	0	Opposed Phasing: 0
PM Peak: 5:25 PM									

Direction	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	%	+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		4	0	4	0		4	0	4	0%	0	4	0	4	0	4	0	4
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 0%	2	0	0	0		2	0	0	0%	0	2	0	0	0	2	0	0
	Th-Rt	Projected: 0%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 0%	11	0	**11**	1		12	0	**12**	0%	0	12	0	**12**	0	12	0	**12**
	Shared			1	17				1	18	0%			1	18			1	18
Southbound	Left		37	0	37	2		39	0	39	0%	0	39	0	39	0	39	0	39
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 0%	5	0	0	0		5	0	0	0%	0	5	0	0	0	5	0	0
	Th-Rt	Projected: 0%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 0%	34	0	34	2		36	0	36	0%	0	36	0	36	0	36	0	36
	Shared			1	76				1	80	0%			1	80			1	80
Eastbound	Left		37	1	37	2		39	1	39	0%	0	39	1	39	0	39	1	39
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 0%	1272	3	**424**	65	19	1356	3	**452**	(20%)	34	1390	3	**463**	0	1390	3	**463**
	Th-Rt	Projected: 0%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 0%	34	1	34	2		36	1	36	(5%)	8	44	1	44	0	44	1	44
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		45	1	**45**	2		47	1	**47**	0%	0	47	1	**47**	0	47	1	**47**
	Lt-Th	W/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 0%	1132	3	377	58	10	1200	3	400	20%	25	1225	3	408	0	1225	3	408
	Th-Rt	Projected: 0%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 0%	13	1	13	1		14	1	14	0%	0	14	1	14	0	14	1	14
	Shared			0	0				0	0	0%			0	0			0	0

	2014, Existing	2019, Projected Cumulative Base	2019, With Project	2019, With Traffic Mitigation
Critical Volumes: North-South:	87	91	91	91
East-West:	469	499	511	511
Total:	556	591	602	602
Volume/capacity (*v/c*) ratio:	0.371	0.394	0.401	0.401
v/c less ATSAC adjustment:	0.271	0.294	0.301	0.301
Level of Service (LOS):	A	A	A	A

PROJECT IMPACT

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

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 5		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	2		Ambient Growth		Critical Phases:	2		☐ Adjacent		In	Out	Total			Critical Phases:	2
Cattaraugus Avenue		Capacity:	1500		from:	2014	Capacity:	1500		Trip	AM	173	83	256			Capacity:	1500
East/West Street:		Signal System:	3		to:	2019	Signal System:	2		Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	2
Venice Boulevard		v/c reduction:	10%		at:	1.0%	v/c reduction:	7%		Trip	AM	0	0	0			v/c reduction:	7%
Analysis Date:	10/29/2015	Opposed Phasing:	0				Opposed Phasing:	0		Gen 2	PM	0	0	0			Opposed Phasing:	0
AM Peak:	8:00 AM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	26	0	26	1		27	0	27	0%	0	27	0	27	0	27	0	27
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	373	0	0	19		392	0	0	0%	0	392	0	0	0	392	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	24	0	24	1		25	0	25	0%	0	25	0	25	0	25	0	25
	Shared		1	**423**				1	**445**	0%			1	**445**			1	**445**
Southbound	Left	171	0	**171**	9		180	0	**180**	0%	0	180	0	**180**	0	180	0	**180**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	96	0	0	5		101	0	0	0%	0	101	0	0	0	101	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	20	0	20	1		21	0	21	5%	8	29	0	29	0	29	0	29
	Shared		1	287				1	302	0%			1	310			1	310
Eastbound	Left	59	1	59	3		62	1	62	(5%)	4	66	1	66	0	66	1	66
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1347	3	**449**	69	6	1422	3	**474**	(15%)	13	1435	3	**478**	0	1435	3	**478**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	8	1	8	0		8	1	8	0%	0	8	1	8	0	8	1	8
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	176	1	**176**	9		185	1	**185**	0%	0	185	1	**185**	0	185	1	**185**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1092	3	364	56	17	1165	3	388	15%	26	1191	3	397	0	1191	3	397
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	195	1	195	10		205	1	205	0%	0	205	1	205	0	205	1	205
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
S/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
E/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
W/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
Critical Volumes:		North-South:		594			North-South:		624			North-South:		624			North-South:	624
		East-West:		625			East-West:		659			East-West:		663			East-West:	663
		Total:		1219			Total:		1283			Total:		1288			Total:	1288
Volume/capacity (*v/c*) ratio:				0.813					0.855					0.858				0.858
v/c less ATSAC adjustment:				0.713					0.785					0.788				0.788
Level of Service (LOS):				C					C					C				C

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_2019.xls

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 5		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases: 2			Ambient Growth		Critical Phases: 2			☐ Adjacent		In	Out	Total			Critical Phases: 2	
Cattaraugus Avenue		Capacity: 1500			from: 2014		Capacity: 1500			Trip	AM	173	83	256			Capacity: 1500	
East/West Street:		Signal System: 3			to: 2019		Signal System: 2			Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System: 2	
Venice Boulevard		v/c reduction: 10%			at: 1.0%		v/c reduction: 7%			Trip	AM	0	0	0			v/c reduction: 7%	
Analysis Date: 10/29/2015		Opposed Phasing: 0					Opposed Phasing: 0			Gen 2	PM	0	0	0			Opposed Phasing: 0	
PM Peak: 5:25 PM		Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	11	0	11	1		12	0	12	0%	0	12	0	12	0	12	0	12
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	79	0	0	4		83	0	0	0%	0	83	0	0	0	83	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	30	0	**30**	2		32	0	**32**	0%	0	32	0	**32**	0	32	0	**32**
	Shared		1	120				1	126	0%			1	126			1	126
Southbound	Left	307	0	307	16		323	0	323	0%	0	323	0	323	0	323	0	323
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	150	0	0	8		158	0	0	0%	0	158	0	0	0	158	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	21	0	21	1		22	0	22	5%	6	28	0	28	0	28	0	28
	Shared		1	478				1	502	0%			1	508			1	508
Eastbound	Left	56	1	56	3		59	1	59	(5%)	8	67	1	67	0	67	1	67
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1360	3	**453**	69	19	1448	3	**483**	(15%)	26	1474	3	**491**	0	1474	3	**491**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	23	1	23	1		24	1	24	0%	0	24	1	24	0	24	1	24
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	99	1	99	5		104	1	**104**	0%	0	104	1	**104**	0	104	1	**104**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1042	3	347	53	10	1105	3	368	15%	19	1124	3	375	0	1124	3	375
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	62	1	62	3		65	1	65	0%	0	65	1	65	0	65	1	65
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
S/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
E/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
W/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
Critical Volumes:		North-South:		508			North-South:		534			North-South:		540		North-South:		540
		East-West:		552			East-West:		587			East-West:		596		East-West:		596
		Total:		1060			Total:		1121			Total:		1135		Total:		1135
Volume/capacity (*v/c*) ratio:				0.707					0.747					0.757				0.757
v/c less ATSAC adjustment:				0.607					0.677					0.687				0.687
Level of Service (LOS):				B					B					B				B

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_2019.xls

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 6		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	3		Ambient Growth		Critical Phases:	3		☐ Adjacent		In	Out	Total			Critical Phases:	3
Robertson Blvd/Higuera		Capacity:	1425		from:	2014	Capacity:	1425		Trip	AM	173	83	256			Capacity:	1425
East/West Street:		Signal System:	2		to:	2019	Signal System:	2		Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	2
Washington Boulevard		v/c reduction:	7%		at:	1.0%	v/c reduction:	7%		Trip	AM	0	0	0			v/c reduction:	7%
Analysis Date:	10/29/2015	Opposed Phasing:	0				Opposed Phasing:	0		Gen 2	PM	0	0	0			Opposed Phasing:	0
AM Peak:	8:00 AM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	62	1	62	3	12	77	1	77	0%	0	77	1	77	0	77	1	77
	Lt-Th	N/B RTOR:	0	0				0	0	0%			0	0			0	0
	Thru	Existing: 0%	1	**315**	16		331	1	**331**	0%	0	331	1	**331**	0	331	1	**331**
	Th-Rt	Projected: 0%	0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 0%	1	124	6		130	1	130	0%	0	130	1	130	0	130	1	130
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	57	1	**57**	3	17	77	1	**77**	0%	0	77	1	**77**	0	77	1	**77**
	Lt-Th	S/B RTOR:	0	0				0	0	0%			0	0			0	0
	Thru	Existing: 0%	1	114	6		120	1	120	0%	0	120	1	120	0	120	1	120
	Th-Rt	Projected: 0%	0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 0%	1	38	2		40	1	40	0%	0	40	1	40	0	40	1	40
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	51	1	51	3		54	1	54	0%	0	54	1	54	0	54	1	54
	Lt-Th	E/B RTOR:	0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	1	**600**	56	88	1235	1	**688**	5%	9	1244	1	**692**	0	1244	1	**692**
	Th-Rt	Projected: 50%	1	**600**				1	**688**	0%			1	**692**			1	**692**
	Right	Mitigated: 50%	0	0	6	26	141	0	0	0%	0	141	0	0	0	141	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	111	1	**111**	6		117	1	**117**	0%	0	117	1	**117**	0	117	1	**117**
	Lt-Th	W/B RTOR:	0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	2	566	58	102	1291	2	645	0%	0	1291	2	645	0	1291	2	645
	Th-Rt	Projected: 50%	0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	1	180	11	5	224	1	186	(5%)	4	228	1	190	0	228	1	190
	Shared		0	0				0	0	0%			0	0			0	0
Critical Volumes:		North-South:		372			North-South:		408			North-South:		408			North-South:	408
		East-West:		711			East-West:		804			East-West:		809			East-West:	809
		Total:		1083			Total:		1212			Total:		1217			Total:	1217
Volume/capacity (*v/c*) ratio:				0.760					0.851					0.854				0.854
v/c less ATSAC adjustment:				0.690					0.781					0.784				0.784
Level of Service (LOS):				B					C					C				C

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_2019.xls

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 6		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	3		Ambient Growth	Critical Phases:	3			☐ Adjacent		In	Out	Total		Critical Phases:	3	
Robertson Blvd/Higuera		Capacity:	1425		from: 2014	Capacity:	1425			Trip	AM	173	83	256		Capacity:	1425	
East/West Street:		Signal System:	2		to: 2019	Signal System:	2			Gen 1	PM	127	174	301	☐ Use Dist 2:	Signal System:	2	
Washington Boulevard		v/c reduction:	7%		at: 1.0%	v/c reduction:	7%			Trip	AM	0	0	0		v/c reduction:	7%	
Analysis Date:	10/29/2015	Opposed Phasing:	0			Opposed Phasing:	0			Gen 2	PM	0	0	0		Opposed Phasing:	0	
PM Peak:	5:00 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	41	1	41	2	25	68	1	68	0%	0	68	1	68	0	68	1	68
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	229	1	**229**	12		241	1	**241**	0%	0	241	1	**241**	0	241	1	**241**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	116	1	116	6		122	1	122	0%	0	122	1	122	0	122	1	122
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	68	1	**68**	3	12	83	1	**83**	0%	0	83	1	**83**	0	83	1	**83**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	135	1	135	7		142	1	142	0%	0	142	1	142	0	142	1	142
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	52	1	52	3		55	1	55	0%	0	55	1	55	0	55	1	55
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	85	1	85	4		89	1	89	0%	0	89	1	89	0	89	1	89
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1144	1	**613**	58	125	1327	1	**712**	5%	6	1333	1	**715**	0	1333	1	**715**
	Th-Rt		1	**613**				1	**712**	0%			1	**715**			1	**715**
	Right	82	0	0	4	10	96	0	0	0%	0	96	0	0	0	96	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	130	1	**130**	7		137	1	**137**	0%	0	137	1	**137**	0	137	1	**137**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	871	2	436	44	121	1036	2	518	0%	0	1036	2	518	0	1036	2	518
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	256	1	222	13	22	291	1	249	(5%)	9	300	1	258	0	300	1	258
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
S/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
Critical Volumes:		North-South:	297				North-South:	324				North-South:	324			North-South:	324	
		East-West:	743				East-West:	848				East-West:	851			East-West:	851	
		Total:	1040				Total:	1173				Total:	1176			Total:	1176	
Volume/capacity (*v/c*) ratio:			0.730					0.823					0.825				0.825	
v/c less ATSAC adjustment:			0.660					0.753					0.755				0.755	
Level of Service (LOS):			B					C					C				C	

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_2019.xls

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 7		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	4		Ambient Growth		Critical Phases:	4		☐ Adjacent		In	Out	Total			Critical Phases:	4
National Boulevard		Capacity:	1375		from:	2014	Capacity:	1375		Trip	AM	173	83	256			Capacity:	1375
East/West Street:		Signal System:	2		to:	2019	Signal System:	2		Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	2
Washington Boulevard		v/c reduction:	7%		at:	1.0%	v/c reduction:	7%		Trip	AM	0	0	0			v/c reduction:	7%
Analysis Date:	10/29/2015	Opposed Phasing:	0				Opposed Phasing:	0		Gen 2	PM	0	0	0			Opposed Phasing:	0
AM Peak:	8:00 AM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	213	2	**117**	11	66	290	2	**159**	5%	8	298	2	**164**	0	298	2	**164**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	668	1	385	34	53	755	**2**	378	5%	9	764	2	382	0	764	2	382
	Th-Rt		1	385				**0**	0	0%			0	0			0	0
	Right	102	0	0	5	2	109	**1**	34	0%	0	109	1	34	0	109	1	34
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	97	2	53	5	58	160	2	88	(15%)	13	173	2	95	0	173	2	95
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	573	1	**341**	29	90	692	1	**414**	(10%)	9	701	1	**423**	0	701	**2**	**351**
	Th-Rt		1	**341**				1	**414**	0%			1	**423**			**0**	0
	Right	109	0	0	6	21	136	0	0	5%	9	145	0	0	0	145	**1**	103
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	65	1	65	3	7	75	1	75	5%	9	84	1	84	0	84	1	84
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	862	2	**431**	44	30	936	2	**468**	0%	0	936	2	**468**	0	936	2	**468**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	220	1	114	11	37	268	1	123	0%	0	268	1	119	0	268	1	119
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	142	1	**142**	7	1	150	1	**150**	0%	0	150	1	**150**	0	150	1	**150**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1081	2	400	55	53	1189	2	455	15%	26	1215	2	464	0	1215	2	464
	Th-Rt		1	400				1	455	0%			1	464			1	464
	Right	118	0	0	6	53	177	0	0	0%	0	177	0	0	0	177	0	0
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
W/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
Critical Volumes:		North-South:		458			North-South:		573			North-South:		587			North-South:	514
		East-West:		573			East-West:		618			East-West:		618			East-West:	618
		Total:		1031			Total:		1192			Total:		1205			Total:	1133
Volume/capacity (*v/c*) ratio:				0.750					0.867					0.876				0.824
v/c less ATSAC adjustment:				0.680					0.797					0.806				0.754
Level of Service (LOS):				B					C					D				C

PROJECT IMPACT

Change in *v/c* due to project: 0.009 — Δ*v/c* after mitigation: -0.043

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_2019.xls

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 7		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	4		Ambient Growth		Critical Phases:	4		☐ Adjacent		In	Out	Total			Critical Phases:	4
National Boulevard		Capacity:	1375		from:	2014	Capacity:	1375		Trip	AM	173	83	256			Capacity:	1375
East/West Street:		Signal System:	2		to:	2019	Signal System:	2		Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	2
Washington Boulevard		v/c reduction:	7%		at:	1.0%	v/c reduction:	7%		Trip	AM	0	0	0			v/c reduction:	7%
Analysis Date:	10/29/2015	Opposed Phasing:	0				Opposed Phasing:	0		Gen 2	PM	0	0	0			Opposed Phasing:	0
PM Peak:	5:00 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	187	2	**103**	10	44	241	2	**132**	5%	6	247	2	**136**	0	247	2	136
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	684	1	409	35	92	811	**2**	405	5%	7	818	2	409	0	818	2	**409**
	Th-Rt		1	409				**0**	0	0%			0	0			0	0
	Right	134	0	0	7	2	143	**1**	82	0%	0	143	1	82	0	143	1	82
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	182	2	100	9	85	276	2	152	(15%)	26	302	2	166	0	302	2	**166**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	738	1	**411**	38	43	819	1	**460**	(10%)	18	837	1	**472**	0	837	**2**	418
	Th-Rt		1	**411**				1	**460**	0%			1	**472**			**0**	0
	Right	83	0	0	4	15	102	0	0	5%	6	108	0	0	0	108	**1**	48
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	82	1	82	4	28	114	1	114	5%	6	120	1	120	0	120	1	120
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1106	2	**553**	56	55	1217	2	**609**	0%	0	1217	2	**609**	0	1217	2	**609**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	198	1	104	10	61	269	1	149	0%	0	269	1	146	0	269	1	146
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	114	1	**114**	6	3	123	1	**123**	0%	0	123	1	**123**	0	123	1	**123**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	716	2	282	37	55	808	2	346	15%	19	827	2	352	0	827	2	352
	Th-Rt		1	282				1	346	0%			1	352			1	352
	Right	129	0	0	7	95	231	0	0	0%	0	231	0	0	0	231	0	0
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
W/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
Critical Volumes:		North-South:		513			North-South:		593			North-South:		608			North-South:	575
		East-West:		667			East-West:		732			East-West:		732			East-West:	732
		Total:		1180			Total:		1324			Total:		1340			Total:	1307
Volume/capacity (*v/c*) ratio:				0.858					0.963					0.974				0.950
v/c less ATSAC adjustment:				0.788					0.893					0.904				0.880
Level of Service (LOS):				C					D					E				D

PROJECT IMPACT

Change in *v/c* due to project: 0.011 — Δ*v/c* after mitigation: -0.013

Significantly impacted? YES — Fully mitigated? YES

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_2019.xls

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 8		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	2		Ambient Growth		Critical Phases:	2		☐ Adjacent		In	Out	Total			Critical Phases:	2
Helms Avenue		Capacity:	1500		from:	2014	Capacity:	1500		Trip	AM	173	83	256			Capacity:	1500
East/West Street:		Signal System:	2		to:	2019	Signal System:	2		Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	2
Washington Boulevard		v/c reduction:	7%		at:	1.0%	v/c reduction:	7%		Trip	AM	0	0	0			v/c reduction:	7%
Analysis Date:	10/29/2015	Opposed Phasing:	0				Opposed Phasing:	0		Gen 2	PM	0	0	0			Opposed Phasing:	0
AM Peak:	8:00 AM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	91	0	0	5		96	0	0	0%	0	96	0	0	0	96	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	13	0	0	1		14	0	0	0%	0	14	0	0	0	14	0	0
	Shared		1	**104**				1	**109**	0%			1	**109**			1	**109**
Southbound	Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1001	1	509	51	23	1075	1	546	(15%)	13	1088	1	553	0	1088	1	553
	Th-Rt		1	509				1	546	0%			1	553			1	553
	Right	17	0	0	1		18	0	0	0%	0	18	0	0	0	18	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	11	1	11	1		12	1	12	0%	0	12	1	12	0	12	1	12
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1307	2	**654**	67	24	1398	2	**699**	15%	26	1424	2	**712**	0	1424	2	**712**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Critical Volumes:		North-South:		104			North-South:		109			North-South:		109		North-South:		109
		East-West:		654			East-West:		699			East-West:		712		East-West:		712
		Total:		758			Total:		808			Total:		821		Total:		821
Volume/capacity (*v/c*) ratio:				0.505					0.539					0.547				0.547
v/c less ATSAC adjustment:				0.435					0.469					0.477				0.477
Level of Service (LOS):				A					A					A				A

N/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%

S/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%

E/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%

W/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%

PROJECT IMPACT

Change in *v/c* due to project: 0.008 — Δ*v/c* after mitigation: 0.008

Significantly impacted? NO — Fully mitigated? N/A

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Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 8		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	2		Ambient Growth		Critical Phases:	2		☐ Adjacent		In	Out	Total			Critical Phases:	2
Helms Avenue		Capacity:	1500		from:	2014	Capacity:	1500		Trip	AM	173	83	256			Capacity:	1500
East/West Street:		Signal System:	2		to:	2019	Signal System:	2		Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	2
Washington Boulevard		v/c reduction:	7%		at:	1.0%	v/c reduction:	7%		Trip	AM	0	0	0			v/c reduction:	7%
Analysis Date:	10/29/2015	Opposed Phasing:	0				Opposed Phasing:	0		Gen 2	PM	0	0	0			Opposed Phasing:	0
PM Peak:	5:00 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	46	0	0	2		48	0	0	0%	0	48	0	0	0	48	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	11	0	0	1		12	0	0	0%	0	12	0	0	0	12	0	0
	Shared		1	**57**				1	**60**	0%			1	**60**			1	**60**
Southbound	Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	1	0	0	0		1	0	0	0%	0	1	0	0	0	1	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1382	1	**731**	70	38	1490	1	**787**	(15%)	26	1516	1	**800**	0	1516	1	**800**
	Th-Rt		1	**731**				1	**787**	0%			1	**800**			1	**800**
	Right	80	0	0	4		84	0	0	0%	0	84	0	0	0	84	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	21	1	**21**	1		22	1	22	0%	0	22	1	22	0	22	1	22
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	885	2	443	45	38	968	2	484	15%	19	987	2	494	0	987	2	494
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
S/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
E/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
W/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
Critical Volumes:		North-South:	57				North-South:	60				North-South:	60			North-South:	60	
		East-West:	752				East-West:	809				East-West:	822			East-West:	822	
		Total:	809				Total:	869				Total:	882			Total:	882	
Volume/capacity (*v/c*) ratio:			0.539					0.580					0.588				0.588	
v/c less ATSAC adjustment:			0.469					0.510					0.518				0.518	
Level of Service (LOS):			A					A					A				A	

PROJECT IMPACT

Change in *v/c* due to project: 0.008 — Δ*v/c* after mitigation: 0.008

Significantly impacted? NO — Fully mitigated? N/A

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 9		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	4		Ambient Growth		Critical Phases:	4		☐ Adjacent		In	Out	Total			Critical Phases:	4
Robertson Boulevard		Capacity:	1375		from:	2014	Capacity:	1375		Trip	AM	173	83	256			Capacity:	1375
East/West Street:		Signal System:	3		to:	2019	Signal System:	3		Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	3
National Boulevard		v/c reduction:	10%		at:	1.0%	v/c reduction:	10%		Trip	AM	0	0	0			v/c reduction:	10%
Analysis Date:	10/29/2015	Opposed Phasing:	0				Opposed Phasing:	0		Gen 2	PM	0	0	0			Opposed Phasing:	0
AM Peak:	8:00 AM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	45	1	45	2	2	49	1	49	0%	0	49	1	49	0	49	1	49
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	634	1	**353**	32		666	1	**374**	0%	0	666	1	**378**	0	666	1	**378**
	Th-Rt		1	**353**				1	**374**	0%			1	**378**			1	**378**
	Right	72	0	0	4	5	81	0	0	5%	8	89	0	0	0	89	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	465	2	**256**	24	70	559	2	**307**	10%	18	577	2	**317**	0	577	2	**317**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	911	1	516	46	64	1021	1	575	0%	0	1021	1	575	0	1021	1	575
	Th-Rt		1	516				1	575	0%			1	575			1	575
	Right	120	0	0	6	3	129	0	0	0%	0	129	0	0	0	129	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	235	1	**235**	12	2	249	1	**249**	0%	0	249	1	**249**	0	249	2	137
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	665	1	455	34	24	723	1	491	10%	18	741	1	500	0	741	1	**500**
	Th-Rt		1	455				1	491	0%			1	500			1	**500**
	Right	245	0	0	12	2	259	0	0	0%	0	259	0	0	0	259	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	132	1	132	7	0	139	1	139	(5%)	4	143	1	143	0	143	1	**143**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	459	1	**459**	23	4	486	1	**486**	(15%)	13	499	1	**499**	0	499	1	499
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	368	1	19	19	0	387	1	0	0%	0	387	1	0	0	387	1	0
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR:	Existing: 50%																	
	Projected: 50%																	
	Mitigated: 50%																	
S/B RTOR:	Existing: 0%																	
	Projected: 0%																	
	Mitigated: 0%																	
E/B RTOR:	Existing: 0%																	
	Projected: 0%																	
	Mitigated: 0%																	
W/B RTOR:	Existing: 75%																	
	Projected: 75%																	
	Mitigated: 75%																	
Critical Volumes:		North-South:		609			North-South:		681			North-South:		695			North-South:	695
		East-West:		694			East-West:		735			East-West:		748			East-West:	643
		Total:		1303			Total:		1416			Total:		1443			Total:	1338
Volume/capacity (*v/c*) ratio:				0.947					1.030					1.050				0.973
v/c less ATSAC adjustment:				0.847					0.930					0.950				0.873
Level of Service (LOS):				D					E					E				D

PROJECT IMPACT

Change in *v/c* due to project: 0.020 — Significantly impacted? YES

Δ*v/c* after mitigation: -0.057 — Fully mitigated? YES

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 9		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION				
North/South Street: Robertson Boulevard		Critical Phases: 4			Ambient Growth		Critical Phases: 4			☐ Adjacent		In	Out	Total			Critical Phases: 4		
		Capacity: 1375			from: 2014		Capacity: 1375			Trip	AM	173	83	256			Capacity: 1375		
East/West Street: National Boulevard		Signal System: 3			to: 2019		Signal System: 3			Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System: 3		
		v/c reduction: 10%			at: 1.0%		v/c reduction: 10%			Trip	AM	0	0	0			v/c reduction: 10%		
Analysis Date: 10/29/2015		Opposed Phasing: 0					Opposed Phasing: 0			Gen 2	PM	0	0	0			Opposed Phasing: 0		
PM Peak: 5:00 PM		Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	41	1	41	2	2	45	1	45	0%	0	45	1	45	0	45	1	45
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	389	1	**269**	20		409	1	**294**	0%	0	409	1	**297**	0	409	1	**297**
	Th-Rt		1	**269**				1	**294**	0%			1	**297**			1	**297**
	Right	149	0	0	8	22	179	0	0	5%	6	185	0	0	0	185	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	488	2	**268**	25	74	587	2	**323**	10%	13	600	2	**330**	0	600	2	**330**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	718	1	437	37	37	792	1	480	0%	0	792	1	480	0	792	1	480
	Th-Rt		1	437				1	480	0%			1	480			1	480
	Right	156	0	0	8	4	168	0	0	0%	0	168	0	0	0	168	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	197	1	197	10	2	209	1	209	0%	0	209	1	209	0	209	**2**	115
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	919	1	**509**	47	8	974	1	**540**	10%	13	987	1	**546**	0	987	1	**546**
	Th-Rt		1	**509**				1	**540**	0%			1	**546**			1	**546**
	Right	99	0	0	5	2	106	0	0	0%	0	106	0	0	0	106	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	126	1	**126**	6	0	132	1	**132**	(5%)	9	141	1	**141**	0	141	1	**141**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	311	1	311	16	21	348	1	348	(15%)	26	374	1	374	0	374	1	374
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	283	1	0	14	0	297	1	0	0%	0	297	1	0	0	297	1	0
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
S/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
E/B RTOR: Existing: 0% Projected: 0% Mitigated: 0%																		
W/B RTOR: Existing: 75% Projected: 75% Mitigated: 75%																		
Critical Volumes:		North-South:		537			North-South:		617			North-South:		627			North-South:		627
		East-West:		635			East-West:		672			East-West:		688			East-West:		688
		Total:		1172			Total:		1289			Total:		1315			Total:		1315
Volume/capacity (*v/c*) ratio:				0.853					0.937					0.956					0.956
v/c less ATSAC adjustment:				0.753					0.837					0.856					0.856
Level of Service (LOS):				C					D					D					D

PROJECT IMPACT

Change in *v/c* due to project: 0.019 — Δ*v/c* after mitigation: 0.019

Significantly impacted? NO — Fully mitigated? N/A

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 10		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases: 3			Ambient Growth		Critical Phases: 3			☐ Adjacent		In	Out	Total			Critical Phases: 3	
National Boulevard		Capacity: 1425			from: 2014		Capacity: 1425			Trip	AM	173	83	256			Capacity: 1425	
East/West Street:		Signal System: 3			to: 2019		Signal System: 3			Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System: 3	
I-10 EB Ramp		v/c reduction: 10%			at: 1.0%		v/c reduction: 10%			Trip	AM	0	0	0			v/c reduction: 10%	
Analysis Date: 10/29/2015		Opposed Phasing: 0					Opposed Phasing: 0			Gen 2	PM	0	0	0			Opposed Phasing: 0	
AM Peak: 8:00 AM		Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	32	1	**32**	2	139	173	1	**173**	(5%)	4	177	1	**177**	0	177	1	**177**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	807	2	404	41	3	851	2	426	(20%)	17	868	2	434	0	868	2	434
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	822	2	411	42	77	941	2	**470**	25%	44	985	2	**492**	0	985	2	**492**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	423	1	**423**	22	2	447	1	447	0%	0	447	1	447	0	447	1	447
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
Critical Volumes:		North-South:		455			North-South:		643			North-South:		669			North-South:	669
		East-West:		0			East-West:		0			East-West:		0			East-West:	0
		Total:		455			Total:		643			Total:		669			Total:	669
Volume/capacity (*v/c*) ratio:				0.319					0.451					0.470				0.470
v/c less ATSAC adjustment:				0.219					0.351					0.370				0.370
Level of Service (LOS):				A					A					A				A

PROJECT IMPACT

Change in *v/c* due to project: 0.019 — Δ*v/c* after mitigation: 0.019

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_2019.xls

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 10		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	3		Ambient Growth		Critical Phases:	3		☐ Adjacent		In	Out	Total			Critical Phases:	3
National Boulevard		Capacity:	1425		from:	2014	Capacity:	1425		Trip	AM	173	83	256			Capacity:	1425
East/West Street:		Signal System:	3		to:	2019	Signal System:	3		Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	3
I-10 EB Ramp		v/c reduction:	10%		at:	1.0%	v/c reduction:	10%		Trip	AM	0	0	0			v/c reduction:	10%
Analysis Date:	10/29/2015	Opposed Phasing:	0				Opposed Phasing:	0		Gen 2	PM	0	0	0			Opposed Phasing:	0
PM Peak:	5:00 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	87	1	**87**	4	236	327	1	**327**	(5%)	9	336	1	**336**	0	336	1	**336**
	Lt-Th	N/B RTOR:	0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	2	357	36	19	769	2	385	(20%)	35	804	2	402	0	804	2	402
	Th-Rt	Projected: 50%	714	0	0			0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0			0	0	0%			0	0			0	0
Southbound	Left		0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:	0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	2	481	49	68	1079	2	540	25%	32	1111	2	556	0	1111	2	556
	Th-Rt	Projected: 50%	962	0	0			0	0	0%			0	0			0	0
	Right	Mitigated: 50%	1	**558**	28	2	588	1	**588**	0%	0	588	1	**588**	0	588	1	**588**
	Shared		558	0	0			0	0	0%			0	0			0	0
Eastbound	Left		0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	E/B RTOR:	0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%	0	0	0			0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0			0	0	0%			0	0			0	0
Westbound	Left		0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	W/B RTOR:	0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%	0	0	0			0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0			0	0	0%			0	0			0	0
Critical Volumes:		North-South:	645				North-South:	916				North-South:	925				North-South:	925
		East-West:	0				East-West:	0				East-West:	0				East-West:	0
		Total:	645				Total:	916				Total:	925				Total:	925
Volume/capacity (*v/c*) ratio:			0.453					0.643					0.649					0.649
v/c less ATSAC adjustment:			0.353					0.543					0.549					0.549
Level of Service (LOS):			A					A					A					A

PROJECT IMPACT

Change in *v/c* due to project: 0.006 — Δ*v/c* after mitigation: 0.006

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_2019.xls

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 11		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases: 2			Ambient Growth		Critical Phases: 2			☐ Adjacent		In	Out	Total			Critical Phases: 2	
Wesley Street		Capacity: 1500			from: 2014		Capacity: 1500			Trip AM		173	83	256			Capacity: 1500	
East/West Street:		Signal System: 2			to: 2019		Signal System: 2			Gen 1 PM		127	174	301	☐ Use Dist 2:		Signal System: 2	
National Boulevard		v/c reduction: 7%			at: 1.0%		v/c reduction: 7%			Trip AM		0	0	0			v/c reduction: 7%	
Analysis Date: 10/29/2015		Opposed Phasing: 1					Opposed Phasing: 1			Gen 2 PM		0	0	0			Opposed Phasing: 1	
AM Peak: 8:00 AM		Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	123	0	0	6		129	0	0	0%	0	129	0	0	0	129	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	76	0	0	4		80	0	0	0%	0	80	0	0	0	80	0	0
	Shared		1	**199**				1	**209**	0%			1	**209**			1	**209**
Southbound	Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	733	2	367	37	109	879	2	440	(10%)	9	888	2	444	0	888	2	444
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	205	1	143	10		215	1	150	0%	0	215	1	150	0	215	1	150
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	40	1	40	2		42	1	42	0%	0	42	1	42	0	42	1	42
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	841	2	**421**	43	130	1014	2	**507**	10%	17	1031	2	**515**	0	1031	2	**515**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
Critical Volumes:		North-South:		199			North-South:		209			North-South:		209			North-South:	209
		East-West:		421			East-West:		507			East-West:		515			East-West:	515
		Total:		620			Total:		716			Total:		725			Total:	725
Volume/capacity (*v/c*) ratio:				0.413					0.477					0.483				0.483
v/c less ATSAC adjustment:				0.343					0.407					0.413				0.413
Level of Service (LOS):				A					A					A				A

PROJECT IMPACT

Change in *v/c* due to project: 0.006 — Δ*v/c* after mitigation: 0.006

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_2019.xls

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 11		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	2		Ambient Growth		Critical Phases:	2		☐ Adjacent		In	Out	Total			Critical Phases:	2
Wesley Street		Capacity:	1500		from:	2014	Capacity:	1500		Trip	AM	173	83	256			Capacity:	1500
East/West Street:		Signal System:	2		to:	2019	Signal System:	2		Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	2
National Boulevard		v/c reduction:	7%		at:	1.0%	v/c reduction:	7%		Trip	AM	0	0	0			v/c reduction:	7%
Analysis Date:	10/29/2015	Opposed Phasing:	1				Opposed Phasing:	1		Gen 2	PM	0	0	0			Opposed Phasing:	1
PM Peak:	5:30 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	75	0	0	4		79	0	0	0%	0	79	0	0	0	79	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	15	0	0	1		16	0	0	0%	0	16	0	0	0	16	0	0
	Shared		1	**90**				1	**95**	0%			1	**95**			1	**95**
Southbound	Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	963	2	**482**	49	159	1171	2	**586**	(10%)	18	1189	2	**595**	0	1189	2	**595**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	78	1	40	4		82	1	43	0%	0	82	1	43	0	82	1	43
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	9	1	**9**	0		9	1	9	0%	0	9	1	9	0	9	1	9
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	932	2	466	48	128	1108	2	554	10%	13	1121	2	560	0	1121	2	560
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR:		Critical Volumes:	North-South:	90			North-South:		95			North-South:		95		North-South:		95
S/B RTOR:			East-West:	491			East-West:		595			East-West:		604		East-West:		604
E/B RTOR:			Total:	581			Total:		690			Total:		699		Total:		699
W/B RTOR:		Volume/capacity (*v/c*) ratio:		0.387					0.460					0.466				0.466
Existing: 50%		*v/c* less ATSAC adjustment:		0.317					0.390					0.396				0.396
Projected: 50%		Level of Service (LOS):		A					A					A				A
Mitigated: 50%																		

PROJECT IMPACT

Change in *v/c* due to project: 0.006 — Δ*v/c* after mitigation: 0.006

Significantly impacted? NO — Fully mitigated? N/A

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 12		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE				2019, WITH PROJECT				2019, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	4		Ambient Growth	Critical Phases:	4		☐ Adjacent	In	Out	Total		Critical Phases:	4	
La Cienega Boulevard		Capacity:	1375		from: 2014	Capacity:	1375		Trip AM	173	83	256		Capacity:	1375	
East/West Street:		Signal System:	3		to: 2019	Signal System:	3		Gen 1 PM	127	174	301	☐ Use Dist 2:	Signal System:	3	
Venice Boulevard		v/c reduction:	10%		at: 1.0%	v/c reduction:	10%		Trip AM	0	0	0		v/c reduction:	10%	
Analysis Date:	10/29/2015	Opposed Phasing:	0			Opposed Phasing:	0		Gen 2 PM	0	0	0		Opposed Phasing:	0	
AM Peak:	8:00 AM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	165	1	**165**	8		173	1	**173**	0%	0	173	1	**173**	0	173	1	**173**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1603	2	552	82		1685	2	581	0%	0	1685	2	581	0	1685	2	581
	Th-Rt		1	552				1	581	0%			1	581			1	581
	Right	54	0	0	3		57	0	0	0%	0	57	0	0	0	57	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	56	1	56	3		59	1	59	0%	0	59	1	59	0	59	1	59
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1089	2	**458**	56		1145	2	**482**	0%	0	1145	2	**488**	0	1145	2	**488**
	Th-Rt		1	**458**				1	**482**	0%			1	**488**			1	**488**
	Right	286	0	0	15		301	0	0	10%	18	319	0	0	0	319	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	312	2	**172**	16		328	2	**180**	(10%)	9	337	2	**185**	0	337	2	**185**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1129	3	376	58	8	1195	3	398	(5%)	4	1199	3	400	0	1199	3	400
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	115	1	33	6		121	1	34	0%	0	121	1	34	0	121	1	34
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	182	1	182	9		191	1	191	0%	0	191	1	191	0	191	1	191
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1275	3	**425**	65	19	1359	3	**453**	5%	8	1367	3	**456**	0	1367	3	**456**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	77	1	49	4		81	1	52	0%	0	81	1	52	0	81	1	52
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 75% Projected: 75% Mitigated: 75%																		
S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
Critical Volumes:		North-South:		623			North-South:		655			North-South:		661			North-South:	661
		East-West:		597			East-West:		633			East-West:		641			East-West:	641
		Total:		1220			Total:		1288			Total:		1302			Total:	1302
Volume/capacity (*v/c*) ratio:				0.887					0.937					0.947				0.947
v/c less ATSAC adjustment:				0.787					0.837					0.847				0.847
Level of Service (LOS):				C					D					D				D

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

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Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 12		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE				2019, WITH PROJECT				2019, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	4		Ambient Growth	Critical Phases:	4		☐ Adjacent		In	Out	Total		Critical Phases:	4
La Cienega Boulevard		Capacity:	1375		from: 2014	Capacity:	1375		Trip	AM	173	83	256		Capacity:	1375
East/West Street:		Signal System:	3		to: 2019	Signal System:	3		Gen 1	PM	127	174	301	☐ Use Dist 2:	Signal System:	3
Venice Boulevard		v/c reduction:	10%		at: 1.0%	v/c reduction:	10%		Trip	AM	0	0	0		v/c reduction:	10%
Analysis Date:	10/29/2015	Opposed Phasing:	0			Opposed Phasing:	0		Gen 2	PM	0	0	0		Opposed Phasing:	0
PM Peak:	5:00 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	+ Project Volume		Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	70	1	70	4		74	1	74	0%	0	74	1	74	0	74	1	74
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1006	2	349	51		1057	2	366	0%	0	1057	2	366	0	1057	2	366
	Th-Rt		1	349				1	366	0%			1	366			1	366
	Right	40	0	0	2		42	0	0	0%	0	42	0	0	0	42	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	63	1	63	3		66	1	66	0%	0	66	1	66	0	66	1	66
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1240	2	**492**	63		1303	2	**517**	0%	0	1303	2	**521**	0	1303	2	**521**
	Th-Rt		1	**492**				1	**517**	0%			1	**521**			1	**521**
	Right	235	0	0	12		247	0	0	10%	13	260	0	0	0	260	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	293	2	161	15		308	2	169	(10%)	18	326	2	179	0	326	2	179
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1456	3	**485**	74	21	1551	3	**517**	(5%)	8	1559	3	**520**	0	1559	3	**520**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	142	1	107	7		149	1	112	0%	0	149	1	112	0	149	1	112
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	186	1	**186**	9		195	1	**195**	0%	0	195	1	**195**	0	195	1	**195**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	984	3	328	50	12	1046	3	349	5%	6	1052	3	351	0	1052	3	351
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	56	1	24	3		59	1	26	0%	0	59	1	26	0	59	1	26
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 75% Projected: 75% Mitigated: 75%																		
S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
Critical Volumes:		North-South:		562			North-South:		590			North-South:		595		North-South:		595
		East-West:		671			East-West:		713			East-West:		715		East-West:		715
		Total:		1233			Total:		1303			Total:		1310		Total:		1310
Volume/capacity (*v/c*) ratio:				0.897					0.948					0.953				0.953
v/c less ATSAC adjustment:				0.797					0.848					0.853				0.853
Level of Service (LOS):				C					D					D				D

PROJECT IMPACT

Change in *v/c* due to project: 0.005 — Δ*v/c* after mitigation: 0.005

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_2019.xls

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 13		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION			
North/South Street: Fairfax Blvd		Critical Phases: 4			Ambient Growth	Critical Phases: 4				☐ Adjacent		In	Out	Total				
		Capacity: 1375			from: 2014	Capacity: 1375				Trip AM		173	83	256				
East/West Street: Washington Blvd		Signal System: 3			to: 2019	Signal System: 3				Gen 1 PM		127	174	301	☐ Use Dist 2:	Signal System: 3		
		v/c reduction: 10%			at: 1.0%	v/c reduction: 10%				Trip AM		0	0	0		v/c reduction: 10%		
Analysis Date: 10/29/2015		Opposed Phasing: 0				Opposed Phasing: 0				Gen 2 PM		0	0	0		Opposed Phasing: 0		
AM Peak: 8:00 AM		Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	21	1	21	1		22	1	22	0%	0	22	1	22	0	22	1	22
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	904	2	**452**	46	6	956	2	**478**	0%	0	956	2	**478**	0	956	2	**478**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	375	1	106	19	6	400	1	86	0%	0	400	1	86	0	400	1	86
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	162	2	**89**	8		170	2	**94**	0%	0	170	2	**94**	0	170	2	**94**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	674	1	357	34	42	750	1	396	0%	0	750	1	401	0	750	1	401
	Th-Rt		1	357				1	396	0%			1	401			1	401
	Right	40	0	0	2		42	0	0	5%	9	51	0	0	0	51	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	62	1	**62**	3		65	1	**65**	(5%)	4	69	1	**69**	0	69	1	**69**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	478	2	163	24	14	516	2	176	(10%)	9	525	2	179	0	525	2	179
	Th-Rt		1	163				1	176	0%			1	179			1	179
	Right	12	0	0	1		13	0	0	0%	0	13	0	0	0	13	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	359	2	197	18	42	419	2	231	0%	0	419	2	231	0	419	2	231
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	971	2	**486**	50	34	1055	2	**527**	10%	17	1072	2	**536**	0	1072	2	**536**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	104	1	23	5		109	1	24	0%	0	109	1	24	0	109	1	24
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 75% Projected: 75% Mitigated: 75%																		
S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
Critical Volumes:		North-South:		541			North-South:		572			North-South:		572		North-South:		572
		East-West:		548			East-West:		592			East-West:		605		East-West:		605
		Total:		1089			Total:		1164			Total:		1177		Total:		1177
Volume/capacity (*v/c*) ratio:				0.792					0.847					0.856				0.856
v/c less ATSAC adjustment:				0.692					0.747					0.756				0.756
Level of Service (LOS):				B					C					C				C

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_2019.xls

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 13		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	4		Ambient Growth		Critical Phases:	4		☐ Adjacent		In	Out	Total			Critical Phases:	4
Fairfax Blvd		Capacity:	1375		from:	2014	Capacity:	1375		Trip	AM	173	83	256			Capacity:	1375
East/West Street:		Signal System:	3		to:	2019	Signal System:	3		Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	3
Washington Blvd		v/c reduction:	10%		at:	1.0%	v/c reduction:	10%		Trip	AM	0	0	0			v/c reduction:	10%
Analysis Date:	10/29/2015	Opposed Phasing:	0				Opposed Phasing:	0		Gen 2	PM	0	0	0			Opposed Phasing:	0
PM Peak:	5:00 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	5	1	5	0		5	1	5	0%	0	5	1	5	0	5	1	5
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	797	2	399	41	37	875	2	437	0%	0	875	2	437	0	875	2	437
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	623	1	**419**	32	37	692	1	**472**	0%	0	692	1	**472**	0	692	1	**472**
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	316	2	**174**	16		332	2	**183**	0%	0	332	2	**183**	0	332	2	**183**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	606	1	349	31	8	645	1	370	0%	0	645	1	373	0	645	1	373
	Th-Rt		1	349				1	370	0%			1	373			1	373
	Right	91	0	0	5		96	0	0	5%	6	102	0	0	0	102	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	78	1	78	4		82	1	82	(5%)	8	90	1	90	0	90	1	90
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	888	2	**300**	45	39	972	2	**328**	(10%)	18	990	2	**334**	0	990	2	**334**
	Th-Rt		1	**300**				1	**328**	0%			1	**334**			1	**334**
	Right	12	0	0	1		13	0	0	0%	0	13	0	0	0	13	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	272	2	**150**	14	8	294	2	**162**	0%	0	294	2	**162**	0	294	2	**162**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	517	2	259	26	22	565	2	283	10%	13	578	2	289	0	578	2	289
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	55	1	0	3		58	1	0	0%	0	58	1	0	0	58	1	0
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 75% Projected: 75% Mitigated: 75%																		
S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
Critical Volumes:		North-South:		593			North-South:		654			North-South:		654			North-South:	654
		East-West:		450			East-West:		490			East-West:		496			East-West:	496
		Total:		1042			Total:		1144			Total:		1150			Total:	1150
Volume/capacity (*v/c*) ratio:				0.758					0.832					0.837				0.837
v/c less ATSAC adjustment:				0.658					0.732					0.737				0.737
Level of Service (LOS):				B					C					C				C

PROJECT IMPACT

Change in *v/c* due to project: 0.005 — Δ*v/c* after mitigation: 0.005

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_2019.xls

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 14	2014, EXISTING	2019, PROJECTED CUMULATIVE BASE		2019, WITH PROJECT				2019, WITH TRAFFIC MITIGATION
North/South Street:	Critical Phases: 4	Ambient Growth	Critical Phases: 4	☐ Adjacent	In	Out	Total	Critical Phases: 4
Jefferson Blvd	Capacity: 1375	from: 2014	Capacity: 1375	Trip Gen 1 AM	173	83	256	Capacity: 1375
East/West Street:	Signal System: 3	to: 2019	Signal System: 3	Trip Gen 1 PM	127	174	301	☐ Use Dist 2 Signal System: 3
National Blvd	v/c reduction: 10%	at: 1.0%	v/c reduction: 10%	Trip Gen 2 AM	0	0	0	v/c reduction: 10%
Analysis Date: 10/29/2015	Opposed Phasing: 2		Opposed Phasing: 2	Trip Gen 2 PM	0	0	0	Opposed Phasing: 2
AM Peak: 8:00 AM								

Approach	Movement	RTOR	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	Project %	+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		315	1	**315**	16	4	335	1	**335**	5%	9	344	1	**344**	0	344	1	**344**
	Lt-Th	N/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 75%	709	2	355	36	64	809	2	405	0%	0	809	2	405	0	809	2	405
	Th-Rt	Projected: 75%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 75%	26	1	25	1		27	1	26	0%	0	27	1	26	0	27	1	26
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		5	1	5	0		5	1	5	0%	0	5	1	5	0	5	1	5
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	808	1	**808**	41	18	867	1	**867**	0%	0	867	1	**867**	0	867	1	**867**
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	703	1	567	36	88	827	1	638	5%	8	835	1	644	0	835	1	644
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		272	1	150	14	93	379	1	**208**	(5%)	4	383	1	**211**	0	383	1	**211**
	Lt-Th	E/B RTOR:		1	**152**				1	202	0%			1	204			1	204
	Thru	Existing: 50%	30	0	0	2		32	0	0	0%	0	32	0	0	0	32	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	234	1	76	12	3	249	1	81	(5%)	5	254	1	82	0	254	1	82
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		1	0	0	0		1	0	0	0%	0	1	0	0	0	1	0	0
	Lt-Th	W/B RTOR:		1	**25**				1	**26**	0%			1	**26**			1	**26**
	Thru	Existing: 50%	24	0	0	1		25	0	0	0%	0	25	0	0	0	25	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	5	1	3	0		5	1	2	0%	0	5	1	2	0	5	1	2
	Shared			0	0				0	0	0%			0	0			0	0

Critical Volumes:	2014, Existing	2019, Projected Cumulative Base	2019, With Project	2019, With Traffic Mitigation
North-South:	1123	1202	1211	1211
East-West:	177	235	237	237
Total:	1300	1437	1448	1448
Volume/capacity (*v/c*) ratio:	0.946	1.045	1.053	1.053
v/c less ATSAC adjustment:	0.846	0.945	0.953	0.953
Level of Service (LOS):	D	E	E	E

PROJECT IMPACT

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

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_2019.xl

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 14		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	4		Ambient Growth		Critical Phases:	4		☐ Adjacent		In	Out	Total			Critical Phases:	4
Jefferson Blvd		Capacity:	1375		from:	2014	Capacity:	1375		Trip	AM	173	83	256			Capacity:	1375
East/West Street:		Signal System:	3		to:	2019	Signal System:	3		Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	3
National Blvd		v/c reduction:	10%		at:	1.0%	v/c reduction:	10%		Trip	AM	0	0	0			v/c reduction:	10%
Analysis Date:	10/29/2015	Opposed Phasing:	2				Opposed Phasing:	2		Gen 2	PM	0	0	0			Opposed Phasing:	2
PM Peak:	5:00 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	192	1	**192**	10	3	205	1	**205**	5%	7	212	1	**212**	0	212	1	**212**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	791	2	396	40	20	851	2	426	0%	0	851	2	426	0	851	2	426
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	6	1	0	0		6	1	0	0%	0	6	1	0	0	6	1	0
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	2	1	2	0		2	1	2	0%	0	2	1	2	0	2	1	2
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	485	1	**485**	25	58	568	1	**568**	0%	0	568	1	**568**	0	568	1	**568**
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	224	1	0	11	97	332	1	0	5%	6	338	1	0	0	338	1	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	564	1	310	29	93	686	1	**377**	(5%)	9	695	1	**382**	0	695	1	**382**
	Lt-Th		1	267				1	322	0%			1	326			1	326
	Thru	13	0	0	1	0	14	0	0	0%	0	14	0	0	0	14	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	414	1	**318**	21	5	440	1	338	(5%)	9	449	1	343	0	449	1	343
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	13	0	0	1		14	0	0	0%	0	14	0	0	0	14	0	0
	Lt-Th		1	**43**				1	**45**	0%			1	**45**			1	**45**
	Thru	30	0	0	2		32	0	0	0%	0	32	0	0	0	32	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	14	1	13	1		15	1	14	0%	0	15	1	14	0	15	1	14
	Shared		0	0				0	0	0%			0	0			0	0
Critical Volumes:		North-South:		677			North-South:		773			North-South:		780		North-South:		780
		East-West:		361			East-West:		422			East-West:		427		East-West:		427
		Total:		1038			Total:		1195			Total:		1207		Total:		1207
Volume/capacity (*v/c*) ratio:				0.755					0.869					0.878				0.878
v/c less ATSAC adjustment:				0.655					0.769					0.778				0.778
Level of Service (LOS):				B					C					C				C

Northbound		Southbound		Eastbound		Westbound	
N/B RTOR:		S/B RTOR:		E/B RTOR:		W/B RTOR:	
Existing:	75%	Existing:	50%	Existing:	50%	Existing:	50%
Projected:	75%	Projected:	50%	Projected:	50%	Projected:	50%
Mitigated:	75%	Mitigated:	50%	Mitigated:	50%	Mitigated:	50%

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_2019.xls

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 15		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE				2019, WITH PROJECT				2019, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	2		Ambient Growth	Critical Phases:	2		☐ Adjacent	In	Out	Total		Critical Phases:	2	
Robertson Blvd		Capacity:	1500		from: 2014	Capacity:	1500		Trip AM	173	83	256		Capacity:	1500	
East/West Street:		Signal System:	3		to: 2019	Signal System:	3		Gen 1 PM	127	174	301	☐ Use Dist 2:	Signal System:	3	
I-10 WB Offramp		v/c reduction:	10%		at: 1.0%	v/c reduction:	10%		Trip AM	0	0	0		v/c reduction:	10%	
Analysis Date:	10/29/2015	Opposed Phasing:	2			Opposed Phasing:	2		Gen 2 PM	0	0	0		Opposed Phasing:	2	
AM Peak:	8:00 AM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	56	1	**56**	3		59	1	**59**	0%	0	59	1	**59**	0	59	1	**59**
	Lt-Th	N/B RTOR:	0	0				0	0	0%			0	0			0	0
	Thru	Existing: 75%	1251	2	626	64	2	1317	2	658	0%	0	1317	2	658	0	1317	2	658
	Th-Rt	Projected: 75%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 75%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0		0	0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	1402	1	**731**	72	2	1476	1	**769**	0%	0	1476	1	**769**	0	1476	1	**769**
	Th-Rt	Projected: 50%		1	**731**				1	**769**	0%			1	**769**			1	**769**
	Right	Mitigated: 50%	59	0	0	3		62	0	0	0%	0	62	0	0	0	62	0	0
	Shared			0	0				0	0	0%			0	0			0	0
Eastbound	Left		128	1	**128**	7		135	1	**135**	0%	0	135	1	**135**	0	135	1	**135**
	Lt-Th	E/B RTOR:		0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	60	1	32	3		63	1	34	0%	0	63	1	34	0	63	1	34
	Shared			0	0				0	0	0%			0	0			0	0
Westbound	Left		78	0	0	4	240	322	0	0	10%	18	340	0	0	0	340	0	0
	Lt-Th	W/B RTOR:		1	119				1	**365**	0%			1	**383**			1	**383**
	Thru	Existing: 50%	41	0	0	2		43	0	0	0%	0	43	0	0	0	43	0	0
	Th-Rt	Projected: 50%		0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	125	1	**125**	6		131	1	131	0%	0	131	1	131	0	131	1	131
	Shared			0	0				0	0	0%			0	0			0	0
Critical Volumes:		North-South:		787			North-South:		828			North-South:		828			North-South:		828
		East-West:		253			East-West:		500			East-West:		518			East-West:		518
		Total:		1040			Total:		1327			Total:		1345			Total:		1345
Volume/capacity (*v/c*) ratio:				0.693					0.885					0.897					0.897
v/c less ATSAC adjustment:				0.593					0.785					0.797					0.797
Level of Service (LOS):				A					C					C					C

PROJECT IMPACT

Change in *v/c* due to project: 0.012 — Δ*v/c* after mitigation: 0.012

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\CMACalc_Final_2019.xls

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 15		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	2		Ambient Growth		Critical Phases:	2		☐ Adjacent		In	Out	Total			Critical Phases:	2
Robertson Blvd		Capacity:	1500		from:	2014	Capacity:	1500		Trip	AM	173	83	256			Capacity:	1500
East/West Street:		Signal System:	3		to:	2019	Signal System:	3		Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	3
I-10 WB Offramp		v/c reduction:	10%		at:	1.0%	v/c reduction:	10%		Trip	AM	0	0	0			v/c reduction:	10%
Analysis Date:	10/29/2015	Opposed Phasing:	2				Opposed Phasing:	2		Gen 2	PM	0	0	0			Opposed Phasing:	2
PM Peak:	5:00 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	33	1	**33**	2		35	1	35	0%	0	35	1	35	0	35	1	35
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	863	2	432	44	2	909	2	455	0%	0	909	2	455	0	909	2	455
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1469	1	**753**	75	2	1546	1	**792**	0%	0	1546	1	**792**	0	1546	1	**792**
	Th-Rt		1	**753**				1	**792**	0%			1	**792**			1	**792**
	Right	36	0	0	2		38	0	0	0%	0	38	0	0	0	38	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	71	1	**71**	4		75	1	**75**	0%	0	75	1	75	0	75	1	**75**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	59	1	43	3		62	1	45	0%	0	62	1	45	0	62	1	45
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	258	0	0	13	192	463	0	0	10%	13	476	0	0	0	476	0	0
	Lt-Th		1	292				1	499	0%			1	512			1	512
	Thru	34	0	0	2		36	0	0	0%	0	36	0	0	0	36	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	508	1	**508**	26		534	1	**534**	0%	0	534	1	534	0	534	1	**534**
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR:	Existing: 75%																	
	Projected: 75%																	
	Mitigated: 75%																	
S/B RTOR:	Existing: 50%																	
	Projected: 50%																	
	Mitigated: 50%																	
E/B RTOR:	Existing: 50%																	
	Projected: 50%																	
	Mitigated: 50%																	
W/B RTOR:	Existing: 50%																	
	Projected: 50%																	
	Mitigated: 50%																	
Critical Volumes:	North-South:			786					827					827				827
	East-West:			579					609					621				609
	Total:			1365					1435					1448				1435
Volume/capacity (*v/c*) ratio:				0.910					0.957					0.965				0.957
v/c less ATSAC adjustment:				0.810					0.857					0.865				0.857
Level of Service (LOS):				D					D					D				D

PROJECT IMPACT

Change in *v/c* due to project: 0.008 — Significantly impacted? NO

Δ*v/c* after mitigation: 0.000 — Fully mitigated? N/A

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Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 16		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE				2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases: 4			Ambient Growth		Critical Phases: 4		☑ Adjacent		In	Out	Total			Critical Phases: 4	
National Boulevard		Capacity: 1375			from: 2014		Capacity: 1375		Trip	AM	192	98	290			Capacity: 1375	
East/West Street:		Signal System: 2			to: 2019		Signal System: 2		Gen 1	PM	149	193	342	☑ Use Dist 2		Signal System: 2	
Project Main Dwy		v/c reduction: 7%			at: 1.0%		v/c reduction: 7%		Trip	AM	0	0	0			v/c reduction: 7%	
Analysis Date: 10/29/2015		Opposed Phasing: 2					Opposed Phasing: 2		Gen 2	PM	0	0	0			Opposed Phasing: 2	
AM Peak: 8:00 AM		Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lane Lanes Volume	+ Project	Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		1	0	0		1	0	10%	19	19	1	**19**	0	19	1	**19**
	Lt-Th	N/B RTOR:	0	0			0	0	0%			0	0			0	0
	Thru	Existing: 50%	2	0	0		2	0	0%	1077	1077	2	539	0	1077	2	539
	Th-Rt	Projected: 50%	0	0			0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0		0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0			0	0	0%			0	0			0	0
Southbound	Left		0	0	0		0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:	0	0			0	0	0%			0	0			0	0
	Thru	Existing: 50%	2	0	0		2	0	0%	1101	1101	2	**551**	0	1101	2	**551**
	Th-Rt	Projected: 50%	0	0			0	0	0%			0	0			0	0
	Right	Mitigated: 50%	1	0	0		1	0	30%	58	58	1	**31**	0	58	1	**31**
	Shared		0	0			0	0	0%			0	0			0	0
Eastbound	Left		1	0	0		1	0	(55%)	54	54	1	**54**	0	54	1	**54**
	Lt-Th	E/B RTOR:	0	0			0	0	0%			0	0			0	0
	Thru	Existing: 0%	0	0	0		0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 0%	0	0			0	0	0%			0	0			0	0
	Right	Mitigated: 0%	1	0	0		1	0	(15%)	15	15	1	15	0	15	1	15
	Shared		0	0			0	0	0%			0	0			0	0
Westbound	Left		0	0	0		0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	W/B RTOR:	0	0			0	0	0%			0	0			0	0
	Thru	Existing: 0%	0	0	0		0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 0%	0	0			0	0	0%			0	0			0	0
	Right	Mitigated: 0%	0	0	0		0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0			0	0	0%			0	0			0	0
Critical Volumes:		North-South:	0				North-South:	0			North-South:		570			North-South:	570
		East-West:	0				East-West:	0			East-West:		54			East-West:	54
		Total:	0				Total:	0			Total:		624			Total:	624
Volume/capacity (*v/c*) ratio:			0.000					0.000					0.453				0.453
v/c less ATSAC adjustment:													0.383				0.383
Level of Service (LOS):			A					A					A				A

PROJECT IMPACT

Change in *v/c* due to project: 0.383 — Δ*v/c* after mitigation: 0.383

Significantly impacted? NO — Fully mitigated? N/A

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Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 16		2014, EXISTING			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases: 4			Ambient Growth		Critical Phases: 4			☑ Adjacent		In	Out	Total			Critical Phases: 4	
National Boulevard		Capacity: 1375			from: 2014		Capacity: 1375			Trip	AM	192	98	290			Capacity: 1375	
East/West Street:		Signal System: 2			to: 2019		Signal System: 2			Gen 1	PM	149	193	342	☑ Use Dist 2		Signal System: 2	
Project Main Dwy		v/c reduction: 7%			at: 1.0%		v/c reduction: 7%			Trip	AM	0	0	0			v/c reduction: 7%	
Analysis Date:	10/29/2015	Opposed Phasing: 2					Opposed Phasing: 2			Gen 2	PM	0	0	0			Opposed Phasing: 2	
PM Peak:	4:15 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume	+ Project	Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left		1	0	0		0	1	0	10%	15	15	1	**15**	0	15	1	**15**
	Lt-Th	N/B RTOR:	0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	2	0	0		0	2	0	0%	1171	1171	2	586	0	1171	2	586
	Th-Rt	Projected: 50%	0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left		0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	S/B RTOR:	0	0				0	0	0%			0	0			0	0
	Thru	Existing: 50%	2	0	0		0	2	0	0%	1255	1255	2	**628**	0	1255	2	**628**
	Th-Rt	Projected: 50%	0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 50%	1	0	0		0	1	0	30%	45	45	1	0	0	45	1	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left		1	0	0		0	1	0	(55%)	106	106	1	**106**	0	106	1	**106**
	Lt-Th	E/B RTOR:	0	0				0	0	0%			0	0			0	0
	Thru	Existing: 0%	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 0%	0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 0%	1	0	0		0	1	0	(15%)	29	29	1	29	0	29	1	29
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left		0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th	W/B RTOR:	0	0				0	0	0%			0	0			0	0
	Thru	Existing: 0%	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt	Projected: 0%	0	0				0	0	0%			0	0			0	0
	Right	Mitigated: 0%	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Critical Volumes:		North-South:	0				North-South:	0				North-South:	643			North-South:	643	
		East-West:	0				East-West:	0				East-West:	106			East-West:	106	
		Total:	0				Total:	0				Total:	749			Total:	749	
Volume/capacity (*v/c*) ratio:			0.000					0.000					0.544				0.544	
v/c less ATSAC adjustment:													0.474				0.474	
Level of Service (LOS):			A					A					A				A	

PROJECT IMPACT

Change in *v/c* due to project: 0.474 — Δ*v/c* after mitigation: 0.474

Significantly impacted? NO — Fully mitigated? N/A

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APPENDIX D

SUPPLEMENTAL STUDY TECHNICAL MEMORANDUM

Kimley»Horn

TECHNICAL MEMORANDUM

To: Barry Kurtz (City of Culver City)
John Fisher (City of Culver City)

From: Sri Chakravarthy, P.E., T.E. (Kimley-Horn and Associates, Inc.)
Vikas Sharma, P.E. (Kimley-Horn and Associates, Inc.)

Date: October 20, 2015

Subject: Supplemental Study for Ivy Station TOD Traffic Impact Analysis Report

Background

Kimley-Horn submitted the draft Traffic Impact Analysis (TIA) for Ivy Station TOD mixed-use development for City and LADOT review in July 2015. Pursuant to that, City of Culver City and LADOT provided review comments. The comments included a need for a detailed queueing analysis for National Boulevard between Washington Boulevard and Venice Boulevard to better understand the future traffic operations on this corridor. Kimley-Horn prepared a detailed traffic simulation of the study area and presented it to the City staff in a separate meeting on August 17, 2015 and subsequently prepared a response letter to comments and submitted to the City on September 1, 2015. Additionally, to address City staff's concerns, Kimley-Horn met with the City staff on September 29, 2015 and presented the traffic simulation model of the Study area traffic signals to engineering and planning staff. In this meeting, Kimley-Horn's traffic simulation suggested that the traffic signals in the study area along National Boulevard possibly could be programmed to avoid long queueing and provide progression in the north-south directions**.** City staff indicated that the simulation seemed to show better traffic flow than currently exists. However, Kimley-Horn explained that the simulation was a best effort to estimate future queues and that queues are "dynamic" in nature and can clear out efficiently under conditions that allow optimal traffic signal timing. This supplemental analysis provides the follow-up documentation on this analysis and presentation to the City.

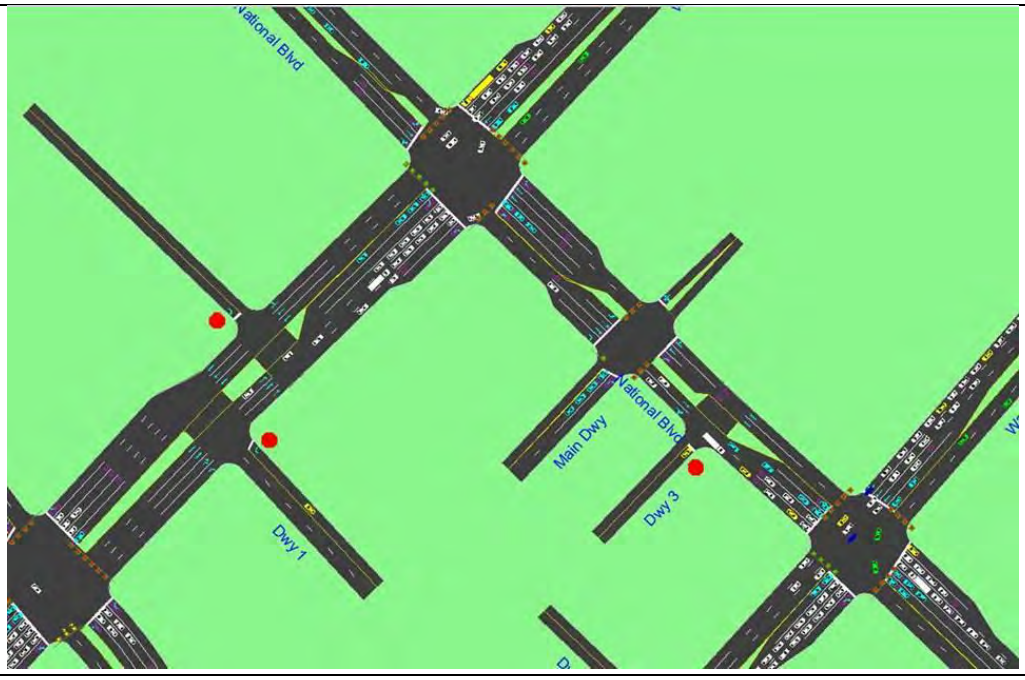
Underlying Assumptions and Analysis

For the traffic simulation model, the following assumptions were used in this analysis:

- The traffic model utilized 2017 With Project traffic volumes for the PM peak hour to simulate the worst case scenario.
- A cycle length of 120 seconds was assumed at all traffic signals.
- The base timing for the traffic models was kept at default values in Synchro software.
- The geometric conditions at the study locations included mitigation improvements proposed in the traffic study (dual NB left turns and dedicated NB right turn lane at National/Venice and a short SB left turn at Main Driveway).
- All functional right turns were coded as dedicated turn lanes to reflect the operational behavior of the driver. This is necessary since Simtraffic software is not able to simulate these turns otherwise.

- Offsets were adjusted along National Boulevard, Venice Boulevard and Washington Boulevard to optimized levels for flow in both east-west and north-south directions.
- The discharge rates at all study intersections were adjusted to reflect the residual queuing that will occur in the field.

The graphics below provide time step snapshots of traffic simulation run in a fully loaded cycle showing how the optimized traffic operations result in clearing the queue:

Time Step 1	
Time Step 2	

Important factors to be considered regarding queue lengths include the following:

- 50th percentile maximum queue is maximum back of queue on a 'typical' cycle.
- 95th percentile is the maximum back of queue with 95th percentile traffic.
- The queue length reported by Synchro/Simtraffic is for the lane with longest queue in the lane group. The total queue length is divided by the number of lanes and the lane utilization factor (which we did not adjust).
- In many cases, 95th percentile queue will not be experienced due to upstream metering. That is the case with 3 signals along National Boulevard. If the upstream intersection is at or near capacity, the 50th percentile queue represents the maximum queue experienced. Similarly, if the upstream intersection has a v:c ratio over 0.8, the maximum queue is approximately equal to the 50th percentile queue divided by upstream v:c ratio. For example, if the 50th percentile queue is 200 feet and the v:c ratio upstream is 0.9, the maximum possible queue would be 200/0.9 = 222 feet.

Based on the discussion above, below is the 50th percentile queue length (in feet) for all movements that would be typical based on the assumed timing parameters. Highlighted cells are relevant to the analysis:

Table 1. 50th Percentile Queue Length (Ft)

Intersection	50th Percentile Queue Length (Storage in Ft shown in parenthesis)											
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
National Blvd and Venice Blvd	102* (250)	392	21 (150)	78 (~135)	317	-	42	395	15	119	246	0
Main Driveway and National Blvd	1 (85)	21	-	-	52	1	77	-	0	-	0	-
Washington Blvd and National Blvd	102 (200)	328	18 (100)	111** (170)	242	-	98	-	92	100	294	-

*NBL at National Boulevard and Venice Boulevard is 102 feet (for dual NB left turn lanes) which is less than the storage length of 250 feet

**SBL at Washington Boulevard and National Boulevard is 111 feet which is less than the storage length of 170 feet

Based on linear interpolation, the relevant 85th percentile queues (in feet) will be as shown in **Table 2** on the following page, which still indicates that the provided storage is sufficient to serve the expected queues:

Table 2. 85th Percentile Queue Length (Ft)

Intersection	Interpolated 85th Percentile Queue Length (Ft)					
	NBL	NBT	NBR	SBL	SBT	SBR
National Blvd and Venice Blvd	144 (250)	445	65 (150)	122 (~135)	397	-
Main Driveway and National Blvd	35 (85)	46	-	-	106	21
Washington Blvd and National Blvd	132 (200)	392	57 (100)	142 (170)	460	-

The queues in northbound through and southbound are not of concern since we are coordinating signals along N-S direction and even in the worst case scenario of the queues filling up the 500 feet distance between Washington/National and Venice/National, they are going to get green indication at the same time due to the coordination offset and as a result clear out completely, as demonstrated to the City in our simulation.

Analysis and Results

The traffic model was calibrated to existing conditions and then loaded with the 2017 With Project traffic volumes. All proposed mitigations were coded into the model along with current signal phasing as well as any proposed changes (e.g. NB left turn at Venice/National coded as protected phasing for dual left turns and permissive phasing for SB left at main driveway). A total of 10 cycles (600 seconds) were simulated by using random seeding to allow network to load for 180 seconds prior to beginning of the simulation. As shown in the traffic simulation, although the reported queue lengths in some cases (e.g. NB and SB through movements) are longer than the storage lengths, the nature of the queue is dynamic in nature and with adjustments to signal timing, the analysis suggests that traffic flow can be managed along National Boulevard to provide progression and avoid long queuing.

It is recommended that during implementation, optimized timing plans be developed by Kimley-Horn for both National Boulevard, Washington Boulevard and Venice Boulevard with the prevailing traffic conditions at that time to serve the traffic in the most optimal manner achievable. This will require coordination with LADOT, City of Culver City and possibly Caltrans.

Finally, it was agreed that the curb-to-curb roadway width of National Boulevard along the project frontage will be 78'. The extra 2' of roadway width will leave a 6' parkway. Therefore, a 2' portion of the building setback will be used to provide an 8' parkway along the project's frontage. The striping plan has been updated (attached to this supplemental analysis) accordingly to show the following:

- 78' curb-to-curb width with dual left-turn lanes, two through lanes, a right-turn lane and bicycle lanes at the northbound approach to Venice Boulevard and also at the southbound approach to Washington Boulevard.
- A right-turn lane for southbound right turning vehicles entering the signalized driveway between Venice Boulevard and Washington Boulevard.
- A bike box on the south leg of National Boulevard for bicyclists riding from southbound National Boulevard to eastbound Washington Boulevard.

APPENDIX E

HIGHWAY CAPACITY SOFTWARE (HCS) WORKSHEETS

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	DS
Agency or Company:	KHA
Date Performed:	7/6/2015
Analysis Time Period:	PM
Freeway/Direction:	10 EB
From/To:	
Jurisdiction:	
Analysis Year:	2015
Description:	Mainline EB at Robertson Pl

Flow Inputs and Adjustments

Volume, V	8033	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	2136	v
Trucks and buses	5	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.976	
Driver population factor, fp	1.00	
Flow rate, vp	2190	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	2190	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	58.6	mi/h
Number of lanes, N	4	
Density, D	37.4	pc/mi/ln
Level of service, LOS	E	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	DS
Agency or Company:	KHA
Date Performed:	7/6/2015
Analysis Time Period:	AM
Freeway/Direction:	10 EB
From/To:	
Jurisdiction:	
Analysis Year:	2015
Description:	Mainline EB at Robertson Pl

Flow Inputs and Adjustments

Volume, V	7084	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1884	v
Trucks and buses	5	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.976	
Driver population factor, fp	1.00	
Flow rate, vp	1931	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1931	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	63.8	mi/h
Number of lanes, N	4	
Density, D	30.3	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	DS
Agency or Company:	KHA
Date Performed:	7/6/2015
Analysis Time Period:	AM
Freeway/Direction:	10 WB
From/To:	
Jurisdiction:	
Analysis Year:	2015
Description:	Mainline WB at Robertson Pl

Flow Inputs and Adjustments

Volume, V	7942	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	2112	v
Trucks and buses	5	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.976	
Driver population factor, fp	1.00	
Flow rate, vp	2165	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	2165	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	59.2	mi/h
Number of lanes, N	4	
Density, D	36.6	pc/mi/ln
Level of service, LOS	E	

Phone: Fax:
E-mail:

Operational Analysis

Analyst:	DS
Agency or Company:	KHA
Date Performed:	7/6/2015
Analysis Time Period:	PM
Freeway/Direction:	10 WB
From/To:	
Jurisdiction:	
Analysis Year:	2015
Description:	Mainline EB at Robertson Pl

Flow Inputs and Adjustments

Volume, V	4690	veh/h
Peak-hour factor, PHF	0.94	
Peak 15-min volume, v15	1247	v
Trucks and buses	5	%
Recreational vehicles	0	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.976	
Driver population factor, fp	1.00	
Flow rate, vp	1279	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	4	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1279	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	69.9	mi/h
Number of lanes, N	4	
Density, D	18.3	pc/mi/ln
Level of service, LOS	C	

HCS 2010: Freeway Merge and Diverge Segments Release 6.50

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	DS
Agency/Co.:	KHA
Date performed:	7/6/2015
Analysis time period:	AM
Freeway/Dir of Travel:	10 WB
Junction:	
Jurisdiction:	
Analysis Year:	2015
Description:	10 WB Offramp at Robertson Pl

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	7942	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	244	vph
Length of first accel/decel lane	1275	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	7942		244			vph
Peak-hour factor, PHF	0.94		0.94			
Peak 15-min volume, v15	2112		65			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	8449	260	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 3830 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	8449	9400	No
$v_{FO} = v_F - v_R$	8189	9400	No
v_R	260	2000	No
v_3 or v_{av34}	2309 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 3830 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	3830	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\ v_{12} - 0.009\ L_D$ = 25.7 pc/mi/ln

Level of service for ramp-freeway junction areas of influence C

Speed Estimation

Intermediate speed variable,	D_S = 0.451	
Space mean speed in ramp influence area,	S_R = 54.6	mph
Space mean speed in outer lanes,	S_0 = 66.2	mph
Space mean speed for all vehicles,	S = 60.4	mph

HCS 2010: Freeway Merge and Diverge Segments Release 6.50

Phone: Fax:
E-mail:

Diverge Analysis

Analyst:	DS
Agency/Co.:	KHA
Date performed:	7/6/2015
Analysis time period:	PM
Freeway/Dir of Travel:	10 WB
Junction:	
Jurisdiction:	
Analysis Year:	2015
Description:	10 WB Offramp at Robertson Pl

Freeway Data

Type of analysis	Diverge	
Number of lanes in freeway	4	
Free-flow speed on freeway	65.0	mph
Volume on freeway	4690	vph

Off Ramp Data

Side of freeway	Right	
Number of lanes in ramp	1	
Free-Flow speed on ramp	35.0	mph
Volume on ramp	800	vph
Length of first accel/decel lane	1275	ft
Length of second accel/decel lane		ft

Adjacent Ramp Data (if one exists)

Does adjacent ramp exist?	No	
Volume on adjacent ramp		vph
Position of adjacent ramp		
Type of adjacent ramp		
Distance to adjacent ramp		ft

Conversion to pc/h Under Base Conditions

Junction Components	Freeway		Ramp		Adjacent Ramp	
Volume, V (vph)	4690		800			vph
Peak-hour factor, PHF	0.94		0.94			
Peak 15-min volume, v15	1247		213			v
Trucks and buses	0		0			%
Recreational vehicles	0		0			%
Terrain type:	Level		Level			
Grade	0.00	%	0.00	%		%
Length	0.00	mi	0.00	mi		mi
Trucks and buses PCE, ET	1.5		1.5			
Recreational vehicle PCE, ER	1.2		1.2			

Heavy vehicle adjustment, fHV	1.000	1.000	
Driver population factor, fP	1.00	1.00	
Flow rate, vp	4989	851	pcph

Estimation of V12 Diverge Areas

L_{EQ} = (Equation 13-12 or 13-13)

P_{FD} = 0.436 Using Equation 8

$v_{12} = v_R + (v_F - v_R) P_{FD}$ = 2655 pc/h

Capacity Checks

	Actual	Maximum	LOS F?
$v_{Fi} = v_F$	4989	9400	No
$v_{FO} = v_F - v_R$	4138	9400	No
v_R	851	2000	No
v_3 or v_{av34}	1167 pc/h	(Equation 13-14 or 13-17)	

Is v_3 or v_{av34} > 2700 pc/h? No

Is v_3 or v_{av34} > 1.5 v_{12} /2 No

If yes, v_{12A} = 2655 (Equation 13-15, 13-16, 13-18, or 13-19)

Flow Entering Diverge Influence Area

	Actual	Max Desirable	Violation?
v_{12}	2655	4400	No

Level of Service Determination (if not F)

Density, $D_R = 4.252 + 0.0086\, v_{12} - 0.009\, L_D$ = 15.6 pc/mi/ln

Level of service for ramp-freeway junction areas of influence B

Speed Estimation

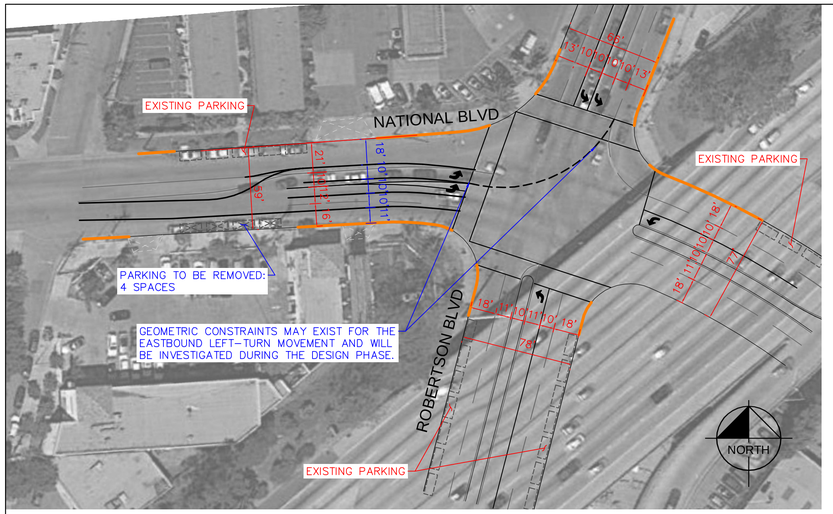
Intermediate speed variable,	D_S = 0.505	
Space mean speed in ramp influence area,	S_R = 53.4	mph
Space mean speed in outer lanes,	S_0 = 70.7	mph
Space mean speed for all vehicles,	S = 60.3	mph

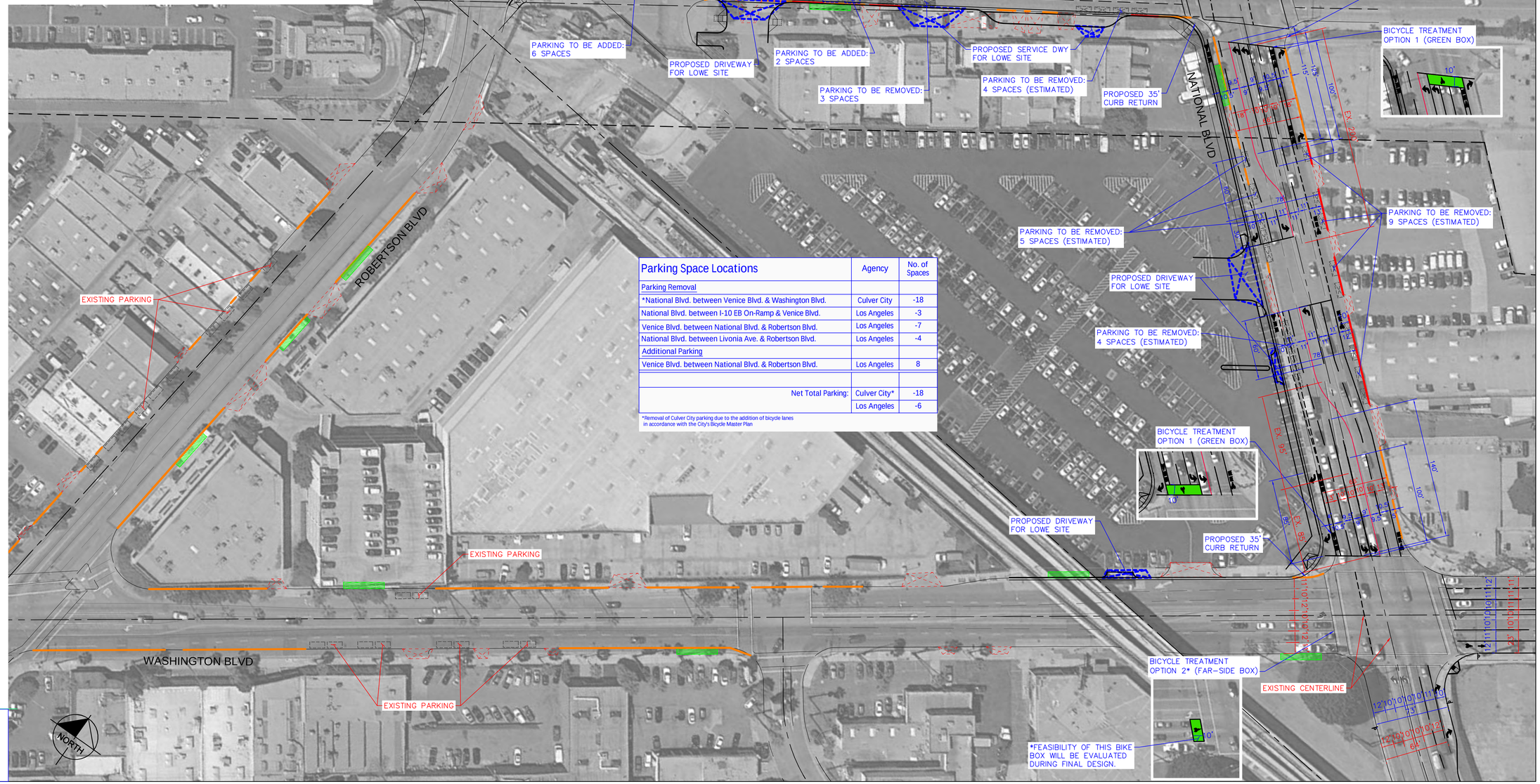
APPENDIX F

ON-STREET PARKING AND STRIPING PLAN

IVY STATION

MIXED-USE TRANSIT ORIENTED DEVELOPMENT
ON-STREET PARKING & TRAFFIC STRIPING EXHIBIT





Parking Space Locations	Agency	No. of Spaces
Parking Removal		
*National Blvd. between Venice Blvd. & Washington Blvd.	Culver City	-18
National Blvd. between I-10 EB On-Ramp & Venice Blvd.	Los Angeles	-3
Venice Blvd. between National Blvd. & Robertson Blvd.	Los Angeles	-7
National Blvd. between Livonia Ave. & Robertson Blvd.	Los Angeles	-4
Additional Parking		
Venice Blvd. between National Blvd. & Robertson Blvd.	Los Angeles	8
Net Total Parking:	Culver City*	-18
	Los Angeles	-6

*Removal of Culver City parking due to the addition of bicycle lanes in accordance with the City's Bicycle Master Plan

LEGEND:

- EXISTING PARKING
- PARKING REQUIRING REMOVAL
- PROPOSED NEW PARKING
- EXISTING RED CURB
- PROPOSED RED CURB
- EXISTING TRAFFIC STRIPING
- PROPOSED TRAFFIC STRIPING
- EXISTING DRIVEWAY
- PROPOSED DRIVEWAY
- EXISTING BUS STOP

GRAPHIC SCALE IN FEET
0 25 50 100
SCALE: 1" = 50'

Kimley»Horn

APPENDIX G

CITY OF LOS ANGELES PEDESTRIAN AND BICYCLE PLAN

2010 BICYCLE PLAN

Designated Bikeways

- Bicycle Path
- Bicycle Lane
- Bicycle Route
- Bicycle Friendly Street
- Countywide Existing & Proposed Facilities
- Existing Rail & Busway Stations
- Proposed Rail & Busway Stations
- College Campus
- Shopping & Entertainment
- Hospitals
- Parks
- Airports
- City Boundary

SCALE: 11/32"= 1 mile

1 mile

Prepared by City of Los Angeles Planning Department • Graphics Section • March 2011

039_map2:06.29.11

APPENDIX H

SUPPLEMENTAL TRAFFIC ANALYSIS

Kimley»Horn

TECHNICAL MEMORANDUM

To: Barry Kurtz P.E., T.E. (City of Culver City)

From: Sri Chakravarthy, P.E., T.E. (Kimley-Horn)
David Shaw (Kimley-Horn)

Date: January 21, 2016

Subject: Ivy Station TOD Supplemental Traffic Analysis

This technical memorandum (memo) documents the supplemental traffic impact analysis and intersection Level of Service (LOS) results for three additional study intersections: Washington Boulevard/Wesley Avenue, Washington Boulevard/Cattaraugus Avenue, and Washington Boulevard/La Cienega Boulevard. Additional information for the study intersections is shown below in **Table 1**.

Table 1 - Study Intersections

Intersection #	Northbound/ Southbound	Eastbound/ Westbound	Signalized	Signal System	Jurisdiction
1	Wesley Avenue	Washington Boulevard	No*	-*	Culver City
2	Cattaraugus Avenue	Washington Boulevard	No*	-*	Culver City
3	La Cienega Boulevard	Washington Boulevard	Yes	ATSAC	Culver City

*Signalized intersections with ATSAC signal system for Future (2019) scenarios

Study Methodology

A traffic impact analysis was conducted to analyze the traffic conditions at the study intersections under the following four scenarios:

- Existing (2015) Conditions
- Existing With Project Conditions
- Future (2019) Conditions
- Future With Project Conditions

Weekday traffic counts from previous years were provided by the City. In consultation with City staff, a 1% per year growth factor was applied to the traffic counts to obtain existing (2015) traffic counts. Traffic count worksheets are provided in **Appendix A** of this memo.

CMA methodology was used to determine the volume to capacity (V/C) ratio and the Level of Service (LOS) associated with each V/C ratio at the study intersections. CMA calculation (CMAC) spreadsheets were utilized in this analysis to determine the LOS at the study intersections and are included in

Appendix B. The City of Culver City significant impact criteria was used to determine significant project impacts.

Existing (2015) Conditions

Existing traffic conditions were analyzed using existing (2015) peak hour traffic counts. **Table 2** presents the Existing (2015) conditions peak hour V/C ratio and the corresponding LOS for each intersection.

Table 2 - Existing (2015) Conditions Intersection LOS

Study Intersections		LOS Analysis Results			
		A.M. Peak Hour		P.M. Peak Hour	
		V/C Ratio	LOS	V/C Ratio	LOS
1	Wesley Avenue at Washington Boulevard	0.682	B	0.531	A
2	Cattaraugus Avenue at Washington Boulevard	0.803	D	0.588	A
3	La Cienega Boulevard at Washington Boulevard	0.870	D	0.882	D

Table 2 indicates that for Existing (2015) conditions, 2 intersections are projected to operate at LOS D during the AM peak period while 1 intersection would operate at LOS B. During the PM peak period, 1 intersection would operate at LOS D while the remaining 2 intersections would operate at LOS A.

Existing With Project Conditions

Existing With Project traffic volumes represent the sum of the existing (2015) traffic volumes plus the project trips. **Table 3** presents the Existing With Project conditions peak hour V/C ratio and the corresponding LOS for each intersection.

Table 3 - Existing With Project Conditions Intersection LOS

Study Intersections		Existing (2015) LOS Analysis Results				Existing With Project LOS Analysis Results				Change	
		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour			
		V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	AM	PM
1	Wesley Avenue at Washington Boulevard	0.682	B	0.531	A	0.693	B	0.542	A	0.011	0.011
2	Cattaraugus Avenue at Washington Boulevard	0.803	D	0.588	A	0.814	D	0.599	A	0.011	0.011
3	La Cienega Boulevard at Washington Boulevard	0.870	D	0.882	D	0.879	D	0.891	D	0.009	0.009

Table 3 indicates that for Existing With Project conditions, 2 intersections are projected to operate at LOS D during the AM peak period while 1 intersection would operate at LOS B. During the PM peak period, 1 intersection would operate at LOS D while the remaining 2 intersections would operate at LOS A. Based on significant impact criteria defined by City of Culver City, the proposed project would not have a significant impact at the study intersections.

Kimley»Horn

Future (2019) Conditions

Future (2019) base conditions represent the sum of existing (2015) volumes raised by ambient growth factor, and the traffic estimated from related projects. As per the information provided by City staff regarding programmed improvements, the intersections of Wesley Avenue/Washington Boulevard and Cattaraugus Avenue/Washington Boulevard are assumed to be signalized intersections with ATSAC signal system. **Table 4** presents the Future (2019) conditions peak hour V/C ratio and the corresponding LOS for each intersection.

Table 4 - Future (2019) Conditions Intersection LOS

Study Intersections		LOS Analysis Results			
		A.M. Peak Hour		P.M. Peak Hour	
		V/C Ratio	LOS	V/C Ratio	LOS
1	Wesley Avenue at Washington Boulevard	0.670	B	0.593	A
2	Cattaraugus Avenue at Washington Boulevard	0.681	B	0.488	A
3	La Cienega Boulevard at Washington Boulevard	0.926	E	0.943	E

Table 4 indicates that for Future (2019) conditions, the intersection of La Cienega Boulevard/Washington Boulevard is projected to operate at LOS E while the remaining 2 intersections would operate at LOS B or better during AM and PM peak periods.

Future With Project Conditions

Future With Project traffic volumes represent the sum of existing (2015) traffic volumes raised by ambient growth factor, the traffic estimated from related projects, and the project trips. **Table 5** represents the Future With Project conditions peak hour V/C ratio and the corresponding LOS for each intersection.

Table 5 - Future With Project Conditions Intersection LOS

Study Intersections		Future (2019) LOS Analysis Results				Future With Project LOS Analysis Results				Change	
		A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour			
		V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio	LOS	AM	PM
1	Wesley Avenue at Washington Boulevard	0.670	B	0.593	A	0.680	B	0.602	B	0.010	0.009
2	Cattaraugus Avenue at Washington Boulevard	0.681	B	0.488	A	0.691	B	0.498	A	0.010	0.010
3	La Cienega Boulevard at Washington Boulevard	0.926	E	0.943	E	0.935	E	0.952	E	0.009	0.009

Table 5 indicates that for Future With Project conditions, the intersection of La Cienega Boulevard/Washington Boulevard is projected to operate at LOS E while the remaining 2 intersections would operate at LOS B or better during AM and PM peak periods. Based on significant impact criteria defined by City of Culver City, the proposed project would not have a significant impact at the study intersections.

APPENDIX A

TRAFFIC COUNT WORKSHEETS

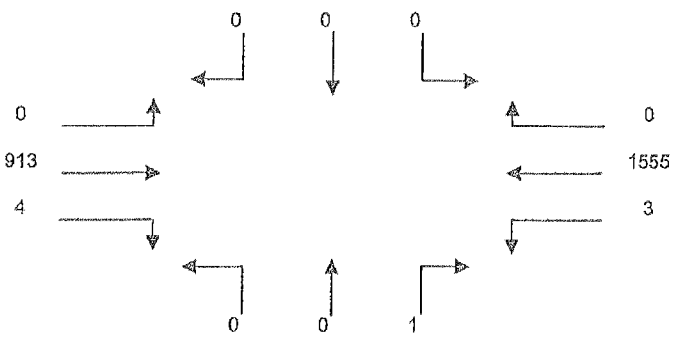
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

PROJECT: [redacted]
DATE: THURSDAY, APRIL 29, 2010
PERIOD: 07:00 AM TO 10:00 AM
INTERSECTION N/S WESLEY AVENUE / DRIVEWAY
E/W WASHINGTON BOULEVARD
FILE NUMBER: 21-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
0700-0715	0	0	0	0	238	1	0	0	0	3	81	0
0715-0730	0	0	0	0	384	3	0	0	0	2	144	0
0730-0745	0	0	0	0	441	0	0	0	0	0	175	0
0745-0800	0	0	0	0	421	2	0	0	0	1	179	0
0800-0815	0	0	0	0	333	1	0	0	0	1	220	0
0815-0830	0	0	0	0	392	0	1	0	0	0	266	0
0830-0845	0	0	0	0	409	0	0	0	0	2	248	0
0845-0900	0	0	0	0	355	4	1	0	1	1	200	0
0900-0915	0	0	0	0	311	2	1	0	1	3	135	0
0915-0930	0	0	0	0	321	0	1	0	2	3	158	0
0930-0945	0	0	0	0	377	2	1	0	0	3	148	0
0945-1000	0	0	0	0	329	1	0	0	1	5	122	0

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
0700-0800	0	0	0	0	1484	6	0	0	0	6	579	0	2075
0715-0815	0	0	0	0	1579	6	0	0	0	4	718	0	2307
0730-0830	0	0	0	0	1587	3	1	0	0	2	840	0	2433
0745-0845	0	0	0	0	1555	3	1	0	0	4	913	0	2476
0800-0900	0	0	0	0	1489	5	2	0	1	4	934	0	2435
0815-0915	0	0	0	0	1467	6	3	0	2	6	849	0	2333
0830-0930	0	0	0	0	1396	6	3	0	4	9	741	0	2159
0845-0945	0	0	0	0	1364	8	4	0	4	10	641	0	2031
0900-1000	0	0	0	0	1338	5	3	0	4	14	563	0	1927

A.M. PEAK HOUR
0745-0845



THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978

*Counts provided by the City of Culver City.

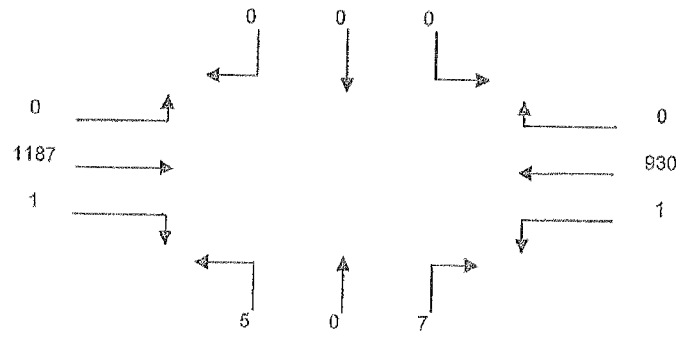
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

PROJECT: [redacted]
DATE: THURSDAY, APRIL 29, 2010
PERIOD: 03:00 PM TO 06:00 PM
INTERSECTION N/S WESLEY STREET / DRIVEWAY
E/W WASHINGTON BOULEVARD
FILE NUMBER: 21-PM

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
0300-0315	0	0	0	0	222	4	4	0	3	2	212	0
0315-0330	0	0	0	0	195	2	3	0	2	0	238	0
0330-0345	0	0	0	0	170	0	5	0	5	0	241	0
0345-0400	0	0	0	0	175	0	3	0	5	1	204	0
0400-0415	0	0	0	0	199	0	4	0	3	2	251	0
0415-0430	0	0	0	0	228	1	4	0	6	1	265	0
0430-0445	0	0	0	0	207	0	2	0	3	2	255	0
0445-0500	0	0	0	0	236	2	2	0	3	2	235	0
0500-0515	0	0	0	0	240	0	4	0	2	0	295	0
0515-0530	0	0	0	0	244	0	3	0	3	0	327	0
0530-0545	0	0	0	0	230	1	0	0	0	0	279	0
0545-0600	0	0	0	0	216	0	0	0	0	1	286	0

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
0300-0400	0	0	0	0	762	6	15	0	15	3	895	0	1696
0315-0415	0	0	0	0	739	2	15	0	15	3	934	0	1708
0330-0430	0	0	0	0	772	1	16	0	19	4	961	0	1773
0345-0445	0	0	0	0	809	1	13	0	17	6	975	0	1821
0400-0500	0	0	0	0	870	3	12	0	15	7	1006	0	1913
0415-0515	0	0	0	0	911	3	12	0	14	5	1050	0	1995
0430-0530	0	0	0	0	927	2	11	0	11	4	1112	0	2067
0445-0545	0	0	0	0	950	3	9	0	8	2	1136	0	2108
0500-0600	0	0	0	0	930	1	7	0	5	1	1187	0	2131

P.M. PEAK HOUR
0500-0600



THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978

*Counts provided by the City of Culver City.

[redacted]

Critical Movement Analysis (CMA) Worksheet

Project Name	8770 Washington Mixed-Use
Intersection Number	21
Intersection Name	North/South: Wesley Street East/West: Washington Boulevard
Date	July 26, 2010
Intersection Control	Signalized
Analysis Period	AM Peak Hour
Analysis Scenario	Future (2013) With Project Plus Mitigation

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	50		50	50
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	1	6	6	0	
	Total Lanes	2				
Southbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
				Sum of North/South Critical Volumes		50
Eastbound	Left	0	0			
	Left/Through	0				
	Through	1	1,296		660	
	Through/Right	1			660	
	Right	0	23	0		
	Total Lanes	2				
Westbound	Left	1	23		23	
	Left/Through	0				
	Through	2	1,726		863	863
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	3				

Sum of East/West Critical Volumes	863
Total Intersection Critical Volumes	913
Intersection Capacity	1,500
Base CMA	0.609
Signal Coordination Adjustment	-0.070
Final CMA	0.539
Level of Service (LOS)	A

Number of Clearance Intervals 2

Signal Coordination ATSAC

[redacted] Transportation Consulting, Inc.

Critical Movement Analysis (CMA) Worksheet

Project Name	8770 Washington Mixed-Use		
Intersection Number	21	Date	July 26, 2010
Intersection Name	North/South: Wesley Street		
	East/West: Washington Boulevard		
Intersection Control	Signalized		
Analysis Period	PM Peak Hour		
Analysis Scenario	Future (2013) With Project Plus Mitigation		

Approach Direction	Lane Type	No. of Lanes	Approach Volumes	Right-Turn on Red	Assigned Lane Volumes	Critical Moves
Northbound	Left	1	78		78	78
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	1	22	22	0	
	Total Lanes	2				
Southbound	Left	0	0			
	Left/Through	0				
	Through	0	0			
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	0				
			Sum of North/South Critical Volumes			78
Eastbound	Left	0	0			
	Left/Through	0				
	Through	1	1,393		712	712
	Through/Right	1			712	
	Right	0	32	0		
	Total Lanes	2				
Westbound	Left	1	43		43	43
	Left/Through	0				
	Through	2	1,238		619	
	Through/Right	0				
	Right	0	0	0		
	Total Lanes	3				
			Sum of East/West Critical Volumes			755
			Total Intersection Critical Volumes			833
Number of Clearance Intervals	2		Intersection Capacity			1,500
			Base CMA			0.555
Signal Coordination	ATSAC		Signal Coordination Adjustment			-0.070
			Final CMA			0.485
			Level of Service (LOS)			A

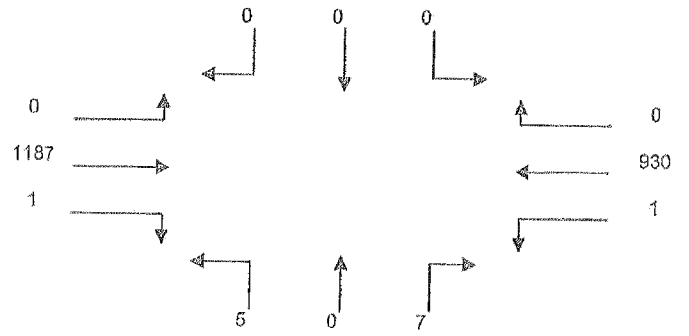
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

PROJECT: WASHINGTON / NATIONAL EMC
DATE: THURSDAY, APRIL 29, 2010
PERIOD: 03:00 PM TO 06:00 PM
INTERSECTION N/S WESLEY STREET / DRIVEWAY
E/W WASHINGTON BOULEVARD
FILE NUMBER: 21-PM

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
0300-0315	0	0	0	0	222	4	4	0	3	2	212	0
0315-0330	0	0	0	0	195	2	3	0	2	0	238	0
0330-0345	0	0	0	0	170	0	5	0	5	0	241	0
0345-0400	0	0	0	0	175	0	3	0	5	1	204	0
0400-0415	0	0	0	0	199	0	4	0	3	2	251	0
0415-0430	0	0	0	0	228	1	4	0	6	1	265	0
0430-0445	0	0	0	0	207	0	2	0	3	2	255	0
0445-0500	0	0	0	0	236	2	2	0	3	2	235	0
0500-0515	0	0	0	0	240	0	4	0	2	0	295	0
0515-0530	0	0	0	0	244	0	3	0	3	0	327	0
0530-0545	0	0	0	0	230	1	0	0	0	0	279	0
0545-0600	0	0	0	0	216	0	0	0	0	1	286	0

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
0300-0400	0	0	0	0	762	6	15	0	15	3	895	0	1696
0315-0415	0	0	0	0	739	2	15	0	15	3	934	0	1708
0330-0430	0	0	0	0	772	1	16	0	19	4	961	0	1773
0345-0445	0	0	0	0	809	1	13	0	17	6	975	0	1821
0400-0500	0	0	0	0	870	3	12	0	15	7	1006	0	1913
0415-0515	0	0	0	0	911	3	12	0	14	5	1050	0	1995
0430-0530	0	0	0	0	927	2	11	0	11	4	1112	0	2067
0445-0545	0	0	0	0	950	3	9	0	8	2	1136	0	2108
0500-0600	0	0	0	0	930	1	7	0	5	1	1187	0	2131

P.M. PEAK HOUR
0500-0600



THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978

*Counts provided by the City of Culver City.

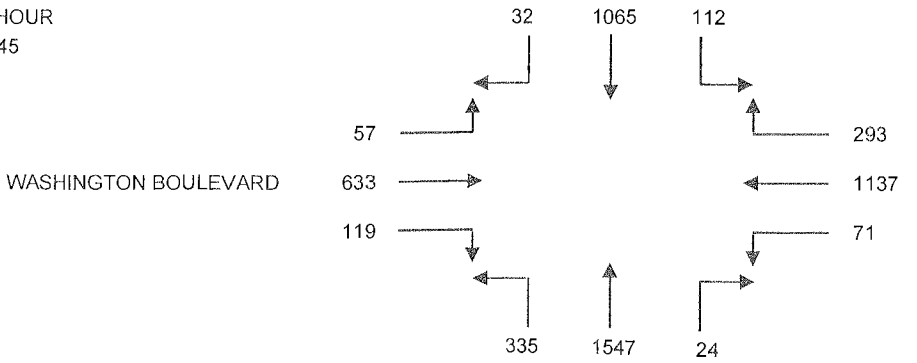
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: [redacted]
PROJECT: WASHINGTON / FAIRFAX - LOS ANGELES
DATE: THURSDAY, SEPTEMBER 11, 2014
PERIOD: 07:00 AM TO 10:00 AM
INTERSECTION N/S LA CIENEGA BOULEVARD
E/W WASHINGTON BOULEVARD
FILE NUMBER: 7-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
0700-0715	1	165	17	64	235	11	2	385	23	10	67	6
0715-0730	2	228	23	74	310	11	3	357	36	16	104	8
0730-0745	3	238	22	81	320	13	4	344	65	18	104	9
0745-0800	6	233	35	78	291	13	6	341	105	22	154	10
0800-0815	8	241	27	67	294	23	6	435	80	35	131	18
0815-0830	9	275	26	86	288	22	5	381	74	20	164	15
0830-0845	9	316	24	62	264	13	7	390	76	42	184	14
0845-0900	7	245	26	89	283	19	10	300	53	37	188	15
0900-0915	14	263	20	70	281	15	5	288	59	35	121	14
0915-0930	9	280	21	66	327	21	7	374	69	52	165	15
0930-0945	16	279	29	78	293	24	10	330	50	27	145	23
0945-1000	11	255	30	83	299	17	5	277	30	27	108	18

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
0700-0800	12	864	97	297	1156	48	15	1427	229	66	429	33	4673
0715-0815	19	940	107	300	1215	60	19	1477	286	91	493	45	5052
0730-0830	26	987	110	312	1193	71	21	1501	324	95	553	52	5245
0745-0845	32	1065	112	293	1137	71	24	1547	335	119	633	57	5425
0800-0900	33	1077	103	304	1129	77	28	1506	283	134	667	62	5403
0815-0915	39	1099	96	307	1116	69	27	1359	262	134	657	58	5223
0830-0930	39	1104	91	287	1155	68	29	1352	257	166	658	58	5264
0845-0945	46	1067	96	303	1184	79	32	1292	231	151	619	67	5167
0900-1000	50	1077	100	297	1200	77	27	1269	208	141	539	70	5055

A.M. PEAK HOUR
0745-0845



DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877

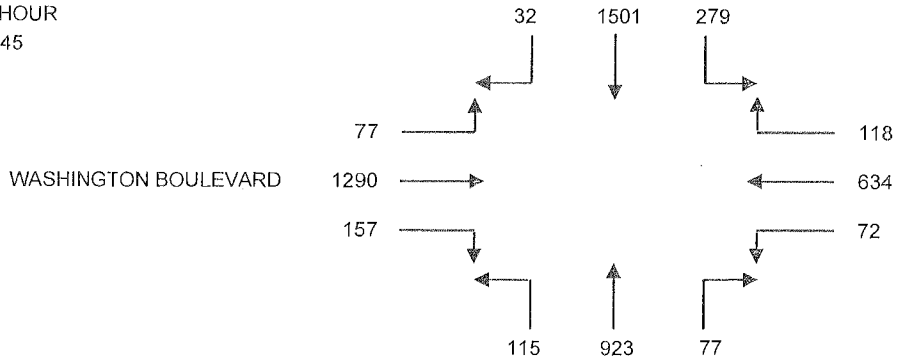
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: [redacted]
PROJECT: WASHINGTON / FAIRFAX - LOS ANGELES
DATE: THURSDAY, SEPTEMBER 11, 2014
PERIOD: 03:00 PM TO 06:00 PM
INTERSECTION N/S LA CIENEGA BOULEVARD
E/W WASHINGTON BOULEVARD
FILE NUMBER: 7-PM

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
0300-0315	6	320	24	36	162	6	6	195	30	30	154	17
0315-0330	10	360	39	28	158	14	7	244	36	44	203	23
0330-0345	12	277	57	26	120	17	5	218	30	32	261	23
0345-0400	15	349	60	33	133	23	9	235	26	36	240	24
0400-0415	10	346	51	31	147	17	11	220	27	22	303	20
0415-0430	13	405	69	22	128	12	14	237	30	43	312	20
0430-0445	17	361	54	29	153	13	14	240	29	22	253	26
0445-0500	10	407	76	20	155	19	19	224	27	28	321	20
0500-0515	5	355	71	32	176	18	18	229	25	35	328	18
0515-0530	8	388	67	38	143	16	23	232	34	56	315	19
0530-0545	9	351	65	28	160	19	17	238	29	38	326	20
0545-0600	9	377	50	21	155	19	14	238	29	30	323	23

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
0300-0400	43	1306	180	123	573	60	27	892	122	142	858	87	4413
0315-0415	47	1332	207	118	558	71	32	917	119	134	1007	90	4632
0330-0430	50	1377	237	112	528	69	39	910	113	133	1116	87	4771
0345-0445	55	1461	234	115	561	65	48	932	112	123	1108	90	4904
0400-0500	50	1519	250	102	583	61	58	921	113	115	1189	86	5047
0415-0515	45	1528	270	103	612	62	65	930	111	128	1214	84	5152
0430-0530	40	1511	268	119	627	66	74	925	115	141	1217	83	5186
0445-0545	32	1501	279	118	634	72	77	923	115	157	1290	77	5275
0500-0600	31	1471	253	119	634	72	72	937	117	159	1292	80	5237

P.M. PEAK HOUR
0445-0545



DATA PROVIDED BY:

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91005
PH: 626-446-7978
FAX: 626-446-2877

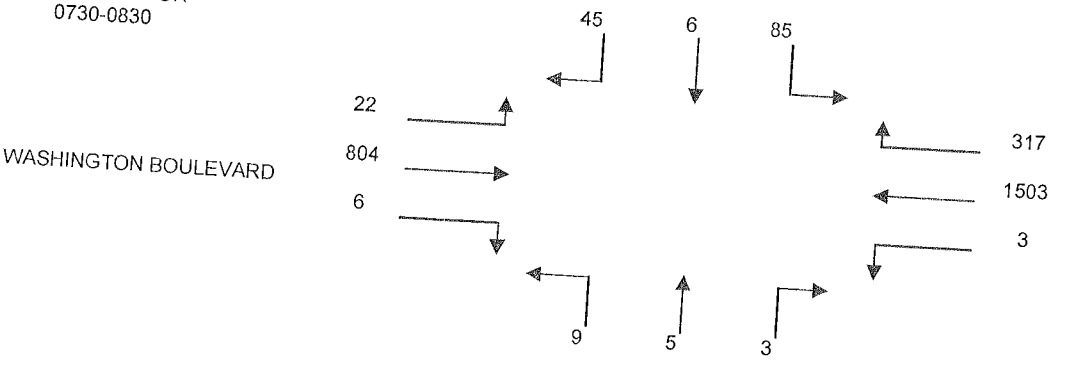
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: [redacted]
PROJECT: WASHINGTON / NATIONAL EMC
DATE: TUESDAY, MAY 04, 2010
PERIOD: 07:00 AM TO 10:00 AM
INTERSECTION N/S CATTARAUGUS AVENUE
E/W WASHINGTON BOULEVARD
FILE NUMBER: 23-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
0700-0715	5	0	7	35	254	0	1	0	1	1	82	4
0715-0730	6	2	10	65	369	3	1	0	1	0	122	5
0730-0745	7	1	15	95	407	1	0	1	2	1	174	3
0745-0800	10	1	16	78	389	1	1	2	3	1	190	4
0800-0815	17	1	25	69	341	1	1	1	2	2	212	6
0815-0830	11	3	29	75	366	0	1	1	2	2	228	9
0830-0845	7	1	15	73	367	0	1	1	2	0	227	9
0845-0900	6	1	7	55	322	1	2	0	4	0	182	7
0900-0915	5	1	3	35	345	2	2	1	4	4	150	3
0915-0930	8	0	7	30	300	1	2	0	4	3	150	2
0930-0945	10	0	8	21	341	1	2	0	2	0	124	3
0945-1000	12	0	5	21	302	0	2	1	0	0	115	3

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
0700-0800	28	4	48	273	1419	5	3	3	7	3	568	16	2377
0715-0815	40	5	66	307	1506	6	3	4	8	4	698	18	2665
0730-0830	45	6	85	317	1503	3	3	5	9	6	804	22	2808
0745-0845	45	6	85	295	1463	2	4	5	9	5	857	28	2804
0800-0900	41	6	76	272	1396	2	5	3	10	4	849	31	2695
0815-0915	29	6	54	238	1400	3	6	3	12	6	787	28	2572
0830-0930	26	3	32	193	1334	4	7	2	14	7	709	21	2352
0845-0945	29	2	25	141	1308	5	8	1	14	7	606	15	2161
0900-1000	35	1	23	107	1288	4	8	2	10	7	539	11	2035

A.M. PEAK HOUR
0730-0830



THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978

INTERSECTION TURNING MOVEMENT COUNT SUMMARY

[redacted]

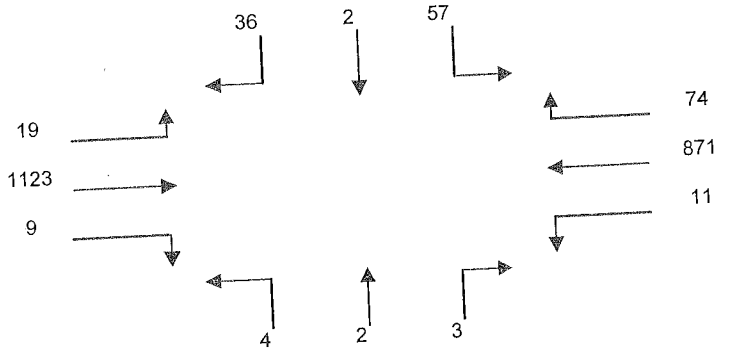
CLIENT: WASHINGTON / NATIONAL EMC
PROJECT: TUESDAY, MAY 04, 2010
DATE: 03:00 PM TO 06:00 PM
PERIOD:
INTERSECTION N/S CATTARAUGUS AVENUE
E/W WASHINGTON BOULEVARD

FILE NUMBER: 23-PM

15 MINUTE TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT		
0300-0315	8	0	18	25	189	0	0	0	1	2		
0315-0330	6	2	19	21	170	0	1	2	0	2		
0330-0345	5	0	19	17	173	3	0	1	2	3	221	4
0345-0400	8	0	14	20	181	2	1	0	1	2	229	5
0400-0415	6	0	15	16	175	3	2	0	0	3	219	2
0415-0430	11	1	19	20	183	1	1	1	0	5	250	4
0430-0445	10	1	20	22	208	2	3	1	1	3	248	2
0445-0500	9	1	19	17	211	3	3	0	1	1	263	2
0500-0515	10	0	15	21	220	2	0	1	1	1	264	5
0515-0530	12	0	13	21	209	3	0	0	0	2	304	4
0530-0545	7	2	17	19	219	2	3	1	2	3	267	4
0545-0600	7	0	12	13	223	4	0	0	1	3	288	6

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
0300-0400	27	2	70	83	713	5	2	3	4	9	867	21	1806
0315-0415	25	2	67	74	699	8	4	3	3	10	893	15	1803
0330-0430	30	1	67	73	712	9	4	2	3	13	919	15	1848
0345-0445	35	2	68	78	747	8	7	2	2	13	946	13	1921
0400-0500	36	3	73	75	777	9	9	2	2	12	980	10	1988
0415-0515	40	3	73	80	822	8	7	3	3	10	1025	13	2087
0430-0530	41	2	67	81	848	10	6	2	3	7	1079	13	2159
0445-0545	38	3	64	78	859	10	6	2	4	7	1098	15	2184
0500-0600	36	2	57	74	871	11	3	2	4	9	1123	19	2211

P.M. PEAK HOUR
0500-0600



THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978

APPENDIX B

CRITICAL MOVEMENT ANALYSIS (CMA) WORKSHEETS

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 1		2015, EXISTING			2015, PROJECTED CUMULATIVE BASE					2015, WITH PROJECT					2015, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases: 0			Ambient Growth		Critical Phases: 0			☐ Adjacent		In	Out	Total			Critical Phases: 0	
Wesley Ave		Capacity: 1200			from: 2015		Capacity: 1200			Trip	AM	173	83	256			Capacity: 1200	
East/West Street:		Signal System: 1			to: 2015		Signal System: 1			Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System: 1	
Washington Blvd		v/c reduction: 0%			at: 1.0%		v/c reduction: 0%			Trip	AM	0	0	0			v/c reduction: 0%	
Analysis Date: 01/21/2016		Opposed Phasing: 0					Opposed Phasing: 0			Gen 2	PM	0	0	0			Opposed Phasing: 0	
AM Peak: 8:00 AM		Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	1	0	**1**	0		1	0	**1**	0%	0	1	0	**1**	0	1	0	**1**
	Shared		1	**1**				1	**1**	0%			1	**1**			1	**1**
Southbound	Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		1	0				1	0	0%			1	0			1	0
Eastbound	Left	0	1	0	0		0	1	0	0%	0	0	1	0	0	0	1	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	960	1	482	0		960	1	482	(15%)	13	973	1	489	0	973	1	489
	Th-Rt		1	482				1	482	(15%)			1	489			1	489
	Right	4	0	0	0		4	0	0	0%	0	4	0	0	0	4	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	3	1	3	0		3	1	3	0%	0	3	1	3	0	3	1	3
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1634	1	**817**	0		1634	1	**817**	15%	26	1660	1	**830**	0	1660	1	**830**
	Th-Rt		1	**817**				1	**817**	15%			1	**830**			1	**830**
	Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 75% Projected: 75% Mitigated: 75%																		
S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
Critical Volumes:		North-South:		1			North-South:		1			North-South:		1			North-South:	1
		East-West:		817			East-West:		817			East-West:		830			East-West:	830
		Total:		818			Total:		818			Total:		831			Total:	831
Volume/capacity (*v/c*) ratio:				0.682					0.682					0.693				0.693
v/c less ATSAC adjustment:				0.682					0.682					0.693				0.693
Level of Service (LOS):				B					B					B				B

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\Additional Intersections

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 1		2015, EXISTING			2015, PROJECTED CUMULATIVE BASE				2015, WITH PROJECT					2015, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases: 0			Ambient Growth		Critical Phases: 0		☐ Adjacent		In	Out	Total			Critical Phases: 0	
Wesley Ave		Capacity: 1200			from: 2015		Capacity: 1200		Trip	AM	173	83	256			Capacity: 1200	
East/West Street:		Signal System: 1			to: 2015		Signal System: 1		Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System: 1	
Washington Blvd		v/c reduction: 0%			at: 1.0%		v/c reduction: 0%		Trip	AM	0	0	0			v/c reduction: 0%	
Analysis Date: 01/21/2016		Opposed Phasing: 0					Opposed Phasing: 0		Gen 2	PM	0	0	0			Opposed Phasing: 0	
PM Peak: 5:00 PM		Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	5	0	5	0		5	0	5	0%	0	5	0	5	0	5	0	5
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	7	0	7	0		7	0	7	0%	0	7	0	7	0	7	0	7
	Shared		1	**12**				1	**12**	0%			1	**12**			1	**12**
Southbound	Left	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		1	0				1	0	0%			1	0			1	0
Eastbound	Left	0	1	0	0		0	1	0	0%	0	0	1	0	0	0	1	0
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1248	1	**625**	0		1248	1	**625**	(15%)	26	1274	1	**638**	0	1274	1	**638**
	Th-Rt		1	**625**				1	**625**	(15%)			1	**638**			1	**638**
	Right	1	0	0	0		1	0	0	0%	0	1	0	0	0	1	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	1	1	**1**	0		1	1	**1**	0%	0	1	1	**1**	0	1	1	**1**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	977	1	489	0		977	1	489	15%	19	996	1	498	0	996	1	498
	Th-Rt		1	489				1	489	15%			1	498			1	498
	Right	0	0	0	0		0	0	0	0%	0	0	0	0	0	0	0	0
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 75% Projected: 75% Mitigated: 75%																		
S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
Critical Volumes:		North-South:		12			North-South:		12			North-South:		12			North-South:	12
		East-West:		626			East-West:		626			East-West:		639			East-West:	639
		Total:		638			Total:		638			Total:		651			Total:	651
Volume/capacity (*v/c*) ratio:				0.531					0.531					0.542				0.542
v/c less ATSAC adjustment:				0.531					0.531					0.542				0.542
Level of Service (LOS):				A					A					A				A

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\Additional Intersections

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 2		2015, EXISTING			2015, PROJECTED CUMULATIVE BASE				2015, WITH PROJECT					2015, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases: 0			Ambient Growth		Critical Phases: 0		☐ Adjacent		In	Out	Total			Critical Phases: 0	
Cattaraugus Ave		Capacity: 1200			from: 2015		Capacity: 1200		Trip	AM	173	83	256			Capacity: 1200	
East/West Street:		Signal System: 1			to: 2015		Signal System: 1		Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System: 1	
Washington Blvd		v/c reduction: 0%			at: 1.0%		v/c reduction: 0%		Trip	AM	0	0	0			v/c reduction: 0%	
Analysis Date: 01/21/2016		Opposed Phasing: 0					Opposed Phasing: 0		Gen 2	PM	0	0	0			Opposed Phasing: 0	
AM Peak: 8:00 AM		Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	9	0	**9**	0		9	0	**9**	0%	0	9	0	**9**	0	9	0	**9**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	5	0	0	0		5	0	0	0%	0	5	0	0	0	5	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	3	0	3	0		3	0	3	0%	0	3	0	3	0	3	0	3
	Shared		1	17				1	17	0%			1	17			1	17
Southbound	Left	89	0	89	0		89	0	89	0%	0	89	0	89	0	89	0	89
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	6	0	0	0		6	0	0	0%	0	6	0	0	0	6	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	47	0	47	0		47	0	47	0%	0	47	0	47	0	47	0	47
	Shared		1	**142**				1	**142**	0%			1	**142**			1	**142**
Eastbound	Left	23	1	**23**	0		23	1	**23**	0%	0	23	1	**23**	0	23	1	**23**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	845	2	423	0		845	2	423	(15%)	13	858	2	429	0	858	2	429
	Th-Rt		0	0				0	0	(15%)			0	0			0	0
	Right	6	1	2	0		6	1	2	0%	0	6	1	2	0	6	1	2
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	3	1	3	0		3	1	3	0%	0	3	1	3	0	3	1	3
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1580	2	**790**	0		1580	2	**790**	15%	26	1606	2	**803**	0	1606	2	**803**
	Th-Rt		0	0				0	0	15%			0	0			0	0
	Right	333	1	289	0		333	1	289	0%	0	333	1	289	0	333	1	289
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR:	Existing: 75%																	
	Projected: 75%																	
	Mitigated: 75%																	
S/B RTOR:	Existing: 50%																	
	Projected: 50%																	
	Mitigated: 50%																	
E/B RTOR:	Existing: 50%																	
	Projected: 50%																	
	Mitigated: 50%																	
W/B RTOR:	Existing: 50%																	
	Projected: 50%																	
	Mitigated: 50%																	
Critical Volumes:		North-South:		151			North-South:		151			North-South:		151			North-South:	151
		East-West:		813			East-West:		813			East-West:		826			East-West:	826
		Total:		964			Total:		964			Total:		977			Total:	977
Volume/capacity (*v/c*) ratio:				0.803					0.803					0.814				0.814
v/c less ATSAC adjustment:				0.803					0.803					0.814				0.814
Level of Service (LOS):				D					D					D				D

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\Additional Intersections

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 2		2015, EXISTING			2015, PROJECTED CUMULATIVE BASE				2015, WITH PROJECT					2015, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases: 0			Ambient Growth		Critical Phases: 0		☐ Adjacent		In	Out	Total			Critical Phases: 0	
Cattaraugus Ave		Capacity: 1200			from: 2015		Capacity: 1200		Trip	AM	173	83	256			Capacity: 1200	
East/West Street:		Signal System: 1			to: 2015		Signal System: 1		Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System: 1	
Washington Blvd		v/c reduction: 0%			at: 1.0%		v/c reduction: 0%		Trip	AM	0	0	0			v/c reduction: 0%	
Analysis Date: 01/21/2016		Opposed Phasing: 0					Opposed Phasing: 0		Gen 2	PM	0	0	0			Opposed Phasing: 0	
PM Peak: 5:00 PM		Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	4	0	**4**	0		4	0	**4**	0%	0	4	0	**4**	0	4	0	**4**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	2	0	0	0		2	0	0	0%	0	2	0	0	0	2	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	3	0	3	0		3	0	3	0%	0	3	0	3	0	3	0	3
	Shared		1	9				1	9	0%			1	9			1	9
Southbound	Left	60	0	60	0		60	0	60	0%	0	60	0	60	0	60	0	60
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	2	0	0	0		2	0	0	0%	0	2	0	0	0	2	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	38	0	38	0		38	0	38	0%	0	38	0	38	0	38	0	38
	Shared		1	**100**				1	**100**	0%			1	**100**			1	**100**
Eastbound	Left	20	1	20	0		20	1	20	0%	0	20	1	20	0	20	1	20
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1180	2	**590**	0		1180	2	**590**	(15%)	26	1206	2	**603**	0	1206	2	**603**
	Th-Rt		0	0				0	0	(15%)			0	0			0	0
	Right	9	1	7	0		9	1	7	0%	0	9	1	7	0	9	1	7
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	12	1	**12**	0		12	1	**12**	0%	0	12	1	**12**	0	12	1	**12**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	915	2	458	0		915	2	458	15%	19	934	2	467	0	934	2	467
	Th-Rt		0	0				0	0	15%			0	0			0	0
	Right	78	1	48	0		78	1	48	0%	0	78	1	48	0	78	1	48
	Shared		0	0				0	0	0%			0	0			0	0
Critical Volumes:		North-South:		104			North-South:		104			North-South:		104		North-South:		104
		East-West:		602			East-West:		602			East-West:		615		East-West:		615
		Total:		706			Total:		706			Total:		719		Total:		719
Volume/capacity (*v/c*) ratio:				0.588					0.588					0.599				0.599
v/c less ATSAC adjustment:				0.588					0.588					0.599				0.599
Level of Service (LOS):				A					A					A				A

Northbound — N/B RTOR: Existing: 75% Projected: 75% Mitigated: 75%

Southbound — S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%

Eastbound — E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%

Westbound — W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%

PROJECT IMPACT

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

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\Additional Intersections

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 3		2015, EXISTING			2015, PROJECTED CUMULATIVE BASE				2015, WITH PROJECT				2015, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	3		Ambient Growth	Critical Phases:	3		☐ Adjacent	In	Out	Total		Critical Phases:	3	
La Cienega Blvd		Capacity:	1425		from: 2015	Capacity:	1425		Trip AM	173	83	256		Capacity:	1425	
East/West Street:		Signal System:	2		to: 2015	Signal System:	2		Gen 1 PM	127	174	301	☐ Use Dist 2:	Signal System:	2	
Washington Blvd		v/c reduction:	7%		at: 1.0%	v/c reduction:	7%		Trip AM	0	0	0		v/c reduction:	7%	
Analysis Date:	01/21/2016	Opposed Phasing:	0			Opposed Phasing:	0		Gen 2 PM	0	0	0		Opposed Phasing:	0	
AM Peak:	8:00 AM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	338	1	**338**	0		338	1	**338**	0%	0	338	1	**338**	0	338	1	**338**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1562	2	529	0		1562	2	529	0%	0	1562	2	529	0	1562	2	529
	Th-Rt		1	529				1	529	0%			1	529			1	529
	Right	24	0	0	0		24	0	0	0%	0	24	0	0	0	24	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	113	1	113	0		113	1	113	0%	0	113	1	113	0	113	1	113
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1076	2	**369**	0		1076	2	**369**	0%	0	1076	2	**369**	0	1076	2	**369**
	Th-Rt		1	**369**				1	**369**	0%			1	**369**			1	**369**
	Right	32	0	0	0		32	0	0	0%	0	32	0	0	0	32	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	58	1	**58**	0		58	1	**58**	0%	0	58	1	**58**	0	58	1	**58**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	639	2	320	0		639	2	320	(15%)	13	652	2	326	0	652	2	326
	Th-Rt		0	0				0	0	(15%)			0	0			0	0
	Right	120	1	0	0		120	1	0	0%	0	120	1	0	0	120	1	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	72	1	72	0		72	1	72	0%	0	72	1	72	0	72	1	72
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1148	2	**574**	0		1148	2	**574**	15%	26	1174	2	**587**	0	1174	2	**587**
	Th-Rt		0	0				0	0	15%			0	0			0	0
	Right	296	1	240	0		296	1	240	0%	0	296	1	240	0	296	1	240
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 75% Projected: 75% Mitigated: 75%																		
S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
Critical Volumes:		North-South:		707			North-South:		707			North-South:		707			North-South:	707
		East-West:		632			East-West:		632			East-West:		645			East-West:	645
		Total:		1339			Total:		1339			Total:		1352			Total:	1352
Volume/capacity (*v/c*) ratio:				0.940					0.940					0.949				0.949
v/c less ATSAC adjustment:				0.870					0.870					0.879				0.879
Level of Service (LOS):				D					D					D				D

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\Additional Intersections

Developed 2005-2007 by Ken Aitchison

CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 3		2015, EXISTING			2015, PROJECTED CUMULATIVE BASE				2015, WITH PROJECT					2015, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	3		Ambient Growth	Critical Phases:	3		☐ Adjacent		In	Out	Total		Critical Phases:	3	
La Cienega Blvd		Capacity:	1425		from: 2015	Capacity:	1425		Trip	AM	173	83	256		Capacity:	1425	
East/West Street:		Signal System:	2		to: 2015	Signal System:	2		Gen 1	PM	127	174	301	☐ Use Dist 2:	Signal System:	2	
Washington Blvd		v/c reduction:	7%		at: 1.0%	v/c reduction:	7%		Trip	AM	0	0	0		v/c reduction:	7%	
Analysis Date:	01/21/2016	Opposed Phasing:	0			Opposed Phasing:	0		Gen 2	PM	0	0	0		Opposed Phasing:	0	
PM Peak:	5:00 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	116	1	**116**	0		116	1	**116**	0%	0	116	1	**116**	0	116	1	**116**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	932	2	337	0		932	2	337	0%	0	932	2	337	0	932	2	337
	Th-Rt		1	337				1	337	0%			1	337			1	337
	Right	78	0	0	0		78	0	0	0%	0	78	0	0	0	78	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Southbound	Left	282	1	282	0		282	1	282	0%	0	282	1	282	0	282	1	282
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1516	2	**516**	0		1516	2	**516**	0%	0	1516	2	**516**	0	1516	2	**516**
	Th-Rt		1	**516**				1	**516**	0%			1	**516**			1	**516**
	Right	32	0	0	0		32	0	0	0%	0	32	0	0	0	32	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Eastbound	Left	78	1	78	0		78	1	78	0%	0	78	1	78	0	78	1	78
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1303	2	**652**	0		1303	2	**652**	(15%)	26	1329	2	**665**	0	1329	2	**665**
	Th-Rt		0	0				0	0	(15%)			0	0			0	0
	Right	159	1	101	0		159	1	101	0%	0	159	1	101	0	159	1	101
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	73	1	**73**	0		73	1	**73**	0%	0	73	1	**73**	0	73	1	**73**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	640	2	320	0		640	2	320	15%	19	659	2	330	0	659	2	330
	Th-Rt		0	0				0	0	15%			0	0			0	0
	Right	119	1	0	0		119	1	0	0%	0	119	1	0	0	119	1	0
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 75% Projected: 75% Mitigated: 75%																		
S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
Critical Volumes:		North-South:		632			North-South:		632			North-South:		632		North-South:		632
		East-West:		725			East-West:		725			East-West:		738		East-West:		738
		Total:		1357			Total:		1357			Total:		1370		Total:		1370
Volume/capacity (*v/c*) ratio:				0.952					0.952					0.961				0.961
v/c less ATSAC adjustment:				0.882					0.882					0.891				0.891
Level of Service (LOS):				D					D					D				D

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\Additional Intersections

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 1		2015			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	0		Ambient Growth		Critical Phases:	4		☐ Adjacent		In	Out	Total			Critical Phases:	4
Wesley Ave		Capacity:	1200		from:	2015	Capacity:	1375		Trip	AM	173	83	256			Capacity:	1375
East/West Street:		Signal System:	1		to:	2019	Signal System:	2		Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	2
Washington Blvd		v/c reduction:	0%		at:	1.0%	v/c reduction:	7%		Trip	AM	0	0	0			v/c reduction:	7%
Analysis Date:	01/21/2016	Opposed Phasing:	0				Opposed Phasing:	1		Gen 2	PM	0	0	0			Opposed Phasing:	1
AM Peak:	8:00 AM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	0	0	0	0	68	68	0	68	0%	0	68	0	68	0	68	0	68
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	1	0	**1**	0	17	18	0	18	0%	0	18	0	18	0	18	0	18
	Shared		1	**1**				1	**86**	0%			1	**86**			1	**86**
Southbound	Left	0	0	0	0	1	1	0	1	0%	0	1	0	1	0	1	0	1
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	0	0	0	0	25	25	0	25	0%	0	25	0	25	0	25	0	25
	Shared		1	0				1	**26**	0%			1	**26**			1	**26**
Eastbound	Left	0	1	0	0	41	41	1	**41**	0%	0	41	1	**41**	0	41	1	**41**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	960	1	482	39	7	1006	1	512	(15%)	13	1019	1	519	0	1019	1	519
	Th-Rt		1	482				1	512	(15%)			1	519			1	519
	Right	4	0	0	0	14	18	0	0	0%	0	18	0	0	0	18	0	0
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	3	1	3	0	14	17	1	17	0%	0	17	1	17	0	17	1	17
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1634	1	**817**	66	27	1727	1	**865**	15%	26	1753	1	**878**	0	1753	1	**878**
	Th-Rt		1	**817**				1	**865**	15%			1	**878**			1	**878**
	Right	0	0	0	0	2	2	0	0	0%	0	2	0	0	0	2	0	0
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR:	Existing: 50%																	
	Projected: 50%																	
	Mitigated: 50%																	
S/B RTOR:	Existing: 50%																	
	Projected: 50%																	
	Mitigated: 50%																	
E/B RTOR:	Existing: 50%																	
	Projected: 50%																	
	Mitigated: 50%																	
W/B RTOR:	Existing: 50%																	
	Projected: 50%																	
	Mitigated: 50%																	
Critical Volumes:		North-South:	1				North-South:	112				North-South:	112				North-South:	112
		East-West:	817				East-West:	906				East-West:	919				East-West:	919
		Total:	818				Total:	1018				Total:	1031				Total:	1031
Volume/capacity (*v/c*) ratio:			0.682					0.740					0.750					0.750
v/c less ATSAC adjustment:			0.682					0.670					0.680					0.680
Level of Service (LOS):			B					B					B					B

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\Additional Intersections

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 1		2015			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION				
North/South Street:		Critical Phases:	0		Ambient Growth		Critical Phases:	4		☐ Adjacent		In	Out	Total			Critical Phases:	4	
Wesley Ave		Capacity:	1200		from:	2015	Capacity:	1375		Trip	AM	173	83	256			Capacity:	1375	
East/West Street:		Signal System:	1		to:	2019	Signal System:	2		Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	2	
Washington Blvd		v/c reduction:	0%		at:	1.0%	v/c reduction:	7%		Trip	AM	0	0	0			v/c reduction:	7%	
Analysis Date:	01/21/2016	Opposed Phasing:	0				Opposed Phasing:	1		Gen 2	PM	0	0	0			Opposed Phasing:	1	
PM Peak:	5:00 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume	
Northbound	Left	5	0	5	0	100	105	0	105	0%	0	105	0	105	0	105	0	105	
	Lt-Th		0	0				0	0	0%			0	0			0	0	
	Thru	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0	
	Th-Rt		0	0				0	0	0%			0	0			0	0	
	Right	7	0	7	0	25	32	0	32	0%	0	32	0	32	0	32	0	32	
	Shared		1	**12**				1	**137**	0%			1	**137**			1	**137**	
Southbound	Left	0	0	0	0	3	3	0	3	0%	0	3	0	3	0	3	0	3	
	Lt-Th		0	0				0	0	0%			0	0			0	0	
	Thru	0	0	0	0	0	0	0	0	0%	0	0	0	0	0	0	0	0	
	Th-Rt		0	0				0	0	0%			0	0			0	0	
	Right	0	0	0	0	61	61	0	61	0%	0	61	0	61	0	61	0	61	
	Shared		1	0				1	**64**	0%			1	**64**			1	**64**	
Eastbound	Left	0	1	0	0	33	33	1	33	0%	0	33	1	33	0	33	1	33	
	Lt-Th		0	0				0	0	0%			0	0			0	0	
	Thru	1248	1	**625**	51	28	1327	1	**679**	(15%)	26	1353	1	**692**	0	1353	1	**692**	
	Th-Rt		1	**625**				1	**679**	(15%)			1	**692**			1	**692**	
	Right	1	0	0	0	30	31	0	0	0%	0	31	0	0	0	31	0	0	
	Shared		0	0				0	0	0%			0	0			0	0	
Westbound	Left	1	1	**1**	0	30	31	1	**31**	0%	0	31	1	**31**	0	31	1	**31**	
	Lt-Th		0	0				0	0	0%			0	0			0	0	
	Thru	977	1	489	40	11	1028	1	515	15%	19	1047	1	524	0	1047	1	524	
	Th-Rt		1	489				1	515	15%			1	524			1	524	
	Right	0	0	0	0	2	2	0	0	0%	0	2	0	0	0	2	0	0	
	Shared		0	0				0	0	0%			0	0			0	0	
	N/B RTOR:																		
	Existing: 50%																		
	Projected: 50%																		
	Mitigated: 50%																		
	S/B RTOR:																		
	Existing: 50%																		
	Projected: 50%																		
	Mitigated: 50%																		
	E/B RTOR:																		
	Existing: 50%																		
	Projected: 50%																		
	Mitigated: 50%																		
	W/B RTOR:																		
	Existing: 50%																		
	Projected: 50%																		
	Mitigated: 50%																		
Critical Volumes:		North-South:	12				North-South:	201				North-South:	201				North-South:	201	
		East-West:	626				East-West:	710				East-West:	723				East-West:	723	
		Total:	638				Total:	911				Total:	924				Total:	924	
Volume/capacity (*v/c*) ratio:			0.531					0.663					0.672					0.672	
v/c less ATSAC adjustment:			0.531					0.593					0.602					0.602	
Level of Service (LOS):			A					A					B					B	

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\Additional Intersections

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 2		2015			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION				
North/South Street:		Critical Phases:	0		Ambient Growth		Critical Phases:	4		☐ Adjacent		In	Out	Total			Critical Phases:	4	
Cattaraugus Ave		Capacity:	1200		from:	2015	Capacity:	1375		Trip	AM	173	83	256			Capacity:	1375	
East/West Street:		Signal System:	1		to:	2019	Signal System:	2		Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	2	
Washington Blvd		v/c reduction:	0%		at:	1.0%	v/c reduction:	7%		Trip	AM	0	0	0			v/c reduction:	7%	
Analysis Date:	01/21/2016	Opposed Phasing:	0				Opposed Phasing:	1		Gen 2	PM	0	0	0			Opposed Phasing:	1	
AM Peak:	8:00 AM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume	
Northbound	Left	9	0	**9**	0	0	9	0	9	0%	0	9	0	9	0	9	0	9	
	Lt-Th		0	0				0	0	0%			0	0			0	0	
	Thru	5	0	0	0	0	5	0	0	0%	0	5	0	0	0	5	0	0	
	Th-Rt		0	0				0	0	0%			0	0			0	0	
	Right	3	0	3	0	0	3	0	3	0%	0	3	0	3	0	3	0	3	
	Shared		1	17				1	**18**	0%			1	**18**			1	**18**	
Southbound	Left	89	0	89	4	0	93	0	93	0%	0	93	0	93	0	93	0	93	
	Lt-Th		0	0				0	0	0%			0	0			0	0	
	Thru	6	0	0	0	0	6	0	0	0%	0	6	0	0	0	6	0	0	
	Th-Rt		0	0				0	0	0%			0	0			0	0	
	Right	47	0	47	2	0	49	0	49	0%	0	49	0	49	0	49	0	49	
	Shared		1	**142**				1	**148**	0%			1	**148**			1	**148**	
Eastbound	Left	23	1	**23**	1	0	24	1	24	0%	0	24	1	24	0	24	1	24	
	Lt-Th		0	0				0	0	0%			0	0			0	0	
	Thru	845	2	423	34	25	904	2	452	(15%)	13	917	2	459	0	917	2	459	
	Th-Rt		0	0				0	0	(15%)			0	0			0	0	
	Right	6	1	2	0	0	6	1	1	0%	0	6	1	1	0	6	1	1	
	Shared		0	0				0	0	0%			0	0			0	0	
Westbound	Left	3	1	3	0	0	3	1	3	0%	0	3	1	3	0	3	1	3	
	Lt-Th		0	0				0	0	0%			0	0			0	0	
	Thru	1580	2	**790**	64	43	1687	2	**844**	15%	26	1713	2	**857**	0	1713	2	**857**	
	Th-Rt		0	0				0	0	15%			0	0			0	0	
	Right	333	1	289	14	0	347	1	301	0%	0	347	1	301	0	347	1	301	
	Shared		0	0				0	0	0%			0	0			0	0	
Critical Volumes:		North-South:		151			North-South:		165			North-South:		165			North-South:		165
		East-West:		813			East-West:		868			East-West:		881			East-West:		881
		Total:		964			Total:		1033			Total:		1046			Total:		1046
Volume/capacity (*v/c*) ratio:				0.803					0.751					0.761					0.761
v/c less ATSAC adjustment:				0.803					0.681					0.691					0.691
Level of Service (LOS):				D					B					B					B

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\Additional Intersections

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 2		2015			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION			
North/South Street:		Critical Phases:	0		Ambient Growth		Critical Phases:	4		☐ Adjacent		In	Out	Total			Critical Phases:	4
Cattaraugus Ave		Capacity:	1200		from:	2015	Capacity:	1375		Trip	AM	173	83	256			Capacity:	1375
East/West Street:		Signal System:	1		to:	2019	Signal System:	2		Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	2
Washington Blvd		v/c reduction:	0%		at:	1.0%	v/c reduction:	7%		Trip	AM	0	0	0			v/c reduction:	7%
Analysis Date:	01/21/2016	Opposed Phasing:	0				Opposed Phasing:	1		Gen 2	PM	0	0	0			Opposed Phasing:	1
PM Peak:	5:00 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume
Northbound	Left	4	0	**4**	0	0	4	0	4	0%	0	4	0	4	0	4	0	4
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	2	0	0	0	0	2	0	0	0%	0	2	0	0	0	2	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	3	0	3	0	0	3	0	3	0%	0	3	0	3	0	3	0	3
	Shared		1	9				1	**9**	0%			1	**9**			1	**9**
Southbound	Left	60	0	60	2	0	62	0	62	0%	0	62	0	62	0	62	0	62
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	2	0	0	0	0	2	0	0	0%	0	2	0	0	0	2	0	0
	Th-Rt		0	0				0	0	0%			0	0			0	0
	Right	38	0	38	2	0	40	0	40	0%	0	40	0	40	0	40	0	40
	Shared		1	**100**				1	**104**	0%			1	**104**			1	**104**
Eastbound	Left	20	1	20	1	0	21	1	21	0%	0	21	1	21	0	21	1	21
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	1180	2	**590**	48	56	1284	2	**642**	(15%)	26	1310	2	**655**	0	1310	2	**655**
	Th-Rt		0	0				0	0	(15%)			0	0			0	0
	Right	9	1	7	0	0	9	1	7	0%	0	9	1	7	0	9	1	7
	Shared		0	0				0	0	0%			0	0			0	0
Westbound	Left	12	1	**12**	0	0	12	1	**12**	0%	0	12	1	**12**	0	12	1	**12**
	Lt-Th		0	0				0	0	0%			0	0			0	0
	Thru	915	2	458	37	42	994	2	497	15%	19	1013	2	507	0	1013	2	507
	Th-Rt		0	0				0	0	15%			0	0			0	0
	Right	78	1	48	3	0	81	1	50	0%	0	81	1	50	0	81	1	50
	Shared		0	0				0	0	0%			0	0			0	0
N/B RTOR: Existing: 75% Projected: 75% Mitigated: 75%																		
S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																		
Critical Volumes:		North-South:		104			North-South:		113			North-South:		113		North-South:		113
		East-West:		602			East-West:		654			East-West:		667		East-West:		667
		Total:		706			Total:		768			Total:		781		Total:		781
Volume/capacity (*v/c*) ratio:				0.588					0.558					0.568				0.568
v/c less ATSAC adjustment:				0.588					0.488					0.498				0.498
Level of Service (LOS):				A					A					A				A

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

Filename: K:\LDT_LDEV\99038001 Washington & National Lowe\Documents\Traffic\Analysis\CMACalc Forms\Additional Intersections

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 3		2015			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION				
North/South Street:		Critical Phases:	3		Ambient Growth		Critical Phases:	3		☐ Adjacent		In	Out	Total			Critical Phases:	3	
La Cienega Blvd		Capacity:	1425		from:	2015	Capacity:	1425		Trip	AM	173	83	256			Capacity:	1425	
East/West Street:		Signal System:	2		to:	2019	Signal System:	2		Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	2	
Washington Blvd		v/c reduction:	7%		at:	1.0%	v/c reduction:	7%		Trip	AM	0	0	0			v/c reduction:	7%	
Analysis Date:	01/21/2016	Opposed Phasing:	0				Opposed Phasing:	0		Gen 2	PM	0	0	0			Opposed Phasing:	0	
AM Peak:	8:00 AM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	= Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume	
Northbound	Left	338	1	**338**	14	3	355	1	**355**	0%	0	355	1	**355**	0	355	1	**355**	
	Lt-Th		0	0				0	0	0%			0	0			0	0	
	Thru	1562	2	529	63	0	1625	2	550	0%	0	1625	2	550	0	1625	2	550	
	Th-Rt		1	529				1	550	0%			1	550			1	550	
	Right	24	0	0	1	0	25	0	0	0%	0	25	0	0	0	25	0	0	
	Shared		0	0				0	0	0%			0	0			0	0	
Southbound	Left	113	1	113	5	0	118	1	118	0%	0	118	1	118	0	118	1	118	
	Lt-Th		0	0				0	0	0%			0	0			0	0	
	Thru	1076	2	**369**	44	0	1120	2	**385**	0%	0	1120	2	**385**	0	1120	2	**385**	
	Th-Rt		1	**369**				1	**385**	0%			1	**385**			1	**385**	
	Right	32	0	0	1	3	36	0	0	0%	0	36	0	0	0	36	0	0	
	Shared		0	0				0	0	0%			0	0			0	0	
Eastbound	Left	58	1	**58**	2	4	64	1	**64**	0%	0	64	1	**64**	0	64	1	**64**	
	Lt-Th		0	0				0	0	0%			0	0			0	0	
	Thru	639	2	320	26	17	682	2	341	(15%)	13	695	2	347	0	695	2	347	
	Th-Rt		0	0				0	0	(15%)			0	0			0	0	
	Right	120	1	0	5	4	129	1	0	0%	0	129	1	0	0	129	1	0	
	Shared		0	0				0	0	0%			0	0			0	0	
Westbound	Left	72	1	72	3	0	75	1	75	0%	0	75	1	75	0	75	1	75	
	Lt-Th		0	0				0	0	0%			0	0			0	0	
	Thru	1148	2	**574**	47	36	1231	2	**615**	15%	26	1257	2	**628**	0	1257	2	**628**	
	Th-Rt		0	0				0	0	15%			0	0			0	0	
	Right	296	1	240	12	0	308	1	249	0%	0	308	1	249	0	308	1	249	
	Shared		0	0				0	0	0%			0	0			0	0	
Critical Volumes:		North-South:		707			North-South:		740			North-South:		740		North-South:		740	
		East-West:		632			East-West:		680			East-West:		693		East-West:		693	
		Total:		1339			Total:		1420			Total:		1433		Total:		1433	
Volume/capacity (*v/c*) ratio:				0.940					0.996					1.005				1.005	
v/c less ATSAC adjustment:				0.870					0.926					0.935				0.935	
Level of Service (LOS):				D					E					E				E	

PROJECT IMPACT

Change in *v/c* due to project:	0.009	Δ*v/c* after mitigation:	0.009
Significantly impacted?	NO	Fully mitigated?	N/A

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CMACalc - Critical Movement Analysis Calculator

Washington Blvd - National Blvd Traffic and Parking Services

Intersection No. 3		2015			2019, PROJECTED CUMULATIVE BASE					2019, WITH PROJECT					2019, WITH TRAFFIC MITIGATION				
North/South Street:		Critical Phases:	3		Ambient Growth		Critical Phases:	3		☐ Adjacent		In	Out	Total			Critical Phases:	3	
La Cienega Blvd		Capacity:	1425		from:	2015	Capacity:	1425		Trip	AM	173	83	256			Capacity:	1425	
East/West Street:		Signal System:	2		to:	2019	Signal System:	2		Gen 1	PM	127	174	301	☐ Use Dist 2:		Signal System:	2	
Washington Blvd		v/c reduction:	7%		at:	1.0%	v/c reduction:	7%		Trip	AM	0	0	0			v/c reduction:	7%	
Analysis Date:	01/21/2016	Opposed Phasing:	0				Opposed Phasing:	0		Gen 2	PM	0	0	0			Opposed Phasing:	0	
PM Peak:	5:00 PM	Counts Volume	Lanes	Lane Volume	+ Amb. Growth	+ Area Projects	= Total Volume	Lanes	Lane Volume		+ Project Volume	Total Volume	Lanes	Lane Volume	Adjusted Volume	Total Volume	Lanes	Lane Volume	
Northbound	Left	116	1	**116**	5	8	129	1	**129**	0%	0	129	1	**129**	0	129	1	**129**	
	Lt-Th		0	0				0	0	0%			0	0			0	0	
	Thru	932	2	337	38	0	970	2	350	0%	0	970	2	350	0	970	2	350	
	Th-Rt		1	337				1	350	0%			1	350			1	350	
	Right	78	0	0	3	0	81	0	0	0%	0	81	0	0	0	81	0	0	
	Shared		0	0				0	0	0%			0	0			0	0	
Southbound	Left	282	1	282	11	0	293	1	293	0%	0	293	1	293	0	293	1	293	
	Lt-Th		0	0				0	0	0%			0	0			0	0	
	Thru	1516	2	**516**	62	0	1578	2	**540**	0%	0	1578	2	**540**	0	1578	2	**540**	
	Th-Rt		1	**516**				1	**540**	0%			1	**540**			1	**540**	
	Right	32	0	0	1	8	41	0	0	0%	0	41	0	0	0	41	0	0	
	Shared		0	0				0	0	0%			0	0			0	0	
Eastbound	Left	78	1	78	3	6	87	1	87	0%	0	87	1	87	0	87	1	87	
	Lt-Th		0	0				0	0	0%			0	0			0	0	
	Thru	1303	2	**652**	53	43	1399	2	**699**	(15%)	26	1425	2	**712**	0	1425	2	**712**	
	Th-Rt		0	0				0	0	(15%)			0	0			0	0	
	Right	159	1	101	6	6	171	1	107	0%	0	171	1	107	0	171	1	107	
	Shared		0	0				0	0	0%			0	0			0	0	
Westbound	Left	73	1	**73**	3	0	76	1	**76**	0%	0	76	1	**76**	0	76	1	**76**	
	Lt-Th		0	0				0	0	0%			0	0			0	0	
	Thru	640	2	320	26	27	693	2	346	15%	19	712	2	356	0	712	2	356	
	Th-Rt		0	0				0	0	15%			0	0			0	0	
	Right	119	1	0	5	0	124	1	0	0%	0	124	1	0	0	124	1	0	
	Shared		0	0				0	0	0%			0	0			0	0	
N/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																			
S/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																			
E/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																			
W/B RTOR: Existing: 50% Projected: 50% Mitigated: 50%																			
Critical Volumes:		North-South:		632			North-South:		668			North-South:		668			North-South:		668
		East-West:		725			East-West:		775			East-West:		788			East-West:		788
		Total:		1357			Total:		1444			Total:		1457			Total:		1457
Volume/capacity (*v/c*) ratio:				0.952					1.013					1.022					1.022
v/c less ATSAC adjustment:				0.882					0.943					0.952					0.952
Level of Service (LOS):				D					E					E					E

PROJECT IMPACT

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

Significantly impacted? NO — Fully mitigated? N/A

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