

APPENDICES

APPENDIX A

ORANGE BIKEWAY PROJECT CONCEPTUAL DRAWINGS

HOWARD BIKEWAY - CONSTRUCTION PLANNED 2021
HOWARD BIKEWAY - CONSTRUCCIÓN PLANEADA PARA 2021



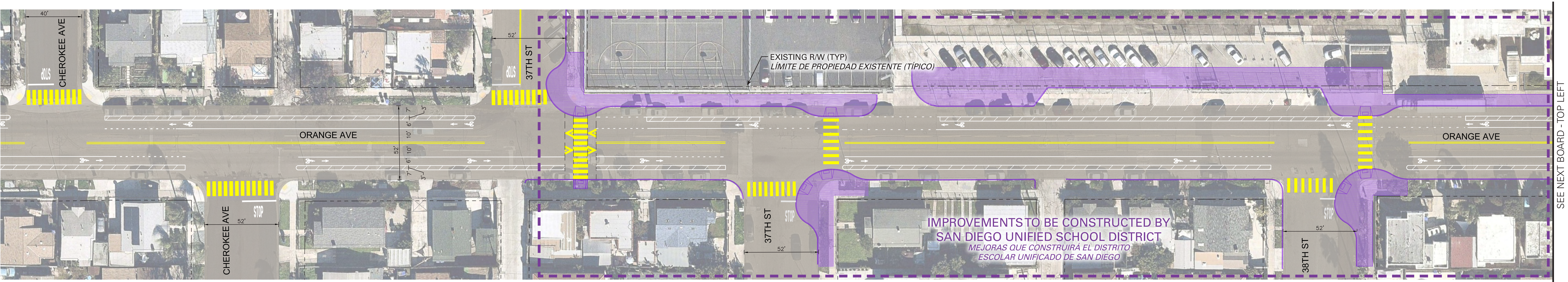
THE DESIGN TEAM IS CONSIDERING PARKING PROTECTED BIKE LANES FOR THIS SECTION OF THE PROJECT. THE ACTUAL PLACEMENT OF THE BIKE LANES WILL BE DETERMINED THROUGH COORDINATION WITH CALTRANS.

SPEED CUSHION
REDUCTOR DE VELOCIDAD

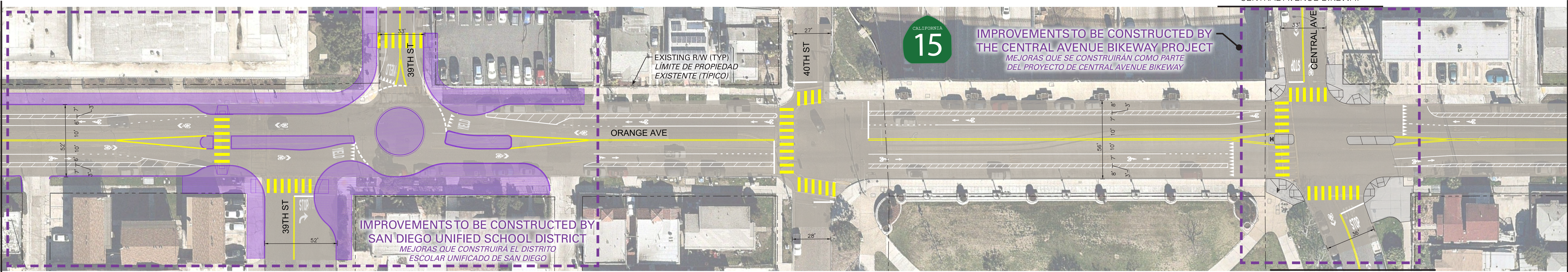
BIKE FRIENDLY INTERSECTION
INTERSECCIONES APTAS PARA BICICLETAS

SEE NEXT BOARD - TOP LEFT
VER SIGUIENTE CUADRO - ARRIBA A LA IZQUIERDA



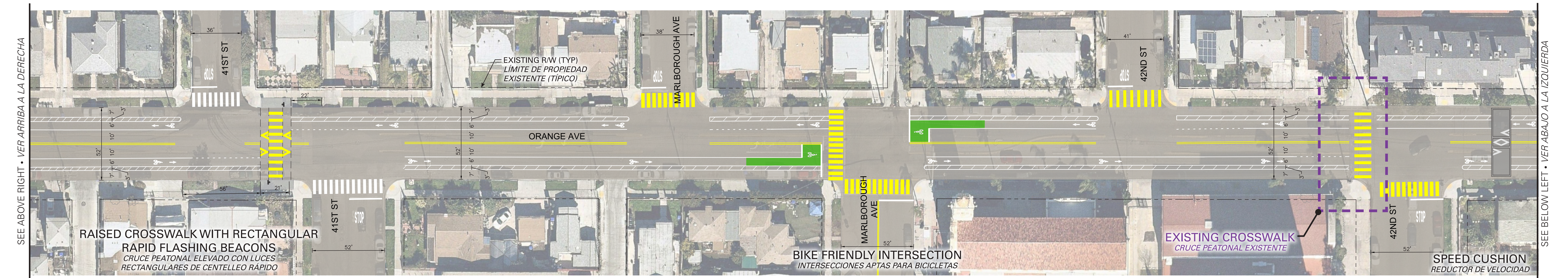


SEE PREVIOUS BOARD - BOTTOM RIGHT
VER CUADRO ANTERIOR - ABAJO A LA DERECHA



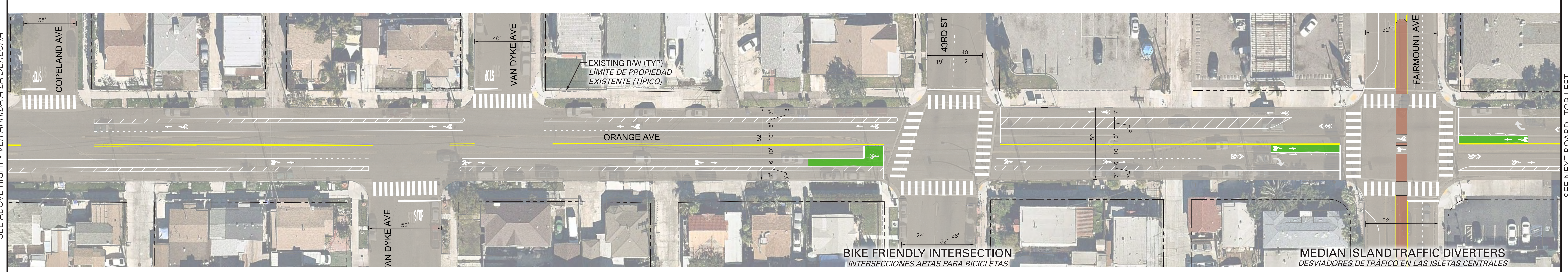
SEE BELOW LEFT • VER ABAJO A LA IZQUIERDA

SEE ABOVE RIGHT • VER ARRIBA A LA DERECHA



SEE BELOW LEFT • VER ABAJO A LA IZQUIERDA

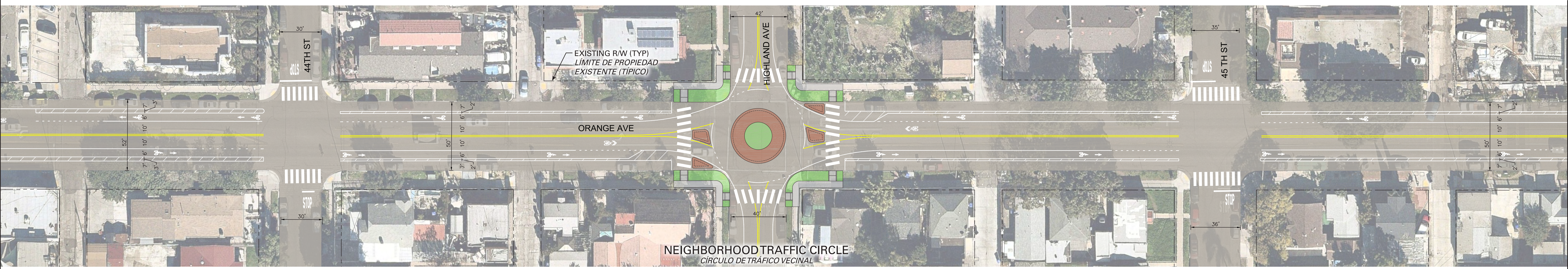
SEE ABOVE RIGHT • VER ARRIBA A LA DERECHA



SEE NEXT BOARD - TOP LEFT
VER SIGUIENTE CUADRO - ARRIBA A LA IZQUIERDA

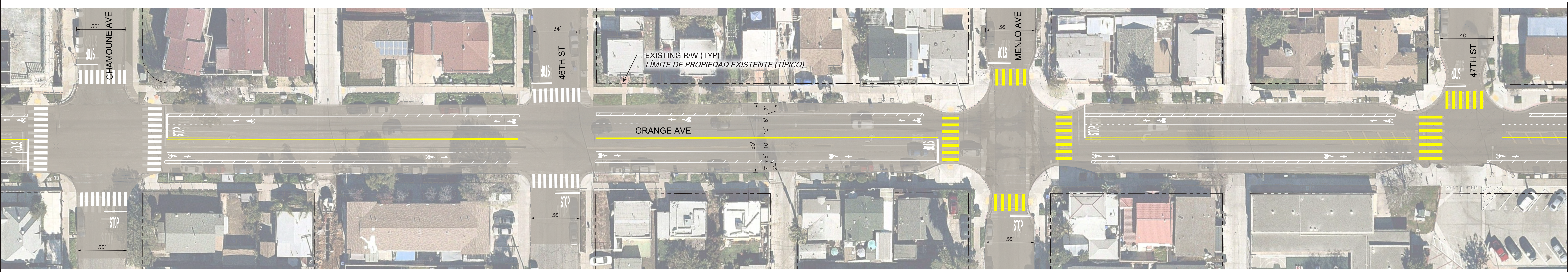


SEE PREVIOUS BOARD - BOTTOM RIGHT
VER CUADRO ANTERIOR - ABAJO A LA DERECHA



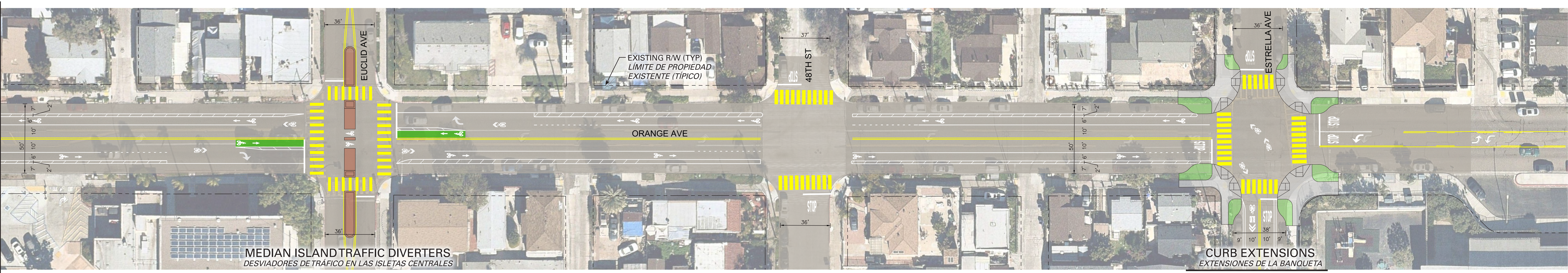
SEE BELOW LEFT • VER ABAJO A LA IZQUIERDA

SEE ABOVE RIGHT • VER ARRIBA A LA DERECHA



SEE BELOW LEFT • VER ABAJO A LA IZQUIERDA

SEE ABOVE RIGHT • VER ARRIBA A LA DERECHA



SEE BELOW LEFT • VER ABAJO A LA IZQUIERDA



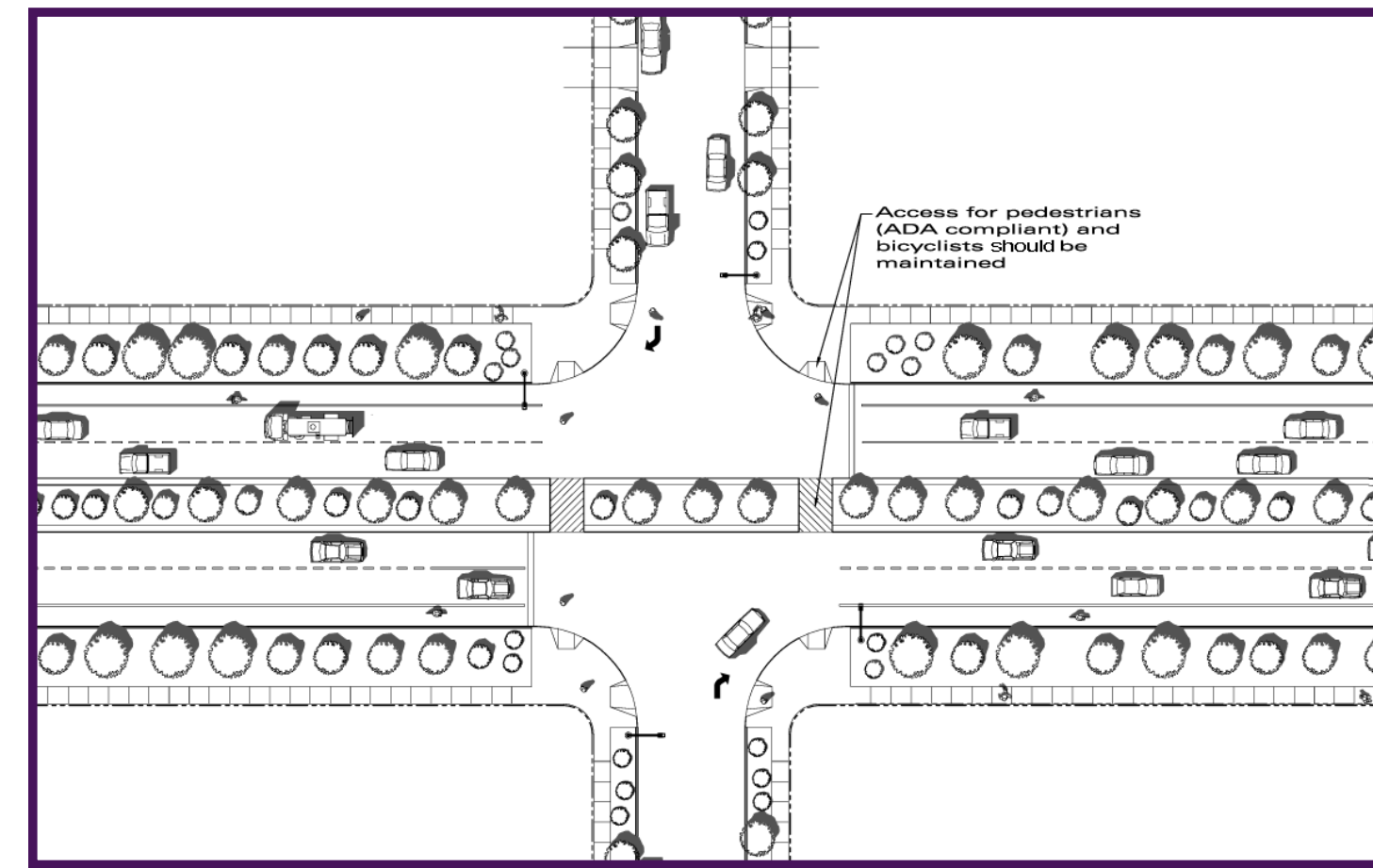
APPENDIX B

ESTIMATION OF VEHICULAR VOLUME CHANGES FROM IMPLEMENTATION OF Channelizer Medians on Orange Avenue (December 2018 – KHA)

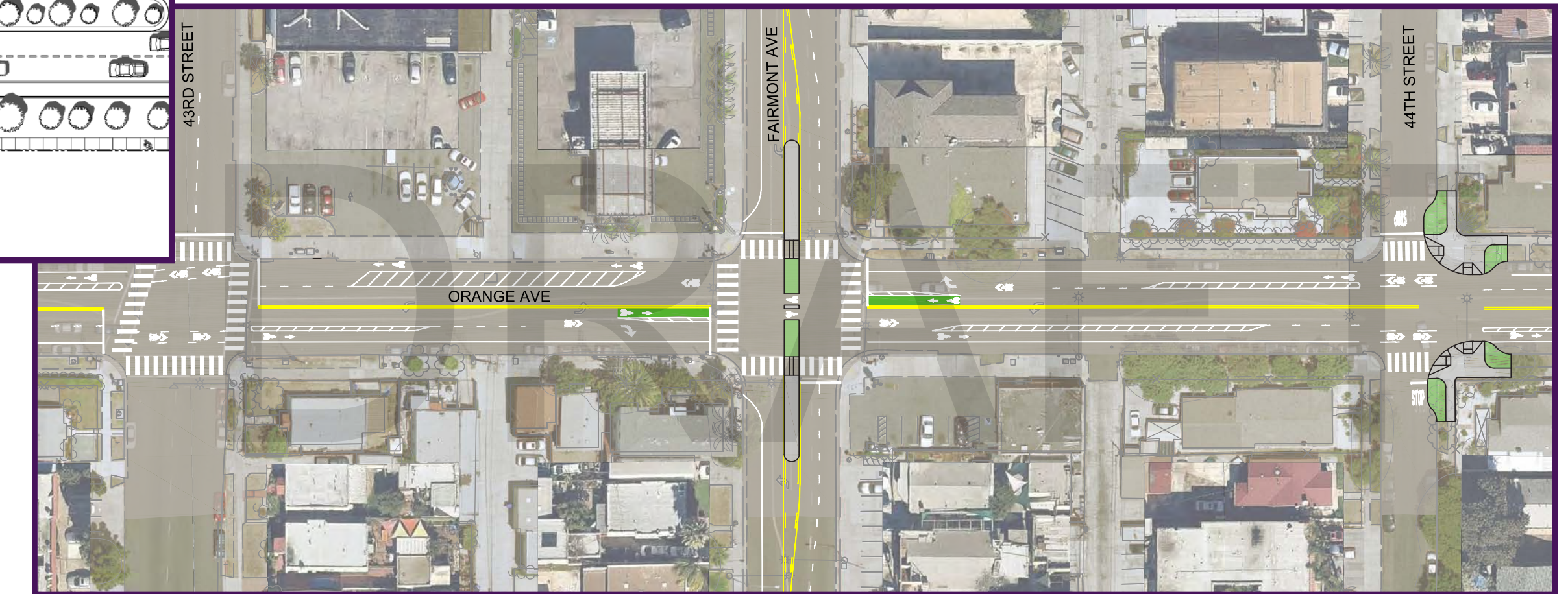
**SUMMARY
ORANGE AVE**

Orange Avenue is classified as a bicycle boulevard in the City of San Diego’s Bicycle Master Plan. Bicycle boulevards are streets designed to give priority to non-motorized users, like people riding bikes and walking, and discourage through-traffic by motor vehicles originating from and destined for areas outside of the immediate neighborhood. Bicycle boulevards use signs, pavement markings, and speed and volume management measures to create a safe and comfortable environment for walking and biking. The City of San Diego Street Design Manual recommends channelizer medians to reduce cut-through trips and calm traffic. Channelizer medians that restrict selected vehicle movements but allow full access for people who bike and walk are one of the most effective and practical ways to manage traffic volumes and discourage cut-through traffic on a bicycle boulevard [“Half Closures,” U.S. Traffic Calming Manual, Ewing, 2009].

This document shows how traffic patterns are expected to change with the installation of channelizer medians on Orange Avenue and explains the step by step process to determine these shifts and volumes.

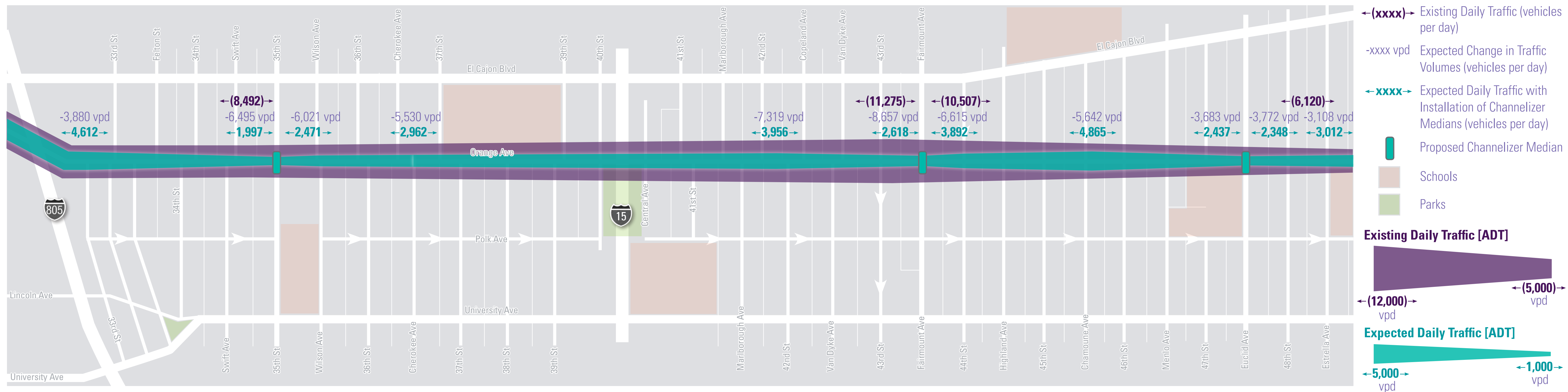


City of San Diego Street Design Manual: Traffic Calming//Channelization



Draft conceptual plan of a channelizer median at the intersection of Fairmount Avenue and Orange Avenue.

This exhibit shows an estimation of the expected vehicular volume changes that would occur on Orange Avenue with the implementation of channelizer medians along Orange Avenue at 35th Street, Fairmount Avenue, and Euclid Avenue. The attached exhibits show the expected changes in vehicular volume on the surrounding street network and explain how these volumes were determined.



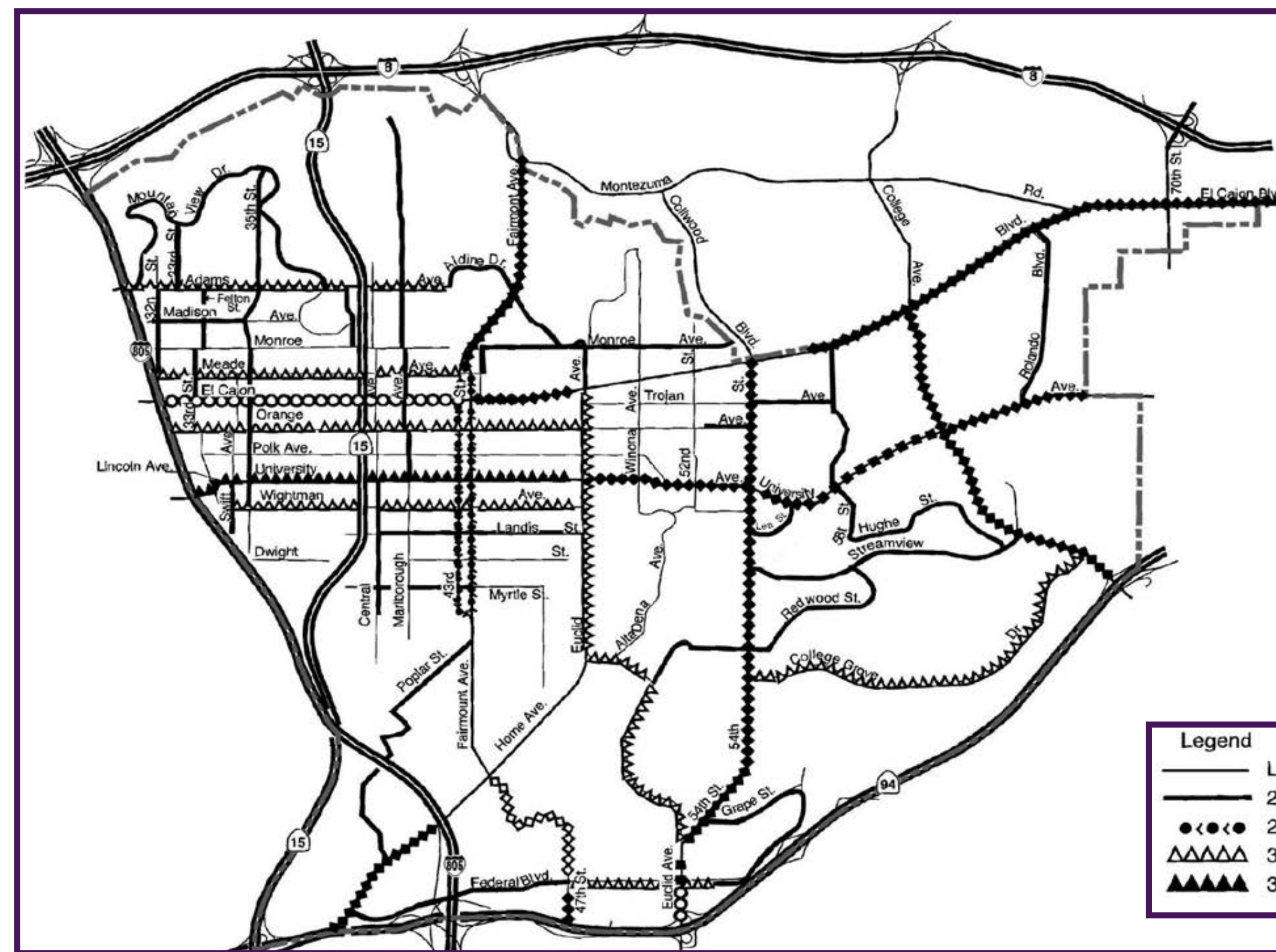
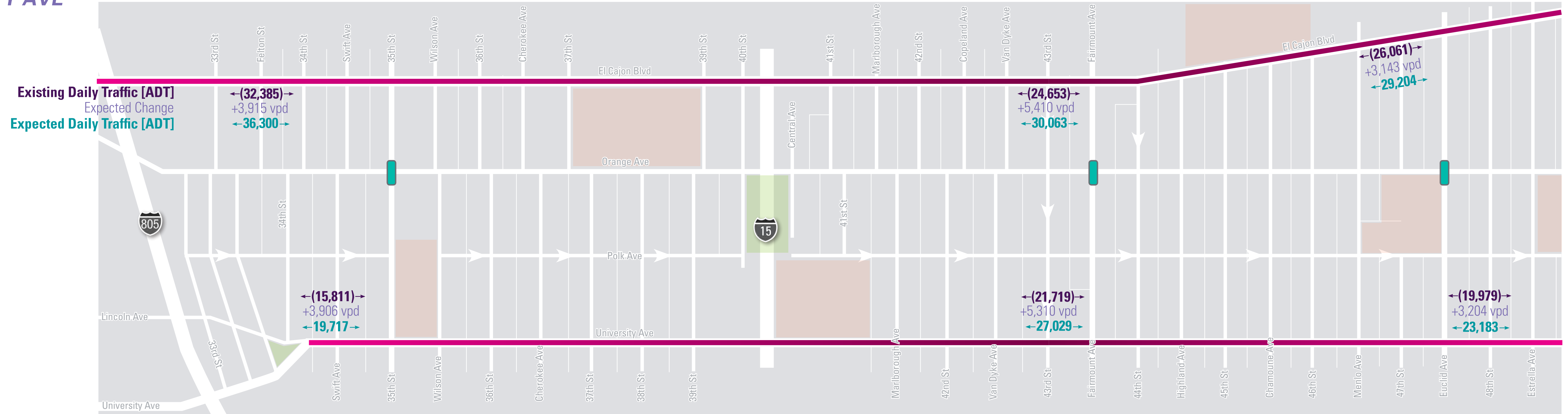
NORTH PARK | MID-CITY BIKEWAYS

ORANGE BIKEWAY



SUMMARY
EL CAJON BLVD & UNIVERSITY AVE

This exhibit shows an estimation of the maximum expected vehicular volume changes that would occur on El Cajon Boulevard and University Avenue with the implementation of channelizer medians along Orange Avenue at 35th Street, Fairmount Avenue, and Euclid Avenue. The attached exhibits explain how these volumes were determined. It should be noted that some of the "Expected Change" trips may be double counting vehicle trips that are already on El Cajon Boulevard or University Avenue; however, this exhibit was developed to show the most conservative potential outcome.



Mid-City Communities Plan:
Recommended Street Network (1998)

Legend	
—	Local Street
—	2-Lane Collector
•••••	2-Lane Major (one way)
▲▲▲▲▲	3-Lane Collector
▲▲▲▲▲	3-Lane Major
◇◇◇◇◇	4-Lane Collector
◆◆◆◆◆	4-Lane Major
■ ■ ■ ■ ■	5-Lane Major
○ ○ ○ ○ ○	6 Lane Major
—15—	Freeway

- ←(xxxx)→ Existing Daily Traffic (vehicles per day)
- +xxxx vpd Expected Change in Traffic Volumes (vehicles per day)
- ←xxxx→ Expected Daily Traffic with Installation of Channelizer Medians (vehicles per day)
- Light Pink Line +2,001-3,000 vpd
- Medium Pink Line +3,001-4,000 vpd
- Dark Pink Line +4,001-5,000 vpd



NORTH PARK | MID-CITY BIKEWAYS

ORANGE BIKEWAY

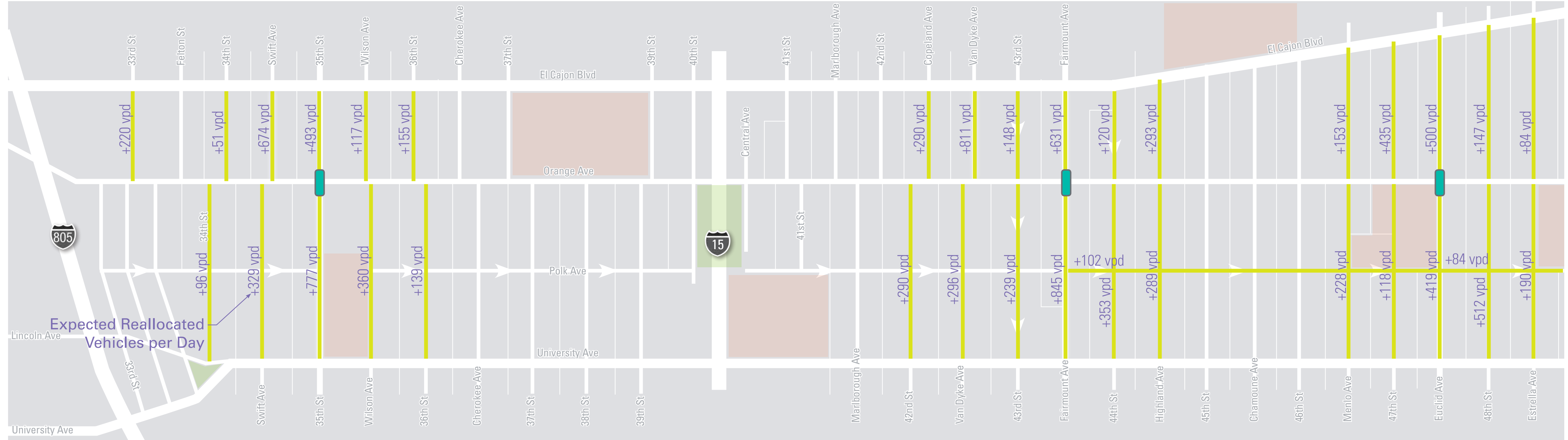


KeepSanDiegoMoving.com/NorthParkMidCityBikeways

Kimley»Horn

SUMMARY
STREET NETWORK

This exhibit shows an estimation of the expected vehicular volume changes that would occur on street network surrounding Orange Avenue with the implementation of channelizer medians along Orange Avenue at 35th Street, Fairmount Avenue, and Euclid Avenue. The attached exhibits explain how these volumes were determined.



Expected Reallocated Vehicles per Day



NORTH PARK | MID-CITY BIKEWAYS

ORANGE BIKEWAY



INTRODUCTION

Orange Avenue is classified as a bicycle boulevard in the City of San Diego’s Bicycle Master Plan. Bicycle boulevards are streets designed to give priority to non-motorized users, like people riding bikes and walking, and discourage through-traffic by motor vehicles originating from and destined for areas outside of the immediate neighborhood. Bicycle boulevards use signs, pavement markings, and speed and volume management measures to create a safe and comfortable environment for walking and biking. The City of San Diego Street Design Manual recommends channelizer medians to reduce cut-through trips and calm traffic. Channelizer medians that restrict selected vehicle movements but allow full access for people who bike and walk are one of the most effective and practical ways to manage traffic volumes and discourage cut-through traffic on a bicycle boulevard [“Half Closures,” U.S. Traffic Calming Manual, Ewing, 2009].

Currently, the traffic volumes on Orange Avenue are higher than most people find comfortable for a bicycle boulevard, creating stressful riding conditions at times. Orange Avenue is a mostly residential street, with only a few schools, retail and community destinations. The high existing daily traffic volumes (between 6,120-11,275 vpd) show that many people use Orange Avenue as a cut-through, and are not driving on the street to access destinations on Orange Avenue. This means that channelizer medians would be an effective solution to manage traffic volumes on Orange Avenue. Additionally, Orange Avenue is especially suited to become a low volume neighborhood street through the installation of median channelizers because there are parallel, high capacity streets within one or two blocks (El Cajon Boulevard and University Avenue) and a full and redundant street network that allows for easy travel between these parallel streets.

This document shows how traffic patterns are expected to change with the installation of the channelizer medians and explains the step by step process to determine these shifts and volumes.

ESTIMATION STEPS

1. EXISTING COUNTS

Collect peak hour turning movement and daily volume counts.

2. PEAK HOUR FACTOR

Calculate the peak hour factor (K-Factor) for each travel direction at each intersection to convert between peak hour turning movements and daily volumes.

3. GPS DATA

Collect StreetLight GPS data to identify the proportion of existing trips on Orange Avenue with final destinations to the north or south of the corridor.

4A. DIVERTED MOVEMENTS

Calculate the total number of vehicles that will be impacted by each diverter.

4B. AVOIDANCE

Based on past research, the surrounding street network, and neighborhood characteristics, about 50% of people who currently drive on Orange Avenue and who are impacted by the diverters would be expected to avoid the street all together because the street would no longer be a convenient cut-through. These vehicles would use parallel facilities like El Cajon Boulevard or University Avenue instead.

4C. EAST-WEST LOCAL DIVERSION

After subtracting out the vehicles who would avoid Orange Avenue, the peak hour turning movements, GPS data, and information about the street network are used to determine which route each vehicle is expected to take. The remaining turning movements on Orange Avenue are converted to daily volumes using the peak hour factors (K-Factors) from Step 2.

4D. EAST-WEST REALLOCATED DAILY TRIPS ON STREET NETWORK

Calculate the number of trips reallocated to each street around the channelizer medians by converting the peak hour turning movements to daily volumes using the peak hour factors (K-Factors) from Step 2.

4E. NORTH-SOUTH LOCAL DIVERSION

Since northbound and southbound vehicles will no longer be able to turn left at the channelizer medians, the peak hour turning movements and information about the street network are used to determine the alternate routes vehicles are expected to take.

4F. NORTH-SOUTH REALLOCATED DAILY TRIPS ON STREET NETWORK

Calculate the number of trips reallocated to each street around the channelizer medians by converting the peak hour turning movements to daily volumes using the peak hour factors (K-Factors) from Step 2.

4G. TRIPS ON PARALLEL STREETS

The daily traffic volumes from Steps 4D and 4F are used to show where and at which direction vehicles are expected to enter El Cajon Boulevard and University Avenue after leaving Orange Avenue.

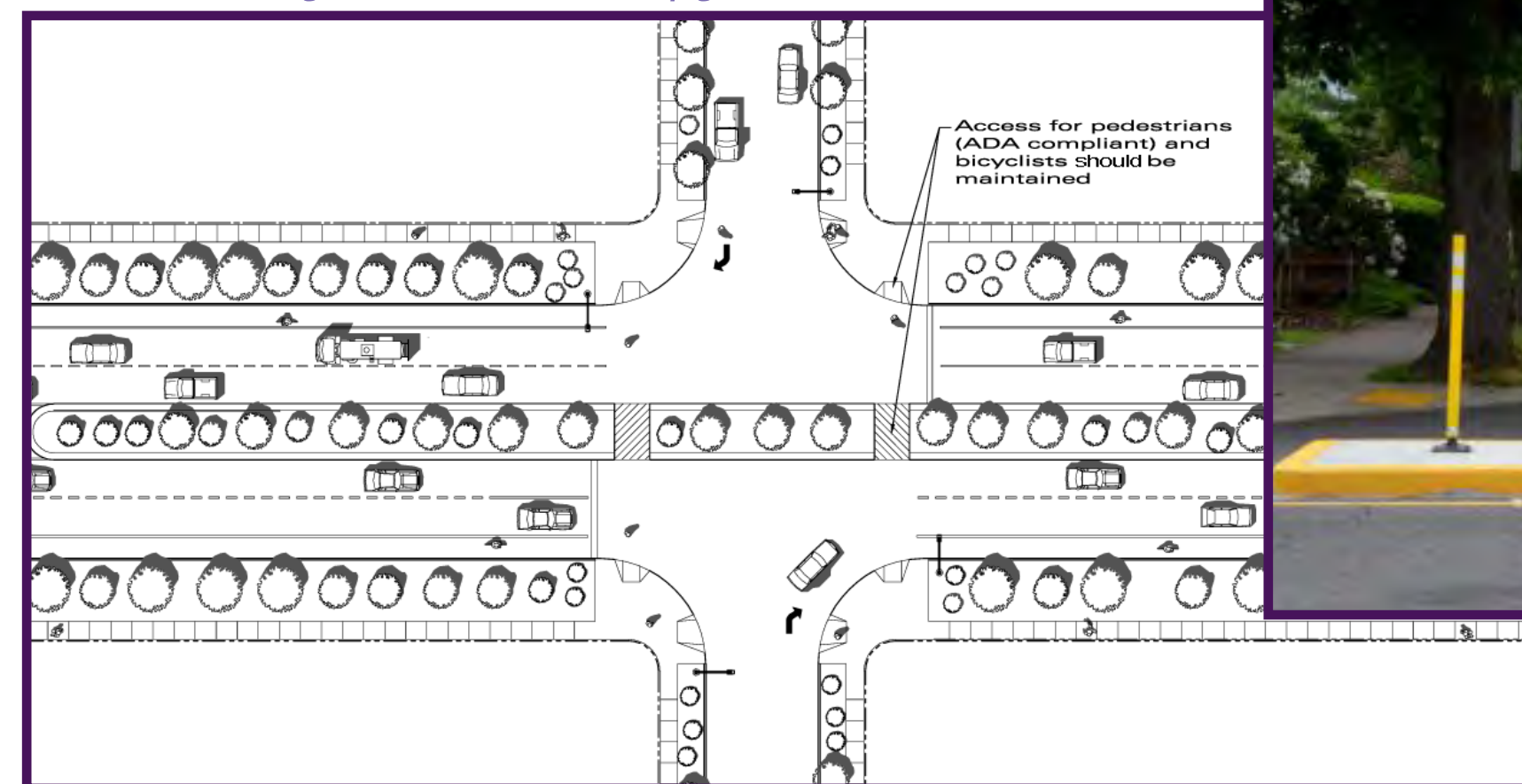
4H. AVOIDANCE ALTERNATIVES

Determine which proportion of the vehicles avoiding Orange Avenue from Step 4B will use El Cajon Boulevard or University Avenue based on the GPS data from Step 3.

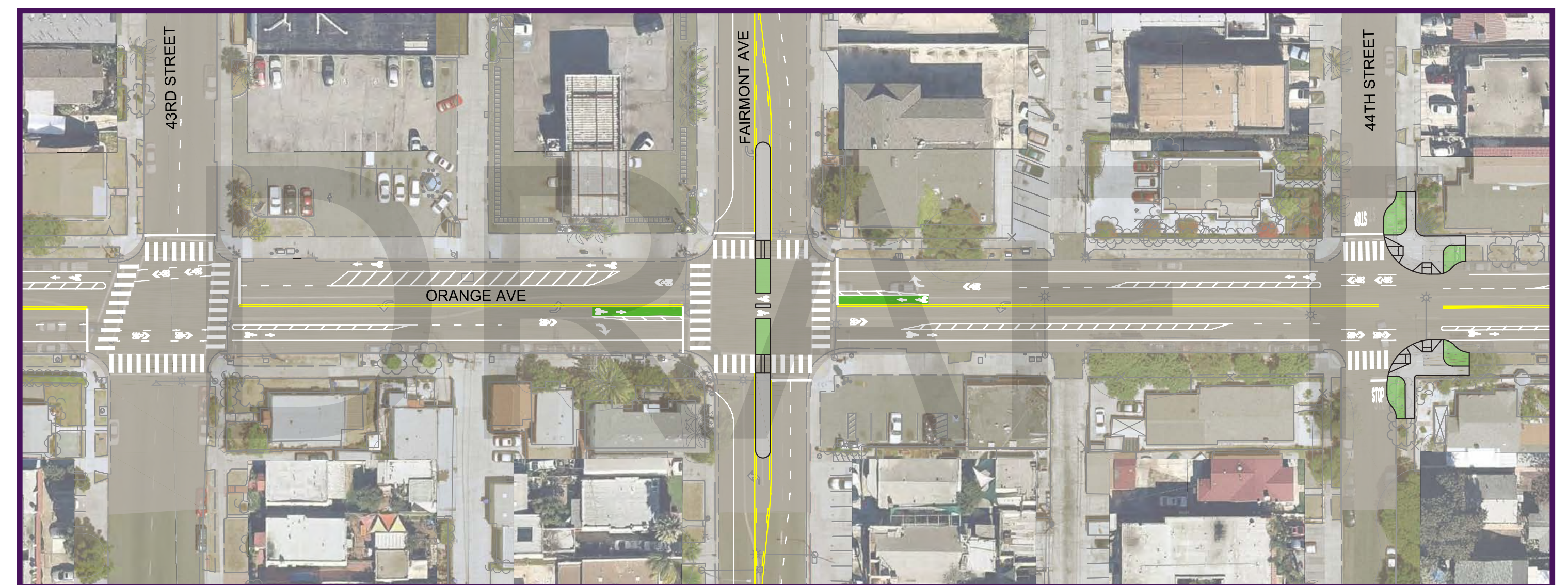
5. EXPECTED DAILY VOLUMES

Determine the final expected daily and peak-hour volumes within the study area after implementation of the channelizer medians.

City of San Diego Street Design Manual: Traffic Calming/Channelization (pg. 92)



Channelizer median island (Portland, OR).



Draft conceptual plan of a channelizer median at the intersection of Fairmount Avenue and Orange Avenue.



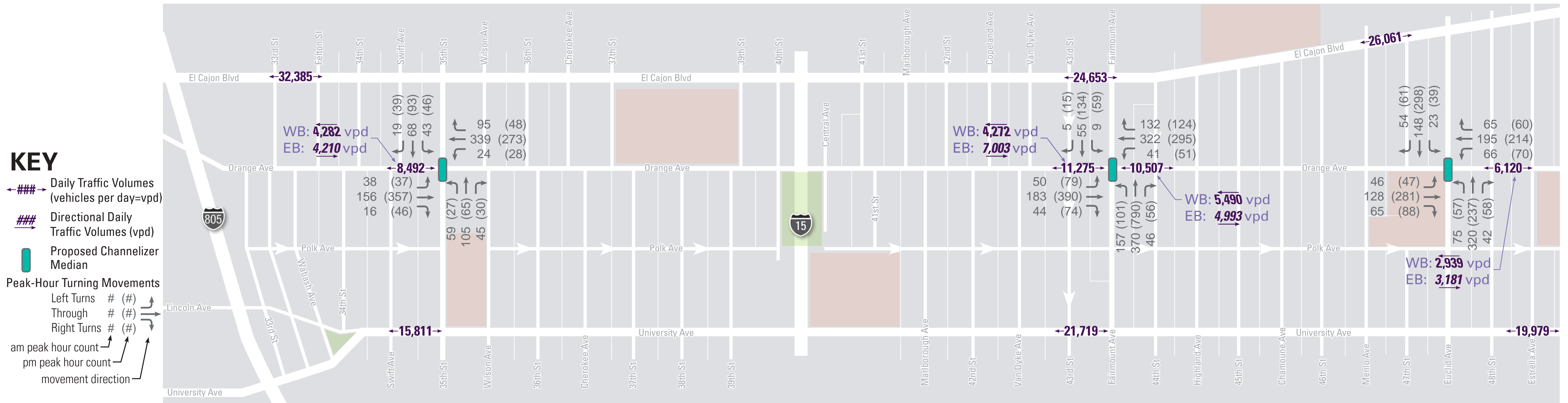
NORTH PARK | MID-CITY BIKEWAYS

ORANGE BIKEWAY



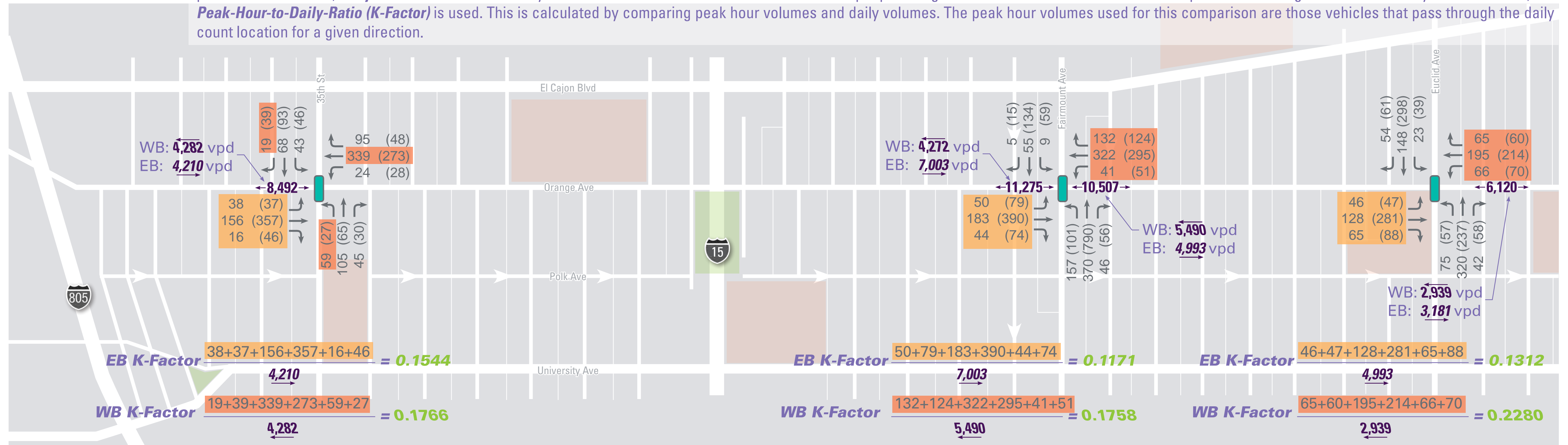
1. EXISTING COUNTS

The peak-hour turning movement and daily volume counts shown below were collected within the last five years.



2. PEAK HOUR FACTOR

Peak hour turning movements are used to determine how traffic may shift to the surrounding street network with the installation of channelizer medians because they provide the detail needed to make reasonable predictions. However, daily traffic volumes are usually used to evaluate the comfort level of a street for people riding bikes. To convert calculations that use peak hour turning movements to daily traffic volumes, the Peak-Hour-to-Daily-Ratio (K-Factor) is used. This is calculated by comparing peak hour volumes and daily volumes. The peak hour volumes used for this comparison are those vehicles that pass through the daily count location for a given direction.



NORTH PARK | MID-CITY BIKEWAYS

ORANGE BIKEWAY



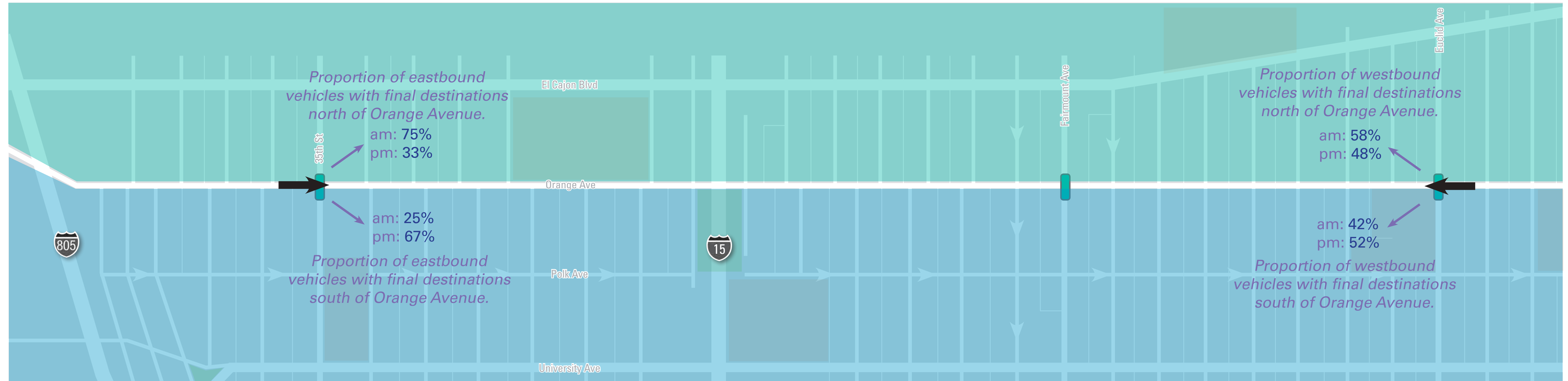
KeepSanDiegoMoving.com/NorthParkMidCityBikeways

Kimley»Horn

3. GPS DATA

With the installation of the channelizer medians, vehicles that currently travel on Orange Avenue would be rerouted to parallel routes north or south of the corridor based on their final destination. GPS data (provided by StreetLight) is used to identify the proportion of existing trips on Orange Avenue with final destinations to the north or south of the corridor. Data was collected for vehicles traveling east on Orange Avenue just west of 35th Street, and vehicles traveling west on Orange Avenue just east of Euclid Avenue (black arrows below) for the am and pm peak hours.

This information is then used to predict how many diverted drivers will choose to reroute north (to El Cajon Boulevard) or south (to University Avenue).



NORTH PARK | MID-CITY BIKEWAYS

ORANGE BIKEWAY



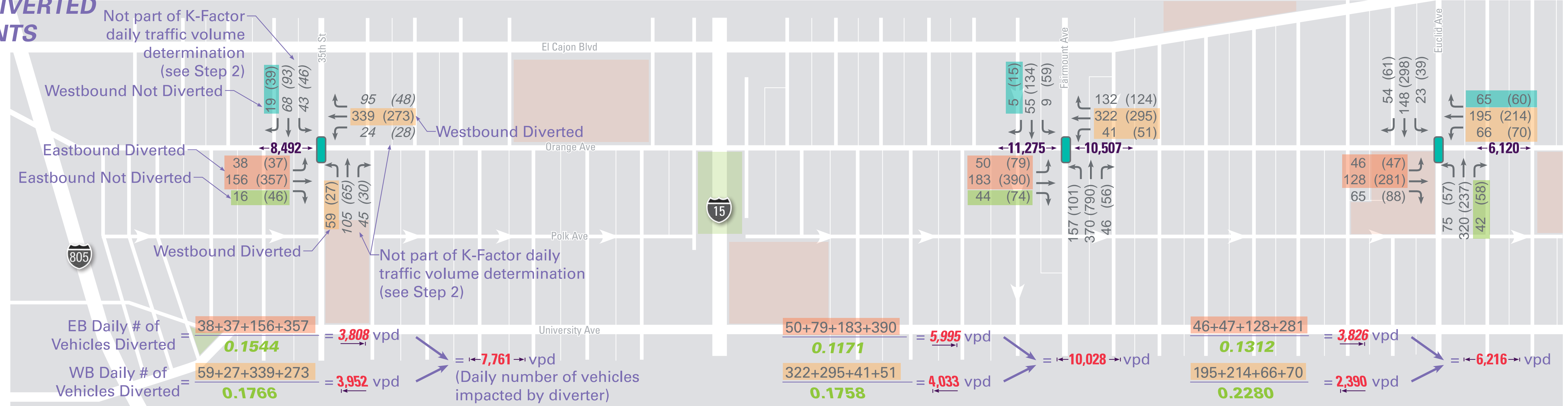
KeepSanDiegoMoving.com/NorthParkMidCityBikeways

Kimley»Horn

4A. DIVERSION

The proposed channelizer medians will not impact vehicles traveling along Orange Avenue that can still make their desired movement at the channelizer medians, such as eastbound vehicles turning right on 35th Street. The figure below shows which of the east-west through movements as defined in Step 2 will be impacted, and uses the K-Factors to determine what proportion of total traffic will be diverted.

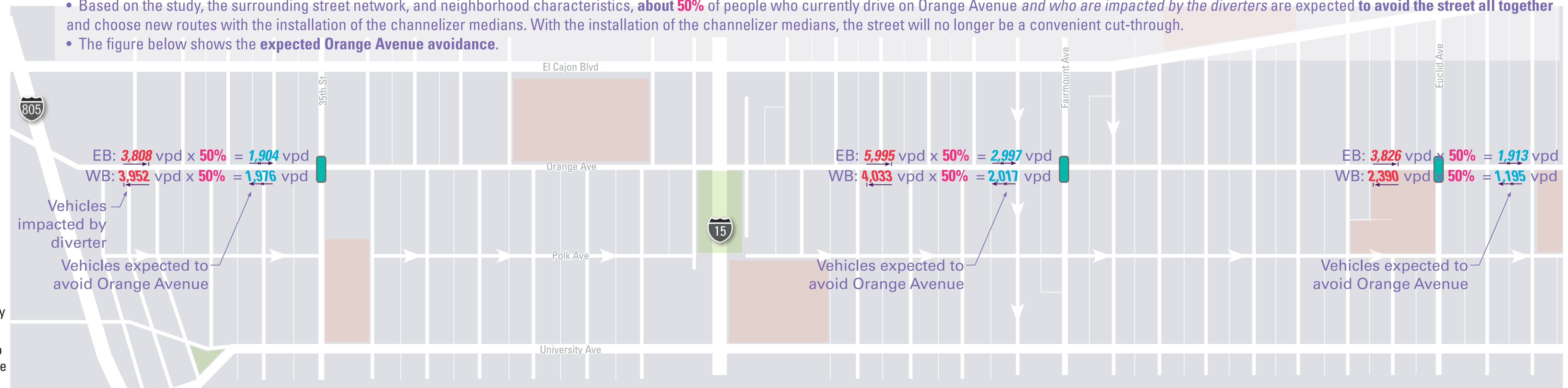
PART A: DIVERTED MOVEMENTS



4B. DIVERSION

PART B: AVOIDANCE

- A study of 53 streets with half closures (which serve a similar purpose as channelizer medians) showed a **42% average reduction in daily traffic volumes, with much higher reductions** for streets with easily accessible parallel facilities (U.S. Traffic Calming Manual, Ewing, 2009).
- Orange Avenue is especially suited to become a low volume neighborhood street through the installation of median channelizers because there are parallel, high capacity streets within one or two blocks (El Cajon Boulevard and University Avenue) and a full and redundant street network that allows for easy travel between these parallel streets.
- Orange Avenue is a mostly residential street, with only a few schools and retail / community destinations. Based on the existing daily traffic volumes on Orange Avenue, the high numbers (between 6,120-11,275 vpd) seem to demonstrate that **many drivers use Orange Avenue as a cut-through**, and are not driving on the street to access destinations **ON** Orange Avenue.
- Based on the study, the surrounding street network, and neighborhood characteristics, **about 50%** of people who currently drive on Orange Avenue *and who are impacted by the diverters* are expected to **avoid the street all together** and choose new routes with the installation of the channelizer medians. With the installation of the channelizer medians, the street will no longer be a convenient cut-through.
- The figure below shows the **expected Orange Avenue avoidance**.



- Existing Directional Daily Traffic Volume
- Vehicles Impacted by Channelizer Median
- Vehicles Expected to Avoid Orange Avenue



NORTH PARK | MID-CITY BIKEWAYS

ORANGE BIKEWAY



4C. DIVERSION
PART C:
EAST-WEST LOCAL
DIVERSION

As discussed in Part 4B, about half of the vehicles impacted by the channelizer medians are expected to avoid the corridor. The remaining vehicles will navigate the corridor and channelizer medians using the local street network. While it's impossible to predict exactly what routes people driving will take, the exhibit below shows how **EASTBOUND** vehicles are expected to travel, using the turning movement volumes. The text and exhibit below, along with **Table 4C: EASTBOUND**, explain how these splits were derived.

- Most EB **left turns** are expected to make the turn early, with the majority of vehicles waiting until the last possible block to leave Orange Avenue.
- EB **throughs** are expected to reroute either north or south of the corridor based on GPS Data. Most vehicles **routing south** are expected to turn right at the intersection, or as is logical based on signal locations along University Avenue. Most vehicles **routing north** are expected to turn left early, with the majority of vehicles waiting until the last possible block to leave Orange Avenue.
- EB **rights** will continue to turn right at the diverter location.



NORTH PARK | MID-CITY BIKEWAYS

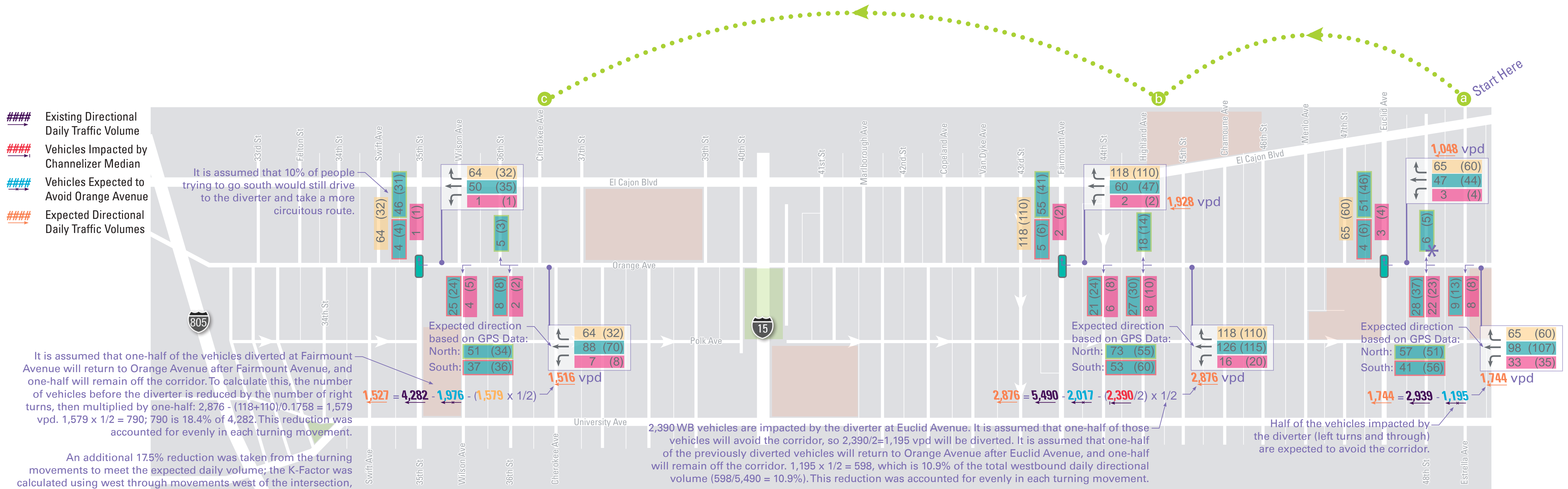
ORANGE BIKEWAY



4C. DIVERSION
PART C:
EAST-WEST LOCAL
DIVERSION (CONT.)

As discussed in Part 4B, about half of the vehicles impacted by the channelizer medians are expected to avoid the corridor. The remaining vehicles will navigate the corridor and channelizer medians using the local street network. While it's impossible to predict exactly what routes people driving will take, the exhibit below shows how **WESTBOUND** vehicles are expected to travel, using the turning movement volumes. The text and exhibit below, along with **Table 4C: WESTBOUND**, explain how these splits were derived.

- Most WB **left turns** are expected to make the turn early, with the majority of vehicles waiting until the last possible block to leave Orange.
- WB **throughs** are expected to reroute either north or south of the corridor based on GPS Data. Most vehicles **routing north** are expected to turn right at the intersection, or as is logical based on signal locations along University Avenue. Most vehicles **routing south** are expected to turn left early, with the majority of vehicles waiting until the last possible block to leave Orange Avenue.
- WB **rights** will continue to turn right at the diverter location.



* The El Cajon Complete Boulevard Plan proposes a raised median at 48th Street that would prohibit NB to WB left turns from 48th Street onto El Cajon Boulevard. However, funding sources and a proposed construction date have not yet been identified at this time so this exhibit does not take them into account. When the median is constructed, the turns expected to be made at 48th Street due to the channelizer medians would likely shift to other parallel facilities, such as Winona Avenue.



NORTH PARK | MID-CITY BIKEWAYS

ORANGE BIKEWAY



4C. DIVERSION

TABLE 4C: EASTBOUND

The table below explains how the expected travel splits for EASTBOUND vehicles, as shown in the previous exhibits, were determined.

	Street	Destination	Blocks Away from Chan. Median	Street Width	Signal @ Major Street	Expected % of Drivers	Expected Peak Hour Turning Movements						Additional Daily Traffic on Street Network (excludes rights)	Notes	
							Left		Thru		Right				
							am	pm	am	pm	am	pm			
35th Street	Peak Hour Vehicles to Divert North	33rd	North	4	52'	Y	23%	4	4	13	13	0	0	220	It is expected that about 10% of drivers with destinations north of Orange Ave will still drive to the channelizer median and take a more circuitous route. Of the remaining 90% of vehicles, it is expected that about 75% will wait to the last block to leave Orange Ave (Swift Ave). The remaining vehicles will likely turn at the second most convenient block - 33rd Street is the only street in the vicinity with a traffic signal on El Cajon Blvd and is wider than the surrounding streets, so we expect some vehicles to use this street. [67%=75%x(100%-10%)]. All EB vehicles will be forced to turn right (SB) at 35th Street, including those with destinations north of Orange Ave. These volumes will be added to the 35th (total) volumes. It is expected that most vehicles (~75%) with destinations south of Orange Ave would continue on Orange Ave for as long as possible, until 35th Street. It is expected that the remaining vehicles would turn at the second most convenient block, which appears to be Swift Ave because it has a traffic signal at University Ave. The total number of eastbound vehicles who turn south onto 35th Street includes the 10% of vehicles with destinations north of Orange Ave who accidentally take a more circuitous route (777=103+674).
		Felton	North	3	36'	N	0%	0	0	0	0	0	0	0	
		34th	North	2	36'	N	0%	0	0	0	0	0	0	0	
		Swift	North	1	34'	N	67%	13	12	39	40	0	0	674	
	35th	North	0	52'	Y	10%	2	2	6	6	0	0	103		
	Peak Hour Vehicles to Divert South	34th	South	2	52'	N	0%	0	0	0	0	0	0	0	
		Swift	South	1	52'	Y	25%	0	0	5	30	0	0	227	
		35th	South	0	52'	Y	75%	0	0	15	89	16	46	674	
35th (total)		South					2	2	21	95	16	46	777		
Fairmount Ave	Peak Hour Vehicles to Divert North	Copeland	North	3	40	Y	23%	4	7	12	11	0	0	290	It is expected that about 10% of drivers with destinations north of Orange Ave will still drive to the channelizer median and take a more circuitous route. Of the remaining 90% of vehicles, it is expected that about 75% will wait to the last block to leave Orange Ave (Van Dyke Ave). The remaining vehicles will likely turn at the second most convenient block - Copeland Ave is the only street in the vicinity with a traffic signal on El Cajon Blvd and is wider than the surrounding streets, so we expect some vehicles to use this street. [67%=75%x(100%-10%)]. All EB vehicles will be forced to turn right (SB) at Fairmount Ave, including those with destinations north of Orange Ave. These volumes will be added to the Fairmount Ave (total) volumes. It is expected that most vehicles (~75%) with destinations south of Orange Ave would continue on Orange Ave for as long as possible, until Fairmount Ave. It is expected that the remaining vehicles would turn at the second most convenient block, which appears to be 43rd Street because it has a traffic signal at University Ave. The total number of eastbound vehicles who turn south onto Fairmount Ave includes the 10% of vehicles with destinations north of Orange Ave who accidentally take a more circuitous route (845=128+717).
		Van Dyke	North	2	38	N	67%	12	19	33	31	0	0	811	
		43rd	North	1	38	One Way	0%	0	0	0	0	0	0	0	
		Fairmount	North	0	52	Y	10%	2	3	5	5	0	0	128	
	Peak Hour Vehicles to Divert South	43rd	South	1	52	Y	25%	0	0	4	24	0	0	239	
		Fairmount	South	0	52	Y	75%	0	0	13	71	38	64	717	
		Fairmount (total)	South					2	3	18	76	38	64	845	
Euclid Ave	Peak Hour Vehicles to Divert North	Menlo	North	2	34	Y	23%	3	3	6	6	0	0	137	It is expected that about 10% of drivers with destinations north of Orange Ave will still drive to the channelizer median and take a more circuitous route. Of the remaining 90% of vehicles, it is expected that about 75% will wait to the last block to leave Orange Ave (47th Street). The remaining vehicles will likely turn at the second most convenient block - Menlo Ave is the only street in the vicinity with a traffic signal on El Cajon Blvd, so we expect some vehicles to use this street. [67%=75%x(100%-10%)]. All EB vehicles will be forced to turn right (SB) at Euclid Ave, including those with destinations north of Orange Ave. These volumes will be added to the Euclid (total) volumes. It is expected that most vehicles (~75%) with destinations south of Orange Ave would continue on Orange Ave for as long as possible, until Euclid Ave. It is expected that the remaining vehicles would turn at the second most convenient block, which appears to be Menlo Ave. The total number of eastbound vehicles who turn south onto Euclid Ave includes the 10% of vehicles with destinations north of Orange Ave who accidentally take a more circuitous route (419=61+358).
		47th	North	1	36	N	67%	9	9	18	17	0	0	404	
		Euclid	North	0	36	Y	10%	1	1	3	3	0	0	61	
	Peak Hour Vehicles to Divert South	Menlo	South	1	36	N	25%	0	0	2	13	0	0	114	
		Euclid	South	0	36	Y	75%	0	0	7	40	51	69	358	
		Euclid (total)	South					1	1	10	43	51	69	419	



NORTH PARK | MID-CITY BIKEWAYS

ORANGE BIKEWAY



KeepSanDiegoMoving.com/NorthParkMidCityBikeways

Kimley»Horn

4C. DIVERSION

TABLE 4C: WESTBOUND

The table below explains how the expected travel splits for WESTBOUND vehicles, as shown in the previous exhibits, were determined.

		Street	Destination	Blocks Away from Chan. Median	Street Width	Signal @ Major Street	Expected % of Drivers	Expected Peak Hour Turning Movements						Additional Daily Traffic on Street Network (excludes rights)	Notes		
								Left		Thru		Right					
								am	pm	am	pm	am	pm				
35th Street	Peak Hour Vehicles to Divert South	36th	South	2	52'	N	23%	2	2	8	8	0	0	113	It is expected that about 10% of drivers with destinations south of Orange Ave will still drive to the channelizer median and take a more circuitous route. Of the remaining 90% of vehicles, it is expected that about 75% will wait to the last block to leave Orange Ave (Wilson Street). The remaining vehicles will likely turn at the second most convenient block, 36th Street. [67%=75%x(100%-10%)].		
		Wilson	South	1	52'	Y	67%	4	5	25	24	0	0	328			
		35th	South	0	52'	Y	10%	1	1	4	4	0	0	57		All WB vehicles will be forced to turn right (NB) at 35th Street, including those with destinations south of Orange Ave. These volumes will be added to the 35th (total) volumes.	
	Peak Hour Vehicles to Divert North	36th	North	2	38'	N	10%	0	0	5	3	0	0	45		It is expected that almost all vehicles (~90%) with destinations north of Orange Ave would continue on Orange Ave for as long as possible, until 35th Street. It is expected that the remaining vehicles would turn at the second most convenient block, which appears to be 36th Street. A 90/10 split was assumed here instead of 75/25 because 36th Street is side street stopped controlled, making it more difficult to turn left onto El Cajon Blvd than a street with a traffic signal. The next closest signalized intersection before 36th Street is 37th Street, four blocks from the proposed channelizer median.	
		35th	North	0	52'	Y	90%	0	0	46	31	64	32	436			
35th (total)	North							1	1	50	35	64	32	493	The total number of WB vehicles who turn north onto 35th Street includes the 10% of vehicles with destinations south of Orange Ave who accidentally take a more circuitous route (493=57+436).		
Fairmount Ave	Peak Hour Vehicles to Divert South	Highland	South	2	40	Y	50%	8	10	27	30	0	0	427	It is expected that about 10% of drivers with destinations south of Orange Ave will still drive to the channelizer median and take a more circuitous route. It is expected that about 40% of drivers will turn at 44th Street and 50% will turn at Highland Ave. Although it is typically expected that vehicles will wait until the last possible street to turn, Highland Ave is significantly wider and therefore more comfortable to drive on that 44th Street.		
		44th	South	1	30	N	40%	6	8	21	24	0	0	336			
		Fairmount	South	0	52	Y	10%	2	2	5	6	0	0	85		All WB vehicles will be forced to turn right (SB) at Fairmount Ave, including those with destinations north of Orange Ave. These volumes will be added to the Fairmount (total) volumes.	
	Peak Hour Vehicles to Divert North	Highland	North	2	40	Y	25%	0	0	18	14	0	0	182		It is expected that most vehicles (~75%) with destinations north of Orange Ave would continue on Orange Ave for as long as possible, until Fairmount Ave. It is expected that the remaining vehicles would turn at the second most convenient block, which appears to be Highland Ave.	
		44th	North	1	30	One-Way	0%	0	0	0	0	0	0	0			
Fairmount (total)	North			0	52	Y	75%	2	2	60	47	118	110	631	The total number of WB vehicles who turn north onto Fairmount Ave includes the 10% of vehicles with destinations south of Orange Ave who accidentally take a more circuitous route (631=85+546).		
Euclid Ave	Peak Hour Vehicles to Divert South	Estrella	South	2	38	N	23%	8	8	9	13	0	0	167	It is expected that about 10% of drivers with destinations south of Orange Ave will still drive to the channelizer median and take a more circuitous route. Of the remaining 90% of vehicles, it is expected that about 75% will wait to the last block to leave Orange Ave (48th Street), and the remaining vehicles will turn at the second to last block (Estrella Ave). [67%=75%x(100%-10%)].		
		48th	South	1	34	N	67%	22	23	28	37	0	0	482			
		Euclid	South	0	36	Y	10%	3	4	4	6	0	0	75		All WB vehicles will be forced to turn right (SB) at Euclid Ave, including those with destinations north of Orange Ave. These volumes will be added to the Euclid (total) volumes.	
	Peak Hour Vehicles to Divert North	Estrella	North	2	34	N	0%	0	0	0	0	0	0	0		It is expected that almost all vehicles (~90%) with destinations north of Orange Ave would continue on Orange Ave for as long as possible, until Euclid Ave. It is expected that the remaining vehicles would turn at the second most convenient block, which appears to be 48th Street. A 90/10 split was assumed here instead of 75/25 because 48th Street is side street stopped controlled, making it more difficult to turn left onto El Cajon Blvd than a street with a traffic signal. The next closest signalized intersection before Euclid Ave is Winona Ave, four blocks from the proposed channelizer median.	
		48th	North	1	36	N	10%	0	0	6	5	0	0	48			
		Euclid	North	0	36	Y	90%	0	0	51	46	65	60	425			*The El Cajon Complete Boulevard Plan proposes a raised median at 48th Street that would prohibit NB to WB left turns. However, funding sources and a proposed construction date have not yet been identified at this time so this exhibit does not take them into account. When the median is constructed, the turns expected to be made at 48th Street due to the channelizer medians would likely shift to other parallel facilities, such as Winona Avenue.
		Euclid (total)	North					3	4	55	52	65	60	500			The total number of WB vehicles who turn north onto Euclid Ave includes the 10% of vehicles with destinations south of Orange Ave who accidentally take a more circuitous route (500=425+75).



NORTH PARK | MID-CITY BIKEWAYS

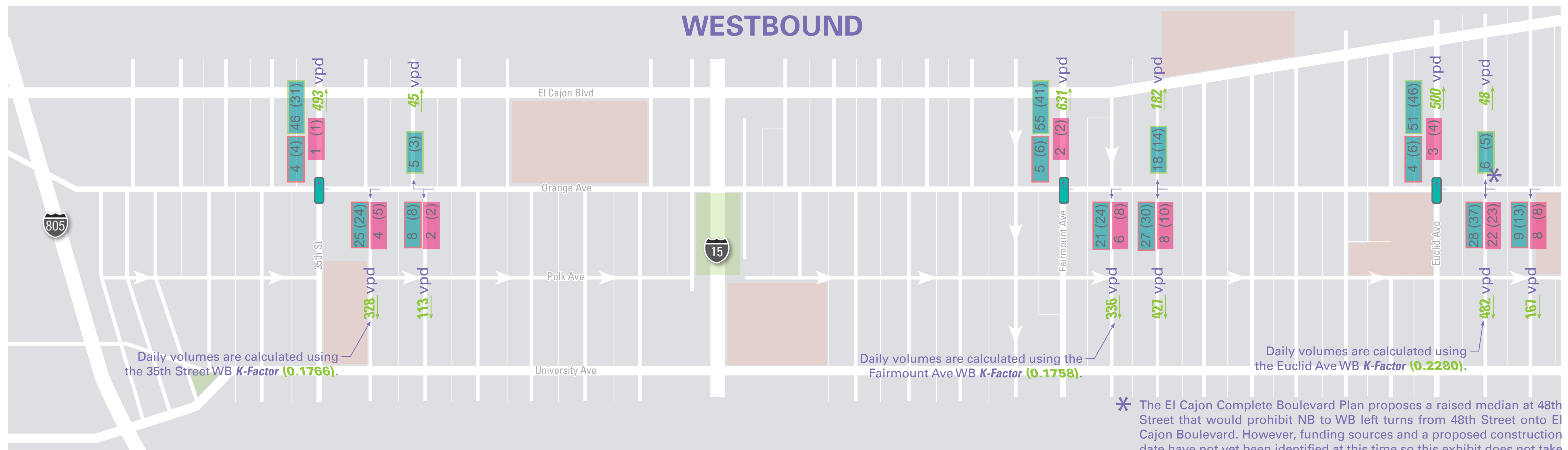
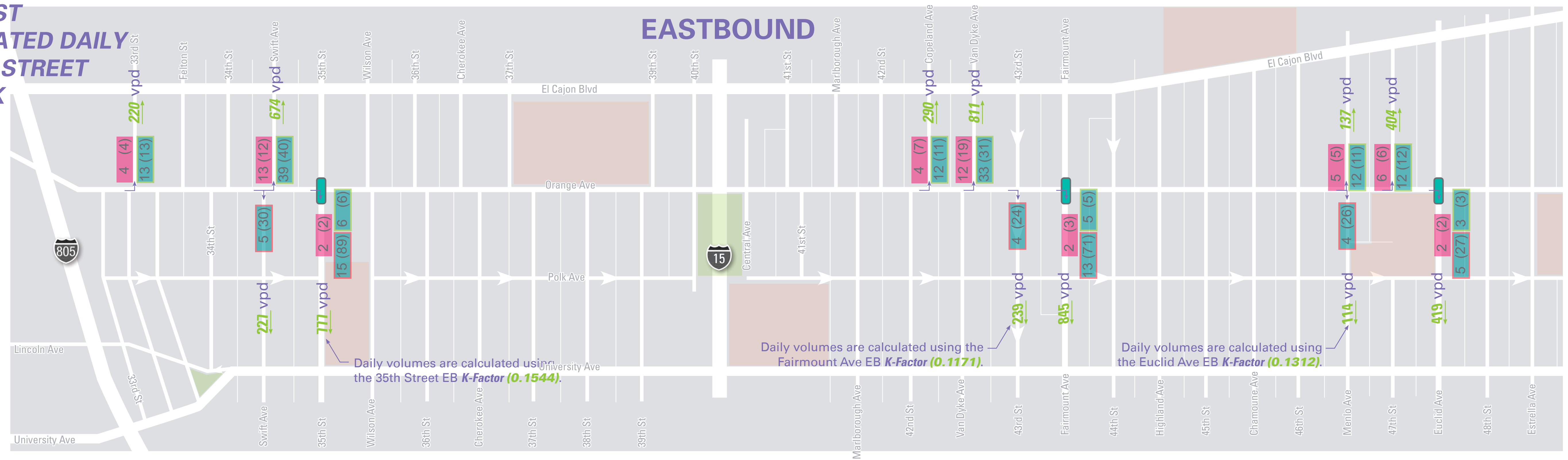
ORANGE BIKEWAY



4D. DIVERSION

PART D:
EAST-WEST
REALLOCATED DAILY
TRIPS ON STREET
NETWORK

To calculate the number of trips reallocated to each street around the channelizer medians the turning movements are divided by the associated **K-Factor**. The expected reallocated daily traffic on each north-south street as created by the diversion of east-west traffic is shown below. The existing right turn volumes are not included in this calculation, since they are not new vehicles being added to the streets.



* The El Cajon Complete Boulevard Plan proposes a raised median at 48th Street that would prohibit NB to WB left turns from 48th Street onto El Cajon Boulevard. However, funding sources and a proposed construction date have not yet been identified at this time so this exhibit does not take them into account. When the median is constructed, the turns expected to be made at 48th Street due to the channelizer medians would likely shift to other parallel facilities, such as Winona Avenue.



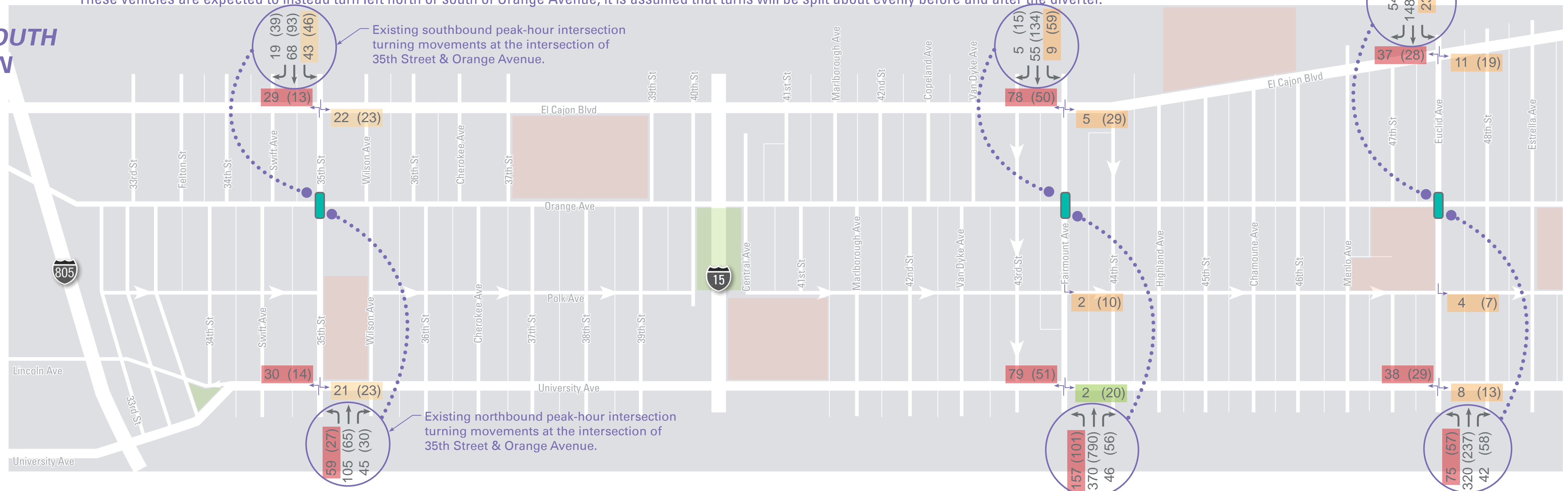
NORTH PARK | MID-CITY BIKEWAYS

ORANGE BIKEWAY



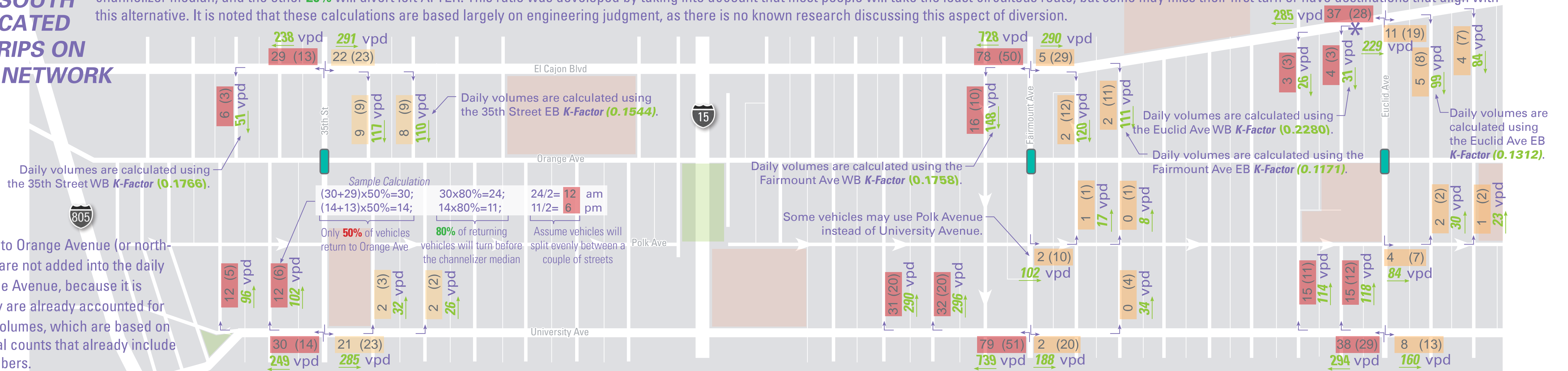
4E. DIVERSION
PART E:
NORTH-SOUTH
DIVERSION

With the installation of the channelizer medians, northbound and southbound vehicles will no longer be able to turn left onto Orange Avenue at 35th Street, Fairmount Avenue, and Euclid Avenue. These vehicles are expected to instead turn left north or south of Orange Avenue; it is assumed that turns will be split about evenly before and after the diverter.



4F. DIVERSION
PART F:
NORTH-SOUTH
REALLOCATED
DAILY TRIPS ON
STREET NETWORK

To estimate the number of reallocated daily trips this change in travel path could place on the north-south streets, similar assumptions are made as those discussed in Step 4B. It is assumed that 50% of the vehicles diverted will not return to Orange Avenue and will continue along one of the east-west parallel streets, and therefore not create additional load on the north-south streets in the vicinity of the channelizer medians. It is assumed that the other 50% of vehicles will connect back to Orange Avenue using a north-south connector street within a couple blocks of the channelizer medians. Of this 50% returning to Orange Avenue, it is assumed that 80% will divert left BEFORE the channelizer median, and the other 20% will divert left AFTER. This ratio was developed by taking into account that most people will take the least circuitous route, but some may miss their first turn or have destinations that align with this alternative. It is noted that these calculations are based largely on engineering judgment, as there is no known research discussing this aspect of diversion.



* The El Cajon Complete Boulevard Plan proposes a raised median at 47th Street that would prohibit WB to SB left turns. However, funding sources and a proposed construction date have not yet been identified at this time so this exhibit does not take them into account. When the median is constructed, the turns expected to be made at 47th Street would likely shift to other parallel facilities, such as Menlo Avenue.



NORTH PARK | MID-CITY BIKEWAYS

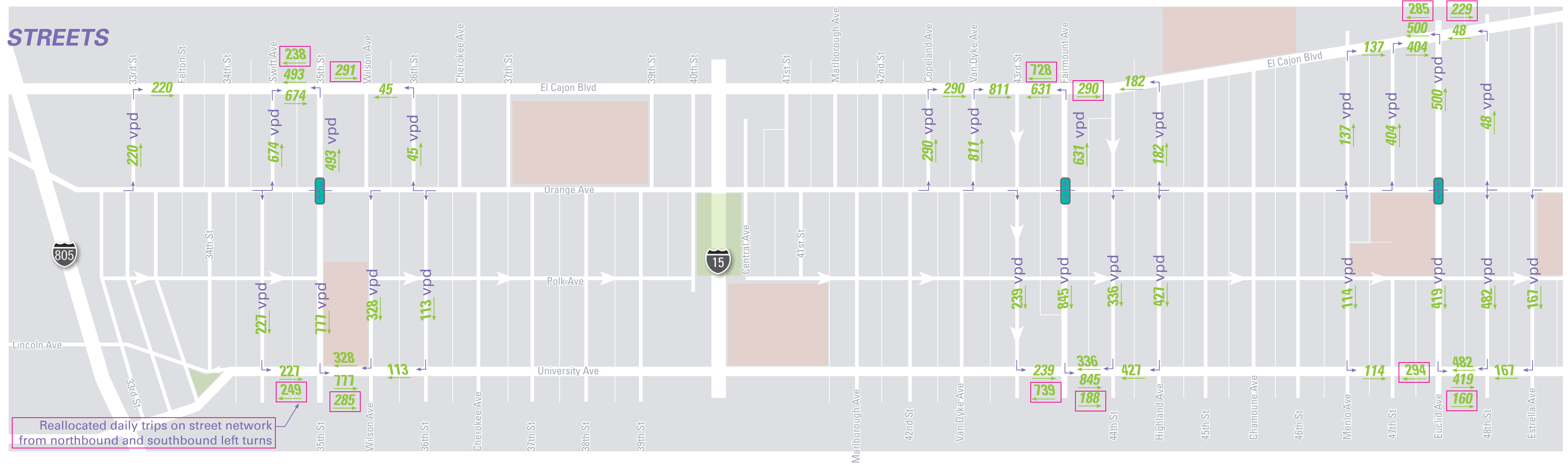
ORANGE BIKEWAY



4G. DIVERSION

**PART G:
TRIPS ON
PARALLEL STREETS**

This exhibit shows where vehicles are expected to travel after local diversion. The daily traffic volumes from Steps 4D and 4F are used to show where and at which direction vehicles are expected to enter El Cajon Boulevard and University Avenue after leaving Orange Avenue.



NORTH PARK | MID-CITY BIKEWAYS

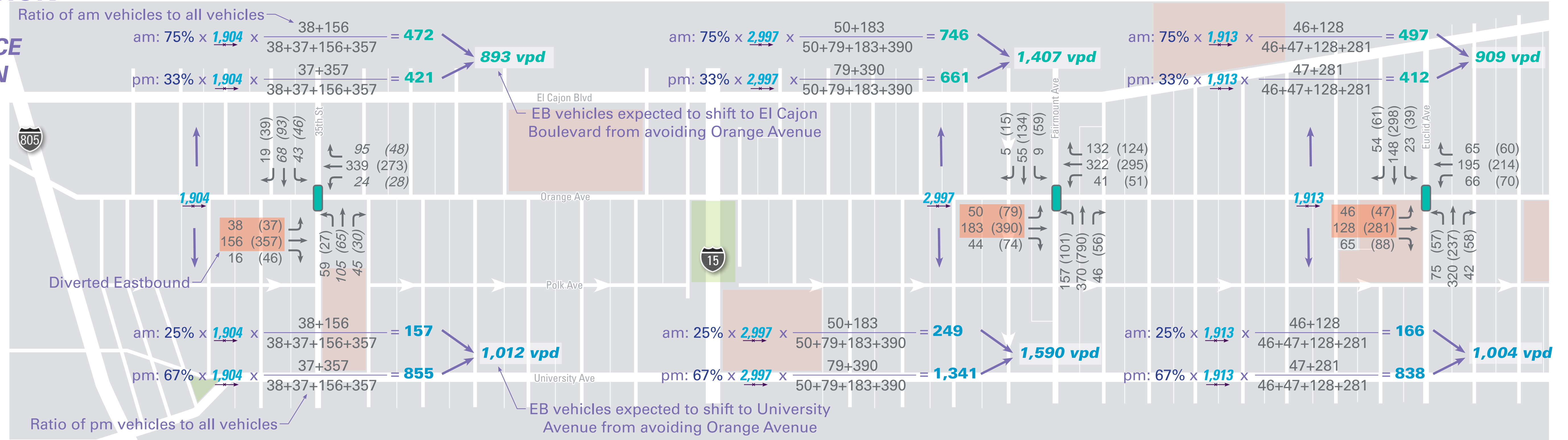
ORANGE BIKEWAY



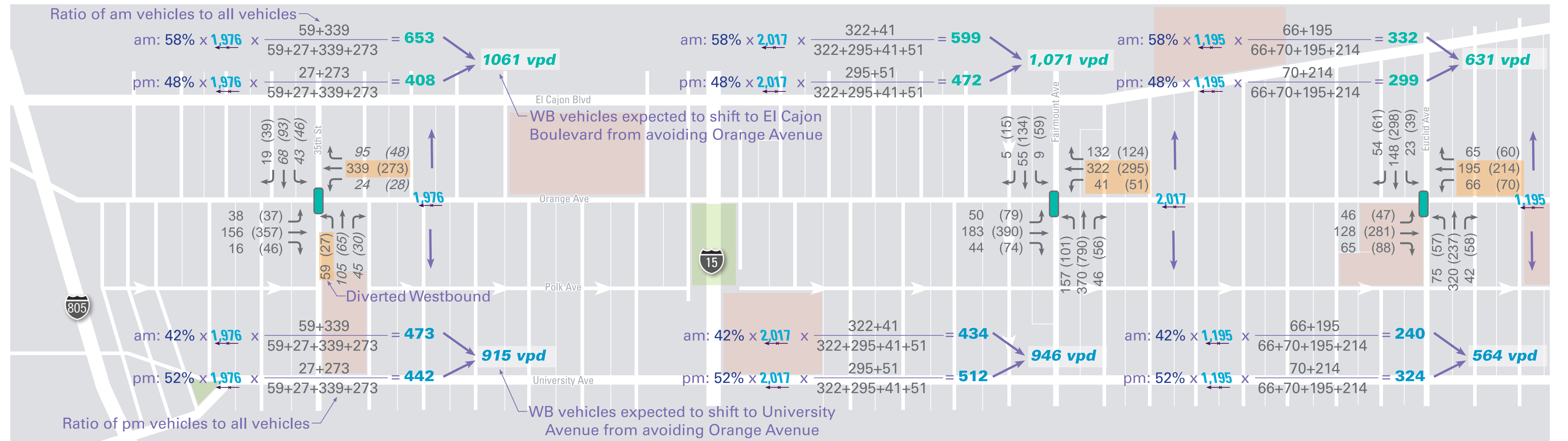
4H. DIVERSION

EASTBOUND: The figure below shows how many of the eastbound vehicles avoiding Orange Avenue are expected to divert north to El Cajon Blvd or south to University Avenue based on the GPS Data and Peak Hour Counts.

**PART H:
AVOIDANCE
DIRECTION**



WESTBOUND: The figure below shows how many of the westbound vehicles avoiding Orange Avenue are expected to divert north to El Cajon Blvd or south to University Avenue based on the GPS Data and Peak Hour Counts.



NORTH PARK | MID-CITY BIKEWAYS

ORANGE BIKEWAY

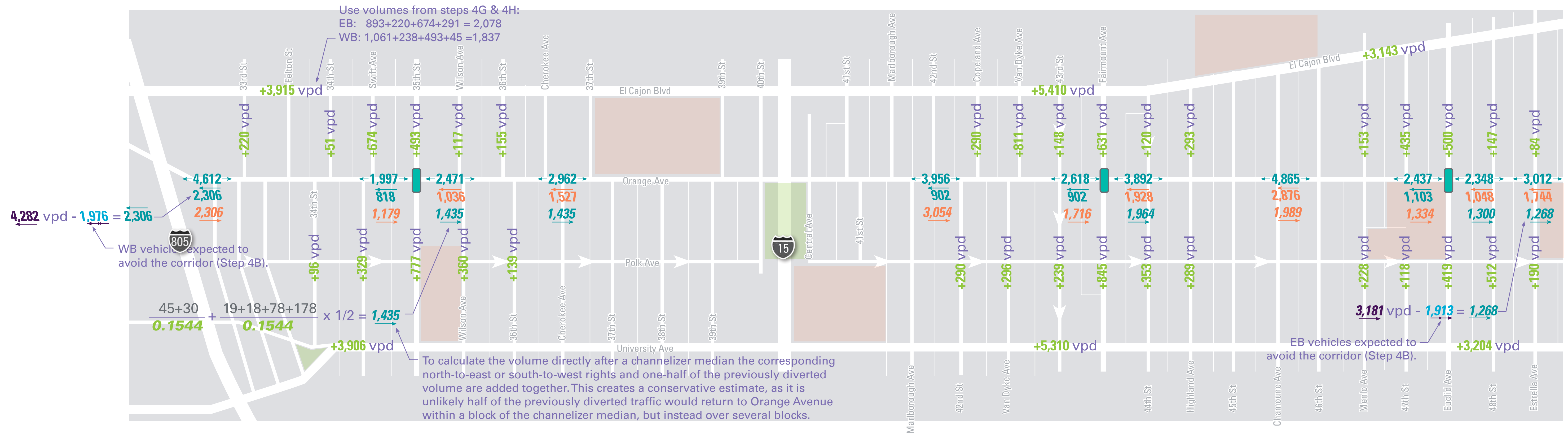


5. EXPECTED DAILY VOLUMES

The exhibit below shows the approximate expected daily volumes on Orange Avenue, El Cajon Boulevard, and University Avenue and the expected change in daily volume on cross streets with the installation of the channelizer medians. While it can't be predicted exactly how drivers will change their routes, this exhibit is meant to show how traffic patterns are likely to change. The daily volume changes were calculated using the *Peak-Hour-to-Daily-Ratio (K-Factor)* from Step 2 and the volumes shown on previous pages.

To calculate the volume directly after a channelizer median (for instance, westbound volumes just west of 35th Street), the corresponding north-to-east or south-to-west rights and one-half of the previously diverted volume are added together. This creates a conservative estimate, as it is unlikely that half of previously diverted traffic would return to Orange Avenue within a block of the channelizer median, but instead over several blocks. A sample calculation is included below; teal values are calculated, orange values are from Step 4C.

The reallocated daily trips on El Cajon Boulevard and University Avenue take into account vehicles no longer traveling on Orange Avenue because of avoidance and east-west and north-south diversion, as shown in the table below. Please refer to the exhibits on pages 1-3 for the simplified summary of expected changes in vehicle travel patterns.



SUMMARY OF REALLOCATED DAILY VOLUMES TO EL CAJON BOULEVARD AND UNIVERSITY AVENUE NEAR CHANNELIZER MEDIAN

		Eastbound			Westbound			Total Additional Daily Trips		
		Avoidance (4H)	East-West Diversion (4D, 4G)	North-South Diversion (4F, 4G)	Eastbound Total	Avoidance (4H)	East-West Diversion (4D, 4G)		North-South Diversion (4F, 4G)	Westbound Total
35th Street	El Cajon Boulevard	893	894	291	2,078	1,061	538	238	1,837	3,915
	University Ave	1,012	1,004	285	2,301	915	441	249	1,605	3,906
Fairmount Ave	El Cajon Boulevard	1,407	1,101	290	2,798	1,071	813	728	2,612	5,410
	University Ave	1,590	1,084	188	2,862	946	763	739	2,448	5,310
Euclid Ave	El Cajon Boulevard	909	541	229	1,679	631	548	285	1,464	3,143
	University Ave	1,004	533	160	1,697	564	649	294	1,507	3,204



NORTH PARK | MID-CITY BIKEWAYS

ORANGE BIKEWAY



APPENDIX C

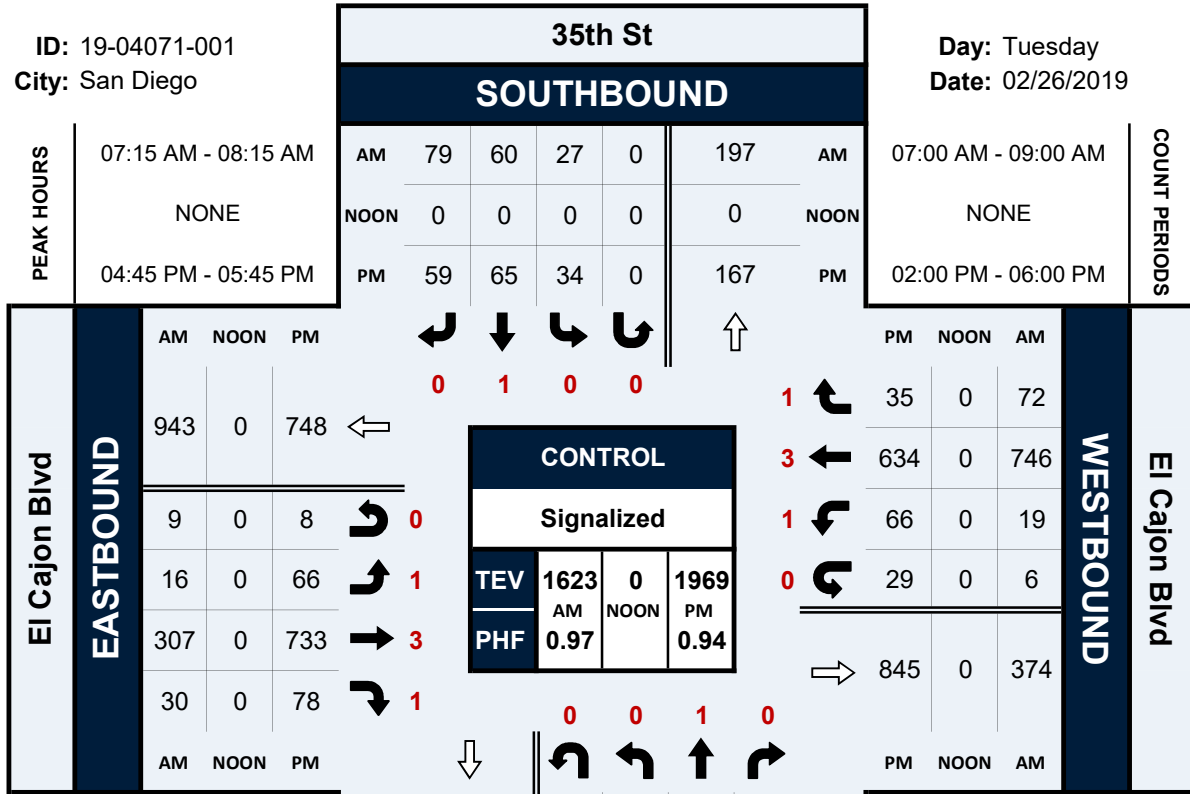
EXISTING TRAFFIC VOLUME DATA

35th St & El Cajon Blvd

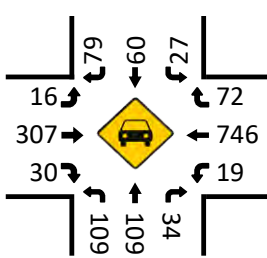
Peak Hour Turning Movement Count

ID: 19-04071-001
City: San Diego

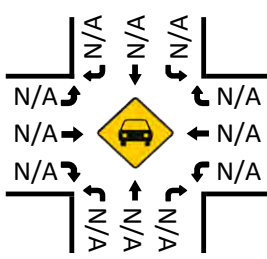
Day: Tuesday
Date: 02/26/2019



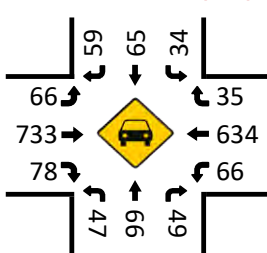
Total Vehicles (AM)



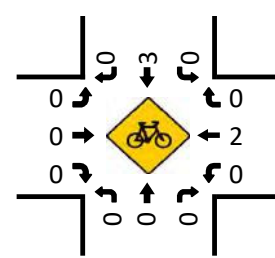
Total Vehicles (Noon)



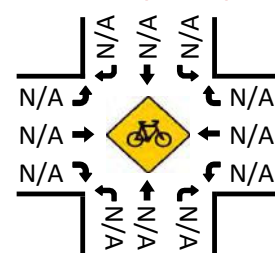
Total Vehicles (PM)



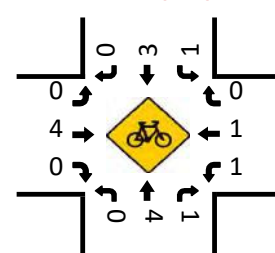
Bikes (AM)



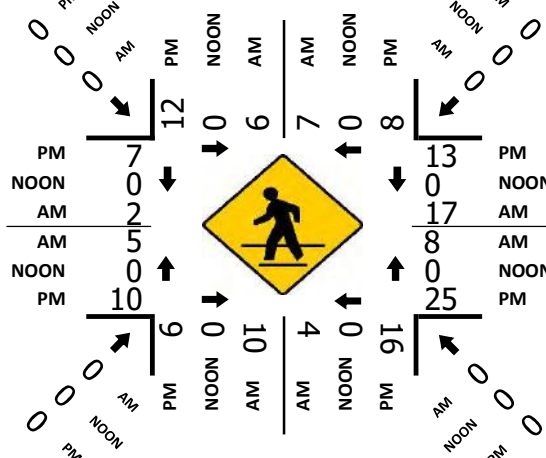
Bikes (NOON)



Bikes (PM)



Pedestrians (Crosswalks)

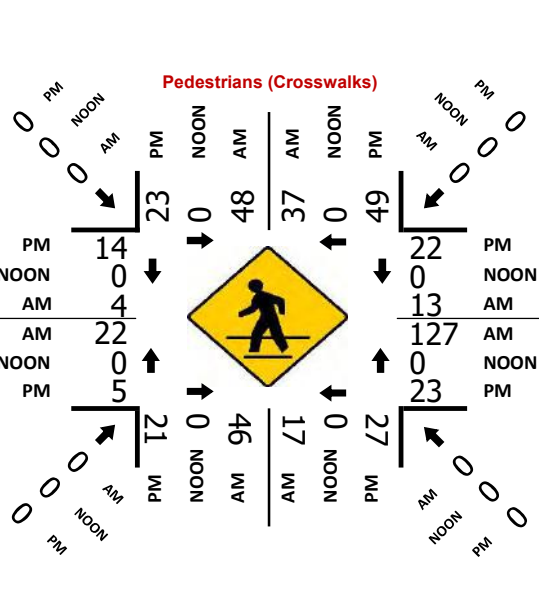
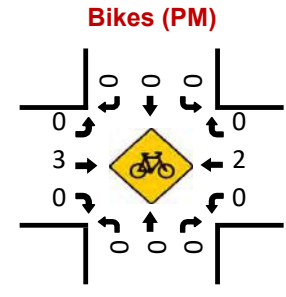
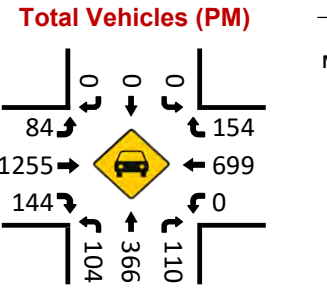
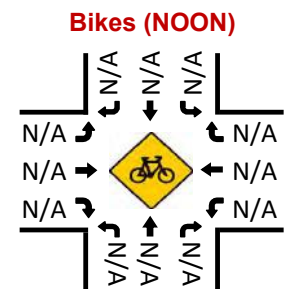
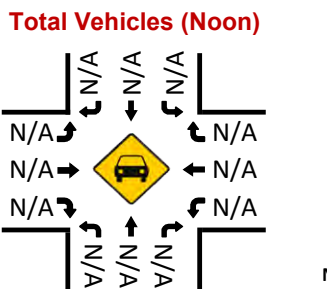
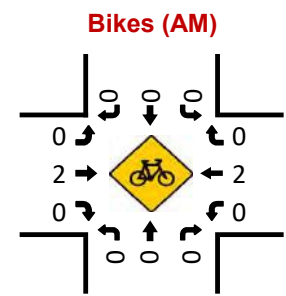
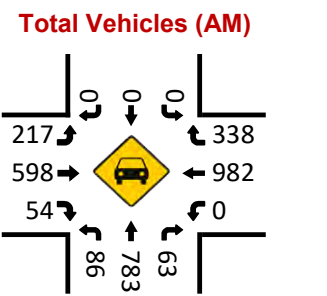
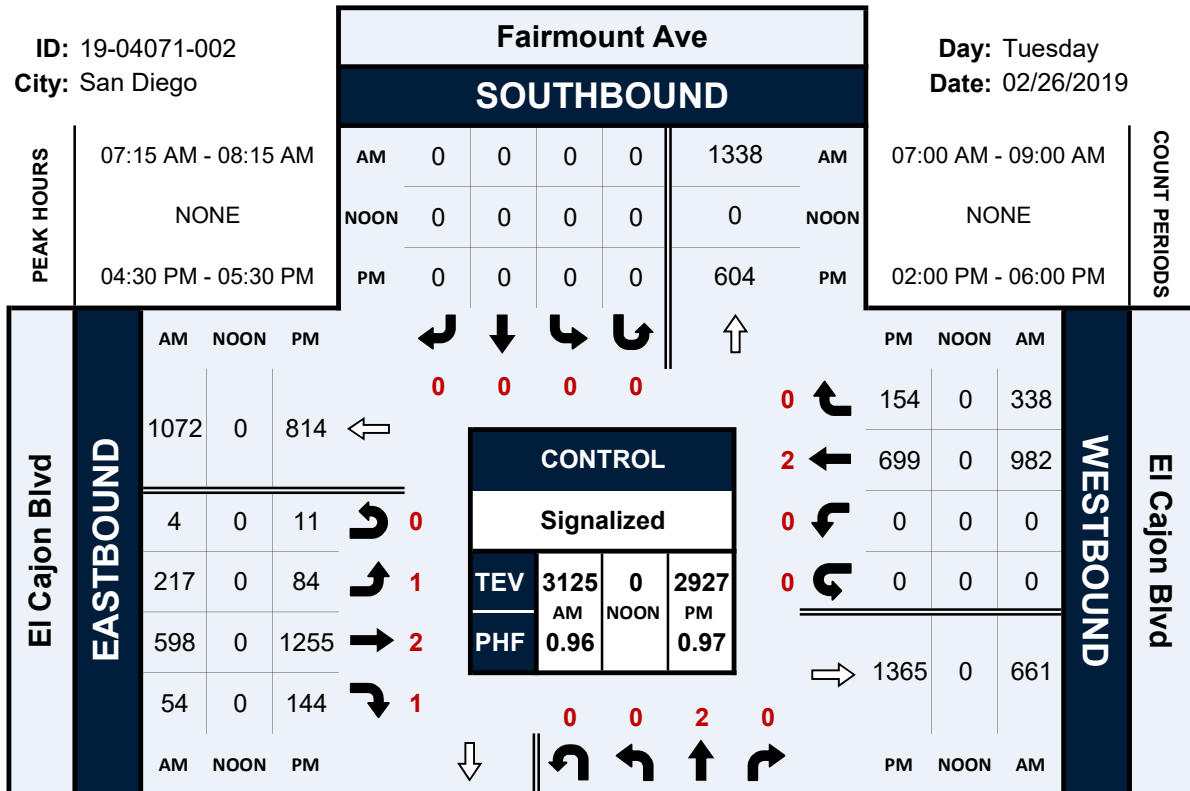


Fairmount Ave & El Cajon Blvd

Peak Hour Turning Movement Count

ID: 19-04071-002
City: San Diego

Day: Tuesday
Date: 02/26/2019

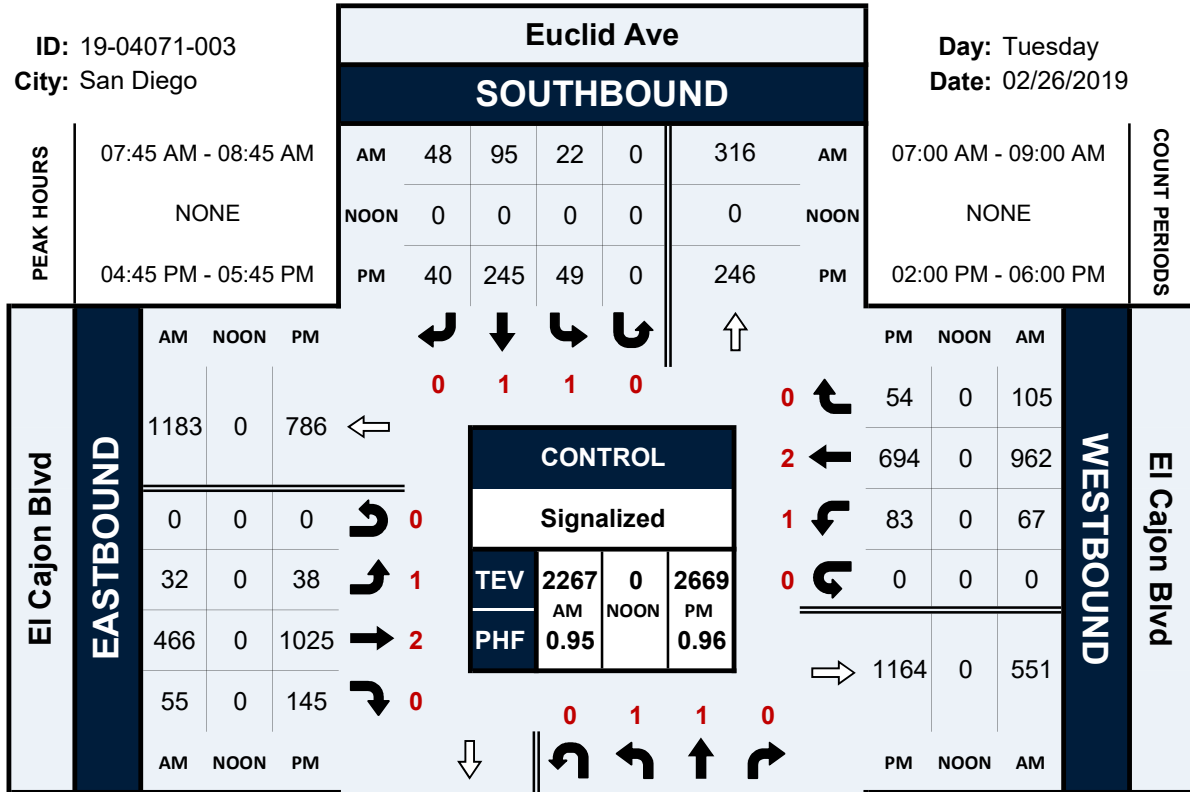


Euclid Ave & El Cajon Blvd

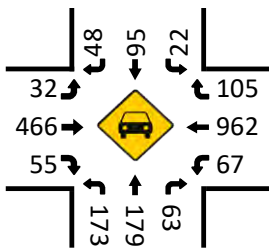
Peak Hour Turning Movement Count

ID: 19-04071-003
City: San Diego

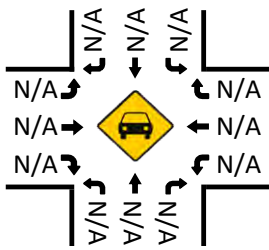
Day: Tuesday
Date: 02/26/2019



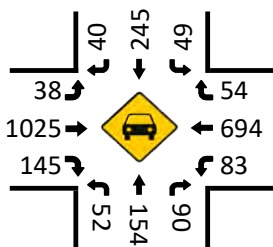
Total Vehicles (AM)



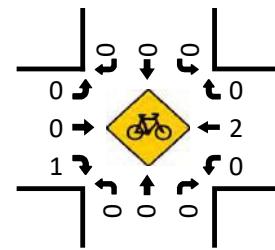
Total Vehicles (Noon)



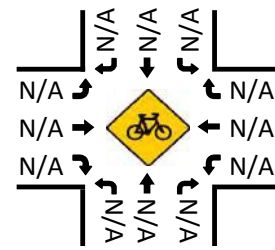
Total Vehicles (PM)



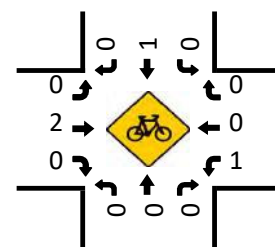
Bikes (AM)



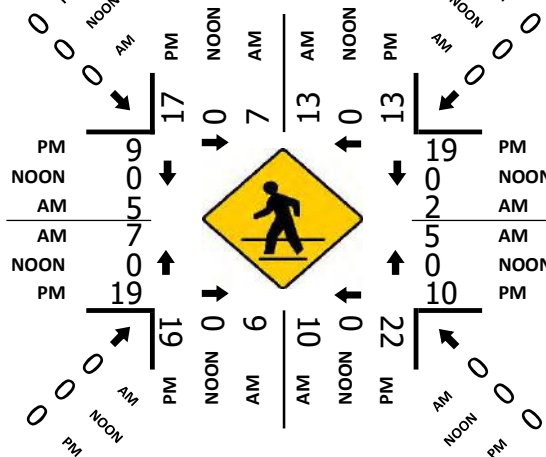
Bikes (Noon)



Bikes (PM)



Pedestrians (Crosswalks)

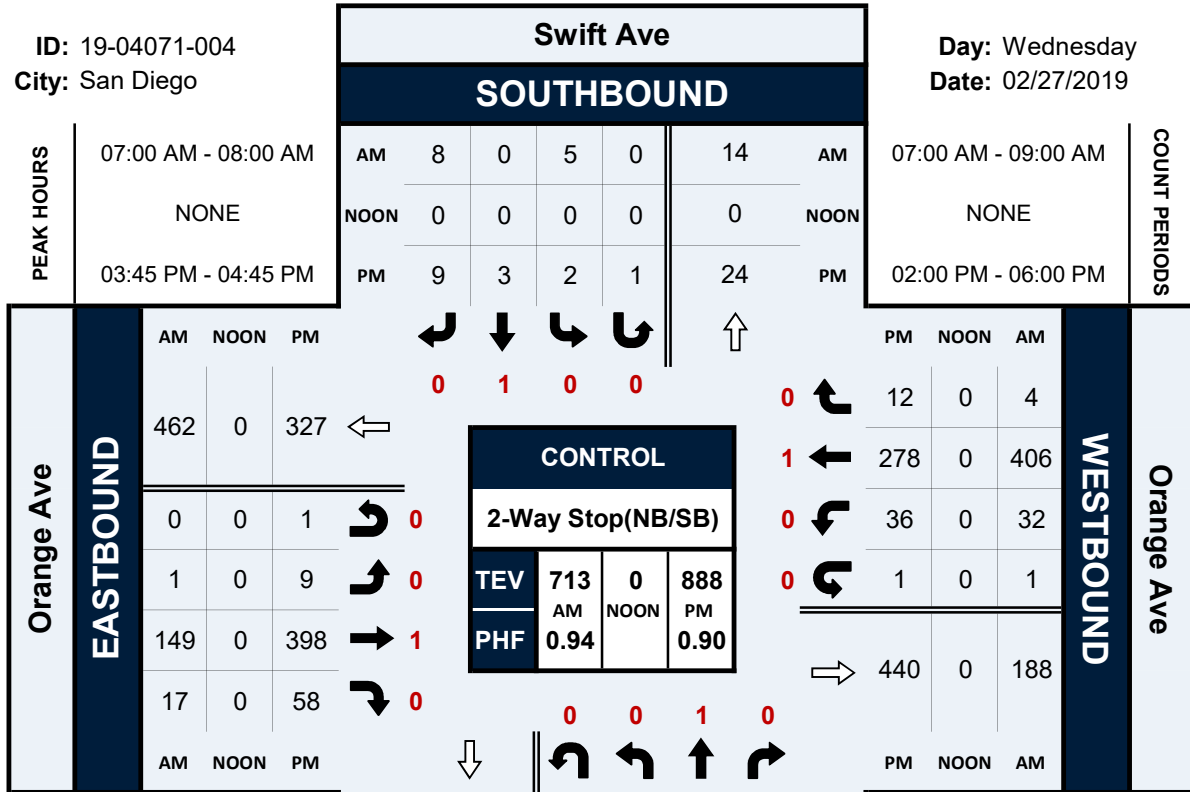


Swift Ave & Orange Ave

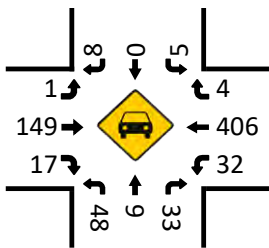
Peak Hour Turning Movement Count

ID: 19-04071-004
City: San Diego

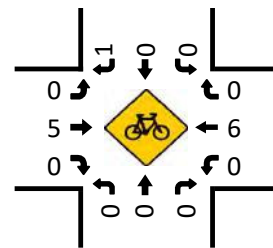
Day: Wednesday
Date: 02/27/2019



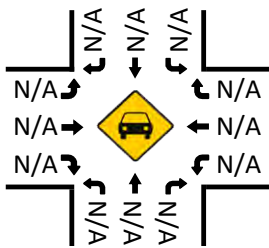
Total Vehicles (AM)



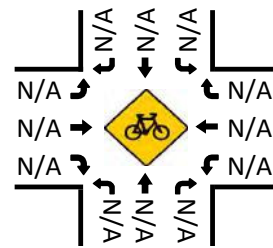
Bikes (AM)



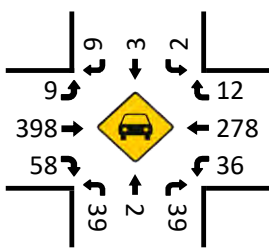
Total Vehicles (Noon)



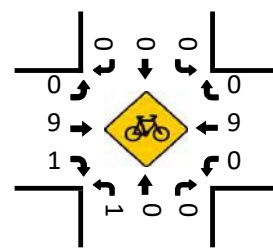
Bikes (NOON)



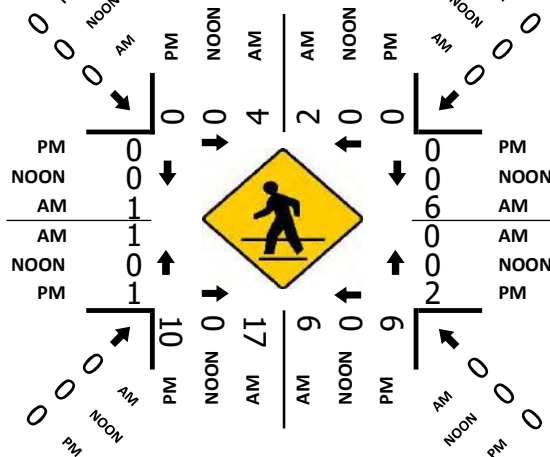
Total Vehicles (PM)



Bikes (PM)



Pedestrians (Crosswalks)

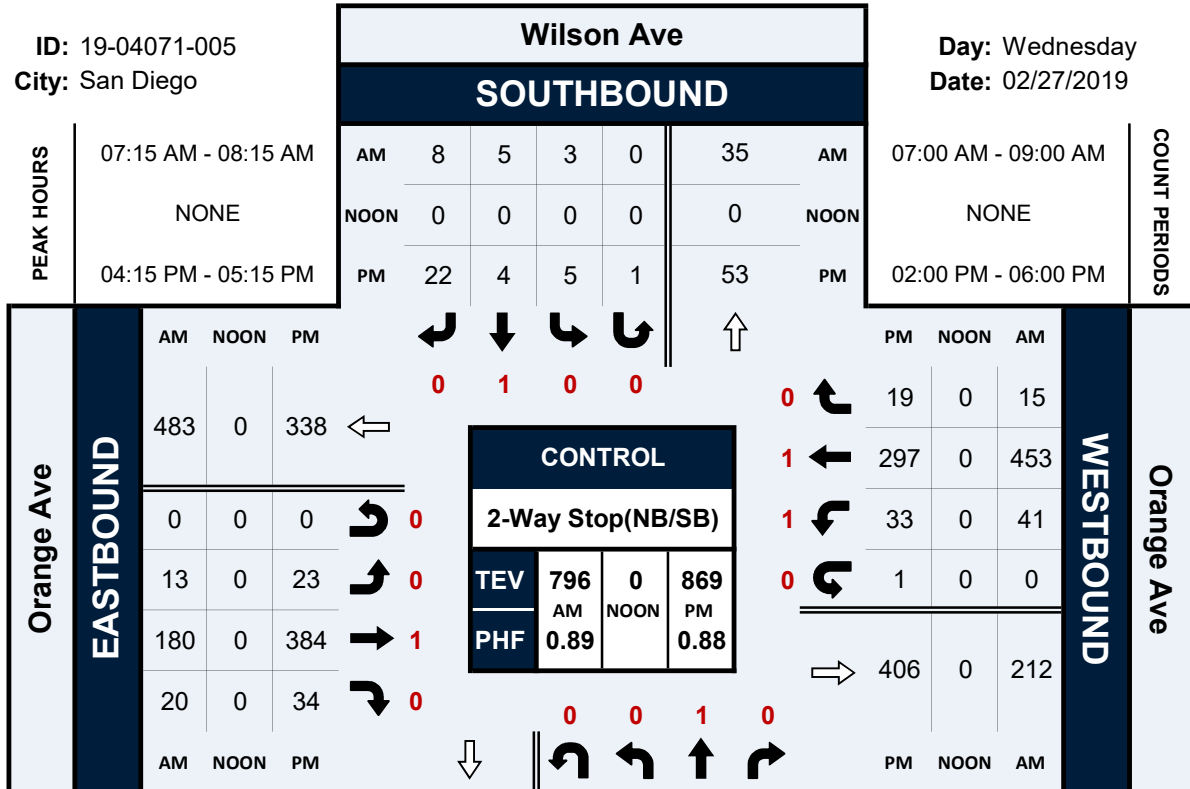


Wilson Ave & Orange Ave

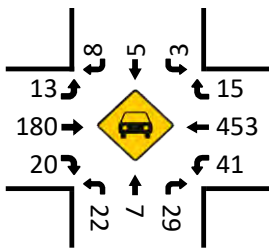
Peak Hour Turning Movement Count

ID: 19-04071-005
City: San Diego

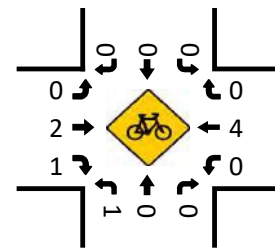
Day: Wednesday
Date: 02/27/2019



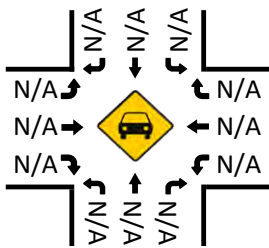
Total Vehicles (AM)



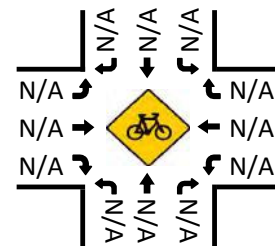
Bikes (AM)



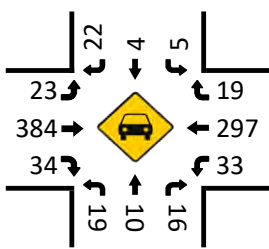
Total Vehicles (Noon)



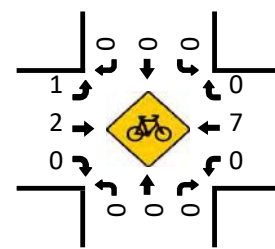
Bikes (NOON)



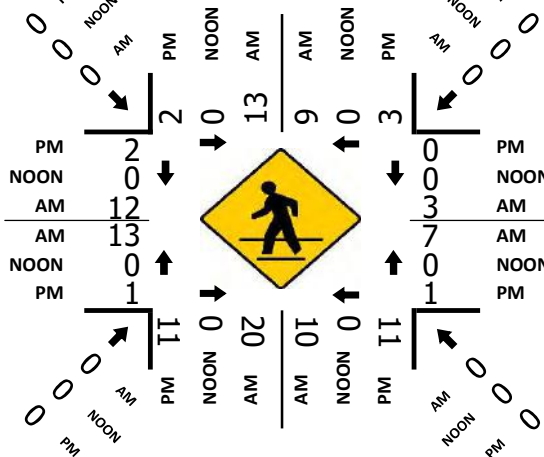
Total Vehicles (PM)



Bikes (PM)



Pedestrians (Crosswalks)

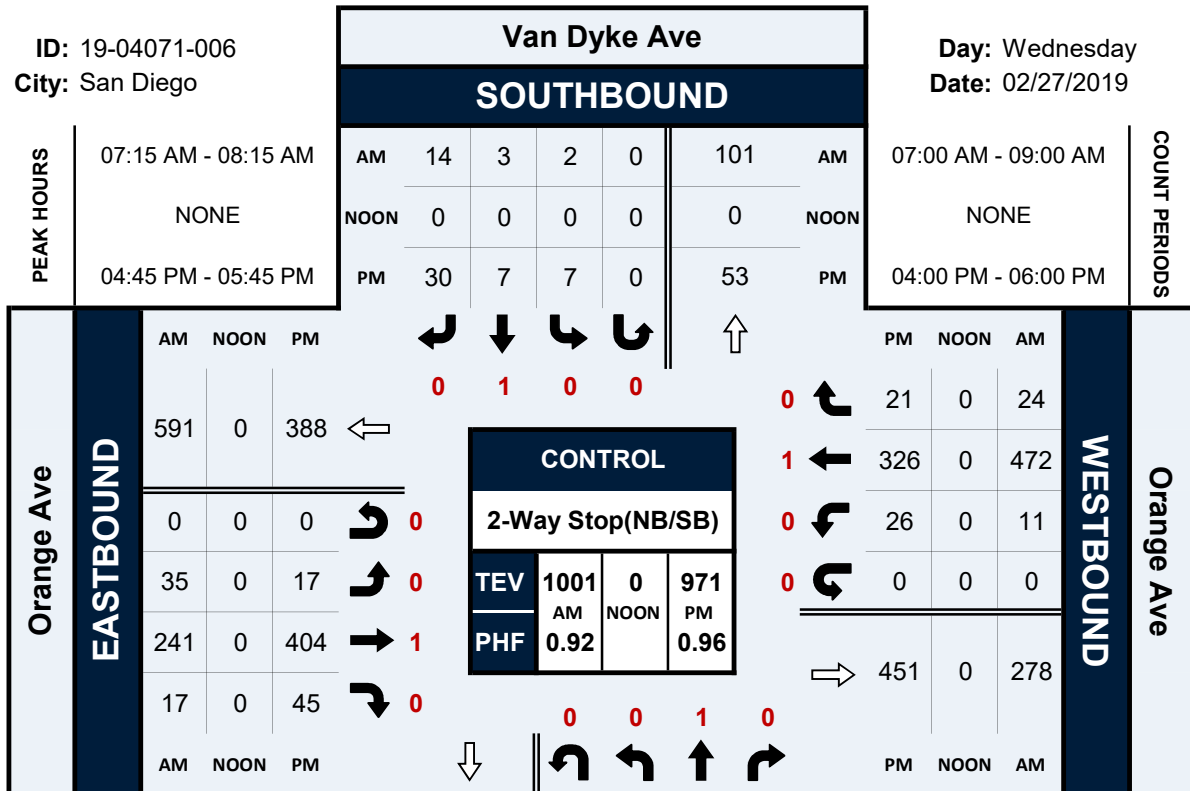


Van Dyke Ave & Orange Ave

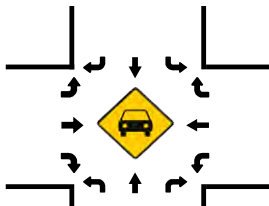
Peak Hour Turning Movement Count

ID: 19-04071-006
City: San Diego

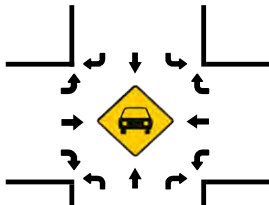
Day: Wednesday
Date: 02/27/2019



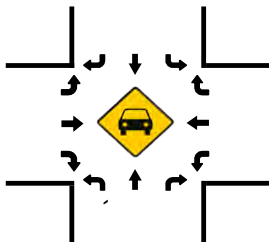
Total Vehicles (AM)



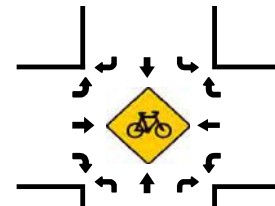
Total Vehicles (Noon)



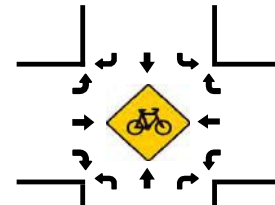
Total Vehicles (PM)



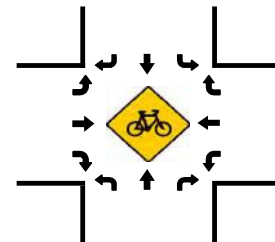
Bikes (AM)



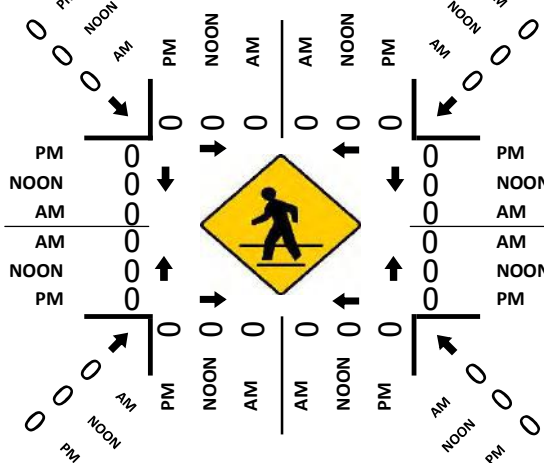
Bikes (NOON)



Bikes (PM)



Pedestrians (Crosswalks)

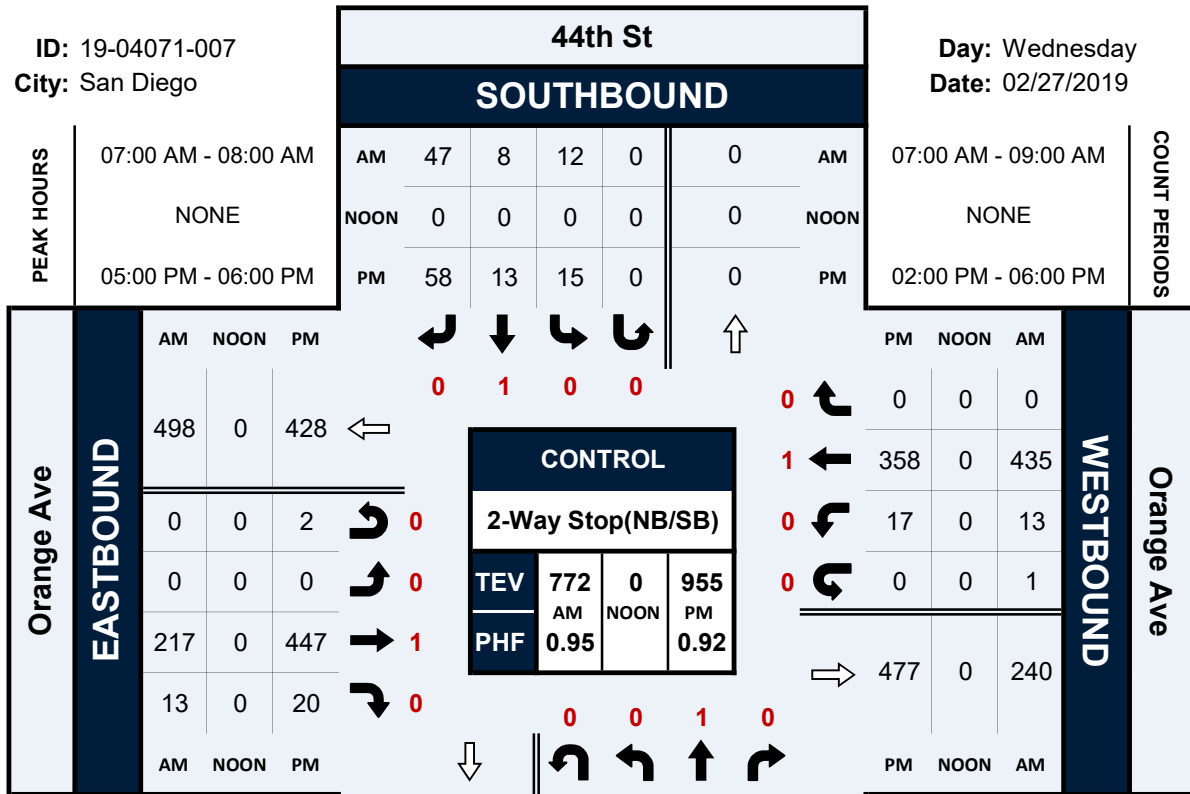


44th St & Orange Ave

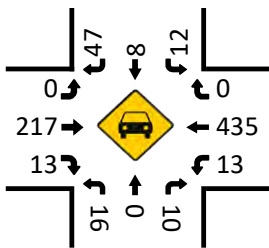
Peak Hour Turning Movement Count

ID: 19-04071-007
City: San Diego

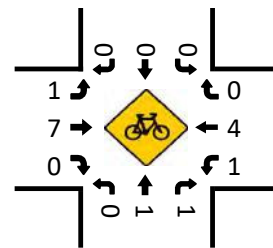
Day: Wednesday
Date: 02/27/2019



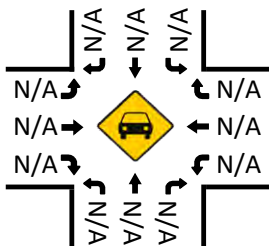
Total Vehicles (AM)



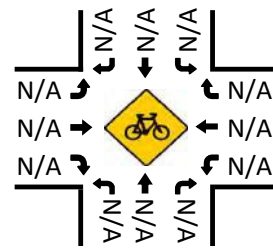
Bikes (AM)



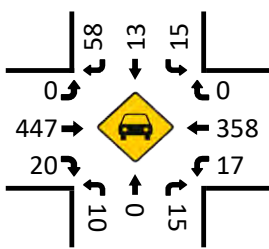
Total Vehicles (Noon)



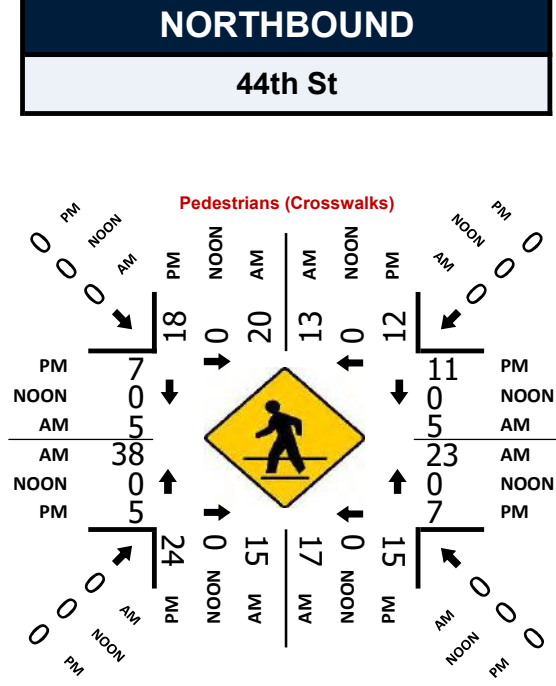
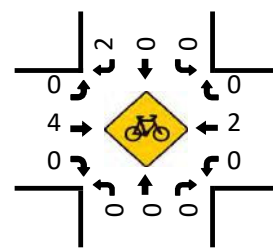
Bikes (Noon)



Total Vehicles (PM)



Bikes (PM)

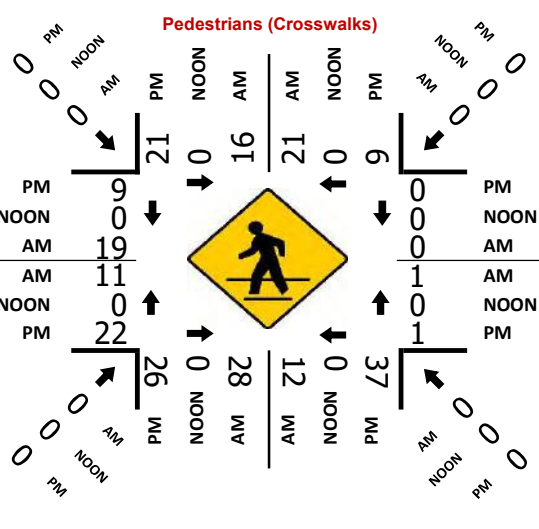
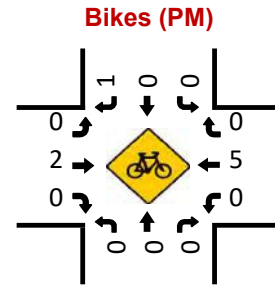
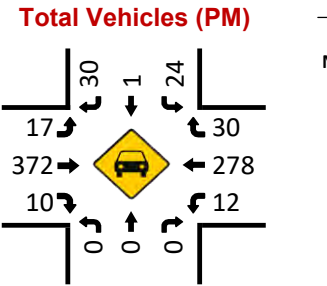
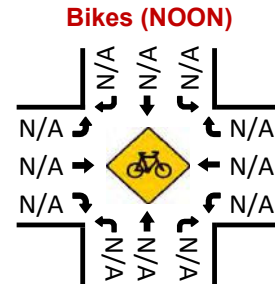
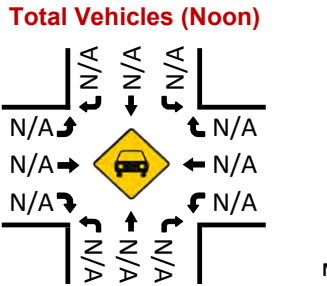
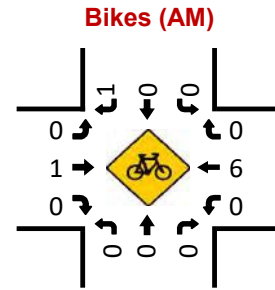
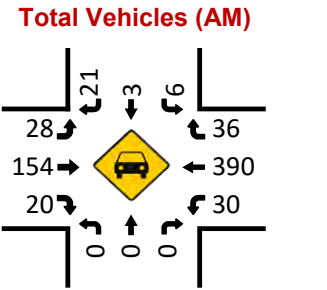
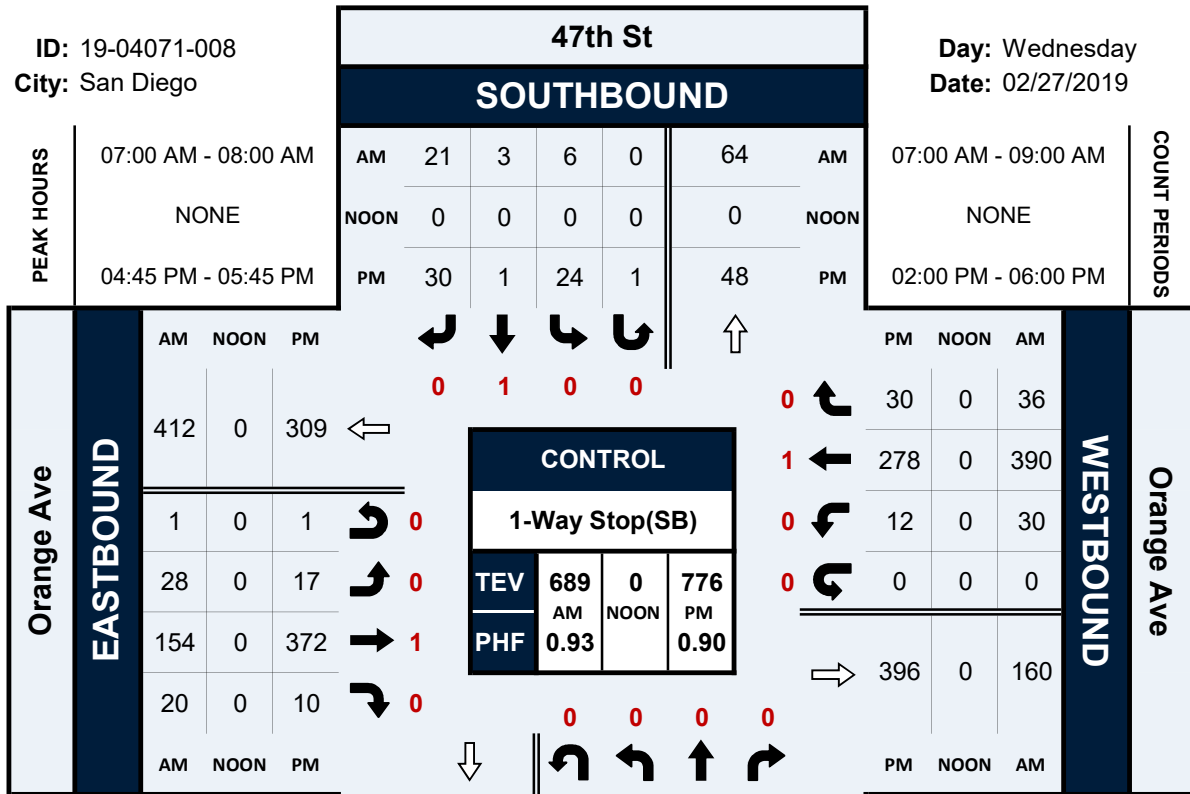


47th St & Orange Ave

Peak Hour Turning Movement Count

ID: 19-04071-008
City: San Diego

Day: Wednesday
Date: 02/27/2019

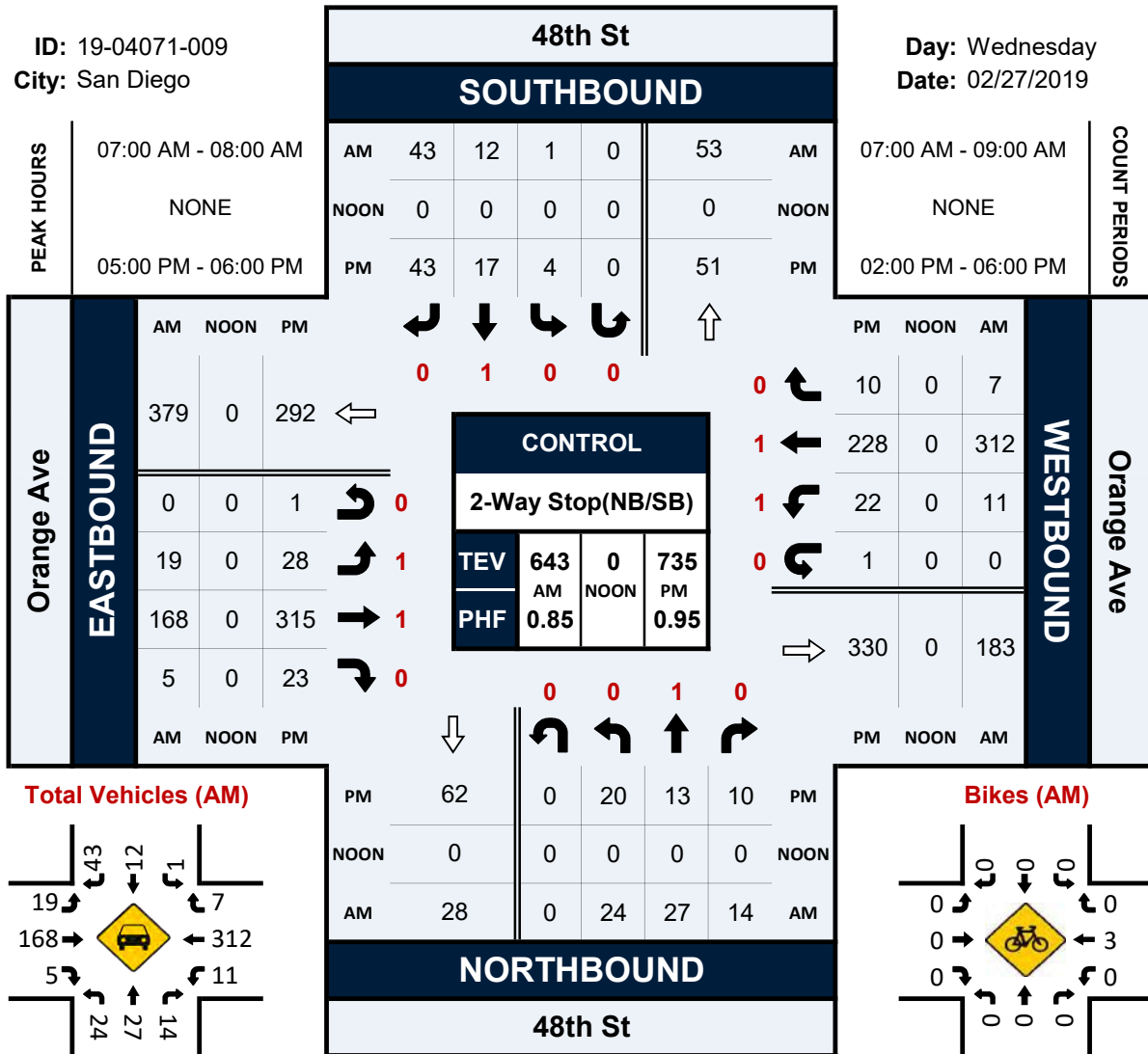


48th St & Orange Ave

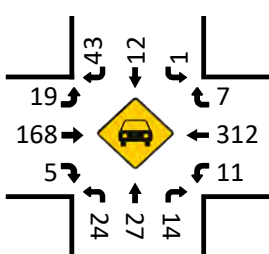
Peak Hour Turning Movement Count

ID: 19-04071-009
City: San Diego

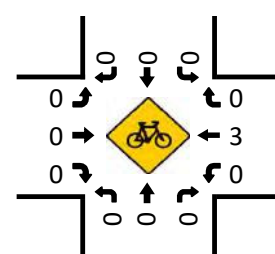
Day: Wednesday
Date: 02/27/2019



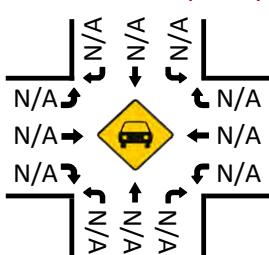
Total Vehicles (AM)



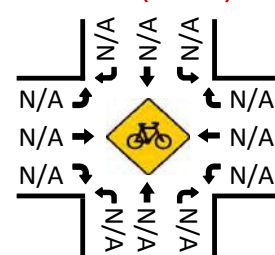
Bikes (AM)



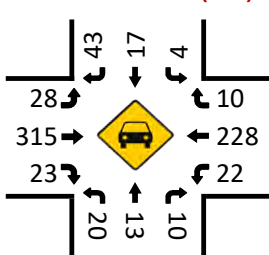
Total Vehicles (Noon)



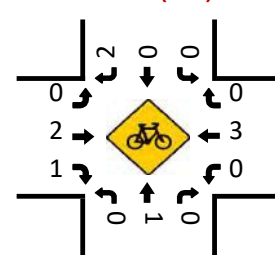
Bikes (NOON)



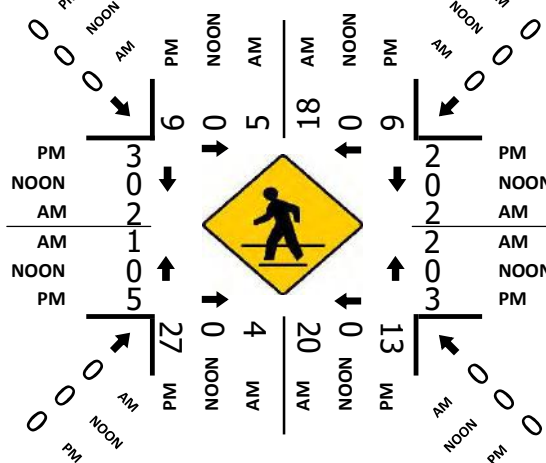
Total Vehicles (PM)



Bikes (PM)



Pedestrians (Crosswalks)

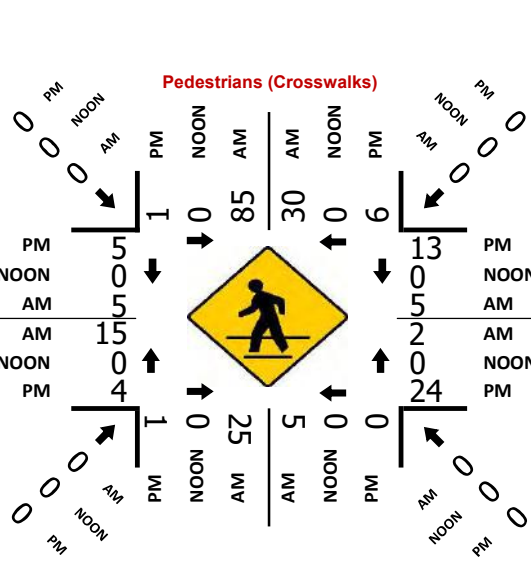
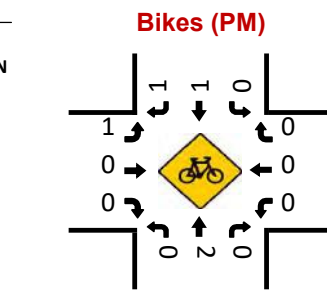
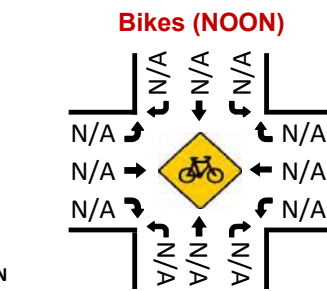
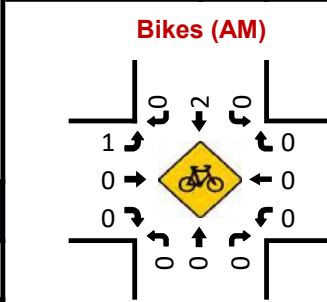
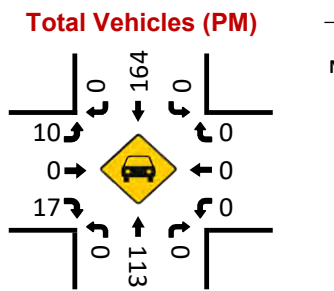
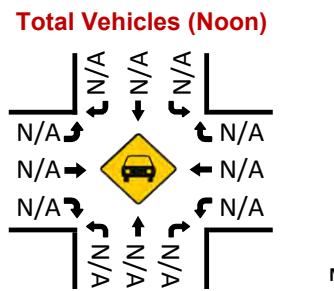
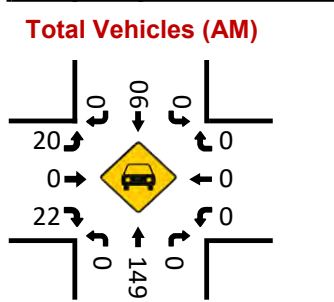
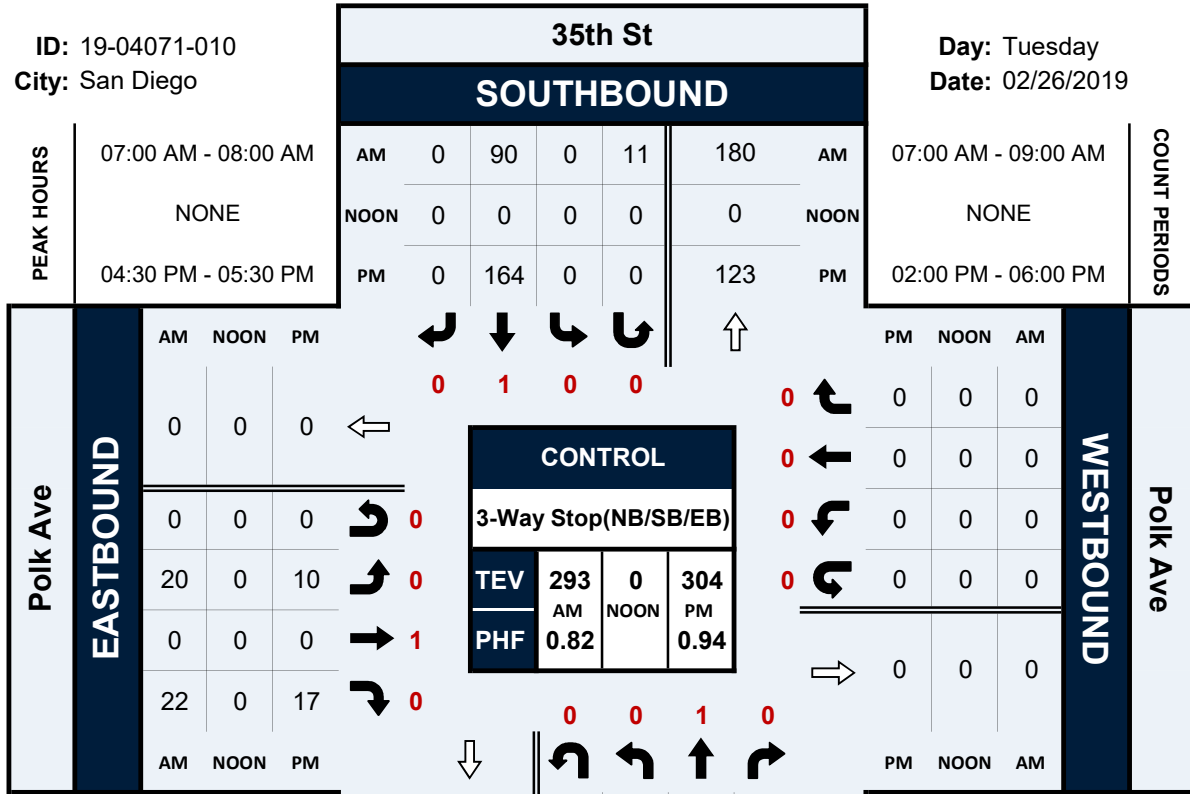


35th St & Polk Ave

Peak Hour Turning Movement Count

ID: 19-04071-010
City: San Diego

Day: Tuesday
Date: 02/26/2019

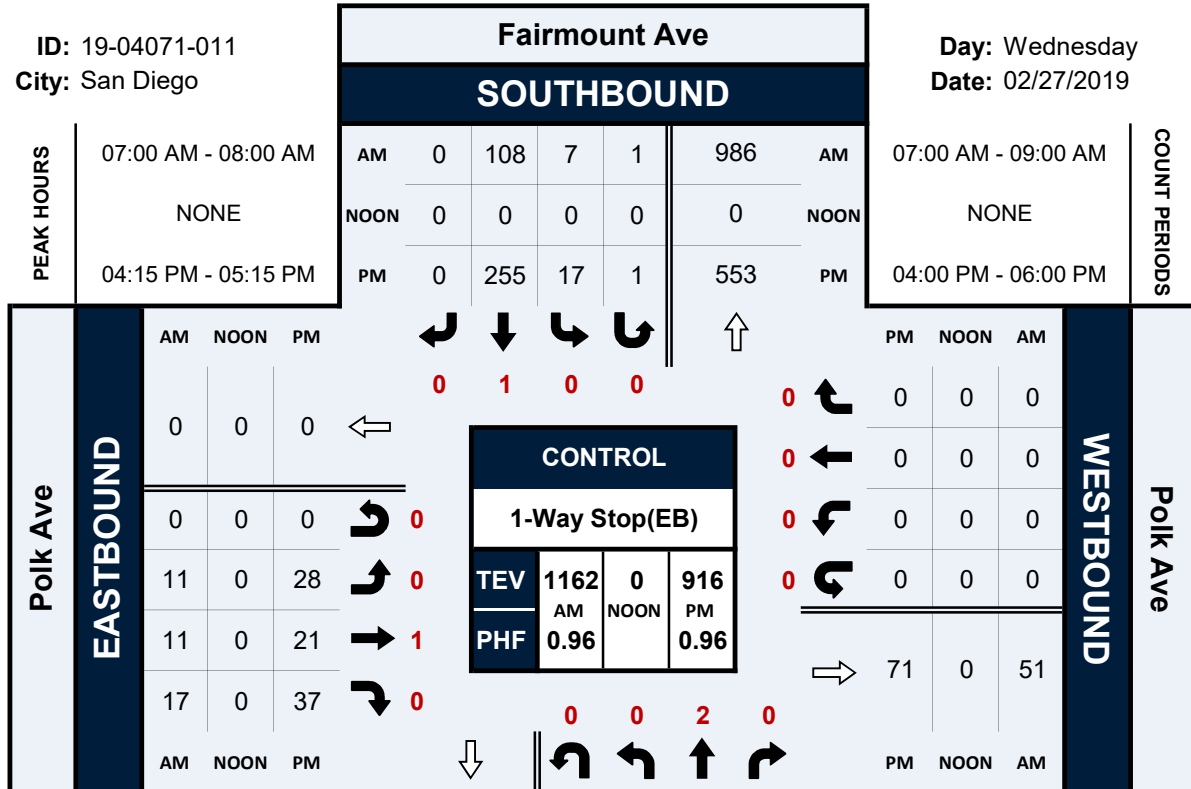


Fairmount Ave & Polk Ave

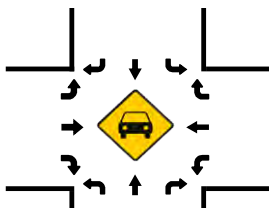
Peak Hour Turning Movement Count

ID: 19-04071-011
City: San Diego

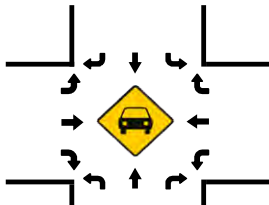
Day: Wednesday
Date: 02/27/2019



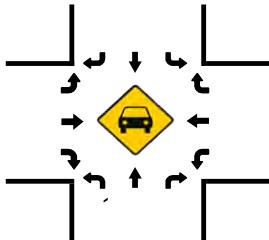
Total Vehicles (AM)



Total Vehicles (Noon)



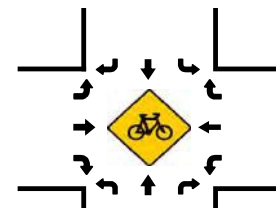
Total Vehicles (PM)



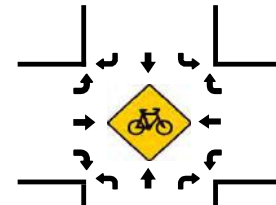
PM	292	0	0	524	33	PM
NOON	0	0	0	0	0	NOON
AM	125	0	0	974	33	AM



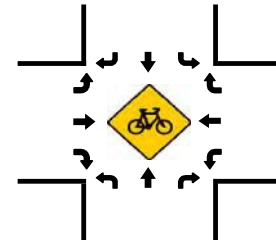
Bikes (AM)



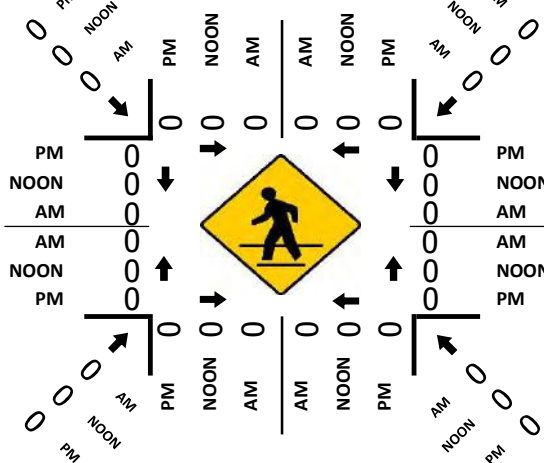
Bikes (NOON)



Bikes (PM)



Pedestrians (Crosswalks)

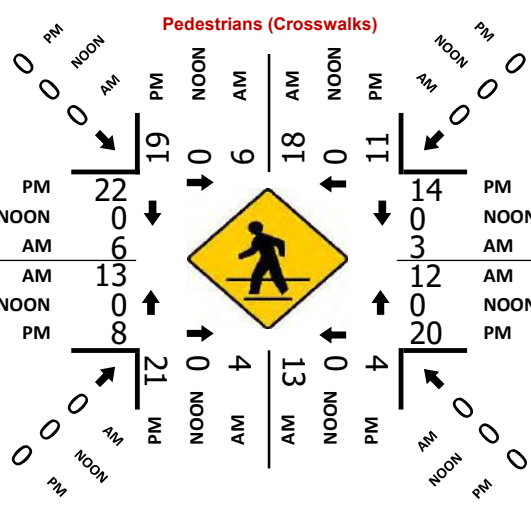
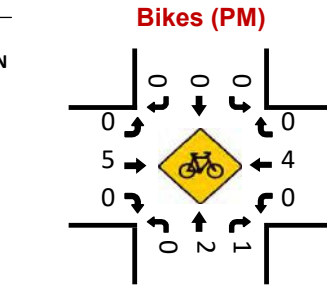
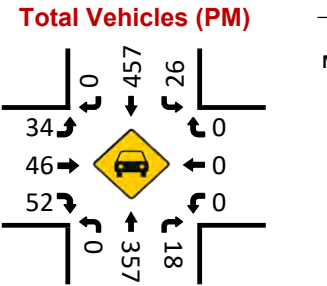
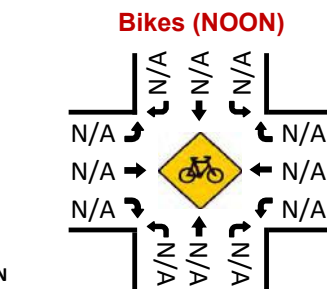
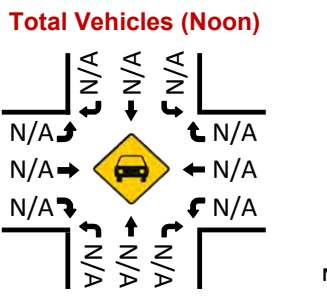
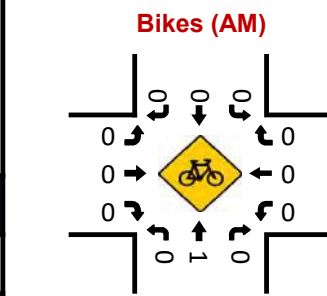
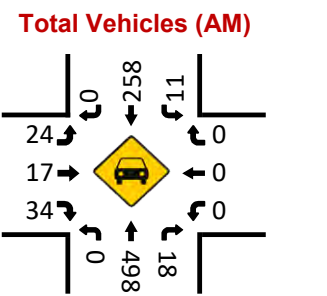
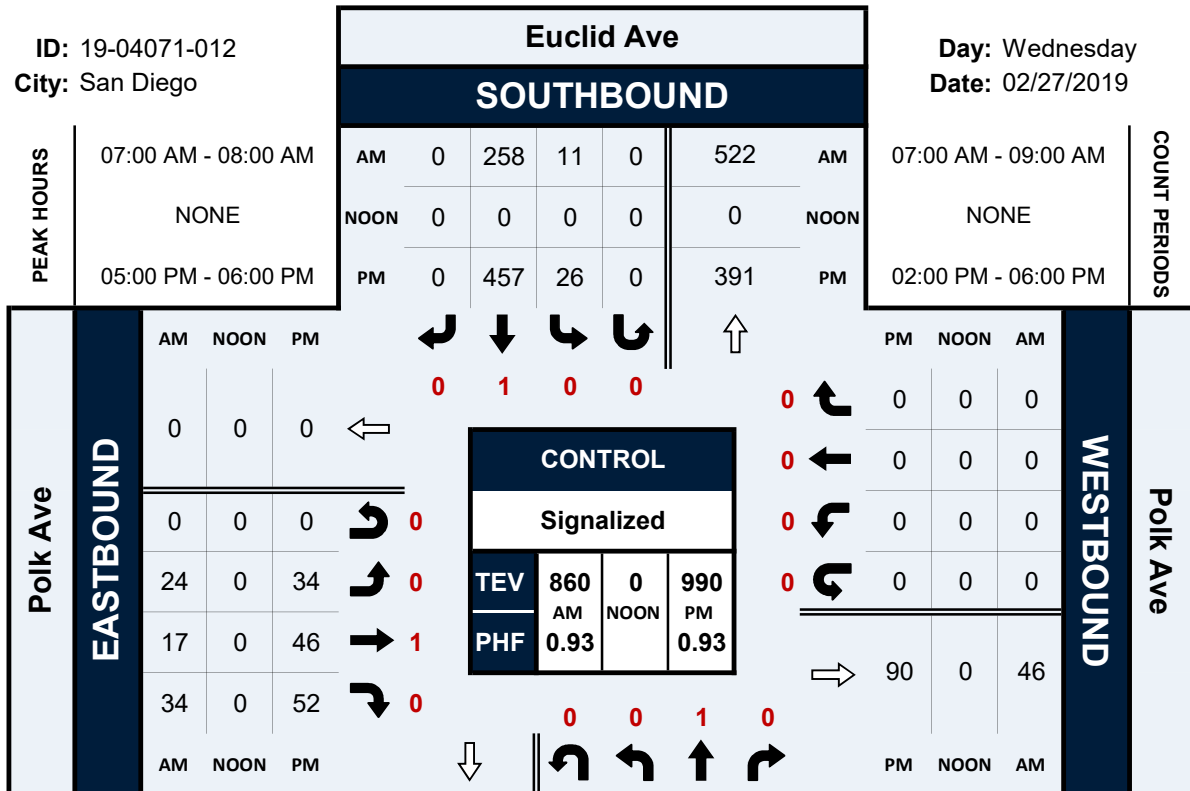


Euclid Ave & Polk Ave

Peak Hour Turning Movement Count

ID: 19-04071-012
City: San Diego

Day: Wednesday
Date: 02/27/2019

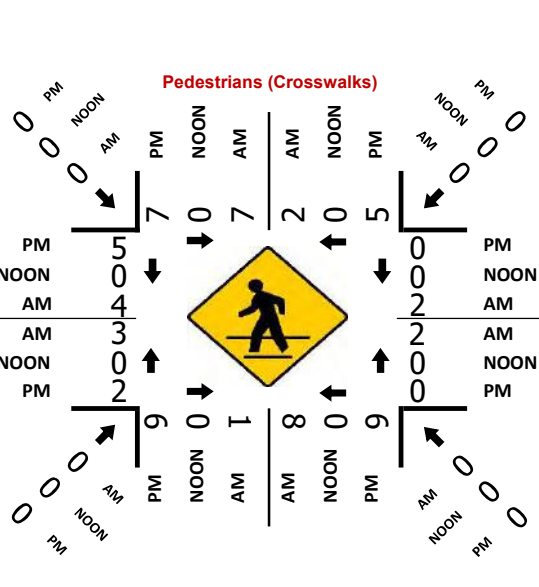
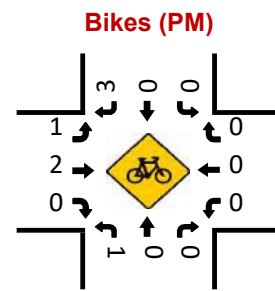
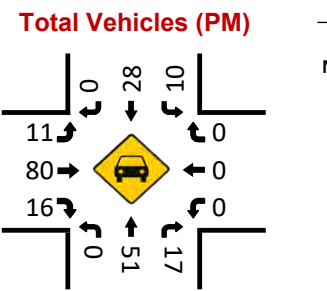
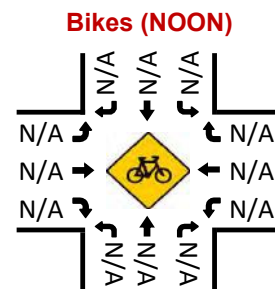
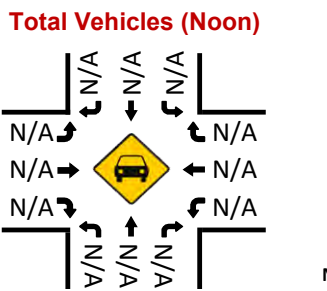
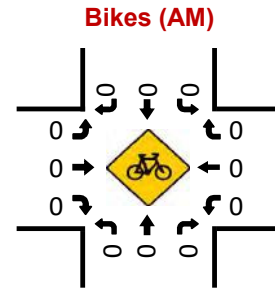
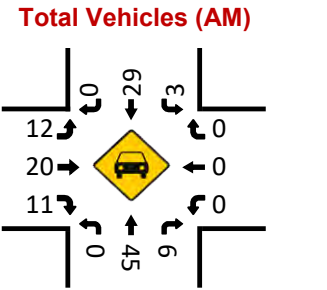
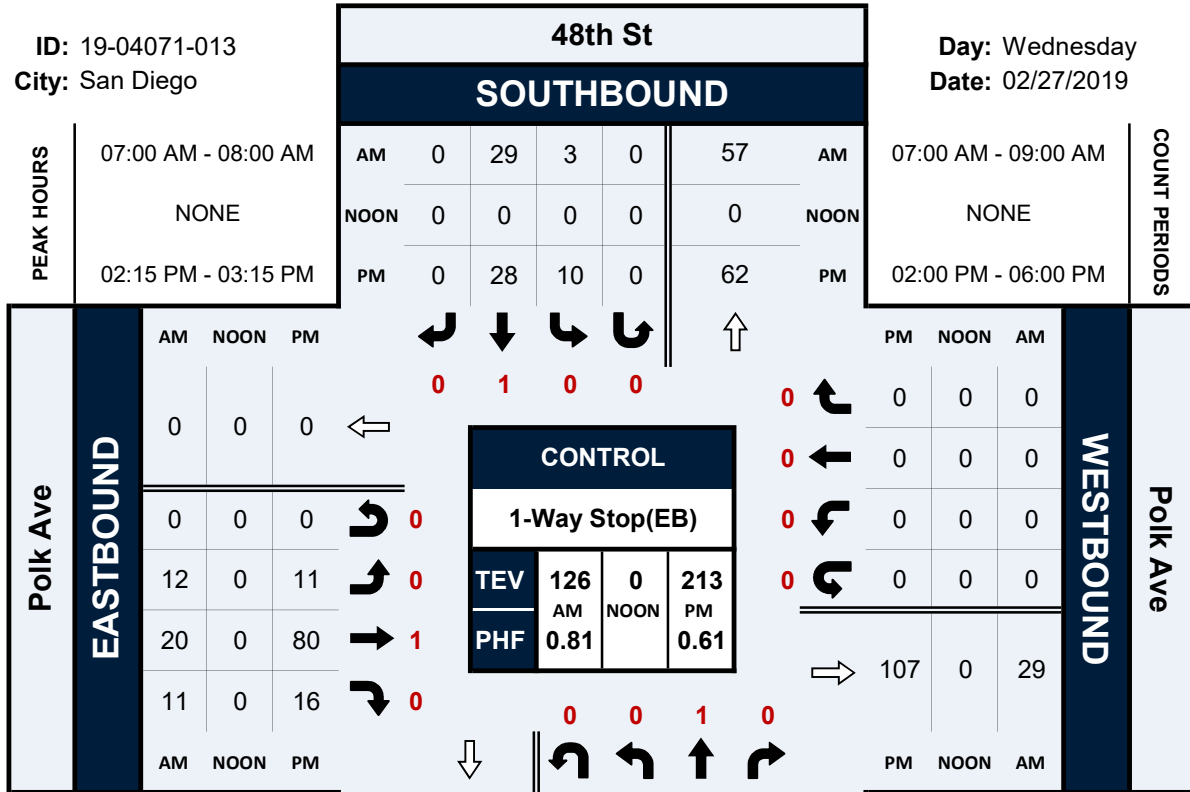


48th St & Polk Ave

Peak Hour Turning Movement Count

ID: 19-04071-013
City: San Diego

Day: Wednesday
Date: 02/27/2019

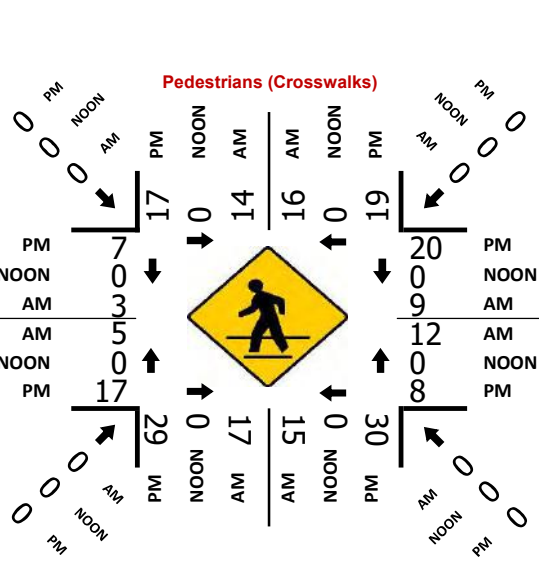
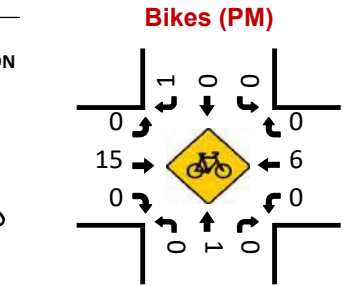
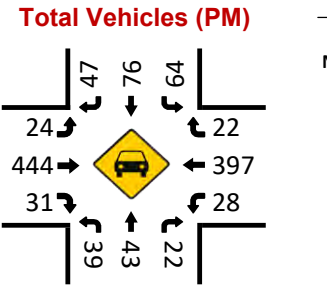
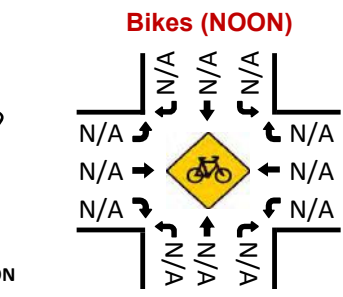
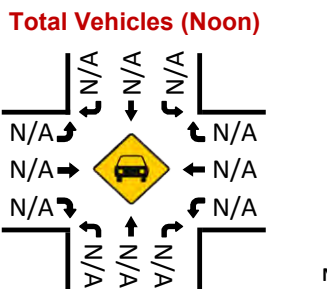
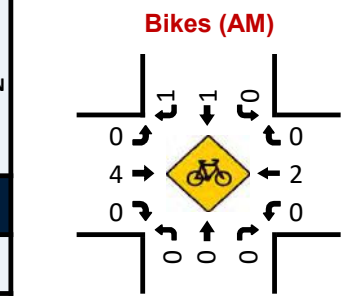
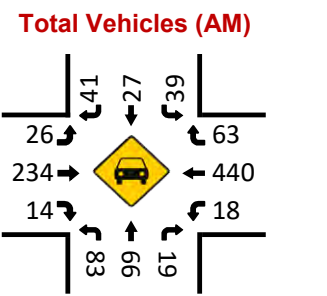
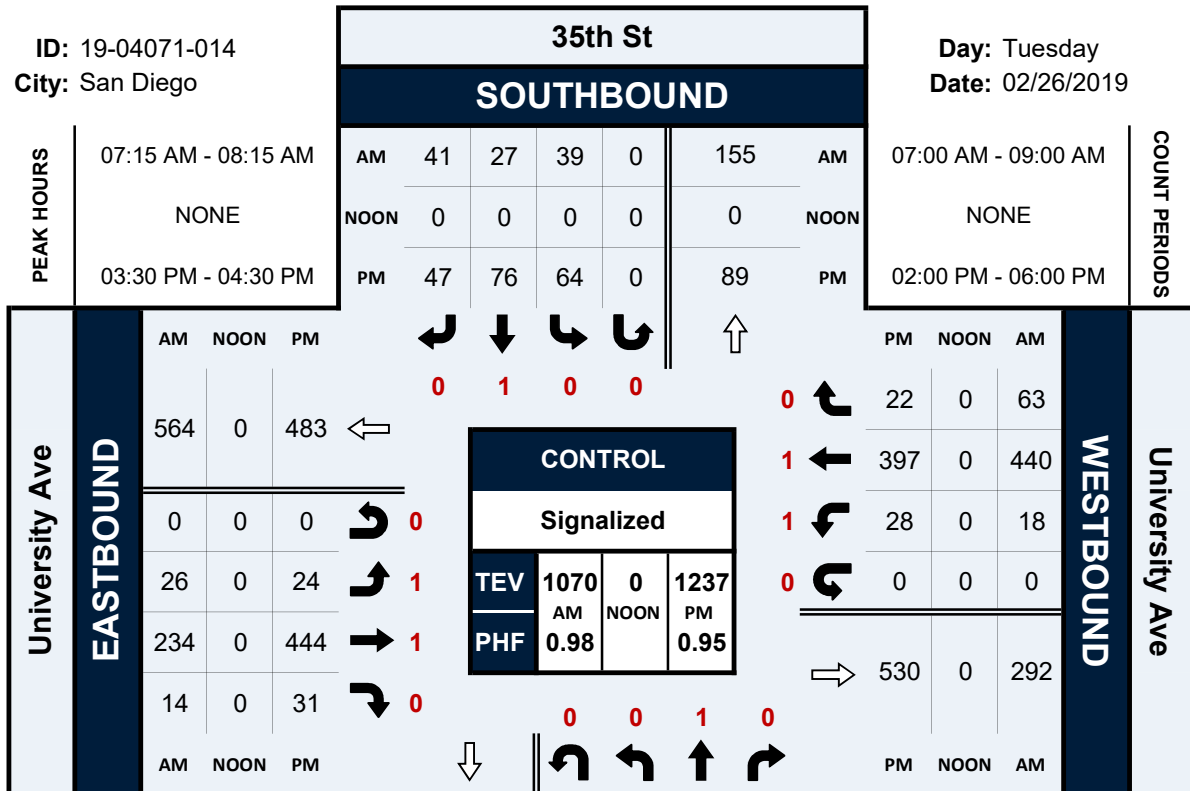


35th St & University Ave

Peak Hour Turning Movement Count

ID: 19-04071-014
City: San Diego

Day: Tuesday
Date: 02/26/2019

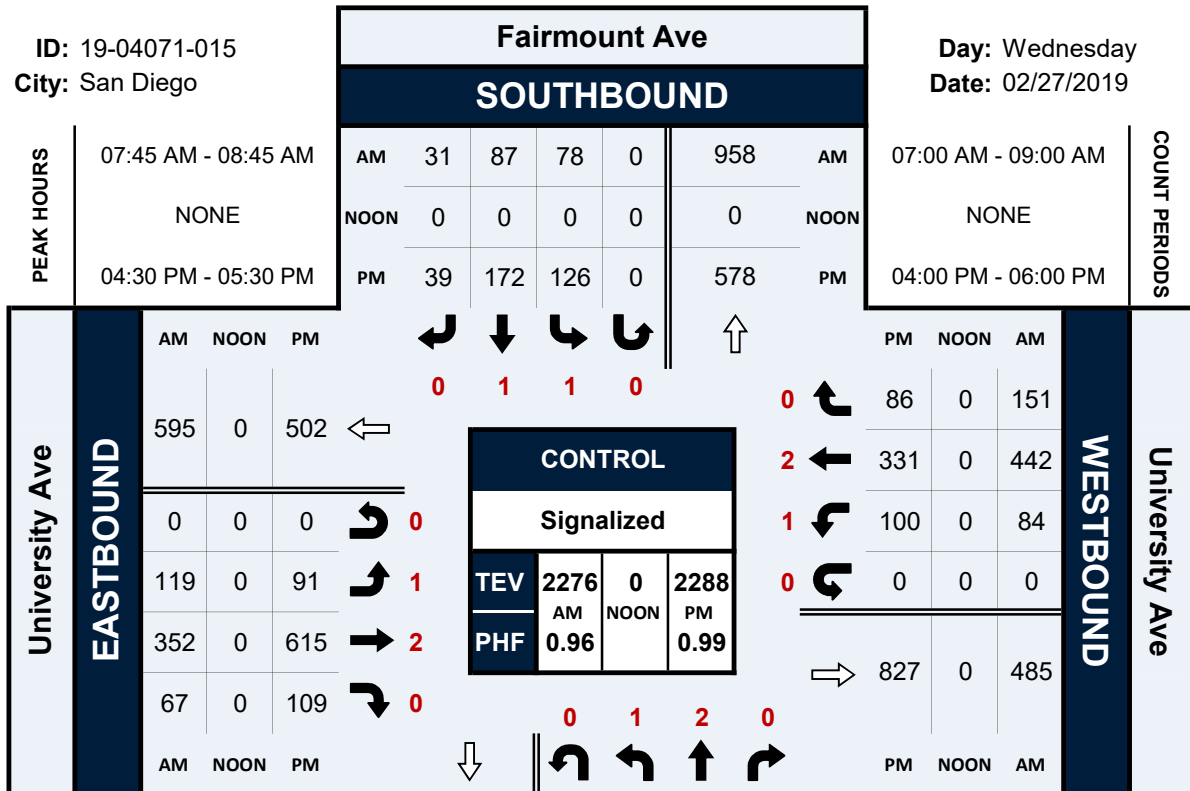


Fairmount Ave & University Ave

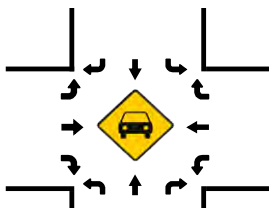
Peak Hour Turning Movement Count

ID: 19-04071-015
City: San Diego

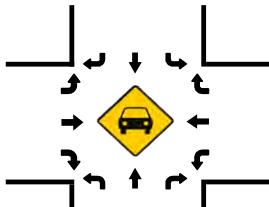
Day: Wednesday
Date: 02/27/2019



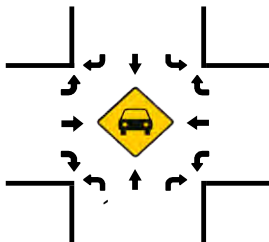
Total Vehicles (AM)



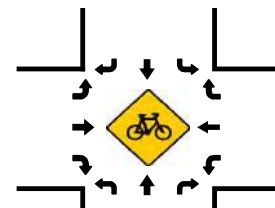
Total Vehicles (Noon)



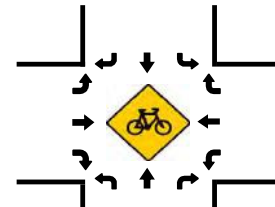
Total Vehicles (PM)



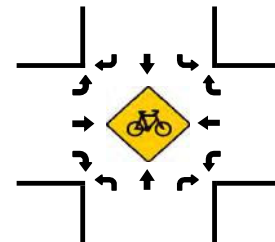
Bikes (AM)



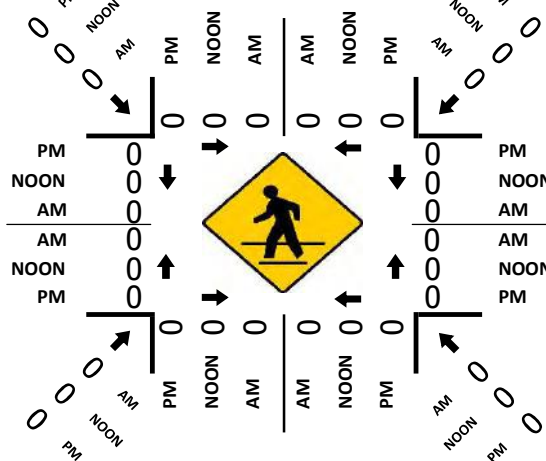
Bikes (NOON)



Bikes (PM)



Pedestrians (Crosswalks)

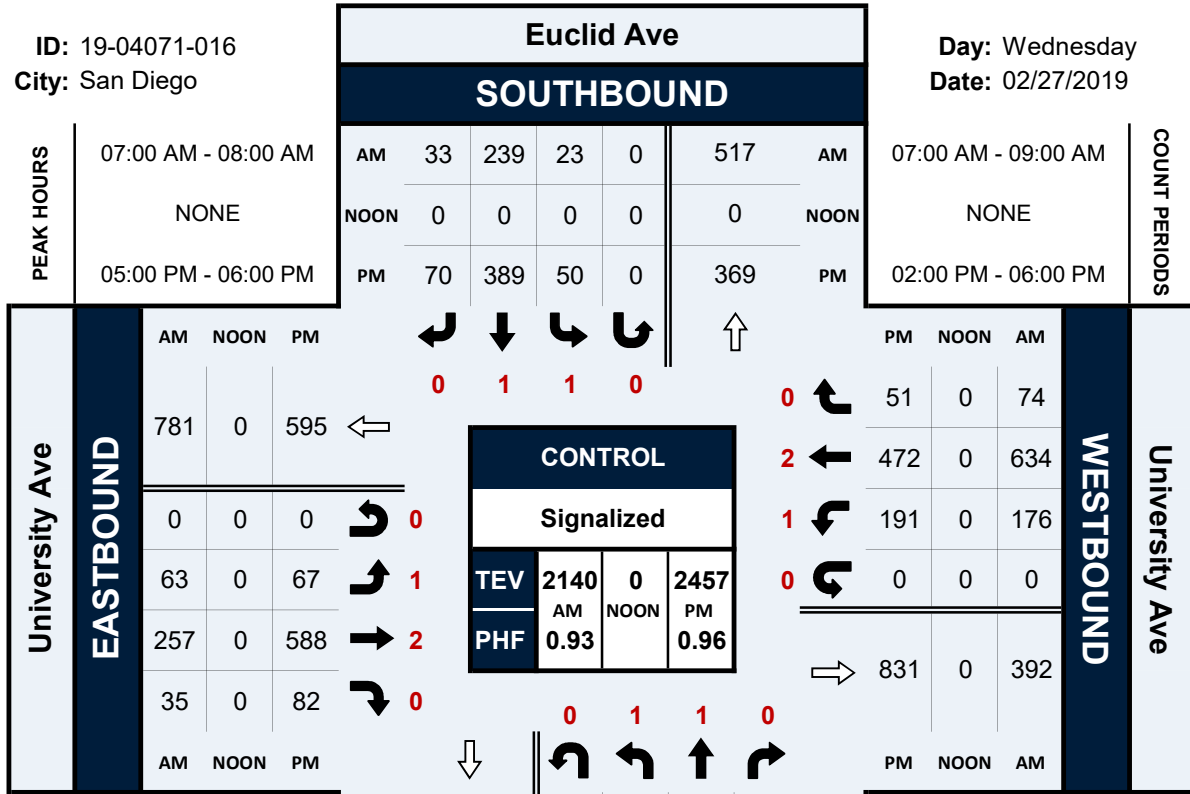


Euclid Ave & University Ave

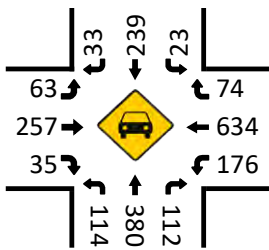
Peak Hour Turning Movement Count

ID: 19-04071-016
City: San Diego

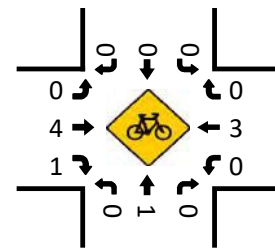
Day: Wednesday
Date: 02/27/2019



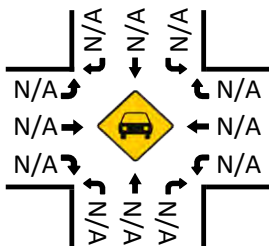
Total Vehicles (AM)



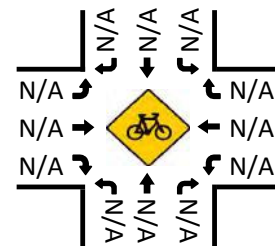
Bikes (AM)



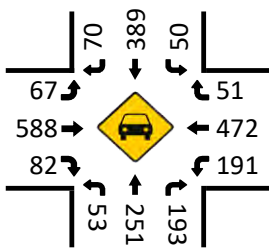
Total Vehicles (Noon)



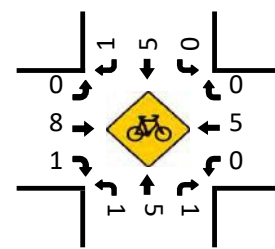
Bikes (Noon)



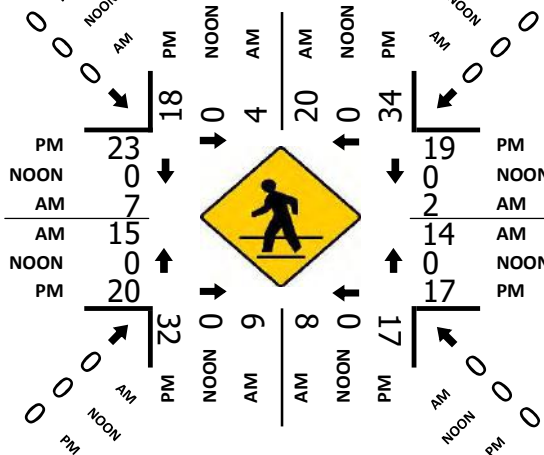
Total Vehicles (PM)



Bikes (PM)



Pedestrians (Crosswalks)

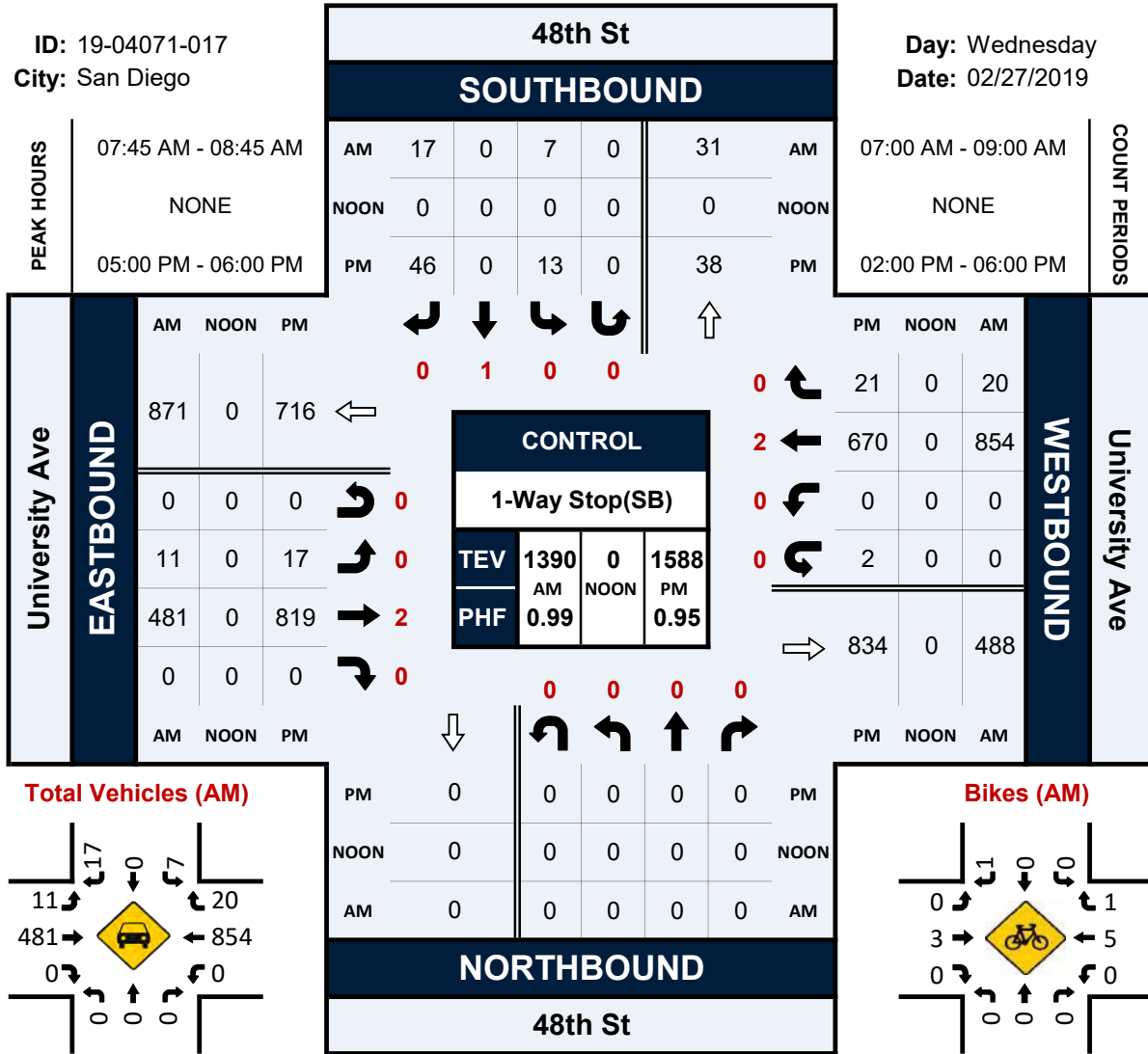


48th St & University Ave

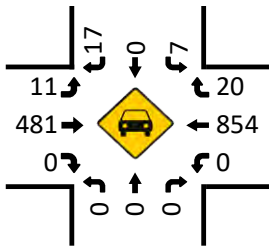
Peak Hour Turning Movement Count

ID: 19-04071-017
City: San Diego

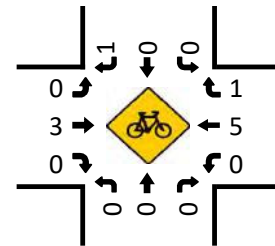
Day: Wednesday
Date: 02/27/2019



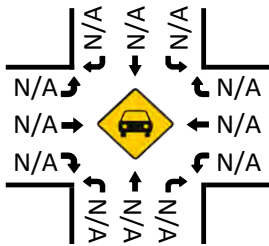
Total Vehicles (AM)



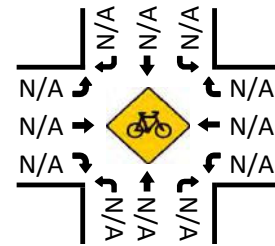
Bikes (AM)



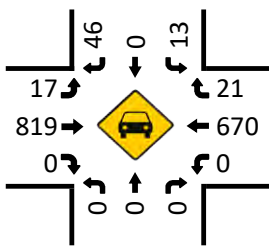
Total Vehicles (Noon)



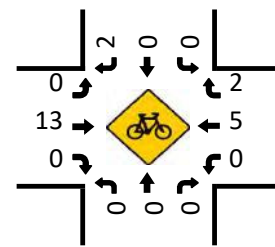
Bikes (NOON)



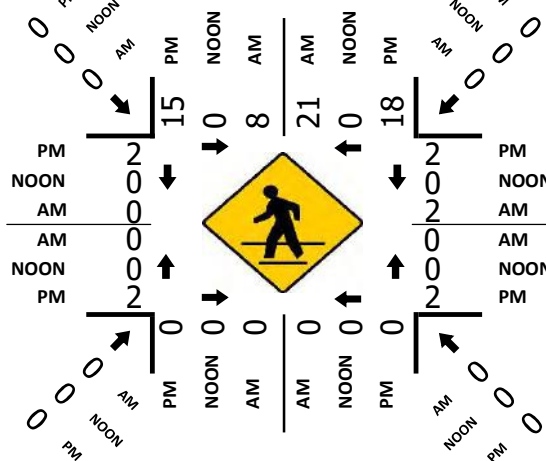
Total Vehicles (PM)



Bikes (PM)



Pedestrians (Crosswalks)

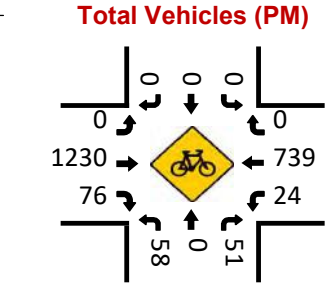
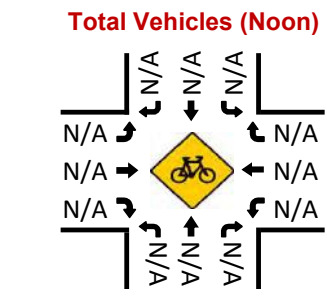
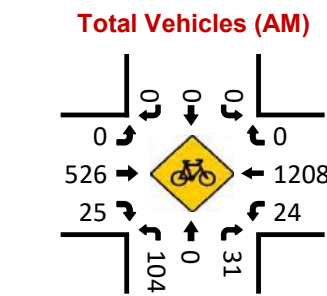
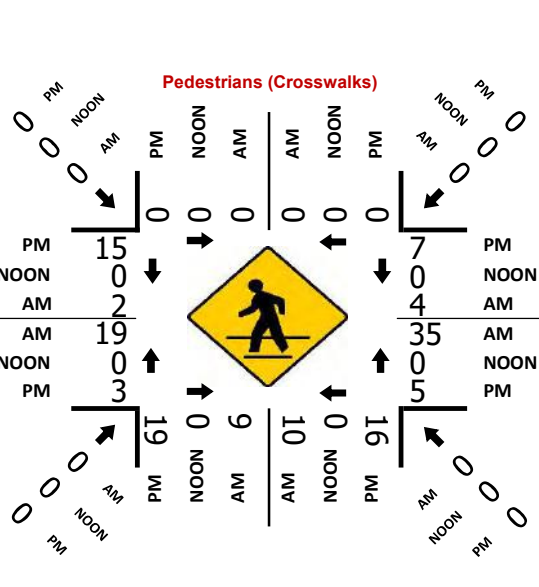
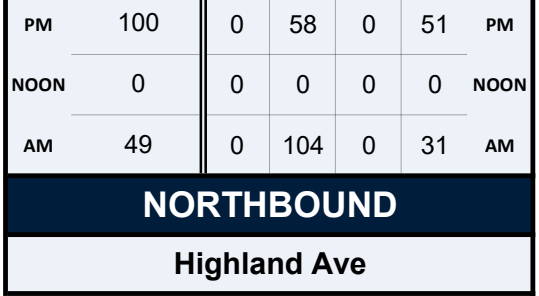
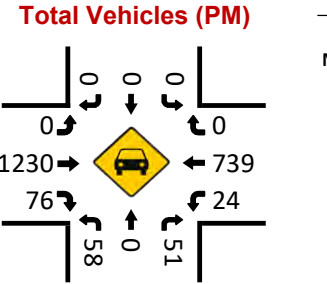
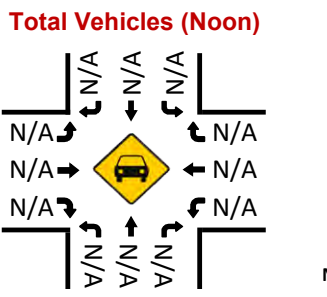
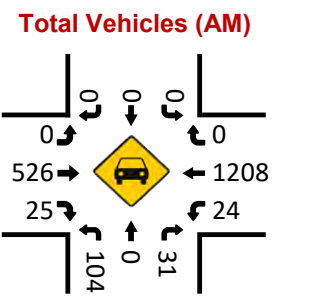
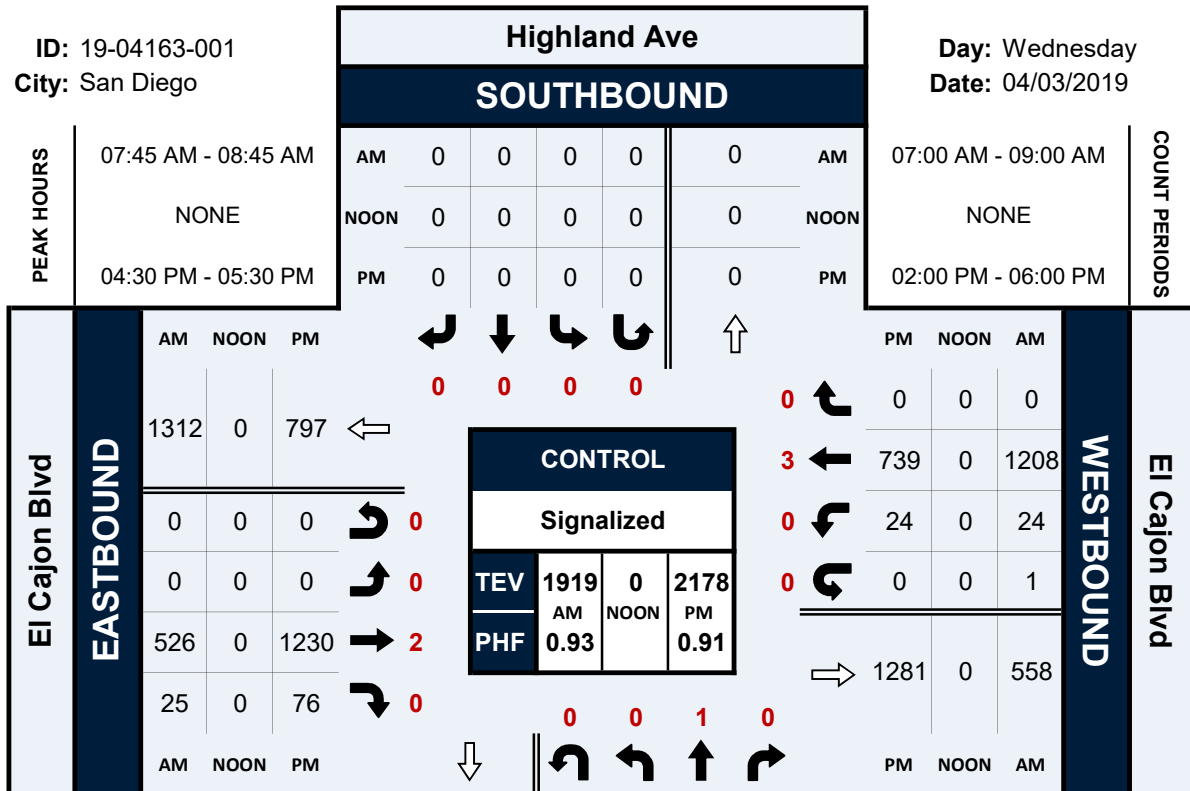


Highland Ave & El Cajon Blvd

Peak Hour Turning Movement Count

ID: 19-04163-001
City: San Diego

Day: Wednesday
Date: 04/03/2019



Turn Count Summary

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-5136



Location: Howard Ave @ 32nd St

Date of Count: Tuesday, March 21, 2017

Analysts: LV/CD

Weather: Sunny

AVC Proj No: 17-0643



Vehicular Count

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-5136



Location: Howard Ave @ 32nd St

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	0	0	0	1	51	2	4	0	7	2	17	0	84
7:15 AM	2	0	0	0	59	6	3	0	11	3	21	1	106
7:30 AM	0	0	0	0	70	6	3	0	7	3	20	1	110
7:45 AM	2	0	0	0	76	4	10	0	7	3	25	0	127
8:00 AM	0	0	0	0	65	9	3	1	7	5	17	0	107
8:15 AM	1	0	0	0	60	9	11	0	5	3	21	0	110
8:30 AM	0	0	0	1	55	7	7	1	8	0	17	1	97
8:45 AM	0	0	0	0	56	2	11	0	5	3	23	0	100
Total	5	0	0	2	492	45	52	2	57	22	161	3	841

AM Intersection Peak Hour : **7:30 AM - 8:30 AM**

Intersection PHF : **0.89**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	3	0	0	0	271	28	27	1	26	14	83	1	454
PHF	0.38	#####	#####	#####	0.89	0.78	0.61	0.25	0.93	0.70	0.83	0.25	0.89
Movement PHF		0.38			0.93			0.79			0.88		0.89

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	0	0	0	0	52	8	10	0	9	16	47	1	143
4:15 PM	1	0	0	1	44	12	14	1	2	20	63	0	158
4:30 PM	0	0	0	0	48	8	10	0	6	11	66	0	149
4:45 PM	0	0	0	0	62	11	14	0	5	5	64	1	162
5:00 PM	0	0	0	2	64	11	14	0	5	3	80	0	179
5:15 PM	1	0	0	0	55	8	16	2	4	9	37	2	134
5:30 PM	0	0	0	0	51	5	8	1	1	13	79	1	159
5:45 PM	1	0	1	0	53	10	13	0	3	15	46	0	142
Total	3	0	1	3	429	73	99	4	35	92	482	5	1,226

PM Intersection Peak Hour : **4:15 PM - 5:15 PM**

Intersection PHF : **0.91**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	1	0	0	3	218	42	52	1	18	39	273	1	648
PHF	0.25	#####	#####	0.375	0.852	0.875	0.929	0.25	0.75	0.488	0.853	0.25	0.91
Movement PHF		0.25			0.85			0.93			0.94		0.91

U-Turn Count Summary

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-1536



Location: Howard Ave @ 32nd St

AM Period (7:00 AM - 9:00 AM)					
	Southbound U-Turn	Westbound U-Turn	Northbound U-Turn	Eastbound U-Turn	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	1	1
8:45 AM	0	0	0	0	0
Total	0	0	0	1	1

AM Intersection Peak Hour : **7:30 AM - 8:30 AM** Intersection PHF : **#DIV/0!**

	North Leg EB	East Leg SB	South Leg EB	West Leg SB	TOTAL
Volume	0	0	0	0	0
PHF	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Movement PHF	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

PM Period (4:00 PM - 6:00 PM)					
	Southbound U-Turn	Westbound U-Turn	Northbound U-Turn	Eastbound U-Turn	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	1	0	1
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	1	1
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	2	2
Total	0	0	1	3	4

PM Intersection Peak Hour : **4:15 PM - 5:15 PM** Intersection PHF : **0.25**

	North Leg EB	East Leg SB	South Leg EB	West Leg SB	TOTAL
Volume	0	0	1	0	1
PHF	#DIV/0!	#DIV/0!	0.25	#DIV/0!	0.25
Movement PHF	#DIV/0!	#DIV/0!	0.25	#DIV/0!	0.25

Bike Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: Howard Ave @ 32nd St

Date of Count: Tuesday, March 21, 2017

Analysts: LV/CD

Weather: Sunny

AVC Proj No: 17-0643



Bike Count

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-5136



Location: Howard Ave @ 32nd St

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:15 AM	0	0	0	0	2	0	0	0	0	0	1	0	3
7:30 AM	0	0	0	0	2	0	0	0	0	0	0	0	2
7:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	1	0	1	0	0	0	0	0	2
8:15 AM	0	0	0	0	2	0	0	1	0	0	1	0	4
8:30 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
8:45 AM	0	0	0	0	2	0	0	0	0	0	0	0	2
Total	0	0	0	0	10	0	1	2	0	0	4	0	17

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

Intersection PHF : **0.63**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	0	0	0	0	5	0	1	2	0	0	2	0	10
PHF	#####	#####	#####	#####	0.63	#####	0.25	0.50	#####	#####	0.50	#####	0.63
Movement PHF	#DIV/0!			0.63			0.75			0.50			0.63

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
4:15 PM	0	0	1	1	1	0	1	0	0	0	1	0	5
4:30 PM	0	0	0	0	2	0	0	0	0	0	3	0	5
4:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
5:00 PM	0	0	0	0	2	1	0	0	0	0	3	0	6
5:15 PM	1	0	0	0	2	0	0	0	0	0	2	0	5
5:30 PM	0	0	0	0	5	0	0	0	0	0	2	0	7
5:45 PM	0	0	0	0	3	0	0	0	0	0	1	0	4
Total	1	0	1	1	16	1	1	0	0	0	15	0	36

PM Intersection Peak Hour : **5:00 PM - 6:00 PM**

Intersection PHF : **0.79**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	1	0	0	0	12	1	0	0	0	0	8	0	22
PHF	0.25	#####	#####	#####	0.6	0.25	#####	#####	#####	#####	0.667	#####	0.79
Movement PHF	0.25			0.65			#DIV/0!			0.67			0.79

Pedestrian Count

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-1536



Location: Howard Ave 32nd St

AM Period (7:00 AM - 9:00 AM)					
	North Leg Total	East Leg Total	South Leg Total	West Leg Total	TOTAL
7:00 AM	1	0	3	0	4
7:15 AM	3	0	4	1	8
7:30 AM	2	0	2	0	4
7:45 AM	2	0	1	0	3
8:00 AM	3	0	3	0	6
8:15 AM	1	0	2	1	4
8:30 AM	2	0	4	0	6
8:45 AM	3	0	5	0	8
Total	17	0	24	2	43

AM Intersection Peak Hour : **7:30 AM - 8:30 AM** **0.71**

	North Leg Total	East Leg Total	South Leg Total	West Leg Total	TOTAL
Volume	8	0	8	1	34
PHF	0.67	#DIV/0!	0.67	0.25	0.71
Movement PHF	0.67	#DIV/0!	0.67	0.25	0.71

PM Period (4:00 PM - 6:00 PM)					
	North Leg Total	East Leg Total	South Leg Total	West Leg Total	TOTAL
4:00 PM	0	0	2	0	2
4:15 PM	0	0	1	0	1
4:30 PM	1	1	1	0	3
4:45 PM	0	1	3	0	4
5:00 PM	4	0	3	0	7
5:15 PM	1	0	18	1	20
5:30 PM	2	0	5	0	7
5:45 PM	1	0	3	0	4
Total	9	2	36	1	48

PM Intersection Peak Hour : **4:15 PM - 5:15 PM** **0.54**

	North Leg Total	East Leg Total	South Leg Total	West Leg Total	TOTAL
Volume	5	2	8	0	30
PHF	0.3125	0.5	0.666666667	#DIV/0!	0.54
Movement PHF	0.31	0.50	0.67	#DIV/0!	0.54

ITM Peak Hour Summary

Prepared by:

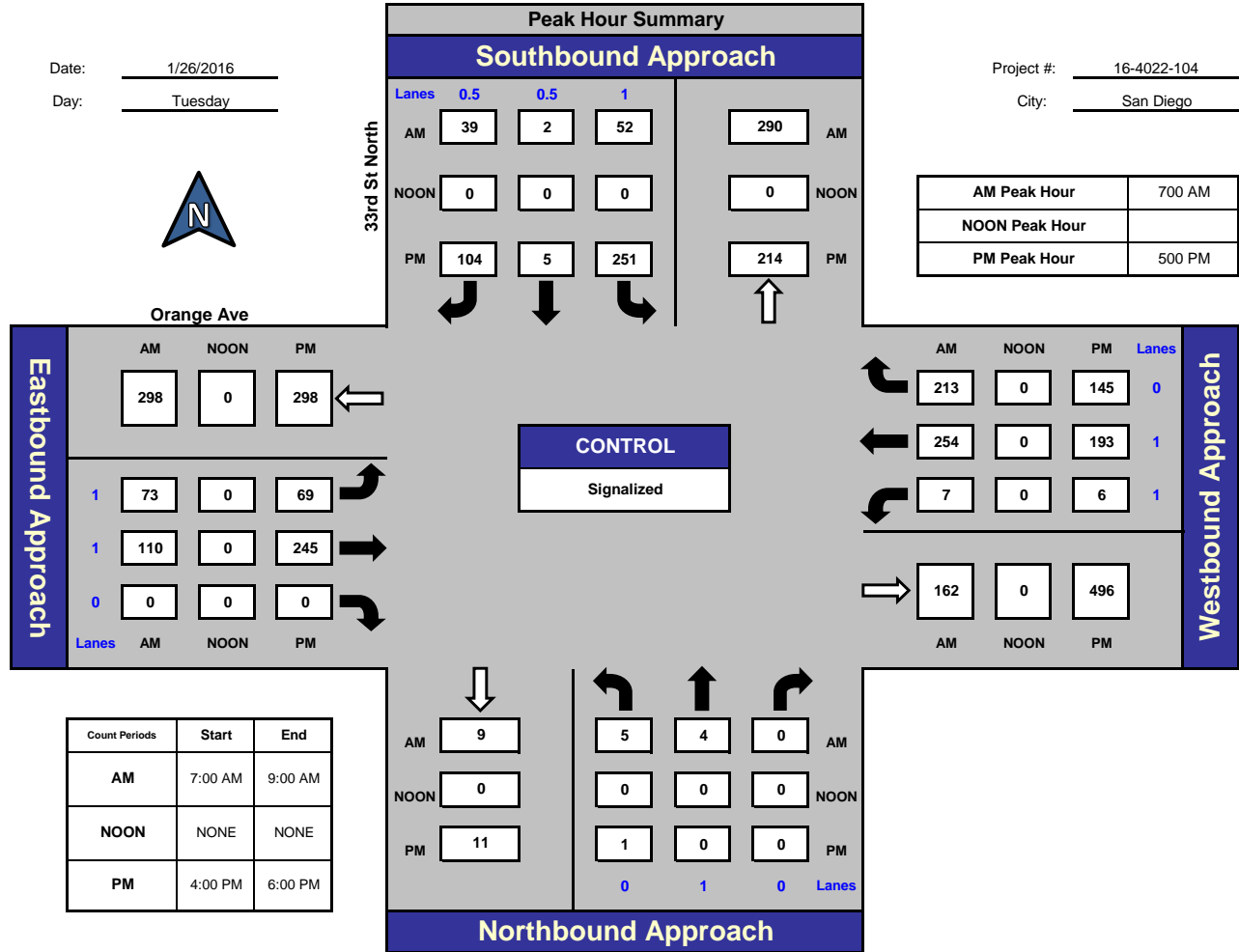


National Data & Surveying Services

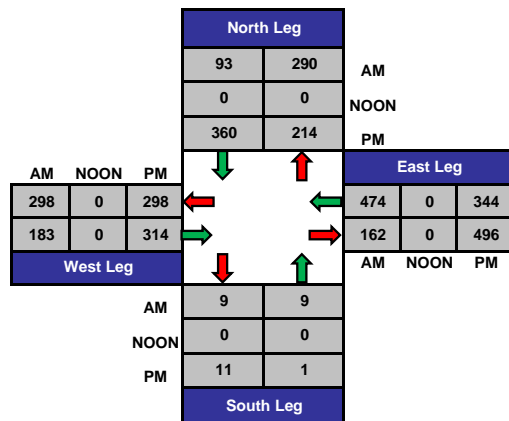
33rd St North and Orange Ave., San Diego

Date: 1/26/2016
Day: Tuesday

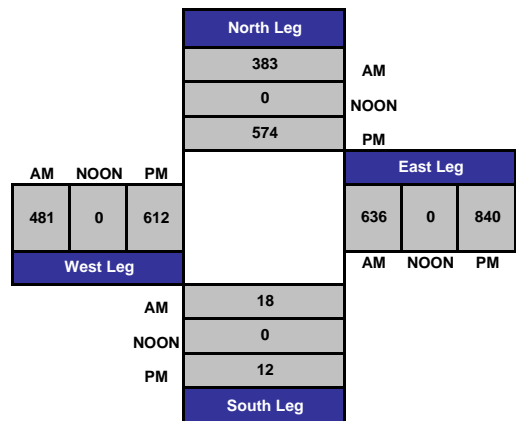
Project #: 16-4022-104
City: San Diego



Total Ins & Outs



Total Volume Per Leg



Turn Count Summary

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-5136



Location: Orange Ave @ 35th St

Date of Count: Tuesday, March 21, 2017

Analysts: LV/CD

Weather: Sunny

AVC Proj No: 17-0643



Vehicular Count

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-5136



Location: Orange Ave @ 35th St

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	0	10	3	21	81	4	9	9	10	5	33	9	194
7:15 AM	2	20	11	22	90	4	14	24	15	4	36	8	250
7:30 AM	4	18	16	23	86	8	16	26	16	0	36	9	258
7:45 AM	8	8	11	24	86	6	11	37	20	6	42	15	274
8:00 AM	5	22	5	26	77	6	4	18	8	6	42	6	225
8:15 AM	2	13	6	24	82	5	6	25	6	7	34	7	217
8:30 AM	7	12	6	17	60	4	3	20	4	2	51	9	195
8:45 AM	5	9	5	15	61	6	4	14	3	3	31	10	166
Total	33	112	63	172	623	43	67	173	82	33	305	73	1,779

AM Intersection Peak Hour : **7:15 AM - 8:15 AM**

Intersection PHF : **0.92**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	19	68	43	95	339	24	45	105	59	16	156	38	1,007
PHF	0.59	0.77	0.67	0.91	0.94	0.75	0.70	0.71	0.74	0.67	0.93	0.63	0.92
Movement PHF	0.86			0.98			0.77			0.83			0.92

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	10	18	8	23	47	3	9	16	3	16	80	10	243
4:15 PM	14	22	14	12	58	9	8	16	8	9	83	12	265
4:30 PM	12	23	17	10	55	4	11	13	4	13	92	9	263
4:45 PM	8	22	10	11	75	8	3	15	7	14	109	7	289
5:00 PM	10	19	13	19	69	5	8	20	10	5	78	6	262
5:15 PM	14	20	13	9	66	10	10	15	6	9	82	7	261
5:30 PM	7	32	10	9	63	5	9	15	4	18	88	17	277
5:45 PM	8	10	16	15	52	2	7	11	5	16	86	14	242
Total	83	166	101	108	485	46	65	121	47	100	698	82	2,102

PM Intersection Peak Hour : **4:45 PM - 5:45 PM**

Intersection PHF : **0.94**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	39	93	46	48	273	28	30	65	27	46	357	37	1089
PHF	0.70	0.727	0.885	0.632	0.91	0.7	0.75	0.813	0.675	0.639	0.819	0.544	0.94
Movement PHF	0.91			0.93			0.80			0.85			0.94

U-Turn Count Summary

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-1536



Location: Orange Ave @ 35th St

AM Period (7:00 AM - 9:00 AM)					
	Southbound U-Turn	Westbound U-Turn	Northbound U-Turn	Eastbound U-Turn	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
Total	0	0	0	0	0

AM Intersection Peak Hour : **7:15 AM - 8:15 AM** Intersection PHF : **#DIV/0!**

	North Leg EB	East Leg SB	South Leg EB	West Leg SB	TOTAL
Volume	0	0	0	0	0
PHF	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Movement PHF	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

PM Period (4:00 PM - 6:00 PM)					
	Southbound U-Turn	Westbound U-Turn	Northbound U-Turn	Eastbound U-Turn	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
Total	0	0	0	0	0

PM Intersection Peak Hour : **4:45 PM - 5:45 PM** Intersection PHF : **#DIV/0!**

	North Leg EB	East Leg SB	South Leg EB	West Leg SB	TOTAL
Volume	0	0	0	0	0
PHF	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Movement PHF	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Bike Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: Orange Ave @ 35th St

Date of Count: Tuesday, March 21, 2017

Analysts: LV/CD

Weather: Sunny

AVC Proj No: 17-0643



Bike Count

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-5136



Location: Orange Ave @ 35th St

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:30 AM	0	0	0	0	2	0	0	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:15 AM	3	1	0	1	1	0	0	0	0	0	0	1	7
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	2	0	0	0	0	0	1	1	4
Total	3	1	0	1	6	0	0	0	0	0	3	2	16

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

Intersection PHF : **0.43**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	3	1	0	1	4	0	0	0	0	0	1	2	12
PHF	0.25	0.25	#####	0.25	0.50	#####	#####	#####	#####	#####	0.25	0.50	0.43
Movement PHF		0.25			0.63		#DIV/0!				0.38		0.43

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	1	1	0	0	0	0	0	0	0	0	1	0	3
4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
4:45 PM	1	0	0	0	1	0	1	0	0	0	2	0	5
5:00 PM	0	0	0	0	2	0	0	0	0	0	6	0	8
5:15 PM	0	0	0	0	2	1	0	0	0	0	1	0	4
5:30 PM	0	1	0	0	3	0	0	0	0	0	3	0	7
5:45 PM	0	0	2	0	3	0	0	0	0	0	0	0	5
Total	2	2	2	0	13	1	1	0	0	0	14	0	35

PM Intersection Peak Hour : **4:45 PM - 5:45 PM**

Intersection PHF : **0.75**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	1	1	0	0	8	1	1	0	0	0	12	0	24
PHF	0.25	0.25	#####	#####	0.667	0.25	0.25	#####	#####	#####	0.5	#####	0.75
Movement PHF		0.50			0.75		0.25				0.50		0.75

Pedestrian Count

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-1536



Location: Orange Ave 35th St

AM Period (7:00 AM - 9:00 AM)					
	North Leg Total	East Leg Total	South Leg Total	West Leg Total	TOTAL
7:00 AM	4	3	3	0	10
7:15 AM	3	0	3	2	8
7:30 AM	4	5	5	14	28
7:45 AM	3	7	7	4	21
8:00 AM	2	5	9	2	18
8:15 AM	2	2	1	2	7
8:30 AM	2	0	3	5	10
8:45 AM	0	2	1	3	6
Total	20	24	32	32	108

AM Intersection Peak Hour : **7:15 AM - 8:15 AM** **0.67**

	North Leg Total	East Leg Total	South Leg Total	West Leg Total	TOTAL
Volume	12	17	24	22	150
PHF	0.75	0.61	0.67	0.39	0.67
Movement PHF	0.75	0.61	0.67	0.39	0.67

PM Period (4:00 PM - 6:00 PM)					
	North Leg Total	East Leg Total	South Leg Total	West Leg Total	TOTAL
4:00 PM	7	4	9	2	22
4:15 PM	3	2	3	3	11
4:30 PM	4	10	8	6	28
4:45 PM	3	1	6	4	14
5:00 PM	2	0	8	4	14
5:15 PM	4	2	5	3	14
5:30 PM	4	2	6	3	15
5:45 PM	3	0	0	0	3
Total	30	21	45	25	121

PM Intersection Peak Hour : **4:45 PM - 5:45 PM** **0.95**

	North Leg Total	East Leg Total	South Leg Total	West Leg Total	TOTAL
Volume	13	5	25	14	114
PHF	0.8125	0.625	0.78125	0.875	0.95
Movement PHF	0.81	0.63	0.78	0.88	0.95

ITM Peak Hour Summary

Prepared by:



National Data & Surveying Services

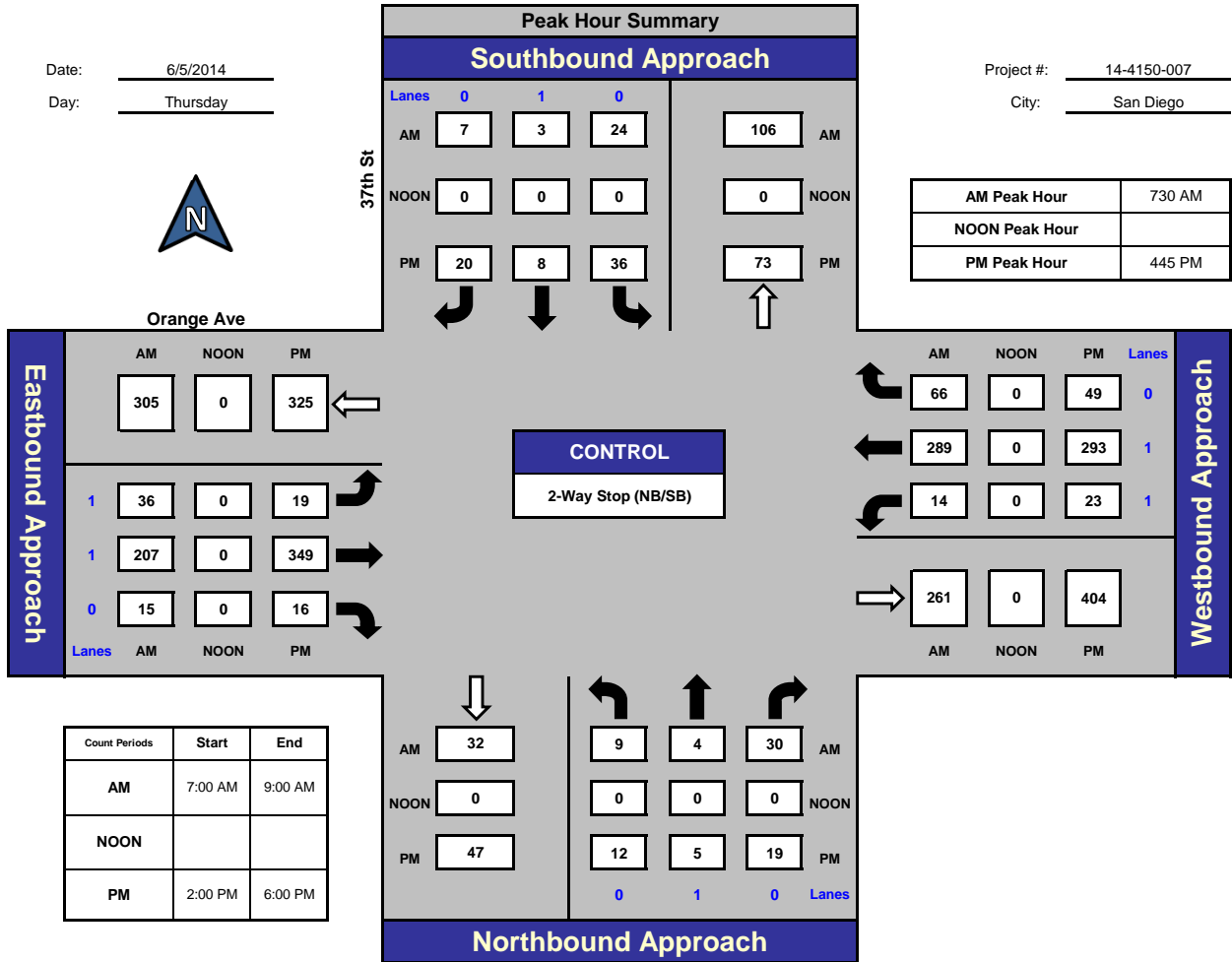
37th St and Orange Ave, San Diego

Date: 6/5/2014

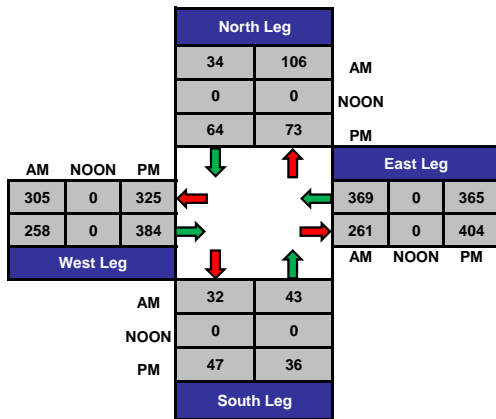
Day: Thursday

Project #: 14-4150-007

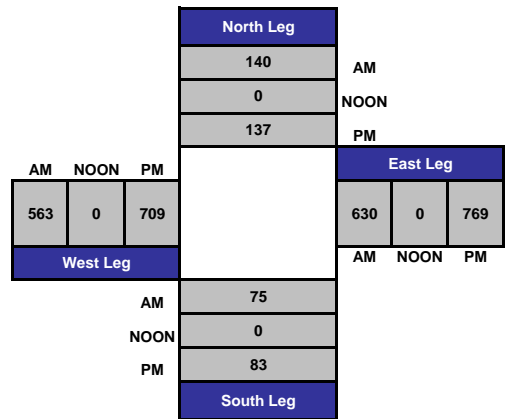
City: San Diego



Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:



National Data & Surveying Services

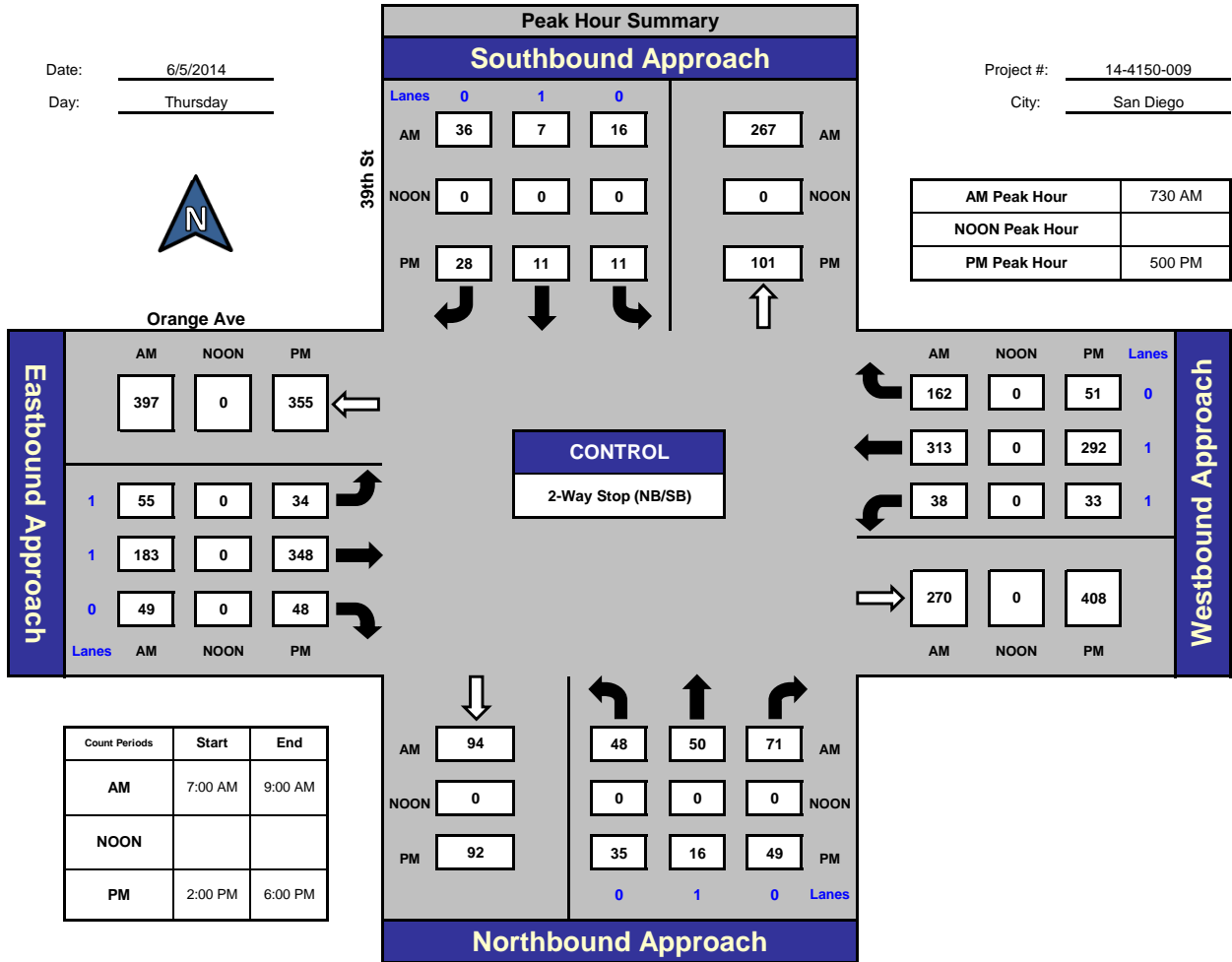
39th St and Orange Ave., San Diego

Date: 6/5/2014

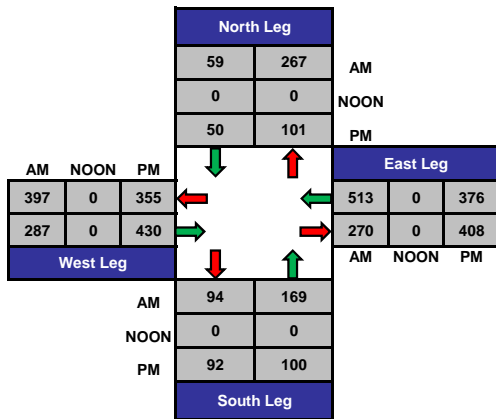
Day: Thursday

Project #: 14-4150-009

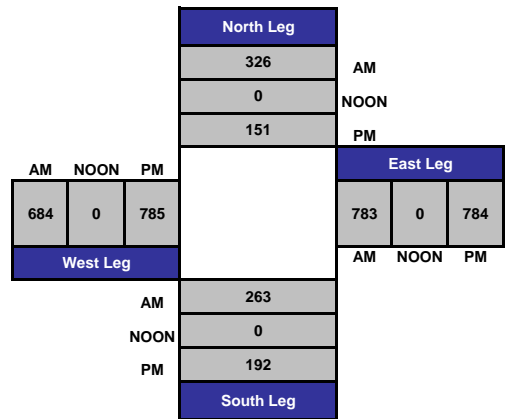
City: San Diego



Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

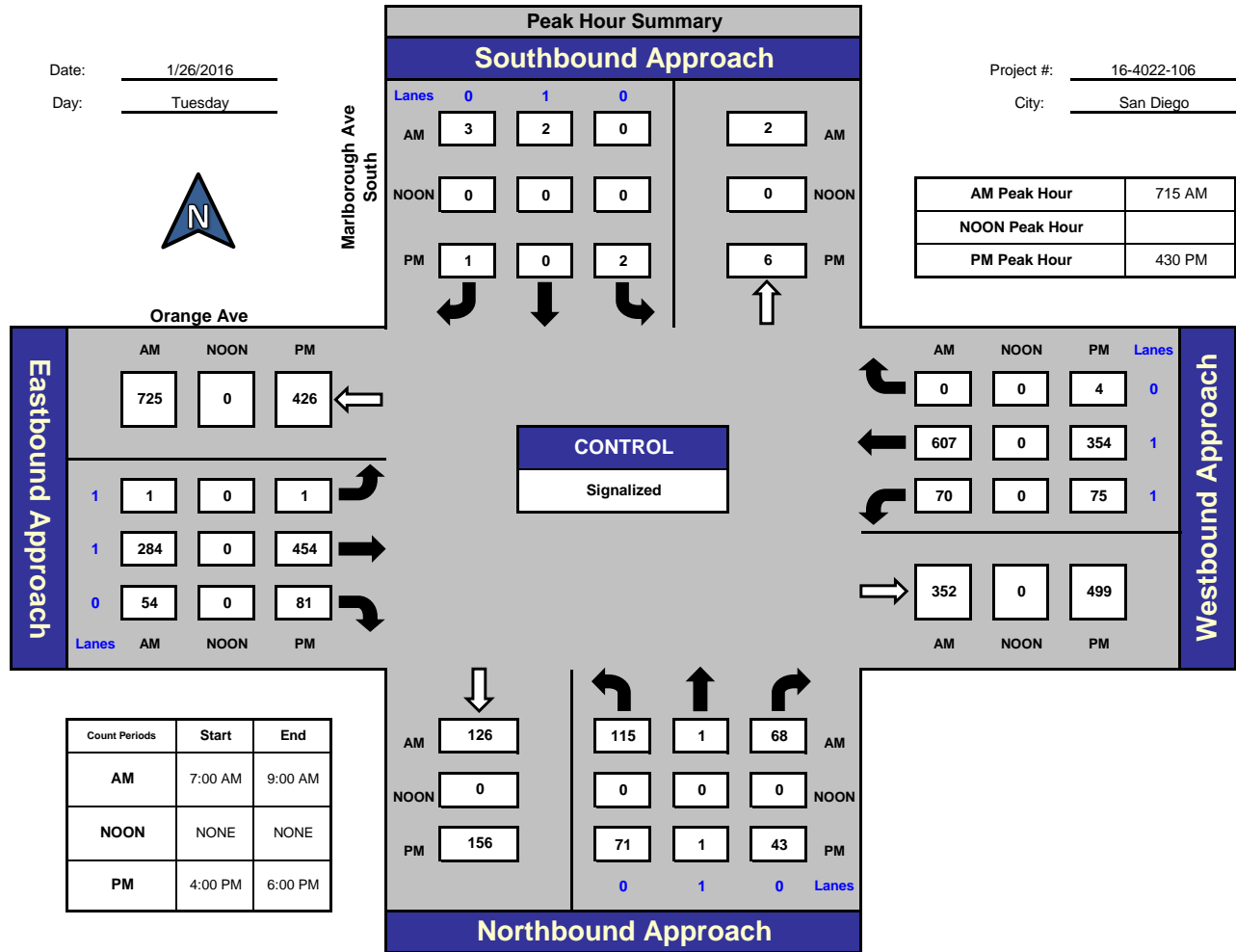


Prepared by:
National Data & Surveying Services

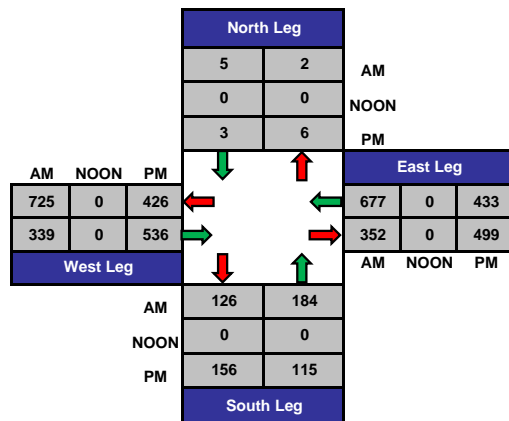
Marlborough Ave South and Orange Ave, San Diego

Date: 1/26/2016
Day: Tuesday

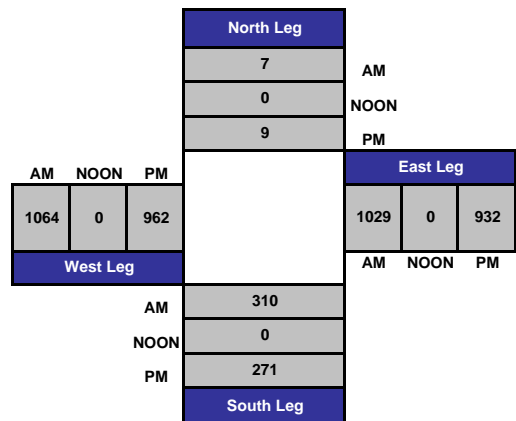
Project #: 16-4022-106
City: San Diego



Total Ins & Outs



Total Volume Per Leg



Turn Count Summary

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-5136



Location: Orange Ave @ 43rd St

Date of Count: Tuesday, March 21, 2017

Analysts: LV/CD

Weather: Sunny

AVC Proj No: 17-0643



Vehicular Count

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-5136



Location: Orange Ave @ 43rd St

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	10	53	4	0	94	5	0	0	0	7	51	0	224
7:15 AM	18	73	8	0	136	6	0	0	0	7	89	0	337
7:30 AM	21	49	4	0	145	4	0	0	0	5	74	0	302
7:45 AM	24	63	21	0	118	3	0	0	0	12	85	0	326
8:00 AM	13	68	15	0	102	5	0	0	0	13	74	0	290
8:15 AM	13	88	5	0	94	10	0	0	0	11	66	0	287
8:30 AM	9	65	19	0	88	9	0	0	0	10	67	0	267
8:45 AM	9	54	17	0	82	6	0	0	0	8	52	2	230
Total	117	513	93	0	859	48	0	0	0	73	558	2	2,263

AM Intersection Peak Hour : **7:15 AM - 8:15 AM**

Intersection PHF : **0.93**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	76	253	48	0	501	18	0	0	0	37	322	0	1,255
PHF	0.79	0.87	0.57	#####	0.86	0.75	#####	#####	#####	0.71	0.90	#####	0.93
Movement PHF		0.87			0.87			#DIV/0!			0.93		0.93

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	14	139	33	0	77	6	0	0	0	13	94	0	376
4:15 PM	16	99	36	0	70	7	0	0	0	14	96	0	338
4:30 PM	16	124	38	0	89	7	0	0	0	16	102	1	393
4:45 PM	15	107	46	0	74	6	0	1	0	20	97	0	366
5:00 PM	16	107	27	0	83	8	0	0	0	12	95	0	348
5:15 PM	14	119	35	0	85	5	0	0	0	13	102	0	373
5:30 PM	22	126	38	0	67	6	0	0	0	17	91	0	367
5:45 PM	11	118	41	0	77	12	0	0	0	20	106	0	385
Total	124	939	294	0	622	57	0	1	0	125	783	1	2,946

PM Intersection Peak Hour : **4:30 PM - 5:30 PM**

Intersection PHF : **0.94**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	61	457	146	0	331	26	0	1	0	61	396	1	1480
PHF	0.95	0.921	0.793	#####	0.93	0.813	#####	0.25	#####	0.763	0.971	0.25	0.94
Movement PHF		0.93			0.93			0.25			0.96		0.94

U-Turn Count Summary

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-1536



Location: Orange Ave @ 43rd St

AM Period (7:00 AM - 9:00 AM)					
	Southbound U-Turn	Westbound U-Turn	Northbound U-Turn	Eastbound U-Turn	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
Total	0	0	0	0	0

AM Intersection Peak Hour : **7:15 AM - 8:15 AM** Intersection PHF : **#DIV/0!**

	North Leg EB	East Leg SB	South Leg EB	West Leg SB	TOTAL
Volume	0	0	0	0	0
PHF	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Movement PHF	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

PM Period (4:00 PM - 6:00 PM)					
	Southbound U-Turn	Westbound U-Turn	Northbound U-Turn	Eastbound U-Turn	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
Total	0	0	0	0	0

PM Intersection Peak Hour : **4:30 PM - 5:30 PM** Intersection PHF : **#DIV/0!**

	North Leg EB	East Leg SB	South Leg EB	West Leg SB	TOTAL
Volume	0	0	0	0	0
PHF	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Movement PHF	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Bike Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: Orange Ave @ 43rd St

Date of Count: Tuesday, March 21, 2017

Analysts: LV/CD

Weather: Sunny

AVC Proj No: 17-0643



Bike Count

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-5136



Location: Orange Ave @ 43rd St

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	0	0	0	0	0	0	0	0	0	0	7	0	7
7:15 AM	0	0	0	0	2	0	0	0	0	0	3	0	5
7:30 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
8:00 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
8:15 AM	0	0	0	0	2	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	1	0	0	0	0	0	2	0	3
8:45 AM	0	0	0	0	3	0	0	0	0	1	1	1	6
Total	0	0	0	0	10	0	0	0	0	1	17	1	29

AM Intersection Peak Hour : **7:00 AM - 8:00 AM**

Intersection PHF : **0.57**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	0	0	0	0	3	0	0	0	0	0	13	0	16
PHF	#####	#####	#####	#####	0.38	#####	#####	#####	#####	#####	0.46	#####	0.57
Movement PHF	#DIV/0!			0.38			#DIV/0!			0.46			0.57

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
4:30 PM	0	0	0	0	1	0	0	1	0	0	0	0	2
4:45 PM	0	1	0	0	1	0	0	0	0	0	1	0	3
5:00 PM	1	1	0	0	1	0	0	0	0	1	0	0	4
5:15 PM	0	0	1	0	2	0	0	0	0	0	1	0	4
5:30 PM	1	0	0	0	3	0	0	0	0	1	0	0	5
5:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
Total	2	3	1	0	9	0	0	1	0	2	5	0	23

PM Intersection Peak Hour : **4:45 PM - 5:45 PM**

Intersection PHF : **0.80**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	2	2	1	0	7	0	0	0	0	2	2	0	16
PHF	0.50	0.5	0.25	#####	0.583	#####	#####	#####	#####	0.5	0.5	#####	0.80
Movement PHF	0.63			0.58			#DIV/0!			1.00			0.80

Pedestrian Count

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-1536



Location: Orange Ave 43rd St

AM Period (7:00 AM - 9:00 AM)					
	North Leg Total	East Leg Total	South Leg Total	West Leg Total	TOTAL
7:00 AM	16	13	22	10	61
7:15 AM	21	15	40	11	87
7:30 AM	5	8	5	5	23
7:45 AM	5	4	12	0	21
8:00 AM	12	4	5	6	27
8:15 AM	5	3	10	4	22
8:30 AM	3	6	4	2	15
8:45 AM	6	8	2	5	21
Total	73	61	100	43	277

AM Intersection Peak Hour : **7:15 AM - 8:15 AM** **0.45**

	North Leg Total	East Leg Total	South Leg Total	West Leg Total	TOTAL
Volume	43	31	62	22	316
PHF	0.51	0.52	0.39	0.50	0.45
Movement PHF	0.51	0.52	0.39	0.50	0.45

PM Period (4:00 PM - 6:00 PM)					
	North Leg Total	East Leg Total	South Leg Total	West Leg Total	TOTAL
4:00 PM	10	5	3	6	24
4:15 PM	8	8	21	9	46
4:30 PM	9	9	14	5	37
4:45 PM	10	7	10	2	29
5:00 PM	8	4	8	6	26
5:15 PM	4	6	9	5	24
5:30 PM	9	5	12	4	30
5:45 PM	12	5	3	2	22
Total	70	49	80	39	238

PM Intersection Peak Hour : **4:30 PM - 5:30 PM** **0.78**

	North Leg Total	East Leg Total	South Leg Total	West Leg Total	TOTAL
Volume	31	26	41	18	232
PHF	0.775	0.722222222	0.732142857	0.75	0.78
Movement PHF	0.78	0.72	0.73	0.75	0.78

ITM Peak Hour Summary

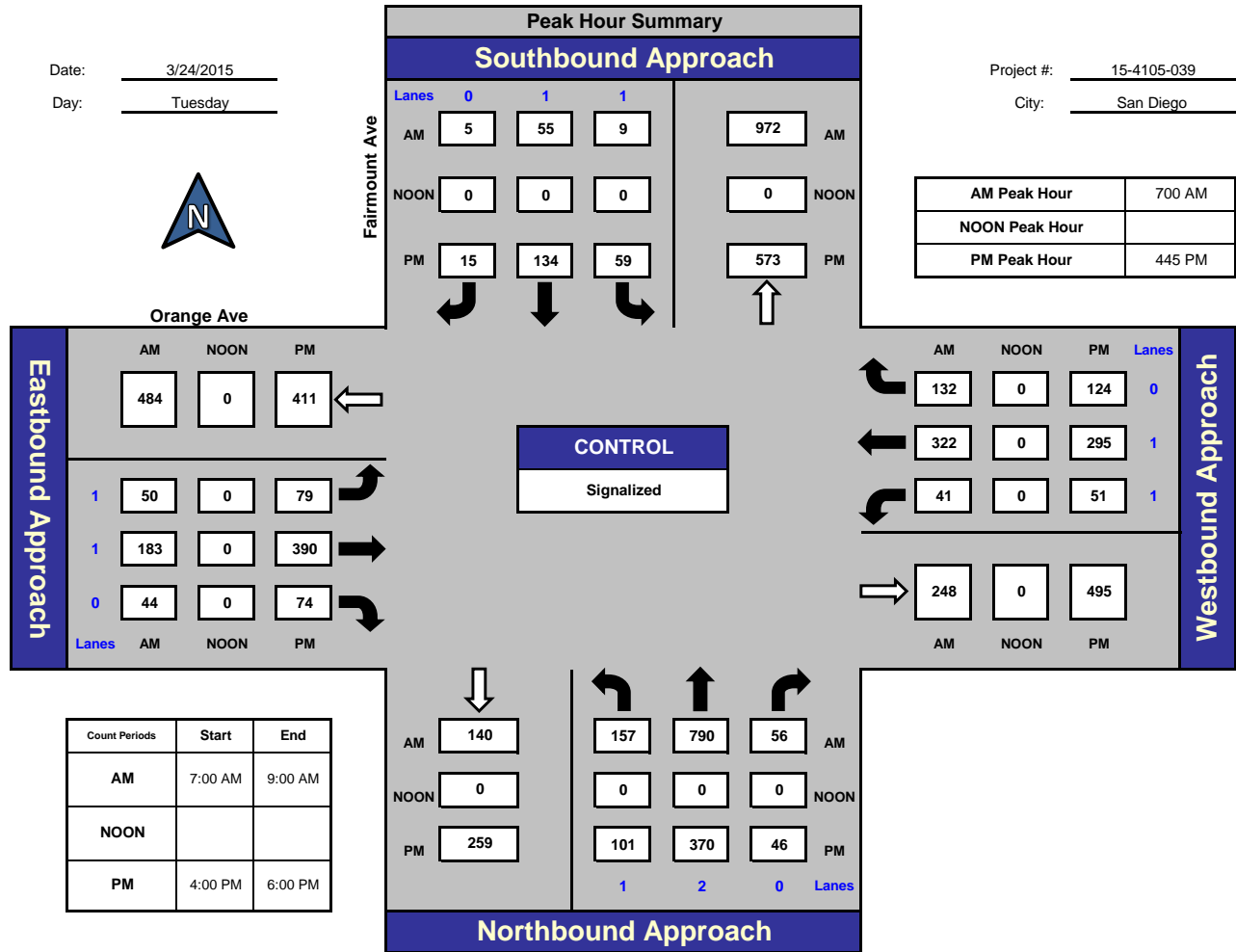


Prepared by:
National Data & Surveying Services

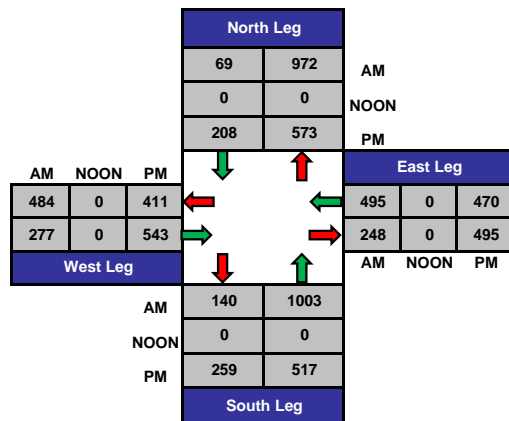
Fairmount Ave and Orange Ave, San Diego

Date: 3/24/2015
Day: Tuesday

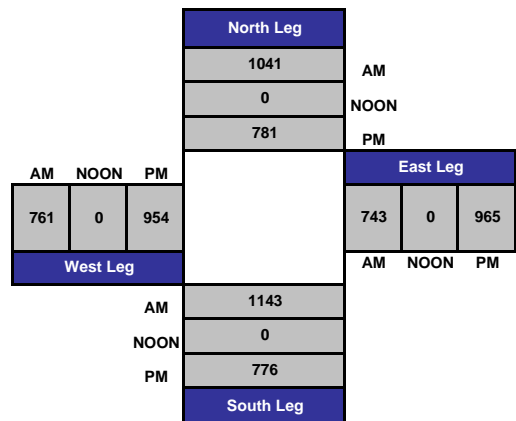
Project #: 15-4105-039
City: San Diego



Total Ins & Outs



Total Volume Per Leg



Turn Count Summary

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-5136



Location: Orange Ave @ Chamoune Ave

Date of Count: Tuesday, March 21, 2017

Analysts: LV/CD

Weather: Sunny

AVC Proj No: 17-0643



Vehicular Count

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-5136



Location: Orange Ave @ Chamoune Ave

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	6	25	1	10	80	11	7	63	7	4	30	11	255
7:15 AM	6	47	15	23	65	14	10	60	7	6	32	7	292
7:30 AM	5	19	5	11	96	13	3	29	4	8	47	5	245
7:45 AM	7	7	2	13	86	5	8	18	8	4	55	7	220
8:00 AM	3	6	1	12	82	4	5	25	11	2	50	5	206
8:15 AM	3	8	4	14	85	9	9	18	11	6	38	5	210
8:30 AM	1	7	3	6	65	11	12	23	10	4	57	2	201
8:45 AM	4	2	4	9	82	8	9	14	5	4	51	8	200
Total	35	121	35	98	641	75	63	250	63	38	360	50	1,829

AM Intersection Peak Hour : **7:00 AM - 8:00 AM**

Intersection PHF : **0.87**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	24	98	23	57	327	43	28	170	26	22	164	30	1,012
PHF	0.86	0.52	0.38	0.62	0.85	0.77	0.70	0.67	0.81	0.69	0.75	0.68	0.87
Movement PHF	0.53			0.89			0.73			0.82			0.87

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	4	16	4	9	60	8	7	13	3	12	69	8	213
4:15 PM	13	10	9	9	52	8	6	11	7	4	74	12	215
4:30 PM	9	17	9	7	67	10	5	15	8	12	92	8	259
4:45 PM	7	14	2	9	57	7	5	16	13	8	97	6	241
5:00 PM	5	22	2	10	87	10	5	12	4	7	110	3	277
5:15 PM	9	10	9	5	71	7	5	10	4	9	81	5	225
5:30 PM	2	11	12	5	62	4	9	13	7	7	81	8	221
5:45 PM	5	16	3	7	61	11	4	7	3	7	83	5	212
Total	54	116	50	61	517	65	46	97	49	66	687	55	1,863

PM Intersection Peak Hour : **4:30 PM - 5:30 PM**

Intersection PHF : **0.90**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	30	63	22	31	282	34	20	53	29	36	380	22	1002
PHF	0.83	0.716	0.611	0.775	0.81	0.85	1	0.828	0.558	0.75	0.864	0.688	0.90
Movement PHF	0.82			0.81			0.75			0.91			0.90

U-Turn Count Summary

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-1536



Location: Orange Ave @ Chamoune Ave

AM Period (7:00 AM - 9:00 AM)					
	Southbound U-Turn	Westbound U-Turn	Northbound U-Turn	Eastbound U-Turn	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	1	1
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
Total	0	0	0	1	1

AM Intersection Peak Hour : **7:00 AM - 8:00 AM** Intersection PHF : **#DIV/0!**

	North Leg EB	East Leg SB	South Leg EB	West Leg SB	TOTAL
Volume	0	0	0	0	0
PHF	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Movement PHF	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

PM Period (4:00 PM - 6:00 PM)					
	Southbound U-Turn	Westbound U-Turn	Northbound U-Turn	Eastbound U-Turn	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	1	0	0	1
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
Total	0	1	0	0	1

PM Intersection Peak Hour : **4:30 PM - 5:30 PM** Intersection PHF : **0.25**

	North Leg EB	East Leg SB	South Leg EB	West Leg SB	TOTAL
Volume	0	1	0	0	1
PHF	#DIV/0!	0.25	#DIV/0!	#DIV/0!	0.25
Movement PHF	#DIV/0!	0.25	#DIV/0!	#DIV/0!	0.25

Bike Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: Orange Ave @ Chamoune Ave

Date of Count: Tuesday, March 21, 2017

Analysts: LV/CD

Weather: Sunny

AVC Proj No: 17-0643



Bike Count

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-5136



Location: Orange Ave @ Chamoune Ave

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	1	0	0	0	1
8:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	2	0	0	0	0	0	1	0	3
Total	0	0	0	0	6	0	0	1	1	0	4	0	12

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

Intersection PHF : **0.58**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	0	0	0	0	5	0	0	0	0	0	2	0	7
PHF	#####	#####	#####	#####	0.63	#####	#####	#####	#####	#####	0.50	#####	0.58
Movement PHF	#DIV/0!			0.63			#DIV/0!			0.50			0.58

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
4:15 PM	0	1	0	0	2	0	0	0	0	0	0	0	3
4:30 PM	0	1	0	0	3	0	0	0	0	0	0	1	5
4:45 PM	1	0	0	0	1	0	0	1	0	0	1	1	5
5:00 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	1	0	0	0	0	0	2	0	3
5:30 PM	0	0	0	0	3	0	0	0	0	0	1	0	4
5:45 PM	0	1	0	0	0	0	0	0	0	0	1	0	2
Total	1	3	0	0	14	0	0	1	0	0	5	2	26

PM Intersection Peak Hour : **4:00 PM - 5:00 PM**

Intersection PHF : **0.75**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	1	2	0	0	8	0	0	1	0	0	1	2	15
PHF	0.25	0.5	#####	#####	0.667	#####	#####	0.25	#####	#####	0.25	0.5	0.75
Movement PHF	0.75			0.67			0.25			0.38			0.75

Pedestrian Count

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-1536



Location: Orange Ave Chamoune Ave

AM Period (7:00 AM - 9:00 AM)					
	North Leg Total	East Leg Total	South Leg Total	West Leg Total	TOTAL
7:00 AM	4	17	13	5	39
7:15 AM	1	37	4	3	45
7:30 AM	5	7	14	2	28
7:45 AM	2	4	4	2	12
8:00 AM	5	6	13	6	30
8:15 AM	0	8	14	2	24
8:30 AM	2	5	24	0	31
8:45 AM	2	4	25	2	33
Total	21	88	111	22	242

AM Intersection Peak Hour : **7:00 AM - 8:00 AM** **0.69**

	North Leg Total	East Leg Total	South Leg Total	West Leg Total	TOTAL
Volume	12	65	35	12	248
PHF	0.60	0.44	0.63	0.60	0.69
Movement PHF	0.60	0.44	0.63	0.60	0.69

PM Period (4:00 PM - 6:00 PM)					
	North Leg Total	East Leg Total	South Leg Total	West Leg Total	TOTAL
4:00 PM	3	12	8	1	24
4:15 PM	2	3	11	2	18
4:30 PM	0	6	8	3	17
4:45 PM	1	8	17	3	29
5:00 PM	0	2	8	0	10
5:15 PM	7	6	7	3	23
5:30 PM	2	13	12	1	28
5:45 PM	4	3	8	0	15
Total	19	53	79	13	164

PM Intersection Peak Hour : **4:30 PM - 5:30 PM** **0.68**

	North Leg Total	East Leg Total	South Leg Total	West Leg Total	TOTAL
Volume	8	22	40	9	158
PHF	0.285714286	0.6875	0.588235294	0.75	0.68
Movement PHF	0.29	0.69	0.59	0.75	0.68

ITM Peak Hour Summary

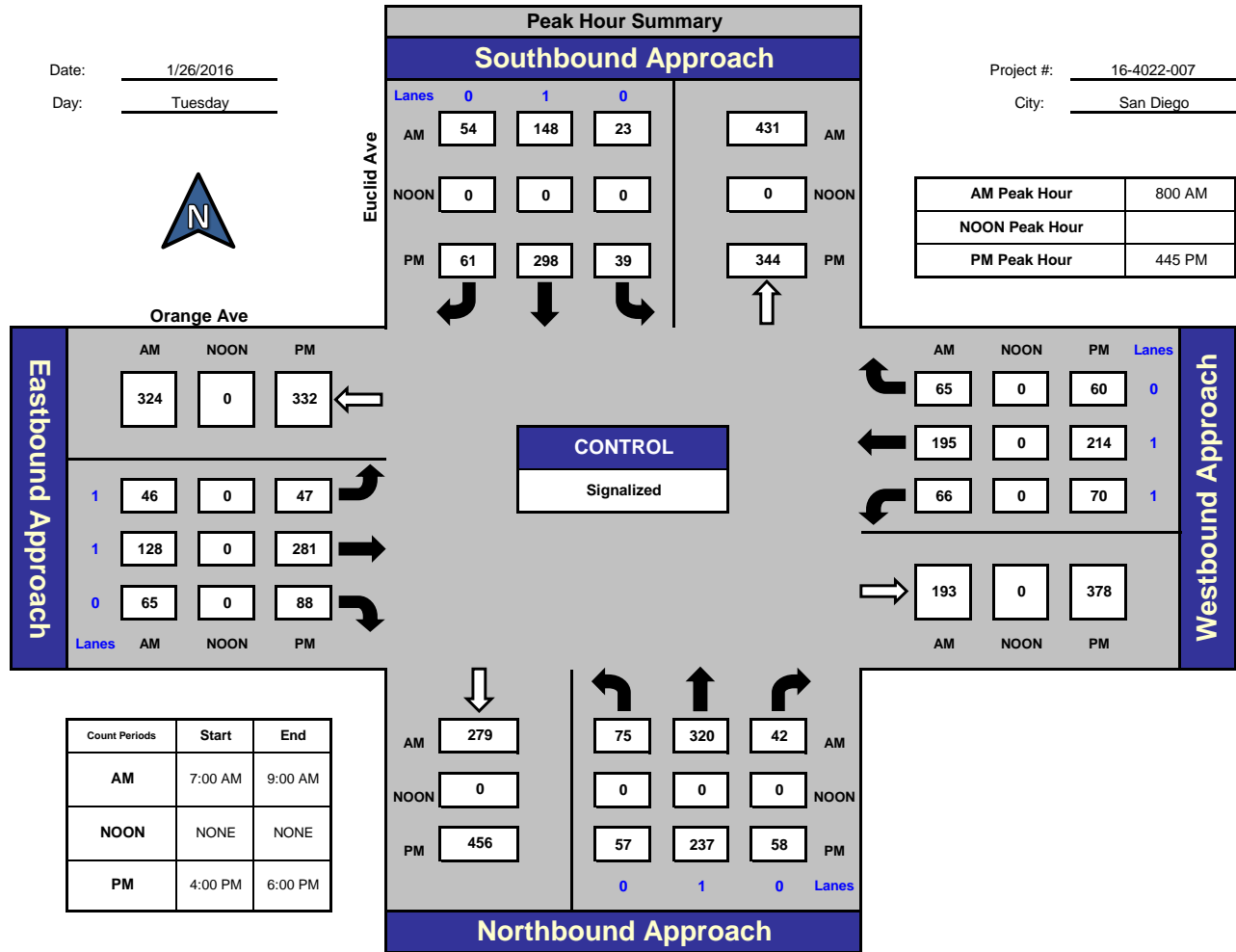


Prepared by:
National Data & Surveying Services

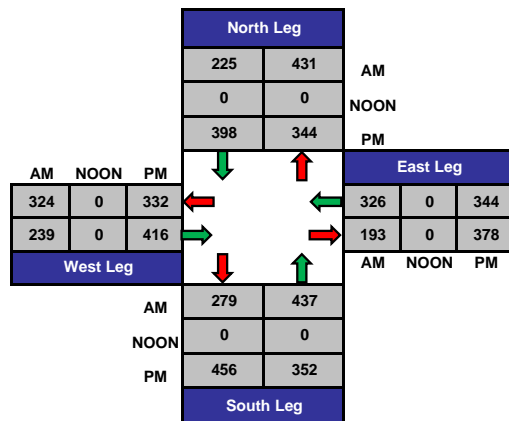
Euclid Ave and Orange Ave, San Diego

Date: 1/26/2016
Day: Tuesday

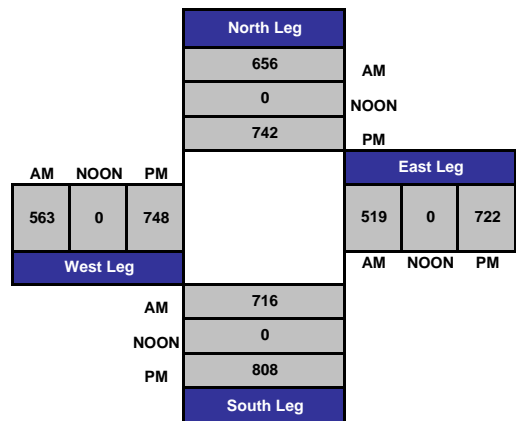
Project #: 16-4022-007
City: San Diego



Total Ins & Outs



Total Volume Per Leg



Turn Count Summary

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-5136



Location: Orange Ave @ Estrella Ave

Date of Count: Tuesday, March 21, 2017

Analysts: LV/CD

Weather: Sunny

AVC Proj No: 17-0643



Vehicular Count

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-5136



Location: Orange Ave @ Estrella Ave

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	8	7	4	4	79	4	7	11	3	1	34	2	164
7:15 AM	8	3	2	2	74	7	4	5	9	3	33	4	154
7:30 AM	10	6	1	0	85	2	3	6	6	2	38	5	164
7:45 AM	7	10	4	0	72	0	5	6	2	2	41	9	158
8:00 AM	9	3	3	2	56	4	1	12	9	4	38	6	147
8:15 AM	5	12	1	1	72	8	16	11	6	2	44	7	185
8:30 AM	8	9	6	0	73	9	7	5	8	1	44	6	176
8:45 AM	7	6	0	0	53	2	7	6	9	2	34	5	131
Total	62	56	21	9	564	36	50	62	52	17	306	44	1,279

AM Intersection Peak Hour : **7:45 AM - 8:45 AM**

Intersection PHF : **0.90**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	29	34	14	3	273	21	29	34	25	9	167	28	666
PHF	0.81	0.71	0.58	0.38	0.93	0.58	0.45	0.71	0.69	0.56	0.95	0.78	0.90
Movement PHF	0.84			0.91			0.67			0.96			0.90

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	4	7	3	2	53	1	4	6	2	4	51	5	142
4:15 PM	3	10	4	4	56	3	1	8	5	2	54	4	154
4:30 PM	3	7	5	4	58	1	2	7	5	5	70	6	173
4:45 PM	6	7	3	2	49	3	3	3	2	4	78	7	167
5:00 PM	6	8	3	1	75	5	4	7	6	4	104	8	231
5:15 PM	14	9	3	2	56	7	2	5	6	3	65	5	177
5:30 PM	3	7	6	1	52	5	3	7	5	5	67	5	166
5:45 PM	8	8	0	1	60	9	5	4	5	3	65	10	178
Total	47	63	27	17	459	34	24	47	36	30	554	50	1,388

PM Intersection Peak Hour : **5:00 PM - 6:00 PM**

Intersection PHF : **0.81**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	31	32	12	5	243	26	14	23	22	15	301	28	752
PHF	0.55	0.889	0.5	0.625	0.81	0.722	0.7	0.821	0.917	0.75	0.724	0.7	0.81
Movement PHF	0.72			0.85			0.87			0.74			0.81

U-Turn Count Summary

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-1536



Location: Orange Ave @ Estrella Ave

AM Period (7:00 AM - 9:00 AM)					
	Southbound U-Turn	Westbound U-Turn	Northbound U-Turn	Eastbound U-Turn	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
Total	0	0	0	0	0

AM Intersection Peak Hour : **7:45 AM - 8:45 AM** Intersection PHF : **#DIV/0!**

	North Leg EB	East Leg SB	South Leg EB	West Leg SB	TOTAL
Volume	0	0	0	0	0
PHF	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Movement PHF	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

PM Period (4:00 PM - 6:00 PM)					
	Southbound U-Turn	Westbound U-Turn	Northbound U-Turn	Eastbound U-Turn	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	1	1
Total	0	0	0	1	1

PM Intersection Peak Hour : **5:00 PM - 6:00 PM** Intersection PHF : **0.25**

	North Leg EB	East Leg SB	South Leg EB	West Leg SB	TOTAL
Volume	0	0	0	1	1
PHF	#DIV/0!	#DIV/0!	#DIV/0!	0.25	0.25
Movement PHF	#DIV/0!	#DIV/0!	#DIV/0!	0.25	0.25

Bike Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: Orange Ave @ Estrella Ave

Date of Count: Tuesday, March 21, 2017

Analysts: LV/CD

Weather: Sunny

AVC Proj No: 17-0643



Bike Count

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-5136



Location: Orange Ave @ Estrella Ave

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	2
7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:15 AM	0	1	0	0	0	0	0	1	0	0	1	0	3
8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	2	0	0	0	1	1	1	0	5
Total	0	1	0	0	5	0	0	2	1	1	3	1	14

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

Intersection PHF : **0.50**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	0	1	0	0	4	0	0	1	1	1	2	0	10
PHF	#####	0.25	#####	#####	0.50	#####	#####	0.25	0.25	0.25	0.50	#####	0.50
Movement PHF		0.25			0.50			0.50			0.38		0.50

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	0	1	0	0	3	0	0	2	0	0	0	0	6
4:15 PM	0	0	1	0	1	0	0	2	0	0	0	0	4
4:30 PM	0	2	0	0	0	0	0	0	0	0	1	0	3
4:45 PM	0	1	0	0	1	0	0	0	0	0	2	0	4
5:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	4	1	5
5:30 PM	0	0	0	0	1	0	0	1	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
Total	0	4	1	0	7	0	0	6	0	0	8	1	27

PM Intersection Peak Hour : **4:00 PM - 5:00 PM**

Intersection PHF : **0.71**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	0	4	1	0	5	0	0	4	0	0	3	0	17
PHF	#####	0.5	0.25	#####	0.417	#####	#####	0.5	#####	#####	0.375	#####	0.71
Movement PHF		0.63			0.42			0.50			0.38		0.71

Pedestrian Count

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-1536



Location: Orange Ave Estrella Ave

AM Period (7:00 AM - 9:00 AM)					
	North Leg Total	East Leg Total	South Leg Total	West Leg Total	TOTAL
7:00 AM	5	5	6	0	16
7:15 AM	3	2	6	1	12
7:30 AM	10	7	5	0	22
7:45 AM	5	5	9	1	20
8:00 AM	1	8	11	14	34
8:15 AM	9	34	31	10	84
8:30 AM	19	29	48	6	102
8:45 AM	7	8	5	6	26
Total	59	98	121	38	316

AM Intersection Peak Hour : **7:45 AM - 8:45 AM** **0.59**

	North Leg Total	East Leg Total	South Leg Total	West Leg Total	TOTAL
Volume	34	76	99	31	480
PHF	0.45	0.56	0.52	0.55	0.59
Movement PHF	0.45	0.56	0.52	0.55	0.59

PM Period (4:00 PM - 6:00 PM)					
	North Leg Total	East Leg Total	South Leg Total	West Leg Total	TOTAL
4:00 PM	5	7	7	4	23
4:15 PM	4	7	3	3	17
4:30 PM	3	3	10	0	16
4:45 PM	5	16	19	5	45
5:00 PM	8	9	10	6	33
5:15 PM	8	4	13	0	25
5:30 PM	3	9	6	2	20
5:45 PM	4	3	4	2	13
Total	40	58	72	22	192

PM Intersection Peak Hour : **5:00 PM - 6:00 PM** **0.69**

	North Leg Total	East Leg Total	South Leg Total	West Leg Total	TOTAL
Volume	23	25	33	10	182
PHF	0.71875	0.694444444	0.634615385	0.416666667	0.69
Movement PHF	0.72	0.69	0.63	0.42	0.69

VOLUME

El Cajon Blvd Bet. 34th St & Swift Ave

Day: Tuesday
Date: 2/26/2019

City: San Diego
Project #: CA19_4070_001

DAILY TOTALS					NB	SB	EB	WB	Total					
					0	0	9,769	9,691	19,460					
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL			
00:00			33	28	61	12:00			164	166	330			
00:15			30	16	46	12:15			173	136	309			
00:30			31	21	52	12:30			161	168	329			
00:45			16	110	13	78	12:45		166	664	154	624	320	1288
01:00			24	8	32	13:00			161	154	315			
01:15			22	11	33	13:15			160	145	305			
01:30			21	12	33	13:30			140	150	290			
01:45			10	77	12	43	13:45		153	614	150	599	303	1213
02:00			14	8	22	14:00			170	127	297			
02:15			10	12	22	14:15			193	139	332			
02:30			12	7	19	14:30			197	150	347			
02:45			6	42	8	35	14:45		212	772	167	583	379	1355
03:00			13	8	21	15:00			202	160	362			
03:15			21	11	32	15:15			174	151	325			
03:30			5	8	13	15:30			178	161	339			
03:45			13	52	7	34	15:45		212	766	148	620	360	1386
04:00			9	10	19	16:00			194	149	343			
04:15			9	15	24	16:15			189	158	347			
04:30			7	25	32	16:30			221	135	356			
04:45			14	39	27	77	16:45		229	833	168	610	397	1443
05:00			10	33	43	17:00			224	174	398			
05:15			15	29	44	17:15			211	179	390			
05:30			28	42	70	17:30			240	185	425			
05:45			30	83	66	170	17:45		228	903	150	688	378	1591
06:00			27	53	80	18:00			198	108	306			
06:15			31	87	118	18:15			187	144	331			
06:30			39	129	168	18:30			148	133	281			
06:45			39	136	160	429	18:45		154	687	122	507	276	1194
07:00			67	218	285	19:00			132	104	236			
07:15			77	242	319	19:15			115	90	205			
07:30			97	223	320	19:30			133	86	219			
07:45			95	336	219	902	19:45		110	490	84	364	194	854
08:00			96	256	352	20:00			104	79	183			
08:15			95	211	306	20:15			90	73	163			
08:30			119	196	315	20:30			103	68	171			
08:45			101	411	187	850	20:45		94	391	66	286	160	677
09:00			117	161	278	21:00			100	59	159			
09:15			128	125	253	21:15			93	58	151			
09:30			116	146	262	21:30			79	58	137			
09:45			138	499	148	580	21:45		73	345	43	218	116	563
10:00			139	131	270	22:00			74	54	128			
10:15			122	137	259	22:15			76	45	121			
10:30			138	141	279	22:30			65	39	104			
10:45			135	534	134	543	22:45		48	263	37	175	85	438
11:00			145	139	284	23:00			32	30	62			
11:15			128	155	283	23:15			43	28	71			
11:30			145	129	274	23:30			42	26	68			
11:45			159	577	135	558	23:45		28	145	34	118	62	263
TOTALS			2896	4299	7195	TOTALS			6873	5392	12265			
SPLIT %			40.3%	59.7%	37.0%	SPLIT %			56.0%	44.0%	63.0%			

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	9,769	9,691	19,460		
AM Peak Hour			11:45	07:15	07:15	PM Peak Hour			16:45	16:45	16:45
AM Pk Volume			657	940	1305	PM Pk Volume			904	706	1610
Pk Hr Factor			0.949	0.918	0.927	Pk Hr Factor			0.942	0.954	0.947
7 - 9 Volume	0	0	747	1752	2499	4 - 6 Volume	0	0	1736	1298	3034
7 - 9 Peak Hour			08:00	07:15	07:15	4 - 6 Peak Hour			16:45	16:45	16:45
7 - 9 Pk Volume	0	0	411	940	1305	4 - 6 Pk Volume	0	0	904	706	1610
Pk Hr Factor	0.000	0.000	0.863	0.918	0.927	Pk Hr Factor	0.000	0.000	0.942	0.954	0.947

VOLUME

33rd St Bet. Orange Ave & El Cajon Blvd

Day: Tuesday
Date: 3/5/2019

City: San Diego
Project #: CA19_4070_014

DAILY TOTALS					NB	SB	EB	WB	Total		
					3,195	3,309	0	0	6,504		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	7	10			17	12:00	54	56			110
00:15	3	5			8	12:15	50	40			90
00:30	1	5			6	12:30	46	56			102
00:45	2	13	5	25	7	12:45	54	204	62	214	418
01:00	3	3			6	13:00	46	47			93
01:15	4	5			9	13:15	37	53			90
01:30	1	1			2	13:30	59	42			101
01:45	0	8	3	12	3	13:45	41	183	55	197	380
02:00	2	3			5	14:00	43	54			97
02:15	7	4			11	14:15	48	61			109
02:30	2	4			6	14:30	52	56			108
02:45	1	12	1	12	2	14:45	52	195	75	246	441
03:00	3	2			5	15:00	35	84			119
03:15	1	1			2	15:15	66	81			147
03:30	5	1			6	15:30	47	83			130
03:45	3	12	1	5	4	15:45	61	209	86	334	543
04:00	3	3			6	16:00	61	99			160
04:15	7	1			8	16:15	62	104			166
04:30	9	2			11	16:30	67	101			168
04:45	7	26	3	9	10	16:45	52	242	112	416	658
05:00	13	7			20	17:00	53	123			176
05:15	14	2			16	17:15	50	101			151
05:30	24	1			25	17:30	58	80			138
05:45	20	71	4	14	24	17:45	46	207	88	392	599
06:00	53	7			60	18:00	42	70			112
06:15	37	7			44	18:15	47	79			126
06:30	75	13			88	18:30	44	61			105
06:45	63	228	15	42	78	18:45	38	171	52	262	433
07:00	66	23			89	19:00	42	41			83
07:15	71	16			87	19:15	27	37			64
07:30	94	32			126	19:30	29	42			71
07:45	77	308	29	100	106	19:45	30	128	41	161	289
08:00	74	25			99	20:00	22	38			60
08:15	72	24			96	20:15	30	33			63
08:30	69	25			94	20:30	19	27			46
08:45	52	267	29	103	81	20:45	20	91	26	124	215
09:00	51	26			77	21:00	17	31			48
09:15	24	33			57	21:15	10	21			31
09:30	50	25			75	21:30	14	19			33
09:45	46	171	34	118	80	21:45	12	53	16	87	140
10:00	37	41			78	22:00	9	21			30
10:15	47	37			84	22:15	4	24			28
10:30	54	45			99	22:30	10	12			22
10:45	38	176	28	151	66	22:45	6	29	14	71	100
11:00	51	40			91	23:00	5	17			22
11:15	30	48			78	23:15	6	8			14
11:30	40	42			82	23:30	8	10			18
11:45	49	170	43	173	92	23:45	2	21	6	41	62
TOTALS	1462	764			2226	TOTALS	1733	2545			4278
SPLIT %	65.7%	34.3%			34.2%	SPLIT %	40.5%	59.5%			65.8%

DAILY TOTALS					NB	SB	EB	WB	Total
					3,195	3,309	0	0	6,504
AM Peak Hour	07:30	11:45			07:30	PM Peak Hour	15:45	16:15	16:15
AM Pk Volume	317	195			427	PM Pk Volume	251	440	674
Pk Hr Factor	0.843	0.871			0.847	Pk Hr Factor	0.937	0.894	0.957
7 - 9 Volume	575	203	0	0	778	4 - 6 Volume	449	808	0
7 - 9 Peak Hour	07:30	07:30			07:30	4 - 6 Peak Hour	16:00	16:15	16:15
7 - 9 Pk Volume	317	110	0	0	427	4 - 6 Pk Volume	242	440	0
Pk Hr Factor	0.843	0.859	0.000	0.000	0.847	Pk Hr Factor	0.903	0.894	0.000

VOLUME

35th St Bet. Orange Ave & El Cajon Blvd

Day: Tuesday
Date: 2/26/2019

City: San Diego
Project #: CA19_4070_016

DAILY TOTALS					NB	SB	EB	WB	Total		
					2,247	2,013	0	0	4,260		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	8	9			17	12:00	26	24			50
00:15	1	3			4	12:15	19	35			54
00:30	2	3			5	12:30	35	24			59
00:45	3	14	2	17	5	12:45	31	111	29	112	60
01:00	2	1			3	13:00	28	26			54
01:15	1	4			5	13:15	40	30			70
01:30	4	4			8	13:30	31	22			53
01:45	2	9	2	11	4	13:45	37	136	32	110	69
02:00	1	4			5	14:00	32	35			67
02:15	3	2			5	14:15	46	32			78
02:30	2	3			5	14:30	46	28			74
02:45	3	9	0	9	3	14:45	39	163	57	152	96
03:00	0	1			1	15:00	43	38			81
03:15	2	5			7	15:15	41	47			88
03:30	2	0			2	15:30	36	48			84
03:45	4	8	2	8	6	15:45	41	161	55	188	96
04:00	1	2			3	16:00	39	48			87
04:15	7	0			7	16:15	31	41			72
04:30	4	1			5	16:30	36	37			73
04:45	7	19	1	4	8	16:45	48	154	63	189	111
05:00	4	1			5	17:00	50	60			110
05:15	4	1			5	17:15	34	45			79
05:30	7	2			9	17:30	30	45			75
05:45	16	31	2	6	18	17:45	27	141	45	195	72
06:00	18	7			25	18:00	40	35			75
06:15	22	13			35	18:15	34	53			87
06:30	29	8			37	18:30	29	41			70
06:45	29	98	10	38	39	18:45	21	124	25	154	46
07:00	39	17			56	19:00	18	32			50
07:15	64	22			86	19:15	26	22			48
07:30	59	39			98	19:30	15	35			50
07:45	63	225	22	100	85	19:45	15	74	17	106	32
08:00	56	32			88	20:00	24	21			45
08:15	51	28			79	20:15	15	21			36
08:30	54	23			77	20:30	21	21			42
08:45	38	199	24	107	62	20:45	14	74	18	81	32
09:00	37	29			66	21:00	15	19			34
09:15	27	14			41	21:15	12	11			23
09:30	27	13			40	21:30	9	24			33
09:45	30	121	18	74	48	21:45	10	46	12	66	22
10:00	23	21			44	22:00	14	17			31
10:15	36	21			57	22:15	13	22			35
10:30	39	21			60	22:30	9	11			20
10:45	32	130	28	91	60	22:45	5	41	17	67	22
11:00	30	28			58	23:00	8	10			18
11:15	31	27			58	23:15	7	5			12
11:30	31	22			53	23:30	10	4			14
11:45	35	127	27	104	62	23:45	7	32	5	24	12
TOTALS	990	569			1559	TOTALS	1257	1444			2701
SPLIT %	63.5%	36.5%			36.6%	SPLIT %	46.5%	53.5%			63.4%

DAILY TOTALS					NB	SB	EB	WB	Total
					2,247	2,013	0	0	4,260
AM Peak Hour	07:15	07:30			07:15	PM Peak Hour	14:15	16:45	16:45
AM Pk Volume	242	121			357	PM Pk Volume	174	213	375
Pk Hr Factor	0.945	0.776			0.911	Pk Hr Factor	0.946	0.845	0.845
7 - 9 Volume	424	207	0	0	631	4 - 6 Volume	295	384	0
7 - 9 Peak Hour	07:15	07:30			07:15	4 - 6 Peak Hour	16:30	16:45	16:45
7 - 9 Pk Volume	242	121	0	0	357	4 - 6 Pk Volume	168	213	0
Pk Hr Factor	0.945	0.776	0.000	0.000	0.911	Pk Hr Factor	0.840	0.845	0.000

VOLUME

42nd St Bet. Orange Ave & Polk Ave

Day: Thursday
Date: 2/28/2019City: San Diego
Project #: CA19_4070_023

DAILY TOTALS					NB	SB	EB	WB	Total		
					1,012	952	0	0	1,964		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	0	1			1	12:00	20	8			28
00:15	1	4			5	12:15	15	13			28
00:30	1	1			2	12:30	14	15			29
00:45	0	2	2	8	2	12:45	11	60	12	48	23
01:00	3	3			6	13:00	10	12			22
01:15	1	4			5	13:15	12	13			25
01:30	2	1			3	13:30	19	12			31
01:45	1	7	0	8	1	13:45	21	62	14	51	35
02:00	0	3			3	14:00	19	15			34
02:15	2	2			4	14:15	29	31			60
02:30	0	0			0	14:30	15	18			33
02:45	1	3	0	5	1	14:45	18	81	22	86	40
03:00	2	3			5	15:00	16	13			29
03:15	1	0			1	15:15	16	23			39
03:30	2	0			2	15:30	13	16			29
03:45	0	5	1	4	1	15:45	15	60	21	73	36
04:00	1	0			1	16:00	22	23			45
04:15	1	1			2	16:15	10	24			34
04:30	0	1			1	16:30	13	16			29
04:45	1	3	1	3	2	16:45	19	64	22	85	41
05:00	2	1			3	17:00	14	23			37
05:15	2	3			5	17:15	15	30			45
05:30	0	1			1	17:30	17	16			33
05:45	4	8	2	7	6	17:45	14	60	21	90	35
06:00	4	4			8	18:00	13	30			43
06:15	6	3			9	18:15	9	12			21
06:30	11	1			12	18:30	10	20			30
06:45	24	45	7	15	31	18:45	8	40	17	79	25
07:00	30	8			38	19:00	14	16			30
07:15	35	9			44	19:15	10	7			17
07:30	51	13			64	19:30	9	9			18
07:45	30	146	15	45	45	19:45	10	43	13	45	23
08:00	28	7			35	20:00	4	10			14
08:15	22	7			29	20:15	3	12			15
08:30	15	15			30	20:30	10	10			20
08:45	23	88	10	39	33	20:45	6	23	11	43	17
09:00	14	15			29	21:00	9	10			19
09:15	13	13			26	21:15	5	9			14
09:30	13	12			25	21:30	2	8			10
09:45	12	52	11	51	23	21:45	10	26	9	36	19
10:00	16	9			25	22:00	4	5			9
10:15	16	13			29	22:15	4	10			14
10:30	12	13			25	22:30	4	3			7
10:45	10	54	15	50	25	22:45	1	13	5	23	6
11:00	16	11			27	23:00	2	5			7
11:15	9	9			18	23:15	6	4			10
11:30	12	11			23	23:30	2	3			5
11:45	14	51	10	41	24	23:45	6	16	5	17	11
TOTALS	464	276			740	TOTALS	548	676			1224
SPLIT %	62.7%	37.3%			37.7%	SPLIT %	44.8%	55.2%			62.3%

DAILY TOTALS					NB	SB	EB	WB	Total
					1,012	952	0	0	1,964
AM Peak Hour	07:00	08:30			07:00	PM Peak Hour	13:30	17:15	14:00
AM Pk Volume	146	53			191	PM Pk Volume	88	97	167
Pk Hr Factor	0.716	0.883			0.746	Pk Hr Factor	0.759	0.808	0.696
7 - 9 Volume	234	84	0	0	318	4 - 6 Volume	124	175	0
7 - 9 Peak Hour	07:00	07:00			07:00	4 - 6 Peak Hour	16:45	16:30	16:45
7 - 9 Pk Volume	146	45	0	0	191	4 - 6 Pk Volume	65	91	0
Pk Hr Factor	0.716	0.750	0.000	0.000	0.746	Pk Hr Factor	0.855	0.758	0.000

VOLUME

43rd St Bet. Orange Ave & El Cajon Blvd

Day: Thursday
Date: 2/28/2019

City: San Diego
Project #: CA19_4070_018

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	7,357	0	0	7,357		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	0	17			17	12:00	0	90			90
00:15	0	14			14	12:15	0	121			121
00:30	0	20			20	12:30	0	130			130
00:45	0	8	59		8 59	12:45	0	105	446		105 446
01:00	0	7			7	13:00	0	113			113
01:15	0	9			9	13:15	0	102			102
01:30	0	6			6	13:30	0	146			146
01:45	0	7	29		7 29	13:45	0	105	466		105 466
02:00	0	6			6	14:00	0	133			133
02:15	0	5			5	14:15	0	138			138
02:30	0	7			7	14:30	0	121			121
02:45	0	11	29		11 29	14:45	0	158	550		158 550
03:00	0	3			3	15:00	0	152			152
03:15	0	3			3	15:15	0	180			180
03:30	0	4			4	15:30	0	161			161
03:45	0	2	12		2 12	15:45	0	148	641		148 641
04:00	0	3			3	16:00	0	191			191
04:15	0	1			1	16:15	0	160			160
04:30	0	3			3	16:30	0	186			186
04:45	0	8	15		8 15	16:45	0	194	731		194 731
05:00	0	9			9	17:00	0	188			188
05:15	0	4			4	17:15	0	200			200
05:30	0	12			12	17:30	0	173			173
05:45	0	14	39		14 39	17:45	0	175	736		175 736
06:00	0	36			36	18:00	0	145			145
06:15	0	33			33	18:15	0	154			154
06:30	0	31			31	18:30	0	144			144
06:45	0	39	139		39 139	18:45	0	101	544		101 544
07:00	0	61			61	19:00	0	120			120
07:15	0	85			85	19:15	0	86			86
07:30	0	82			82	19:30	0	67			67
07:45	0	83	311		83 311	19:45	0	88	361		88 361
08:00	0	100			100	20:00	0	91			91
08:15	0	81			81	20:15	0	82			82
08:30	0	86			86	20:30	0	86			86
08:45	0	83	350		83 350	20:45	0	72	331		72 331
09:00	0	67			67	21:00	0	70			70
09:15	0	93			93	21:15	0	77			77
09:30	0	83			83	21:30	0	71			71
09:45	0	80	323		80 323	21:45	0	63	281		63 281
10:00	0	95			95	22:00	0	48			48
10:15	0	95			95	22:15	0	41			41
10:30	0	75			75	22:30	0	40			40
10:45	0	72	337		72 337	22:45	0	26	155		26 155
11:00	0	98			98	23:00	0	38			38
11:15	0	92			92	23:15	0	34			34
11:30	0	94			94	23:30	0	23			23
11:45	0	70	354		70 354	23:45	0	23	118		23 118
TOTALS		1997			1997	TOTALS		5360			5360
SPLIT %		100.0%			27.1%	SPLIT %		100.0%			72.9%

DAILY TOTALS					NB	SB	EB	WB	Total	
					0	7,357	0	0	7,357	
AM Peak Hour		11:45			11:45	PM Peak Hour		16:30		16:30
AM Pk Volume		411			411	PM Pk Volume		768		768
Pk Hr Factor		0.790			0.790	Pk Hr Factor		0.960		0.960
7 - 9 Volume	0	661	0	0	661	4 - 6 Volume	0	1467	0	1467
7 - 9 Peak Hour		07:15			07:15	4 - 6 Peak Hour		16:30		16:30
7 - 9 Pk Volume	0	350	0	0	350	4 - 6 Pk Volume	0	768	0	768
Pk Hr Factor	0.000	0.875	0.000	0.000	0.875	Pk Hr Factor	0.000	0.960	0.000	0.000

VOLUME

43rd St Bet. Orange Ave & Polk Ave

Day: Thursday
Date: 2/28/2019

City: San Diego
Project #: CA19_4070_025

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	5,957	0	0	5,957		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	0	12			12	12:00	0	84			84
00:15	0	11			11	12:15	0	74			74
00:30	0	15			15	12:30	0	84			84
00:45	0	8	46		8 46	12:45	0	73	315		73 315
01:00	0	5			5	13:00	0	75			75
01:15	0	8			8	13:15	0	96			96
01:30	0	9			9	13:30	0	84			84
01:45	0	10	32		10 32	13:45	0	81	336		81 336
02:00	0	9			9	14:00	0	87			87
02:15	0	5			5	14:15	0	95			95
02:30	0	1			1	14:30	0	132			132
02:45	0	5	20		5 20	14:45	0	135	449		135 449
03:00	0	5			5	15:00	0	142			142
03:15	0	3			3	15:15	0	143			143
03:30	0	2			2	15:30	0	149			149
03:45	0	2	12		2 12	15:45	0	147	581		147 581
04:00	0	3			3	16:00	0	169			169
04:15	0	2			2	16:15	0	162			162
04:30	0	2			2	16:30	0	179			179
04:45	0	5	12		5 12	16:45	0	149	659		149 659
05:00	0	7			7	17:00	0	176			176
05:15	0	10			10	17:15	0	170			170
05:30	0	13			13	17:30	0	123			123
05:45	0	17	47		17 47	17:45	0	172	641		172 641
06:00	0	23			23	18:00	0	125			125
06:15	0	17			17	18:15	0	102			102
06:30	0	34			34	18:30	0	107			107
06:45	0	38	112		38 112	18:45	0	87	421		87 421
07:00	0	41			41	19:00	0	89			89
07:15	0	73			73	19:15	0	66			66
07:30	0	74			74	19:30	0	77			77
07:45	0	69	257		69 257	19:45	0	79	311		79 311
08:00	0	79			79	20:00	0	75			75
08:15	0	48			48	20:15	0	57			57
08:30	0	52			52	20:30	0	48			48
08:45	0	71	250		71 250	20:45	0	45	225		45 225
09:00	0	67			67	21:00	0	59			59
09:15	0	72			72	21:15	0	52			52
09:30	0	63			63	21:30	0	49			49
09:45	0	61	263		61 263	21:45	0	36	196		36 196
10:00	0	61			61	22:00	0	33			33
10:15	0	73			73	22:15	0	38			38
10:30	0	69			69	22:30	0	29			29
10:45	0	73	276		73 276	22:45	0	21	121		21 121
11:00	0	45			45	23:00	0	32			32
11:15	0	73			73	23:15	0	22			22
11:30	0	76			76	23:30	0	21			21
11:45	0	81	275		81 275	23:45	0	25	100		25 100
TOTALS		1602			1602	TOTALS		4355			4355
SPLIT %		100.0%			26.9%	SPLIT %		100.0%			73.1%

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	5,957	0	0	5,957		
AM Peak Hour		11:45			11:45	PM Peak Hour		16:30		16:30	
AM Pk Volume		323			323	PM Pk Volume		674		674	
Pk Hr Factor		0.961			0.961	Pk Hr Factor		0.941		0.941	
7 - 9 Volume	0	507	0	0	507	4 - 6 Volume	0	1300	0	0	1300
7 - 9 Peak Hour		07:15			07:15	4 - 6 Peak Hour		16:30			16:30
7 - 9 Pk Volume	0	295	0	0	295	4 - 6 Pk Volume	0	674	0	0	674
Pk Hr Factor	0.000	0.934	0.000	0.000	0.934	Pk Hr Factor	0.000	0.941	0.000	0.000	0.941

VOLUME

44th St Bet. Orange Ave & El Cajon Blvd

Day: Wednesday
Date: 2/27/2019

City: San Diego
Project #: CA19_4070_019

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	959	0	0	959		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	0	3			3	12:00	0	26			26
00:15	0	4			4	12:15	0	21			21
00:30	0	0			0	12:30	0	16			16
00:45	0	3	10		3 10	12:45	0	22	85		22 85
01:00	0	0			0	13:00	0	11			11
01:15	0	1			1	13:15	0	12			12
01:30	0	1			1	13:30	0	24			24
01:45	0	2	4		2 4	13:45	0	16	63		16 63
02:00	0	2			2	14:00	0	15			15
02:15	0	0			0	14:15	0	11			11
02:30	0	1			1	14:30	0	15			15
02:45	0	0	3		0 3	14:45	0	10	51		10 51
03:00	0	0			0	15:00	0	19			19
03:15	0	0			0	15:15	0	19			19
03:30	0	1			1	15:30	0	14			14
03:45	0	0	1		0 1	15:45	0	19	71		19 71
04:00	0	0			0	16:00	0	12			12
04:15	0	1			1	16:15	0	23			23
04:30	0	0			0	16:30	0	19			19
04:45	0	0	1		0 1	16:45	0	19	73		19 73
05:00	0	2			2	17:00	0	20			20
05:15	0	1			1	17:15	0	29			29
05:30	0	0			0	17:30	0	26			26
05:45	0	1	4		1 4	17:45	0	21	96		21 96
06:00	0	6			6	18:00	0	19			19
06:15	0	6			6	18:15	0	16			16
06:30	0	5			5	18:30	0	13			13
06:45	0	14	31		14 31	18:45	0	12	60		12 60
07:00	0	17			17	19:00	0	12			12
07:15	0	21			21	19:15	0	11			11
07:30	0	19			19	19:30	0	18			18
07:45	0	9	66		9 66	19:45	0	10	51		10 51
08:00	0	11			11	20:00	0	9			9
08:15	0	10			10	20:15	0	11			11
08:30	0	16			16	20:30	0	9			9
08:45	0	10	47		10 47	20:45	0	4	33		4 33
09:00	0	19			19	21:00	0	9			9
09:15	0	13			13	21:15	0	6			6
09:30	0	10			10	21:30	0	12			12
09:45	0	10	52		10 52	21:45	0	4	31		4 31
10:00	0	12			12	22:00	0	6			6
10:15	0	4			4	22:15	0	2			2
10:30	0	14			14	22:30	0	1			1
10:45	0	9	39		9 39	22:45	0	5	14		5 14
11:00	0	13			13	23:00	0	7			7
11:15	0	9			9	23:15	0	7			7
11:30	0	11			11	23:30	0	6			6
11:45	0	19	52		19 52	23:45	0	1	21		1 21
TOTALS		310			310	TOTALS		649			649
SPLIT %		100.0%			32.3%	SPLIT %		100.0%			67.7%

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	959	0	0	959		
AM Peak Hour		11:45			11:45	PM Peak Hour		17:00		17:00	
AM Pk Volume		82			82	PM Pk Volume		96		96	
Pk Hr Factor		0.788			0.788	Pk Hr Factor		0.828		0.828	
7 - 9 Volume	0	113	0	0	113	4 - 6 Volume	0	169	0	0	169
7 - 9 Peak Hour		07:00			07:00	4 - 6 Peak Hour		17:00			17:00
7 - 9 Pk Volume	0	66	0	0	66	4 - 6 Pk Volume	0	96	0	0	96
Pk Hr Factor	0.000	0.786	0.000	0.000	0.786	Pk Hr Factor	0.000	0.828	0.000	0.000	0.828

VOLUME

44th St Bet. Orange Ave & Polk Ave

Day: Wednesday
Date: 2/27/2019

City: San Diego
Project #: CA19_4070_026

DAILY TOTALS					NB	SB	EB	WB	Total		
					409	537	0	0	946		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	1	0			1	12:00	7	4			11
00:15	0	0			0	12:15	4	13			17
00:30	0	1			1	12:30	6	8			14
00:45	0	1	4	5	4	12:45	5	8	33		13
01:00	1	0			1	13:00	7	8			15
01:15	2	0			2	13:15	6	11			17
01:30	0	1			1	13:30	2	8			10
01:45	0	3	2	3	2	13:45	7	7	34		14
02:00	1	1			2	14:00	8	11			19
02:15	0	0			0	14:15	5	9			14
02:30	0	1			1	14:30	8	9			17
02:45	0	1	0	2	0	14:45	3	8	37		11
03:00	1	0			1	15:00	9	12			21
03:15	0	0			0	15:15	11	16			27
03:30	0	1			1	15:30	8	8			16
03:45	1	2	0	1	1	15:45	7	9	45		16
04:00	0	0			0	16:00	4	7			11
04:15	0	0			0	16:15	8	13			21
04:30	0	0			0	16:30	11	6			17
04:45	1	1	1	1	2	16:45	5	10	36		15
05:00	0	2			2	17:00	8	10			18
05:15	4	3			7	17:15	7	13			20
05:30	2	1			3	17:30	4	12			16
05:45	3	9	0	6	3	17:45	5	11	46		16
06:00	5	8			13	18:00	8	12			20
06:15	9	4			13	18:15	2	12			14
06:30	7	5			12	18:30	5	12			17
06:45	7	28	5	22	12	18:45	5	6	42		11
07:00	5	5			10	19:00	4	9			13
07:15	11	10			21	19:15	1	6			7
07:30	3	13			16	19:30	5	7			12
07:45	5	24	5	33	10	19:45	3	5	27		8
08:00	10	4			14	20:00	5	7			12
08:15	4	5			9	20:15	4	4			8
08:30	10	11			21	20:30	2	6			8
08:45	8	32	8	28	16	20:45	5	3	20		8
09:00	7	4			11	21:00	1	5			6
09:15	3	6			9	21:15	2	3			5
09:30	10	6			16	21:30	1	4			5
09:45	3	23	9	25	12	21:45	1	2	14		3
10:00	8	7			15	22:00	1	4			5
10:15	6	9			15	22:15	6	1			7
10:30	6	5			11	22:30	1	1			2
10:45	11	31	6	27	17	22:45	1	1	7		2
11:00	8	9			17	23:00	5	3			8
11:15	6	4			10	23:15	2	5			7
11:30	8	10			18	23:30	2	4			6
11:45	5	27	6	29	11	23:45	0	2	14		2
TOTALS	182	182			364	TOTALS	227	355			582
SPLIT %	50.0%	50.0%			38.5%	SPLIT %	39.0%	61.0%			61.5%

DAILY TOTALS					NB	SB	EB	WB	Total
					409	537	0	0	946
AM Peak Hour	10:45	06:45			10:45	PM Peak Hour	15:00	17:15	15:00
AM Pk Volume	33	33			62	PM Pk Volume	35	48	80
Pk Hr Factor	0.750	0.635			0.861	Pk Hr Factor	0.795	0.923	0.741
7 - 9 Volume	56	61	0	0	117	4 - 6 Volume	52	82	0
7 - 9 Peak Hour	08:00	07:00			07:15	4 - 6 Peak Hour	16:15	17:00	16:15
7 - 9 Pk Volume	32	33	0	0	61	4 - 6 Pk Volume	32	46	0
Pk Hr Factor	0.800	0.635	0.000	0.000	0.726	Pk Hr Factor	0.727	0.885	0.000

VOLUME

48th St Bet. Orange Ave & El Cajon Blvd

Day: Wednesday
Date: 2/27/2019

City: San Diego
Project #: CA19_4070_021

DAILY TOTALS					NB	SB	EB	WB	Total		
					548	681	0	0	1,229		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	1	0			1	12:00	8	9			17
00:15	4	1			5	12:15	5	9			14
00:30	3	2			5	12:30	9	11			20
00:45	1	9	1	4	2	12:45	8	30	11	40	19
01:00	3	2			5	13:00	10	13			23
01:15	0	2			2	13:15	7	7			14
01:30	1	1			2	13:30	9	10			19
01:45	2	6	1	6	3	13:45	15	41	13	43	28
02:00	4	1			5	14:00	7	10			17
02:15	0	0			0	14:15	4	11			15
02:30	0	1			1	14:30	14	16			30
02:45	1	5	0	2	1	14:45	4	29	12	49	16
03:00	1	1			2	15:00	3	16			19
03:15	2	2			4	15:15	11	13			24
03:30	0	1			1	15:30	9	8			17
03:45	0	3	2	6	2	15:45	7	30	16	53	23
04:00	3	0			3	16:00	7	16			23
04:15	0	3			3	16:15	12	18			30
04:30	1	0			1	16:30	7	15			22
04:45	1	5	1	4	2	16:45	8	34	18	67	26
05:00	4	0			4	17:00	4	16			20
05:15	3	3			6	17:15	14	19			33
05:30	3	1			4	17:30	12	17			29
05:45	2	12	4	8	6	17:45	11	41	18	70	29
06:00	8	1			9	18:00	8	12			20
06:15	4	3			7	18:15	9	8			17
06:30	10	4			14	18:30	11	7			18
06:45	9	31	2	10	11	18:45	4	32	12	39	16
07:00	10	10			20	19:00	1	1			2
07:15	11	7			18	19:15	0	3			3
07:30	20	16			36	19:30	3	14			17
07:45	16	57	19	52	35	19:45	7	11	6	24	13
08:00	13	16			29	20:00	4	6			10
08:15	20	6			26	20:15	3	5			8
08:30	15	8			23	20:30	1	6			7
08:45	8	56	10	40	18	20:45	5	13	8	25	13
09:00	6	5			11	21:00	3	3			6
09:15	8	4			12	21:15	5	5			10
09:30	5	4			9	21:30	4	6			10
09:45	5	24	5	18	10	21:45	5	17	11	25	16
10:00	3	5			8	22:00	8	6			14
10:15	7	5			12	22:15	0	6			6
10:30	3	2			5	22:30	1	4			5
10:45	5	18	6	18	11	22:45	4	13	4	20	8
11:00	8	16			24	23:00	2	2			4
11:15	4	8			12	23:15	0	5			5
11:30	9	12			21	23:30	2	2			4
11:45	6	27	12	48	18	23:45	0	4	1	10	1
TOTALS	253	216			469	TOTALS	295	465			760
SPLIT %	53.9%	46.1%			38.2%	SPLIT %	38.8%	61.2%			61.8%

DAILY TOTALS					NB	SB	EB	WB	Total
					548	681	0	0	1,229
AM Peak Hour	07:30	07:15			07:30	PM Peak Hour	17:15	16:45	17:00
AM Pk Volume	69	58			126	PM Pk Volume	45	70	111
Pk Hr Factor	0.863	0.763			0.875	Pk Hr Factor	0.804	0.921	0.841
7 - 9 Volume	113	92	0	0	205	4 - 6 Volume	75	137	0
7 - 9 Peak Hour	07:30	07:15			07:30	4 - 6 Peak Hour	17:00	16:45	17:00
7 - 9 Pk Volume	69	58	0	0	126	4 - 6 Pk Volume	41	70	0
Pk Hr Factor	0.863	0.763	0.000	0.000	0.875	Pk Hr Factor	0.732	0.921	0.000

VOLUME

University Ave Bet. 35th St & Wilson Ave

Day: Tuesday
Date: 3/5/2019

City: San Diego
Project #: CA19_4070_009

DAILY TOTALS					NB	SB	EB	WB	Total			
					0	0	6,832	6,771	13,603			
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL	
00:00			31	21	52	12:00			103	113	216	
00:15			21	17	38	12:15			116	104	220	
00:30			29	17	46	12:30			106	83	189	
00:45			21	102	17	12:45			118	443	87	387
				72	38	174					205	830
01:00			18	14	32	13:00			118	86	204	
01:15			13	11	24	13:15			93	77	170	
01:30			12	10	22	13:30			111	93	204	
01:45			12	55	20	13:45			128	450	105	361
				55	32	110					233	811
02:00			14	8	22	14:00			103	80	183	
02:15			14	11	25	14:15			112	109	221	
02:30			11	8	19	14:30			124	76	200	
02:45			7	46	4	14:45			112	451	104	369
				31	11	77					216	820
03:00			8	10	18	15:00			144	99	243	
03:15			15	18	33	15:15			113	94	207	
03:30			10	12	22	15:30			114	126	240	
03:45			5	38	12	15:45			137	508	127	446
				52	17	90					264	954
04:00			13	11	24	16:00			145	122	267	
04:15			8	21	29	16:15			124	87	211	
04:30			12	19	31	16:30			134	98	232	
04:45			4	37	26	16:45			129	532	103	410
				77	30	114					232	942
05:00			15	27	42	17:00			137	125	262	
05:15			23	37	60	17:15			136	108	244	
05:30			30	51	81	17:30			117	111	228	
05:45			37	105	51	17:45			108	498	124	468
				166	88	271					232	966
06:00			39	56	95	18:00			144	124	268	
06:15			45	77	122	18:15			134	130	264	
06:30			41	98	139	18:30			117	101	218	
06:45			42	167	108	18:45			118	513	105	460
				339	150	506					223	973
07:00			48	124	172	19:00			103	87	190	
07:15			49	123	172	19:15			83	93	176	
07:30			66	147	213	19:30			84	72	156	
07:45			75	238	133	19:45			85	355	67	319
				527	208	765					152	674
08:00			68	132	200	20:00			98	79	177	
08:15			67	119	186	20:15			77	61	138	
08:30			83	102	185	20:30			86	57	143	
08:45			102	320	117	20:45			76	337	65	262
				470	219	790					141	599
09:00			81	108	189	21:00			65	61	126	
09:15			55	93	148	21:15			78	51	129	
09:30			68	76	144	21:30			63	55	118	
09:45			66	270	75	21:45			57	263	43	210
				352	141	622					100	473
10:00			61	85	146	22:00			68	44	112	
10:15			111	81	192	22:15			63	42	105	
10:30			82	92	174	22:30			43	30	73	
10:45			102	356	80	22:45			53	227	43	159
				338	182	694					96	386
11:00			79	69	148	23:00			42	29	71	
11:15			88	87	175	23:15			41	23	64	
11:30			100	88	188	23:30			31	23	54	
11:45			110	377	90	23:45			30	144	32	107
				334	200	711					62	251
TOTALS				2111	2813	4924	TOTALS			4721	3958	8679
SPLIT %				42.9%	57.1%	36.2%	SPLIT %			54.4%	45.6%	63.8%

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	6,832	6,771	13,603		
AM Peak Hour			11:45	07:15	11:45	PM Peak Hour			15:45	17:30	17:30
AM Pk Volume			435	535	825	PM Pk Volume			540	489	992
Pk Hr Factor			0.938	0.910	0.938	Pk Hr Factor			0.931	0.940	0.925
7 - 9 Volume	0	0	558	997	1555	4 - 6 Volume	0	0	1030	878	1908
7 - 9 Peak Hour			08:00	07:15	07:30	4 - 6 Peak Hour			16:30	17:00	16:30
7 - 9 Pk Volume	0	0	320	535	807	4 - 6 Pk Volume	0	0	536	468	970
Pk Hr Factor	0.000	0.000	0.784	0.910	0.947	Pk Hr Factor	0.000	0.000	0.978	0.936	0.926

VOLUME

El Cajon Blvd Bet. 35th St & Wilson Ave

Day: Tuesday
Date: 2/26/2019

City: San Diego
Project #: CA19_4070_002

DAILY TOTALS					NB	SB	EB	WB	Total			
					0	0	9,662	9,403	19,065			
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL	
00:00			30	23	53	12:00			160	164	324	
00:15			22	14	36	12:15			162	144	306	
00:30			28	23	51	12:30			154	155	309	
00:45			19	99	9	12:45			180	656	144	607
01:00			23	9	32	13:00			168	145	313	
01:15			16	9	25	13:15			157	121	278	
01:30			22	14	36	13:30			155	139	294	
01:45			12	73	11	13:45			143	623	130	535
02:00			13	13	26	14:00			171	128	299	
02:15			11	11	22	14:15			182	139	321	
02:30			14	9	23	14:30			204	149	353	
02:45			6	44	5	14:45			195	752	171	587
03:00			10	7	17	15:00			204	157	361	
03:15			19	12	31	15:15			184	153	337	
03:30			7	5	12	15:30			187	159	346	
03:45			11	47	8	15:45			207	782	157	626
04:00			10	7	17	16:00			196	158	354	
04:15			11	13	24	16:15			207	172	379	
04:30			8	16	24	16:30			221	156	377	
04:45			15	44	16	16:45			214	838	161	647
05:00			10	27	37	17:00			229	195	424	
05:15			20	18	38	17:15			198	193	391	
05:30			34	40	74	17:30			222	195	417	
05:45			35	99	49	17:45			196	845	178	761
06:00			32	40	72	18:00			191	156	347	
06:15			43	83	126	18:15			175	143	318	
06:30			43	117	160	18:30			153	137	290	
06:45			46	164	147	18:45			135	654	122	558
07:00			74	169	243	19:00			113	94	207	
07:15			105	205	310	19:15			112	92	204	
07:30			97	189	286	19:30			110	74	184	
07:45			116	392	221	19:45			103	438	86	346
08:00			88	210	298	20:00			97	77	174	
08:15			116	209	325	20:15			76	76	152	
08:30			126	177	303	20:30			85	65	150	
08:45			118	448	183	20:45			78	336	63	281
09:00			126	174	300	21:00			88	61	149	
09:15			133	107	240	21:15			80	70	150	
09:30			118	147	265	21:30			67	55	122	
09:45			151	528	138	21:45			62	297	48	234
10:00			136	133	269	22:00			68	54	122	
10:15			144	123	267	22:15			63	46	109	
10:30			154	130	284	22:30			63	33	96	
10:45			118	552	129	22:45			46	240	42	175
11:00			128	117	245	23:00			38	31	69	
11:15			123	143	266	23:15			44	27	71	
11:30			150	121	271	23:30			39	24	63	
11:45			161	562	147	23:45			28	149	37	119
TOTALS			3052	3927	6979	TOTALS			6610	5476	12086	
SPLIT %			43.7%	56.3%	36.6%	SPLIT %			54.7%	45.3%	63.4%	

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	9,662	9,403	19,065		
AM Peak Hour			11:45	07:30	07:45	PM Peak Hour			16:15	17:00	16:45
AM Pk Volume			637	829	1263	PM Pk Volume			871	761	1607
Pk Hr Factor			0.983	0.938	0.937	Pk Hr Factor			0.951	0.976	0.948
7 - 9 Volume	0	0	840	1563	2403	4 - 6 Volume	0	0	1683	1408	3091
7 - 9 Peak Hour			08:00	07:30	07:45	4 - 6 Peak Hour			16:15	17:00	16:45
7 - 9 Pk Volume	0	0	448	829	1263	4 - 6 Pk Volume	0	0	871	761	1607
Pk Hr Factor	0.000	0.000	0.889	0.938	0.937	Pk Hr Factor	0.000	0.000	0.951	0.976	0.948

VOLUME

University Ave Bet. 43rd St & Fairmount Ave

Day: Tuesday
Date: 3/5/2019

City: San Diego
Project #: CA19_4070_010

DAILY TOTALS						NB	SB	EB	WB	Total		
						0	0	10,834	9,198	20,032		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL	
00:00			32	30	62	12:00			164	152	316	
00:15			34	19	53	12:15			163	143	306	
00:30			24	18	42	12:30			164	141	305	
00:45			22	112	13	12:45			186	677	126	562
				80	35	192					312	1239
01:00			25	17	42	13:00			160	141	301	
01:15			21	16	37	13:15			201	128	329	
01:30			27	12	39	13:30			154	140	294	
01:45			24	97	19	13:45			192	707	144	553
				64	43	161					336	1260
02:00			20	12	32	14:00			161	139	300	
02:15			12	21	33	14:15			186	157	343	
02:30			19	15	34	14:30			196	146	342	
02:45			19	70	18	14:45			198	741	139	581
				66	37	136					337	1322
03:00			18	12	30	15:00			181	141	322	
03:15			16	19	35	15:15			194	127	321	
03:30			17	15	32	15:30			210	129	339	
03:45			14	65	22	15:45			221	806	143	540
				68	36	133					364	1346
04:00			9	18	27	16:00			213	129	342	
04:15			12	21	33	16:15			213	108	321	
04:30			13	34	47	16:30			214	154	368	
04:45			26	60	47	16:45			218	858	118	509
				120	73	180					336	1367
05:00			31	41	72	17:00			216	143	359	
05:15			31	55	86	17:15			193	139	332	
05:30			27	68	95	17:30			121	134	255	
05:45			43	132	77	17:45			200	730	122	538
				241	120	373					322	1268
06:00			48	101	149	18:00			218	141	359	
06:15			56	110	166	18:15			193	134	327	
06:30			74	142	216	18:30			196	136	332	
06:45			68	246	134	18:45			180	787	125	536
				487	202	733					305	1323
07:00			90	175	265	19:00			150	110	260	
07:15			78	173	251	19:15			166	110	276	
07:30			103	170	273	19:30			138	106	244	
07:45			134	405	153	19:45			147	601	91	417
				671	287	1076					238	1018
08:00			140	143	283	20:00			124	111	235	
08:15			143	148	291	20:15			118	95	213	
08:30			117	137	254	20:30			120	83	203	
08:45			170	570	136	20:45			93	455	91	380
				564	306	1134					184	835
09:00			152	152	304	21:00			100	91	191	
09:15			129	135	264	21:15			116	69	185	
09:30			156	120	276	21:30			93	78	171	
09:45			149	586	121	21:45			86	395	68	306
				528	270	1114					154	701
10:00			146	135	281	22:00			87	64	151	
10:15			152	126	278	22:15			84	62	146	
10:30			148	140	288	22:30			67	48	115	
10:45			189	635	124	22:45			55	293	34	208
				525	313	1160					89	501
11:00			141	124	265	23:00			51	50	101	
11:15			152	122	274	23:15			48	38	86	
11:30			163	125	288	23:30			47	43	90	
11:45			170	626	125	23:45			34	180	27	158
				496	295	1122					61	338
TOTALS				3604	3910	7514	TOTALS			7230	5288	12518
SPLIT %				48.0%	52.0%	37.5%	SPLIT %			57.8%	42.2%	62.5%

DAILY TOTALS						NB	SB	EB	WB	Total	
						0	0	10,834	9,198	20,032	
AM Peak Hour			11:45	07:00	11:45	PM Peak Hour			15:45	13:45	15:45
AM Pk Volume			661	671	1222	PM Pk Volume			861	586	1395
Pk Hr Factor			0.972	0.959	0.967	Pk Hr Factor			0.974	0.933	0.948
7 - 9 Volume	0	0	975	1235	2210	4 - 6 Volume	0	0	1588	1047	2635
7 - 9 Peak Hour			08:00	07:00	07:30	4 - 6 Peak Hour			16:15	16:30	16:30
7 - 9 Pk Volume	0	0	570	671	1134	4 - 6 Pk Volume	0	0	861	554	1395
Pk Hr Factor	0.000	0.000	0.838	0.959	0.974	Pk Hr Factor	0.000	0.000	0.987	0.899	0.948

VOLUME

El Cajon Blvd Bet. Copeland Ave & Van Dyke Ave

Day: Tuesday
Date: 3/5/2019

City: San Diego
Project #: CA19_4070_003

DAILY TOTALS						NB	SB	EB	WB	Total				
						0	0	15,507	11,594	27,101				
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL			
00:00			50	11	61	12:00			248	176	424			
00:15			39	15	54	12:15			243	158	401			
00:30			42	22	64	12:30			265	190	455			
00:45			31	162	11	59	12:45		270	1026	166	690	436	1716
01:00			19	16	35	13:00			261	174	435			
01:15			24	8	32	13:15			259	213	472			
01:30			30	12	42	13:30			226	227	453			
01:45			25	98	13	49	13:45		265	1011	171	785	436	1796
02:00			22	5	27	14:00			271	155	426			
02:15			11	8	19	14:15			288	182	470			
02:30			15	15	30	14:30			309	189	498			
02:45			11	59	10	38	14:45		277	1145	186	712	463	1857
03:00			16	11	27	15:00			297	193	490			
03:15			9	9	18	15:15			366	170	536			
03:30			10	11	21	15:30			338	192	530			
03:45			10	45	13	44	15:45		316	1317	174	729	490	2046
04:00			13	16	29	16:00			347	199	546			
04:15			18	16	34	16:15			351	172	523			
04:30			14	27	41	16:30			374	202	576			
04:45			29	74	27	86	16:45		366	1438	177	750	543	2188
05:00			34	51	85	17:00			342	209	551			
05:15			31	56	87	17:15			333	218	551			
05:30			49	64	113	17:30			330	178	508			
05:45			40	154	47	218	17:45		303	1308	169	774	472	2082
06:00			61	78	139	18:00			293	161	454			
06:15			58	108	166	18:15			265	170	435			
06:30			89	160	249	18:30			236	165	401			
06:45			91	299	179	525	18:45		236	1030	168	664	404	1694
07:00			134	234	368	19:00			215	145	360			
07:15			200	230	430	19:15			203	114	317			
07:30			186	238	424	19:30			178	113	291			
07:45			240	760	286	988	19:45		183	779	104	476	287	1255
08:00			191	277	468	20:00			133	102	235			
08:15			176	233	409	20:15			148	104	252			
08:30			189	214	403	20:30			141	86	227			
08:45			208	764	211	935	20:45		124	546	60	352	184	898
09:00			198	202	400	21:00			130	79	209			
09:15			211	149	360	21:15			104	95	199			
09:30			203	182	385	21:30			125	73	198			
09:45			218	830	159	692	21:45		90	449	57	304	147	753
10:00			199	146	345	22:00			86	58	144			
10:15			190	167	357	22:15			91	57	148			
10:30			215	189	404	22:30			81	57	138			
10:45			229	833	147	649	22:45		73	331	44	216	117	547
11:00			205	179	384	23:00			64	46	110			
11:15			184	180	364	23:15			60	35	95			
11:30			210	170	380	23:30			59	30	89			
11:45			222	821	194	723	23:45		45	228	25	136	70	364
TOTALS			4899	5006	9905	TOTALS			10608	6588	17196			
SPLIT %			49.5%	50.5%	36.5%	SPLIT %			61.7%	38.3%	63.5%			

DAILY TOTALS						NB	SB	EB	WB	Total	
						0	0	15,507	11,594	27,101	
AM Peak Hour			11:45	07:30	07:15	PM Peak Hour			16:00	16:30	16:30
AM Pk Volume			978	1034	1848	PM Pk Volume			1438	806	2221
Pk Hr Factor			0.923	0.904	0.878	Pk Hr Factor			0.961	0.924	0.964
7 - 9 Volume	0	0	1524	1923	3447	4 - 6 Volume	0	0	2746	1524	4270
7 - 9 Peak Hour			07:15	07:30	07:15	4 - 6 Peak Hour			16:00	16:30	16:30
7 - 9 Pk Volume	0	0	817	1034	1848	4 - 6 Pk Volume	0	0	1438	806	2221
Pk Hr Factor	0.000	0.000	0.851	0.904	0.878	Pk Hr Factor	0.000	0.000	0.961	0.924	0.964

VOLUME

El Cajon Blvd Bet. 47th St & Euclid Ave

Day: Tuesday
Date: 2/26/2019

City: San Diego
Project #: CA19_4070_006

DAILY TOTALS					NB	SB	EB	WB	Total					
					0	0	12,392	12,143	24,535					
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL			
00:00			22	25	47	12:00			202	174	376			
00:15			31	24	55	12:15			176	192	368			
00:30			30	18	48	12:30			211	202	413			
00:45			21	104	23	12:45			208	797	154	362	1519	
01:00			21	17	38	13:00			201	158	359			
01:15			19	17	36	13:15			203	178	381			
01:30			20	24	44	13:30			173	176	349			
01:45			13	73	14	13:45			185	762	154	666	339	1428
02:00			16	12	28	14:00			204	154	358			
02:15			7	10	17	14:15			213	176	389			
02:30			12	10	22	14:30			233	171	404			
02:45			8	43	13	14:45			281	931	175	676	456	1607
03:00			8	17	25	15:00			244	180	424			
03:15			3	7	10	15:15			272	182	454			
03:30			5	13	18	15:30			264	185	449			
03:45			8	24	16	15:45			270	1050	167	714	437	1764
04:00			11	14	25	16:00			274	201	475			
04:15			14	21	35	16:15			276	173	449			
04:30			14	24	38	16:30			281	190	471			
04:45			24	63	33	16:45			317	1148	189	753	506	1901
05:00			24	41	65	17:00			304	204	508			
05:15			22	56	78	17:15			278	218	496			
05:30			36	51	87	17:30			283	190	473			
05:45			34	116	50	17:45			283	1148	141	753	424	1901
06:00			39	76	115	18:00			263	161	424			
06:15			48	111	159	18:15			222	133	355			
06:30			60	153	213	18:30			235	143	378			
06:45			62	209	282	18:45			195	915	119	556	314	1471
07:00			98	334	432	19:00			175	155	330			
07:15			130	284	414	19:15			158	110	268			
07:30			134	219	353	19:30			118	111	229			
07:45			157	519	321	19:45			122	573	109	485	231	1058
08:00			139	322	461	20:00			137	105	242			
08:15			116	274	390	20:15			118	99	217			
08:30			160	277	437	20:30			112	88	200			
08:45			158	573	227	20:45			101	468	64	356	165	824
09:00			163	176	339	21:00			108	86	194			
09:15			148	158	306	21:15			92	82	174			
09:30			172	203	375	21:30			81	83	164			
09:45			164	647	178	21:45			84	365	64	315	148	680
10:00			163	187	350	22:00			71	64	135			
10:15			198	191	389	22:15			81	72	153			
10:30			177	205	382	22:30			73	70	143			
10:45			192	730	186	22:45			52	277	48	254	100	531
11:00			163	197	360	23:00			49	46	95			
11:15			157	208	365	23:15			55	42	97			
11:30			181	219	400	23:30			36	35	71			
11:45			181	682	212	23:45			35	175	20	143	55	318
TOTALS				3783	5750	9533	TOTALS			8609	6393	15002		
SPLIT %				39.7%	60.3%	38.9%	SPLIT %			57.4%	42.6%	61.1%		

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	12,392	12,143	24,535		
AM Peak Hour			11:45	07:45	07:45	PM Peak Hour			16:45	16:30	16:45
AM Pk Volume			770	1194	1766	PM Pk Volume			1182	801	1983
Pk Hr Factor			0.912	0.927	0.924	Pk Hr Factor			0.932	0.919	0.976
7 - 9 Volume	0	0	1092	2258	3350	4 - 6 Volume	0	0	2296	1506	3802
7 - 9 Peak Hour			08:00	07:45	07:45	4 - 6 Peak Hour			16:45	16:30	16:45
7 - 9 Pk Volume	0	0	573	1194	1766	4 - 6 Pk Volume	0	0	1182	801	1983
Pk Hr Factor	0.000	0.000	0.895	0.927	0.924	Pk Hr Factor	0.000	0.000	0.932	0.919	0.976

VOLUME

El Cajon Blvd Bet. Copeland Ave & Van Dyke Ave

Day: Tuesday
Date: 3/5/2019

City: San Diego
Project #: CA19_4070_003

DAILY TOTALS					NB	SB	EB	WB	Total			
					0	0	15,507	11,594	27,101			
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL	
00:00			50	11	61	12:00			248	176	424	
00:15			39	15	54	12:15			243	158	401	
00:30			42	22	64	12:30			265	190	455	
00:45			31	162	11	59	12:45		270	1026	166	690
01:00			19	16	35	13:00			261	174	435	
01:15			24	8	32	13:15			259	213	472	
01:30			30	12	42	13:30			226	227	453	
01:45			25	98	13	49	13:45		265	1011	171	785
02:00			22	5	27	14:00			271	155	426	
02:15			11	8	19	14:15			288	182	470	
02:30			15	15	30	14:30			309	189	498	
02:45			11	59	10	38	14:45		277	1145	186	712
03:00			16	11	27	15:00			297	193	490	
03:15			9	9	18	15:15			366	170	536	
03:30			10	11	21	15:30			338	192	530	
03:45			10	45	13	44	15:45		316	1317	174	729
04:00			13	16	29	16:00			347	199	546	
04:15			18	16	34	16:15			351	172	523	
04:30			14	27	41	16:30			374	202	576	
04:45			29	74	27	86	16:45		366	1438	177	750
05:00			34	51	85	17:00			342	209	551	
05:15			31	56	87	17:15			333	218	551	
05:30			49	64	113	17:30			330	178	508	
05:45			40	154	47	218	17:45		303	1308	169	774
06:00			61	78	139	18:00			293	161	454	
06:15			58	108	166	18:15			265	170	435	
06:30			89	160	249	18:30			236	165	401	
06:45			91	299	179	525	18:45		236	1030	168	664
07:00			134	234	368	19:00			215	145	360	
07:15			200	230	430	19:15			203	114	317	
07:30			186	238	424	19:30			178	113	291	
07:45			240	760	286	988	19:45		183	779	104	476
08:00			191	277	468	20:00			133	102	235	
08:15			176	233	409	20:15			148	104	252	
08:30			189	214	403	20:30			141	86	227	
08:45			208	764	211	935	20:45		124	546	60	352
09:00			198	202	400	21:00			130	79	209	
09:15			211	149	360	21:15			104	95	199	
09:30			203	182	385	21:30			125	73	198	
09:45			218	830	159	692	21:45		90	449	57	304
10:00			199	146	345	22:00			86	58	144	
10:15			190	167	357	22:15			91	57	148	
10:30			215	189	404	22:30			81	57	138	
10:45			229	833	147	649	22:45		73	331	44	216
11:00			205	179	384	23:00			64	46	110	
11:15			184	180	364	23:15			60	35	95	
11:30			210	170	380	23:30			59	30	89	
11:45			222	821	194	723	23:45		45	228	25	136
TOTALS			4899	5006	9905	TOTALS			10608	6588	17196	
SPLIT %			49.5%	50.5%	36.5%	SPLIT %			61.7%	38.3%	63.5%	

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	15,507	11,594	27,101		
AM Peak Hour			11:45	07:30	07:15	PM Peak Hour			16:00	16:30	16:30
AM Pk Volume			978	1034	1848	PM Pk Volume			1438	806	2221
Pk Hr Factor			0.923	0.904	0.878	Pk Hr Factor			0.961	0.924	0.964
7 - 9 Volume	0	0	1524	1923	3447	4 - 6 Volume	0	0	2746	1524	4270
7 - 9 Peak Hour			07:15	07:30	07:15	4 - 6 Peak Hour			16:00	16:30	16:30
7 - 9 Pk Volume	0	0	817	1034	1848	4 - 6 Pk Volume	0	0	1438	806	2221
Pk Hr Factor	0.000	0.000	0.851	0.904	0.878	Pk Hr Factor	0.000	0.000	0.961	0.924	0.964

VOLUME

El Cajon Blvd Bet. Euclid Ave & 48th St

Day: Tuesday
Date: 2/26/2019

City: San Diego
Project #: CA19_4070_007

DAILY TOTALS					NB	SB	EB	WB	Total			
					0	0	12,462	11,789	24,251			
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL	
00:00			30	26	56	12:00			203	156	359	
00:15			32	24	56	12:15			176	197	373	
00:30			32	22	54	12:30			205	214	419	
00:45			27	121	28	100	12:45		207	791	164	731
01:00			18	15	33	13:00			212	161	373	
01:15			24	18	42	13:15			201	164	365	
01:30			18	23	41	13:30			180	154	334	
01:45			25	85	13	69	13:45		187	780	146	625
02:00			18	13	31	14:00			195	149	344	
02:15			8	11	19	14:15			182	183	365	
02:30			22	13	35	14:30			220	174	394	
02:45			8	56	11	48	14:45		262	859	174	680
03:00			16	15	31	15:00			267	182	449	
03:15			5	8	13	15:15			252	174	426	
03:30			4	17	21	15:30			279	193	472	
03:45			8	33	15	55	15:45		288	1086	163	712
04:00			14	17	31	16:00			261	202	463	
04:15			13	23	36	16:15			278	174	452	
04:30			10	36	46	16:30			274	198	472	
04:45			28	65	36	112	16:45		297	1110	192	766
05:00			26	48	74	17:00			290	207	497	
05:15			23	61	84	17:15			288	209	497	
05:30			30	60	90	17:30			273	179	452	
05:45			40	119	58	227	17:45		280	1131	148	743
06:00			30	86	116	18:00			255	155	410	
06:15			48	106	154	18:15			237	149	386	
06:30			57	156	213	18:30			227	151	378	
06:45			86	221	263	611	18:45		204	923	120	575
07:00			96	366	462	19:00			170	148	318	
07:15			119	280	399	19:15			154	101	255	
07:30			120	234	354	19:30			125	106	231	
07:45			160	495	291	1171	19:45		123	572	100	455
08:00			142	295	437	20:00			138	99	237	
08:15			138	243	381	20:15			120	99	219	
08:30			153	255	408	20:30			120	73	193	
08:45			168	601	219	1012	20:45		96	474	69	340
09:00			162	183	345	21:00			112	81	193	
09:15			144	147	291	21:15			108	69	177	
09:30			164	174	338	21:30			95	75	170	
09:45			166	636	169	673	21:45		83	398	63	288
10:00			143	150	293	22:00			74	69	143	
10:15			210	184	394	22:15			102	59	161	
10:30			176	194	370	22:30			69	62	131	
10:45			191	720	161	689	22:45		60	305	48	238
11:00			160	171	331	23:00			53	46	99	
11:15			154	186	340	23:15			60	37	97	
11:30			180	177	357	23:30			44	33	77	
11:45			193	687	189	723	23:45		37	194	30	146
TOTALS			3839	5490	9329	TOTALS			8623	6299	14922	
SPLIT %			41.2%	58.8%	38.5%	SPLIT %			57.8%	42.2%	61.5%	

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	12,462	11,789	24,251		
AM Peak Hour			11:45	07:00	07:45	PM Peak Hour			16:30	16:30	16:30
AM Pk Volume			777	1171	1677	PM Pk Volume			1149	806	1955
Pk Hr Factor			0.948	0.800	0.930	Pk Hr Factor			0.967	0.964	0.983
7 - 9 Volume	0	0	1096	2183	3279	4 - 6 Volume	0	0	2241	1509	3750
7 - 9 Peak Hour			08:00	07:00	07:45	4 - 6 Peak Hour			16:30	16:30	16:30
7 - 9 Pk Volume	0	0	601	1171	1677	4 - 6 Pk Volume	0	0	1149	806	1955
Pk Hr Factor	0.000	0.000	0.894	0.800	0.930	Pk Hr Factor	0.000	0.000	0.967	0.964	0.983

VOLUME

El Cajon Blvd Bet. Fairmount Ave & 44th St

Day: Tuesday
Date: 2/26/2019

City: San Diego
Project #: CA19_4070_005

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	14,468	13,102	27,570		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			26	21	47	12:00			223	170	393
00:15			41	19	60	12:15			222	203	425
00:30			48	17	65	12:30			209	208	417
00:45			26	14	40	12:45			227	175	402
		141	71		212			881	756		1637
01:00			24	18	42	13:00			215	189	404
01:15			25	15	40	13:15			217	176	393
01:30			18	18	36	13:30			205	204	409
01:45			20	13	33	13:45			196	168	364
		87	64		151			833	737		1570
02:00			22	14	36	14:00			253	170	423
02:15			8	13	21	14:15			270	214	484
02:30			17	10	27	14:30			298	214	512
02:45			6	9	15	14:45			310	240	550
		53	46		99			1131	838		1969
03:00			11	18	29	15:00			308	232	540
03:15			9	12	21	15:15			330	199	529
03:30			3	17	20	15:30			315	212	527
03:45			13	12	25	15:45			331	196	527
		36	59		95			1284	839		2123
04:00			17	17	34	16:00			319	205	524
04:15			15	19	34	16:15			315	195	510
04:30			16	31	47	16:30			317	223	540
04:45			28	37	65	16:45			372	184	556
		76	104		180			1323	807		2130
05:00			21	48	69	17:00			333	224	557
05:15			31	79	110	17:15			323	244	567
05:30			38	93	131	17:30			310	193	503
05:45			58	66	124	17:45			327	179	506
		148	286		434			1293	840		2133
06:00			64	100	164	18:00			309	185	494
06:15			62	154	216	18:15			279	197	476
06:30			70	211	281	18:30			259	173	432
06:45			89	288	377	18:45			241	164	405
		285	753		1038			1088	719		1807
07:00			139	294	433	19:00			221	160	381
07:15			193	293	486	19:15			192	130	322
07:30			157	270	427	19:30			182	124	306
07:45			168	337	505	19:45			158	103	261
		657	1194		1851			753	517		1270
08:00			154	346	500	20:00			151	112	263
08:15			126	288	414	20:15			153	97	250
08:30			152	254	406	20:30			132	99	231
08:45			184	237	421	20:45			92	62	154
		616	1125		1741			528	370		898
09:00			172	203	375	21:00			135	82	217
09:15			169	192	361	21:15			125	96	221
09:30			204	208	412	21:30			99	71	170
09:45			195	740	375	21:45			100	63	163
		180	783		1523			459	312		771
10:00			192	163	355	22:00			98	63	161
10:15			194	175	369	22:15			99	52	151
10:30			199	201	400	22:30			67	61	128
10:45			191	776	367	22:45			66	55	121
		715			1491			330	231		561
11:00			162	185	347	23:00			68	46	114
11:15			189	203	392	23:15			63	38	101
11:30			196	197	393	23:30			30	33	63
11:45			215	762	428	23:45			27	21	48
		213	798		1560			188	138		326
TOTALS			4377	5998	10375	TOTALS			10091	7104	17195
SPLIT %			42.2%	57.8%	37.6%	SPLIT %			58.7%	41.3%	62.4%

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	14,468	13,102	27,570		
AM Peak Hour			11:45	07:15	07:15	PM Peak Hour			16:30	14:15	16:30
AM Pk Volume			869	1246	1918	PM Pk Volume			1345	900	2220
Pk Hr Factor			0.974	0.900	0.950	Pk Hr Factor			0.904	0.938	0.979
7 - 9 Volume	0	0	1273	2319	3592	4 - 6 Volume	0	0	2616	1647	4263
7 - 9 Peak Hour			07:15	07:15	07:15	4 - 6 Peak Hour			16:30	16:30	16:30
7 - 9 Pk Volume	0	0	672	1246	1918	4 - 6 Pk Volume	0	0	1345	875	2220
Pk Hr Factor	0.000	0.000	0.870	0.900	0.950	Pk Hr Factor	0.000	0.000	0.904	0.897	0.979

VOLUME

University Ave Bet. Swift Ave & 35th St

Day: Tuesday
Date: 2/26/2019

City: San Diego
Project #: CA19_4070_008

DAILY TOTALS					NB	SB	EB	WB	Total			
					0	0	6,513	7,311	13,824			
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL	
00:00			25	28	53	12:00			100	110	210	
00:15			27	20	47	12:15			105	114	219	
00:30			17	16	33	12:30			103	77	180	
00:45			14	83	17	12:45			100	408	87	388
					31	164					187	796
01:00			19	19	38	13:00			97	99	196	
01:15			13	19	32	13:15			94	86	180	
01:30			17	11	28	13:30			94	94	188	
01:45			11	60	18	13:45			116	401	98	377
					29	127					214	778
02:00			9	15	24	14:00			85	99	184	
02:15			10	10	20	14:15			104	121	225	
02:30			14	8	22	14:30			110	91	201	
02:45			17	50	6	14:45			120	419	114	425
					23	89					234	844
03:00			10	12	22	15:00			113	102	215	
03:15			12	7	19	15:15			138	104	242	
03:30			10	10	20	15:30			117	129	246	
03:45			6	38	14	15:45			113	481	136	471
					20	81					249	952
04:00			9	15	24	16:00			127	121	248	
04:15			9	17	26	16:15			125	105	230	
04:30			10	24	34	16:30			131	100	231	
04:45			9	37	33	16:45			102	485	125	451
					42	126					227	936
05:00			17	29	46	17:00			113	132	245	
05:15			22	37	59	17:15			125	106	231	
05:30			22	59	81	17:30			132	124	256	
05:45			27	88	64	17:45			115	485	130	492
					91	277					245	977
06:00			22	67	89	18:00			118	130	248	
06:15			34	90	124	18:15			105	144	249	
06:30			42	110	152	18:30			100	108	208	
06:45			39	137	112	18:45			91	414	106	488
					151	516					197	902
07:00			52	132	184	19:00			96	95	191	
07:15			60	121	181	19:15			68	85	153	
07:30			74	154	228	19:30			79	78	157	
07:45			74	260	142	19:45			70	313	62	320
					216	809					132	633
08:00			80	155	235	20:00			77	73	150	
08:15			78	133	211	20:15			86	59	145	
08:30			77	136	213	20:30			58	57	115	
08:45			76	311	123	20:45			68	289	70	259
					199	858					138	548
09:00			74	127	201	21:00			69	55	124	
09:15			84	110	194	21:15			69	48	117	
09:30			83	96	179	21:30			70	58	128	
09:45			80	321	98	21:45			61	269	44	205
					178	752					105	474
10:00			87	97	184	22:00			51	43	94	
10:15			105	92	197	22:15			57	46	103	
10:30			150	102	252	22:30			47	33	80	
10:45			118	460	94	22:45			52	207	39	161
					212	845					91	368
11:00			82	85	167	23:00			31	34	65	
11:15			108	105	213	23:15			38	27	65	
11:30			85	88	173	23:30			32	17	49	
11:45			86	361	93	23:45			35	136	26	104
					179	732					61	240
TOTALS				2206	3170	5376	TOTALS			4307	4141	8448
SPLIT %				41.0%	59.0%	38.9%	SPLIT %			51.0%	49.0%	61.1%

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	6,513	7,311	13,824		
AM Peak Hour			10:00	07:30	07:30	PM Peak Hour			15:45	17:30	17:30
AM Pk Volume			460	584	890	PM Pk Volume			496	528	998
Pk Hr Factor			0.767	0.942	0.947	Pk Hr Factor			0.947	0.917	0.975
7 - 9 Volume	0	0	571	1096	1667	4 - 6 Volume	0	0	970	943	1913
7 - 9 Peak Hour			08:00	07:30	07:30	4 - 6 Peak Hour			16:00	17:00	17:00
7 - 9 Pk Volume	0	0	311	584	890	4 - 6 Pk Volume	0	0	485	492	977
Pk Hr Factor	0.000	0.000	0.972	0.942	0.947	Pk Hr Factor	0.000	0.000	0.926	0.932	0.954

VOLUME

Highland Ave Bet. Orange Ave & El Cajon Blvd

Day: Thursday
Date: 2/28/2019

City: San Diego
Project #: CA19_4070_020

DAILY TOTALS					NB	SB	EB	WB	Total		
					1,667	1,142	0	0	2,809		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	1	2			3	12:00	20	16			36
00:15	2	5			7	12:15	18	19			37
00:30	1	2			3	12:30	21	22			43
00:45	3	7	1	10	4	12:45	21	80	14	71	35
01:00	4	4			8	13:00	21	17			38
01:15	2	4			6	13:15	26	15			41
01:30	0	1			1	13:30	21	15			36
01:45	3	9	4	13	7	13:45	20	88	27	74	47
02:00	2	0			2	14:00	25	14			39
02:15	1	1			2	14:15	32	23			55
02:30	1	0			1	14:30	21	36			57
02:45	0	4	2	3	2	14:45	27	105	25	98	52
03:00	3	1			4	15:00	38	26			64
03:15	2	0			2	15:15	27	24			51
03:30	3	0			3	15:30	16	12			28
03:45	1	9	3	4	4	15:45	21	102	25	87	46
04:00	1	1			2	16:00	20	26			46
04:15	1	3			4	16:15	30	25			55
04:30	5	2			7	16:30	27	21			48
04:45	3	10	2	8	5	16:45	32	109	13	85	45
05:00	4	0			4	17:00	21	18			39
05:15	6	1			7	17:15	25	24			49
05:30	12	6			18	17:30	27	26			53
05:45	8	30	5	12	13	17:45	19	92	19	87	38
06:00	15	6			21	18:00	19	27			46
06:15	21	5			26	18:15	25	28			53
06:30	37	4			41	18:30	19	19			38
06:45	38	111	10	25	48	18:45	22	85	16	90	38
07:00	48	18			66	19:00	12	13			25
07:15	57	32			89	19:15	24	13			37
07:30	50	11			61	19:30	11	11			22
07:45	54	209	9	70	63	19:45	10	57	15	52	25
08:00	39	8			47	20:00	19	14			33
08:15	33	10			43	20:15	15	14			29
08:30	47	10			57	20:30	15	12			27
08:45	36	155	20	48	56	20:45	9	58	12	52	21
09:00	27	13			40	21:00	11	16			27
09:15	26	9			35	21:15	12	8			20
09:30	22	12			34	21:30	9	10			19
09:45	23	98	15	49	38	21:45	7	39	18	52	25
10:00	22	10			32	22:00	4	9			13
10:15	22	16			38	22:15	9	13			22
10:30	23	7			30	22:30	9	9			18
10:45	22	89	8	41	30	22:45	5	27	12	43	17
11:00	18	9			27	23:00	4	5			9
11:15	23	9			32	23:15	5	3			8
11:30	13	20			33	23:30	3	4			7
11:45	24	78	16	54	40	23:45	4	16	2	14	6
TOTALS	809	337			1146	TOTALS	858	805			1663
SPLIT %	70.6%	29.4%			40.8%	SPLIT %	51.6%	48.4%			59.2%

DAILY TOTALS					NB	SB	EB	WB	Total
					1,667	1,142	0	0	2,809
AM Peak Hour	07:00	11:45			07:00	PM Peak Hour	14:15	14:30	14:15
AM Pk Volume	209	73			279	PM Pk Volume	118	111	228
Pk Hr Factor	0.917	0.830			0.784	Pk Hr Factor	0.776	0.771	0.891
7 - 9 Volume	364	118	0	0	482	4 - 6 Volume	201	172	0
7 - 9 Peak Hour	07:00	07:00			07:00	4 - 6 Peak Hour	16:15	17:00	16:00
7 - 9 Pk Volume	209	70	0	0	279	4 - 6 Pk Volume	110	87	0
Pk Hr Factor	0.917	0.547	0.000	0.000	0.784	Pk Hr Factor	0.859	0.837	0.000

VOLUME

Highland Ave Bet. Orange Ave & Polk Ave

Day: Thursday
Date: 2/28/2019

City: San Diego
Project #: CA19_4070_027

DAILY TOTALS					NB	SB	EB	WB	Total		
					1,662	1,261	0	0	2,923		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	2	3			5	12:00	18	16			34
00:15	3	4			7	12:15	24	15			39
00:30	0	0			0	12:30	20	22			42
00:45	1	6	2	9	3	12:45	18	80	12	65	30
01:00	2	2			4	13:00	26	21			47
01:15	1	5			6	13:15	23	14			37
01:30	1	2			3	13:30	24	22			46
01:45	2	6	0	9	2	13:45	25	98	26	83	51
02:00	1	1			2	14:00	25	20			45
02:15	3	0			3	14:15	23	28			51
02:30	2	2			4	14:30	26	37			63
02:45	1	7	1	4	2	14:45	32	106	23	108	55
03:00	3	3			6	15:00	39	27			66
03:15	2	1			3	15:15	38	21			59
03:30	3	1			4	15:30	21	26			47
03:45	1	9	1	6	2	15:45	28	126	27	101	55
04:00	2	0			2	16:00	39	26			65
04:15	0	1			1	16:15	24	29			53
04:30	1	1			2	16:30	31	30			61
04:45	5	8	2	4	7	16:45	30	124	25	110	55
05:00	4	3			7	17:00	29	21			50
05:15	3	2			5	17:15	32	28			60
05:30	5	7			12	17:30	25	30			55
05:45	11	23	7	19	18	17:45	20	106	20	99	40
06:00	7	7			14	18:00	21	21			42
06:15	17	5			22	18:15	24	27			51
06:30	29	8			37	18:30	17	17			34
06:45	20	73	13	33	33	18:45	22	84	13	78	35
07:00	50	14			64	19:00	23	15			38
07:15	50	33			83	19:15	28	10			38
07:30	50	24			74	19:30	13	7			20
07:45	38	188	15	86	53	19:45	15	79	15	47	30
08:00	40	13			53	20:00	14	8			22
08:15	28	14			42	20:15	19	11			30
08:30	36	26			62	20:30	11	13			24
08:45	34	138	19	72	53	20:45	8	52	11	43	19
09:00	23	21			44	21:00	15	14			29
09:15	27	15			42	21:15	14	10			24
09:30	18	12			30	21:30	7	13			20
09:45	23	91	22	70	45	21:45	11	47	13	50	24
10:00	17	16			33	22:00	6	2			8
10:15	22	20			42	22:15	6	9			15
10:30	20	11			31	22:30	6	7			13
10:45	20	79	13	60	33	22:45	6	24	7	25	13
11:00	20	14			34	23:00	8	4			12
11:15	27	10			37	23:15	3	6			9
11:30	15	23			38	23:30	2	4			6
11:45	29	91	17	64	46	23:45	4	17	2	16	6
TOTALS	719	436			1155	TOTALS	943	825			1768
SPLIT %	62.3%	37.7%			39.5%	SPLIT %	53.3%	46.7%			60.5%

DAILY TOTALS					NB	SB	EB	WB	Total
					1,662	1,261	0	0	2,923
AM Peak Hour	07:00	07:00		07:00	PM Peak Hour	14:30	14:15		14:30
AM Pk Volume	188	86		274	PM Pk Volume	135	115		243
Pk Hr Factor	0.940	0.652		0.825	Pk Hr Factor	0.865	0.777		0.920
7 - 9 Volume	326	158	0	484	4 - 6 Volume	230	209	0	439
7 - 9 Peak Hour	07:00	07:00		07:00	4 - 6 Peak Hour	16:00	16:00		16:00
7 - 9 Pk Volume	188	86	0	274	4 - 6 Pk Volume	124	110	0	234
Pk Hr Factor	0.940	0.652	0.000	0.825	Pk Hr Factor	0.795	0.917	0.000	0.900

VOLUME

Menlo Ave Bet. Orange Ave & Polk Ave

Day: Tuesday
Date: 3/5/2019City: San Diego
Project #: CA19_4070_028

DAILY TOTALS					NB	SB	EB	WB	Total		
					961	1,021	0	0	1,982		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	1	2			3	12:00	8	19			27
00:15	1	1			2	12:15	18	14			32
00:30	1	3			4	12:30	11	9			20
00:45	0	3	1	7	1	12:45	13	50	15	57	28
01:00	2	0			2	13:00	9	15			24
01:15	1	4			5	13:15	11	6			17
01:30	1	1			2	13:30	12	9			21
01:45	0	4	0	5	0	13:45	13	45	10	40	23
02:00	0	0			0	14:00	20	8			28
02:15	1	2			3	14:15	18	12			30
02:30	1	1			2	14:30	17	28			45
02:45	0	2	0	3	0	14:45	24	79	17	65	41
03:00	0	1			1	15:00	24	21			45
03:15	0	0			0	15:15	19	34			53
03:30	0	0			0	15:30	27	36			63
03:45	0	2	3		2	15:45	25	95	29	120	54
04:00	0	0			0	16:00	26	31			57
04:15	1	1			2	16:15	19	21			40
04:30	2	2			4	16:30	15	21			36
04:45	2	5	0	3	2	16:45	21	81	22	95	43
05:00	4	2			6	17:00	13	24			37
05:15	1	2			3	17:15	18	20			38
05:30	3	3			6	17:30	15	19			34
05:45	5	13	2	9	7	17:45	11	57	21	84	32
06:00	7	6			13	18:00	9	18			27
06:15	6	6			12	18:15	10	17			27
06:30	13	7			20	18:30	6	18			24
06:45	10	36	12	31	22	18:45	10	35	14	67	24
07:00	19	16			35	19:00	9	13			22
07:15	40	30			70	19:15	8	12			20
07:30	30	20			50	19:30	7	10			17
07:45	24	113	15	81	39	19:45	6	30	15	50	21
08:00	31	23			54	20:00	11	12			23
08:15	21	11			32	20:15	4	6			10
08:30	25	17			42	20:30	9	5			14
08:45	30	107	12	63	42	20:45	6	30	6	29	12
09:00	16	10			26	21:00	5	8			13
09:15	15	12			27	21:15	7	10			17
09:30	14	5			19	21:30	6	10			16
09:45	12	57	5	32	17	21:45	4	22	13	41	17
10:00	10	18			28	22:00	0	7			7
10:15	13	13			26	22:15	4	3			7
10:30	14	14			28	22:30	2	5			7
10:45	4	41	12	57	16	22:45	1	7	1	16	2
11:00	12	14			26	23:00	1	4			5
11:15	4	11			15	23:15	5	6			11
11:30	11	11			22	23:30	1	3			4
11:45	15	42	10	46	25	23:45	0	7	4	17	4
TOTALS	423	340			763	TOTALS	538	681			1219
SPLIT %	55.4%	44.6%			38.5%	SPLIT %	44.1%	55.9%			61.5%

DAILY TOTALS					NB	SB	EB	WB	Total		
					961	1,021	0	0	1,982		
AM Peak Hour	07:15	07:15			07:15	PM Peak Hour	15:15	15:15		15:15	
AM Pk Volume	125	88			213	PM Pk Volume	97	130		227	
Pk Hr Factor	0.781	0.733			0.761	Pk Hr Factor	0.898	0.903		0.901	
7 - 9 Volume	220	144	0	0	364	4 - 6 Volume	138	179	0	0	317
7 - 9 Peak Hour	07:15	07:15			07:15	4 - 6 Peak Hour	16:00	16:00			16:00
7 - 9 Pk Volume	125	88	0	0	213	4 - 6 Pk Volume	81	95	0	0	176
Pk Hr Factor	0.781	0.733	0.000	0.000	0.761	Pk Hr Factor	0.779	0.766	0.000	0.000	0.772

VOLUME

Swift Ave Bet. Orange Ave & El Cajon Blvd

Day: Thursday
Date: 2/28/2019

City: San Diego
Project #: CA19_4070_015

DAILY TOTALS					NB	SB	EB	WB	Total		
					314	208	0	0	522		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	0	1			1	12:00	5	1			6
00:15	0	2			2	12:15	7	4			11
00:30	1	3			4	12:30	2	3			5
00:45	1	2	0	6	1	12:45	5	19	2	10	29
01:00	0	0			0	13:00	3	3			6
01:15	0	0			0	13:15	8	2			10
01:30	0	0			0	13:30	3	5			8
01:45	0	0			0	13:45	6	20	4	14	34
02:00	1	1			2	14:00	2	3			5
02:15	0	0			0	14:15	9	4			13
02:30	0	0			0	14:30	7	5			12
02:45	0	1	0	1	0	14:45	7	25	5	17	42
03:00	0	0			0	15:00	5	9			14
03:15	0	0			0	15:15	9	4			13
03:30	0	0			0	15:30	6	3			9
03:45	0	0			0	15:45	4	24	4	20	44
04:00	0	0			0	16:00	6	1			7
04:15	0	0			0	16:15	1	0			1
04:30	2	0			2	16:30	7	2			9
04:45	0	2	0		0	16:45	4	18	5	8	26
05:00	1	2			3	17:00	10	2			12
05:15	1	0			1	17:15	8	4			12
05:30	0	0			0	17:30	4	4			8
05:45	1	3	0	2	1	17:45	3	25	5	15	40
06:00	1	0			1	18:00	5	6			11
06:15	1	1			2	18:15	3	7			10
06:30	1	1			2	18:30	10	6			16
06:45	1	4	0	2	1	18:45	3	21	4	23	44
07:00	4	2			6	19:00	6	4			10
07:15	2	1			3	19:15	4	2			6
07:30	5	4			9	19:30	4	0			4
07:45	7	18	2	9	9	19:45	2	16	4	10	26
08:00	3	4			7	20:00	5	2			7
08:15	6	3			9	20:15	2	2			4
08:30	1	6			7	20:30	3	0			3
08:45	5	15	2	15	7	20:45	2	12	4	8	20
09:00	3	1			4	21:00	2	2			4
09:15	3	3			6	21:15	4	2			6
09:30	5	4			9	21:30	3	0			3
09:45	5	16	2	10	7	21:45	4	13	5	9	22
10:00	4	0			4	22:00	3	2			5
10:15	7	2			9	22:15	2	1			3
10:30	6	1			7	22:30	5	3			8
10:45	4	21	3	6	7	22:45	3	13	2	8	21
11:00	6	0			6	23:00	1	0			1
11:15	6	2			8	23:15	2	0			2
11:30	2	4			6	23:30	1	2			3
11:45	6	20	6	12	12	23:45	2	6	1	3	9
TOTALS	102	63			165	TOTALS	212	145			357
SPLIT %	61.8%	38.2%			31.6%	SPLIT %	59.4%	40.6%			68.4%

DAILY TOTALS					NB	SB	EB	WB	Total
					314	208	0	0	522
AM Peak Hour	10:15	07:45			11:30	PM Peak Hour	16:30	17:45	14:15
AM Pk Volume	23	15			35	PM Pk Volume	29	24	51
Pk Hr Factor	0.821	0.625			0.729	Pk Hr Factor	0.725	0.857	0.911
7 - 9 Volume	33	24	0	0	57	4 - 6 Volume	43	23	0
7 - 9 Peak Hour	07:30	07:45			07:30	4 - 6 Peak Hour	16:30	16:45	16:30
7 - 9 Pk Volume	21	15	0	0	34	4 - 6 Pk Volume	29	15	0
Pk Hr Factor	0.750	0.625	0.000	0.000	0.944	Pk Hr Factor	0.725	0.750	0.000

VOLUME

Swift Ave Bet. Orange Ave & Polk Ave

Day: Tuesday
Date: 3/5/2019City: San Diego
Project #: CA19_4070_022

DAILY TOTALS					NB	SB	EB	WB	Total		
					985	833	0	0	1,818		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	3	3			6	12:00	10	7			17
00:15	2	1			3	12:15	11	10			21
00:30	1	0			1	12:30	11	10			21
00:45	4	10	0	4	4	12:45	7	39	8	35	15
01:00	2	5			7	13:00	14	17			31
01:15	4	1			5	13:15	7	8			15
01:30	0	0			0	13:30	9	13			22
01:45	1	7	0	6	1	13:45	18	48	13	51	31
02:00	3	0			3	14:00	18	12			30
02:15	2	1			3	14:15	17	16			33
02:30	3	2			5	14:30	15	15			30
02:45	1	9	0	3	1	14:45	13	63	19	62	32
03:00	2	0			2	15:00	18	19			37
03:15	1	0			1	15:15	11	20			31
03:30	0	0			0	15:30	17	19			36
03:45	0	3	0		0	15:45	22	68	18	76	40
04:00	0	0			0	16:00	12	21			33
04:15	3	1			4	16:15	13	18			31
04:30	3	2			5	16:30	23	16			39
04:45	1	7	2	5	3	16:45	18	66	23	78	41
05:00	2	2			4	17:00	17	20			37
05:15	2	0			2	17:15	16	20			36
05:30	8	2			10	17:30	14	24			38
05:45	9	21	3	7	12	17:45	18	65	25	89	43
06:00	9	3			12	18:00	14	18			32
06:15	4	4			8	18:15	16	15			31
06:30	14	10			24	18:30	18	14			32
06:45	13	40	1	18	14	18:45	16	64	14	61	30
07:00	21	7			28	19:00	8	10			18
07:15	23	7			30	19:15	12	12			24
07:30	18	13			31	19:30	12	11			23
07:45	18	80	18	45	36	19:45	12	44	13	46	25
08:00	26	13			39	20:00	9	11			20
08:15	28	13			41	20:15	8	11			19
08:30	19	13			32	20:30	9	11			20
08:45	14	87	7	46	21	20:45	8	34	7	40	15
09:00	13	10			23	21:00	11	7			18
09:15	13	11			24	21:15	8	13			21
09:30	11	3			14	21:30	4	5			9
09:45	18	55	4	28	22	21:45	5	28	5	30	10
10:00	10	9			19	22:00	4	9			13
10:15	18	10			28	22:15	10	6			16
10:30	14	6			20	22:30	4	2			6
10:45	22	64	8	33	30	22:45	3	21	3	20	6
11:00	11	12			23	23:00	0	4			4
11:15	12	9			21	23:15	2	4			6
11:30	13	8			21	23:30	4	3			7
11:45	17	53	4	33	21	23:45	3	9	6	17	9
TOTALS	436	228			664	TOTALS	549	605			1154
SPLIT %	65.7%	34.3%			36.5%	SPLIT %	47.6%	52.4%			63.5%

DAILY TOTALS					NB	SB	EB	WB	Total
					985	833	0	0	1,818
AM Peak Hour	07:45	07:30			07:45	PM Peak Hour	16:30	17:00	17:00
AM Pk Volume	91	57			148	PM Pk Volume	74	89	154
Pk Hr Factor	0.813	0.792			0.902	Pk Hr Factor	0.804	0.890	0.895
7 - 9 Volume	167	91	0	0	258	4 - 6 Volume	131	167	0
7 - 9 Peak Hour	07:45	07:30			07:45	4 - 6 Peak Hour	16:30	17:00	17:00
7 - 9 Pk Volume	91	57	0	0	148	4 - 6 Pk Volume	74	89	0
Pk Hr Factor	0.813	0.792	0.000	0.000	0.902	Pk Hr Factor	0.804	0.890	0.000

VOLUME

University Ave Bet. 47th St & Euclid Ave

Day: Wednesday
Date: 2/27/2019

City: San Diego
Project #: CA19_4070_012

DAILY TOTALS					NB	SB	EB	WB	Total			
					0	0	8,837	10,023	18,860			
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL	
00:00			21	29	50	12:00			124	139	263	
00:15			23	26	49	12:15			135	160	295	
00:30			34	23	57	12:30			128	157	285	
00:45			18	96	14	12:45			134	521	152	608
					32	188					286	1129
01:00			9	14	23	13:00			126	187	313	
01:15			13	14	27	13:15			142	160	302	
01:30			18	6	24	13:30			132	136	268	
01:45			17	57	16	13:45			140	540	144	627
					33	107					284	1167
02:00			18	11	29	14:00			160	137	297	
02:15			8	13	21	14:15			146	136	282	
02:30			14	17	31	14:30			174	173	347	
02:45			9	49	10	14:45			141	621	138	584
					19	100					279	1205
03:00			7	6	13	15:00			151	148	299	
03:15			8	10	18	15:15			171	158	329	
03:30			6	13	19	15:30			162	120	282	
03:45			9	30	10	15:45			162	646	154	580
					19	69					316	1226
04:00			7	9	16	16:00			178	152	330	
04:15			14	7	21	16:15			182	140	322	
04:30			12	32	44	16:30			182	138	320	
04:45			17	50	26	16:45			166	708	157	587
					43	124					323	1295
05:00			23	33	56	17:00			168	151	319	
05:15			21	40	61	17:15			152	135	287	
05:30			41	46	87	17:30			188	140	328	
05:45			23	108	57	17:45			168	676	148	574
					80	284					316	1250
06:00			33	86	119	18:00			172	140	312	
06:15			37	91	128	18:15			180	158	338	
06:30			54	129	183	18:30			193	150	343	
06:45			76	200	174	18:45			151	696	121	569
					250	680					272	1265
07:00			66	211	277	19:00			110	134	244	
07:15			84	219	303	19:15			111	99	210	
07:30			91	175	266	19:30			117	101	218	
07:45			111	352	187	19:45			139	477	107	441
					298	1144					246	918
08:00			110	212	322	20:00			104	140	244	
08:15			123	212	335	20:15			84	111	195	
08:30			99	225	324	20:30			89	90	179	
08:45			92	424	183	20:45			83	360	106	447
					275	1256					189	807
09:00			111	164	275	21:00			90	80	170	
09:15			106	149	255	21:15			87	83	170	
09:30			119	126	245	21:30			80	99	179	
09:45			138	474	135	21:45			70	327	67	329
					273	1048					137	656
10:00			123	149	272	22:00			63	65	128	
10:15			145	132	277	22:15			66	66	132	
10:30			133	122	255	22:30			51	36	87	
10:45			125	526	115	22:45			38	218	60	227
					240	1044					98	445
11:00			132	150	282	23:00			36	44	80	
11:15			123	139	262	23:15			41	51	92	
11:30			142	172	314	23:30			38	35	73	
11:45			138	535	149	23:45			31	146	32	162
					287	1145					63	308
TOTALS				2901	4288	7189	TOTALS			5936	5735	11671
SPLIT %				40.4%	59.6%	38.1%	SPLIT %			50.9%	49.1%	61.9%

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	8,837	10,023	18,860		
AM Peak Hour			09:45	07:45	07:45	PM Peak Hour			17:45	12:15	17:45
AM Pk Volume			539	836	1279	PM Pk Volume			713	656	1309
Pk Hr Factor			0.929	0.929	0.954	Pk Hr Factor			0.924	0.877	0.954
7 - 9 Volume	0	0	776	1624	2400	4 - 6 Volume	0	0	1384	1161	2545
7 - 9 Peak Hour			07:45	07:45	07:45	4 - 6 Peak Hour			16:00	16:00	16:00
7 - 9 Pk Volume	0	0	443	836	1279	4 - 6 Pk Volume	0	0	708	587	1295
Pk Hr Factor	0.000	0.000	0.900	0.929	0.954	Pk Hr Factor	0.000	0.000	0.973	0.935	0.981

VOLUME

University Ave Bet. 48th St & Estrella Ave

Day: Thursday
Date: 2/28/2019

City: San Diego
Project #: CA19_4070_013

DAILY TOTALS						NB	SB	EB	WB	Total		
						0	0	9,778	10,938	20,716		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL	
00:00			26	21	47	12:00			154	173	327	
00:15			32	23	55	12:15			135	155	290	
00:30			33	22	55	12:30			150	165	315	
00:45			15	106	17	12:45			179	618	192	371
				83	32	189				685	1303	
01:00			14	12	26	13:00			161	188	349	
01:15			14	20	34	13:15			145	164	309	
01:30			22	7	29	13:30			155	143	298	
01:45			12	62	9	13:45			165	626	157	322
				48	21	110				652	1278	
02:00			18	13	31	14:00			170	165	335	
02:15			11	10	21	14:15			126	139	265	
02:30			17	20	37	14:30			121	132	253	
02:45			12	58	14	14:45			175	592	161	336
				57	26	115				597	1189	
03:00			9	8	17	15:00			173	169	342	
03:15			10	12	22	15:15			191	169	360	
03:30			9	12	21	15:30			206	160	366	
03:45			11	39	11	15:45			189	759	173	362
				43	22	82				671	1430	
04:00			8	11	19	16:00			198	172	370	
04:15			12	9	21	16:15			182	166	348	
04:30			16	35	51	16:30			190	151	341	
04:45			17	53	30	16:45			195	765	200	395
				85	47	138				689	1454	
05:00			25	31	56	17:00			174	171	345	
05:15			35	40	75	17:15			209	188	397	
05:30			36	53	89	17:30			206	170	376	
05:45			30	126	71	17:45			225	814	166	391
				195	101	321				695	1509	
06:00			38	80	118	18:00			215	166	381	
06:15			47	100	147	18:15			188	189	377	
06:30			63	127	190	18:30			170	172	342	
06:45			85	233	161	18:45			161	734	140	301
				468	246	701				667	1401	
07:00			84	221	305	19:00			129	133	262	
07:15			83	252	335	19:15			129	115	244	
07:30			102	212	314	19:30			128	122	250	
07:45			123	392	204	19:45			129	515	121	250
				889	327	1281				491	1006	
08:00			116	230	346	20:00			109	139	248	
08:15			131	202	333	20:15			101	111	212	
08:30			118	237	355	20:30			88	120	208	
08:45			106	471	189	20:45			99	397	124	223
				858	295	1329				494	891	
09:00			129	166	295	21:00			119	85	204	
09:15			110	153	263	21:15			94	96	190	
09:30			133	135	268	21:30			81	113	194	
09:45			125	497	126	21:45			77	371	65	142
				580	251	1077				359	730	
10:00			111	142	253	22:00			76	74	150	
10:15			143	136	279	22:15			83	75	158	
10:30			122	150	272	22:30			49	48	97	
10:45			147	523	135	22:45			60	268	64	124
				563	282	1086				261	529	
11:00			126	155	281	23:00			47	55	102	
11:15			124	159	283	23:15			44	58	102	
11:30			194	166	360	23:30			28	34	62	
11:45			161	605	147	23:45			35	154	34	69
				627	308	1232				181	335	
TOTALS				3165	4496	7661	TOTALS			6613	6442	13055
SPLIT %				41.3%	58.7%	37.0%	SPLIT %			50.7%	49.3%	63.0%

DAILY TOTALS						NB	SB	EB	WB	Total	
						0	0	9,778	10,938	20,716	
AM Peak Hour			11:30	07:15	07:45	PM Peak Hour			17:15	16:45	17:15
AM Pk Volume			644	898	1361	PM Pk Volume			855	729	1545
Pk Hr Factor			0.830	0.891	0.958	Pk Hr Factor			0.950	0.911	0.973
7 - 9 Volume	0	0	863	1747	2610	4 - 6 Volume	0	0	1579	1384	2963
7 - 9 Peak Hour			07:45	07:15	07:45	4 - 6 Peak Hour			17:00	16:45	16:45
7 - 9 Pk Volume	0	0	488	898	1361	4 - 6 Pk Volume	0	0	814	729	1513
Pk Hr Factor	0.000	0.000	0.931	0.891	0.958	Pk Hr Factor	0.000	0.000	0.904	0.911	0.953

VOLUME

University Ave Bet. Fairmount Ave & 44th St

Day: Tuesday
Date: 3/5/2019

City: San Diego
Project #: CA19_4070_011

DAILY TOTALS					NB	SB						Total
					0	0						20,440
							11,105			9,335		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL	
00:00			35	31	66	12:00			196	132	328	
00:15			34	22	56	12:15			183	122	305	
00:30			21	18	39	12:30			195	135	330	
00:45			19	109	128	12:45			197	771	968	
01:00			24	19	43	13:00			200	138	338	
01:15			18	15	33	13:15			217	138	355	
01:30			27	10	37	13:30			155	143	298	
01:45			19	88	107	13:45			190	762	952	
02:00			20	8	28	14:00			165	147	312	
02:15			9	19	28	14:15			195	152	347	
02:30			17	13	30	14:30			192	160	352	
02:45			19	65	84	14:45			179	731	910	
03:00			13	13	26	15:00			227	139	366	
03:15			14	13	27	15:15			226	124	350	
03:30			13	22	35	15:30			212	126	338	
03:45			13	53	66	15:45			206	871	1077	
04:00			7	18	25	16:00			209	151	360	
04:15			11	23	34	16:15			206	116	322	
04:30			11	31	42	16:30			220	139	359	
04:45			18	47	65	16:45			215	850	1065	
05:00			29	41	70	17:00			224	132	356	
05:15			32	53	85	17:15			181	161	342	
05:30			20	68	88	17:30			201	140	341	
05:45			36	117	153	17:45			182	788	970	
06:00			39	95	134	18:00			218	131	349	
06:15			48	122	170	18:15			176	153	329	
06:30			78	141	219	18:30			195	136	331	
06:45			62	227	289	18:45			177	766	943	
07:00			91	190	281	19:00			148	107	255	
07:15			88	202	290	19:15			154	112	266	
07:30			106	193	299	19:30			148	99	247	
07:45			102	387	489	19:45			132	582	714	
08:00			120	168	288	20:00			134	110	244	
08:15			124	163	287	20:15			120	91	211	
08:30			113	148	261	20:30			113	93	206	
08:45			133	490	623	20:45			86	453	539	
09:00			195	147	342	21:00			110	75	185	
09:15			164	143	307	21:15			118	77	195	
09:30			162	120	282	21:30			102	71	173	
09:45			154	675	829	21:45			70	400	470	
10:00			170	119	289	22:00			82	58	140	
10:15			189	133	322	22:15			83	55	138	
10:30			154	134	288	22:30			61	50	111	
10:45			182	695	877	22:45			51	277	328	
11:00			175	110	285	23:00			46	39	85	
11:15			169	126	295	23:15			50	39	89	
11:30			208	120	328	23:30			45	37	82	
11:45			181	733	914	23:45			27	168	195	
TOTALS			3686	4036	7722	TOTALS			7419	5299	12718	
SPLIT %			47.7%	52.3%	37.8%	SPLIT %			58.3%	41.7%	62.2%	

DAILY TOTALS					NB	SB						Total
					0	0						20,440
							11,105			9,335		
AM Peak Hour			11:30	07:00	11:45	PM Peak Hour			15:00	14:00	14:30	
AM Pk Volume			768	777	1263	PM Pk Volume			871	625	1413	
Pk Hr Factor			0.923	0.962	0.957	Pk Hr Factor			0.959	0.941	0.965	
7 - 9 Volume	0	0	877	1400	2277	4 - 6 Volume	0	0	1638	1105	2743	
7 - 9 Peak Hour			08:00	07:00	07:15	4 - 6 Peak Hour			16:15	16:45	16:30	
7 - 9 Pk Volume	0	0	490	777	1171	4 - 6 Pk Volume	0	0	865	573	1412	
Pk Hr Factor	0.000	0.000	0.921	0.962	0.979	Pk Hr Factor	0.000	0.000	0.965	0.890	0.983	

VOLUME

Van Dyke Ave Bet. Orange Ave & Polk Ave

Day: Thursday
Date: 2/28/2019

City: San Diego
Project #: CA19_4070_024

DAILY TOTALS					NB	SB	EB	WB	Total		
					1,168	755	0	0	1,923		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	2	3			5	12:00	10	7			17
00:15	3	6			9	12:15	13	7			20
00:30	6	2			8	12:30	13	12			25
00:45	0	11	2	13	24	12:45	19	55	9	35	90
01:00	2	1			3	13:00	21	9			30
01:15	0	1			1	13:15	16	11			27
01:30	1	2			3	13:30	24	7			31
01:45	2	5	1	5	10	13:45	18	79	16	43	122
02:00	1	0			1	14:00	17	13			30
02:15	3	1			4	14:15	18	12			30
02:30	0	0			0	14:30	23	20			43
02:45	2	6	3	4	10	14:45	11	69	15	60	129
03:00	2	0			2	15:00	17	18			35
03:15	3	1			4	15:15	27	16			43
03:30	1	0			1	15:30	13	10			23
03:45	2	8	3	4	12	15:45	25	82	13	57	139
04:00	1	1			2	16:00	17	26			43
04:15	1	0			1	16:15	18	15			33
04:30	3	2			5	16:30	17	20			37
04:45	2	7	0	3	10	16:45	16	68	14	75	143
05:00	4	2			6	17:00	21	27			48
05:15	3	3			6	17:15	20	31			51
05:30	9	0			9	17:30	23	17			40
05:45	8	24	2	7	31	17:45	18	82	18	93	175
06:00	9	4			13	18:00	12	13			25
06:15	12	3			15	18:15	15	9			24
06:30	16	5			21	18:30	13	9			22
06:45	12	49	6	18	67	18:45	19	59	12	43	102
07:00	19	3			22	19:00	20	16			36
07:15	44	5			49	19:15	9	11			20
07:30	54	11			65	19:30	6	13			19
07:45	33	150	7	26	176	19:45	8	43	4	44	87
08:00	38	5			43	20:00	7	5			12
08:15	19	15			34	20:15	5	4			9
08:30	26	7			33	20:30	6	7			13
08:45	18	101	8	35	136	20:45	10	28	12	28	56
09:00	17	12			29	21:00	9	7			16
09:15	11	12			23	21:15	6	9			15
09:30	19	6			25	21:30	13	6			19
09:45	11	58	9	39	97	21:45	7	35	5	27	62
10:00	11	8			19	22:00	7	4			11
10:15	12	5			17	22:15	9	9			18
10:30	17	12			29	22:30	2	3			5
10:45	14	54	8	33	87	22:45	4	22	7	23	45
11:00	10	7			17	23:00	7	5			12
11:15	14	7			21	23:15	4	4			8
11:30	16	6			22	23:30	4	2			6
11:45	16	56	6	26	82	23:45	2	17	3	14	31
TOTALS	529	213			742	TOTALS	639	542			1181
SPLIT %	71.3%	28.7%			38.6%	SPLIT %	54.1%	45.9%			61.4%

DAILY TOTALS					NB	SB	EB	WB	Total	
					1,168	755	0	0	1,923	
AM Peak Hour	07:15	08:15			07:15	PM Peak Hour	15:00	17:00	17:00	
AM Pk Volume	169	42			197	PM Pk Volume	82	93	175	
Pk Hr Factor	0.782	0.700			0.758	Pk Hr Factor	0.759	0.750	0.858	
7 - 9 Volume	251	61	0	0	312	4 - 6 Volume	150	168	0	318
7 - 9 Peak Hour	07:15	07:30			07:15	4 - 6 Peak Hour	17:00	17:00		17:00
7 - 9 Pk Volume	169	38	0	0	197	4 - 6 Pk Volume	82	93	0	175
Pk Hr Factor	0.782	0.633	0.000	0.000	0.758	Pk Hr Factor	0.891	0.750	0.000	0.858

VOLUME

Wilson Ave Bet. Orange Ave & El Cajon Blvd

Day: Wednesday
Date: 2/27/2019

City: San Diego
Project #: CA19_4070_017

DAILY TOTALS					NB	SB	EB	WB	Total		
					552	525	0	0	1,077		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	2	0			2	12:00	8	10			18
00:15	1	1			2	12:15	7	12			19
00:30	1	1			2	12:30	8	8			16
00:45	2	6	1	3	3	12:45	10	33	12	42	22
01:00	2	0			2	13:00	10	10			20
01:15	0	0			0	13:15	15	13			28
01:30	0	0			0	13:30	11	8			19
01:45	0	2	0		0	13:45	15	51	9	40	24
02:00	1	2			3	14:00	4	18			22
02:15	1	0			1	14:15	10	16			26
02:30	0	0			0	14:30	5	14			19
02:45	1	3	2	4	3	14:45	10	29	7	55	17
03:00	1	2			3	15:00	13	10			23
03:15	0	1			1	15:15	8	8			16
03:30	0	0			0	15:30	5	10			15
03:45	1	2	0	3	1	15:45	9	35	14	42	23
04:00	0	0			0	16:00	12	16			28
04:15	0	0			0	16:15	11	9			20
04:30	1	0			1	16:30	13	9			22
04:45	0	1	0		0	16:45	11	47	6	40	17
05:00	0	1			1	17:00	10	9			19
05:15	4	0			4	17:15	8	4			12
05:30	2	0			2	17:30	6	11			17
05:45	1	7	0	1	1	17:45	10	34	10	34	20
06:00	5	2			7	18:00	13	5			18
06:15	5	1			6	18:15	10	8			18
06:30	4	1			5	18:30	6	11			17
06:45	6	20	0	4	6	18:45	5	34	7	31	12
07:00	11	2			13	19:00	12	14			26
07:15	8	1			9	19:15	12	9			21
07:30	9	6			15	19:30	5	6			11
07:45	4	32	5	14	9	19:45	9	38	4	33	13
08:00	7	4			11	20:00	3	9			12
08:15	8	3			11	20:15	4	2			6
08:30	8	6			14	20:30	2	5			7
08:45	9	32	5	18	14	20:45	4	13	8	24	12
09:00	7	5			12	21:00	9	3			12
09:15	5	8			13	21:15	5	5			10
09:30	6	7			13	21:30	2	4			6
09:45	7	25	2	22	9	21:45	5	21	2	14	7
10:00	4	6			10	22:00	0	0			0
10:15	4	8			12	22:15	1	5			6
10:30	13	4			17	22:30	4	3			7
10:45	8	29	12	30	20	22:45	0	5	1	9	1
11:00	13	15			28	23:00	3	4			7
11:15	11	16			27	23:15	1	3			4
11:30	11	9			20	23:30	1	4			5
11:45	12	47	10	50	22	23:45	1	6	1	12	2
TOTALS	206	149			355	TOTALS	346	376			722
SPLIT %	58.0%	42.0%			33.0%	SPLIT %	47.9%	52.1%			67.0%

DAILY TOTALS					NB	SB	EB	WB	Total
					552	525	0	0	1,077
AM Peak Hour	11:00	10:45			11:00	PM Peak Hour	13:00	13:45	13:15
AM Pk Volume	47	52			97	PM Pk Volume	51	57	93
Pk Hr Factor	0.904	0.813			0.866	Pk Hr Factor	0.850	0.792	0.830
7 - 9 Volume	64	32	0	0	96	4 - 6 Volume	81	74	0
7 - 9 Peak Hour	07:00	07:30			08:00	4 - 6 Peak Hour	16:00	16:00	16:00
7 - 9 Pk Volume	32	18	0	0	50	4 - 6 Pk Volume	47	40	0
Pk Hr Factor	0.727	0.750	0.000	0.000	0.893	Pk Hr Factor	0.904	0.625	0.000

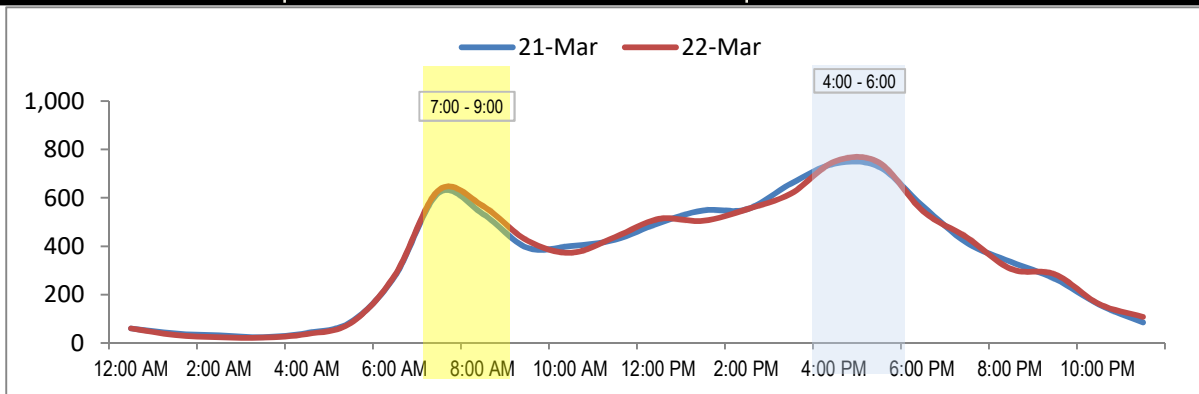
3-Day Segment Counts Summary

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-5136



Location: Orange Ave btwn Swift Ave & 35th St (West of Alley)
Orientation: East-West
Day 1 Tuesday, March 21, 2017
Day 2 Wednesday, March 22, 2017
AVC Proj. No: 17-0643

		Average Daily Traffic	8,492
		Highest Daily Traffic	8,499
Time	Hourly Volume		
		21-Mar	22-Mar
12:00 AM - 1:00 AM		60	60
1:00 AM - 2:00 AM		39	33
2:00 AM - 3:00 AM		31	23
3:00 AM - 4:00 AM		24	22
4:00 AM - 5:00 AM		41	37
5:00 AM - 6:00 AM		87	83
6:00 AM - 7:00 AM		277	281
7:00 AM - 8:00 AM		622	633
8:00 AM - 9:00 AM		533	566
9:00 AM - 10:00 AM		394	424
10:00 AM - 11:00 AM		401	373
11:00 AM - 12:00 PM		427	438
12:00 PM - 1:00 PM		496	513
1:00 PM - 2:00 PM		548	505
2:00 PM - 3:00 PM		553	553
3:00 PM - 4:00 PM		659	618
4:00 PM - 5:00 PM		742	751
5:00 PM - 6:00 PM		728	746
6:00 PM - 7:00 PM		565	545
7:00 PM - 8:00 PM		414	436
8:00 PM - 9:00 PM		335	306
9:00 PM - 10:00 PM		265	284
10:00 PM - 11:00 PM		159	161
11:00 PM - 12:00 AM		85	108
Total		8,485	8,499



24 Hour Segment Count

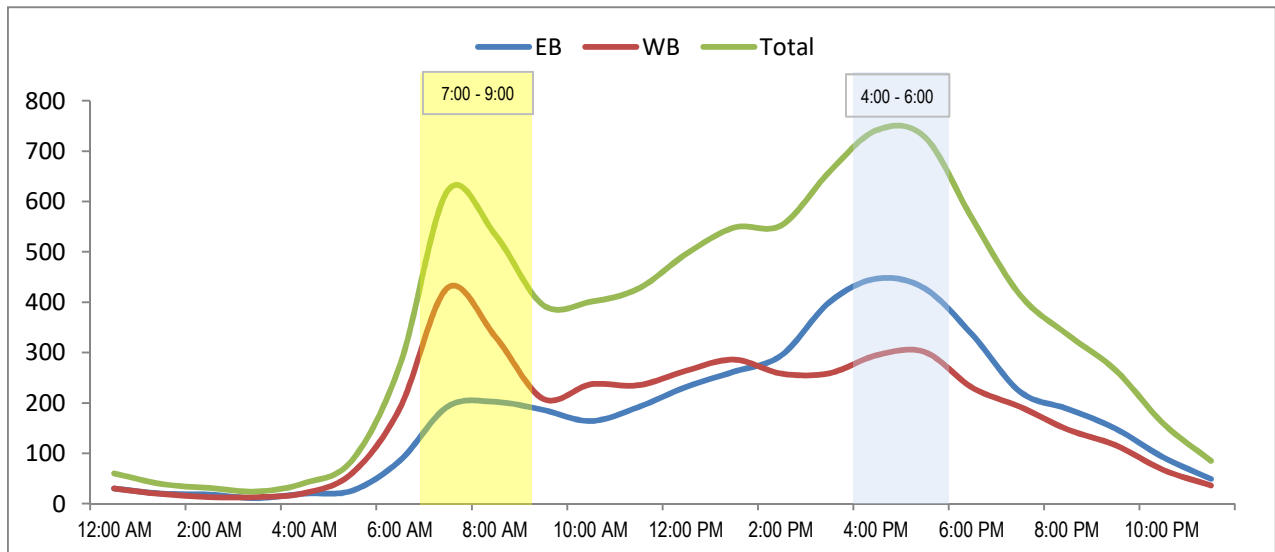
Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-5136



Location: Orange Ave btwn Swift Ave & 35th St (West of Alley)
Orientation: East-West
Date of Count: Tuesday, March 21, 2017
Analysts: DASH
Weather: Sunny
AVC Proj. No: 17-0643

24 Hour Segment Volume					8,485		
Time	Hourly Volume			Time	Hourly Volume		
	EB	WB	Total		EB	WB	Total
12:00 AM - 1:00 AM	30	30	60	12:00 PM - 1:00 PM	232	264	496
1:00 AM - 2:00 AM	20	19	39	1:00 PM - 2:00 PM	262	286	548
2:00 AM - 3:00 AM	18	13	31	2:00 PM - 3:00 PM	295	258	553
3:00 AM - 4:00 AM	11	13	24	3:00 PM - 4:00 PM	400	259	659
4:00 AM - 5:00 AM	20	21	41	4:00 PM - 5:00 PM	447	295	742
5:00 AM - 6:00 AM	26	61	87	5:00 PM - 6:00 PM	427	301	728
6:00 AM - 7:00 AM	86	191	277	6:00 PM - 7:00 PM	335	230	565
7:00 AM - 8:00 AM	193	429	622	7:00 PM - 8:00 PM	222	192	414
8:00 AM - 9:00 AM	202	331	533	8:00 PM - 9:00 PM	188	147	335
9:00 AM - 10:00 AM	186	208	394	9:00 PM - 10:00 PM	149	116	265
10:00 AM - 11:00 AM	164	237	401	10:00 PM - 11:00 PM	92	67	159
11:00 AM - 12:00 PM	192	235	427	11:00 PM - 12:00 AM	49	36	85
Total	1,148	1,788	2,936	Total	3,098	2,451	5,549

24-Hour EB Volume 4,246 **24-Hour WB Volume 4,239**



24 Hour Segment Count

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-5136



Location: Orange Ave btwn Swift Ave & 35th St (West of Alley)

Orientation: East-West

Date of Count: Wednesday, March 22, 2017

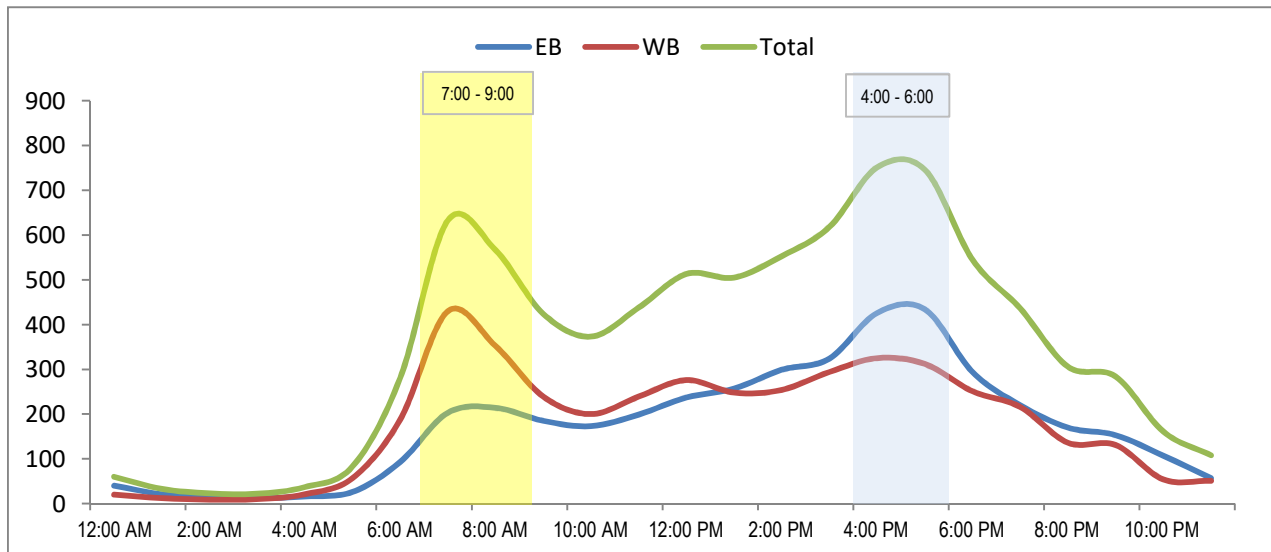
Analysts: DASH

Weather: Sunny

AVC Proj. No: 17-0643

24 Hour Segment Volume					8,499		
Time	Hourly Volume			Time	Hourly Volume		
	EB	WB	Total		EB	WB	Total
12:00 AM - 1:00 AM	40	20	60	12:00 PM - 1:00 PM	237	276	513
1:00 AM - 2:00 AM	21	12	33	1:00 PM - 2:00 PM	257	248	505
2:00 AM - 3:00 AM	14	9	23	2:00 PM - 3:00 PM	299	254	553
3:00 AM - 4:00 AM	12	10	22	3:00 PM - 4:00 PM	324	294	618
4:00 AM - 5:00 AM	16	21	37	4:00 PM - 5:00 PM	426	325	751
5:00 AM - 6:00 AM	26	57	83	5:00 PM - 6:00 PM	434	312	746
6:00 AM - 7:00 AM	93	188	281	6:00 PM - 7:00 PM	294	251	545
7:00 AM - 8:00 AM	203	430	633	7:00 PM - 8:00 PM	220	216	436
8:00 AM - 9:00 AM	214	352	566	8:00 PM - 9:00 PM	170	136	306
9:00 AM - 10:00 AM	185	239	424	9:00 PM - 10:00 PM	153	131	284
10:00 AM - 11:00 AM	173	200	373	10:00 PM - 11:00 PM	107	54	161
11:00 AM - 12:00 PM	199	239	438	11:00 PM - 12:00 AM	57	51	108
Total	1,196	1,777	2,973	Total	2,978	2,548	5,526

24-Hour EB Volume 4,174 **24-Hour WB Volume 4,325**



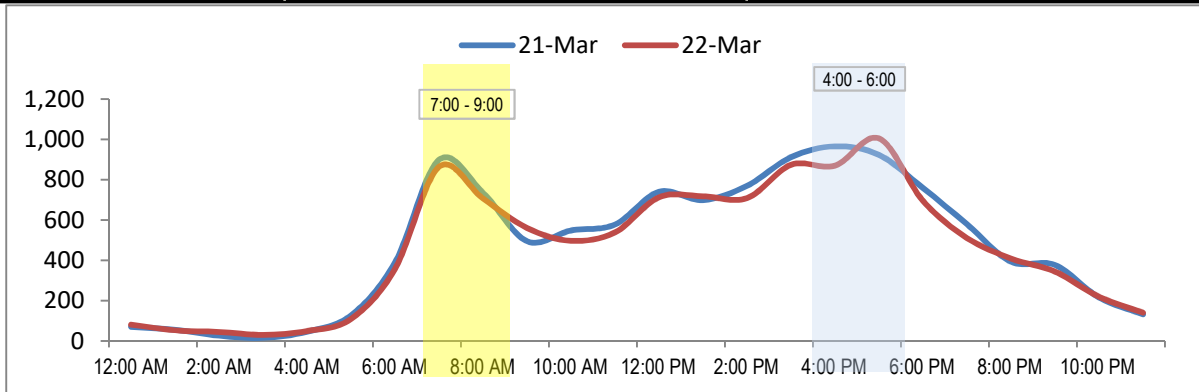
3-Day Segment Counts Summary

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-5136



Location: Orange Ave btwn 43rd St & Fairmount Ave (West of Alley)
Orientation: East-West
Day 1 Tuesday, March 21, 2017
Day 2 Wednesday, March 22, 2017
AVC Proj. No: 17-0643

		Average Daily Traffic	11,275
		Highest Daily Traffic	11,450
Time	Hourly Volume		
	21-Mar	22-Mar	
12:00 AM - 1:00 AM	70	81	
1:00 AM - 2:00 AM	55	53	
2:00 AM - 3:00 AM	26	45	
3:00 AM - 4:00 AM	15	30	
4:00 AM - 5:00 AM	46	49	
5:00 AM - 6:00 AM	127	109	
6:00 AM - 7:00 AM	390	358	
7:00 AM - 8:00 AM	899	864	
8:00 AM - 9:00 AM	735	707	
9:00 AM - 10:00 AM	495	561	
10:00 AM - 11:00 AM	548	497	
11:00 AM - 12:00 PM	578	539	
12:00 PM - 1:00 PM	740	713	
1:00 PM - 2:00 PM	699	718	
2:00 PM - 3:00 PM	770	709	
3:00 PM - 4:00 PM	912	874	
4:00 PM - 5:00 PM	966	870	
5:00 PM - 6:00 PM	923	1,005	
6:00 PM - 7:00 PM	759	695	
7:00 PM - 8:00 PM	579	511	
8:00 PM - 9:00 PM	393	409	
9:00 PM - 10:00 PM	377	344	
10:00 PM - 11:00 PM	216	219	
11:00 PM - 12:00 AM	132	140	
Total	11,450	11,100	



24 Hour Segment Count

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-5136



Location: Orange Ave btwn 43rd St & Fairmount Ave (West of Alley)

Orientation: East-West

Date of Count: Tuesday, March 21, 2017

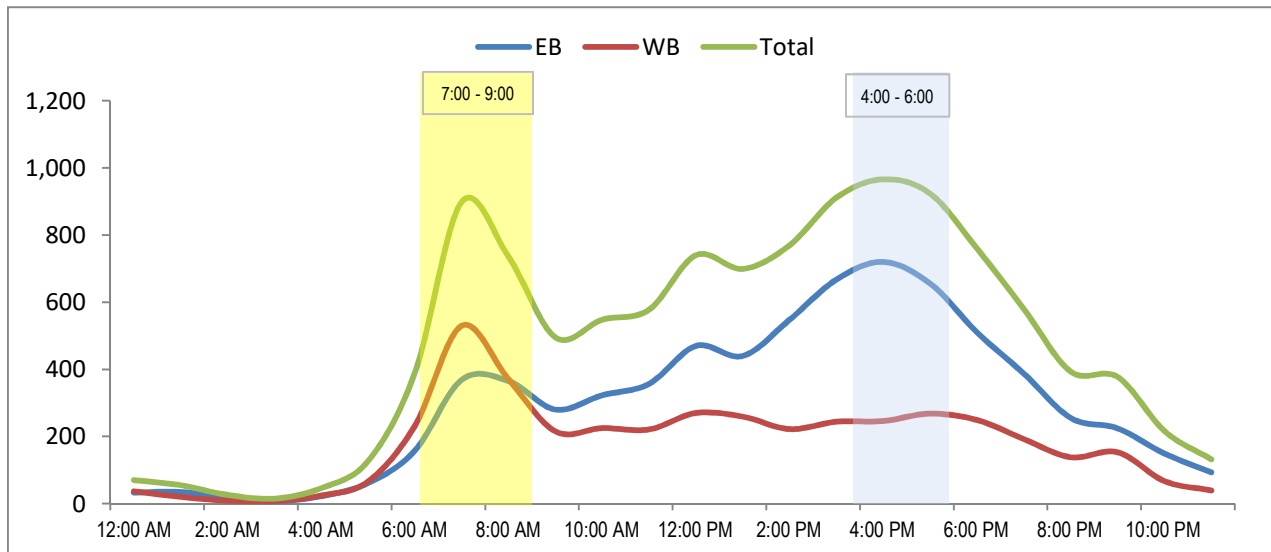
Analysts: DASH

Weather: Sunny

AVC Proj. No: 17-0643

24 Hour Segment Volume					11,450		
Time	Hourly Volume			Time	Hourly Volume		
	EB	WB	Total		EB	WB	Total
12:00 AM - 1:00 AM	33	37	70	12:00 PM - 1:00 PM	470	270	740
1:00 AM - 2:00 AM	35	20	55	1:00 PM - 2:00 PM	440	259	699
2:00 AM - 3:00 AM	17	9	26	2:00 PM - 3:00 PM	548	222	770
3:00 AM - 4:00 AM	7	8	15	3:00 PM - 4:00 PM	668	244	912
4:00 AM - 5:00 AM	22	24	46	4:00 PM - 5:00 PM	720	246	966
5:00 AM - 6:00 AM	61	66	127	5:00 PM - 6:00 PM	655	268	923
6:00 AM - 7:00 AM	158	232	390	6:00 PM - 7:00 PM	510	249	759
7:00 AM - 8:00 AM	369	530	899	7:00 PM - 8:00 PM	387	192	579
8:00 AM - 9:00 AM	365	370	735	8:00 PM - 9:00 PM	255	138	393
9:00 AM - 10:00 AM	280	215	495	9:00 PM - 10:00 PM	224	153	377
10:00 AM - 11:00 AM	323	225	548	10:00 PM - 11:00 PM	149	67	216
11:00 AM - 12:00 PM	357	221	578	11:00 PM - 12:00 AM	93	39	132
Total	2,027	1,957	3,984	Total	5,119	2,347	7,466

24-Hour EB Volume 7,146 **24-Hour WB Volume 4,304**



24 Hour Segment Count

Accurate Video Counts Inc
 info@accuratevideocounts.com
 (619) 987-5136



Location: Orange Ave btwn 43rd St & Fairmount Ave (West of Alley)

Orientation: East-West

Date of Count: Wednesday, March 22, 2017

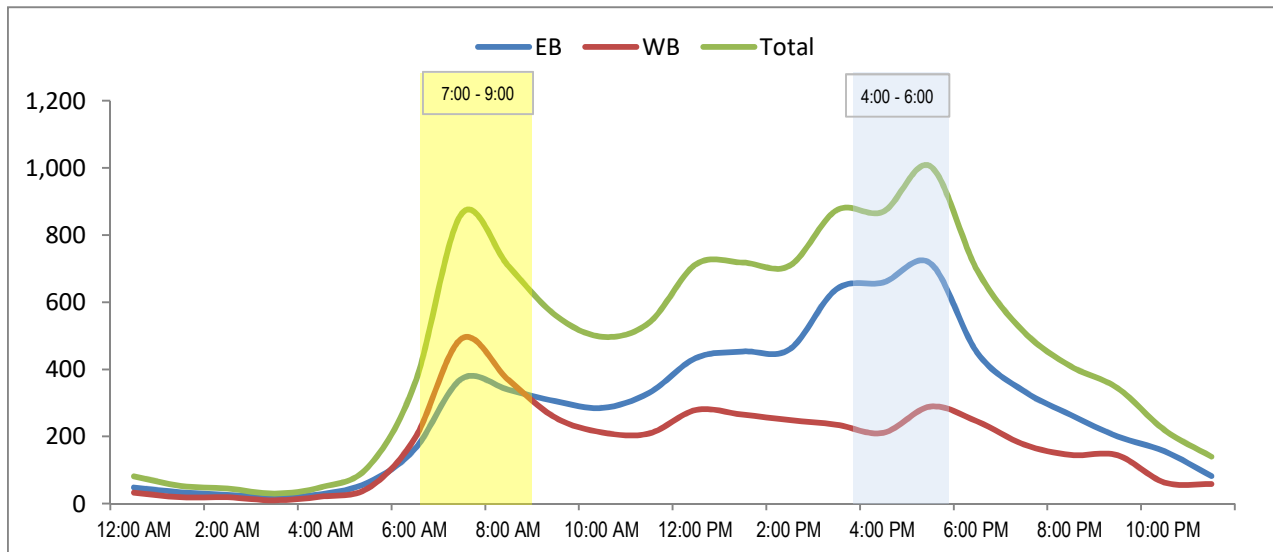
Analysts: DASH

Weather: Sunny

AVC Proj. No: 17-0643

24 Hour Segment Volume					11,100		
Time	Hourly Volume			Time	Hourly Volume		
	EB	WB	Total		EB	WB	Total
12:00 AM - 1:00 AM	48	33	81	12:00 PM - 1:00 PM	434	279	713
1:00 AM - 2:00 AM	34	19	53	1:00 PM - 2:00 PM	453	265	718
2:00 AM - 3:00 AM	26	19	45	2:00 PM - 3:00 PM	460	249	709
3:00 AM - 4:00 AM	20	10	30	3:00 PM - 4:00 PM	639	235	874
4:00 AM - 5:00 AM	28	21	49	4:00 PM - 5:00 PM	659	211	870
5:00 AM - 6:00 AM	63	46	109	5:00 PM - 6:00 PM	716	289	1,005
6:00 AM - 7:00 AM	163	195	358	6:00 PM - 7:00 PM	450	245	695
7:00 AM - 8:00 AM	372	492	864	7:00 PM - 8:00 PM	335	176	511
8:00 AM - 9:00 AM	339	368	707	8:00 PM - 9:00 PM	264	145	409
9:00 AM - 10:00 AM	305	256	561	9:00 PM - 10:00 PM	200	144	344
10:00 AM - 11:00 AM	285	212	497	10:00 PM - 11:00 PM	156	63	219
11:00 AM - 12:00 PM	330	209	539	11:00 PM - 12:00 AM	82	58	140
Total	2,013	1,880	3,893	Total	4,848	2,359	7,207

24-Hour EB Volume 6,861 **24-Hour WB Volume 4,239**



APPENDIX D

INTERSECTION LOS WORKSHEETS

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↖	↗		↔	
Traffic Vol, veh/h	1	83	14	28	271	0	26	1	27	0	0	3
Future Vol, veh/h	1	83	14	28	271	0	26	1	27	0	0	3
Conflicting Peds, #/hr	9	0	9	8	0	8	9	0	8	8	0	9
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	70	-	-	100	-	-	-	-	40	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	93	16	31	304	0	29	1	30	0	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	313	0	0	118	0	0	489	487	118	502	495	322
Stage 1	-	-	-	-	-	-	112	112	-	375	375	-
Stage 2	-	-	-	-	-	-	377	375	-	127	120	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1247	-	-	1470	-	-	489	481	934	480	476	719
Stage 1	-	-	-	-	-	-	893	803	-	646	617	-
Stage 2	-	-	-	-	-	-	644	617	-	877	796	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1236	-	-	1457	-	-	470	462	919	448	457	707
Mov Cap-2 Maneuver	-	-	-	-	-	-	470	462	-	448	457	-
Stage 1	-	-	-	-	-	-	885	795	-	640	598	-
Stage 2	-	-	-	-	-	-	622	598	-	840	788	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.7			11.2			10.1		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	470	919	1236	-	-	1457	-	-	707
HCM Lane V/C Ratio	0.065	0.033	0.001	-	-	0.022	-	-	0.005
HCM Control Delay (s)	13.2	9.1	7.9	-	-	7.5	-	-	10.1
HCM Lane LOS	B	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0.1	0	-	-	0.1	-	-	0

NPMC Howard-Orange Mobility Assessment
2: Alley/33rd St & Orange Ave

Existing Conditions
timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	110	0	7	254	213	5	4	0	52	2	39
Future Volume (veh/h)	73	110	0	7	254	213	5	4	0	52	2	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	79	120	0	8	276	232	5	4	0	57	2	42
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	105	481	0	336	363	305	14	12	0	183	7	156
Arrive On Green	0.06	0.26	0.00	0.19	0.39	0.39	0.01	0.01	0.00	0.10	0.10	0.10
Sat Flow, veh/h	1781	1870	0	1781	939	789	1011	809	0	1781	73	1524
Grp Volume(v), veh/h	79	120	0	8	0	508	9	0	0	57	0	44
Grp Sat Flow(s),veh/h/ln	1781	1870	0	1781	0	1728	1820	0	0	1781	0	1596
Q Serve(g_s), s	1.7	2.0	0.0	0.1	0.0	9.9	0.2	0.0	0.0	1.2	0.0	1.0
Cycle Q Clear(g_c), s	1.7	2.0	0.0	0.1	0.0	9.9	0.2	0.0	0.0	1.2	0.0	1.0
Prop In Lane	1.00		0.00	1.00		0.46	0.56		0.00	1.00		0.95
Lane Grp Cap(c), veh/h	105	481	0	336	0	669	26	0	0	183	0	164
V/C Ratio(X)	0.75	0.25	0.00	0.02	0.00	0.76	0.35	0.00	0.00	0.31	0.00	0.27
Avail Cap(c_a), veh/h	1558	3367	0	1649	0	3111	2153	0	0	2107	0	1888
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.0	11.5	0.0	12.8	0.0	10.3	19.0	0.0	0.0	16.2	0.0	16.1
Incr Delay (d2), s/veh	4.0	0.1	0.0	0.0	0.0	1.1	2.9	0.0	0.0	0.4	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.7	0.0	0.0	0.0	3.1	0.1	0.0	0.0	0.4	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.0	11.6	0.0	12.9	0.0	11.5	21.9	0.0	0.0	16.5	0.0	16.4
LnGrp LOS	C	B	A	B	A	B	C	A	A	B	A	B
Approach Vol, veh/h		199			516			9			101	
Approach Delay, s/veh		15.7			11.5			21.9			16.5	
Approach LOS		B			B			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.3	14.0		4.6	6.3	20.0		8.0				
Change Period (Y+Rc), s	5.0	4.0		4.0	4.0	* 5		4.0				
Max Green Setting (Gmax), s	36.0	70.0		46.0	34.0	* 70		46.0				
Max Q Clear Time (g_c+l1), s	2.1	4.0		2.2	3.7	11.9		3.2				
Green Ext Time (p_c), s	0.0	0.5		0.0	0.1	3.1		0.3				

Intersection Summary

HCM 6th Ctrl Delay	13.2
HCM 6th LOS	B

Notes

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

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↖			↗			↗	↗
Traffic Vol, veh/h	1	149	17	33	406	4	48	9	33	5	0	8
Future Vol, veh/h	1	149	17	33	406	4	48	9	33	5	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	159	18	35	432	4	51	10	35	5	0	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	436	0	0	177	0	0	679	676	168	697	683	434
Stage 1	-	-	-	-	-	-	170	170	-	504	504	-
Stage 2	-	-	-	-	-	-	509	506	-	193	179	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1124	-	-	1399	-	-	366	375	876	356	372	622
Stage 1	-	-	-	-	-	-	832	758	-	550	541	-
Stage 2	-	-	-	-	-	-	547	540	-	809	751	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1124	-	-	1399	-	-	354	365	876	328	362	622
Mov Cap-2 Maneuver	-	-	-	-	-	-	354	365	-	328	362	-
Stage 1	-	-	-	-	-	-	831	757	-	549	527	-
Stage 2	-	-	-	-	-	-	526	527	-	766	750	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.6			15			13		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	455	1124	-	-	1399	-	-	463
HCM Lane V/C Ratio	0.21	0.001	-	-	0.025	-	-	0.03
HCM Control Delay (s)	15	8.2	-	-	7.6	-	-	13
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.8	0	-	-	0.1	-	-	0.1

NPMC Howard-Orange Mobility Assessment
4: 35th St & Orange Ave

Existing Conditions
timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	156	16	24	339	95	59	105	45	43	68	19
Future Volume (veh/h)	38	156	16	24	339	95	59	105	45	43	68	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.98		0.96	0.96		0.95	0.97		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	170	17	26	368	103	64	114	49	47	74	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	517	889	89	749	742	208	188	207	77	199	233	54
Arrive On Green	0.53	0.53	0.53	0.53	0.53	0.53	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	913	1665	167	1177	1390	389	326	956	353	358	1074	248
Grp Volume(v), veh/h	41	0	187	26	0	471	227	0	0	142	0	0
Grp Sat Flow(s),veh/h/ln	913	0	1832	1177	0	1779	1636	0	0	1680	0	0
Q Serve(g_s), s	1.2	0.0	2.1	0.5	0.0	6.6	2.1	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	7.8	0.0	2.1	2.5	0.0	6.6	4.8	0.0	0.0	2.6	0.0	0.0
Prop In Lane	1.00		0.09	1.00		0.22	0.28		0.22	0.33		0.15
Lane Grp Cap(c), veh/h	517	0	978	749	0	950	472	0	0	486	0	0
V/C Ratio(X)	0.08	0.00	0.19	0.03	0.00	0.50	0.48	0.00	0.00	0.29	0.00	0.00
Avail Cap(c_a), veh/h	517	0	978	749	0	950	1173	0	0	1165	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.3	0.0	4.8	5.4	0.0	5.8	13.9	0.0	0.0	13.1	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.4	0.1	0.0	1.8	0.3	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.6	0.1	0.0	2.0	1.6	0.0	0.0	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.6	0.0	5.2	5.5	0.0	7.7	14.2	0.0	0.0	13.2	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	A
Approach Vol, veh/h		228			497			227				142
Approach Delay, s/veh		5.8			7.5			14.2				13.2
Approach LOS		A			A			B				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.9		13.4		25.9		13.4				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		21.0		26.1		21.0		26.1				
Max Q Clear Time (g_c+I1), s		9.8		6.8		8.6		4.6				
Green Ext Time (p_c), s		1.0		0.9		2.8		0.5				
Intersection Summary												
HCM 6th Ctrl Delay				9.3								
HCM 6th LOS				A								

Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	180	20	41	453	15	22	7	29	3	5	8
Future Vol, veh/h	13	180	20	41	453	15	22	7	29	3	5	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	202	22	46	509	17	25	8	33	3	6	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	526	0	0	224	0	0	860	861	213	874	864	518
Stage 1	-	-	-	-	-	-	243	243	-	610	610	-
Stage 2	-	-	-	-	-	-	617	618	-	264	254	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1041	-	-	1345	-	-	276	293	827	270	292	558
Stage 1	-	-	-	-	-	-	761	705	-	482	485	-
Stage 2	-	-	-	-	-	-	477	481	-	741	697	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1041	-	-	1345	-	-	258	279	827	245	278	558
Mov Cap-2 Maneuver	-	-	-	-	-	-	258	279	-	245	278	-
Stage 1	-	-	-	-	-	-	750	695	-	475	469	-
Stage 2	-	-	-	-	-	-	448	465	-	694	687	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.6			15.8			15.6		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	399	1041	-	-	1345	-	-	359
HCM Lane V/C Ratio	0.163	0.014	-	-	0.034	-	-	0.05
HCM Control Delay (s)	15.8	8.5	-	-	7.8	-	-	15.6
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.6	0	-	-	0.1	-	-	0.2

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔			↔			↔	↔
Traffic Vol, veh/h	36	207	15	14	289	66	9	4	30	24	3	7
Future Vol, veh/h	36	207	15	14	289	66	9	4	30	24	3	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	35	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	39	225	16	15	314	72	10	4	33	26	3	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	386	0	0	241	0	0	697	727	233	710	699	350
Stage 1	-	-	-	-	-	-	311	311	-	380	380	-
Stage 2	-	-	-	-	-	-	386	416	-	330	319	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1172	-	-	1326	-	-	356	351	806	348	364	693
Stage 1	-	-	-	-	-	-	699	658	-	642	614	-
Stage 2	-	-	-	-	-	-	637	592	-	683	653	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1172	-	-	1326	-	-	338	336	806	319	348	693
Mov Cap-2 Maneuver	-	-	-	-	-	-	338	336	-	319	348	-
Stage 1	-	-	-	-	-	-	676	636	-	621	607	-
Stage 2	-	-	-	-	-	-	620	585	-	629	631	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.1			0.3			11.9			16.1		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	568	1172	-	-	1326	-	-	362
HCM Lane V/C Ratio	0.082	0.033	-	-	0.011	-	-	0.102
HCM Control Delay (s)	11.9	8.2	-	-	7.7	-	-	16.1
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-	-	0.3

Intersection												
Int Delay, s/veh	6.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	55	183	49	38	313	162	48	50	71	16	7	36
Future Vol, veh/h	55	183	49	38	313	162	48	50	71	16	7	36
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	60	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	60	199	53	41	340	176	52	54	77	17	8	39

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	516	0	0	252	0	0	880	944	226	921	882	428
Stage 1	-	-	-	-	-	-	346	346	-	510	510	-
Stage 2	-	-	-	-	-	-	534	598	-	411	372	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1050	-	-	1313	-	-	268	262	813	251	285	627
Stage 1	-	-	-	-	-	-	670	635	-	546	538	-
Stage 2	-	-	-	-	-	-	530	491	-	618	619	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1050	-	-	1313	-	-	229	239	813	175	260	627
Mov Cap-2 Maneuver	-	-	-	-	-	-	229	239	-	175	260	-
Stage 1	-	-	-	-	-	-	632	599	-	515	521	-
Stage 2	-	-	-	-	-	-	474	476	-	480	584	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.7			0.6			28.2			18.2		
HCM LOS							D			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	334	1050	-	-	1313	-	-	336
HCM Lane V/C Ratio	0.55	0.057	-	-	0.031	-	-	0.191
HCM Control Delay (s)	28.2	8.6	-	-	7.8	-	-	18.2
HCM Lane LOS	D	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	3.1	0.2	-	-	0.1	-	-	0.7

NPMC Howard-Orange Mobility Assessment
8: Marlborough Ave S/Alley & Orange Ave

Existing Conditions
timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	284	54	70	607	0	115	0	68	0	2	3
Future Volume (veh/h)	0	284	54	70	607	0	115	0	68	0	2	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	309	59	76	660	0	125	0	74	0	2	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	243	746	142	607	914	0	358	8	100	0	122	183
Arrive On Green	0.00	0.49	0.49	0.49	0.49	0.00	0.18	0.00	0.18	0.00	0.18	0.18
Sat Flow, veh/h	774	1526	291	1014	1870	0	885	47	552	0	675	1013
Grp Volume(v), veh/h	0	0	368	76	660	0	199	0	0	0	0	5
Grp Sat Flow(s),veh/h/ln	774	0	1818	1014	1870	0	1483	0	0	0	0	1688
Q Serve(g_s), s	0.0	0.0	3.8	1.5	8.3	0.0	3.5	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.0	0.0	3.8	5.4	8.3	0.0	3.7	0.0	0.0	0.0	0.0	0.1
Prop In Lane	1.00		0.16	1.00		0.00	0.63		0.37	0.00		0.60
Lane Grp Cap(c), veh/h	243	0	888	607	914	0	466	0	0	0	0	305
V/C Ratio(X)	0.00	0.00	0.41	0.13	0.72	0.00	0.43	0.00	0.00	0.00	0.00	0.02
Avail Cap(c_a), veh/h	1539	0	3929	2303	4043	0	1889	0	0	0	0	2508
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	4.9	6.6	6.0	0.0	11.5	0.0	0.0	0.0	0.0	10.0
Incr Delay (d2), s/veh	0.0	0.0	0.2	0.0	0.6	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.8	0.2	1.7	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	5.0	6.6	6.6	0.0	11.7	0.0	0.0	0.0	0.0	10.0
LnGrp LOS	A	A	A	A	A	A	B	A	A	A	A	A
Approach Vol, veh/h		368			736			199				5
Approach Delay, s/veh		5.0			6.6			11.7				10.0
Approach LOS		A			A			B				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		19.4		10.2		19.4		10.2				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		64.0		44.0		64.0		34.0				
Max Q Clear Time (g_c+I1), s		5.8		2.1		10.3		5.7				
Green Ext Time (p_c), s		1.9		0.0		4.2		0.8				
Intersection Summary												
HCM 6th Ctrl Delay			6.9									
HCM 6th LOS			A									

Intersection												
Int Delay, s/veh	8.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑		↖	↗			↕			↕	
Traffic Vol, veh/h	35	241	17	11	472	24	105	42	35	2	3	14
Future Vol, veh/h	35	241	17	11	472	24	105	42	35	2	3	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	262	18	12	513	26	114	46	38	2	3	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	539	0	0	280	0	0	906	910	271	939	906	526
Stage 1	-	-	-	-	-	-	347	347	-	550	550	-
Stage 2	-	-	-	-	-	-	559	563	-	389	356	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1029	-	-	1283	-	-	257	275	768	244	276	552
Stage 1	-	-	-	-	-	-	669	635	-	519	516	-
Stage 2	-	-	-	-	-	-	513	509	-	635	629	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1029	-	-	1283	-	-	239	262	768	194	263	552
Mov Cap-2 Maneuver	-	-	-	-	-	-	239	262	-	194	263	-
Stage 1	-	-	-	-	-	-	644	612	-	500	511	-
Stage 2	-	-	-	-	-	-	491	504	-	538	606	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1			0.2			43			14.4		
HCM LOS							E			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	282	1029	-	-	1283	-	-	404
HCM Lane V/C Ratio	0.702	0.037	-	-	0.009	-	-	0.051
HCM Control Delay (s)	43	8.6	-	-	7.8	-	-	14.4
HCM Lane LOS	E	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	4.8	0.1	-	-	0	-	-	0.2

NPMC Howard-Orange Mobility Assessment
10: 43rd St & Orange Ave

Existing Conditions
timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔						↔↔	
Traffic Volume (veh/h)	0	322	37	18	501	0	0	0	0	48	253	76
Future Volume (veh/h)	0	322	37	18	501	0	0	0	0	48	253	76
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	0.99		1.00				1.00		0.91
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1900	1870	1900
Adj Flow Rate, veh/h	0	346	40	19	539	0				52	272	82
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	2	2	0				0	2	0
Cap, veh/h	0	1032	119	627	1179	0				100	536	167
Arrive On Green	0.00	0.63	0.63	1.00	1.00	0.00				0.23	0.23	0.23
Sat Flow, veh/h	0	1637	189	987	1870	0				437	2336	730
Grp Volume(v), veh/h	0	0	386	19	539	0				220	0	186
Grp Sat Flow(s),veh/h/ln	0	0	1826	987	1870	0				1849	0	1653
Q Serve(g_s), s	0.0	0.0	6.9	0.2	0.0	0.0				7.3	0.0	6.8
Cycle Q Clear(g_c), s	0.0	0.0	6.9	7.2	0.0	0.0				7.3	0.0	6.8
Prop In Lane	0.00		0.10	1.00		0.00				0.24		0.44
Lane Grp Cap(c), veh/h	0	0	1151	627	1179	0				424	0	379
V/C Ratio(X)	0.00	0.00	0.34	0.03	0.46	0.00				0.52	0.00	0.49
Avail Cap(c_a), veh/h	0	0	1151	627	1179	0				1085	0	971
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	0.81	0.81	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	6.1	0.6	0.0	0.0				23.6	0.0	23.4
Incr Delay (d2), s/veh	0.0	0.0	0.8	0.1	1.0	0.0				2.2	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	2.5	0.0	0.3	0.0				3.3	0.0	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	6.8	0.6	1.0	0.0				25.8	0.0	25.6
LnGrp LOS	A	A	A	A	A	A				C	A	C
Approach Vol, veh/h		386			558						406	
Approach Delay, s/veh		6.8			1.0						25.7	
Approach LOS		A			A						C	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		49.0		21.0		49.0						
Change Period (Y+Rc), s		4.9		4.9		4.9						
Max Green Setting (Gmax), s		19.1		41.1		19.1						
Max Q Clear Time (g_c+I1), s		8.9		9.3		9.2						
Green Ext Time (p_c), s		3.2		5.3		4.6						
Intersection Summary												
HCM 6th Ctrl Delay				10.1								
HCM 6th LOS				B								

NPMC Howard-Orange Mobility Assessment
 11: Fairmount Ave & Orange Ave

Existing Conditions
 timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	183	44	41	322	132	157	790	56	9	55	5
Future Volume (veh/h)	50	183	44	41	322	132	157	790	56	9	55	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.93	0.96		0.87	0.95		0.91	0.99		0.91
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	54	199	48	45	350	143	171	859	61	10	60	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	250	582	140	507	490	200	650	1514	108	262	765	64
Arrive On Green	0.81	0.81	0.81	0.41	0.41	0.41	0.45	0.45	0.45	0.45	0.45	0.45
Sat Flow, veh/h	897	1430	345	1089	1204	492	1263	3341	237	603	1688	141
Grp Volume(v), veh/h	54	0	247	45	0	493	171	457	463	10	0	65
Grp Sat Flow(s),veh/h/ln	897	0	1775	1089	0	1696	1263	1777	1801	603	0	1829
Q Serve(g_s), s	3.2	0.0	2.5	1.9	0.0	17.0	6.2	13.2	13.2	0.9	0.0	1.4
Cycle Q Clear(g_c), s	20.2	0.0	2.5	4.4	0.0	17.0	7.6	13.2	13.2	14.1	0.0	1.4
Prop In Lane	1.00		0.19	1.00		0.29	1.00		0.13	1.00		0.08
Lane Grp Cap(c), veh/h	250	0	722	507	0	690	650	805	816	262	0	829
V/C Ratio(X)	0.22	0.00	0.34	0.09	0.00	0.71	0.26	0.57	0.57	0.04	0.00	0.08
Avail Cap(c_a), veh/h	250	0	722	507	0	690	801	1018	1032	334	0	1048
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.95	0.00	0.95	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.3	0.0	4.1	14.5	0.0	17.4	13.0	14.1	14.1	19.3	0.0	10.8
Incr Delay (d2), s/veh	1.9	0.0	1.2	0.3	0.0	6.2	0.9	2.7	2.7	0.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/lr0.6	0.0	0.0	1.0	0.5	0.0	7.4	1.8	5.4	5.4	0.1	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.1	0.0	5.3	14.8	0.0	23.6	13.9	16.8	16.7	19.5	0.0	11.0
LnGrp LOS	B	A	A	B	A	C	B	B	B	B	A	B
Approach Vol, veh/h		301			538			1091				75
Approach Delay, s/veh		6.9			22.9			16.3				12.2
Approach LOS		A			C			B				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		33.4		36.6		33.4		36.6				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		20.1		40.1		20.1		40.1				
Max Q Clear Time (g_c+I1), s		22.2		15.2		19.0		16.1				
Green Ext Time (p_c), s		0.0		16.5		0.6		0.9				
Intersection Summary												
HCM 6th Ctrl Delay												16.5
HCM 6th LOS												B

Intersection												
Int Delay, s/veh	1.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔			↔			↔	
Traffic Vol, veh/h	0	217	13	14	435	0	16	0	10	12	8	47
Future Vol, veh/h	0	217	13	14	435	0	16	0	10	12	8	47
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	228	14	15	458	0	17	0	11	13	8	49

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	242	0	0	752	723	235	729	730	458
Stage 1	-	-	-	-	-	-	235	235	-	488	488	-
Stage 2	-	-	-	-	-	-	517	488	-	241	242	-
Critical Hdwy	-	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	1324	-	0	327	352	804	338	349	603
Stage 1	0	-	-	-	-	0	768	710	-	561	550	-
Stage 2	0	-	-	-	-	0	541	550	-	762	705	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1324	-	-	293	348	804	331	345	603
Mov Cap-2 Maneuver	-	-	-	-	-	-	391	434	-	436	430	-
Stage 1	-	-	-	-	-	-	768	710	-	561	544	-
Stage 2	-	-	-	-	-	-	483	544	-	752	705	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.2			12.8			12.7		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	487	-	-	1324	-	540
HCM Lane V/C Ratio	0.056	-	-	0.011	-	0.131
HCM Control Delay (s)	12.8	-	-	7.8	-	12.7
HCM Lane LOS	B	-	-	A	-	B
HCM 95th %tile Q(veh)	0.2	-	-	0	-	0.4

Intersection	
Intersection Delay, s/veh	19.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↕			↕	
Traffic Vol, veh/h	30	164	22	43	327	57	26	170	28	23	98	24
Future Vol, veh/h	30	164	22	43	327	57	26	170	28	23	98	24
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	34	189	25	49	376	66	30	195	32	26	113	28
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	13.6	26.3	15.3	13
HCM LOS	B	D	C	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	12%	100%	0%	100%	0%	16%
Vol Thru, %	76%	0%	88%	0%	85%	68%
Vol Right, %	12%	0%	12%	0%	15%	17%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	224	30	186	43	384	145
LT Vol	26	30	0	43	0	23
Through Vol	170	0	164	0	327	98
RT Vol	28	0	22	0	57	24
Lane Flow Rate	257	34	214	49	441	167
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.468	0.071	0.404	0.096	0.78	0.314
Departure Headway (Hd)	6.548	7.399	6.802	6.978	6.361	6.793
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	548	484	528	514	569	528
Service Time	4.596	5.15	4.552	4.719	4.102	4.849
HCM Lane V/C Ratio	0.469	0.07	0.405	0.095	0.775	0.316
HCM Control Delay	15.3	10.7	14.1	10.5	28.1	13
HCM Lane LOS	C	B	B	B	D	B
HCM 95th-tile Q	2.5	0.2	1.9	0.3	7.2	1.3

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	29	154	20	30	390	36	0	0	0	6	3	21
Future Vol, veh/h	29	154	20	30	390	36	0	0	0	6	3	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	31	166	22	32	419	39	0	0	0	6	3	23

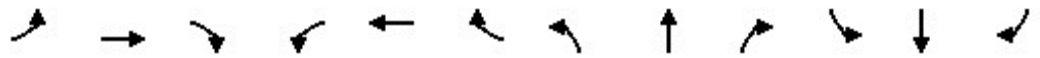
Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	458	0	0	188	0	0	742	753	439
Stage 1	-	-	-	-	-	-	503	503	-
Stage 2	-	-	-	-	-	-	239	250	-
Critical Hdwy	4.12	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	1103	-	-	1386	-	-	383	339	618
Stage 1	-	-	-	-	-	-	607	541	-
Stage 2	-	-	-	-	-	-	801	700	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1103	-	-	1386	-	-	360	0	618
Mov Cap-2 Maneuver	-	-	-	-	-	-	360	0	-
Stage 1	-	-	-	-	-	-	570	0	-
Stage 2	-	-	-	-	-	-	801	0	-

Approach	EB			WB			SB		
HCM Control Delay, s	1.2			0.5			12.2		
HCM LOS							B		

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1103	-	-	1386	-	-	533
HCM Lane V/C Ratio	0.028	-	-	0.023	-	-	0.061
HCM Control Delay (s)	8.4	0	-	7.7	0	-	12.2
HCM Lane LOS	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-	-	0.2

NPMC Howard-Orange Mobility Assessment
 15: Euclid Ave & Orange Ave

Existing Conditions
 timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	128	65	66	195	65	75	320	42	23	148	54
Future Volume (veh/h)	46	128	65	66	195	65	75	320	42	23	148	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	50	139	71	72	212	71	82	348	46	25	161	59
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	76	253	129	98	307	103	179	507	62	128	466	157
Arrive On Green	0.04	0.22	0.22	0.06	0.23	0.23	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1781	1167	596	1781	1341	449	198	1356	166	78	1246	420
Grp Volume(v), veh/h	50	0	210	72	0	283	476	0	0	245	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1763	1781	0	1790	1720	0	0	1744	0	0
Q Serve(g_s), s	1.1	0.0	4.2	1.6	0.0	5.8	4.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.1	0.0	4.2	1.6	0.0	5.8	9.4	0.0	0.0	4.0	0.0	0.0
Prop In Lane	1.00		0.34	1.00		0.25	0.17		0.10	0.10		0.24
Lane Grp Cap(c), veh/h	76	0	382	98	0	410	749	0	0	752	0	0
V/C Ratio(X)	0.66	0.00	0.55	0.73	0.00	0.69	0.64	0.00	0.00	0.33	0.00	0.00
Avail Cap(c_a), veh/h	1332	0	1758	1332	0	1784	2617	0	0	2601	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	18.9	0.0	14.0	18.7	0.0	14.2	10.7	0.0	0.0	9.1	0.0	0.0
Incr Delay (d2), s/veh	3.6	0.0	1.1	4.0	0.0	1.9	0.9	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	1.6	0.7	0.0	2.2	2.8	0.0	0.0	1.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.5	0.0	15.1	22.6	0.0	16.1	11.6	0.0	0.0	9.3	0.0	0.0
LnGrp LOS	C	A	B	C	A	B	B	A	A	A	A	A
Approach Vol, veh/h		260			355			476			245	
Approach Delay, s/veh		16.5			17.4			11.6			9.3	
Approach LOS		B			B			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.6	13.6		19.9	6.1	14.1		19.9				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	30.0	40.0		60.0	30.0	40.0		60.0				
Max Q Clear Time (g_c+I1), s	3.6	6.2		6.0	3.1	7.8		11.4				
Green Ext Time (p_c), s	0.1	1.3		1.7	0.1	1.8		3.7				
Intersection Summary												
HCM 6th Ctrl Delay				13.7								
HCM 6th LOS				B								

Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔			↔			↔	↔
Traffic Vol, veh/h	19	168	5	11	312	7	24	27	14	1	12	43
Future Vol, veh/h	19	168	5	11	312	7	24	27	14	1	12	43
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	198	6	13	367	8	28	32	16	1	14	51

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	375	0	0	204	0	0	675	646	201	666	645	371
Stage 1	-	-	-	-	-	-	245	245	-	397	397	-
Stage 2	-	-	-	-	-	-	430	401	-	269	248	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1183	-	-	1368	-	-	368	390	840	373	391	675
Stage 1	-	-	-	-	-	-	759	703	-	629	603	-
Stage 2	-	-	-	-	-	-	603	601	-	737	701	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1183	-	-	1368	-	-	324	379	840	335	380	675
Mov Cap-2 Maneuver	-	-	-	-	-	-	324	379	-	335	380	-
Stage 1	-	-	-	-	-	-	745	690	-	617	597	-
Stage 2	-	-	-	-	-	-	539	595	-	676	688	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.8			0.3			16.1			12.1		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	401	1183	-	-	1368	-	-	570
HCM Lane V/C Ratio	0.191	0.019	-	-	0.009	-	-	0.116
HCM Control Delay (s)	16.1	8.1	-	-	7.7	-	-	12.1
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.7	0.1	-	-	0	-	-	0.4

Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Vol, veh/h	1	28	167	9	3	21	273	3	25	34	29	14
Future Vol, veh/h	1	28	167	9	3	21	273	3	25	34	29	14
Peak Hour Factor	0.92	0.90	0.90	0.90	0.92	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	31	186	10	3	23	303	3	28	38	32	16
Number of Lanes	0	1	1	0	0	1	1	0	0	1	0	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	10	11.9	9.3	9.1
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	28%	100%	0%	100%	0%	18%
Vol Thru, %	39%	0%	95%	0%	99%	44%
Vol Right, %	33%	0%	5%	0%	1%	38%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	88	29	176	24	276	77
LT Vol	25	29	0	24	0	14
Through Vol	34	0	167	0	273	34
RT Vol	29	0	9	0	3	29
Lane Flow Rate	98	32	196	27	307	86
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.144	0.052	0.288	0.042	0.446	0.125
Departure Headway (Hd)	5.301	5.845	5.305	5.742	5.231	5.274
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	670	609	673	620	684	672
Service Time	3.385	3.62	3.08	3.511	2.999	3.361
HCM Lane V/C Ratio	0.146	0.053	0.291	0.044	0.449	0.128
HCM Control Delay	9.3	8.9	10.2	8.8	12.2	9.1
HCM Lane LOS	A	A	B	A	B	A
HCM 95th-tile Q	0.5	0.2	1.2	0.1	2.3	0.4

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑			↑↑↑					↑			↑
Traffic Vol, veh/h	0	339	13	0	908	26	0	0	14	0	0	10
Future Vol, veh/h	0	339	13	0	908	26	0	0	14	0	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	368	14	0	987	28	0	0	15	0	0	11

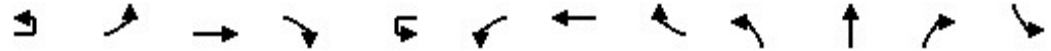
Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	-	-	0	-	-	191	-	-	508
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	696	0	0	437
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	696	-	-	437
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	10.3	13.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	696	-	-	-	-	437
HCM Lane V/C Ratio	0.022	-	-	-	-	0.025
HCM Control Delay (s)	10.3	-	-	-	-	13.4
HCM Lane LOS	B	-	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	-	0.1

NPMC Howard-Orange Mobility Assessment
19: 35th St & El Cajon Blvd

Existing Conditions
timing Plan: AM Peak



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (veh/h)	9	16	307	30	6	19	746	72	109	109	34	27
Future Volume (veh/h)	9	16	307	30	6	19	746	72	109	109	34	27
Initial Q (Qb), veh		0	0	0		0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00		1.00		1.00	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach			No				No			No		
Adj Sat Flow, veh/h/ln		1870	1870	1870		1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h		16	316	31		20	769	74	112	112	35	28
Peak Hour Factor		0.97	0.97	0.97		0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %		2	2	2		2	2	2	2	2	2	2
Cap, veh/h		25	3258	1011		30	3271	1015	161	138	39	120
Arrive On Green		0.01	0.64	0.64		0.02	0.64	0.64	0.21	0.21	0.21	0.21
Sat Flow, veh/h		1781	5106	1585		1781	5106	1585	530	644	183	358
Grp Volume(v), veh/h		16	316	31		20	769	74	259	0	0	90
Grp Sat Flow(s),veh/h/ln		1781	1702	1585		1781	1702	1585	1358	0	0	1504
Q Serve(g_s), s		1.0	2.6	0.8		1.2	6.9	1.9	16.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s		1.0	2.6	0.8		1.2	6.9	1.9	20.4	0.0	0.0	4.3
Prop In Lane		1.00		1.00		1.00		1.00	0.43		0.14	0.31
Lane Grp Cap(c), veh/h		25	3258	1011		30	3271	1015	338	0	0	365
V/C Ratio(X)		0.64	0.10	0.03		0.67	0.24	0.07	0.77	0.00	0.00	0.25
Avail Cap(c_a), veh/h		233	3258	1011		233	3271	1015	450	0	0	485
HCM Platoon Ratio		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)		1.00	1.00	1.00		1.00	1.00	1.00	0.86	0.00	0.00	1.00
Uniform Delay (d), s/veh		53.0	7.5	7.2		52.8	8.2	7.3	42.2	0.0	0.0	35.1
Incr Delay (d2), s/veh		9.5	0.1	0.1		9.3	0.2	0.1	3.2	0.0	0.0	0.1
Initial Q Delay(d3),s/veh		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		0.5	0.9	0.3		0.6	2.4	0.7	7.0	0.0	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		62.5	7.6	7.3		62.1	8.4	7.5	45.4	0.0	0.0	35.2
LnGrp LOS		E	A	A		E	A	A	D	A	A	D
Approach Vol, veh/h			363				863			259		
Approach Delay, s/veh			10.0				9.5			45.4		
Approach LOS			A				A			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.9	74.1		28.0	6.2	73.8		28.0				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	14.1	48.6		31.1	14.1	48.6		31.1				
Max Q Clear Time (g_c+I1), s	3.0	8.9		22.4	3.2	4.6		6.6				
Green Ext Time (p_c), s	0.0	4.2		0.7	0.0	1.6		0.5				

Intersection Summary

HCM 6th Ctrl Delay	17.9
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑			↑↑↑					↑			↑
Traffic Vol, veh/h	0	869	19	0	1030	38	0	0	101	0	0	71
Future Vol, veh/h	0	869	19	0	1030	38	0	0	101	0	0	71
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	945	21	0	1120	41	0	0	110	0	0	77

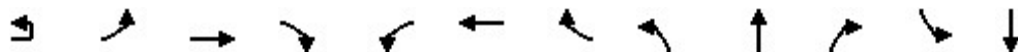
Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	-	-	0	-	-	483	-	-	581
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	453	0	0	391
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	453	-	-	391
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	15.5	16.5
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	453	-	-	-	-	391
HCM Lane V/C Ratio	0.242	-	-	-	-	0.197
HCM Control Delay (s)	15.5	-	-	-	-	16.5
HCM Lane LOS	C	-	-	-	-	C
HCM 95th %tile Q(veh)	0.9	-	-	-	-	0.7

NPMC Howard-Orange Mobility Assessment
21: Fairmount Ave & El Cajon Blvd

Existing Conditions
timing Plan: AM Peak



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	4	217	598	54	0	982	338	86	783	63	0	0
Future Volume (veh/h)	4	217	598	54	0	982	338	86	783	63	0	0
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00		
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Work Zone On Approach			No			No			No			
Adj Sat Flow, veh/h/ln		1870	1870	1870	0	1870	1870	1900	1870	1900		
Adj Flow Rate, veh/h		226	623	56	0	1023	352	90	816	66		
Peak Hour Factor		0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96		
Percent Heavy Veh, %		2	2	2	0	2	2	0	2	0		
Cap, veh/h		165	2194	979	0	1270	433	98	930	79		
Arrive On Green		0.09	0.62	0.62	0.00	0.49	0.49	0.30	0.30	0.30		
Sat Flow, veh/h		1781	3554	1585	0	2695	886	325	3090	262		
Grp Volume(v), veh/h		226	623	56	0	695	680	513	0	459		
Grp Sat Flow(s),veh/h/ln		1781	1777	1585	0	1777	1711	1854	0	1823		
Q Serve(g_s), s		11.1	9.8	1.7	0.0	39.5	40.5	32.1	0.0	28.2		
Cycle Q Clear(g_c), s		11.1	9.8	1.7	0.0	39.5	40.5	32.1	0.0	28.2		
Prop In Lane		1.00		1.00	0.00		0.52	0.18		0.14		
Lane Grp Cap(c), veh/h		165	2194	979	0	867	835	558	0	549		
V/C Ratio(X)		1.37	0.28	0.06	0.00	0.80	0.81	0.92	0.00	0.84		
Avail Cap(c_a), veh/h		165	2194	979	0	867	835	604	0	594		
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(l)		1.00	1.00	1.00	0.00	0.84	0.84	0.76	0.00	0.76		
Uniform Delay (d), s/veh		54.5	10.7	9.1	0.0	25.8	26.1	40.5	0.0	39.2		
Incr Delay (d2), s/veh		200.8	0.3	0.1	0.0	6.6	7.3	14.4	0.0	6.8		
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln		14.2	3.8	0.6	0.0	17.8	17.7	16.7	0.0	13.6		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		255.3	11.0	9.2	0.0	32.4	33.3	55.0	0.0	46.0		
LnGrp LOS		F	B	A	A	C	C	D	A	D		
Approach Vol, veh/h			905			1375			972			
Approach Delay, s/veh			71.9			32.9			50.7			
Approach LOS			E			C			D			
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		79.0			15.5	63.5		41.0				
Change Period (Y+Rc), s		4.9			4.4	4.9		4.9				
Max Green Setting (Gmax), s		55.6			11.1	55.6		39.1				
Max Q Clear Time (g_c+I1), s		11.8			13.1	42.5		34.1				
Green Ext Time (p_c), s		3.2			0.0	5.7		2.0				

Intersection Summary

HCM 6th Ctrl Delay	49.1
HCM 6th LOS	D

Notes

User approved ignoring U-Turning movement.

NPMC Howard-Orange Mobility Assessment
 22: Euclid Ave & El Cajon Blvd

Existing Conditions
 timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	32	466	55	67	962	105	173	179	63	22	95	48
Future Volume (veh/h)	32	466	55	67	962	105	173	179	63	22	95	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	34	491	58	71	1013	111	182	188	66	23	100	51
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	60	1887	222	91	1958	214	271	319	112	190	282	144
Arrive On Green	0.03	0.59	0.59	0.05	0.61	0.61	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3203	377	1781	3230	354	1236	1323	464	1126	1168	596
Grp Volume(v), veh/h	34	272	277	71	557	567	182	0	254	23	0	151
Grp Sat Flow(s),veh/h/ln	1781	1777	1803	1781	1777	1807	1236	0	1787	1126	0	1763
Q Serve(g_s), s	2.3	8.9	9.0	4.7	21.6	21.6	17.2	0.0	15.1	2.2	0.0	8.5
Cycle Q Clear(g_c), s	2.3	8.9	9.0	4.7	21.6	21.6	25.7	0.0	15.1	17.3	0.0	8.5
Prop In Lane	1.00		0.21	1.00		0.20	1.00		0.26	1.00		0.34
Lane Grp Cap(c), veh/h	60	1047	1062	91	1077	1095	271	0	432	190	0	426
V/C Ratio(X)	0.56	0.26	0.26	0.78	0.52	0.52	0.67	0.00	0.59	0.12	0.00	0.35
Avail Cap(c_a), veh/h	105	1047	1062	150	1077	1095	478	0	731	379	0	721
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.98	0.98	0.98	1.00	1.00	1.00	0.72	0.00	0.72	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.1	12.0	12.0	56.3	13.6	13.6	48.4	0.0	40.2	47.9	0.0	37.7
Incr Delay (d2), s/veh	3.0	0.6	0.6	5.4	1.8	1.7	0.8	0.0	0.3	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	3.6	3.7	2.3	8.8	9.0	5.3	0.0	6.7	0.6	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.1	12.5	12.6	61.7	15.3	15.3	49.2	0.0	40.6	48.0	0.0	37.9
LnGrp LOS	E	B	B	E	B	B	D	A	D	D	A	D
Approach Vol, veh/h		583			1195			436				174
Approach Delay, s/veh		15.3			18.1			44.2				39.3
Approach LOS		B			B			D				D
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	75.6			33.9	8.5	77.6		33.9				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	46.6			49.1	7.1	46.6		49.1				
Max Q Clear Time (g_c+10), s	11.0			19.3	4.3	23.6		27.7				
Green Ext Time (p_c), s	0.0	4.3		0.6	0.0	8.9		1.3				
Intersection Summary												
HCM 6th Ctrl Delay												23.7
HCM 6th LOS												C

Intersection

Intersection Delay, s/veh 8.1
 Intersection LOS A

Movement	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR
Lane Configurations								
Traffic Vol, veh/h	20	22	1	0	149	11	90	0
Future Vol, veh/h	20	22	1	0	149	11	90	0
Peak Hour Factor	0.82	0.82	0.92	0.82	0.82	0.92	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2
Mvmt Flow	24	27	1	0	182	12	110	0
Number of Lanes	1	0	0	0	1	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB	EB	
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.7	8.3	7.9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	48%	0%
Vol Thru, %	100%	0%	100%
Vol Right, %	0%	52%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	150	42	101
LT Vol	0	20	0
Through Vol	150	0	101
RT Vol	0	22	0
Lane Flow Rate	183	51	122
Geometry Grp	1	1	1
Degree of Util (X)	0.209	0.062	0.141
Departure Headway (Hd)	4.117	4.377	4.163
Convergence, Y/N	Yes	Yes	Yes
Cap	865	823	852
Service Time	2.177	2.377	2.236
HCM Lane V/C Ratio	0.212	0.062	0.143
HCM Control Delay	8.3	7.7	7.9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.8	0.2	0.5

Intersection													
Int Delay, s/veh	0.5												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↕						↕				↕	
Traffic Vol, veh/h	11	11	17	0	0	0	0	974	33	1	7	108	0
Future Vol, veh/h	11	11	17	0	0	0	0	974	33	1	7	108	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	92	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	11	18	0	0	0	0	1015	34	1	7	113	0

Major/Minor	Minor2			Major1			Major2			
Conflicting Flow All	635	1178	113	-	0	0	1049	1049	0	0
Stage 1	127	129	-	-	-	-	-	-	-	-
Stage 2	508	1049	-	-	-	-	-	-	-	-
Critical Hdwy	6.63	6.53	6.23	-	-	-	6.93	4.13	-	-
Critical Hdwy Stg 1	5.43	5.53	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.83	5.53	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	-	-	-	3.119	2.219	-	-
Pot Cap-1 Maneuver	426	190	939	0	-	-	233	661	-	0
Stage 1	898	789	-	0	-	-	-	-	-	0
Stage 2	570	303	-	0	-	-	-	-	-	0
Platoon blocked, %										
Mov Cap-1 Maneuver	419	0	939	-	-	-	534	534	-	-
Mov Cap-2 Maneuver	419	0	-	-	-	-	-	-	-	-
Stage 1	884	0	-	-	-	-	-	-	-	-
Stage 2	570	0	-	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.1	0	0.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	631	534	-
HCM Lane V/C Ratio	-	-	0.064	0.014	-
HCM Control Delay (s)	-	-	11.1	11.9	0
HCM Lane LOS	-	-	B	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

NPMC Howard-Orange Mobility Assessment
 25: Euclid Ave & Polk Ave

Existing Conditions
 timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Volume (veh/h)	24	17	34	0	0	0	0	498	18	11	258	0
Future Volume (veh/h)	24	17	34	0	0	0	0	498	18	11	258	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	26	18	37				0	535	19	12	277	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	0				0	2	2	2	2	0
Cap, veh/h	39	27	55				0	863	31	184	872	0
Arrive On Green	0.07	0.07	0.07				0.00	0.48	0.48	0.48	0.48	0.00
Sat Flow, veh/h	547	378	778				0	1795	64	25	1815	0
Grp Volume(v), veh/h	81	0	0				0	0	554	289	0	0
Grp Sat Flow(s),veh/h/ln	1703	0	0				0	0	1859	1840	0	0
Q Serve(g_s), s	1.0	0.0	0.0				0.0	0.0	4.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.0	0.0	0.0				0.0	0.0	4.8	2.1	0.0	0.0
Prop In Lane	0.32		0.46				0.00		0.03	0.04		0.00
Lane Grp Cap(c), veh/h	121	0	0				0	0	894	1056	0	0
V/C Ratio(X)	0.67	0.00	0.00				0.00	0.00	0.62	0.27	0.00	0.00
Avail Cap(c_a), veh/h	2734	0	0				0	0	4684	4690	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.9	0.0	0.0				0.0	0.0	4.2	3.5	0.0	0.0
Incr Delay (d2), s/veh	2.4	0.0	0.0				0.0	0.0	0.6	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0				0.0	0.0	0.4	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.3	0.0	0.0				0.0	0.0	4.8	3.6	0.0	0.0
LnGrp LOS	B	A	A				A	A	A	A	A	A
Approach Vol, veh/h		81						554			289	
Approach Delay, s/veh		12.3						4.8			3.6	
Approach LOS		B						A			A	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		15.4		6.5				15.4				
Change Period (Y+Rc), s		4.9		4.9				4.9				
Max Green Setting (Gmax), s		55.1		35.1				55.1				
Max Q Clear Time (g_c+I1), s		6.8		3.0				4.1				
Green Ext Time (p_c), s		3.7		0.3				1.7				
Intersection Summary												
HCM 6th Ctrl Delay			5.1									
HCM 6th LOS			A									

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	12	20	11	0	0	0	0	45	6	3	29	0
Future Vol, veh/h	12	20	11	0	0	0	0	45	6	3	29	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	25	14	0	0	0	0	56	7	4	36	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	104	107	36	-	0	0	63	0	0
Stage 1	44	44	-	-	-	-	-	-	-
Stage 2	60	63	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	-	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	894	783	1037	0	-	-	1540	-	0
Stage 1	978	858	-	0	-	-	-	-	0
Stage 2	963	842	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	891	0	1037	-	-	-	1540	-	-
Mov Cap-2 Maneuver	891	0	-	-	-	-	-	-	-
Stage 1	975	0	-	-	-	-	-	-	-
Stage 2	963	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	0	0.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	955	1540	-
HCM Lane V/C Ratio	-	-	0.056	0.002	-
HCM Control Delay (s)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

NPMC Howard-Orange Mobility Assessment
27: 35th St & University Ave

Existing Conditions
timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	234	14	18	440	63	83	66	19	39	27	41
Future Volume (veh/h)	26	234	14	18	440	63	83	66	19	39	27	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	239	14	18	449	64	85	67	19	40	28	42
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	653	1267	74	872	1159	165	177	97	24	132	80	86
Arrive On Green	0.72	0.72	0.72	0.72	0.72	0.72	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	887	1749	102	1127	1601	228	742	733	184	455	604	654
Grp Volume(v), veh/h	27	0	253	18	0	513	171	0	0	110	0	0
Grp Sat Flow(s),veh/h/ln	887	0	1852	1127	0	1829	1660	0	0	1713	0	0
Q Serve(g_s), s	0.8	0.0	3.0	0.4	0.0	7.3	2.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	8.1	0.0	3.0	3.3	0.0	7.3	6.6	0.0	0.0	3.9	0.0	0.0
Prop In Lane	1.00		0.06	1.00		0.12	0.50		0.11	0.36		0.38
Lane Grp Cap(c), veh/h	653	0	1341	872	0	1324	298	0	0	298	0	0
V/C Ratio(X)	0.04	0.00	0.19	0.02	0.00	0.39	0.57	0.00	0.00	0.37	0.00	0.00
Avail Cap(c_a), veh/h	653	0	1341	872	0	1324	526	0	0	526	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.2	0.0	3.0	3.5	0.0	3.6	28.3	0.0	0.0	27.3	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.3	0.0	0.0	0.9	0.6	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.8	0.1	0.0	2.0	2.7	0.0	0.0	1.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.3	0.0	3.3	3.6	0.0	4.5	29.0	0.0	0.0	27.6	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	C	A	A	C	A	A
Approach Vol, veh/h		280			531			171				110
Approach Delay, s/veh		3.5			4.4			29.0				27.6
Approach LOS		A			A			C				C
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		54.1		13.9		54.1		13.9				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		39.1		19.1		39.1		19.1				
Max Q Clear Time (g_c+I1), s		10.1		5.9		9.3		8.6				
Green Ext Time (p_c), s		2.3		0.3		5.6		0.4				

Intersection Summary

HCM 6th Ctrl Delay	10.4
HCM 6th LOS	B

NPMC Howard-Orange Mobility Assessment
28: Fairmount Ave & University Ave

Existing Conditions
timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	352	67	84	442	151	122	688	55	78	87	31
Future Volume (veh/h)	119	352	67	84	442	151	122	688	55	78	87	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	124	367	70	88	460	157	127	717	57	81	91	32
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	152	514	97	601	1117	378	156	841	67	104	294	103
Arrive On Green	0.09	0.17	0.17	0.34	0.43	0.43	0.09	0.25	0.25	0.06	0.22	0.22
Sat Flow, veh/h	1781	2983	563	1781	2606	882	1781	3335	265	1781	1322	465
Grp Volume(v), veh/h	124	217	220	88	313	304	127	382	392	81	0	123
Grp Sat Flow(s),veh/h/ln	1781	1777	1769	1781	1777	1712	1781	1777	1823	1781	0	1787
Q Serve(g_s), s	7.3	12.2	12.5	3.7	12.9	13.1	7.4	21.7	21.7	4.8	0.0	6.1
Cycle Q Clear(g_c), s	7.3	12.2	12.5	3.7	12.9	13.1	7.4	21.7	21.7	4.8	0.0	6.1
Prop In Lane	1.00		0.32	1.00		0.52	1.00		0.15	1.00		0.26
Lane Grp Cap(c), veh/h	152	306	305	601	762	734	156	448	460	104	0	398
V/C Ratio(X)	0.81	0.71	0.72	0.15	0.41	0.41	0.81	0.85	0.85	0.78	0.00	0.31
Avail Cap(c_a), veh/h	229	588	586	601	762	734	329	521	535	195	0	398
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.6	41.4	41.5	24.5	21.0	21.0	47.5	37.8	37.8	49.3	0.0	34.4
Incr Delay (d2), s/veh	7.5	13.1	13.8	0.0	1.6	1.7	3.8	11.7	11.5	4.8	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	6.4	6.6	1.5	5.6	5.5	3.4	10.8	11.0	2.2	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.2	54.5	55.3	24.5	22.6	22.8	51.3	49.4	49.2	54.0	0.0	34.9
LnGrp LOS	E	D	E	C	C	C	D	D	D	D	A	C
Approach Vol, veh/h		561			705			901			204	
Approach Delay, s/veh		54.9			22.9			49.6			42.5	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	40.7	23.2	13.7	28.5	13.5	50.3	10.6	31.6				
Change Period (Y+Rc), s	4.9	* 4.9	4.4	4.9	4.4	4.9	4.4	4.9				
Max Green Setting (Gmax), s	30.6	* 35	19.6	23.1	13.6	31.1	11.6	31.1				
Max Q Clear Time (g_c+1/3), s	15.7	14.5	9.4	8.1	9.3	15.1	6.8	23.7				
Green Ext Time (p_c), s	0.0	3.8	0.1	0.6	0.1	4.6	0.0	3.0				

Intersection Summary

HCM 6th Ctrl Delay	42.3
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

NPMC Howard-Orange Mobility Assessment
 29: Euclid Ave & University Ave

Existing Conditions
 timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	63	257	35	176	634	74	114	380	112	23	239	33
Future Volume (veh/h)	63	257	35	176	634	74	114	380	112	23	239	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	68	276	38	189	682	80	123	409	120	25	257	35
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	481	1301	177	223	845	99	271	430	126	95	499	68
Arrive On Green	0.27	0.41	0.41	0.13	0.26	0.26	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1781	3142	428	1781	3204	375	1087	1389	408	874	1611	219
Grp Volume(v), veh/h	68	155	159	189	378	384	123	0	529	25	0	292
Grp Sat Flow(s),veh/h/ln	1781	1777	1793	1781	1777	1803	1087	0	1797	874	0	1831
Q Serve(g_s), s	2.7	5.3	5.4	9.8	18.7	18.7	9.9	0.0	27.1	2.0	0.0	12.3
Cycle Q Clear(g_c), s	2.7	5.3	5.4	9.8	18.7	18.7	22.2	0.0	27.1	29.1	0.0	12.3
Prop In Lane	1.00		0.24	1.00		0.21	1.00		0.23	1.00		0.12
Lane Grp Cap(c), veh/h	481	736	743	223	469	476	271	0	556	95	0	567
V/C Ratio(X)	0.14	0.21	0.21	0.85	0.81	0.81	0.45	0.00	0.95	0.26	0.00	0.52
Avail Cap(c_a), veh/h	481	736	743	296	758	769	271	0	556	95	0	567
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.98	0.00	0.98
Uniform Delay (d), s/veh	26.0	17.7	17.7	40.2	32.3	32.4	35.8	0.0	31.8	46.2	0.0	26.7
Incr Delay (d2), s/veh	0.0	0.7	0.7	12.7	13.8	13.7	1.0	0.0	26.3	2.0	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.2	2.3	5.0	9.6	9.8	2.7	0.0	15.4	0.6	0.0	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.1	18.3	18.4	53.0	46.1	46.1	36.8	0.0	58.1	48.2	0.0	27.7
LnGrp LOS	C	B	B	D	D	D	D	A	E	D	A	C
Approach Vol, veh/h		382		951		652		317				
Approach Delay, s/veh		19.7		47.5		54.1		29.4				
Approach LOS		B		D		D		C				
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.2	43.8		34.0	30.3	29.7		34.0				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.9	* 4.9		4.9				
Max Green Setting (Gmax), s	15.6	35.1		29.1	10.6	* 40		29.1				
Max Q Clear Time (g_c+fl), s	11.8	7.4		31.1	4.7	20.7		29.1				
Green Ext Time (p_c), s	0.1	2.4		0.0	0.0	4.1		0.0				

Intersection Summary

HCM 6th Ctrl Delay	42.2
HCM 6th LOS	D

Notes

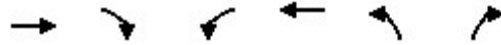
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	
Traffic Vol, veh/h	11	481	854	20	7	17
Future Vol, veh/h	11	481	854	20	7	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	185	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	486	863	20	7	17

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	883	0	-	0	1138 442
Stage 1	-	-	-	-	873 -
Stage 2	-	-	-	-	265 -
Critical Hdwy	4.14	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	2.22	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	762	-	-	-	195 563
Stage 1	-	-	-	-	369 -
Stage 2	-	-	-	-	755 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	762	-	-	-	191 563
Mov Cap-2 Maneuver	-	-	-	-	191 -
Stage 1	-	-	-	-	362 -
Stage 2	-	-	-	-	755 -

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	15.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	762	-	-	-	359
HCM Lane V/C Ratio	0.015	-	-	-	0.068
HCM Control Delay (s)	9.8	0.1	-	-	15.8
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (veh/h)	526	25	24	1208	104	31
Future Volume (veh/h)	526	25	24	1208	104	31
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1900	1900
Adj Flow Rate, veh/h	566	27	26	1299	112	33
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	0	0
Cap, veh/h	2314	110	554	2381	339	100
Arrive On Green	0.67	0.67	0.67	0.67	0.25	0.25
Sat Flow, veh/h	3547	165	824	3647	1330	392
Grp Volume(v), veh/h	291	302	26	1299	146	0
Grp Sat Flow(s),veh/h/ln	1777	1841	824	1777	1733	0
Q Serve(g_s), s	8.4	8.4	1.7	24.7	8.9	0.0
Cycle Q Clear(g_c), s	8.4	8.4	10.1	24.7	8.9	0.0
Prop In Lane		0.09	1.00		0.77	0.23
Lane Grp Cap(c), veh/h	1190	1233	554	2381	441	0
V/C Ratio(X)	0.24	0.24	0.05	0.55	0.33	0.00
Avail Cap(c_a), veh/h	1190	1233	554	2381	441	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.97	0.97	0.82	0.82	1.00	0.00
Uniform Delay (d), s/veh	8.5	8.5	10.5	11.2	39.4	0.0
Incr Delay (d2), s/veh	0.5	0.5	0.0	0.2	2.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	3.4	0.3	9.3	4.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	8.9	8.9	10.5	11.4	41.4	0.0
LnGrp LOS	A	A	B	B	D	A
Approach Vol, veh/h	593			1325	146	
Approach Delay, s/veh	8.9			11.4	41.4	
Approach LOS	A			B	D	
Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		92.0			92.0	38.0
Change Period (Y+Rc), s		4.9			4.9	4.9
Max Green Setting (Gmax), s		87.1			87.1	33.1
Max Q Clear Time (g_c+I1), s		10.4			26.7	10.9
Green Ext Time (p_c), s		4.1			15.0	0.4
Intersection Summary						
HCM 6th Ctrl Delay			12.8			
HCM 6th LOS			B			

Intersection												
Intersection Delay, s/veh	10.2											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↕			↕	
Traffic Vol, veh/h	8	0	59	3	216	118	14	0	11	22	6	46
Future Vol, veh/h	8	0	59	3	216	118	14	0	11	22	6	46
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	0	64	3	235	128	15	0	12	24	7	50
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	7.6	11.3	8.1	8.2
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	56%	100%	0%	100%	0%	30%
Vol Thru, %	0%	0%	0%	0%	65%	8%
Vol Right, %	44%	0%	100%	0%	35%	62%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	25	8	59	3	334	74
LT Vol	14	8	0	3	0	22
Through Vol	0	0	0	0	216	6
RT Vol	11	0	59	0	118	46
Lane Flow Rate	27	9	64	3	363	80
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.037	0.013	0.078	0.005	0.466	0.104
Departure Headway (Hd)	4.908	5.587	4.38	5.371	4.621	4.675
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	729	642	818	670	784	767
Service Time	2.941	3.312	2.105	3.071	2.321	2.702
HCM Lane V/C Ratio	0.037	0.014	0.078	0.004	0.463	0.104
HCM Control Delay	8.1	8.4	7.5	8.1	11.3	8.2
HCM Lane LOS	A	A	A	A	B	A
HCM 95th-tile Q	0.1	0	0.3	0	2.5	0.3

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	273	39	42	218	3	19	1	52	1	0	1
Future Vol, veh/h	1	273	39	42	218	3	19	1	52	1	0	1
Conflicting Peds, #/hr	9	0	9	8	0	8	9	0	8	8	0	9
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	70	-	-	100	-	-	-	-	40	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	300	43	46	240	3	21	1	57	1	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	252	0	0	352	0	0	676	677	339	704	697	260
Stage 1	-	-	-	-	-	-	333	333	-	343	343	-
Stage 2	-	-	-	-	-	-	343	344	-	361	354	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1313	-	-	1207	-	-	367	375	703	352	365	779
Stage 1	-	-	-	-	-	-	681	644	-	672	637	-
Stage 2	-	-	-	-	-	-	672	637	-	657	630	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1302	-	-	1197	-	-	349	354	692	308	345	766
Mov Cap-2 Maneuver	-	-	-	-	-	-	349	354	-	308	345	-
Stage 1	-	-	-	-	-	-	675	638	-	666	607	-
Stage 2	-	-	-	-	-	-	640	607	-	597	624	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1.3			12.2			13.2		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	349	692	1302	-	-	1197	-	-	439
HCM Lane V/C Ratio	0.063	0.083	0.001	-	-	0.039	-	-	0.005
HCM Control Delay (s)	16	10.7	7.8	-	-	8.1	-	-	13.2
HCM Lane LOS	C	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0.3	0	-	-	0.1	-	-	0

NPMC Howard-Orange Mobility Assessment
2: Alley/33rd St & Orange Ave

Existing Conditions
timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	245	0	6	193	145	1	0	0	251	5	104
Future Volume (veh/h)	69	245	0	6	193	145	1	0	0	251	5	104
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	75	266	0	7	210	158	1	0	0	273	5	113
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	101	477	0	171	291	219	5	0	0	380	14	326
Arrive On Green	0.06	0.26	0.00	0.10	0.29	0.29	0.00	0.00	0.00	0.21	0.21	0.21
Sat Flow, veh/h	1781	1870	0	1781	991	745	1781	0	0	1781	68	1528
Grp Volume(v), veh/h	75	266	0	7	0	368	1	0	0	273	0	118
Grp Sat Flow(s),veh/h/ln	1781	1870	0	1781	0	1736	1781	0	0	1781	0	1595
Q Serve(g_s), s	1.6	4.8	0.0	0.1	0.0	7.4	0.0	0.0	0.0	5.6	0.0	2.5
Cycle Q Clear(g_c), s	1.6	4.8	0.0	0.1	0.0	7.4	0.0	0.0	0.0	5.6	0.0	2.5
Prop In Lane	1.00		0.00	1.00		0.43	1.00		0.00	1.00		0.96
Lane Grp Cap(c), veh/h	101	477	0	171	0	511	5	0	0	380	0	341
V/C Ratio(X)	0.74	0.56	0.00	0.04	0.00	0.72	0.22	0.00	0.00	0.72	0.00	0.35
Avail Cap(c_a), veh/h	1545	3341	0	1636	0	3101	2091	0	0	2091	0	1872
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.2	12.7	0.0	16.1	0.0	12.4	19.5	0.0	0.0	14.3	0.0	13.1
Incr Delay (d2), s/veh	3.9	0.5	0.0	0.0	0.0	1.2	8.7	0.0	0.0	1.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.7	0.0	0.1	0.0	2.5	0.0	0.0	0.0	2.0	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.1	13.1	0.0	16.1	0.0	13.6	28.3	0.0	0.0	15.3	0.0	13.3
LnGrp LOS	C	B	A	B	A	B	C	A	A	B	A	B
Approach Vol, veh/h		341			375			1			391	
Approach Delay, s/veh		15.1			13.6			28.3			14.7	
Approach LOS		B			B			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	14.0		4.1	6.2	16.5		12.4				
Change Period (Y+Rc), s	5.0	4.0		4.0	4.0	* 5		4.0				
Max Green Setting (Gmax), s	36.0	70.0		46.0	34.0	* 70		46.0				
Max Q Clear Time (g_c+I1), s	2.1	6.8		2.0	3.6	9.4		7.6				
Green Ext Time (p_c), s	0.0	1.2		0.0	0.1	2.1		0.9				

Intersection Summary

HCM 6th Ctrl Delay	14.5
HCM 6th LOS	B

Notes

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

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↑			↕			↕	
Traffic Vol, veh/h	10	398	58	37	278	12	39	2	39	3	3	9
Future Vol, veh/h	10	398	58	37	278	12	39	2	39	3	3	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	442	64	41	309	13	43	2	43	3	3	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	322	0	0	506	0	0	900	900	474	917	926	316
Stage 1	-	-	-	-	-	-	496	496	-	398	398	-
Stage 2	-	-	-	-	-	-	404	404	-	519	528	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1238	-	-	1059	-	-	259	278	590	253	269	724
Stage 1	-	-	-	-	-	-	556	545	-	628	603	-
Stage 2	-	-	-	-	-	-	623	599	-	540	528	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1238	-	-	1059	-	-	243	264	590	224	255	724
Mov Cap-2 Maneuver	-	-	-	-	-	-	243	264	-	224	255	-
Stage 1	-	-	-	-	-	-	549	538	-	620	579	-
Stage 2	-	-	-	-	-	-	587	576	-	492	522	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			1			19.2			14.4		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	342	1238	-	-	1059	-	-	399
HCM Lane V/C Ratio	0.26	0.009	-	-	0.039	-	-	0.042
HCM Control Delay (s)	19.2	7.9	-	-	8.5	-	-	14.4
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1	0	-	-	0.1	-	-	0.1

NPMC Howard-Orange Mobility Assessment
4: 35th St & Orange Ave

Existing Conditions
timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	357	46	28	273	48	27	65	30	46	93	39
Future Volume (veh/h)	37	357	46	28	273	48	27	65	30	46	93	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.96	0.97		0.94	0.96		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	39	380	49	30	290	51	29	69	32	49	99	41
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	647	888	115	580	846	149	158	202	80	175	191	68
Arrive On Green	0.55	0.55	0.55	0.55	0.55	0.55	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1027	1614	208	949	1537	270	222	1048	415	290	990	354
Grp Volume(v), veh/h	39	0	429	30	0	341	130	0	0	189	0	0
Grp Sat Flow(s),veh/h/ln	1027	0	1822	949	0	1807	1684	0	0	1634	0	0
Q Serve(g_s), s	0.8	0.0	5.3	0.7	0.0	4.0	0.0	0.0	0.0	1.4	0.0	0.0
Cycle Q Clear(g_c), s	4.8	0.0	5.3	6.0	0.0	4.0	2.5	0.0	0.0	3.9	0.0	0.0
Prop In Lane	1.00		0.11	1.00		0.15	0.22		0.25	0.26		0.22
Lane Grp Cap(c), veh/h	647	0	1003	580	0	995	440	0	0	434	0	0
V/C Ratio(X)	0.06	0.00	0.43	0.05	0.00	0.34	0.30	0.00	0.00	0.44	0.00	0.00
Avail Cap(c_a), veh/h	647	0	1003	580	0	995	1423	0	0	1409	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.1	0.0	5.0	6.8	0.0	4.8	13.4	0.0	0.0	13.9	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	1.3	0.2	0.0	0.9	0.1	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	1.6	0.1	0.0	1.1	0.8	0.0	0.0	1.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.3	0.0	6.4	7.0	0.0	5.7	13.6	0.0	0.0	14.2	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	A
Approach Vol, veh/h		468			371			130			189	
Approach Delay, s/veh		6.4			5.8			13.6			14.2	
Approach LOS		A			A			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.9		12.3		25.9		12.3				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		21.0		31.1		21.0		31.1				
Max Q Clear Time (g_c+l1), s		7.3		4.5		8.0		5.9				
Green Ext Time (p_c), s		2.6		0.5		2.0		0.8				
Intersection Summary												
HCM 6th Ctrl Delay			8.3									
HCM 6th LOS			A									

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	384	34	34	297	19	20	10	16	6	4	22
Future Vol, veh/h	23	384	34	34	297	19	20	10	16	6	4	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	436	39	39	338	22	23	11	18	7	5	25

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	360	0	0	475	0	0	950	946	456	949	954	349
Stage 1	-	-	-	-	-	-	508	508	-	427	427	-
Stage 2	-	-	-	-	-	-	442	438	-	522	527	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1199	-	-	1087	-	-	240	262	604	240	259	694
Stage 1	-	-	-	-	-	-	547	539	-	606	585	-
Stage 2	-	-	-	-	-	-	594	579	-	538	528	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1199	-	-	1087	-	-	218	247	604	215	244	694
Mov Cap-2 Maneuver	-	-	-	-	-	-	218	247	-	215	244	-
Stage 1	-	-	-	-	-	-	535	527	-	593	564	-
Stage 2	-	-	-	-	-	-	548	558	-	499	516	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0.8			20.1			14.4		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	290	1199	-	-	1087	-	-	421
HCM Lane V/C Ratio	0.18	0.022	-	-	0.036	-	-	0.086
HCM Control Delay (s)	20.1	8.1	-	-	8.4	-	-	14.4
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.6	0.1	-	-	0.1	-	-	0.3

Intersection												
Int Delay, s/veh	2.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔			↔			↔	↔
Traffic Vol, veh/h	19	349	16	23	293	49	12	5	19	36	8	20
Future Vol, veh/h	19	349	16	23	293	49	12	5	19	36	8	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	35	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	379	17	25	318	53	13	5	21	39	9	22

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	371	0	0	396	0	0	840	851	388	838	833	345
Stage 1	-	-	-	-	-	-	430	430	-	395	395	-
Stage 2	-	-	-	-	-	-	410	421	-	443	438	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1188	-	-	1163	-	-	285	297	660	286	304	698
Stage 1	-	-	-	-	-	-	603	583	-	630	605	-
Stage 2	-	-	-	-	-	-	619	589	-	594	579	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1188	-	-	1163	-	-	262	285	660	265	292	698
Mov Cap-2 Maneuver	-	-	-	-	-	-	262	285	-	265	292	-
Stage 1	-	-	-	-	-	-	592	573	-	619	592	-
Stage 2	-	-	-	-	-	-	578	577	-	560	569	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0.4		0.5		15.2		18.6	
HCM LOS					C		C	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	391	1188	-	-	1163	-	-	334
HCM Lane V/C Ratio	0.1	0.017	-	-	0.021	-	-	0.208
HCM Control Delay (s)	15.2	8.1	-	-	8.2	-	-	18.6
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0.1	-	-	0.8

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	34	348	48	33	292	51	35	16	49	11	11	28
Future Vol, veh/h	34	348	48	33	292	51	35	16	49	11	11	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	60	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	37	378	52	36	317	55	38	17	53	12	12	30

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	372	0	0	430	0	0	916	922	404	930	921	345
Stage 1	-	-	-	-	-	-	478	478	-	417	417	-
Stage 2	-	-	-	-	-	-	438	444	-	513	504	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1186	-	-	1129	-	-	253	270	647	248	270	698
Stage 1	-	-	-	-	-	-	568	556	-	613	591	-
Stage 2	-	-	-	-	-	-	597	575	-	544	541	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1186	-	-	1129	-	-	222	253	647	206	253	698
Mov Cap-2 Maneuver	-	-	-	-	-	-	222	253	-	206	253	-
Stage 1	-	-	-	-	-	-	550	539	-	594	572	-
Stage 2	-	-	-	-	-	-	541	557	-	468	524	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6			0.7			20.7			16.6		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	337	1186	-	-	1129	-	-	365
HCM Lane V/C Ratio	0.323	0.031	-	-	0.032	-	-	0.149
HCM Control Delay (s)	20.7	8.1	-	-	8.3	-	-	16.6
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1.4	0.1	-	-	0.1	-	-	0.5

NPMC Howard-Orange Mobility Assessment
8: Marlborough Ave S/Alley & Orange Ave

Existing Conditions
timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	454	81	75	354	0	71	0	43	2	0	1
Future Volume (veh/h)	0	454	81	75	354	0	71	0	43	2	0	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	493	88	82	385	0	77	0	47	2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	293	765	137	509	927	0	335	0	59	343	22	60
Arrive On Green	0.00	0.50	0.50	0.50	0.50	0.00	0.11	0.00	0.11	0.11	0.00	0.11
Sat Flow, veh/h	998	1545	276	833	1870	0	919	0	561	937	206	571
Grp Volume(v), veh/h	0	0	581	82	385	0	124	0	0	3	0	0
Grp Sat Flow(s),veh/h/ln	998	0	1821	833	1870	0	1481	0	0	1714	0	0
Q Serve(g_s), s	0.0	0.0	5.8	2.0	3.2	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	5.8	7.8	3.2	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.15	1.00		0.00	0.62		0.38	0.67		0.33
Lane Grp Cap(c), veh/h	293	0	902	509	927	0	394	0	0	426	0	0
V/C Ratio(X)	0.00	0.00	0.64	0.16	0.42	0.00	0.31	0.00	0.00	0.01	0.00	0.00
Avail Cap(c_a), veh/h	2398	0	4741	2266	4870	0	2279	0	0	2828	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	4.6	7.5	3.9	0.0	10.7	0.0	0.0	9.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.4	0.1	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.8	0.2	0.4	0.0	0.5	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	5.0	7.6	4.1	0.0	10.9	0.0	0.0	9.8	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B	A	A	A	A	A
Approach Vol, veh/h		581			467			124				3
Approach Delay, s/veh		5.0			4.7			10.9				9.8
Approach LOS		A			A			B				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		17.1		7.5		17.1		7.5				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		64.0		44.0		64.0		34.0				
Max Q Clear Time (g_c+I1), s		7.8		2.0		9.8		4.0				
Green Ext Time (p_c), s		3.4		0.0		2.4		0.5				
Intersection Summary												
HCM 6th Ctrl Delay			5.5									
HCM 6th LOS			A									

Intersection													
Int Delay, s/veh	2.8												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑		↖	↑				↕			↕	
Traffic Vol, veh/h	17	404	45	26	326	21	1	32	15	40	7	7	30
Future Vol, veh/h	17	404	45	26	326	21	1	32	15	40	7	7	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	60	-	-	50	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	92	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	421	47	27	340	22	1	33	16	42	7	7	31

Major/Minor	Major1			Major2			Minor1			Minor2			
Conflicting Flow All	362	0	0	468	0	0	0	905	897	445	915	909	351
Stage 1	-	-	-	-	-	-	0	481	481	-	405	405	-
Stage 2	-	-	-	-	-	-	0	424	416	-	510	504	-
Critical Hdwy	4.12	-	-	4.12	-	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1197	-	-	1094	-	-	0	257	279	613	253	275	692
Stage 1	-	-	-	-	-	-	0	566	554	-	622	598	-
Stage 2	-	-	-	-	-	-	0	608	592	-	546	541	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1197	-	-	1094	-	-	0	233	268	613	219	264	692
Mov Cap-2 Maneuver	-	-	-	-	-	-	0	233	268	-	219	264	-
Stage 1	-	-	-	-	-	-	0	558	546	-	613	583	-
Stage 2	-	-	-	-	-	-	0	559	577	-	487	533	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.6			19.6			14.3		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	336	1197	-	-	1094	-	-	432
HCM Lane V/C Ratio	0.27	0.015	-	-	0.025	-	-	0.106
HCM Control Delay (s)	19.6	8.1	-	-	8.4	-	-	14.3
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.1	0	-	-	0.1	-	-	0.4

NPMC Howard-Orange Mobility Assessment
10: 43rd St & Orange Ave

Existing Conditions
timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖		↖	↖						↖	↖
Traffic Volume (veh/h)	1	396	61	26	331	0	0	1	0	146	457	61
Future Volume (veh/h)	1	396	61	26	331	0	0	1	0	146	457	61
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	0.96		0.95	0.99		1.00				1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	0				1900	1870	1900
Adj Flow Rate, veh/h	1	421	65	28	352	0				155	486	65
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	0				0	2	0
Cap, veh/h	60	788	121	520	940	0				253	836	116
Arrive On Green	0.50	0.50	0.50	1.00	1.00	0.00				0.33	0.33	0.33
Sat Flow, veh/h	0	1568	242	902	1870	0				758	2503	349
Grp Volume(v), veh/h	487	0	0	28	352	0				375	0	331
Grp Sat Flow(s),veh/h/ln	1810	0	0	902	1870	0				1832	0	1777
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0				10.3	0.0	9.2
Cycle Q Clear(g_c), s	11.0	0.0	0.0	0.0	0.0	0.0				10.3	0.0	9.2
Prop In Lane	0.00		0.13	1.00		0.00				0.41		0.20
Lane Grp Cap(c), veh/h	970	0	0	520	940	0				612	0	594
V/C Ratio(X)	0.50	0.00	0.00	0.05	0.37	0.00				0.61	0.00	0.56
Avail Cap(c_a), veh/h	970	0	0	520	940	0				950	0	921
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	0.90	0.90	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	10.1	0.0	0.0	0.0	0.0	0.0				16.7	0.0	16.4
Incr Delay (d2), s/veh	1.9	0.0	0.0	0.2	1.0	0.0				2.2	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	0.0	0.0	0.3	0.0				4.2	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.0	0.0	0.0	0.2	1.0	0.0				19.0	0.0	18.2
LnGrp LOS	B	A	A	A	A	A				B	A	B
Approach Vol, veh/h		487			380						706	
Approach Delay, s/veh		12.0			1.0						18.6	
Approach LOS		B			A						B	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		35.1		24.9		35.1						
Change Period (Y+Rc), s		4.9		4.9		4.9						
Max Green Setting (Gmax), s		19.1		31.1		19.1						
Max Q Clear Time (g_c+I1), s		13.0		12.3		2.0						
Green Ext Time (p_c), s		2.8		7.8		4.3						
Intersection Summary												
HCM 6th Ctrl Delay				12.3								
HCM 6th LOS				B								

NPMC Howard-Orange Mobility Assessment
 11: Fairmount Ave & Orange Ave

Existing Conditions
 timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	390	74	51	295	124	101	370	46	59	134	15
Future Volume (veh/h)	79	390	74	51	295	124	101	370	46	59	134	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.94	0.98		0.89	0.94		0.89	0.96		0.88
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	86	424	80	55	321	135	110	402	50	64	146	16
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	429	777	147	569	618	260	395	1011	124	319	526	58
Arrive On Green	1.00	1.00	1.00	0.51	0.51	0.51	0.32	0.32	0.32	0.11	0.11	0.11
Sat Flow, veh/h	916	1512	285	873	1203	506	1147	3134	385	901	1631	179
Grp Volume(v), veh/h	86	0	504	55	0	456	110	226	226	64	0	162
Grp Sat Flow(s),veh/h/ln	916	0	1797	873	0	1709	1147	1777	1743	901	0	1810
Q Serve(g_s), s	2.4	0.0	0.0	2.0	0.0	10.6	4.8	5.9	6.1	4.0	0.0	4.9
Cycle Q Clear(g_c), s	13.0	0.0	0.0	2.0	0.0	10.6	9.8	5.9	6.1	10.1	0.0	4.9
Prop In Lane	1.00		0.16	1.00		0.30	1.00		0.22	1.00		0.10
Lane Grp Cap(c), veh/h	429	0	924	569	0	879	395	573	562	319	0	584
V/C Ratio(X)	0.20	0.00	0.55	0.10	0.00	0.52	0.28	0.39	0.40	0.20	0.00	0.28
Avail Cap(c_a), veh/h	429	0	924	569	0	879	601	891	874	481	0	908
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(l)	0.09	0.00	0.09	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	2.2	0.0	0.0	7.6	0.0	9.7	19.2	15.8	15.8	25.6	0.0	20.4
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.3	0.0	2.2	1.6	1.9	2.0	1.3	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/lr0.1	0.0	0.1	0.4	0.0	3.9	1.4	2.5	2.5	1.1	0.0	2.2	
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2.3	0.0	0.2	7.9	0.0	11.8	20.8	17.7	17.8	26.9	0.0	21.5
LnGrp LOS	A	A	A	A	A	B	C	B	B	C	A	C
Approach Vol, veh/h		590			511			562			226	
Approach Delay, s/veh		0.5			11.4			18.3			23.0	
Approach LOS		A			B			B			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		35.8		24.2		35.8		24.2				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		20.1		30.1		20.1		30.1				
Max Q Clear Time (g_c+I1), s		15.0		11.8		12.6		12.1				
Green Ext Time (p_c), s		2.8		7.2		3.4		2.7				
Intersection Summary												
HCM 6th Ctrl Delay											11.5	
HCM 6th LOS											B	

Intersection												
Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔			↔			↔	
Traffic Vol, veh/h	0	447	20	17	358	0	10	0	15	15	13	58
Future Vol, veh/h	0	447	20	17	358	0	10	0	15	15	13	58
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	486	22	18	389	0	11	0	16	16	14	63

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	508	0	0	961	922	497	930	933	389
Stage 1	-	-	-	-	-	-	497	497	-	425	425	-
Stage 2	-	-	-	-	-	-	464	425	-	505	508	-
Critical Hdwy	-	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	1057	-	0	236	270	573	248	266	659
Stage 1	0	-	-	-	-	0	555	545	-	607	586	-
Stage 2	0	-	-	-	-	0	578	586	-	549	539	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1057	-	-	204	265	573	238	261	659
Mov Cap-2 Maneuver	-	-	-	-	-	-	333	376	-	362	368	-
Stage 1	-	-	-	-	-	-	555	545	-	607	576	-
Stage 2	-	-	-	-	-	-	501	576	-	533	539	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.4			13.6			13.4		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	445	-	-	1057	-	522
HCM Lane V/C Ratio	0.061	-	-	0.017	-	0.179
HCM Control Delay (s)	13.6	-	-	8.5	-	13.4
HCM Lane LOS	B	-	-	A	-	B
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-	0.6

Intersection	
Intersection Delay, s/veh	17.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	380	36	35	282	31	29	53	20	22	63	30
Future Vol, veh/h	22	380	36	35	282	31	29	53	20	22	63	30
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	422	40	39	313	34	32	59	22	24	70	33
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	22.9	15.6	11.3	11.4
HCM LOS	C	C	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	28%	100%	0%	100%	0%	19%
Vol Thru, %	52%	0%	91%	0%	90%	55%
Vol Right, %	20%	0%	9%	0%	10%	26%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	102	22	416	35	313	115
LT Vol	29	22	0	35	0	22
Through Vol	53	0	380	0	282	63
RT Vol	20	0	36	0	31	30
Lane Flow Rate	113	24	462	39	348	128
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.206	0.043	0.744	0.07	0.571	0.228
Departure Headway (Hd)	6.529	6.365	5.796	6.486	5.908	6.43
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	545	561	624	551	609	555
Service Time	4.618	4.119	3.55	4.246	3.667	4.517
HCM Lane V/C Ratio	0.207	0.043	0.74	0.071	0.571	0.231
HCM Control Delay	11.3	9.4	23.6	9.7	16.3	11.4
HCM Lane LOS	B	A	C	A	C	B
HCM 95th-tile Q	0.8	0.1	6.5	0.2	3.6	0.9

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	18	372	10	12	278	30	0	0	0	25	1	30
Future Vol, veh/h	18	372	10	12	278	30	0	0	0	25	1	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	413	11	13	309	33	0	0	0	28	1	33

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	342	0	0	424	0	0	811	816	326
Stage 1	-	-	-	-	-	-	352	352	-
Stage 2	-	-	-	-	-	-	459	464	-
Critical Hdwy	4.12	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	1217	-	-	1135	-	-	349	311	715
Stage 1	-	-	-	-	-	-	712	632	-
Stage 2	-	-	-	-	-	-	636	564	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1217	-	-	1135	-	-	336	0	715
Mov Cap-2 Maneuver	-	-	-	-	-	-	336	0	-
Stage 1	-	-	-	-	-	-	686	0	-
Stage 2	-	-	-	-	-	-	636	0	-

Approach	EB		WB		SB	
HCM Control Delay, s	0.4		0.3		13.8	
HCM LOS					B	

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1217	-	-	1135	-	-	473
HCM Lane V/C Ratio	0.016	-	-	0.012	-	-	0.132
HCM Control Delay (s)	8	0	-	8.2	0	-	13.8
HCM Lane LOS	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0.5

NPMC Howard-Orange Mobility Assessment
 15: Euclid Ave & Orange Ave

Existing Conditions
 timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	281	88	70	214	60	57	237	58	39	298	61
Future Volume (veh/h)	47	281	88	70	214	60	57	237	58	39	298	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	51	305	96	76	233	65	62	258	63	42	324	66
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	75	413	130	97	443	124	152	416	93	119	459	89
Arrive On Green	0.04	0.30	0.30	0.05	0.32	0.32	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1781	1364	429	1781	1407	393	180	1271	285	96	1403	270
Grp Volume(v), veh/h	51	0	401	76	0	298	383	0	0	432	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1793	1781	0	1800	1736	0	0	1770	0	0
Q Serve(g_s), s	1.3	0.0	9.0	1.9	0.0	6.1	0.0	0.0	0.0	1.4	0.0	0.0
Cycle Q Clear(g_c), s	1.3	0.0	9.0	1.9	0.0	6.1	8.1	0.0	0.0	9.5	0.0	0.0
Prop In Lane	1.00		0.24	1.00		0.22	0.16		0.16	0.10		0.15
Lane Grp Cap(c), veh/h	75	0	542	97	0	567	661	0	0	667	0	0
V/C Ratio(X)	0.68	0.00	0.74	0.78	0.00	0.53	0.58	0.00	0.00	0.65	0.00	0.00
Avail Cap(c_a), veh/h	1188	0	1594	1188	0	1600	2267	0	0	2375	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.3	0.0	14.1	21.0	0.0	12.6	12.9	0.0	0.0	13.3	0.0	0.0
Incr Delay (d2), s/veh	4.1	0.0	1.8	5.1	0.0	0.7	0.8	0.0	0.0	1.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	3.4	0.9	0.0	2.2	2.8	0.0	0.0	3.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.3	0.0	15.9	26.1	0.0	13.3	13.7	0.0	0.0	14.4	0.0	0.0
LnGrp LOS	C	A	B	C	A	B	B	A	A	B	A	A
Approach Vol, veh/h		452			374			383			432	
Approach Delay, s/veh		17.0			15.9			13.7			14.4	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	18.5		19.6	6.3	19.1		19.6				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	30.0	40.0		60.0	30.0	40.0		60.0				
Max Q Clear Time (g_c+I1), s	3.9	11.0		11.5	3.3	8.1		10.1				
Green Ext Time (p_c), s	0.1	2.7		3.2	0.1	1.9		2.9				
Intersection Summary												
HCM 6th Ctrl Delay				15.3								
HCM 6th LOS				B								

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↕			↕	
Traffic Vol, veh/h	29	315	23	23	228	10	20	13	10	4	17	43
Future Vol, veh/h	29	315	23	23	228	10	20	13	10	4	17	43
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	31	332	24	24	240	11	21	14	11	4	18	45

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	251	0	0	356	0	0	731	705	344	713	712	246
Stage 1	-	-	-	-	-	-	406	406	-	294	294	-
Stage 2	-	-	-	-	-	-	325	299	-	419	418	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1314	-	-	1203	-	-	337	361	699	347	358	793
Stage 1	-	-	-	-	-	-	622	598	-	714	670	-
Stage 2	-	-	-	-	-	-	687	666	-	612	591	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	1314	-	-	1203	-	-	295	345	699	321	342	793
Mov Cap-2 Maneuver	-	-	-	-	-	-	295	345	-	321	342	-
Stage 1	-	-	-	-	-	-	607	584	-	697	657	-
Stage 2	-	-	-	-	-	-	618	653	-	575	577	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6			0.7			16.5			12.5		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	359	1314	-	-	1203	-	-	550
HCM Lane V/C Ratio	0.126	0.023	-	-	0.02	-	-	0.122
HCM Control Delay (s)	16.5	7.8	-	-	8.1	-	-	12.5
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0.1	-	-	0.4

Intersection	
Intersection Delay, s/veh	13.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↶	↷			↶	↷			↕			↕
Traffic Vol, veh/h	29	301	15	5	26	243	5	22	23	14	12	32
Future Vol, veh/h	29	301	15	5	26	243	5	22	23	14	12	32
Peak Hour Factor	0.81	0.81	0.81	0.92	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	372	19	5	32	300	6	27	28	17	15	40
Number of Lanes	1	1	0	0	1	1	0	0	1	0	0	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	15	12.6	9.9	9.9
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	37%	100%	0%	100%	0%	16%
Vol Thru, %	39%	0%	95%	0%	98%	43%
Vol Right, %	24%	0%	5%	0%	2%	41%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	59	29	316	31	248	75
LT Vol	22	29	0	31	0	12
Through Vol	23	0	301	0	243	32
RT Vol	14	0	15	0	5	31
Lane Flow Rate	73	36	390	38	306	93
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.122	0.059	0.588	0.063	0.468	0.15
Departure Headway (Hd)	6.009	5.961	5.423	6.021	5.501	5.814
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	596	604	671	596	655	616
Service Time	4.052	3.661	3.123	3.748	3.228	3.856
HCM Lane V/C Ratio	0.122	0.06	0.581	0.064	0.467	0.151
HCM Control Delay	9.9	9	15.6	9.2	13	9.9
HCM Lane LOS	A	A	C	A	B	A
HCM 95th-tile Q	0.4	0.2	3.8	0.2	2.5	0.5

Intersection

Intersection Delay, s/veh

Intersection LOS

Movement SBR

Lane Configurations

Traffic Vol, veh/h 31

Future Vol, veh/h 31

Peak Hour Factor 0.81

Heavy Vehicles, % 2

Mvmt Flow 38

Number of Lanes 0

Approach

Opposing Approach

Opposing Lanes

Conflicting Approach Left

Conflicting Lanes Left

Conflicting Approach Right

Conflicting Lanes Right

HCM Control Delay

HCM LOS

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑			↑↑↑					↑			↑
Traffic Vol, veh/h	0	854	14	0	729	11	0	0	23	0	0	23
Future Vol, veh/h	0	854	14	0	729	11	0	0	23	0	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	928	15	0	792	12	0	0	25	0	0	25

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	-	-	0	-	-	472	-	-	402
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	461	0	0	511
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	461	-	-	511
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	13.3	12.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	461	-	-	-	-	511
HCM Lane V/C Ratio	0.054	-	-	-	-	0.049
HCM Control Delay (s)	13.3	-	-	-	-	12.4
HCM Lane LOS	B	-	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	-	0.2

NPMC Howard-Orange Mobility Assessment
 19: 35th St & El Cajon Blvd

Existing Conditions
 timing Plan: PM Peak



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (veh/h)	8	66	733	78	29	66	634	35	47	66	49	34
Future Volume (veh/h)	8	66	733	78	29	66	634	35	47	66	49	34
Initial Q (Qb), veh		0	0	0		0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00		1.00		1.00		1.00	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach			No				No			No		
Adj Sat Flow, veh/h/ln		1870	1870	1870		1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h		70	780	83		70	674	37	50	70	52	36
Peak Hour Factor		0.94	0.94	0.94		0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %		2	2	2		2	2	2	2	2	2	2
Cap, veh/h		90	3455	1073		90	3455	1073	82	98	61	97
Arrive On Green		0.05	0.68	0.68		0.05	0.68	0.68	0.15	0.15	0.15	0.15
Sat Flow, veh/h		1781	5106	1585		1781	5106	1585	278	634	395	365
Grp Volume(v), veh/h		70	780	83		70	674	37	172	0	0	105
Grp Sat Flow(s),veh/h/ln		1781	1702	1585		1781	1702	1585	1308	0	0	1442
Q Serve(g_s), s		4.7	7.0	2.1		4.7	5.9	0.9	8.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s		4.7	7.0	2.1		4.7	5.9	0.9	15.9	0.0	0.0	7.2
Prop In Lane		1.00		1.00		1.00		1.00	0.29		0.30	0.34
Lane Grp Cap(c), veh/h		90	3455	1073		90	3455	1073	241	0	0	263
V/C Ratio(X)		0.78	0.23	0.08		0.78	0.20	0.03	0.71	0.00	0.00	0.40
Avail Cap(c_a), veh/h		224	3455	1073		224	3455	1073	457	0	0	485
HCM Platoon Ratio		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)		1.00	1.00	1.00		1.00	1.00	1.00	0.97	0.00	0.00	1.00
Uniform Delay (d), s/veh		56.3	7.4	6.6		56.3	7.2	6.4	50.1	0.0	0.0	45.6
Incr Delay (d2), s/veh		5.4	0.2	0.1		5.4	0.1	0.1	1.4	0.0	0.0	0.4
Initial Q Delay(d3),s/veh		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		2.2	2.5	0.7		2.2	2.1	0.3	5.2	0.0	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		61.7	7.6	6.8		61.7	7.4	6.5	51.5	0.0	0.0	46.0
LnGrp LOS		E	A	A		E	A	A	D	A	A	D
Approach Vol, veh/h			933				781			172		
Approach Delay, s/veh			11.5				12.2			51.5		
Approach LOS			B				B			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.5	86.1		23.5	10.5	86.1		23.5				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	15.1	55.6		35.1	15.1	55.6		35.1				
Max Q Clear Time (g_c+l1), s	6.7	7.9		17.9	6.7	9.0		9.2				
Green Ext Time (p_c), s	0.0	3.6		0.6	0.0	4.3		0.5				

Intersection Summary

HCM 6th Ctrl Delay	17.9
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.



Movement	SBT	SBR
Lane Configurations	↕	↗
Traffic Volume (veh/h)	65	59
Future Volume (veh/h)	65	59
Initial Q (Qb), veh	0	0
Ped-Bike Adj(A_pbT)		1.00
Parking Bus, Adj	1.00	1.00
Work Zone On Approach	No	
Adj Sat Flow, veh/h/ln	1870	1870
Adj Flow Rate, veh/h	69	63
Peak Hour Factor	0.94	0.94
Percent Heavy Veh, %	2	2
Cap, veh/h	167	245
Arrive On Green	0.15	0.15
Sat Flow, veh/h	1077	1585
Grp Volume(v), veh/h	0	63
Grp Sat Flow(s),veh/h/ln	0	1585
Q Serve(g_s), s	0.0	4.2
Cycle Q Clear(g_c), s	0.0	4.2
Prop In Lane		1.00
Lane Grp Cap(c), veh/h	0	245
V/C Ratio(X)	0.00	0.26
Avail Cap(c_a), veh/h	0	464
HCM Platoon Ratio	1.00	1.00
Upstream Filter(l)	0.00	1.00
Uniform Delay (d), s/veh	0.0	44.7
Incr Delay (d2), s/veh	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.7
Unsig. Movement Delay, s/veh		
LnGrp Delay(d),s/veh	0.0	44.9
LnGrp LOS	A	D
Approach Vol, veh/h	168	
Approach Delay, s/veh	45.6	
Approach LOS	D	
Timer - Assigned Phs		

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑			↑↑↑					↑			↑
Traffic Vol, veh/h	0	1483	44	0	768	35	0	0	53	0	0	53
Future Vol, veh/h	0	1483	44	0	768	35	0	0	53	0	0	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1612	48	0	835	38	0	0	58	0	0	58

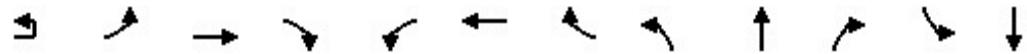
Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	-	-	0	-	-	830	-	-	437
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	269	0	0	485
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	269	-	-	485
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0		0		22		13.4	
HCM LOS					C		B	

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	269	-	-	-	-	485
HCM Lane V/C Ratio	0.214	-	-	-	-	0.119
HCM Control Delay (s)	22	-	-	-	-	13.4
HCM Lane LOS	C	-	-	-	-	B
HCM 95th %tile Q(veh)	0.8	-	-	-	-	0.4

NPMC Howard-Orange Mobility Assessment
 21: Fairmount Ave & El Cajon Blvd

Existing Conditions
 timing Plan: PM Peak



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	11	84	1255	144	0	699	154	104	366	110	0	0
Future Volume (veh/h)	11	84	1255	144	0	699	154	104	366	110	0	0
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)		1.00		1.00	1.00		1.00	1.00		1.00		
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Work Zone On Approach			No			No			No			
Adj Sat Flow, veh/h/ln		1870	1870	1870	0	1870	1870	1900	1870	1900		
Adj Flow Rate, veh/h		87	1294	148	0	721	159	107	377	113		
Peak Hour Factor		0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97		
Percent Heavy Veh, %		2	2	2	0	2	2	0	2	0		
Cap, veh/h		110	2571	1147	0	1808	399	120	440	138		
Arrive On Green		0.06	0.72	0.72	0.00	0.62	0.62	0.39	0.39	0.39		
Sat Flow, veh/h		1781	3554	1585	0	2988	638	616	2257	710		
Grp Volume(v), veh/h		87	1294	148	0	443	437	319	0	278		
Grp Sat Flow(s),veh/h/ln		1781	1777	1585	0	1777	1756	1840	0	1743		
Q Serve(g_s), s		5.8	19.0	3.4	0.0	14.9	14.9	19.5	0.0	17.1		
Cycle Q Clear(g_c), s		5.8	19.0	3.4	0.0	14.9	14.9	19.5	0.0	17.1		
Prop In Lane		1.00		1.00	0.00		0.36	0.33		0.41		
Lane Grp Cap(c), veh/h		110	2571	1147	0	1110	1097	358	0	340		
V/C Ratio(X)		0.79	0.50	0.13	0.00	0.40	0.40	0.89	0.00	0.82		
Avail Cap(c_a), veh/h		402	2571	1147	0	1110	1097	492	0	466		
HCM Platoon Ratio		1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00		
Upstream Filter(l)		1.00	1.00	1.00	0.00	0.96	0.96	0.90	0.00	0.90		
Uniform Delay (d), s/veh		55.5	7.2	5.1	0.0	11.2	11.2	35.4	0.0	34.7		
Incr Delay (d2), s/veh		4.6	0.7	0.2	0.0	1.0	1.0	10.8	0.0	5.1		
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln		2.7	6.7	1.1	0.0	6.0	5.9	8.2	0.0	6.4		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		60.1	7.9	5.3	0.0	12.3	12.3	46.2	0.0	39.8		
LnGrp LOS		E	A	A	A	B	B	D	A	D		
Approach Vol, veh/h			1529			880			597			
Approach Delay, s/veh			10.6			12.3			43.2			
Approach LOS			B			B			D			
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		91.7			11.8	79.9		28.3				
Change Period (Y+Rc), s		4.9			4.4	4.9		4.9				
Max Green Setting (Gmax), s		46.6			27.1	46.6		32.1				
Max Q Clear Time (g_c+I1), s		21.0			7.8	16.9		21.5				
Green Ext Time (p_c), s		7.9			0.1	4.0		1.9				
Intersection Summary												
HCM 6th Ctrl Delay			17.6									
HCM 6th LOS			B									
Notes												
User approved ignoring U-Turning movement.												



Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	0
Future Volume (veh/h)	0
Initial Q (Qb), veh	
Ped-Bike Adj(A_pbT)	
Parking Bus, Adj	
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	
Adj Flow Rate, veh/h	
Peak Hour Factor	
Percent Heavy Veh, %	
Cap, veh/h	
Arrive On Green	
Sat Flow, veh/h	
Grp Volume(v), veh/h	
Grp Sat Flow(s),veh/h/ln	
Q Serve(g_s), s	
Cycle Q Clear(g_c), s	
Prop In Lane	
Lane Grp Cap(c), veh/h	
V/C Ratio(X)	
Avail Cap(c_a), veh/h	
HCM Platoon Ratio	
Upstream Filter(l)	
Uniform Delay (d), s/veh	
Incr Delay (d2), s/veh	
Initial Q Delay(d3),s/veh	
%ile BackOfQ(50%),veh/ln	
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	
LnGrp LOS	
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

NPMC Howard-Orange Mobility Assessment
 22: Euclid Ave & El Cajon Blvd

Existing Conditions
 timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	38	1025	145	83	694	54	52	154	90	49	245	40
Future Volume (veh/h)	38	1025	145	83	694	54	52	154	90	49	245	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	40	1068	151	86	723	56	54	160	94	51	255	42
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	66	1866	263	105	2069	160	141	249	146	166	353	58
Arrive On Green	0.04	0.60	0.60	0.06	0.62	0.62	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1781	3126	441	1781	3342	259	1082	1105	649	1126	1566	258
Grp Volume(v), veh/h	40	606	613	86	384	395	54	0	254	51	0	297
Grp Sat Flow(s),veh/h/ln	1781	1777	1791	1781	1777	1824	1082	0	1754	1126	0	1824
Q Serve(g_s), s	2.7	25.1	25.2	5.7	12.6	12.6	5.8	0.0	15.7	5.2	0.0	18.1
Cycle Q Clear(g_c), s	2.7	25.1	25.2	5.7	12.6	12.6	23.9	0.0	15.7	20.9	0.0	18.1
Prop In Lane	1.00		0.25	1.00		0.14	1.00		0.37	1.00		0.14
Lane Grp Cap(c), veh/h	66	1060	1069	105	1100	1129	141	0	396	166	0	412
V/C Ratio(X)	0.61	0.57	0.57	0.82	0.35	0.35	0.38	0.00	0.64	0.31	0.00	0.72
Avail Cap(c_a), veh/h	105	1060	1069	105	1100	1129	430	0	864	467	0	898
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.80	0.80	0.80	1.00	1.00	1.00	0.76	0.00	0.76	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.9	14.8	14.8	55.8	11.1	11.1	54.0	0.0	42.1	51.5	0.0	43.0
Incr Delay (d2), s/veh	2.7	1.8	1.8	35.2	0.9	0.9	0.5	0.0	0.5	0.4	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	10.2	10.4	3.6	5.1	5.2	1.6	0.0	6.9	1.5	0.0	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.7	16.6	16.6	91.0	12.0	12.0	54.5	0.0	42.6	51.9	0.0	43.9
LnGrp LOS	E	B	B	F	B	B	D	A	D	D	A	D
Approach Vol, veh/h		1259			865			308			348	
Approach Delay, s/veh		18.0			19.8			44.7			45.1	
Approach LOS		B			B			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	1.5	76.5		32.0	8.8	79.2		32.0				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	39.6			59.1	7.1	39.6		59.1				
Max Q Clear Time (g_c+11), s	27.2			22.9	4.7	14.6		25.9				
Green Ext Time (p_c), s	0.0	7.2		1.3	0.0	5.7		1.2				
Intersection Summary												
HCM 6th Ctrl Delay											24.9	
HCM 6th LOS											C	

Intersection

Intersection Delay, s/veh 7.9

Intersection LOS A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	17	0	113	164	0
Future Vol, veh/h	10	17	0	113	164	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	18	0	120	174	0
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB		
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.4	7.8	8.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	37%	0%
Vol Thru, %	100%	0%	100%
Vol Right, %	0%	63%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	113	27	164
LT Vol	0	10	0
Through Vol	113	0	164
RT Vol	0	17	0
Lane Flow Rate	120	29	174
Geometry Grp	1	1	1
Degree of Util (X)	0.137	0.034	0.198
Departure Headway (Hd)	4.116	4.265	4.076
Convergence, Y/N	Yes	Yes	Yes
Cap	866	844	878
Service Time	2.169	2.265	2.117
HCM Lane V/C Ratio	0.139	0.034	0.198
HCM Control Delay	7.8	7.4	8.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0.1	0.7

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	28	21	37	0	0	0	0	524	33	18	255	0
Future Vol, veh/h	28	21	37	0	0	0	0	524	33	18	255	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	29	22	39	0	0	0	0	546	34	19	266	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	577	884	266	-	0	0	580	0	0
Stage 1	304	304	-	-	-	-	-	-	-
Stage 2	273	580	-	-	-	-	-	-	-
Critical Hdwy	6.63	6.53	6.23	-	-	-	4.13	-	-
Critical Hdwy Stg 1	5.43	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.83	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	-	-	-	2.219	-	-
Pot Cap-1 Maneuver	463	284	772	0	-	-	992	-	0
Stage 1	748	662	-	0	-	-	-	-	0
Stage 2	749	499	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	453	0	772	-	-	-	992	-	-
Mov Cap-2 Maneuver	453	0	-	-	-	-	-	-	-
Stage 1	732	0	-	-	-	-	-	-	-
Stage 2	749	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.2	0	0.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	592	992	-
HCM Lane V/C Ratio	-	-	0.151	0.019	-
HCM Control Delay (s)	-	-	12.2	8.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-

NPMC Howard-Orange Mobility Assessment
 25: Euclid Ave & Polk Ave

Existing Conditions
 timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Volume (veh/h)	34	46	52	0	0	0	0	357	18	26	457	0
Future Volume (veh/h)	34	46	52	0	0	0	0	357	18	26	457	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	37	49	56				0	384	19	28	491	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	0				0	2	2	2	2	0
Cap, veh/h	51	67	77				0	799	40	188	809	0
Arrive On Green	0.11	0.11	0.11				0.00	0.45	0.45	0.45	0.45	0.00
Sat Flow, veh/h	450	595	680				0	1767	87	43	1789	0
Grp Volume(v), veh/h	142	0	0				0	0	403	519	0	0
Grp Sat Flow(s),veh/h/ln	1725	0	0				0	0	1855	1832	0	0
Q Serve(g_s), s	1.8	0.0	0.0				0.0	0.0	3.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.8	0.0	0.0				0.0	0.0	3.4	4.7	0.0	0.0
Prop In Lane	0.26		0.39				0.00		0.05	0.05		0.00
Lane Grp Cap(c), veh/h	195	0	0				0	0	839	997	0	0
V/C Ratio(X)	0.73	0.00	0.00				0.00	0.00	0.48	0.52	0.00	0.00
Avail Cap(c_a), veh/h	2684	0	0				0	0	4530	4545	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.7	0.0	0.0				0.0	0.0	4.3	4.7	0.0	0.0
Incr Delay (d2), s/veh	1.9	0.0	0.0				0.0	0.0	0.4	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0				0.0	0.0	0.4	0.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.6	0.0	0.0				0.0	0.0	4.7	5.0	0.0	0.0
LnGrp LOS	B	A	A				A	A	A	A	A	A
Approach Vol, veh/h		142						403			519	
Approach Delay, s/veh		11.6						4.7			5.0	
Approach LOS		B						A			A	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		15.1		7.5				15.1				
Change Period (Y+Rc), s		4.9		4.9				4.9				
Max Green Setting (Gmax), s		55.1		35.1				55.1				
Max Q Clear Time (g_c+I1), s		5.4		3.8				6.7				
Green Ext Time (p_c), s		2.5		0.5				3.5				
Intersection Summary												
HCM 6th Ctrl Delay			5.8									
HCM 6th LOS			A									

Intersection												
Int Delay, s/veh	5.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	11	80	16	0	0	0	0	51	17	10	28	0
Future Vol, veh/h	11	80	16	0	0	0	0	51	17	10	28	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	61	61	61	61	61	61	61	61	61	61	61	61
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	131	26	0	0	0	0	84	28	16	46	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	176	190	46	-	0	0	112	0	0
Stage 1	78	78	-	-	-	-	-	-	-
Stage 2	98	112	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	-	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	814	705	1023	0	-	-	1478	-	0
Stage 1	945	830	-	0	-	-	-	-	0
Stage 2	926	803	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	805	0	1023	-	-	-	1478	-	-
Mov Cap-2 Maneuver	805	0	-	-	-	-	-	-	-
Stage 1	935	0	-	-	-	-	-	-	-
Stage 2	926	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.8	0	2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	921	1478	-
HCM Lane V/C Ratio	-	-	0.19	0.011	-
HCM Control Delay (s)	-	-	9.8	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0	-

NPMC Howard-Orange Mobility Assessment
 27: 35th St & University Ave

Existing Conditions
 timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	444	31	28	397	22	39	43	22	64	76	47
Future Volume (veh/h)	24	444	31	28	397	22	39	43	22	64	76	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	25	467	33	29	418	23	41	45	23	67	80	49
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	704	1256	89	657	1277	70	128	125	50	132	112	60
Arrive On Green	0.73	0.73	0.73	0.73	0.73	0.73	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	948	1726	122	898	1756	97	439	870	350	475	782	419
Grp Volume(v), veh/h	25	0	500	29	0	441	109	0	0	196	0	0
Grp Sat Flow(s),veh/h/ln	948	0	1848	898	0	1853	1659	0	0	1675	0	0
Q Serve(g_s), s	0.7	0.0	7.7	0.9	0.0	6.5	0.0	0.0	0.0	4.1	0.0	0.0
Cycle Q Clear(g_c), s	7.2	0.0	7.7	8.6	0.0	6.5	4.3	0.0	0.0	8.5	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.05	0.38		0.21	0.34		0.25
Lane Grp Cap(c), veh/h	704	0	1344	657	0	1348	304	0	0	304	0	0
V/C Ratio(X)	0.04	0.00	0.37	0.04	0.00	0.33	0.36	0.00	0.00	0.64	0.00	0.00
Avail Cap(c_a), veh/h	704	0	1344	657	0	1348	469	0	0	474	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.0	0.0	3.9	5.5	0.0	3.7	29.7	0.0	0.0	31.4	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.8	0.1	0.0	0.6	0.3	0.0	0.0	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	2.3	0.2	0.0	1.9	1.8	0.0	0.0	3.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.1	0.0	4.7	5.6	0.0	4.4	29.9	0.0	0.0	32.2	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	C	A	A	C	A	A
Approach Vol, veh/h		525			470			109				196
Approach Delay, s/veh		4.7			4.4			29.9				32.2
Approach LOS		A			A			C				C
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		60.2		15.8		60.2		15.8				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		47.1		19.1		47.1		19.1				
Max Q Clear Time (g_c+I1), s		9.7		10.5		10.6		6.3				
Green Ext Time (p_c), s		5.2		0.5		5.0		0.3				

Intersection Summary

HCM 6th Ctrl Delay	10.9
HCM 6th LOS	B

NPMC Howard-Orange Mobility Assessment
28: Fairmount Ave & University Ave

Existing Conditions
timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	615	109	100	331	86	132	401	86	126	172	39
Future Volume (veh/h)	91	615	109	100	331	86	132	401	86	126	172	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	92	621	110	101	334	87	133	405	87	127	174	39
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	116	1508	267	127	1416	364	162	494	105	155	245	55
Arrive On Green	0.07	0.50	0.50	0.07	0.51	0.51	0.09	0.17	0.17	0.09	0.17	0.17
Sat Flow, veh/h	1781	3018	534	1781	2799	719	1781	2915	621	1781	1479	332
Grp Volume(v), veh/h	92	365	366	101	210	211	133	245	247	127	0	213
Grp Sat Flow(s),veh/h/ln	1781	1777	1774	1781	1777	1741	1781	1777	1759	1781	0	1811
Q Serve(g_s), s	5.5	14.0	14.0	6.0	7.2	7.3	7.9	14.4	14.6	7.6	0.0	12.0
Cycle Q Clear(g_c), s	5.5	14.0	14.0	6.0	7.2	7.3	7.9	14.4	14.6	7.6	0.0	12.0
Prop In Lane	1.00		0.30	1.00		0.41	1.00		0.35	1.00		0.18
Lane Grp Cap(c), veh/h	116	888	887	127	899	881	162	301	298	155	0	300
V/C Ratio(X)	0.79	0.41	0.41	0.79	0.23	0.24	0.82	0.81	0.83	0.82	0.00	0.71
Avail Cap(c_a), veh/h	208	888	887	340	899	881	224	380	376	208	0	371
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	49.7	17.0	17.0	49.4	15.0	15.0	48.3	43.2	43.3	48.5	0.0	42.6
Incr Delay (d2), s/veh	4.5	1.4	1.4	4.2	0.6	0.6	11.4	10.7	11.8	12.9	0.0	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	5.9	5.9	2.8	3.0	3.0	4.0	7.2	7.3	3.9	0.0	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.2	18.4	18.4	53.5	15.6	15.6	59.7	53.9	55.1	61.4	0.0	47.7
LnGrp LOS	D	B	B	D	B	B	E	D	E	E	A	D
Approach Vol, veh/h		823			522			625			340	
Approach Delay, s/veh		22.4			22.9			55.6			52.8	
Approach LOS		C			C			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.6	58.9	14.2	22.8	11.5	59.5	13.8	23.2				
Change Period (Y+Rc), s	4.4	4.9	4.4	4.9	4.4	4.9	4.4	4.9				
Max Green Setting (Gmax), s	20.6	33.1	13.6	22.1	12.6	41.1	12.6	23.1				
Max Q Clear Time (g_c+1/3), s	19.0	16.0	9.9	14.0	7.5	9.3	9.6	16.6				
Green Ext Time (p_c), s	0.1	6.2	0.1	0.8	0.0	3.8	0.0	1.7				

Intersection Summary

HCM 6th Ctrl Delay	36.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

NPMC Howard-Orange Mobility Assessment
29: Euclid Ave & University Ave

Existing Conditions
timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	67	588	82	191	472	51	53	251	193	50	389	70
Future Volume (veh/h)	67	588	82	191	472	51	53	251	193	50	389	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	70	612	85	199	492	53	55	261	201	52	405	73
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	597	1260	175	231	621	67	155	325	250	152	512	92
Arrive On Green	0.34	0.40	0.40	0.13	0.19	0.19	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	1781	3134	435	1781	3237	347	916	980	755	930	1542	278
Grp Volume(v), veh/h	70	346	351	199	269	276	55	0	462	52	0	478
Grp Sat Flow(s),veh/h/ln	1781	1777	1792	1781	1777	1808	916	0	1735	930	0	1820
Q Serve(g_s), s	2.8	15.1	15.1	11.4	15.0	15.1	6.0	0.0	25.2	5.6	0.0	24.8
Cycle Q Clear(g_c), s	2.8	15.1	15.1	11.4	15.0	15.1	30.8	0.0	25.2	30.8	0.0	24.8
Prop In Lane	1.00		0.24	1.00		0.19	1.00		0.44	1.00		0.15
Lane Grp Cap(c), veh/h	597	714	721	231	341	347	155	0	575	152	0	604
V/C Ratio(X)	0.12	0.48	0.49	0.86	0.79	0.79	0.35	0.00	0.80	0.34	0.00	0.79
Avail Cap(c_a), veh/h	597	714	721	336	668	680	178	0	619	175	0	649
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.87	0.00	0.87
Uniform Delay (d), s/veh	23.9	23.1	23.1	44.3	40.0	40.1	45.4	0.0	31.7	45.7	0.0	31.5
Incr Delay (d2), s/veh	0.0	2.3	2.3	10.4	16.8	17.0	1.2	0.0	6.9	1.6	0.0	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	6.7	6.7	5.7	8.1	8.3	1.4	0.0	11.5	1.4	0.0	11.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.0	25.4	25.5	54.8	56.9	57.1	46.6	0.0	38.6	47.3	0.0	37.4
LnGrp LOS	C	C	C	D	E	E	D	A	D	D	A	D
Approach Vol, veh/h		767			744			517				530
Approach Delay, s/veh		25.3			56.4			39.5				38.4
Approach LOS		C			E			D				D
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.9	46.7		39.4	39.8	24.9		39.4				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.9	* 4.9		4.9				
Max Green Setting (Gmax), s	19.6	33.1		37.1	13.6	* 39		37.1				
Max Q Clear Time (g_c+1), s	13.4	17.1		32.8	4.8	17.1		32.8				
Green Ext Time (p_c), s	0.1	4.8		1.6	0.0	2.8		1.2				

Intersection Summary

HCM 6th Ctrl Delay	39.9
HCM 6th LOS	D

Notes

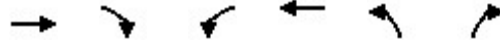
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Vol, veh/h	17	819	672	21	13	46
Future Vol, veh/h	17	819	672	21	13	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	185	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	862	707	22	14	48

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	729	0	-	0	1185 365
Stage 1	-	-	-	-	718 -
Stage 2	-	-	-	-	467 -
Critical Hdwy	4.14	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	2.22	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	871	-	-	-	182 632
Stage 1	-	-	-	-	444 -
Stage 2	-	-	-	-	597 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	871	-	-	-	175 632
Mov Cap-2 Maneuver	-	-	-	-	175 -
Stage 1	-	-	-	-	426 -
Stage 2	-	-	-	-	597 -

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	15.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	871	-	-	-	401
HCM Lane V/C Ratio	0.021	-	-	-	0.155
HCM Control Delay (s)	9.2	0.2	-	-	15.6
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (veh/h)	1230	76	24	739	58	51
Future Volume (veh/h)	1230	76	24	739	58	51
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1900	1900
Adj Flow Rate, veh/h	1352	84	26	812	64	56
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	0	0
Cap, veh/h	2460	152	257	2572	179	157
Arrive On Green	0.72	0.72	0.72	0.72	0.20	0.20
Sat Flow, veh/h	3492	211	372	3647	891	780
Grp Volume(v), veh/h	705	731	26	812	121	0
Grp Sat Flow(s),veh/h/ln	1777	1832	372	1777	1685	0
Q Serve(g_s), s	23.6	23.8	4.5	10.6	8.0	0.0
Cycle Q Clear(g_c), s	23.6	23.8	28.3	10.6	8.0	0.0
Prop In Lane		0.11	1.00		0.53	0.46
Lane Grp Cap(c), veh/h	1286	1326	257	2572	338	0
V/C Ratio(X)	0.55	0.55	0.10	0.32	0.36	0.00
Avail Cap(c_a), veh/h	1286	1326	257	2572	338	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.94	0.94	1.00	0.00
Uniform Delay (d), s/veh	8.2	8.2	14.7	6.4	44.7	0.0
Incr Delay (d2), s/veh	1.4	1.4	0.2	0.1	2.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	9.1	0.4	3.7	3.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.7	9.6	14.9	6.5	47.7	0.0
LnGrp LOS	A	A	B	A	D	A
Approach Vol, veh/h	1436			838	121	
Approach Delay, s/veh	9.7			6.8	47.7	
Approach LOS	A			A	D	
Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		99.0			99.0	31.0
Change Period (Y+Rc), s		4.9			4.9	4.9
Max Green Setting (Gmax), s		94.1			94.1	26.1
Max Q Clear Time (g_c+I1), s		25.8			30.3	10.0
Green Ext Time (p_c), s		16.2			7.9	0.3
Intersection Summary						
HCM 6th Ctrl Delay			10.6			
HCM 6th LOS			B			

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	9	31	1	50	80	18	0	176	23	11	40
Future Vol, veh/h	20	9	31	1	50	80	18	0	176	23	11	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	10	34	1	54	87	20	0	191	25	12	43
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	8.1	8.6	8.3	7.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	9%	100%	0%	100%	0%	31%
Vol Thru, %	0%	0%	22%	0%	38%	15%
Vol Right, %	91%	0%	78%	0%	62%	54%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	194	20	40	1	130	74
LT Vol	18	20	0	1	0	23
Through Vol	0	0	9	0	50	11
RT Vol	176	0	31	0	80	40
Lane Flow Rate	211	22	43	1	141	80
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.235	0.035	0.057	0.002	0.188	0.098
Departure Headway (Hd)	4.005	5.796	4.745	5.723	4.786	4.396
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	898	618	754	626	749	815
Service Time	2.026	3.532	2.48	3.455	2.517	2.425
HCM Lane V/C Ratio	0.235	0.036	0.057	0.002	0.188	0.098
HCM Control Delay	8.3	8.7	7.8	8.5	8.6	7.9
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.9	0.1	0.2	0	0.7	0.3

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↖	↗		↔	
Traffic Vol, veh/h	1	41	14	28	111	0	26	1	27	0	0	3
Future Vol, veh/h	1	41	14	28	111	0	26	1	27	0	0	3
Conflicting Peds, #/hr	9	0	9	8	0	8	9	0	8	8	0	9
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	70	-	-	100	-	-	-	-	40	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	46	16	31	125	0	29	1	30	0	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	134	0	0	71	0	0	263	261	71	276	269	143
Stage 1	-	-	-	-	-	-	65	65	-	196	196	-
Stage 2	-	-	-	-	-	-	198	196	-	80	73	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1451	-	-	1529	-	-	690	644	991	676	637	905
Stage 1	-	-	-	-	-	-	946	841	-	806	739	-
Stage 2	-	-	-	-	-	-	804	739	-	929	834	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1439	-	-	1516	-	-	664	619	975	633	612	890
Mov Cap-2 Maneuver	-	-	-	-	-	-	664	619	-	633	612	-
Stage 1	-	-	-	-	-	-	937	833	-	799	718	-
Stage 2	-	-	-	-	-	-	778	718	-	891	826	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			1.5			9.7			9.1		
HCM LOS							A			A		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	662	975	1439	-	-	1516	-	-	890
HCM Lane V/C Ratio	0.046	0.031	0.001	-	-	0.021	-	-	0.004
HCM Control Delay (s)	10.7	8.8	7.5	-	-	7.4	-	-	9.1
HCM Lane LOS	B	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0.1	0	-	-	0.1	-	-	0

NPMC Howard-Orange Mobility Assessment
2: Alley/33rd St & Orange Ave

Existing with Project
Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔		↔	↔	↔
Traffic Volume (veh/h)	90	42	0	2	55	213	5	4	0	52	2	119
Future Volume (veh/h)	90	42	0	2	55	213	5	4	0	52	2	119
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	98	46	0	2	60	232	5	4	0	57	2	129
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	551	218	0	136	127	480	15	12	0	300	4	263
Arrive On Green	0.37	0.37	0.00	0.37	0.37	0.37	0.01	0.01	0.00	0.17	0.17	0.17
Sat Flow, veh/h	878	587	0	3	342	1292	1011	809	0	1781	24	1564
Grp Volume(v), veh/h	144	0	0	294	0	0	9	0	0	57	0	131
Grp Sat Flow(s),veh/h/ln	1466	0	0	1637	0	0	1820	0	0	1781	0	1589
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.7	0.0	2.0
Cycle Q Clear(g_c), s	1.4	0.0	0.0	3.7	0.0	0.0	0.1	0.0	0.0	0.7	0.0	2.0
Prop In Lane	0.68		0.00	0.01		0.79	0.56		0.00	1.00		0.98
Lane Grp Cap(c), veh/h	769	0	0	743	0	0	26	0	0	300	0	267
V/C Ratio(X)	0.19	0.00	0.00	0.40	0.00	0.00	0.34	0.00	0.00	0.19	0.00	0.49
Avail Cap(c_a), veh/h	1375	0	0	1532	0	0	1555	0	0	1522	0	1357
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.8	0.0	0.0	6.5	0.0	0.0	13.1	0.0	0.0	9.6	0.0	10.1
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.2	0.0	0.0	2.8	0.0	0.0	0.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0	0.8	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.8	0.0	0.0	6.7	0.0	0.0	15.9	0.0	0.0	9.7	0.0	10.7
LnGrp LOS	A	A	A	A	A	A	B	A	A	A	A	B
Approach Vol, veh/h		144			294			9				188
Approach Delay, s/veh		5.8			6.7			15.9				10.4
Approach LOS		A			A			B				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		14.0		4.4		14.0		8.5				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		23.0		23.0		23.0		23.0				
Max Q Clear Time (g_c+I1), s		3.4		2.1		5.7		4.0				
Green Ext Time (p_c), s		0.6		0.0		1.4		0.6				
Intersection Summary												
HCM 6th Ctrl Delay				7.7								
HCM 6th LOS				A								

Intersection												
Int Delay, s/veh	7.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	53	13	22	7	56	4	98	9	33	5	4	48
Future Vol, veh/h	53	13	22	7	56	4	98	9	33	5	4	48
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	56	14	23	7	60	4	104	10	35	5	4	51




















Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	64	0	0	37	0	0	242	216	26	236	225	62
Stage 1	-	-	-	-	-	-	138	138	-	76	76	-
Stage 2	-	-	-	-	-	-	104	78	-	160	149	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1538	-	-	1574	-	-	712	682	1050	718	674	1003
Stage 1	-	-	-	-	-	-	865	782	-	933	832	-
Stage 2	-	-	-	-	-	-	902	830	-	842	774	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1538	-	-	1574	-	-	651	653	1050	664	646	1003
Mov Cap-2 Maneuver	-	-	-	-	-	-	651	653	-	664	646	-
Stage 1	-	-	-	-	-	-	833	753	-	898	828	-
Stage 2	-	-	-	-	-	-	847	826	-	774	745	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	4.5			0.8			11.4			9.2		
HCM LOS							B			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	715	1538	-	-	1574	-	-	926
HCM Lane V/C Ratio	0.208	0.037	-	-	0.005	-	-	0.065
HCM Control Delay (s)	11.4	7.4	0	-	7.3	0	-	9.2
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.8	0.1	-	-	0	-	-	0.2

NPMC Howard-Orange Mobility Assessment
4: 35th St & Orange Ave

Existing with Project
Timing Plan: AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	39	0	0	145	0	134	45	0	89	19
Future Volume (veh/h)	0	0	39	0	0	145	0	134	45	0	89	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.96	1.00		0.98	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	0	0	42	0	0	158	0	146	49	0	97	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	0	2	2	0	2	2	0	2	2
Cap, veh/h	0	631	505	0	631	513	0	486	163	0	537	116
Arrive On Green	0.00	0.00	0.34	0.00	0.00	0.34	0.00	0.36	0.36	0.00	0.36	0.36
Sat Flow, veh/h	0	1870	1496	0	1870	1519	0	1331	447	0	1473	319
Grp Volume(v), veh/h	0	0	42	0	0	158	0	0	195	0	0	118
Grp Sat Flow(s),veh/h/ln	0	1870	1496	0	1870	1519	0	0	1777	0	0	1792
Q Serve(g_s), s	0.0	0.0	0.6	0.0	0.0	2.5	0.0	0.0	2.6	0.0	0.0	1.5
Cycle Q Clear(g_c), s	0.0	0.0	0.6	0.0	0.0	2.5	0.0	0.0	2.6	0.0	0.0	1.5
Prop In Lane	0.00		1.00	0.00		1.00	0.00		0.25	0.00		0.18
Lane Grp Cap(c), veh/h	0	631	505	0	631	513	0	0	649	0	0	654
V/C Ratio(X)	0.00	0.00	0.08	0.00	0.00	0.31	0.00	0.00	0.30	0.00	0.00	0.18
Avail Cap(c_a), veh/h	0	1476	1181	0	1476	1199	0	0	1349	0	0	1382
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	7.4	0.0	0.0	8.1	0.0	0.0	7.5	0.0	0.0	7.1
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.2	0.0	0.0	0.6	0.0	0.0	0.7	0.0	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	7.5	0.0	0.0	8.4	0.0	0.0	7.7	0.0	0.0	7.2
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		42			158			195				118
Approach Delay, s/veh		7.5			8.4			7.7				7.2
Approach LOS		A			A			A				A
Timer - Assigned Phs		2		4		6			8			
Phs Duration (G+Y+Rc), s		16.0		16.9		16.0		16.9				
Change Period (Y+Rc), s		4.9		4.9		4.9		* 4.9				
Max Green Setting (Gmax), s		26.0		25.0		26.0		* 25				
Max Q Clear Time (g_c+I1), s		2.6		4.6		4.5		3.5				
Green Ext Time (p_c), s		0.1		1.1		0.5		0.6				
Intersection Summary												
HCM 6th Ctrl Delay			7.8									
HCM 6th LOS			A									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection												
Int Delay, s/veh	4.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	13	18	15	71	108	15	22	9	31	12	5	8
Future Vol, veh/h	13	18	15	71	108	15	22	9	31	12	5	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	20	17	80	121	17	25	10	35	13	6	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	138	0	0	37	0	0	356	357	29	371	357	130
Stage 1	-	-	-	-	-	-	59	59	-	290	290	-
Stage 2	-	-	-	-	-	-	297	298	-	81	67	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1446	-	-	1574	-	-	599	569	1046	586	569	920
Stage 1	-	-	-	-	-	-	953	846	-	718	672	-
Stage 2	-	-	-	-	-	-	712	667	-	927	839	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1446	-	-	1574	-	-	559	532	1046	530	532	920
Mov Cap-2 Maneuver	-	-	-	-	-	-	559	532	-	530	532	-
Stage 1	-	-	-	-	-	-	943	837	-	710	635	-
Stage 2	-	-	-	-	-	-	660	630	-	876	830	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.1			2.7			10.5			11.1		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	722	1446	-	-	1574	-	-	614
HCM Lane V/C Ratio	0.096	0.01	-	-	0.051	-	-	0.046
HCM Control Delay (s)	10.5	7.5	0	-	7.4	0	-	11.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0.2	-	-	0.1

Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	23	54	15	14	60	66	9	4	42	61	3	7
Future Vol, veh/h	23	54	15	14	60	66	9	4	42	61	3	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	59	16	15	65	72	10	4	46	66	3	8

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	137	0	0	75	0	0	254	284	67	273	256	101
Stage 1	-	-	-	-	-	-	117	117	-	131	131	-
Stage 2	-	-	-	-	-	-	137	167	-	142	125	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1447	-	-	1524	-	-	699	625	997	679	648	954
Stage 1	-	-	-	-	-	-	888	799	-	873	788	-
Stage 2	-	-	-	-	-	-	866	760	-	861	792	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1447	-	-	1524	-	-	675	607	997	630	629	954
Mov Cap-2 Maneuver	-	-	-	-	-	-	675	607	-	630	629	-
Stage 1	-	-	-	-	-	-	872	785	-	857	779	-
Stage 2	-	-	-	-	-	-	846	752	-	802	778	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	1.9		0.7		9.4		11.3	
HCM LOS					A		B	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	886	1447	-	-	1524	-	-	652
HCM Lane V/C Ratio	0.067	0.017	-	-	0.01	-	-	0.118
HCM Control Delay (s)	9.4	7.5	0	-	7.4	0	-	11.3
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.4

Intersection												
Int Delay, s/veh	5.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	49	96	44	38	72	162	48	50	71	16	7	36
Future Vol, veh/h	49	96	44	38	72	162	48	50	71	16	7	36
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	53	104	48	41	78	176	52	54	77	17	8	39

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	254	0	0	152	0	0	506	570	128	548	506	166
Stage 1	-	-	-	-	-	-	234	234	-	248	248	-
Stage 2	-	-	-	-	-	-	272	336	-	300	258	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1311	-	-	1429	-	-	477	431	922	447	469	878
Stage 1	-	-	-	-	-	-	769	711	-	756	701	-
Stage 2	-	-	-	-	-	-	734	642	-	709	694	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1311	-	-	1429	-	-	424	398	922	346	433	878
Mov Cap-2 Maneuver	-	-	-	-	-	-	424	398	-	346	433	-
Stage 1	-	-	-	-	-	-	735	680	-	723	677	-
Stage 2	-	-	-	-	-	-	670	620	-	571	663	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	2			1.1			15.2			12.1		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	535	1311	-	-	1429	-	-	571
HCM Lane V/C Ratio	0.343	0.041	-	-	0.029	-	-	0.112
HCM Control Delay (s)	15.2	7.9	0	-	7.6	0	-	12.1
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.5	0.1	-	-	0.1	-	-	0.4

NPMC Howard-Orange Mobility Assessment
8: Marlborough Ave S/Alley & Orange Ave

Existing with Project
Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	0	104	54	70	223	0	115	0	68	0	2	3
Future Volume (veh/h)	0	104	54	70	223	0	115	0	68	0	2	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	113	59	76	242	0	125	0	74	0	2	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	370	193	318	459	0	463	0	96	0	120	180
Arrive On Green	0.00	0.32	0.32	0.32	0.32	0.00	0.18	0.00	0.18	0.00	0.18	0.18
Sat Flow, veh/h	0	1157	604	281	1437	0	911	0	540	0	675	1013
Grp Volume(v), veh/h	0	0	172	318	0	0	199	0	0	0	0	5
Grp Sat Flow(s),veh/h/ln	0	0	1762	1718	0	0	1451	0	0	0	0	1688
Q Serve(g_s), s	0.0	0.0	1.4	1.1	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	1.4	2.9	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.00		0.34	0.24		0.00	0.63		0.37	0.00		0.60
Lane Grp Cap(c), veh/h	0	0	563	777	0	0	559	0	0	0	0	301
V/C Ratio(X)	0.00	0.00	0.31	0.41	0.00	0.00	0.36	0.00	0.00	0.00	0.00	0.02
Avail Cap(c_a), veh/h	0	0	2168	2134	0	0	1655	0	0	0	0	2078
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	5.0	5.5	0.0	0.0	7.7	0.0	0.0	0.0	0.0	6.6
Incr Delay (d2), s/veh	0.0	0.0	0.2	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.2	0.4	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	5.2	5.6	0.0	0.0	7.8	0.0	0.0	0.0	0.0	6.6
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		172			318			199				5
Approach Delay, s/veh		5.2			5.6			7.8				6.6
Approach LOS		A			A			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		11.1		8.4		11.1		8.4				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		24.0		24.0		22.2		18.0				
Max Q Clear Time (g_c+I1), s		3.4		2.0		4.9		4.6				
Green Ext Time (p_c), s		0.7		0.0		1.4		0.6				
Intersection Summary												
HCM 6th Ctrl Delay			6.2									
HCM 6th LOS			A									

Intersection												
Int Delay, s/veh	9.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	80	34	17	6	85	24	163	42	35	2	3	14
Future Vol, veh/h	80	34	17	6	85	24	163	42	35	2	3	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	87	37	18	7	92	26	177	46	38	2	3	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	118	0	0	55	0	0	348	352	46	381	348	105
Stage 1	-	-	-	-	-	-	220	220	-	119	119	-
Stage 2	-	-	-	-	-	-	128	132	-	262	229	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1470	-	-	1550	-	-	607	573	1023	577	576	949
Stage 1	-	-	-	-	-	-	782	721	-	885	797	-
Stage 2	-	-	-	-	-	-	876	787	-	743	715	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1470	-	-	1550	-	-	565	535	1023	493	538	949
Mov Cap-2 Maneuver	-	-	-	-	-	-	565	535	-	493	538	-
Stage 1	-	-	-	-	-	-	734	677	-	831	793	-
Stage 2	-	-	-	-	-	-	854	783	-	626	671	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	4.6			0.4			15.6			9.7		
HCM LOS							C			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	598	1470	-	-	1550	-	-	779
HCM Lane V/C Ratio	0.436	0.059	-	-	0.004	-	-	0.027
HCM Control Delay (s)	15.6	7.6	0	-	7.3	0	-	9.7
HCM Lane LOS	C	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	2.2	0.2	-	-	0	-	-	0.1

NPMC Howard-Orange Mobility Assessment
 10: 43rd St & Orange Ave

Existing with Project
 Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		1			1						1	1
Traffic Volume (veh/h)	0	58	41	2	64	0	0	0	0	48	258	107
Future Volume (veh/h)	0	58	41	2	64	0	0	0	0	48	258	107
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	0.97		1.00				1.00		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1900	1870	1900
Adj Flow Rate, veh/h	0	62	44	2	69	0				52	277	115
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	2	2	0				0	2	0
Cap, veh/h	0	534	379	70	997	0				116	629	272
Arrive On Green	0.00	0.54	0.54	0.54	0.54	0.00				0.29	0.29	0.29
Sat Flow, veh/h	0	994	705	11	1854	0				396	2145	925
Grp Volume(v), veh/h	0	0	106	71	0	0				243	0	201
Grp Sat Flow(s),veh/h/ln	0	0	1699	1865	0	0				1851	0	1615
Q Serve(g_s), s	0.0	0.0	1.8	0.0	0.0	0.0				6.2	0.0	5.8
Cycle Q Clear(g_c), s	0.0	0.0	1.8	1.1	0.0	0.0				6.2	0.0	5.8
Prop In Lane	0.00		0.42	0.03		0.00				0.21		0.57
Lane Grp Cap(c), veh/h	0	0	913	1066	0	0				543	0	474
V/C Ratio(X)	0.00	0.00	0.12	0.07	0.00	0.00				0.45	0.00	0.42
Avail Cap(c_a), veh/h	0	0	913	1066	0	0				766	0	668
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(l)	0.00	0.00	1.00	1.00	0.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	6.6	6.4	0.0	0.0				16.7	0.0	16.5
Incr Delay (d2), s/veh	0.0	0.0	0.3	0.1	0.0	0.0				1.3	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.6	0.4	0.0	0.0				2.6	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	6.9	6.6	0.0	0.0				18.0	0.0	17.9
LnGrp LOS	A	A	A	A	A	A				B	A	B
Approach Vol, veh/h		106			71						444	
Approach Delay, s/veh		6.9			6.6						17.9	
Approach LOS		A			A						B	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		36.1		21.9		36.1						
Change Period (Y+Rc), s		4.9		4.9		4.9						
Max Green Setting (Gmax), s		24.0		24.0		20.1						
Max Q Clear Time (g_c+I1), s		3.8		8.2		3.1						
Green Ext Time (p_c), s		1.1		4.3		0.5						
Intersection Summary												
HCM 6th Ctrl Delay				14.7								
HCM 6th LOS				B								

NPMC Howard-Orange Mobility Assessment
 11: Fairmount Ave & Orange Ave

Existing with Project
 Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↑	↗		↑↑			↘	
Traffic Volume (veh/h)	0	0	64	0	0	102	0	868	56	0	59	5
Future Volume (veh/h)	0	0	64	0	0	102	0	868	56	0	59	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.91	1.00		0.90	1.00		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	0	0	70	0	0	111	0	943	61	0	64	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	0	2	2	0	2	2	0	2	2
Cap, veh/h	0	925	734	0	925	715	0	1228	79	0	621	49
Arrive On Green	0.00	0.00	0.49	0.00	0.00	0.49	0.00	0.37	0.37	0.00	0.37	0.37
Sat Flow, veh/h	0	1870	1484	0	1870	1444	0	3455	217	0	1700	133
Grp Volume(v), veh/h	0	0	70	0	0	111	0	498	506	0	0	69
Grp Sat Flow(s),veh/h/ln	0	1870	1484	0	1870	1444	0	1777	1802	0	0	1833
Q Serve(g_s), s	0.0	0.0	1.8	0.0	0.0	2.9	0.0	17.3	17.3	0.0	0.0	1.7
Cycle Q Clear(g_c), s	0.0	0.0	1.8	0.0	0.0	2.9	0.0	17.3	17.3	0.0	0.0	1.7
Prop In Lane	0.00		1.00	0.00		1.00	0.00		0.12	0.00		0.07
Lane Grp Cap(c), veh/h	0	925	734	0	925	715	0	649	658	0	0	670
V/C Ratio(X)	0.00	0.00	0.10	0.00	0.00	0.16	0.00	0.77	0.77	0.00	0.00	0.10
Avail Cap(c_a), veh/h	0	925	734	0	925	715	0	919	932	0	0	948
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	9.4	0.0	0.0	9.7	0.0	19.6	19.6	0.0	0.0	14.7
Incr Delay (d2), s/veh	0.0	0.0	0.3	0.0	0.0	0.5	0.0	2.5	2.5	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/lr0.0	0.0	0.0	0.6	0.0	0.0	1.0	0.0	7.0	7.1	0.0	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	9.6	0.0	0.0	10.1	0.0	22.1	22.1	0.0	0.0	14.7
LnGrp LOS	A	A	A	A	A	B	A	C	C	A	A	B
Approach Vol, veh/h		70			111			1004				69
Approach Delay, s/veh		9.6			10.1			22.1				14.7
Approach LOS		A			B			C				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		39.5		30.5		39.5		30.5				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		24.0		36.2		24.0		36.2				
Max Q Clear Time (g_c+I1), s		3.8		19.3		4.9		3.7				
Green Ext Time (p_c), s		0.2		6.2		0.3		0.3				

Intersection Summary

HCM 6th Ctrl Delay	19.9
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Intersection												
Int Delay, s/veh	6.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	0	5	13	40	69	0	16	0	25	36	8	47
Future Vol, veh/h	0	5	13	40	69	0	16	0	25	36	8	47
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	5	14	42	73	0	17	0	26	38	8	49

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	19	0	0	198	169	12	182	176	73
Stage 1	-	-	-	-	-	-	12	12	-	157	157	-
Stage 2	-	-	-	-	-	-	186	157	-	25	19	-
Critical Hdwy	-	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	1597	-	0	761	724	1069	779	717	989
Stage 1	0	-	-	-	-	0	1009	886	-	845	768	-
Stage 2	0	-	-	-	-	0	816	768	-	993	880	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1597	-	-	702	704	1069	744	698	989
Mov Cap-2 Maneuver	-	-	-	-	-	-	702	704	-	744	698	-
Stage 1	-	-	-	-	-	-	1009	886	-	845	747	-
Stage 2	-	-	-	-	-	-	746	747	-	969	880	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2.7	9.3	9.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	888	-	-	1597	-	848
HCM Lane V/C Ratio	0.049	-	-	0.026	-	0.113
HCM Control Delay (s)	9.3	-	-	7.3	0	9.8
HCM Lane LOS	A	-	-	A	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-	0.4

Intersection	
Intersection Delay, s/veh	9.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	18	14	18	9	81	57	46	175	28	45	105	24
Future Vol, veh/h	18	14	18	9	81	57	46	175	28	45	105	24
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	16	21	10	93	66	53	201	32	52	121	28
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.7	9.5	10.6	9.6
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	18%	36%	6%	26%
Vol Thru, %	70%	28%	55%	60%
Vol Right, %	11%	36%	39%	14%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	249	50	147	174
LT Vol	46	18	9	45
Through Vol	175	14	81	105
RT Vol	28	18	57	24
Lane Flow Rate	286	57	169	200
Geometry Grp	1	1	1	1
Degree of Util (X)	0.374	0.083	0.231	0.267
Departure Headway (Hd)	4.708	5.169	4.928	4.807
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	758	686	723	742
Service Time	2.769	3.255	2.999	2.875
HCM Lane V/C Ratio	0.377	0.083	0.234	0.27
HCM Control Delay	10.6	8.7	9.5	9.6
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	1.7	0.3	0.9	1.1

Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	56	45	20	30	55	24	0	0	0	6	28	53
Future Vol, veh/h	56	45	20	30	55	24	0	0	0	6	28	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	60	48	22	32	59	26	0	0	0	6	30	57

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	85	0	0	70	0	0	315	326	72
Stage 1	-	-	-	-	-	-	136	136	-
Stage 2	-	-	-	-	-	-	179	190	-
Critical Hdwy	4.12	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	1512	-	-	1531	-	-	678	592	990
Stage 1	-	-	-	-	-	-	890	784	-
Stage 2	-	-	-	-	-	-	852	743	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1512	-	-	1531	-	-	636	0	990
Mov Cap-2 Maneuver	-	-	-	-	-	-	636	0	-
Stage 1	-	-	-	-	-	-	835	0	-
Stage 2	-	-	-	-	-	-	852	0	-

Approach	EB	WB	SB
HCM Control Delay, s	3.5	2	9.3
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1512	-	-	1531	-	-	937
HCM Lane V/C Ratio	0.04	-	-	0.021	-	-	0.1
HCM Control Delay (s)	7.5	0	-	7.4	0	-	9.3
HCM Lane LOS	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-	-	0.3

NPMC Howard-Orange Mobility Assessment
 15: Euclid Ave & Orange Ave

Existing with Project
 Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↑	↗	↖	↑	↖	↖	↑	↗
Traffic Volume (veh/h)	0	0	75	0	0	123	0	358	42	0	160	54
Future Volume (veh/h)	0	0	75	0	0	123	0	358	42	0	160	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	82	0	0	134	0	389	46	0	174	59
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	0	406	344	0	406	344	286	645	76	286	525	178
Arrive On Green	0.00	0.00	0.22	0.00	0.00	0.22	0.00	0.39	0.39	0.00	0.39	0.39
Sat Flow, veh/h	0	1870	1585	0	1870	1585	1147	1641	194	954	1336	453
Grp Volume(v), veh/h	0	0	82	0	0	134	0	0	435	0	0	233
Grp Sat Flow(s),veh/h/ln	0	1870	1585	0	1870	1585	1147	0	1835	954	0	1789
Q Serve(g_s), s	0.0	0.0	1.1	0.0	0.0	1.8	0.0	0.0	4.7	0.0	0.0	2.3
Cycle Q Clear(g_c), s	0.0	0.0	1.1	0.0	0.0	1.8	0.0	0.0	4.7	0.0	0.0	2.3
Prop In Lane	0.00		1.00	0.00		1.00	1.00		0.11	1.00		0.25
Lane Grp Cap(c), veh/h	0	406	344	0	406	344	286	0	722	286	0	703
V/C Ratio(X)	0.00	0.00	0.24	0.00	0.00	0.39	0.00	0.00	0.60	0.00	0.00	0.33
Avail Cap(c_a), veh/h	0	2761	2340	0	2761	2340	2716	0	4608	2305	0	4491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	8.1	0.0	0.0	8.4	0.0	0.0	6.1	0.0	0.0	5.3
Incr Delay (d2), s/veh	0.0	0.0	0.4	0.0	0.0	0.7	0.0	0.0	0.8	0.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.3	0.0	0.0	0.5	0.0	0.0	0.9	0.0	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	8.5	0.0	0.0	9.1	0.0	0.0	6.9	0.0	0.0	5.6
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		82			134			435				233
Approach Delay, s/veh		8.5			9.1			6.9				5.6
Approach LOS		A			A			A				A
Timer - Assigned Phs		2		4		6			8			
Phs Duration (G+Y+Rc), s		10.4		14.8		10.4		14.8				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		37.1		63.1		37.1		63.1				
Max Q Clear Time (g_c+I1), s		3.1		4.3		3.8		6.7				
Green Ext Time (p_c), s		0.2		1.6		0.4		3.1				
Intersection Summary												
HCM 6th Ctrl Delay			7.0									
HCM 6th LOS			A									

Intersection												
Int Delay, s/veh	6.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	19	12	5	61	105	13	24	30	26	6	12	43
Future Vol, veh/h	19	12	5	61	105	13	24	30	26	6	12	43
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	14	6	72	124	15	28	35	31	7	14	51

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	139	0	0	20	0	0	369	344	17	370	340	132
Stage 1	-	-	-	-	-	-	61	61	-	276	276	-
Stage 2	-	-	-	-	-	-	308	283	-	94	64	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1445	-	-	1596	-	-	588	579	1062	587	582	917
Stage 1	-	-	-	-	-	-	950	844	-	730	682	-
Stage 2	-	-	-	-	-	-	702	677	-	913	842	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1445	-	-	1596	-	-	519	543	1062	516	545	917
Mov Cap-2 Maneuver	-	-	-	-	-	-	519	543	-	516	545	-
Stage 1	-	-	-	-	-	-	936	831	-	719	649	-
Stage 2	-	-	-	-	-	-	617	644	-	836	829	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	4			2.5			11.7			10.3		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	635	1445	-	-	1596	-	-	757
HCM Lane V/C Ratio	0.148	0.015	-	-	0.045	-	-	0.095
HCM Control Delay (s)	11.7	7.5	0	-	7.4	0	-	10.3
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.5	0	-	-	0.1	-	-	0.3

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	19	30	7	38	127	3	25	34	40	34	34	29
Future Vol, veh/h	19	30	7	38	127	3	25	34	40	34	34	29
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	33	8	42	141	3	28	38	44	38	38	32
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.1	9	8.2	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	25%	34%	23%	35%
Vol Thru, %	34%	54%	76%	35%
Vol Right, %	40%	12%	2%	30%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	99	56	168	97
LT Vol	25	19	38	34
Through Vol	34	30	127	34
RT Vol	40	7	3	29
Lane Flow Rate	110	62	187	108
Geometry Grp	1	1	1	1
Degree of Util (X)	0.136	0.08	0.235	0.136
Departure Headway (Hd)	4.454	4.644	4.541	4.538
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	805	771	791	791
Service Time	2.48	2.675	2.567	2.563
HCM Lane V/C Ratio	0.137	0.08	0.236	0.137
HCM Control Delay	8.2	8.1	9	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.3	0.9	0.5

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑			↑↑↑					↑			↑
Traffic Vol, veh/h	0	429	13	0	1367	26	0	0	66	0	0	10
Future Vol, veh/h	0	429	13	0	1367	26	0	0	66	0	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	466	14	0	1486	28	0	0	72	0	0	11

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	-	-	0	-	-	240	-	-	757
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	648	0	0	300
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	648	-	-	300
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0		0		11.2		17.5	
HCM LOS					B		C	

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	648	-	-	-	-	300
HCM Lane V/C Ratio	0.111	-	-	-	-	0.036
HCM Control Delay (s)	11.2	-	-	-	-	17.5
HCM Lane LOS	B	-	-	-	-	C
HCM 95th %tile Q(veh)	0.4	-	-	-	-	0.1

NPMC Howard-Orange Mobility Assessment
 19: 35th St & El Cajon Blvd

Existing with Project
 Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	449	30	19	1086	72	188	109	15	49	38	79
Future Volume (veh/h)	16	449	30	19	1086	72	188	109	15	49	38	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	463	31	20	1120	74	194	112	15	51	39	81
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	25	2920	907	30	2934	911	259	122	16	259	185	444
Arrive On Green	0.01	0.57	0.57	0.02	0.57	0.57	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	733	437	57	739	660	1585
Grp Volume(v), veh/h	16	463	31	20	1120	74	321	0	0	90	0	81
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1227	0	0	1398	0	1585
Q Serve(g_s), s	1.0	4.6	0.9	1.2	12.9	2.3	23.2	0.0	0.0	0.0	0.0	4.2
Cycle Q Clear(g_c), s	1.0	4.6	0.9	1.2	12.9	2.3	28.1	0.0	0.0	4.9	0.0	4.2
Prop In Lane	1.00		1.00	1.00		1.00	0.60		0.05	0.57		1.00
Lane Grp Cap(c), veh/h	25	2920	907	30	2934	911	397	0	0	444	0	444
V/C Ratio(X)	0.64	0.16	0.03	0.67	0.38	0.08	0.81	0.00	0.00	0.20	0.00	0.18
Avail Cap(c_a), veh/h	233	2920	907	233	2934	911	409	0	0	455	0	456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	53.0	10.9	10.1	52.8	12.5	10.3	40.3	0.0	0.0	29.6	0.0	29.5
Incr Delay (d2), s/veh	9.5	0.1	0.1	9.3	0.4	0.2	10.2	0.0	0.0	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.7	0.3	0.6	4.8	0.8	9.4	0.0	0.0	1.8	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.5	11.0	10.2	62.1	12.9	10.4	50.5	0.0	0.0	29.7	0.0	29.6
LnGrp LOS	E	B	B	E	B	B	D	A	A	C	A	C
Approach Vol, veh/h		510			1214			321				171
Approach Delay, s/veh		12.6			13.6			50.5				29.7
Approach LOS		B			B			D				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.9	66.9		35.1	6.2	66.7		35.1				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	14.1	48.6		31.1	14.1	48.6		31.1				
Max Q Clear Time (g_c+I1), s	3.0	14.9		30.1	3.2	6.6		6.9				
Green Ext Time (p_c), s	0.0	6.6		0.2	0.0	2.3		0.5				

Intersection Summary

HCM 6th Ctrl Delay	19.9
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Intersection												
Int Delay, s/veh	1.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑			↑↑↑					↑			↑
Traffic Vol, veh/h	0	1001	19	0	1545	38	0	0	146	0	0	71
Future Vol, veh/h	0	1001	19	0	1545	38	0	0	146	0	0	71
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1088	21	0	1679	41	0	0	159	0	0	77

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	-	-	0	-	-	555	-	-	860
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	407	0	0	257
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	407	-	-	257
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	19.4	24.9
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	407	-	-	-	-	257
HCM Lane V/C Ratio	0.39	-	-	-	-	0.3
HCM Control Delay (s)	19.4	-	-	-	-	24.9
HCM Lane LOS	C	-	-	-	-	C
HCM 95th %tile Q(veh)	1.8	-	-	-	-	1.2

NPMC Howard-Orange Mobility Assessment
 21: Fairmount Ave & El Cajon Blvd

Existing with Project
 Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	217	756	49	0	1403	338	134	783	38	0	0	0
Future Volume (veh/h)	217	756	49	0	1403	338	134	783	38	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1900	1870	1900			
Adj Flow Rate, veh/h	226	788	51	0	1461	352	140	816	40			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	2	2	0	2	2	0	2	0			
Cap, veh/h	232	2313	1032	0	1384	324	132	813	42			
Arrive On Green	0.13	0.65	0.65	0.00	0.48	0.48	0.27	0.27	0.27			
Sat Flow, veh/h	1781	3554	1585	0	2952	668	495	3037	155			
Grp Volume(v), veh/h	226	788	51	0	891	922	522	0	474			
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	0	1777	1750	1846	0	1842			
Q Serve(g_s), s	15.2	11.9	1.4	0.0	58.1	58.1	32.1	0.0	30.5			
Cycle Q Clear(g_c), s	15.2	11.9	1.4	0.0	58.1	58.1	32.1	0.0	30.5			
Prop In Lane	1.00		1.00	0.00		0.38	0.27		0.08			
Lane Grp Cap(c), veh/h	232	2313	1032	0	860	847	494	0	493			
V/C Ratio(X)	0.98	0.34	0.05	0.00	1.04	1.09	1.06	0.00	0.96			
Avail Cap(c_a), veh/h	232	2313	1032	0	860	847	494	0	493			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.80	0.80	0.72	0.00	0.72			
Uniform Delay (d), s/veh	52.0	9.4	7.6	0.0	31.0	31.0	44.0	0.0	43.3			
Incr Delay (d2), s/veh	52.0	0.4	0.1	0.0	37.1	54.8	50.5	0.0	25.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	10.1	4.6	0.5	0.0	32.7	36.4	21.4	0.0	17.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	104.0	9.8	7.6	0.0	68.1	85.7	94.4	0.0	68.4			
LnGrp LOS	F	A	A	A	F	F	F	A	E			
Approach Vol, veh/h		1065			1813			996				
Approach Delay, s/veh		29.7			77.1			82.0				
Approach LOS		C			E			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		83.0			20.0	63.0		37.0				
Change Period (Y+Rc), s		4.9			4.4	4.9		4.9				
Max Green Setting (Gmax), s		78.1			15.6	58.1		32.1				
Max Q Clear Time (g_c+I1), s		13.9			17.2	60.1		34.1				
Green Ext Time (p_c), s		4.3			0.0	0.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	65.3
HCM 6th LOS	E

Notes

User approved ignoring U-Turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗		↖	↖		↖	↖	
Traffic Volume (veh/h)	32	607	55	67	1205	105	269	179	40	33	84	48
Future Volume (veh/h)	32	607	55	67	1205	105	269	179	40	33	84	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	34	639	58	71	1268	111	283	188	42	35	88	51
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	60	1726	156	91	1788	156	369	454	101	297	341	198
Arrive On Green	0.03	0.52	0.52	0.05	0.54	0.54	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1781	3295	299	1781	3307	289	1250	1480	331	1151	1111	644
Grp Volume(v), veh/h	34	344	353	71	680	699	283	0	230	35	0	139
Grp Sat Flow(s),veh/h/ln	1781	1777	1817	1781	1777	1818	1250	0	1811	1151	0	1754
Q Serve(g_s), s	2.3	13.7	13.8	4.7	34.1	34.4	26.4	0.0	12.1	3.0	0.0	7.2
Cycle Q Clear(g_c), s	2.3	13.7	13.8	4.7	34.1	34.4	33.6	0.0	12.1	15.1	0.0	7.2
Prop In Lane	1.00		0.16	1.00		0.16	1.00		0.18	1.00		0.37
Lane Grp Cap(c), veh/h	60	931	952	91	961	984	369	0	556	297	0	538
V/C Ratio(X)	0.56	0.37	0.37	0.78	0.71	0.71	0.77	0.00	0.41	0.12	0.00	0.26
Avail Cap(c_a), veh/h	105	931	952	150	961	984	497	0	741	415	0	718
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	1.00	1.00	1.00	0.92	0.00	0.92	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.1	16.9	16.9	56.3	20.5	20.5	44.0	0.0	33.0	39.0	0.0	31.3
Incr Delay (d2), s/veh	3.0	1.1	1.1	5.4	4.4	4.4	3.0	0.0	0.2	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	5.8	6.0	2.3	14.8	15.3	8.4	0.0	5.3	0.9	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.1	18.0	18.0	61.7	24.9	24.9	46.9	0.0	33.2	39.1	0.0	31.4
LnGrp LOS	E	B	B	E	C	C	D	A	C	D	A	C
Approach Vol, veh/h		731			1450			513				174
Approach Delay, s/veh		19.9			26.7			40.8				32.9
Approach LOS		B			C			D				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	67.8			41.7	8.5	69.8		41.7				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	46.6			49.1	7.1	46.6		49.1				
Max Q Clear Time (g_c+1/3), s	15.8			17.1	4.3	36.4		35.6				
Green Ext Time (p_c), s	0.0	5.7		0.6	0.0	6.7		1.2				
Intersection Summary												
HCM 6th Ctrl Delay												27.9
HCM 6th LOS												C

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	22	0	119	107	0
Future Vol, veh/h	20	22	0	119	107	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	27	0	145	130	0
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB	EB	
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.6	8	7.9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	48%	0%
Vol Thru, %	100%	0%	100%
Vol Right, %	0%	52%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	119	42	107
LT Vol	0	20	0
Through Vol	119	0	107
RT Vol	0	22	0
Lane Flow Rate	145	51	130
Geometry Grp	1	1	1
Degree of Util (X)	0.166	0.061	0.15
Departure Headway (Hd)	4.124	4.314	4.135
Convergence, Y/N	Yes	Yes	Yes
Cap	863	835	860
Service Time	2.183	2.314	2.197
HCM Lane V/C Ratio	0.168	0.061	0.151
HCM Control Delay	8	7.6	7.9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.6	0.2	0.5

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	11	11	17	0	0	0	0	895	33	17	94	0
Future Vol, veh/h	11	11	17	0	0	0	0	895	33	17	94	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	11	18	0	0	0	0	932	34	18	98	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	600	1100	98	-	0	0	966	0	0
Stage 1	134	134	-	-	-	-	-	-	-
Stage 2	466	966	-	-	-	-	-	-	-
Critical Hdwy	6.63	6.53	6.23	-	-	-	4.13	-	-
Critical Hdwy Stg 1	5.43	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.83	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	-	-	-	2.219	-	-
Pot Cap-1 Maneuver	448	212	957	0	-	-	711	-	0
Stage 1	892	785	-	0	-	-	-	-	0
Stage 2	599	332	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	436	0	957	-	-	-	711	-	-
Mov Cap-2 Maneuver	436	0	-	-	-	-	-	-	-
Stage 1	868	0	-	-	-	-	-	-	-
Stage 2	599	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.9	0	1.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	651	711	-
HCM Lane V/C Ratio	-	-	0.062	0.025	-
HCM Control Delay (s)	-	-	10.9	10.2	0
HCM Lane LOS	-	-	B	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

NPMC Howard-Orange Mobility Assessment
 25: Euclid Ave & Polk Ave

Existing with Project
 Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔						↔			↔	
Traffic Volume (veh/h)	24	17	34	0	0	0	0	460	18	18	236	0
Future Volume (veh/h)	24	17	34	0	0	0	0	460	18	18	236	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	26	18	37				0	495	19	19	254	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	0				0	2	2	2	2	0
Cap, veh/h	39	27	56				0	839	32	203	830	0
Arrive On Green	0.07	0.07	0.07				0.00	0.47	0.47	0.47	0.47	0.00
Sat Flow, veh/h	547	378	778				0	1789	69	48	1770	0
Grp Volume(v), veh/h	81	0	0				0	0	514	273	0	0
Grp Sat Flow(s),veh/h/ln	1703	0	0				0	0	1858	1817	0	0
Q Serve(g_s), s	1.0	0.0	0.0				0.0	0.0	4.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.0	0.0	0.0				0.0	0.0	4.3	1.9	0.0	0.0
Prop In Lane	0.32		0.46				0.00		0.04	0.07		0.00
Lane Grp Cap(c), veh/h	122	0	0				0	0	871	1033	0	0
V/C Ratio(X)	0.67	0.00	0.00				0.00	0.00	0.59	0.26	0.00	0.00
Avail Cap(c_a), veh/h	2803	0	0				0	0	4801	4705	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.7	0.0	0.0				0.0	0.0	4.2	3.5	0.0	0.0
Incr Delay (d2), s/veh	2.3	0.0	0.0				0.0	0.0	0.5	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0				0.0	0.0	0.3	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.0	0.0	0.0				0.0	0.0	4.7	3.6	0.0	0.0
LnGrp LOS	B	A	A				A	A	A	A	A	A
Approach Vol, veh/h		81						514			273	
Approach Delay, s/veh		12.0						4.7			3.6	
Approach LOS		B						A			A	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		14.9		6.4				14.9				
Change Period (Y+Rc), s		4.9		4.9				4.9				
Max Green Setting (Gmax), s		55.1		35.1				55.1				
Max Q Clear Time (g_c+I1), s		6.3		3.0				3.9				
Green Ext Time (p_c), s		3.3		0.3				1.6				
Intersection Summary												
HCM 6th Ctrl Delay			5.0									
HCM 6th LOS			A									

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	16	23	11	0	0	0	0	56	6	3	79	0
Future Vol, veh/h	16	23	11	0	0	0	0	56	6	3	79	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	28	14	0	0	0	0	69	7	4	98	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	179	182	98	-	0	0	76	0	0
Stage 1	106	106	-	-	-	-	-	-	-
Stage 2	73	76	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	-	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	811	712	958	0	-	-	1523	-	0
Stage 1	918	807	-	0	-	-	-	-	0
Stage 2	950	832	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	809	0	958	-	-	-	1523	-	-
Mov Cap-2 Maneuver	809	0	-	-	-	-	-	-	-
Stage 1	915	0	-	-	-	-	-	-	-
Stage 2	950	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.5	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	864	1523	-
HCM Lane V/C Ratio	-	-	0.071	0.002	-
HCM Control Delay (s)	-	-	9.5	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	258	14	18	592	63	113	36	19	83	27	29
Future Volume (veh/h)	26	258	14	18	592	63	113	36	19	83	27	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	263	14	18	604	64	115	37	19	85	28	30
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	533	1262	67	842	1192	126	228	53	24	201	59	47
Arrive On Green	0.72	0.72	0.72	0.72	0.72	0.72	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	769	1760	94	1102	1662	176	1008	380	173	843	423	336
Grp Volume(v), veh/h	27	0	277	18	0	668	171	0	0	143	0	0
Grp Sat Flow(s),veh/h/ln	769	0	1853	1102	0	1839	1561	0	0	1601	0	0
Q Serve(g_s), s	1.1	0.0	3.4	0.4	0.0	11.0	1.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	12.1	0.0	3.4	3.8	0.0	11.0	7.0	0.0	0.0	5.6	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.10	0.67		0.11	0.59		0.21
Lane Grp Cap(c), veh/h	533	0	1329	842	0	1319	305	0	0	307	0	0
V/C Ratio(X)	0.05	0.00	0.21	0.02	0.00	0.51	0.56	0.00	0.00	0.47	0.00	0.00
Avail Cap(c_a), veh/h	533	0	1329	842	0	1319	512	0	0	516	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.0	0.0	3.2	3.8	0.0	4.3	28.2	0.0	0.0	27.6	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.4	0.0	0.0	1.4	0.6	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.9	0.1	0.0	3.1	2.6	0.0	0.0	2.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.1	0.0	3.6	3.9	0.0	5.7	28.8	0.0	0.0	28.0	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	C	A	A	C	A	A
Approach Vol, veh/h		304			686			171				143
Approach Delay, s/veh		3.9			5.6			28.8				28.0
Approach LOS		A			A			C				C
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		53.7		14.3		53.7		14.3				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		39.1		19.1		39.1		19.1				
Max Q Clear Time (g_c+l1), s		14.1		7.6		13.0		9.0				
Green Ext Time (p_c), s		2.5		0.4		7.6		0.4				

Intersection Summary

HCM 6th Ctrl Delay	10.7
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	391	67	84	560	151	201	609	55	92	87	10
Future Volume (veh/h)	119	391	67	84	560	151	201	609	55	92	87	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	124	407	70	88	583	157	209	634	57	96	91	10
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	152	561	96	596	1215	326	240	765	69	121	274	30
Arrive On Green	0.09	0.18	0.18	0.33	0.44	0.44	0.13	0.23	0.23	0.07	0.17	0.17
Sat Flow, veh/h	1781	3036	518	1781	2769	744	1781	3298	296	1781	1656	182
Grp Volume(v), veh/h	124	237	240	88	373	367	209	341	350	96	0	101
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1781	1777	1736	1781	1777	1817	1781	0	1838
Q Serve(g_s), s	7.3	13.3	13.5	3.7	15.8	15.9	12.2	19.3	19.4	5.6	0.0	5.1
Cycle Q Clear(g_c), s	7.3	13.3	13.5	3.7	15.8	15.9	12.2	19.3	19.4	5.6	0.0	5.1
Prop In Lane	1.00		0.29	1.00		0.43	1.00		0.16	1.00		0.10
Lane Grp Cap(c), veh/h	152	329	329	596	780	762	240	412	422	121	0	304
V/C Ratio(X)	0.81	0.72	0.73	0.15	0.48	0.48	0.87	0.83	0.83	0.79	0.00	0.33
Avail Cap(c_a), veh/h	229	588	588	596	780	762	329	521	533	195	0	400
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.6	40.6	40.7	24.7	21.1	21.2	44.9	38.7	38.7	48.7	0.0	39.1
Incr Delay (d2), s/veh	7.5	12.9	13.4	0.0	2.1	2.2	13.3	8.8	8.8	4.4	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	7.0	7.1	1.6	6.9	6.8	6.2	9.3	9.6	2.6	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.2	53.5	54.1	24.7	23.2	23.3	58.3	47.5	47.5	53.0	0.0	39.8
LnGrp LOS	E	D	D	C	C	C	E	D	D	D	A	D
Approach Vol, veh/h		601			828			900			197	
Approach Delay, s/veh		54.1			23.4			50.0			46.3	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	40.4	24.5	18.7	22.4	13.5	51.4	11.6	29.5				
Change Period (Y+Rc), s	4.9	* 4.9	4.4	4.9	4.4	4.9	4.4	4.9				
Max Green Setting (Gmax), s	30.6	* 35	19.6	23.1	13.6	31.1	11.6	31.1				
Max Q Clear Time (g_c+1/3), s	15.7	15.5	14.2	7.1	9.3	17.9	7.6	21.4				
Green Ext Time (p_c), s	0.0	4.1	0.1	0.4	0.1	5.1	0.0	3.2				

Intersection Summary

HCM 6th Ctrl Delay	42.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	63	292	35	176	757	74	152	342	112	38	239	0
Future Volume (veh/h)	63	292	35	176	757	74	152	342	112	38	239	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	68	314	38	189	814	80	163	368	120	41	257	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	413	1323	159	223	987	97	301	418	136	123	579	0
Arrive On Green	0.23	0.41	0.41	0.13	0.30	0.30	0.31	0.31	0.31	0.31	0.31	0.00
Sat Flow, veh/h	1781	3195	383	1781	3268	321	1123	1351	440	908	1870	0
Grp Volume(v), veh/h	68	173	179	189	443	451	163	0	488	41	257	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1801	1781	1777	1813	1123	0	1791	908	1870	0
Q Serve(g_s), s	2.9	6.0	6.1	9.8	21.8	21.8	12.8	0.0	24.3	4.2	10.3	0.0
Cycle Q Clear(g_c), s	2.9	6.0	6.1	9.8	21.8	21.8	23.1	0.0	24.3	28.5	10.3	0.0
Prop In Lane	1.00		0.21	1.00		0.18	1.00		0.25	1.00		0.00
Lane Grp Cap(c), veh/h	413	736	746	223	537	547	301	0	554	123	579	0
V/C Ratio(X)	0.16	0.24	0.24	0.85	0.82	0.82	0.54	0.00	0.88	0.33	0.44	0.00
Avail Cap(c_a), veh/h	413	736	746	296	758	773	301	0	554	123	579	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.98	0.98	0.00
Uniform Delay (d), s/veh	28.8	17.9	17.9	40.2	30.5	30.5	35.2	0.0	30.8	44.3	26.0	0.0
Incr Delay (d2), s/veh	0.1	0.8	0.8	12.7	13.5	13.2	1.8	0.0	15.0	2.2	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.5	2.6	5.0	11.1	11.2	3.6	0.0	12.5	1.0	4.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.9	18.6	18.7	53.0	44.0	43.7	37.0	0.0	45.8	46.5	26.7	0.0
LnGrp LOS	C	B	B	D	D	D	D	A	D	D	C	A
Approach Vol, veh/h		420			1083			651			298	
Approach Delay, s/veh		20.3			45.4			43.6			29.4	
Approach LOS		C			D			D			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.2	43.8		34.0	26.7	33.3		34.0				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.9	* 4.9		4.9				
Max Green Setting (Gmax), s	15.6	35.1		29.1	10.6	* 40		29.1				
Max Q Clear Time (g_c+fl), s	11.8	8.1		30.5	4.9	23.8		26.3				
Green Ext Time (p_c), s	0.1	2.7		0.0	0.0	4.6		1.0				

Intersection Summary

HCM 6th Ctrl Delay	38.7
HCM 6th LOS	D

Notes

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

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	
Traffic Vol, veh/h	22	520	949	20	7	67
Future Vol, veh/h	22	520	949	20	7	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	185	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	525	959	20	7	68

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	979	0	-	0	1276 490
Stage 1	-	-	-	-	969 -
Stage 2	-	-	-	-	307 -
Critical Hdwy	4.14	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	2.22	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	701	-	-	-	158 524
Stage 1	-	-	-	-	329 -
Stage 2	-	-	-	-	719 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	701	-	-	-	151 524
Mov Cap-2 Maneuver	-	-	-	-	151 -
Stage 1	-	-	-	-	315 -
Stage 2	-	-	-	-	719 -

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	15.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	701	-	-	-	425
HCM Lane V/C Ratio	0.032	-	-	-	0.176
HCM Control Delay (s)	10.3	0.2	-	-	15.3
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (veh/h)	565	25	24	1303	194	31
Future Volume (veh/h)	565	25	24	1303	194	31
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1900	1900
Adj Flow Rate, veh/h	614	27	26	1416	211	34
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	0	0
Cap, veh/h	2656	117	619	2722	238	38
Arrive On Green	0.77	0.77	0.77	0.77	0.16	0.16
Sat Flow, veh/h	3561	152	788	3647	1502	242
Grp Volume(v), veh/h	314	327	26	1416	246	0
Grp Sat Flow(s),veh/h/ln	1777	1843	788	1777	1752	0
Q Serve(g_s), s	6.5	6.6	1.3	20.2	17.9	0.0
Cycle Q Clear(g_c), s	6.5	6.6	7.8	20.2	17.9	0.0
Prop In Lane		0.08	1.00		0.86	0.14
Lane Grp Cap(c), veh/h	1361	1412	619	2722	278	0
V/C Ratio(X)	0.23	0.23	0.04	0.52	0.88	0.00
Avail Cap(c_a), veh/h	1361	1412	619	2722	862	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.95	0.95	0.63	0.63	1.00	0.00
Uniform Delay (d), s/veh	4.3	4.3	5.4	5.9	53.5	0.0
Incr Delay (d2), s/veh	0.4	0.4	0.0	0.1	9.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	2.4	0.2	6.6	8.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	4.7	4.7	5.5	6.0	62.7	0.0
LnGrp LOS	A	A	A	A	E	A
Approach Vol, veh/h	641			1442	246	
Approach Delay, s/veh	4.7			6.0	62.7	
Approach LOS	A			A	E	
Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		104.5			104.5	25.5
Change Period (Y+Rc), s		4.9			4.9	4.9
Max Green Setting (Gmax), s		56.2			56.2	64.0
Max Q Clear Time (g_c+I1), s		8.6			22.2	19.9
Green Ext Time (p_c), s		4.5			14.7	0.8
Intersection Summary						
HCM 6th Ctrl Delay			11.6			
HCM 6th LOS			B			

Intersection				
Intersection Delay, s/veh	4.3			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	80	301	83	82
Demand Flow Rate, veh/h	82	308	84	84
Vehicles Circulating, veh/h	84	61	108	92
Vehicles Exiting, veh/h	92	131	58	277
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	3.4	4.9	3.5	3.5
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	82	308	84	84
Cap Entry Lane, veh/h	1267	1297	1236	1256
Entry HV Adj Factor	0.979	0.978	0.986	0.975
Flow Entry, veh/h	80	301	83	82
Cap Entry, veh/h	1241	1268	1218	1224
V/C Ratio	0.065	0.238	0.068	0.067
Control Delay, s/veh	3.4	4.9	3.5	3.5
LOS	A	A	A	A
95th %tile Queue, veh	0	1	0	0

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↖	↗		↔	
Traffic Vol, veh/h	1	136	39	42	115	3	18	1	52	0	0	1
Future Vol, veh/h	1	136	39	42	115	3	18	1	52	0	0	1
Conflicting Peds, #/hr	9	0	9	8	0	8	9	0	8	8	0	9
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	70	-	-	100	-	-	-	-	40	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	153	44	47	129	3	20	1	58	0	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	141	0	0	206	0	0	420	421	192	449	442	149
Stage 1	-	-	-	-	-	-	186	186	-	234	234	-
Stage 2	-	-	-	-	-	-	234	235	-	215	208	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1442	-	-	1365	-	-	544	524	850	520	510	898
Stage 1	-	-	-	-	-	-	816	746	-	769	711	-
Stage 2	-	-	-	-	-	-	769	710	-	787	730	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1430	-	-	1353	-	-	520	496	836	462	483	883
Mov Cap-2 Maneuver	-	-	-	-	-	-	520	496	-	462	483	-
Stage 1	-	-	-	-	-	-	809	739	-	762	680	-
Stage 2	-	-	-	-	-	-	735	679	-	725	723	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			2			10.3			9.1		
HCM LOS							B			A		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	519	836	1430	-	-	1353	-	-	883
HCM Lane V/C Ratio	0.041	0.07	0.001	-	-	0.035	-	-	0.001
HCM Control Delay (s)	12.2	9.6	7.5	-	-	7.8	-	-	9.1
HCM Lane LOS	B	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0.2	0	-	-	0.1	-	-	0

NPMC Howard-Orange Mobility Assessment
2: Alley/33rd St & Orange Ave

Existing with Project
Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Volume (veh/h)	86	110	0	3	79	145	1	0	0	251	5	124
Future Volume (veh/h)	86	110	0	3	79	145	1	0	0	251	5	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	93	120	0	3	86	158	1	0	0	273	5	135
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	353	381	0	129	208	373	6	0	0	413	13	356
Arrive On Green	0.35	0.35	0.00	0.35	0.35	0.35	0.00	0.00	0.00	0.23	0.23	0.23
Sat Flow, veh/h	495	1094	0	6	598	1071	1781	0	0	1781	57	1537
Grp Volume(v), veh/h	213	0	0	247	0	0	1	0	0	273	0	140
Grp Sat Flow(s),veh/h/ln	1588	0	0	1675	0	0	1781	0	0	1781	0	1594
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0	2.1
Cycle Q Clear(g_c), s	2.4	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	4.0	0.0	2.1
Prop In Lane	0.44		0.00	0.01		0.64	1.00		0.00	1.00		0.96
Lane Grp Cap(c), veh/h	734	0	0	710	0	0	6	0	0	413	0	370
V/C Ratio(X)	0.29	0.00	0.00	0.35	0.00	0.00	0.16	0.00	0.00	0.66	0.00	0.38
Avail Cap(c_a), veh/h	1394	0	0	1466	0	0	1427	0	0	1427	0	1277
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.9	0.0	0.0	7.1	0.0	0.0	14.3	0.0	0.0	10.0	0.0	9.3
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.2	0.0	0.0	4.4	0.0	0.0	0.7	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.0	0.0	0.0	7.3	0.0	0.0	18.7	0.0	0.0	10.7	0.0	9.5
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	A
Approach Vol, veh/h		213			247			1			413	
Approach Delay, s/veh		7.0			7.3			18.7			10.3	
Approach LOS		A			A			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		14.0		4.0		14.0		10.7				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		23.0		23.0		23.0		23.0				
Max Q Clear Time (g_c+I1), s		4.4		2.0		5.2		6.0				
Green Ext Time (p_c), s		0.9		0.0		1.1		0.9				
Intersection Summary												
HCM 6th Ctrl Delay				8.7								
HCM 6th LOS				A								

Intersection												
Int Delay, s/veh	5.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	61	112	88	12	29	12	83	2	39	2	7	29
Future Vol, veh/h	61	112	88	12	29	12	83	2	39	2	7	29
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	65	119	94	13	31	13	88	2	41	2	7	31

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	44	0	0	213	0	0	379	366	166	382	407	38
Stage 1	-	-	-	-	-	-	296	296	-	64	64	-
Stage 2	-	-	-	-	-	-	83	70	-	318	343	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1564	-	-	1357	-	-	579	562	878	576	533	1034
Stage 1	-	-	-	-	-	-	712	668	-	947	842	-
Stage 2	-	-	-	-	-	-	925	837	-	693	637	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1564	-	-	1357	-	-	531	529	878	523	502	1034
Mov Cap-2 Maneuver	-	-	-	-	-	-	531	529	-	523	502	-
Stage 1	-	-	-	-	-	-	678	636	-	902	834	-
Stage 2	-	-	-	-	-	-	880	829	-	626	606	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.7			1.7			12.6			9.6		
HCM LOS							B			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	606	1564	-	-	1357	-	-	829
HCM Lane V/C Ratio	0.218	0.041	-	-	0.009	-	-	0.049
HCM Control Delay (s)	12.6	7.4	0	-	7.7	0	-	9.6
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.8	0.1	-	-	0	-	-	0.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↑	↗		↑			↑	
Traffic Volume (veh/h)	0	0	143	0	0	83	0	78	30	0	116	39
Future Volume (veh/h)	0	0	143	0	0	83	0	78	30	0	116	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.96	1.00		0.98	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	0	0	155	0	0	90	0	85	33	0	126	42
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	0	2	2	0	2	2	0	2	2
Cap, veh/h	0	652	522	0	652	530	0	455	177	0	473	158
Arrive On Green	0.00	0.00	0.35	0.00	0.00	0.35	0.00	0.36	0.36	0.00	0.36	0.36
Sat Flow, veh/h	0	1870	1498	0	1870	1520	0	1273	494	0	1321	440
Grp Volume(v), veh/h	0	0	155	0	0	90	0	0	118	0	0	168
Grp Sat Flow(s),veh/h/ln	0	1870	1498	0	1870	1520	0	0	1767	0	0	1761
Q Serve(g_s), s	0.0	0.0	2.5	0.0	0.0	1.4	0.0	0.0	1.5	0.0	0.0	2.3
Cycle Q Clear(g_c), s	0.0	0.0	2.5	0.0	0.0	1.4	0.0	0.0	1.5	0.0	0.0	2.3
Prop In Lane	0.00		1.00	0.00		1.00	0.00		0.28	0.00		0.25
Lane Grp Cap(c), veh/h	0	652	522	0	652	530	0	0	632	0	0	630
V/C Ratio(X)	0.00	0.00	0.30	0.00	0.00	0.17	0.00	0.00	0.19	0.00	0.00	0.27
Avail Cap(c_a), veh/h	0	1457	1167	0	1457	1184	0	0	1324	0	0	1341
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	7.9	0.0	0.0	7.5	0.0	0.0	7.4	0.0	0.0	7.6
Incr Delay (d2), s/veh	0.0	0.0	0.3	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.6	0.0	0.0	0.3	0.0	0.0	0.4	0.0	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	8.2	0.0	0.0	7.7	0.0	0.0	7.5	0.0	0.0	7.8
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		155			90			118				168
Approach Delay, s/veh		8.2			7.7			7.5				7.8
Approach LOS		A			A			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		16.5		16.8		16.5		16.8				
Change Period (Y+Rc), s		4.9		4.9		4.9		* 4.9				
Max Green Setting (Gmax), s		26.0		25.0		26.0		* 25				
Max Q Clear Time (g_c+I1), s		4.5		3.5		3.4		4.3				
Green Ext Time (p_c), s		0.5		0.6		0.2		0.9				

Intersection Summary

HCM 6th Ctrl Delay	7.8
HCM 6th LOS	A

Notes

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

Intersection												
Int Delay, s/veh	6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	23	10	4	63	50	19	19	12	19	14	4	22
Future Vol, veh/h	23	10	4	63	50	19	19	12	19	14	4	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	11	4	71	56	21	21	13	21	16	4	25

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	77	0	0	15	0	0	288	284	13	291	276	67
Stage 1	-	-	-	-	-	-	65	65	-	209	209	-
Stage 2	-	-	-	-	-	-	223	219	-	82	67	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1522	-	-	1603	-	-	664	625	1067	661	632	997
Stage 1	-	-	-	-	-	-	946	841	-	793	729	-
Stage 2	-	-	-	-	-	-	780	722	-	926	839	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1522	-	-	1603	-	-	614	586	1067	606	593	997
Mov Cap-2 Maneuver	-	-	-	-	-	-	614	586	-	606	593	-
Stage 1	-	-	-	-	-	-	930	827	-	780	695	-
Stage 2	-	-	-	-	-	-	721	689	-	878	825	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	4.6			3.5			10.4			10		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	722	1522	-	-	1603	-	-	771
HCM Lane V/C Ratio	0.078	0.017	-	-	0.044	-	-	0.058
HCM Control Delay (s)	10.4	7.4	0	-	7.3	0	-	10
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0.1	-	-	0.2

Intersection												
Int Delay, s/veh	5.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	65	16	23	82	49	12	5	88	70	8	20
Future Vol, veh/h	6	65	16	23	82	49	12	5	88	70	8	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	71	17	25	89	53	13	5	96	76	9	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	142	0	0	88	0	0	275	286	80	310	268	116
Stage 1	-	-	-	-	-	-	94	94	-	166	166	-
Stage 2	-	-	-	-	-	-	181	192	-	144	102	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1441	-	-	1508	-	-	677	623	980	642	638	936
Stage 1	-	-	-	-	-	-	913	817	-	836	761	-
Stage 2	-	-	-	-	-	-	821	742	-	859	811	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1441	-	-	1508	-	-	643	609	980	566	623	936
Mov Cap-2 Maneuver	-	-	-	-	-	-	643	609	-	566	623	-
Stage 1	-	-	-	-	-	-	908	813	-	832	747	-
Stage 2	-	-	-	-	-	-	778	729	-	766	807	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			1.1			9.6			12		
HCM LOS							A			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	900	1441	-	-	1508	-	-	621
HCM Lane V/C Ratio	0.127	0.005	-	-	0.017	-	-	0.172
HCM Control Delay (s)	9.6	7.5	0	-	7.4	0	-	12
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0	-	-	0.1	-	-	0.6

Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	28	140	18	33	82	51	35	16	49	11	11	28
Future Vol, veh/h	28	140	18	33	82	51	35	16	49	11	11	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	152	20	36	89	55	38	17	53	12	12	30

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	144	0	0	172	0	0	432	438	162	446	421	117
Stage 1	-	-	-	-	-	-	222	222	-	189	189	-
Stage 2	-	-	-	-	-	-	210	216	-	257	232	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1438	-	-	1405	-	-	534	512	883	523	524	935
Stage 1	-	-	-	-	-	-	780	720	-	813	744	-
Stage 2	-	-	-	-	-	-	792	724	-	748	713	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1438	-	-	1405	-	-	488	486	883	460	498	935
Mov Cap-2 Maneuver	-	-	-	-	-	-	488	486	-	460	498	-
Stage 1	-	-	-	-	-	-	762	703	-	794	723	-
Stage 2	-	-	-	-	-	-	732	704	-	670	697	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.1			1.5			12			11		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	624	1438	-	-	1405	-	-	658
HCM Lane V/C Ratio	0.174	0.021	-	-	0.026	-	-	0.083
HCM Control Delay (s)	12	7.6	0	-	7.6	0	-	11
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.6	0.1	-	-	0.1	-	-	0.3

NPMC Howard-Orange Mobility Assessment
8: Marlborough Ave S/Alley & Orange Ave

Existing with Project
Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	0	153	81	75	142	0	71	0	43	2	0	1
Future Volume (veh/h)	0	153	81	75	142	0	71	0	43	2	0	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	166	88	82	154	0	77	0	47	2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	367	195	392	355	0	440	0	60	474	0	61
Arrive On Green	0.00	0.32	0.32	0.32	0.32	0.00	0.11	0.00	0.11	0.11	0.00	0.11
Sat Flow, veh/h	0	1151	610	338	1111	0	919	0	561	1148	0	574
Grp Volume(v), veh/h	0	0	254	236	0	0	124	0	0	3	0	0
Grp Sat Flow(s),veh/h/ln	0	0	1761	1450	0	0	1481	0	0	1722	0	0
Q Serve(g_s), s	0.0	0.0	2.0	0.5	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	2.0	2.4	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.00		0.35	0.35		0.00	0.62		0.38	0.67		0.33
Lane Grp Cap(c), veh/h	0	0	562	747	0	0	499	0	0	535	0	0
V/C Ratio(X)	0.00	0.00	0.45	0.32	0.00	0.00	0.25	0.00	0.00	0.01	0.00	0.00
Avail Cap(c_a), veh/h	0	0	2479	2242	0	0	1901	0	0	2308	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	4.6	4.6	0.0	0.0	7.4	0.0	0.0	6.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.3	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.2	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	4.9	4.7	0.0	0.0	7.5	0.0	0.0	6.8	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		254			236			124				3
Approach Delay, s/veh		4.9			4.7			7.5				6.8
Approach LOS		A			A			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		10.3		6.7		10.3		6.7				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		24.0		23.0		22.2		18.0				
Max Q Clear Time (g_c+I1), s		4.0		2.0		4.4		3.4				
Green Ext Time (p_c), s		1.1		0.0		1.0		0.4				
Intersection Summary												
HCM 6th Ctrl Delay				5.4								
HCM 6th LOS				A								

Intersection												
Int Delay, s/veh	6.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	67	79	45	20	38	11	92	15	40	7	7	30
Future Vol, veh/h	67	79	45	20	38	11	92	15	40	7	7	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	73	86	49	22	41	12	100	16	43	8	8	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	53	0	0	135	0	0	369	354	111	377	372	47
Stage 1	-	-	-	-	-	-	257	257	-	91	91	-
Stage 2	-	-	-	-	-	-	112	97	-	286	281	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1553	-	-	1449	-	-	588	571	942	580	558	1022
Stage 1	-	-	-	-	-	-	748	695	-	916	820	-
Stage 2	-	-	-	-	-	-	893	815	-	721	678	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1553	-	-	1449	-	-	534	533	942	513	521	1022
Mov Cap-2 Maneuver	-	-	-	-	-	-	534	533	-	513	521	-
Stage 1	-	-	-	-	-	-	710	660	-	869	807	-
Stage 2	-	-	-	-	-	-	843	802	-	637	643	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.6			2.2			13.1			9.9		
HCM LOS							B			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	605	1553	-	-	1449	-	-	780
HCM Lane V/C Ratio	0.264	0.047	-	-	0.015	-	-	0.061
HCM Control Delay (s)	13.1	7.4	0	-	7.5	0	-	9.9
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	1.1	0.1	-	-	0	-	-	0.2

NPMC Howard-Orange Mobility Assessment
10: 43rd St & Orange Ave

Existing with Project
Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		1			1						1	1
Traffic Volume (veh/h)	0	32	85	7	5	0	0	0	0	146	463	81
Future Volume (veh/h)	0	32	85	7	5	0	0	0	0	146	463	81
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	0.97		1.00				1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1900	1870	1900
Adj Flow Rate, veh/h	0	34	91	8	5	0				157	498	87
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	2	2	0				0	2	0
Cap, veh/h	0	215	576	495	287	0				245	816	149
Arrive On Green	0.00	0.50	0.50	0.50	0.50	0.00				0.34	0.34	0.34
Sat Flow, veh/h	0	431	1154	796	576	0				726	2419	441
Grp Volume(v), veh/h	0	0	125	13	0	0				396	0	346
Grp Sat Flow(s),veh/h/ln	0	0	1585	1372	0	0				1834	0	1753
Q Serve(g_s), s	0.0	0.0	2.6	0.0	0.0	0.0				11.0	0.0	9.8
Cycle Q Clear(g_c), s	0.0	0.0	2.6	2.6	0.0	0.0				11.0	0.0	9.8
Prop In Lane	0.00		0.73	0.62		0.00				0.40		0.25
Lane Grp Cap(c), veh/h	0	0	791	782	0	0				619	0	591
V/C Ratio(X)	0.00	0.00	0.16	0.02	0.00	0.00				0.64	0.00	0.58
Avail Cap(c_a), veh/h	0	0	791	782	0	0				767	0	733
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	8.2	7.6	0.0	0.0				16.8	0.0	16.4
Incr Delay (d2), s/veh	0.0	0.0	0.4	0.0	0.0	0.0				2.6	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.9	0.1	0.0	0.0				4.6	0.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	8.6	7.6	0.0	0.0				19.4	0.0	18.5
LnGrp LOS	A	A	A	A	A	A				B	A	B
Approach Vol, veh/h		125			13						742	
Approach Delay, s/veh		8.6			7.6						18.9	
Approach LOS		A			A						B	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		34.9		25.1		34.9						
Change Period (Y+Rc), s		4.9		4.9		4.9						
Max Green Setting (Gmax), s		25.1		25.1		25.1						
Max Q Clear Time (g_c+I1), s		4.6		13.0		4.6						
Green Ext Time (p_c), s		1.4		6.2		0.0						
Intersection Summary												
HCM 6th Ctrl Delay			17.3									
HCM 6th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↑	↗		↑↑			↖	
Traffic Volume (veh/h)	0	0	77	0	0	181	0	420	46	0	164	15
Future Volume (veh/h)	0	0	77	0	0	181	0	420	46	0	164	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.92	1.00		0.88	1.00		0.90
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	0	0	84	0	0	197	0	457	50	0	178	16
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	0	2	2	0	2	2	0	2	2
Cap, veh/h	0	1057	845	0	1057	824	0	938	102	0	493	44
Arrive On Green	0.00	0.00	0.57	0.00	0.00	0.57	0.00	0.29	0.29	0.00	0.29	0.29
Sat Flow, veh/h	0	1870	1494	0	1870	1458	0	3276	345	0	1674	150
Grp Volume(v), veh/h	0	0	84	0	0	197	0	253	254	0	0	194
Grp Sat Flow(s),veh/h/ln	0	1870	1494	0	1870	1458	0	1777	1751	0	0	1825
Q Serve(g_s), s	0.0	0.0	1.8	0.0	0.0	4.8	0.0	8.2	8.4	0.0	0.0	5.9
Cycle Q Clear(g_c), s	0.0	0.0	1.8	0.0	0.0	4.8	0.0	8.2	8.4	0.0	0.0	5.9
Prop In Lane	0.00		1.00	0.00		1.00	0.00		0.20	0.00		0.08
Lane Grp Cap(c), veh/h	0	1057	845	0	1057	824	0	524	516	0	0	538
V/C Ratio(X)	0.00	0.00	0.10	0.00	0.00	0.24	0.00	0.48	0.49	0.00	0.00	0.36
Avail Cap(c_a), veh/h	0	1057	845	0	1057	824	0	891	878	0	0	915
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.99	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	7.0	0.0	0.0	7.6	0.0	20.3	20.4	0.0	0.0	19.5
Incr Delay (d2), s/veh	0.0	0.0	0.2	0.0	0.0	0.7	0.0	0.7	0.7	0.0	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/lr0.0	0.0	0.0	0.6	0.0	0.0	1.5	0.0	3.3	3.3	0.0	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	7.2	0.0	0.0	8.3	0.0	21.0	21.1	0.0	0.0	19.9
LnGrp LOS	A	A	A	A	A	A	A	C	C	A	A	B
Approach Vol, veh/h		84			197			507			194	
Approach Delay, s/veh		7.2			8.3			21.0			19.9	
Approach LOS		A			A			C			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		44.5		25.5		44.5		25.5				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		25.1		35.1		25.1		35.1				
Max Q Clear Time (g_c+I1), s		3.8		10.4		6.8		7.9				
Green Ext Time (p_c), s		0.2		3.2		0.6		1.1				
Intersection Summary												
HCM 6th Ctrl Delay			17.1									
HCM 6th LOS			B									

Intersection												
Int Delay, s/veh	7.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	0	2	20	49	30	0	10	0	94	45	13	58
Future Vol, veh/h	0	2	20	49	30	0	10	0	94	45	13	58
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	21	52	32	0	11	0	99	47	14	61

Major/Minor	Major1		Major2		Minor1			Minor2				
Conflicting Flow All	-	0	0	23	0	0	187	149	13	198	159	32
Stage 1	-	-	-	-	-	-	13	13	-	136	136	-
Stage 2	-	-	-	-	-	-	174	136	-	62	23	-
Critical Hdwy	-	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	1592	-	0	774	743	1067	761	733	1042
Stage 1	0	-	-	-	-	0	1007	885	-	867	784	-
Stage 2	0	-	-	-	-	0	828	784	-	949	876	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1592	-	-	700	718	1067	673	709	1042
Mov Cap-2 Maneuver	-	-	-	-	-	-	700	718	-	673	709	-
Stage 1	-	-	-	-	-	-	1007	885	-	867	758	-
Stage 2	-	-	-	-	-	-	740	758	-	861	876	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	4.6	9	10.1
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	1016	-	-	1592	-	823
HCM Lane V/C Ratio	0.108	-	-	0.032	-	0.148
HCM Control Delay (s)	9	-	-	7.3	0	10.1
HCM Lane LOS	A	-	-	A	A	B
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-	0.5

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	12	12	2	85	31	69	58	20	42	73	30
Future Vol, veh/h	11	12	12	2	85	31	69	58	20	42	73	30
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	14	14	2	98	36	79	67	23	48	84	34
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8	8.6	8.8	8.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	47%	31%	2%	29%
Vol Thru, %	39%	34%	72%	50%
Vol Right, %	14%	34%	26%	21%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	147	35	118	145
LT Vol	69	11	2	42
Through Vol	58	12	85	73
RT Vol	20	12	31	30
Lane Flow Rate	169	40	136	167
Geometry Grp	1	1	1	1
Degree of Util (X)	0.213	0.053	0.173	0.207
Departure Headway (Hd)	4.548	4.729	4.597	4.476
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	789	756	780	802
Service Time	2.578	2.766	2.628	2.504
HCM Lane V/C Ratio	0.214	0.053	0.174	0.208
HCM Control Delay	8.8	8	8.6	8.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.8	0.2	0.6	0.8

Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	44	112	10	12	7	4	0	0	0	24	21	53
Future Vol, veh/h	44	112	10	12	7	4	0	0	0	24	21	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	47	120	11	13	8	4	0	0	0	26	23	57





















Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	12	0	0	131	0	0	256	261	10
Stage 1	-	-	-	-	-	-	36	36	-
Stage 2	-	-	-	-	-	-	220	225	-
Critical Hdwy	4.12	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	1607	-	-	1454	-	-	733	644	1071
Stage 1	-	-	-	-	-	-	986	865	-
Stage 2	-	-	-	-	-	-	817	718	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1607	-	-	1454	-	-	703	0	1071
Mov Cap-2 Maneuver	-	-	-	-	-	-	703	0	-
Stage 1	-	-	-	-	-	-	946	0	-
Stage 2	-	-	-	-	-	-	817	0	-

Approach	EB	WB	SB
HCM Control Delay, s	1.9	3.9	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1607	-	-	1454	-	-	921
HCM Lane V/C Ratio	0.029	-	-	0.009	-	-	0.114
HCM Control Delay (s)	7.3	0	-	7.5	0	-	9.4
HCM Lane LOS	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0.4

NPMC Howard-Orange Mobility Assessment
 15: Euclid Ave & Orange Ave

Existing with Project
 Timing Plan: PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	131	0	0	116	0	266	58	0	318	61
Future Volume (veh/h)	0	0	131	0	0	116	0	266	58	0	318	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	142	0	0	126	0	289	63	0	346	66
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	0	439	372	0	439	372	284	563	123	284	578	110
Arrive On Green	0.00	0.00	0.23	0.00	0.00	0.23	0.00	0.38	0.38	0.00	0.38	0.38
Sat Flow, veh/h	0	1870	1585	0	1870	1585	974	1488	324	1029	1527	291
Grp Volume(v), veh/h	0	0	142	0	0	126	0	0	352	0	0	412
Grp Sat Flow(s),veh/h/ln	0	1870	1585	0	1870	1585	974	0	1812	1029	0	1818
Q Serve(g_s), s	0.0	0.0	1.9	0.0	0.0	1.7	0.0	0.0	3.8	0.0	0.0	4.6
Cycle Q Clear(g_c), s	0.0	0.0	1.9	0.0	0.0	1.7	0.0	0.0	3.8	0.0	0.0	4.6
Prop In Lane	0.00		1.00	0.00		1.00	1.00		0.18	1.00		0.16
Lane Grp Cap(c), veh/h	0	439	372	0	439	372	284	0	686	284	0	688
V/C Ratio(X)	0.00	0.00	0.38	0.00	0.00	0.34	0.00	0.00	0.51	0.00	0.00	0.60
Avail Cap(c_a), veh/h	0	2741	2323	0	2741	2323	2344	0	4517	2460	0	4532
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	8.1	0.0	0.0	8.1	0.0	0.0	6.1	0.0	0.0	6.3
Incr Delay (d2), s/veh	0.0	0.0	0.6	0.0	0.0	0.5	0.0	0.0	0.6	0.0	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.5	0.0	0.0	0.4	0.0	0.0	0.8	0.0	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	8.8	0.0	0.0	8.6	0.0	0.0	6.7	0.0	0.0	7.2
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		142			126			352				412
Approach Delay, s/veh		8.8			8.6			6.7				7.2
Approach LOS		A			A			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		10.8		14.5		10.8		14.5				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		37.1		63.1		37.1		63.1				
Max Q Clear Time (g_c+I1), s		3.9		6.6		3.7		5.8				
Green Ext Time (p_c), s		0.5		3.0		0.4		2.5				
Intersection Summary												
HCM 6th Ctrl Delay			7.4									
HCM 6th LOS			A									

Intersection												
Int Delay, s/veh	6.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	28	17	23	82	51	15	20	16	30	12	17	43
Future Vol, veh/h	28	17	23	82	51	15	20	16	30	12	17	43
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	20	27	96	60	18	24	19	35	14	20	51

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	78	0	0	47	0	0	397	370	34	388	374	69
Stage 1	-	-	-	-	-	-	100	100	-	261	261	-
Stage 2	-	-	-	-	-	-	297	270	-	127	113	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1520	-	-	1560	-	-	563	560	1039	571	557	994
Stage 1	-	-	-	-	-	-	906	812	-	744	692	-
Stage 2	-	-	-	-	-	-	712	686	-	877	802	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1520	-	-	1560	-	-	485	512	1039	502	510	994
Mov Cap-2 Maneuver	-	-	-	-	-	-	485	512	-	502	510	-
Stage 1	-	-	-	-	-	-	886	794	-	728	648	-
Stage 2	-	-	-	-	-	-	613	642	-	809	784	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	3.1			4.1			11.3			10.7		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	651	1520	-	-	1560	-	-	716
HCM Lane V/C Ratio	0.119	0.022	-	-	0.062	-	-	0.118
HCM Control Delay (s)	11.3	7.4	0	-	7.5	0	-	10.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0.2	-	-	0.4

Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	19	30	2	47	108	5	22	23	69	33	32	31
Future Vol, veh/h	19	30	2	47	108	5	22	23	69	33	32	31
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	33	2	52	120	6	24	26	77	37	36	34
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.1	8.9	8.1	8.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	19%	37%	29%	34%
Vol Thru, %	20%	59%	68%	33%
Vol Right, %	61%	4%	3%	32%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	114	51	160	96
LT Vol	22	19	47	33
Through Vol	23	30	108	32
RT Vol	69	2	5	31
Lane Flow Rate	127	57	178	107
Geometry Grp	1	1	1	1
Degree of Util (X)	0.151	0.074	0.225	0.133
Departure Headway (Hd)	4.288	4.717	4.564	4.504
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	837	759	788	796
Service Time	2.312	2.748	2.589	2.531
HCM Lane V/C Ratio	0.152	0.075	0.226	0.134
HCM Control Delay	8.1	8.1	8.9	8.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.2	0.9	0.5

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑			↑↑↑					↑			↑
Traffic Vol, veh/h	0	939	14	0	920	11	0	0	75	0	0	23
Future Vol, veh/h	0	939	14	0	920	11	0	0	75	0	0	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1021	15	0	1000	12	0	0	82	0	0	25

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	-	-	0	-	-	518	-	-	506
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	430	0	0	438
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	430	-	-	438
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0		0		15.3		13.7	
HCM LOS					C		B	

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	430	-	-	-	-	438
HCM Lane V/C Ratio	0.19	-	-	-	-	0.057
HCM Control Delay (s)	15.3	-	-	-	-	13.7
HCM Lane LOS	C	-	-	-	-	B
HCM 95th %tile Q(veh)	0.7	-	-	-	-	0.2

NPMC Howard-Orange Mobility Assessment
 19: 35th St & El Cajon Blvd

Existing with Project
 Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	870	78	66	757	35	95	66	31	57	42	59
Future Volume (veh/h)	66	870	78	66	757	35	95	66	31	57	42	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	68	897	80	68	780	36	98	68	32	59	43	61
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	88	3176	986	88	3176	986	147	94	37	185	122	313
Arrive On Green	0.05	0.62	0.62	0.05	0.62	0.62	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	493	479	187	671	617	1585
Grp Volume(v), veh/h	68	897	80	68	780	36	198	0	0	102	0	61
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1159	0	0	1288	0	1585
Q Serve(g_s), s	4.1	8.7	2.2	4.1	7.4	0.9	11.6	0.0	0.0	0.0	0.0	3.5
Cycle Q Clear(g_c), s	4.1	8.7	2.2	4.1	7.4	0.9	18.8	0.0	0.0	7.1	0.0	3.5
Prop In Lane	1.00		1.00	1.00		1.00	0.49		0.16	0.58		1.00
Lane Grp Cap(c), veh/h	88	3176	986	88	3176	986	278	0	0	307	0	313
V/C Ratio(X)	0.78	0.28	0.08	0.78	0.25	0.04	0.71	0.00	0.00	0.33	0.00	0.20
Avail Cap(c_a), veh/h	233	3176	986	233	3176	986	414	0	0	442	0	456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.8	9.4	8.1	50.8	9.1	7.9	43.8	0.0	0.0	37.4	0.0	36.2
Incr Delay (d2), s/veh	5.4	0.2	0.2	5.4	0.2	0.1	1.3	0.0	0.0	0.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	3.1	0.8	1.9	2.6	0.3	5.3	0.0	0.0	2.4	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.2	9.6	8.3	56.2	9.3	8.0	45.1	0.0	0.0	37.6	0.0	36.3
LnGrp LOS	E	A	A	E	A	A	D	A	A	D	A	D
Approach Vol, veh/h		1045			884			198				163
Approach Delay, s/veh		12.5			12.8			45.1				37.1
Approach LOS		B			B			D				D
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.7	72.1		26.2	9.7	72.1		26.2				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	14.1	48.6		31.1	14.1	48.6		31.1				
Max Q Clear Time (g_c+I1), s	6.1	9.4		20.8	6.1	10.7		9.1				
Green Ext Time (p_c), s	0.0	4.2		0.5	0.0	5.0		0.5				

Intersection Summary

HCM 6th Ctrl Delay	17.2
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑			↑↑↑					↑			↑
Traffic Vol, veh/h	0	1603	44	0	1009	35	0	0	93	0	0	53
Future Vol, veh/h	0	1603	44	0	1009	35	0	0	93	0	0	53
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1742	48	0	1097	38	0	0	101	0	0	58

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	-	-	0	-	-	895	-	-	568
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	244	0	0	399
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	244	-	-	399
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	29.8	15.5
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	244	-	-	-	-	399
HCM Lane V/C Ratio	0.414	-	-	-	-	0.144
HCM Control Delay (s)	29.8	-	-	-	-	15.5
HCM Lane LOS	D	-	-	-	-	C
HCM 95th %tile Q(veh)	1.9	-	-	-	-	0.5

NPMC Howard-Orange Mobility Assessment
21: Fairmount Ave & El Cajon Blvd

Existing with Project
Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	1416	115	0	844	154	201	366	80	0	0	0
Future Volume (veh/h)	84	1416	115	0	844	154	201	366	80	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1900	1870	1900			
Adj Flow Rate, veh/h	88	1475	120	0	879	160	209	381	83			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	2	2	0	2	2	0	2	0			
Cap, veh/h	111	2479	1106	0	1797	327	236	456	103			
Arrive On Green	0.06	0.70	0.70	0.00	0.60	0.60	0.22	0.22	0.22			
Sat Flow, veh/h	1781	3554	1585	0	3096	546	1070	2067	466			
Grp Volume(v), veh/h	88	1475	120	0	520	519	355	0	318			
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	0	1777	1772	1817	0	1786			
Q Serve(g_s), s	5.8	25.7	3.0	0.0	19.9	19.9	22.7	0.0	20.3			
Cycle Q Clear(g_c), s	5.8	25.7	3.0	0.0	19.9	19.9	22.7	0.0	20.3			
Prop In Lane	1.00		1.00	0.00		0.31	0.59		0.26			
Lane Grp Cap(c), veh/h	111	2479	1106	0	1064	1061	401	0	394			
V/C Ratio(X)	0.79	0.59	0.11	0.00	0.49	0.49	0.89	0.00	0.81			
Avail Cap(c_a), veh/h	232	2479	1106	0	1064	1061	486	0	478			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.92	0.92	0.85	0.00	0.85			
Uniform Delay (d), s/veh	55.5	9.4	5.9	0.0	13.7	13.7	45.3	0.0	44.3			
Incr Delay (d2), s/veh	4.7	1.1	0.2	0.0	1.5	1.5	12.0	0.0	5.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.8	9.4	1.0	0.0	8.2	8.1	11.5	0.0	9.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.2	10.4	6.1	0.0	15.1	15.2	57.3	0.0	50.2			
LnGrp LOS	E	B	A	A	B	B	E	A	D			
Approach Vol, veh/h		1683			1039			673				
Approach Delay, s/veh		12.7			15.1			53.9				
Approach LOS		B			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		88.6			11.9	76.7		31.4				
Change Period (Y+Rc), s		4.9			4.4	4.9		4.9				
Max Green Setting (Gmax), s		78.1			15.6	58.1		32.1				
Max Q Clear Time (g_c+I1), s		27.7			7.8	21.9		24.7				
Green Ext Time (p_c), s		11.0			0.1	5.1		1.8				
Intersection Summary												
HCM 6th Ctrl Delay			21.6									
HCM 6th LOS			C									
Notes												
User approved ignoring U-Turning movement.												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖		↖	↖		↖	↖		↖	↖	
Traffic Volume (veh/h)	38	1145	145	83	810	54	137	154	66	68	226	40
Future Volume (veh/h)	38	1145	145	83	810	54	137	154	66	68	226	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	40	1205	153	87	853	57	144	162	69	72	238	42
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	66	1702	215	109	1897	127	229	353	150	263	439	78
Arrive On Green	0.04	0.54	0.54	0.06	0.56	0.56	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1781	3173	402	1781	3381	226	1099	1245	530	1149	1548	273
Grp Volume(v), veh/h	40	673	685	87	448	462	144	0	231	72	0	280
Grp Sat Flow(s),veh/h/ln	1781	1777	1798	1781	1777	1830	1099	0	1775	1149	0	1821
Q Serve(g_s), s	2.7	33.9	34.2	5.8	17.8	17.8	15.3	0.0	12.9	6.6	0.0	15.6
Cycle Q Clear(g_c), s	2.7	33.9	34.2	5.8	17.8	17.8	30.9	0.0	12.9	19.5	0.0	15.6
Prop In Lane	1.00		0.22	1.00		0.12	1.00		0.30	1.00		0.15
Lane Grp Cap(c), veh/h	66	953	965	109	997	1027	229	0	504	263	0	517
V/C Ratio(X)	0.61	0.71	0.71	0.79	0.45	0.45	0.63	0.00	0.46	0.27	0.00	0.54
Avail Cap(c_a), veh/h	105	953	965	150	997	1027	367	0	726	407	0	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.80	0.80	0.80	1.00	1.00	1.00	0.95	0.00	0.95	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.9	20.7	20.8	55.6	15.5	15.5	49.5	0.0	35.4	43.4	0.0	36.4
Incr Delay (d2), s/veh	2.7	3.5	3.6	12.8	1.5	1.4	1.0	0.0	0.2	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	14.6	14.9	3.0	7.4	7.7	4.3	0.0	5.6	1.9	0.0	7.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.7	24.3	24.4	68.3	16.9	16.9	50.5	0.0	35.6	43.6	0.0	36.7
LnGrp LOS	E	C	C	E	B	B	D	A	D	D	A	D
Approach Vol, veh/h		1398			997			375			352	
Approach Delay, s/veh		25.3			21.4			41.3			38.1	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	1.8	69.3		38.9	8.8	72.2		38.9				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	40.0	46.6		49.1	7.1	46.6		49.1				
Max Q Clear Time (g_c+1), s	17.0	36.2		21.5	4.7	19.8		32.9				
Green Ext Time (p_c), s	0.0	6.9		1.2	0.0	7.1		1.1				

Intersection Summary

HCM 6th Ctrl Delay	27.4
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	17	0	99	181	0
Future Vol, veh/h	10	17	0	99	181	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	21	0	121	221	0
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB	EB	
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.5	7.9	8.5
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	37%	0%
Vol Thru, %	100%	0%	100%
Vol Right, %	0%	63%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	99	27	181
LT Vol	0	10	0
Through Vol	99	0	181
RT Vol	0	17	0
Lane Flow Rate	121	33	221
Geometry Grp	1	1	1
Degree of Util (X)	0.139	0.04	0.25
Departure Headway (Hd)	4.157	4.365	4.082
Convergence, Y/N	Yes	Yes	Yes
Cap	854	825	874
Service Time	2.225	2.365	2.131
HCM Lane V/C Ratio	0.142	0.04	0.253
HCM Control Delay	7.9	7.5	8.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0.1	1

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	28	21	37	0	0	0	0	473	33	65	255	0
Future Vol, veh/h	28	21	37	0	0	0	0	473	33	65	255	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	29	22	39	0	0	0	0	493	34	68	266	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	649	929	266	-	0	0	527	0	0
Stage 1	402	402	-	-	-	-	-	-	-
Stage 2	247	527	-	-	-	-	-	-	-
Critical Hdwy	6.63	6.53	6.23	-	-	-	4.13	-	-
Critical Hdwy Stg 1	5.43	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.83	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	-	-	-	2.219	-	-
Pot Cap-1 Maneuver	418	267	772	0	-	-	1038	-	0
Stage 1	675	600	-	0	-	-	-	-	0
Stage 2	772	527	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	386	0	772	-	-	-	1038	-	-
Mov Cap-2 Maneuver	386	0	-	-	-	-	-	-	-
Stage 1	623	0	-	-	-	-	-	-	-
Stage 2	772	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13	0	1.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	540	1038	-
HCM Lane V/C Ratio	-	-	0.166	0.065	-
HCM Control Delay (s)	-	-	13	8.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0.2	-

NPMC Howard-Orange Mobility Assessment
25: Euclid Ave & Polk Ave

Existing with Project
Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Volume (veh/h)	34	46	52	0	0	0	0	328	18	53	438	0
Future Volume (veh/h)	34	46	52	0	0	0	0	328	18	53	438	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	37	49	56				0	353	19	57	471	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	0				0	2	2	2	2	0
Cap, veh/h	51	67	77				0	808	43	221	772	0
Arrive On Green	0.11	0.11	0.11				0.00	0.46	0.46	0.46	0.46	0.00
Sat Flow, veh/h	450	595	680				0	1759	95	103	1680	0
Grp Volume(v), veh/h	142	0	0				0	0	372	528	0	0
Grp Sat Flow(s),veh/h/ln	1725	0	0				0	0	1853	1783	0	0
Q Serve(g_s), s	1.8	0.0	0.0				0.0	0.0	3.1	0.2	0.0	0.0
Cycle Q Clear(g_c), s	1.8	0.0	0.0				0.0	0.0	3.1	4.9	0.0	0.0
Prop In Lane	0.26		0.39				0.00		0.05	0.11		0.00
Lane Grp Cap(c), veh/h	195	0	0				0	0	851	993	0	0
V/C Ratio(X)	0.73	0.00	0.00				0.00	0.00	0.44	0.53	0.00	0.00
Avail Cap(c_a), veh/h	2642	0	0				0	0	4455	4324	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.8	0.0	0.0				0.0	0.0	4.2	4.7	0.0	0.0
Incr Delay (d2), s/veh	1.9	0.0	0.0				0.0	0.0	0.3	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0				0.0	0.0	0.3	0.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.8	0.0	0.0				0.0	0.0	4.5	5.1	0.0	0.0
LnGrp LOS	B	A	A				A	A	A	A	A	A
Approach Vol, veh/h		142						372			528	
Approach Delay, s/veh		11.8						4.5			5.1	
Approach LOS		B						A			A	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		15.4		7.5				15.4				
Change Period (Y+Rc), s		4.9		4.9				4.9				
Max Green Setting (Gmax), s		55.1		35.1				55.1				
Max Q Clear Time (g_c+I1), s		5.1		3.8				6.9				
Green Ext Time (p_c), s		2.2		0.5				3.6				
Intersection Summary												
HCM 6th Ctrl Delay			5.8									
HCM 6th LOS			A									

Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	11	100	16	0	0	0	0	67	17	10	88	0
Future Vol, veh/h	11	100	16	0	0	0	0	67	17	10	88	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	123	20	0	0	0	0	83	21	12	109	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	227	237	109	-	0	0	104	0	0
Stage 1	133	133	-	-	-	-	-	-	-
Stage 2	94	104	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	-	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	761	664	945	0	-	-	1488	-	0
Stage 1	893	786	-	0	-	-	-	-	0
Stage 2	930	809	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	754	0	945	-	-	-	1488	-	-
Mov Cap-2 Maneuver	754	0	-	-	-	-	-	-	-
Stage 1	885	0	-	-	-	-	-	-	-
Stage 2	930	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.1	0	0.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	857	1488	-
HCM Lane V/C Ratio	-	-	0.183	0.008	-
HCM Control Delay (s)	-	-	10.1	7.4	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0	-

NPMC Howard-Orange Mobility Assessment
 27: 35th St & University Ave

Existing with Project
 Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	574	31	28	682	22	53	29	22	184	76	33
Future Volume (veh/h)	24	574	31	28	682	22	53	29	22	184	76	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	24	586	32	29	696	22	54	30	22	188	78	34
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	405	1117	61	471	1147	36	225	121	70	298	93	39
Arrive On Green	0.64	0.64	0.64	0.64	0.64	0.64	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	734	1757	96	805	1803	57	659	549	316	964	423	177
Grp Volume(v), veh/h	24	0	618	29	0	718	106	0	0	300	0	0
Grp Sat Flow(s),veh/h/ln	734	0	1853	805	0	1860	1525	0	0	1564	0	0
Q Serve(g_s), s	1.4	0.0	12.4	1.4	0.0	15.6	0.0	0.0	0.0	8.8	0.0	0.0
Cycle Q Clear(g_c), s	16.9	0.0	12.4	13.8	0.0	15.6	3.6	0.0	0.0	12.4	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.03	0.51		0.21	0.63		0.11
Lane Grp Cap(c), veh/h	405	0	1178	471	0	1183	415	0	0	430	0	0
V/C Ratio(X)	0.06	0.00	0.52	0.06	0.00	0.61	0.26	0.00	0.00	0.70	0.00	0.00
Avail Cap(c_a), veh/h	405	0	1178	471	0	1183	505	0	0	521	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.4	0.0	6.8	10.5	0.0	7.3	22.0	0.0	0.0	25.3	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	1.7	0.3	0.0	2.3	0.1	0.0	0.0	2.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	4.3	0.3	0.0	5.4	1.4	0.0	0.0	4.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.6	0.0	8.4	10.8	0.0	9.7	22.2	0.0	0.0	27.4	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	C	A	A	C	A	A
Approach Vol, veh/h		642			747			106				300
Approach Delay, s/veh		8.6			9.7			22.2				27.4
Approach LOS		A			A			C				C
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		48.1		19.9		48.1		19.9				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		39.1		19.1		39.1		19.1				
Max Q Clear Time (g_c+I1), s		18.9		14.4		17.6		5.6				
Green Ext Time (p_c), s		5.7		0.5		7.8		0.3				
Intersection Summary												
HCM 6th Ctrl Delay				13.0								
HCM 6th LOS				B								



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗		↖	↖↗		↖	↖	↗
Traffic Volume (veh/h)	91	822	109	100	615	86	183	350	86	187	172	14
Future Volume (veh/h)	91	822	109	100	615	86	183	350	86	187	172	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	95	856	114	104	641	90	191	365	90	195	179	15
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	120	981	131	411	1500	210	222	477	116	195	260	22
Arrive On Green	0.07	0.31	0.31	0.23	0.48	0.48	0.12	0.17	0.17	0.11	0.15	0.15
Sat Flow, veh/h	1781	3152	420	1781	3129	439	1781	2833	690	1781	1702	143
Grp Volume(v), veh/h	95	483	487	104	364	367	191	227	228	195	0	194
Grp Sat Flow(s),veh/h/ln	1781	1777	1795	1781	1777	1791	1781	1777	1746	1781	0	1845
Q Serve(g_s), s	5.6	27.2	27.2	5.1	14.2	14.2	11.1	12.9	13.2	11.6	0.0	10.6
Cycle Q Clear(g_c), s	5.6	27.2	27.2	5.1	14.2	14.2	11.1	12.9	13.2	11.6	0.0	10.6
Prop In Lane	1.00		0.23	1.00		0.24	1.00		0.40	1.00		0.08
Lane Grp Cap(c), veh/h	120	553	559	411	852	859	222	299	294	195	0	282
V/C Ratio(X)	0.79	0.87	0.87	0.25	0.43	0.43	0.86	0.76	0.77	1.00	0.00	0.69
Avail Cap(c_a), veh/h	229	588	594	411	852	859	329	521	512	195	0	402
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.7	34.5	34.5	33.3	18.1	18.1	45.5	42.0	42.2	47.2	0.0	42.5
Incr Delay (d2), s/veh	4.3	17.2	17.0	0.1	1.6	1.6	9.7	4.3	4.7	64.5	0.0	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	14.2	14.3	2.2	6.1	6.1	5.5	6.0	6.0	8.6	0.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.0	51.7	51.5	33.4	19.6	19.6	55.2	46.3	46.9	111.7	0.0	46.0
LnGrp LOS	D	D	D	C	B	B	E	D	D	F	A	D
Approach Vol, veh/h		1065			835			646			389	
Approach Delay, s/veh		51.7			21.4			49.1			78.9	
Approach LOS		D			C			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	29.4	37.9	17.6	21.1	11.6	55.7	16.0	22.7				
Change Period (Y+Rc), s	4.9	* 4.9	4.4	4.9	4.4	4.9	4.4	4.9				
Max Green Setting (Gmax), s	30.6	* 35	19.6	23.1	13.6	31.1	11.6	31.1				
Max Q Clear Time (g_c+11), s	17.1	29.2	13.1	12.6	7.6	16.2	13.6	15.2				
Green Ext Time (p_c), s	0.0	3.8	0.1	0.8	0.0	5.3	0.0	2.6				

Intersection Summary

HCM 6th Ctrl Delay	46.1
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	67	759	82	191	754	51	82	222	193	86	389	35
Future Volume (veh/h)	67	759	82	191	754	51	82	222	193	86	389	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	72	816	88	205	811	55	88	239	208	92	418	38
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	430	1311	141	239	989	67	154	286	249	141	523	48
Arrive On Green	0.24	0.41	0.41	0.13	0.29	0.29	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1781	3236	349	1781	3377	229	935	923	803	943	1689	154
Grp Volume(v), veh/h	72	448	456	205	427	439	88	0	447	92	0	456
Grp Sat Flow(s),veh/h/ln	1781	1777	1808	1781	1777	1829	935	0	1726	943	0	1843
Q Serve(g_s), s	3.0	18.9	18.9	10.6	21.0	21.0	7.8	0.0	22.7	6.4	0.0	21.3
Cycle Q Clear(g_c), s	3.0	18.9	18.9	10.6	21.0	21.0	29.1	0.0	22.7	29.1	0.0	21.3
Prop In Lane	1.00		0.19	1.00		0.13	1.00		0.47	1.00		0.08
Lane Grp Cap(c), veh/h	430	720	732	239	520	536	154	0	534	141	0	570
V/C Ratio(X)	0.17	0.62	0.62	0.86	0.82	0.82	0.57	0.00	0.84	0.65	0.00	0.80
Avail Cap(c_a), veh/h	430	720	732	296	758	780	154	0	534	141	0	570
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.85	0.00	0.85
Uniform Delay (d), s/veh	28.2	22.2	22.2	39.8	30.9	30.9	43.6	0.0	30.2	44.8	0.0	29.8
Incr Delay (d2), s/veh	0.1	4.0	4.0	15.9	13.5	13.2	4.6	0.0	11.0	10.0	0.0	7.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	8.4	8.5	5.6	10.7	11.0	2.2	0.0	10.8	2.5	0.0	10.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.3	26.3	26.2	55.7	44.4	44.1	48.2	0.0	41.2	54.7	0.0	36.9
LnGrp LOS	C	C	C	E	D	D	D	A	D	D	A	D
Approach Vol, veh/h		976			1071			535			548	
Approach Delay, s/veh		26.4			46.4			42.4			39.9	
Approach LOS		C			D			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.0	43.0		34.0	27.6	32.4		34.0				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.9	* 4.9		4.9				
Max Green Setting (Gmax), s	15.6	35.1		29.1	10.6	* 40		29.1				
Max Q Clear Time (g_c+1/2, s)	11.6	20.9		31.1	5.0	23.0		31.1				
Green Ext Time (p_c), s	0.1	6.0		0.0	0.0	4.5		0.0				

Intersection Summary

HCM 6th Ctrl Delay	38.4
HCM 6th LOS	D

Notes

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

Intersection						
Int Delay, s/veh	1.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Vol, veh/h	33	1010	915	21	13	106
Future Vol, veh/h	33	1010	915	21	13	106
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	185	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	1020	924	21	13	107

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	945	0	-	0	1511 473
Stage 1	-	-	-	-	935 -
Stage 2	-	-	-	-	576 -
Critical Hdwy	4.14	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	2.22	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	722	-	-	-	111 538
Stage 1	-	-	-	-	342 -
Stage 2	-	-	-	-	525 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	722	-	-	-	99 538
Mov Cap-2 Maneuver	-	-	-	-	99 -
Stage 1	-	-	-	-	306 -
Stage 2	-	-	-	-	525 -

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	19.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	722	-	-	-	362
HCM Lane V/C Ratio	0.046	-	-	-	0.332
HCM Control Delay (s)	10.2	0.5	-	-	19.8
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	1.4



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (veh/h)	1421	76	24	984	58	51
Future Volume (veh/h)	1421	76	24	984	58	51
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1900	1900
Adj Flow Rate, veh/h	1545	83	26	1070	63	55
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	0	0
Cap, veh/h	2876	154	273	2979	77	67
Arrive On Green	0.84	0.84	0.84	0.84	0.09	0.09
Sat Flow, veh/h	3524	184	309	3647	892	779
Grp Volume(v), veh/h	797	831	26	1070	119	0
Grp Sat Flow(s),veh/h/ln	1777	1837	309	1777	1686	0
Q Serve(g_s), s	17.1	17.4	3.5	9.1	9.0	0.0
Cycle Q Clear(g_c), s	17.1	17.4	20.9	9.1	9.0	0.0
Prop In Lane		0.10	1.00		0.53	0.46
Lane Grp Cap(c), veh/h	1489	1540	273	2979	146	0
V/C Ratio(X)	0.54	0.54	0.10	0.36	0.82	0.00
Avail Cap(c_a), veh/h	1489	1540	273	2979	830	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.83	0.83	1.00	0.00
Uniform Delay (d), s/veh	3.1	3.1	6.2	2.4	58.4	0.0
Incr Delay (d2), s/veh	1.1	1.0	0.1	0.1	10.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	4.9	0.2	2.3	4.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	4.1	4.1	6.3	2.5	68.9	0.0
LnGrp LOS	A	A	A	A	E	A
Approach Vol, veh/h	1628			1096	119	
Approach Delay, s/veh	4.1			2.6	68.9	
Approach LOS	A			A	E	
Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		113.9			113.9	16.1
Change Period (Y+Rc), s		4.9			4.9	4.9
Max Green Setting (Gmax), s		56.2			56.2	64.0
Max Q Clear Time (g_c+I1), s		19.4			22.9	11.0
Green Ext Time (p_c), s		17.3			10.5	0.4
Intersection Summary						
HCM 6th Ctrl Delay			6.3			
HCM 6th LOS			A			

Intersection				
Intersection Delay, s/veh	3.5			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	87	117	89	78
Demand Flow Rate, veh/h	90	119	90	80
Vehicles Circulating, veh/h	68	54	96	50
Vehicles Exiting, veh/h	62	132	62	123
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	3.4	3.5	3.5	3.3
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	90	119	90	80
Cap Entry Lane, veh/h	1287	1306	1251	1311
Entry HV Adj Factor	0.972	0.981	0.987	0.972
Flow Entry, veh/h	87	117	89	78
Cap Entry, veh/h	1251	1281	1235	1275
V/C Ratio	0.070	0.091	0.072	0.061
Control Delay, s/veh	3.4	3.5	3.5	3.3
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	0

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	88	15	30	288	0	28	1	29	0	0	3
Future Vol, veh/h	1	88	15	30	288	0	28	1	29	0	0	3
Conflicting Peds, #/hr	9	0	9	8	0	8	9	0	8	8	0	9
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	70	-	-	100	-	-	-	-	40	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	99	17	34	324	0	31	1	33	0	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	333	0	0	125	0	0	522	520	125	536	528	342
Stage 1	-	-	-	-	-	-	119	119	-	401	401	-
Stage 2	-	-	-	-	-	-	403	401	-	135	127	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1226	-	-	1462	-	-	465	461	926	455	456	701
Stage 1	-	-	-	-	-	-	885	797	-	626	601	-
Stage 2	-	-	-	-	-	-	624	601	-	868	791	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1215	-	-	1449	-	-	446	442	911	423	437	689
Mov Cap-2 Maneuver	-	-	-	-	-	-	446	442	-	423	437	-
Stage 1	-	-	-	-	-	-	877	789	-	620	582	-
Stage 2	-	-	-	-	-	-	601	582	-	829	783	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.7			11.4			10.3		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	446	911	1215	-	-	1449	-	-	689
HCM Lane V/C Ratio	0.073	0.036	0.001	-	-	0.023	-	-	0.005
HCM Control Delay (s)	13.7	9.1	8	-	-	7.5	-	-	10.3
HCM Lane LOS	B	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0.1	0	-	-	0.1	-	-	0

NPMC Howard-Orange Mobility Assessment
2: Alley/33rd St & Orange Ave

Near Term (2022) Conditions
Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	117	0	7	270	226	5	4	0	55	2	41
Future Volume (veh/h)	77	117	0	7	270	226	5	4	0	55	2	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	84	127	0	8	293	246	5	4	0	60	2	45
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	107	461	0	387	379	318	14	12	0	185	7	158
Arrive On Green	0.06	0.25	0.00	0.22	0.40	0.40	0.01	0.01	0.00	0.10	0.10	0.10
Sat Flow, veh/h	1781	1870	0	1781	940	789	1011	809	0	1781	68	1528
Grp Volume(v), veh/h	84	127	0	8	0	539	9	0	0	60	0	47
Grp Sat Flow(s),veh/h/ln	1781	1870	0	1781	0	1728	1820	0	0	1781	0	1595
Q Serve(g_s), s	1.9	2.2	0.0	0.1	0.0	11.0	0.2	0.0	0.0	1.3	0.0	1.1
Cycle Q Clear(g_c), s	1.9	2.2	0.0	0.1	0.0	11.0	0.2	0.0	0.0	1.3	0.0	1.1
Prop In Lane	1.00		0.00	1.00		0.46	0.56		0.00	1.00		0.96
Lane Grp Cap(c), veh/h	107	461	0	387	0	697	26	0	0	185	0	165
V/C Ratio(X)	0.78	0.28	0.00	0.02	0.00	0.77	0.35	0.00	0.00	0.33	0.00	0.28
Avail Cap(c_a), veh/h	1492	3225	0	1580	0	2981	2062	0	0	2019	0	1808
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.8	12.4	0.0	12.5	0.0	10.5	19.8	0.0	0.0	16.9	0.0	16.8
Incr Delay (d2), s/veh	4.6	0.1	0.0	0.0	0.0	1.2	2.9	0.0	0.0	0.4	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.8	0.0	0.1	0.0	3.4	0.1	0.0	0.0	0.5	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	12.5	0.0	12.5	0.0	11.7	22.7	0.0	0.0	17.3	0.0	17.2
LnGrp LOS	C	B	A	B	A	B	C	A	A	B	A	B
Approach Vol, veh/h		211			547			9			107	
Approach Delay, s/veh		16.9			11.7			22.7			17.2	
Approach LOS		B			B			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.8	14.0		4.6	6.4	21.4		8.2				
Change Period (Y+Rc), s	5.0	4.0		4.0	4.0	* 5		4.0				
Max Green Setting (Gmax), s	36.0	70.0		46.0	34.0	* 70		46.0				
Max Q Clear Time (g_c+I1), s	2.1	4.2		2.2	3.9	13.0		3.3				
Green Ext Time (p_c), s	0.0	0.5		0.0	0.1	3.4		0.3				

Intersection Summary

HCM 6th Ctrl Delay	13.7
HCM 6th LOS	B

Notes

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

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↑			↕			↕	
Traffic Vol, veh/h	1	158	18	34	431	4	51	10	35	5	0	8
Future Vol, veh/h	1	158	18	34	431	4	51	10	35	5	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	168	19	36	459	4	54	11	37	5	0	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	463	0	0	187	0	0	718	715	178	737	722	461
Stage 1	-	-	-	-	-	-	180	180	-	533	533	-
Stage 2	-	-	-	-	-	-	538	535	-	204	189	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1098	-	-	1387	-	-	344	356	865	334	353	600
Stage 1	-	-	-	-	-	-	822	750	-	531	525	-
Stage 2	-	-	-	-	-	-	527	524	-	798	744	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1098	-	-	1387	-	-	332	346	865	306	343	600
Mov Cap-2 Maneuver	-	-	-	-	-	-	332	346	-	306	343	-
Stage 1	-	-	-	-	-	-	821	749	-	530	511	-
Stage 2	-	-	-	-	-	-	506	510	-	752	743	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.6			15.9			13.5		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	431	1098	-	-	1387	-	-	438
HCM Lane V/C Ratio	0.237	0.001	-	-	0.026	-	-	0.032
HCM Control Delay (s)	15.9	8.3	-	-	7.7	-	-	13.5
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.9	0	-	-	0.1	-	-	0.1

NPMC Howard-Orange Mobility Assessment
4: 35th St & Orange Ave

Near Term (2022) Conditions
Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	166	17	25	360	101	63	111	48	46	72	20
Future Volume (veh/h)	40	166	17	25	360	101	63	111	48	46	72	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.96	0.96		0.95	0.97		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	180	18	27	391	110	68	121	52	50	78	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	518	959	96	766	800	225	171	204	76	182	231	53
Arrive On Green	0.58	0.58	0.58	0.58	0.58	0.58	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	891	1665	167	1167	1389	391	336	950	354	372	1072	248
Grp Volume(v), veh/h	43	0	198	27	0	501	241	0	0	150	0	0
Grp Sat Flow(s),veh/h/ln	891	0	1832	1167	0	1779	1640	0	0	1693	0	0
Q Serve(g_s), s	1.4	0.0	2.4	0.5	0.0	7.8	2.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	9.2	0.0	2.4	2.9	0.0	7.8	6.1	0.0	0.0	3.3	0.0	0.0
Prop In Lane	1.00		0.09	1.00		0.22	0.28		0.22	0.33		0.15
Lane Grp Cap(c), veh/h	518	0	1055	766	0	1025	451	0	0	466	0	0
V/C Ratio(X)	0.08	0.00	0.19	0.04	0.00	0.49	0.53	0.00	0.00	0.32	0.00	0.00
Avail Cap(c_a), veh/h	518	0	1055	766	0	1025	786	0	0	790	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.6	0.0	4.7	5.4	0.0	5.9	16.8	0.0	0.0	15.8	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.4	0.1	0.0	1.7	0.4	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.7	0.1	0.0	2.5	2.2	0.0	0.0	1.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.9	0.0	5.1	5.5	0.0	7.5	17.1	0.0	0.0	15.9	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	A
Approach Vol, veh/h		241			528			241			150	
Approach Delay, s/veh		5.8			7.4			17.1			15.9	
Approach LOS		A			A			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		31.9		15.0		31.9		15.0				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		27.0		20.1		27.0		20.1				
Max Q Clear Time (g_c+I1), s		11.2		8.1		9.8		5.3				
Green Ext Time (p_c), s		1.3		0.8		3.5		0.5				
Intersection Summary												
HCM 6th Ctrl Delay				10.2								
HCM 6th LOS				B								

Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	191	21	44	481	16	23	7	31	3	5	8
Future Vol, veh/h	14	191	21	44	481	16	23	7	31	3	5	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	215	24	49	540	18	26	8	35	3	6	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	558	0	0	239	0	0	914	915	227	928	918	549
Stage 1	-	-	-	-	-	-	259	259	-	647	647	-
Stage 2	-	-	-	-	-	-	655	656	-	281	271	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1013	-	-	1328	-	-	254	273	812	248	272	535
Stage 1	-	-	-	-	-	-	746	694	-	460	467	-
Stage 2	-	-	-	-	-	-	455	462	-	726	685	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1013	-	-	1328	-	-	236	259	812	223	258	535
Mov Cap-2 Maneuver	-	-	-	-	-	-	236	259	-	223	258	-
Stage 1	-	-	-	-	-	-	734	683	-	453	450	-
Stage 2	-	-	-	-	-	-	425	445	-	676	674	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.6			16.7			16.4		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	375	1013	-	-	1328	-	-	335
HCM Lane V/C Ratio	0.183	0.016	-	-	0.037	-	-	0.054
HCM Control Delay (s)	16.7	8.6	-	-	7.8	-	-	16.4
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.7	0	-	-	0.1	-	-	0.2

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	38	220	16	15	307	70	10	4	32	25	3	7
Future Vol, veh/h	38	220	16	15	307	70	10	4	32	25	3	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	35	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	41	239	17	16	334	76	11	4	35	27	3	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	410	0	0	256	0	0	740	772	248	753	742	372
Stage 1	-	-	-	-	-	-	330	330	-	404	404	-
Stage 2	-	-	-	-	-	-	410	442	-	349	338	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1149	-	-	1309	-	-	333	330	791	326	344	674
Stage 1	-	-	-	-	-	-	683	646	-	623	599	-
Stage 2	-	-	-	-	-	-	619	576	-	667	641	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1149	-	-	1309	-	-	315	314	791	297	327	674
Mov Cap-2 Maneuver	-	-	-	-	-	-	315	314	-	297	327	-
Stage 1	-	-	-	-	-	-	658	623	-	601	592	-
Stage 2	-	-	-	-	-	-	601	569	-	611	618	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.1			0.3			12.3			17		
HCM LOS							B			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	542	1149	-	-	1309	-	-	337
HCM Lane V/C Ratio	0.092	0.036	-	-	0.012	-	-	0.113
HCM Control Delay (s)	12.3	8.2	-	-	7.8	-	-	17
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-	-	0.4

Intersection												
Int Delay, s/veh	7.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	58	194	52	40	332	172	51	53	75	17	7	38
Future Vol, veh/h	58	194	52	40	332	172	51	53	75	17	7	38
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	60	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	63	211	57	43	361	187	55	58	82	18	8	41

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	548	0	0	268	0	0	931	1000	240	977	935	455
Stage 1	-	-	-	-	-	-	366	366	-	541	541	-
Stage 2	-	-	-	-	-	-	565	634	-	436	394	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1021	-	-	1296	-	-	247	243	799	230	265	605
Stage 1	-	-	-	-	-	-	653	623	-	525	521	-
Stage 2	-	-	-	-	-	-	510	473	-	599	605	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1021	-	-	1296	-	-	209	220	799	154	240	605
Mov Cap-2 Maneuver	-	-	-	-	-	-	209	220	-	154	240	-
Stage 1	-	-	-	-	-	-	613	584	-	492	504	-
Stage 2	-	-	-	-	-	-	452	457	-	455	567	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.7			0.6			34.5			20.1		
HCM LOS							D			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	309	1021	-	-	1296	-	-	306
HCM Lane V/C Ratio	0.63	0.062	-	-	0.034	-	-	0.22
HCM Control Delay (s)	34.5	8.8	-	-	7.9	-	-	20.1
HCM Lane LOS		D	A	-	-	A	-	C
HCM 95th %tile Q(veh)		4	0.2	-	-	0.1	-	0.8

NPMC Howard-Orange Mobility Assessment
8: Marlborough Ave S/Alley & Orange Ave

Near Term (2022) Conditions
Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	301	57	74	644	0	122	0	72	0	2	3
Future Volume (veh/h)	0	301	57	74	644	0	122	0	72	0	2	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	327	62	80	700	0	133	0	78	0	2	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	225	769	146	591	941	0	350	12	105	0	129	193
Arrive On Green	0.00	0.50	0.50	0.50	0.50	0.00	0.19	0.00	0.19	0.00	0.19	0.19
Sat Flow, veh/h	746	1528	290	995	1870	0	875	63	550	0	675	1013
Grp Volume(v), veh/h	0	0	389	80	700	0	211	0	0	0	0	5
Grp Sat Flow(s),veh/h/ln	746	0	1818	995	1870	0	1487	0	0	0	0	1688
Q Serve(g_s), s	0.0	0.0	4.3	1.8	9.5	0.0	3.9	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.0	0.0	4.3	6.1	9.5	0.0	4.3	0.0	0.0	0.0	0.0	0.1
Prop In Lane	1.00		0.16	1.00		0.00	0.63		0.37	0.00		0.60
Lane Grp Cap(c), veh/h	225	0	915	591	941	0	467	0	0	0	0	322
V/C Ratio(X)	0.00	0.00	0.43	0.14	0.74	0.00	0.45	0.00	0.00	0.00	0.00	0.02
Avail Cap(c_a), veh/h	1341	0	3635	2079	3740	0	1749	0	0	0	0	2320
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	5.0	6.9	6.3	0.0	12.2	0.0	0.0	0.0	0.0	10.5
Incr Delay (d2), s/veh	0.0	0.0	0.2	0.1	0.6	0.0	0.3	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.9	0.3	2.1	0.0	1.1	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	5.2	7.0	6.9	0.0	12.4	0.0	0.0	0.0	0.0	10.5
LnGrp LOS	A	A	A	A	A	A	B	A	A	A	A	B
Approach Vol, veh/h		389			780			211				5
Approach Delay, s/veh		5.2			7.0			12.4				10.5
Approach LOS		A			A			B				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		21.0		11.0		21.0		11.0				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		64.0		44.0		64.0		34.0				
Max Q Clear Time (g_c+I1), s		6.3		2.1		11.5		6.3				
Green Ext Time (p_c), s		2.0		0.0		4.6		0.9				
Intersection Summary												
HCM 6th Ctrl Delay				7.3								
HCM 6th LOS				A								

Intersection												
Int Delay, s/veh	11.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑		↖	↗			↕			↕	
Traffic Vol, veh/h	37	256	18	12	501	25	111	45	37	2	3	15
Future Vol, veh/h	37	256	18	12	501	25	111	45	37	2	3	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	40	278	20	13	545	27	121	49	40	2	3	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	572	0	0	298	0	0	962	966	288	998	963	559
Stage 1	-	-	-	-	-	-	368	368	-	585	585	-
Stage 2	-	-	-	-	-	-	594	598	-	413	378	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1001	-	-	1263	-	-	235	255	751	223	256	529
Stage 1	-	-	-	-	-	-	652	621	-	497	498	-
Stage 2	-	-	-	-	-	-	491	491	-	616	615	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1001	-	-	1263	-	-	217	242	751	172	243	529
Mov Cap-2 Maneuver	-	-	-	-	-	-	217	242	-	172	243	-
Stage 1	-	-	-	-	-	-	626	596	-	477	493	-
Stage 2	-	-	-	-	-	-	468	486	-	514	590	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1			0.2			59.8			15		
HCM LOS							F			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	258	1001	-	-	1263	-	-	382
HCM Lane V/C Ratio	0.813	0.04	-	-	0.01	-	-	0.057
HCM Control Delay (s)	59.8	8.7	-	-	7.9	-	-	15
HCM Lane LOS	F	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	6.4	0.1	-	-	0	-	-	0.2

NPMC Howard-Orange Mobility Assessment
10: 43rd St & Orange Ave

Near Term (2022) Conditions
Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔						↔↔	
Traffic Volume (veh/h)	0	342	39	19	532	0	0	0	0	51	268	81
Future Volume (veh/h)	0	342	39	19	532	0	0	0	0	51	268	81
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	0.99		1.00				1.00		0.91
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1900	1870	1900
Adj Flow Rate, veh/h	0	368	42	20	572	0				55	288	87
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	2	2	0				0	2	0
Cap, veh/h	0	1027	117	604	1172	0				102	545	171
Arrive On Green	0.00	0.63	0.63	1.00	1.00	0.00				0.23	0.23	0.23
Sat Flow, veh/h	0	1639	187	966	1870	0				435	2335	732
Grp Volume(v), veh/h	0	0	410	20	572	0				234	0	196
Grp Sat Flow(s),veh/h/ln	0	0	1826	966	1870	0				1849	0	1654
Q Serve(g_s), s	0.0	0.0	7.6	0.3	0.0	0.0				7.8	0.0	7.2
Cycle Q Clear(g_c), s	0.0	0.0	7.6	7.8	0.0	0.0				7.8	0.0	7.2
Prop In Lane	0.00		0.10	1.00		0.00				0.24		0.44
Lane Grp Cap(c), veh/h	0	0	1144	604	1172	0				431	0	386
V/C Ratio(X)	0.00	0.00	0.36	0.03	0.49	0.00				0.54	0.00	0.51
Avail Cap(c_a), veh/h	0	0	1144	604	1172	0				1085	0	971
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	0.76	0.76	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	6.3	0.7	0.0	0.0				23.5	0.0	23.3
Incr Delay (d2), s/veh	0.0	0.0	0.9	0.1	1.1	0.0				2.4	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	2.7	0.0	0.4	0.0				3.5	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	7.2	0.8	1.1	0.0				25.9	0.0	25.7
LnGrp LOS	A	A	A	A	A	A				C	A	C
Approach Vol, veh/h		410			592						430	
Approach Delay, s/veh		7.2			1.1						25.8	
Approach LOS		A			A						C	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		48.8		21.2		48.8						
Change Period (Y+Rc), s		4.9		4.9		4.9						
Max Green Setting (Gmax), s		19.1		41.1		19.1						
Max Q Clear Time (g_c+I1), s		9.6		9.8		9.8						
Green Ext Time (p_c), s		3.3		5.6		4.7						
Intersection Summary												
HCM 6th Ctrl Delay				10.3								
HCM 6th LOS				B								

NPMC Howard-Orange Mobility Assessment
 11: Fairmount Ave & Orange Ave

Near Term (2022) Conditions
 Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕	↗	↖	↗	
Traffic Volume (veh/h)	53	194	47	44	342	140	167	838	59	10	58	5
Future Volume (veh/h)	53	194	47	44	342	140	167	838	59	10	58	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.92	0.96		0.87	0.95		0.92	0.99		0.91
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	211	51	48	372	152	182	911	64	11	63	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	206	558	135	473	469	192	670	1571	110	258	797	63
Arrive On Green	0.78	0.78	0.78	0.39	0.39	0.39	0.47	0.47	0.47	0.47	0.47	0.47
Sat Flow, veh/h	878	1429	345	1075	1202	491	1263	3344	235	574	1696	135
Grp Volume(v), veh/h	58	0	262	48	0	524	182	484	491	11	0	68
Grp Sat Flow(s),veh/h/ln	878	0	1774	1075	0	1693	1263	1777	1803	574	0	1831
Q Serve(g_s), s	4.1	0.0	3.2	2.1	0.0	19.1	6.5	13.9	13.9	1.0	0.0	1.4
Cycle Q Clear(g_c), s	23.2	0.0	3.2	5.4	0.0	19.1	7.9	13.9	13.9	14.9	0.0	1.4
Prop In Lane	1.00		0.19	1.00		0.29	1.00		0.13	1.00		0.07
Lane Grp Cap(c), veh/h	206	0	692	473	0	661	670	835	847	258	0	860
V/C Ratio(X)	0.28	0.00	0.38	0.10	0.00	0.79	0.27	0.58	0.58	0.04	0.00	0.08
Avail Cap(c_a), veh/h	206	0	692	473	0	661	801	1018	1033	318	0	1049
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.94	0.00	0.94	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.7	0.0	5.0	15.8	0.0	18.8	12.4	13.5	13.5	19.0	0.0	10.2
Incr Delay (d2), s/veh	3.2	0.0	1.5	0.4	0.0	9.5	0.9	2.7	2.7	0.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/lr0.8	0.0	0.0	1.2	0.6	0.0	8.7	1.8	5.6	5.7	0.1	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.9	0.0	6.5	16.2	0.0	28.3	13.3	16.3	16.2	19.2	0.0	10.4
LnGrp LOS	B	A	A	B	A	C	B	B	B	B	A	B
Approach Vol, veh/h		320			572			1157				79
Approach Delay, s/veh		8.8			27.3			15.8				11.6
Approach LOS		A			C			B				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		32.2		37.8		32.2		37.8				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		20.1		40.1		20.1		40.1				
Max Q Clear Time (g_c+I1), s		25.2		15.9		21.1		16.9				
Green Ext Time (p_c), s		0.0		17.0		0.0		0.9				
Intersection Summary												
HCM 6th Ctrl Delay												17.7
HCM 6th LOS												B

Intersection												
Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔			↔			↔	
Traffic Vol, veh/h	0	230	14	14	462	0	17	0	11	13	8	50
Future Vol, veh/h	0	230	14	14	462	0	17	0	11	13	8	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	242	15	15	486	0	18	0	12	14	8	53

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	257	0	0	797	766	250	772	773	486
Stage 1	-	-	-	-	-	-	250	250	-	516	516	-
Stage 2	-	-	-	-	-	-	547	516	-	256	257	-
Critical Hdwy	-	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	1308	-	0	305	333	789	317	330	581
Stage 1	0	-	-	-	-	0	754	700	-	542	534	-
Stage 2	0	-	-	-	-	0	521	534	-	749	695	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1308	-	-	271	329	789	310	326	581
Mov Cap-2 Maneuver	-	-	-	-	-	-	372	419	-	419	415	-
Stage 1	-	-	-	-	-	-	754	700	-	542	528	-
Stage 2	-	-	-	-	-	-	461	528	-	738	695	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.2			13.2			13.1		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	469	-	-	1308	-	521
HCM Lane V/C Ratio	0.063	-	-	0.011	-	0.143
HCM Control Delay (s)	13.2	-	-	7.8	-	13.1
HCM Lane LOS	B	-	-	A	-	B
HCM 95th %tile Q(veh)	0.2	-	-	0	-	0.5

Intersection	
Intersection Delay, s/veh	23.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↕			↕	
Traffic Vol, veh/h	32	174	23	46	347	60	28	180	30	24	104	25
Future Vol, veh/h	32	174	23	46	347	60	28	180	30	24	104	25
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	37	200	26	53	399	69	32	207	34	28	120	29
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	14.8	33.9	16.9	13.9
HCM LOS	B	D	C	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	12%	100%	0%	100%	0%	16%
Vol Thru, %	76%	0%	88%	0%	85%	68%
Vol Right, %	13%	0%	12%	0%	15%	16%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	238	32	197	46	407	153
LT Vol	28	32	0	46	0	24
Through Vol	180	0	174	0	347	104
RT Vol	30	0	23	0	60	25
Lane Flow Rate	274	37	226	53	468	176
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.516	0.078	0.444	0.105	0.853	0.346
Departure Headway (Hd)	6.794	7.655	7.057	7.18	6.563	7.085
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	528	466	509	498	552	505
Service Time	4.858	5.425	4.826	4.936	4.319	5.159
HCM Lane V/C Ratio	0.519	0.079	0.444	0.106	0.848	0.349
HCM Control Delay	16.9	11.1	15.4	10.8	36.5	13.9
HCM Lane LOS	C	B	C	B	E	B
HCM 95th-tile Q	2.9	0.3	2.3	0.3	9.1	1.5

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	30	163	21	32	414	38	0	0	0	6	3	22
Future Vol, veh/h	30	163	21	32	414	38	0	0	0	6	3	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	175	23	34	445	41	0	0	0	6	3	24

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	486	0	0	198	0	0	785	796	466
Stage 1	-	-	-	-	-	-	534	534	-
Stage 2	-	-	-	-	-	-	251	262	-
Critical Hdwy	4.12	-	-	4.12	-	-	6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	1077	-	-	1375	-	-	361	320	597
Stage 1	-	-	-	-	-	-	588	524	-
Stage 2	-	-	-	-	-	-	791	691	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1077	-	-	1375	-	-	337	0	597
Mov Cap-2 Maneuver	-	-	-	-	-	-	337	0	-
Stage 1	-	-	-	-	-	-	549	0	-
Stage 2	-	-	-	-	-	-	791	0	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0.5	12.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1077	-	-	1375	-	-	512
HCM Lane V/C Ratio	0.03	-	-	0.025	-	-	0.065
HCM Control Delay (s)	8.4	0	-	7.7	0	-	12.5
HCM Lane LOS	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-	-	0.2

NPMC Howard-Orange Mobility Assessment
 15: Euclid Ave & Orange Ave

Near Term (2022) Conditions
 Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	136	69	70	207	69	80	340	45	24	157	57
Future Volume (veh/h)	49	136	69	70	207	69	80	340	45	24	157	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	53	148	75	76	225	75	87	370	49	26	171	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	78	264	134	99	319	106	176	523	65	122	486	163
Arrive On Green	0.04	0.23	0.23	0.06	0.24	0.24	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1781	1170	593	1781	1342	447	201	1346	166	78	1251	418
Grp Volume(v), veh/h	53	0	223	76	0	300	506	0	0	259	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1764	1781	0	1790	1714	0	0	1747	0	0
Q Serve(g_s), s	1.3	0.0	4.8	1.8	0.0	6.6	5.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.3	0.0	4.8	1.8	0.0	6.6	10.8	0.0	0.0	4.4	0.0	0.0
Prop In Lane	1.00		0.34	1.00		0.25	0.17		0.10	0.10		0.24
Lane Grp Cap(c), veh/h	78	0	398	99	0	425	764	0	0	771	0	0
V/C Ratio(X)	0.68	0.00	0.56	0.77	0.00	0.71	0.66	0.00	0.00	0.34	0.00	0.00
Avail Cap(c_a), veh/h	1242	0	1640	1242	0	1664	2435	0	0	2426	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.3	0.0	14.8	20.0	0.0	15.0	11.2	0.0	0.0	9.4	0.0	0.0
Incr Delay (d2), s/veh	3.9	0.0	1.1	4.7	0.0	2.0	1.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	1.8	0.8	0.0	2.6	3.3	0.0	0.0	1.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.2	0.0	15.9	24.7	0.0	17.0	12.2	0.0	0.0	9.6	0.0	0.0
LnGrp LOS	C	A	B	C	A	B	B	A	A	A	A	A
Approach Vol, veh/h		276			376			506			259	
Approach Delay, s/veh		17.5			18.5			12.2			9.6	
Approach LOS		B			B			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.8	14.6		21.6	6.3	15.1		21.6				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	30.0	40.0		60.0	30.0	40.0		60.0				
Max Q Clear Time (g_c+I1), s	3.8	6.8		6.4	3.3	8.6		12.8				
Green Ext Time (p_c), s	0.1	1.4		1.8	0.1	1.9		4.0				
Intersection Summary												
HCM 6th Ctrl Delay				14.4								
HCM 6th LOS				B								

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔			↔			↔	↔
Traffic Vol, veh/h	20	178	5	12	331	7	25	29	15	1	13	46
Future Vol, veh/h	20	178	5	12	331	7	25	29	15	1	13	46
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	209	6	14	389	8	29	34	18	1	15	54

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	397	0	0	215	0	0	716	685	212	707	684	393
Stage 1	-	-	-	-	-	-	260	260	-	421	421	-
Stage 2	-	-	-	-	-	-	456	425	-	286	263	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1162	-	-	1355	-	-	345	371	828	350	371	656
Stage 1	-	-	-	-	-	-	745	693	-	610	589	-
Stage 2	-	-	-	-	-	-	584	586	-	721	691	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1162	-	-	1355	-	-	299	359	828	310	359	656
Mov Cap-2 Maneuver	-	-	-	-	-	-	299	359	-	310	359	-
Stage 1	-	-	-	-	-	-	729	678	-	597	583	-
Stage 2	-	-	-	-	-	-	516	580	-	656	676	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.8			0.3			17.1			12.5		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	378	1162	-	-	1355	-	-	548
HCM Lane V/C Ratio	0.215	0.02	-	-	0.01	-	-	0.129
HCM Control Delay (s)	17.1	8.2	-	-	7.7	-	-	12.5
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.8	0.1	-	-	0	-	-	0.4

Intersection	
Intersection Delay, s/veh	11.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↕			↕	
Traffic Vol, veh/h	30	177	10	22	290	3	27	36	31	15	36	31
Future Vol, veh/h	30	177	10	22	290	3	27	36	31	15	36	31
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	197	11	24	322	3	30	40	34	17	40	34
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	10.4	12.6	9.5	9.3
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	29%	100%	0%	100%	0%	18%
Vol Thru, %	38%	0%	95%	0%	99%	44%
Vol Right, %	33%	0%	5%	0%	1%	38%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	94	30	187	22	293	82
LT Vol	27	30	0	22	0	15
Through Vol	36	0	177	0	290	36
RT Vol	31	0	10	0	3	31
Lane Flow Rate	104	33	208	24	326	91
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.159	0.055	0.309	0.039	0.478	0.138
Departure Headway (Hd)	5.494	6.005	5.462	5.796	5.285	5.468
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	657	600	663	612	674	660
Service Time	3.494	3.705	3.162	3.589	3.078	3.472
HCM Lane V/C Ratio	0.158	0.055	0.314	0.039	0.484	0.138
HCM Control Delay	9.5	9.1	10.6	8.8	12.9	9.3
HCM Lane LOS	A	A	B	A	B	A
HCM 95th-tile Q	0.6	0.2	1.3	0.1	2.6	0.5

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑			↑↑↑					↑			↑
Traffic Vol, veh/h	0	360	14	0	964	28	0	0	15	0	0	11
Future Vol, veh/h	0	360	14	0	964	28	0	0	15	0	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	391	15	0	1048	30	0	0	16	0	0	12

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	-	-	0	-	-	203	-	-	539
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	684	0	0	417
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	684	-	-	417
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0		0		10.4		13.9	
HCM LOS					B		B	

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	684	-	-	-	-	417
HCM Lane V/C Ratio	0.024	-	-	-	-	0.029
HCM Control Delay (s)	10.4	-	-	-	-	13.9
HCM Lane LOS	B	-	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	-	0.1

NPMC Howard-Orange Mobility Assessment
 19: 35th St & El Cajon Blvd

Near Term (2022) Conditions
 Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	326	32	20	792	76	116	116	36	29	64	84
Future Volume (veh/h)	17	326	32	20	792	76	116	116	36	29	64	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	336	33	21	816	78	120	120	37	30	66	87
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	28	3177	986	31	3186	989	169	145	41	126	257	363
Arrive On Green	0.02	0.62	0.62	0.02	0.62	0.62	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	530	633	179	361	1123	1585
Grp Volume(v), veh/h	18	336	33	21	816	78	277	0	0	96	0	87
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1342	0	0	1484	0	1585
Q Serve(g_s), s	1.1	2.9	0.9	1.3	7.7	2.1	17.5	0.0	0.0	0.0	0.0	4.8
Cycle Q Clear(g_c), s	1.1	2.9	0.9	1.3	7.7	2.1	22.1	0.0	0.0	4.6	0.0	4.8
Prop In Lane	1.00		1.00	1.00		1.00	0.43		0.13	0.31		1.00
Lane Grp Cap(c), veh/h	28	3177	986	31	3186	989	355	0	0	384	0	363
V/C Ratio(X)	0.65	0.11	0.03	0.68	0.26	0.08	0.78	0.00	0.00	0.25	0.00	0.24
Avail Cap(c_a), veh/h	233	3177	986	233	3186	989	443	0	0	478	0	456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.82	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.9	8.3	7.9	52.8	9.1	8.0	41.6	0.0	0.0	33.8	0.0	34.0
Incr Delay (d2), s/veh	9.4	0.1	0.1	9.4	0.2	0.2	4.4	0.0	0.0	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.0	0.3	0.6	2.8	0.7	7.6	0.0	0.0	2.1	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.2	8.3	7.9	62.2	9.3	8.2	46.0	0.0	0.0	34.0	0.0	34.1
LnGrp LOS	E	A	A	E	A	A	D	A	A	C	A	C
Approach Vol, veh/h		387			915			277				183
Approach Delay, s/veh		10.8			10.4			46.0				34.0
Approach LOS		B			B			D				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.1	72.3		29.6	6.3	72.1		29.6				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	14.1	48.6		31.1	14.1	48.6		31.1				
Max Q Clear Time (g_c+I1), s	3.1	9.7		24.1	3.3	4.9		6.8				
Green Ext Time (p_c), s	0.0	4.5		0.7	0.0	1.7		0.5				

Intersection Summary

HCM 6th Ctrl Delay	18.5
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑			↑↑↑					↑			↑
Traffic Vol, veh/h	0	922	20	0	1093	40	0	0	107	0	0	75
Future Vol, veh/h	0	922	20	0	1093	40	0	0	107	0	0	75
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1002	22	0	1188	43	0	0	116	0	0	82

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	-	-	0	-	-	512	-	-	616
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	434	0	0	372
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	434	-	-	372
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	16.3	17.4
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	434	-	-	-	-	372
HCM Lane V/C Ratio	0.268	-	-	-	-	0.219
HCM Control Delay (s)	16.3	-	-	-	-	17.4
HCM Lane LOS	C	-	-	-	-	C
HCM 95th %tile Q(veh)	1.1	-	-	-	-	0.8

NPMC Howard-Orange Mobility Assessment
 21: Fairmount Ave & El Cajon Blvd

Near Term (2022) Conditions
 Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	635	57	0	1042	359	91	831	67	0	0	0
Future Volume (veh/h)	230	635	57	0	1042	359	91	831	67	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1900	1870	1900			
Adj Flow Rate, veh/h	240	661	59	0	1085	374	95	866	70			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	2	2	0	2	2	0	2	0			
Cap, veh/h	165	2150	959	0	1239	421	101	969	82			
Arrive On Green	0.09	0.60	0.60	0.00	0.48	0.48	0.31	0.31	0.31			
Sat Flow, veh/h	1781	3554	1585	0	2697	884	324	3092	262			
Grp Volume(v), veh/h	240	661	59	0	735	724	544	0	487			
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	0	1777	1711	1854	0	1823			
Q Serve(g_s), s	11.1	10.8	1.8	0.0	44.4	46.1	34.2	0.0	30.0			
Cycle Q Clear(g_c), s	11.1	10.8	1.8	0.0	44.4	46.1	34.2	0.0	30.0			
Prop In Lane	1.00		1.00	0.00		0.52	0.17		0.14			
Lane Grp Cap(c), veh/h	165	2150	959	0	845	814	581	0	571			
V/C Ratio(X)	1.46	0.31	0.06	0.00	0.87	0.89	0.94	0.00	0.85			
Avail Cap(c_a), veh/h	165	2150	959	0	845	814	604	0	594			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.85	0.85	0.75	0.00	0.75			
Uniform Delay (d), s/veh	54.5	11.5	9.7	0.0	28.1	28.6	40.0	0.0	38.6			
Incr Delay (d2), s/veh	235.8	0.4	0.1	0.0	10.3	12.1	17.4	0.0	8.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	15.8	4.3	0.7	0.0	20.7	21.0	18.2	0.0	14.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	290.3	11.9	9.8	0.0	38.4	40.7	57.4	0.0	46.7			
LnGrp LOS	F	B	A	A	D	D	E	A	D			
Approach Vol, veh/h		960			1459			1031				
Approach Delay, s/veh		81.3			39.5			52.4				
Approach LOS		F			D			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		77.5			15.5	62.0		42.5				
Change Period (Y+Rc), s		4.9			4.4	4.9		4.9				
Max Green Setting (Gmax), s		55.6			11.1	55.6		39.1				
Max Q Clear Time (g_c+I1), s		12.8			13.1	48.1		36.2				
Green Ext Time (p_c), s		3.4			0.0	4.2		1.4				
Intersection Summary												
HCM 6th Ctrl Delay			55.0									
HCM 6th LOS			E									
Notes												
User approved ignoring U-Turning movement.												

NPMC Howard-Orange Mobility Assessment
 22: Euclid Ave & El Cajon Blvd

Near Term (2022) Conditions
 Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖		↖	↖		↖	↖		↖	↖	
Traffic Volume (veh/h)	34	495	58	71	1021	111	184	190	67	23	101	51
Future Volume (veh/h)	34	495	58	71	1021	111	184	190	67	23	101	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	36	521	61	75	1075	117	194	200	71	24	106	54
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	62	1834	214	96	1909	208	283	338	120	196	299	152
Arrive On Green	0.03	0.57	0.57	0.05	0.59	0.59	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1781	3206	374	1781	3232	351	1226	1318	468	1108	1168	595
Grp Volume(v), veh/h	36	288	294	75	590	602	194	0	271	24	0	160
Grp Sat Flow(s),veh/h/ln	1781	1777	1803	1781	1777	1807	1226	0	1786	1108	0	1763
Q Serve(g_s), s	2.4	9.9	10.0	5.0	24.4	24.5	18.5	0.0	16.0	2.3	0.0	8.9
Cycle Q Clear(g_c), s	2.4	9.9	10.0	5.0	24.4	24.5	27.4	0.0	16.0	18.3	0.0	8.9
Prop In Lane	1.00		0.21	1.00		0.19	1.00		0.26	1.00		0.34
Lane Grp Cap(c), veh/h	62	1016	1031	96	1049	1067	283	0	457	196	0	452
V/C Ratio(X)	0.58	0.28	0.29	0.79	0.56	0.56	0.69	0.00	0.59	0.12	0.00	0.35
Avail Cap(c_a), veh/h	105	1016	1031	150	1049	1067	471	0	731	366	0	721
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.98	0.98	0.98	1.00	1.00	1.00	0.69	0.00	0.69	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.0	13.1	13.1	56.1	15.1	15.1	47.7	0.0	39.1	47.2	0.0	36.5
Incr Delay (d2), s/veh	3.1	0.7	0.7	5.3	2.2	2.2	0.8	0.0	0.3	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	4.1	4.2	2.4	10.2	10.3	5.7	0.0	7.0	0.7	0.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.1	13.8	13.8	61.4	17.2	17.2	48.5	0.0	39.5	47.3	0.0	36.7
LnGrp LOS	E	B	B	E	B	B	D	A	D	D	A	D
Approach Vol, veh/h		618			1267			465				184
Approach Delay, s/veh		16.5			19.8			43.2				38.1
Approach LOS		B			B			D				D
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.8	73.5		35.6	8.6	75.8		35.6				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	46.6			49.1	7.1	46.6		49.1				
Max Q Clear Time (g_c+1), s	12.0			20.3	4.4	26.5		29.4				
Green Ext Time (p_c), s	0.0	4.6		0.7	0.0	8.9		1.4				
Intersection Summary												
HCM 6th Ctrl Delay				24.6								
HCM 6th LOS				C								

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	23	0	158	96	0
Future Vol, veh/h	21	23	0	158	96	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	28	0	193	117	0
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB	EB	
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.7	8.4	7.9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	48%	0%
Vol Thru, %	100%	0%	100%
Vol Right, %	0%	52%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	158	44	96
LT Vol	0	21	0
Through Vol	158	0	96
RT Vol	0	23	0
Lane Flow Rate	193	54	117
Geometry Grp	1	1	1
Degree of Util (X)	0.22	0.065	0.136
Departure Headway (Hd)	4.117	4.39	4.175
Convergence, Y/N	Yes	Yes	Yes
Cap	865	821	849
Service Time	2.179	2.39	2.252
HCM Lane V/C Ratio	0.223	0.066	0.138
HCM Control Delay	8.4	7.7	7.9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.8	0.2	0.5

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	12	12	18	0	0	0	0	1034	35	7	115	0
Future Vol, veh/h	12	12	18	0	0	0	0	1034	35	7	115	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	13	19	0	0	0	0	1077	36	7	120	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	673	1247	120	-	0	0	1113	0	0
Stage 1	134	134	-	-	-	-	-	-	-
Stage 2	539	1113	-	-	-	-	-	-	-
Critical Hdwy	6.63	6.53	6.23	-	-	-	4.13	-	-
Critical Hdwy Stg 1	5.43	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.83	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	-	-	-	2.219	-	-
Pot Cap-1 Maneuver	404	173	931	0	-	-	625	-	0
Stage 1	892	785	-	0	-	-	-	-	0
Stage 2	550	283	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	399	0	931	-	-	-	625	-	-
Mov Cap-2 Maneuver	399	0	-	-	-	-	-	-	-
Stage 1	881	0	-	-	-	-	-	-	-
Stage 2	550	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.4	0	0.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	607	625	-
HCM Lane V/C Ratio	-	-	0.072	0.012	-
HCM Control Delay (s)	-	-	11.4	10.8	0
HCM Lane LOS	-	-	B	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

NPMC Howard-Orange Mobility Assessment
25: Euclid Ave & Polk Ave

Near Term (2022) Conditions
Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Volume (veh/h)	25	18	36	0	0	0	0	528	19	12	274	0
Future Volume (veh/h)	25	18	36	0	0	0	0	528	19	12	274	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	27	19	39				0	568	20	13	295	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	0				0	2	2	2	2	0
Cap, veh/h	40	28	57				0	892	31	177	900	0
Arrive On Green	0.07	0.07	0.07				0.00	0.50	0.50	0.50	0.50	0.00
Sat Flow, veh/h	541	381	781				0	1796	63	26	1813	0
Grp Volume(v), veh/h	85	0	0				0	0	588	308	0	0
Grp Sat Flow(s),veh/h/ln	1703	0	0				0	0	1859	1838	0	0
Q Serve(g_s), s	1.1	0.0	0.0				0.0	0.0	5.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.1	0.0	0.0				0.0	0.0	5.3	2.3	0.0	0.0
Prop In Lane	0.32		0.46				0.00		0.03	0.04		0.00
Lane Grp Cap(c), veh/h	124	0	0				0	0	923	1078	0	0
V/C Ratio(X)	0.68	0.00	0.00				0.00	0.00	0.64	0.29	0.00	0.00
Avail Cap(c_a), veh/h	2624	0	0				0	0	4498	4493	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.3	0.0	0.0				0.0	0.0	4.2	3.5	0.0	0.0
Incr Delay (d2), s/veh	2.5	0.0	0.0				0.0	0.0	0.6	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0				0.0	0.0	0.4	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.8	0.0	0.0				0.0	0.0	4.8	3.6	0.0	0.0
LnGrp LOS	B	A	A				A	A	A	A	A	A
Approach Vol, veh/h		85						588			308	
Approach Delay, s/veh		12.8						4.8			3.6	
Approach LOS		B						A			A	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		16.2		6.6				16.2				
Change Period (Y+Rc), s		4.9		4.9				4.9				
Max Green Setting (Gmax), s		55.1		35.1				55.1				
Max Q Clear Time (g_c+I1), s		7.3		3.1				4.3				
Green Ext Time (p_c), s		4.0		0.3				1.8				
Intersection Summary												
HCM 6th Ctrl Delay			5.1									
HCM 6th LOS			A									

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	13	21	12	0	0	0	0	48	6	3	31	0
Future Vol, veh/h	13	21	12	0	0	0	0	48	6	3	31	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	26	15	0	0	0	0	59	7	4	38	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	109	112	38	-	0	0	66	0	0
Stage 1	46	46	-	-	-	-	-	-	-
Stage 2	63	66	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	-	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	888	778	1034	0	-	-	1536	-	0
Stage 1	976	857	-	0	-	-	-	-	0
Stage 2	960	840	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	885	0	1034	-	-	-	1536	-	-
Mov Cap-2 Maneuver	885	0	-	-	-	-	-	-	-
Stage 1	973	0	-	-	-	-	-	-	-
Stage 2	960	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	951	1536	-
HCM Lane V/C Ratio	-	-	0.06	0.002	-
HCM Control Delay (s)	-	-	9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

NPMC Howard-Orange Mobility Assessment
 27: 35th St & University Ave

Near Term (2022) Conditions
 Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	248	15	19	467	67	88	70	20	41	29	44
Future Volume (veh/h)	28	248	15	19	467	67	88	70	20	41	29	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	29	253	15	19	477	68	90	71	20	42	30	45
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	621	1255	74	851	1149	164	182	101	25	134	83	90
Arrive On Green	0.72	0.72	0.72	0.72	0.72	0.72	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	862	1748	104	1111	1601	228	746	732	183	446	601	654
Grp Volume(v), veh/h	29	0	268	19	0	545	181	0	0	117	0	0
Grp Sat Flow(s),veh/h/ln	862	0	1852	1111	0	1829	1661	0	0	1702	0	0
Q Serve(g_s), s	1.0	0.0	3.2	0.4	0.0	8.1	2.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	9.1	0.0	3.2	3.6	0.0	8.1	7.0	0.0	0.0	4.2	0.0	0.0
Prop In Lane	1.00		0.06	1.00		0.12	0.50		0.11	0.36		0.38
Lane Grp Cap(c), veh/h	621	0	1329	851	0	1313	308	0	0	307	0	0
V/C Ratio(X)	0.05	0.00	0.20	0.02	0.00	0.42	0.59	0.00	0.00	0.38	0.00	0.00
Avail Cap(c_a), veh/h	621	0	1329	851	0	1313	527	0	0	525	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.7	0.0	3.2	3.8	0.0	3.9	28.1	0.0	0.0	27.1	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.3	0.0	0.0	1.0	0.7	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.9	0.1	0.0	2.2	2.8	0.0	0.0	1.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.8	0.0	3.5	3.8	0.0	4.8	28.8	0.0	0.0	27.4	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	C	A	A	C	A	A
Approach Vol, veh/h		297			564			181				117
Approach Delay, s/veh		3.7			4.8			28.8				27.4
Approach LOS		A			A			C				C
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		53.7		14.3		53.7		14.3				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		39.1		19.1		39.1		19.1				
Max Q Clear Time (g_c+I1), s		11.1		6.2		10.1		9.0				
Green Ext Time (p_c), s		2.4		0.3		6.0		0.5				
Intersection Summary												
HCM 6th Ctrl Delay				10.5								
HCM 6th LOS				B								



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	126	374	71	89	469	160	129	730	58	83	92	33
Future Volume (veh/h)	126	374	71	89	469	160	129	730	58	83	92	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	131	390	74	93	489	167	134	760	60	86	96	34
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	160	540	102	561	1070	363	164	875	69	110	306	108
Arrive On Green	0.09	0.18	0.18	0.31	0.41	0.41	0.09	0.26	0.26	0.06	0.23	0.23
Sat Flow, veh/h	1781	2985	561	1781	2604	884	1781	3336	263	1781	1319	467
Grp Volume(v), veh/h	131	231	233	93	333	323	134	405	415	86	0	130
Grp Sat Flow(s),veh/h/ln	1781	1777	1769	1781	1777	1711	1781	1777	1823	1781	0	1786
Q Serve(g_s), s	7.7	13.0	13.2	4.0	14.4	14.5	7.8	23.1	23.1	5.0	0.0	6.4
Cycle Q Clear(g_c), s	7.7	13.0	13.2	4.0	14.4	14.5	7.8	23.1	23.1	5.0	0.0	6.4
Prop In Lane	1.00		0.32	1.00		0.52	1.00		0.14	1.00		0.26
Lane Grp Cap(c), veh/h	160	322	320	561	730	703	164	466	478	110	0	414
V/C Ratio(X)	0.82	0.72	0.73	0.17	0.46	0.46	0.82	0.87	0.87	0.79	0.00	0.31
Avail Cap(c_a), veh/h	229	588	586	561	730	703	329	521	535	195	0	414
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.4	40.9	40.9	26.2	22.6	22.7	47.3	37.3	37.3	49.1	0.0	33.7
Incr Delay (d2), s/veh	9.8	12.9	13.6	0.1	2.0	2.2	3.8	13.6	13.3	4.6	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	6.8	6.9	1.7	6.3	6.2	3.6	11.6	11.9	2.4	0.0	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.2	53.8	54.5	26.3	24.7	24.8	51.0	50.9	50.7	53.7	0.0	34.2
LnGrp LOS	E	D	D	C	C	C	D	D	D	D	A	C
Approach Vol, veh/h		595			749			954			216	
Approach Delay, s/veh		54.8			24.9			50.8			42.0	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	38.3	24.1	14.1	29.5	13.9	48.5	10.9	32.7				
Change Period (Y+Rc), s	4.9	* 4.9	4.4	4.9	4.4	4.9	4.4	4.9				
Max Green Setting (Gmax), s	30.6	* 35	19.6	23.1	13.6	31.1	11.6	31.1				
Max Q Clear Time (g_c+1/3), s	10.0	15.2	9.8	8.4	9.7	16.5	7.0	25.1				
Green Ext Time (p_c), s	0.0	4.0	0.1	0.6	0.1	4.7	0.0	2.7				

Intersection Summary

HCM 6th Ctrl Delay	43.3
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	67	273	37	187	673	79	121	403	119	24	254	35
Future Volume (veh/h)	67	273	37	187	673	79	121	403	119	24	254	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	72	294	40	201	724	85	130	433	128	26	273	38
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	456	1282	173	235	890	104	256	429	127	77	497	69
Arrive On Green	0.26	0.41	0.41	0.13	0.28	0.28	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1781	3147	424	1781	3204	376	1068	1387	410	849	1606	224
Grp Volume(v), veh/h	72	165	169	201	401	408	130	0	561	26	0	311
Grp Sat Flow(s),veh/h/ln	1781	1777	1794	1781	1777	1803	1068	0	1797	849	0	1830
Q Serve(g_s), s	2.9	5.7	5.8	10.4	19.8	19.8	10.8	0.0	29.1	0.0	0.0	13.3
Cycle Q Clear(g_c), s	2.9	5.7	5.8	10.4	19.8	19.8	24.1	0.0	29.1	29.1	0.0	13.3
Prop In Lane	1.00		0.24	1.00		0.21	1.00		0.23	1.00		0.12
Lane Grp Cap(c), veh/h	456	724	731	235	494	501	256	0	556	77	0	567
V/C Ratio(X)	0.16	0.23	0.23	0.86	0.81	0.81	0.51	0.00	1.01	0.34	0.00	0.55
Avail Cap(c_a), veh/h	456	724	731	296	758	769	256	0	556	77	0	567
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.98	0.00	0.98
Uniform Delay (d), s/veh	27.1	18.2	18.2	39.9	31.7	31.7	37.0	0.0	32.5	47.0	0.0	27.0
Incr Delay (d2), s/veh	0.1	0.7	0.7	15.1	13.6	13.5	1.4	0.0	40.3	3.6	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.4	2.5	5.5	10.1	10.3	2.9	0.0	18.4	0.7	0.0	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.2	18.9	19.0	55.0	45.3	45.2	38.4	0.0	72.8	50.6	0.0	28.4
LnGrp LOS	C	B	B	E	D	D	D	A	F	D	A	C
Approach Vol, veh/h		406			1010			691			337	
Approach Delay, s/veh		20.4			47.2			66.3			30.1	
Approach LOS		C			D			E			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.8	43.2		34.0	29.0	31.0		34.0				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.9	* 4.9		4.9				
Max Green Setting (Gmax), s	15.6	35.1		29.1	10.6	* 40		29.1				
Max Q Clear Time (g_c+1/2, s)	12.4	7.8		31.1	4.9	21.8		31.1				
Green Ext Time (p_c), s	0.1	2.5		0.0	0.0	4.3		0.0				

Intersection Summary

HCM 6th Ctrl Delay	45.8
HCM 6th LOS	D

Notes

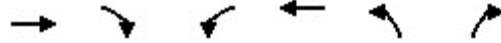
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	
Traffic Vol, veh/h	12	510	906	21	7	18
Future Vol, veh/h	12	510	906	21	7	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	185	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	515	915	21	7	18

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	936	0	-	0	1208 468
Stage 1	-	-	-	-	926 -
Stage 2	-	-	-	-	282 -
Critical Hdwy	4.14	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	2.22	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	727	-	-	-	176 542
Stage 1	-	-	-	-	346 -
Stage 2	-	-	-	-	741 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	727	-	-	-	172 542
Mov Cap-2 Maneuver	-	-	-	-	172 -
Stage 1	-	-	-	-	338 -
Stage 2	-	-	-	-	741 -

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	16.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	727	-	-	-	338
HCM Lane V/C Ratio	0.017	-	-	-	0.075
HCM Control Delay (s)	10	0.1	-	-	16.5
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	
Traffic Volume (veh/h)	558	27	25	1282	110	33
Future Volume (veh/h)	558	27	25	1282	110	33
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1900	1900
Adj Flow Rate, veh/h	607	29	27	1393	120	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	0	0
Cap, veh/h	2844	136	678	2927	142	43
Arrive On Green	0.82	0.82	0.82	0.82	0.11	0.11
Sat Flow, veh/h	3546	165	792	3647	1324	397
Grp Volume(v), veh/h	312	324	27	1393	157	0
Grp Sat Flow(s),veh/h/ln	1777	1841	792	1777	1733	0
Q Serve(g_s), s	4.9	4.9	1.0	14.8	11.6	0.0
Cycle Q Clear(g_c), s	4.9	4.9	5.9	14.8	11.6	0.0
Prop In Lane		0.09	1.00		0.76	0.23
Lane Grp Cap(c), veh/h	1464	1516	678	2927	185	0
V/C Ratio(X)	0.21	0.21	0.04	0.48	0.85	0.00
Avail Cap(c_a), veh/h	1464	1516	678	2927	433	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.96	0.96	0.79	0.79	1.00	0.00
Uniform Delay (d), s/veh	2.4	2.5	3.1	3.3	57.0	0.0
Incr Delay (d2), s/veh	0.3	0.3	0.0	0.1	10.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.5	0.1	4.0	5.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.8	2.8	3.1	3.4	67.1	0.0
LnGrp LOS	A	A	A	A	E	A
Approach Vol, veh/h	636			1420	157	
Approach Delay, s/veh	2.8			3.4	67.1	
Approach LOS	A			A	E	
Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		111.6			111.6	18.4
Change Period (Y+Rc), s		4.5			4.5	4.5
Max Green Setting (Gmax), s		88.5			88.5	32.5
Max Q Clear Time (g_c+I1), s		6.9			16.8	13.6
Green Ext Time (p_c), s		4.5			17.4	0.4
Intersection Summary						
HCM 6th Ctrl Delay			7.7			
HCM 6th LOS			A			

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	59	0	8	1	75	118	26	0	19	22	6	46
Future Vol, veh/h	59	0	8	1	75	118	26	0	19	22	6	46
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	64	0	9	1	82	128	28	0	21	24	7	50
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	8.6	8.8	7.9	7.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	58%	100%	0%	100%	0%	30%
Vol Thru, %	0%	0%	0%	0%	39%	8%
Vol Right, %	42%	0%	100%	0%	61%	62%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	45	59	8	1	193	74
LT Vol	26	59	0	1	0	22
Through Vol	0	0	0	0	75	6
RT Vol	19	0	8	0	118	46
Lane Flow Rate	49	64	9	1	210	80
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.062	0.098	0.01	0.002	0.26	0.097
Departure Headway (Hd)	4.564	5.497	4.291	5.4	4.469	4.354
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	786	653	835	664	806	825
Service Time	2.583	3.217	2.011	3.118	2.186	2.37
HCM Lane V/C Ratio	0.062	0.098	0.011	0.002	0.261	0.097
HCM Control Delay	7.9	8.8	7.1	8.1	8.8	7.8
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.2	0.3	0	0	1	0.3

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↖	↗		↔	
Traffic Vol, veh/h	1	290	41	45	231	3	19	1	55	0	0	1
Future Vol, veh/h	1	290	41	45	231	3	19	1	55	0	0	1
Conflicting Peds, #/hr	9	0	9	8	0	8	9	0	8	8	0	9
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	70	-	-	100	-	-	-	-	40	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	319	45	49	254	3	21	1	60	0	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	266	0	0	373	0	0	716	717	359	745	738	274
Stage 1	-	-	-	-	-	-	353	353	-	363	363	-
Stage 2	-	-	-	-	-	-	363	364	-	382	375	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1298	-	-	1185	-	-	345	355	685	330	346	765
Stage 1	-	-	-	-	-	-	664	631	-	656	625	-
Stage 2	-	-	-	-	-	-	656	624	-	640	617	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1287	-	-	1175	-	-	328	334	674	285	325	752
Mov Cap-2 Maneuver	-	-	-	-	-	-	328	334	-	285	325	-
Stage 1	-	-	-	-	-	-	658	625	-	650	593	-
Stage 2	-	-	-	-	-	-	622	592	-	577	611	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			1.3			12.5			9.8		
HCM LOS							B			A		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	328	674	1287	-	-	1175	-	-	752
HCM Lane V/C Ratio	0.067	0.09	0.001	-	-	0.042	-	-	0.001
HCM Control Delay (s)	16.8	10.9	7.8	-	-	8.2	-	-	9.8
HCM Lane LOS	C	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0.3	0	-	-	0.1	-	-	0

NPMC Howard-Orange Mobility Assessment
2: Alley/33rd St & Orange Ave

Near Term (2022) Conditions
Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	260	0	6	205	154	1	0	0	266	5	110
Future Volume (veh/h)	73	260	0	6	205	154	1	0	0	266	5	110
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	79	283	0	7	223	167	1	0	0	289	5	120
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	103	456	0	211	303	227	4	0	0	394	14	339
Arrive On Green	0.06	0.24	0.00	0.12	0.30	0.30	0.00	0.00	0.00	0.22	0.22	0.22
Sat Flow, veh/h	1781	1870	0	1781	993	744	1781	0	0	1781	64	1531
Grp Volume(v), veh/h	79	283	0	7	0	390	1	0	0	289	0	125
Grp Sat Flow(s),veh/h/ln	1781	1870	0	1781	0	1737	1781	0	0	1781	0	1595
Q Serve(g_s), s	1.8	5.5	0.0	0.1	0.0	8.3	0.0	0.0	0.0	6.2	0.0	2.7
Cycle Q Clear(g_c), s	1.8	5.5	0.0	0.1	0.0	8.3	0.0	0.0	0.0	6.2	0.0	2.7
Prop In Lane	1.00		0.00	1.00		0.43	1.00		0.00	1.00		0.96
Lane Grp Cap(c), veh/h	103	456	0	211	0	529	4	0	0	394	0	353
V/C Ratio(X)	0.77	0.62	0.00	0.03	0.00	0.74	0.23	0.00	0.00	0.73	0.00	0.35
Avail Cap(c_a), veh/h	1477	3193	0	1564	0	2965	1998	0	0	1998	0	1789
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.0	13.8	0.0	16.0	0.0	12.8	20.4	0.0	0.0	14.8	0.0	13.5
Incr Delay (d2), s/veh	4.4	0.6	0.0	0.0	0.0	1.2	9.7	0.0	0.0	1.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	2.1	0.0	0.1	0.0	2.8	0.0	0.0	0.0	2.3	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	14.4	0.0	16.0	0.0	14.0	30.1	0.0	0.0	15.8	0.0	13.7
LnGrp LOS	C	B	A	B	A	B	C	A	A	B	A	B
Approach Vol, veh/h		362			397			1			414	
Approach Delay, s/veh		16.4			14.1			30.1			15.2	
Approach LOS		B			B			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.9	14.0		4.1	6.4	17.5		13.1				
Change Period (Y+Rc), s	5.0	4.0		4.0	4.0	* 5		4.0				
Max Green Setting (Gmax), s	36.0	70.0		46.0	34.0	* 70		46.0				
Max Q Clear Time (g_c+I1), s	2.1	7.5		2.0	3.8	10.3		8.2				
Green Ext Time (p_c), s	0.0	1.3		0.0	0.1	2.2		1.0				

Intersection Summary

HCM 6th Ctrl Delay	15.2
HCM 6th LOS	B

Notes

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

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔			↔			↔	
Traffic Vol, veh/h	10	422	62	38	295	13	41	2	41	2	3	10
Future Vol, veh/h	10	422	62	38	295	13	41	2	41	2	3	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	469	69	42	328	14	46	2	46	2	3	11




















Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	342	0	0	538	0	0	952	952	504	969	979	335
Stage 1	-	-	-	-	-	-	526	526	-	419	419	-
Stage 2	-	-	-	-	-	-	426	426	-	550	560	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1217	-	-	1030	-	-	239	259	568	233	250	707
Stage 1	-	-	-	-	-	-	535	529	-	612	590	-
Stage 2	-	-	-	-	-	-	606	586	-	519	511	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1217	-	-	1030	-	-	223	245	568	204	237	707
Mov Cap-2 Maneuver	-	-	-	-	-	-	223	245	-	204	237	-
Stage 1	-	-	-	-	-	-	528	522	-	604	566	-
Stage 2	-	-	-	-	-	-	569	562	-	469	504	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.9			21			14.2		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	318	1217	-	-	1030	-	-	410
HCM Lane V/C Ratio	0.294	0.009	-	-	0.041	-	-	0.041
HCM Control Delay (s)	21	8	-	-	8.6	-	-	14.2
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.2	0	-	-	0.1	-	-	0.1

NPMC Howard-Orange Mobility Assessment
4: 35th St & Orange Ave

Near Term (2022) Conditions
Timing Plan: PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	379	49	30	290	51	29	69	32	49	99	41
Future Volume (veh/h)	39	379	49	30	290	51	29	69	32	49	99	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.96	0.99		0.96	0.97		0.94	0.96		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	403	52	32	309	54	31	73	34	52	105	44
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	665	987	127	594	941	164	133	199	79	148	187	68
Arrive On Green	0.61	0.61	0.61	0.61	0.61	0.61	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1009	1614	208	929	1539	269	226	1051	418	295	986	359
Grp Volume(v), veh/h	41	0	455	32	0	363	138	0	0	201	0	0
Grp Sat Flow(s),veh/h/ln	1009	0	1823	929	0	1808	1695	0	0	1640	0	0
Q Serve(g_s), s	1.0	0.0	6.4	0.9	0.0	4.8	0.0	0.0	0.0	2.0	0.0	0.0
Cycle Q Clear(g_c), s	5.8	0.0	6.4	7.3	0.0	4.8	3.4	0.0	0.0	5.4	0.0	0.0
Prop In Lane	1.00		0.11	1.00		0.15	0.22		0.25	0.26		0.22
Lane Grp Cap(c), veh/h	665	0	1114	594	0	1105	411	0	0	403	0	0
V/C Ratio(X)	0.06	0.00	0.41	0.05	0.00	0.33	0.34	0.00	0.00	0.50	0.00	0.00
Avail Cap(c_a), veh/h	665	0	1114	594	0	1105	821	0	0	810	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.1	0.0	4.9	6.8	0.0	4.6	17.5	0.0	0.0	18.2	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	1.1	0.2	0.0	0.8	0.2	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	1.9	0.2	0.0	1.4	1.3	0.0	0.0	1.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.2	0.0	6.1	7.0	0.0	5.4	17.7	0.0	0.0	18.6	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	A
Approach Vol, veh/h		496			395			138			201	
Approach Delay, s/veh		6.1			5.6			17.7			18.6	
Approach LOS		A			A			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		34.9		14.2		34.9		14.2				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		30.0		22.1		30.0		22.1				
Max Q Clear Time (g_c+I1), s		8.4		5.4		9.3		7.4				
Green Ext Time (p_c), s		3.4		0.5		2.6		0.7				
Intersection Summary												
HCM 6th Ctrl Delay			9.3									
HCM 6th LOS			A									

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	408	36	35	315	20	20	11	17	5	4	23
Future Vol, veh/h	24	408	36	35	315	20	20	11	17	5	4	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	464	41	40	358	23	23	13	19	6	5	26

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	381	0	0	505	0	0	1004	1000	485	1005	1009	370
Stage 1	-	-	-	-	-	-	539	539	-	450	450	-
Stage 2	-	-	-	-	-	-	465	461	-	555	559	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1177	-	-	1060	-	-	220	243	582	220	240	676
Stage 1	-	-	-	-	-	-	527	522	-	589	572	-
Stage 2	-	-	-	-	-	-	578	565	-	516	511	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1177	-	-	1060	-	-	199	228	582	194	226	676
Mov Cap-2 Maneuver	-	-	-	-	-	-	199	228	-	194	226	-
Stage 1	-	-	-	-	-	-	515	510	-	575	550	-
Stage 2	-	-	-	-	-	-	530	544	-	475	499	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0.8			21.7			14.6		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	270	1177	-	-	1060	-	-	413
HCM Lane V/C Ratio	0.202	0.023	-	-	0.038	-	-	0.088
HCM Control Delay (s)	21.7	8.1	-	-	8.5	-	-	14.6
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.7	0.1	-	-	0.1	-	-	0.3

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↕			↕	
Traffic Vol, veh/h	20	370	17	24	311	52	13	5	20	38	8	21
Future Vol, veh/h	20	370	17	24	311	52	13	5	20	38	8	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	35	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	402	18	26	338	57	14	5	22	41	9	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	395	0	0	420	0	0	890	902	411	888	883	367
Stage 1	-	-	-	-	-	-	455	455	-	419	419	-
Stage 2	-	-	-	-	-	-	435	447	-	469	464	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1164	-	-	1139	-	-	264	277	641	264	285	678
Stage 1	-	-	-	-	-	-	585	569	-	612	590	-
Stage 2	-	-	-	-	-	-	600	573	-	575	564	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1164	-	-	1139	-	-	241	265	641	243	273	678
Mov Cap-2 Maneuver	-	-	-	-	-	-	241	265	-	243	273	-
Stage 1	-	-	-	-	-	-	574	558	-	600	576	-
Stage 2	-	-	-	-	-	-	558	560	-	540	553	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0.5			16.1			20.2		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	365	1164	-	-	1139	-	-	309
HCM Lane V/C Ratio	0.113	0.019	-	-	0.023	-	-	0.236
HCM Control Delay (s)	16.1	8.2	-	-	8.2	-	-	20.2
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0.1	-	-	0.9

Intersection												
Int Delay, s/veh	3.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	36	369	51	35	310	54	37	17	52	12	12	30
Future Vol, veh/h	36	369	51	35	310	54	37	17	52	12	12	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	60	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	39	401	55	38	337	59	40	18	57	13	13	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	396	0	0	456	0	0	973	979	429	987	977	367
Stage 1	-	-	-	-	-	-	507	507	-	443	443	-
Stage 2	-	-	-	-	-	-	466	472	-	544	534	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1163	-	-	1105	-	-	231	250	626	226	251	678
Stage 1	-	-	-	-	-	-	548	539	-	594	576	-
Stage 2	-	-	-	-	-	-	577	559	-	523	524	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1163	-	-	1105	-	-	200	233	626	183	234	678
Mov Cap-2 Maneuver	-	-	-	-	-	-	200	233	-	183	234	-
Stage 1	-	-	-	-	-	-	529	521	-	574	556	-
Stage 2	-	-	-	-	-	-	518	540	-	444	506	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6			0.7			23.2			18		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	311	1163	-	-	1105	-	-	335
HCM Lane V/C Ratio	0.37	0.034	-	-	0.034	-	-	0.175
HCM Control Delay (s)	23.2	8.2	-	-	8.4	-	-	18
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1.7	0.1	-	-	0.1	-	-	0.6

NPMC Howard-Orange Mobility Assessment
8: Marlborough Ave S/Alley & Orange Ave

Near Term (2022) Conditions
Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	482	86	80	376	0	75	0	46	2	0	1
Future Volume (veh/h)	0	482	86	80	376	0	75	0	46	2	0	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	524	93	87	409	0	82	0	50	2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	274	793	141	486	960	0	327	0	64	322	36	65
Arrive On Green	0.00	0.51	0.51	0.51	0.51	0.00	0.11	0.00	0.11	0.11	0.00	0.11
Sat Flow, veh/h	977	1546	274	806	1870	0	920	0	561	820	316	568
Grp Volume(v), veh/h	0	0	617	87	409	0	132	0	0	3	0	0
Grp Sat Flow(s),veh/h/ln	977	0	1821	806	1870	0	1480	0	0	1704	0	0
Q Serve(g_s), s	0.0	0.0	6.6	2.3	3.6	0.0	2.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	6.6	8.9	3.6	0.0	2.3	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.15	1.00		0.00	0.62		0.38	0.67		0.33
Lane Grp Cap(c), veh/h	274	0	934	486	960	0	391	0	0	423	0	0
V/C Ratio(X)	0.00	0.00	0.66	0.18	0.43	0.00	0.34	0.00	0.00	0.01	0.00	0.00
Avail Cap(c_a), veh/h	2149	0	4432	2034	4552	0	2130	0	0	2642	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	4.7	8.0	4.0	0.0	11.3	0.0	0.0	10.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.4	0.1	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	1.0	0.3	0.5	0.0	0.6	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	5.1	8.1	4.2	0.0	11.5	0.0	0.0	10.3	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	A
Approach Vol, veh/h		617			496			132				3
Approach Delay, s/veh		5.1			4.8			11.5				10.3
Approach LOS		A			A			B				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		18.4		7.9		18.4		7.9				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		64.0		44.0		64.0		34.0				
Max Q Clear Time (g_c+I1), s		8.6		2.0		10.9		4.3				
Green Ext Time (p_c), s		3.7		0.0		2.6		0.5				
Intersection Summary												
HCM 6th Ctrl Delay				5.7								
HCM 6th LOS				A								

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑		↖	↗			↕			↕	
Traffic Vol, veh/h	18	429	48	28	346	22	34	16	42	7	7	32
Future Vol, veh/h	18	429	48	28	346	22	34	16	42	7	7	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	447	50	29	360	23	35	17	44	7	7	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	383	0	0	497	0	0	960	951	472	971	965	372
Stage 1	-	-	-	-	-	-	510	510	-	430	430	-
Stage 2	-	-	-	-	-	-	450	441	-	541	535	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1175	-	-	1067	-	-	236	260	592	232	255	674
Stage 1	-	-	-	-	-	-	546	538	-	603	583	-
Stage 2	-	-	-	-	-	-	589	577	-	525	524	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1175	-	-	1067	-	-	212	249	592	197	244	674
Mov Cap-2 Maneuver	-	-	-	-	-	-	212	249	-	197	244	-
Stage 1	-	-	-	-	-	-	537	529	-	593	567	-
Stage 2	-	-	-	-	-	-	538	561	-	463	516	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.6			21.6			14.9		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	311	1175	-	-	1067	-	-	412
HCM Lane V/C Ratio	0.308	0.016	-	-	0.027	-	-	0.116
HCM Control Delay (s)	21.6	8.1	-	-	8.5	-	-	14.9
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.3	0	-	-	0.1	-	-	0.4

NPMC Howard-Orange Mobility Assessment
 10: 43rd St & Orange Ave

Near Term (2022) Conditions
 Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↖						↖	↖
Traffic Volume (veh/h)	0	420	65	28	351	0	0	0	0	155	485	65
Future Volume (veh/h)	0	420	65	28	351	0	0	0	0	155	485	65
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	0.99		1.00				1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1900	1870	1900
Adj Flow Rate, veh/h	0	447	69	30	373	0				165	516	69
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	2	2	2	2	0				0	2	0
Cap, veh/h	0	764	118	368	911	0				265	874	122
Arrive On Green	0.00	0.49	0.49	0.97	0.97	0.00				0.35	0.35	0.35
Sat Flow, veh/h	0	1568	242	878	1870	0				760	2502	349
Grp Volume(v), veh/h	0	0	516	30	373	0				398	0	352
Grp Sat Flow(s),veh/h/ln	0	0	1810	878	1870	0				1832	0	1778
Q Serve(g_s), s	0.0	0.0	12.3	1.0	0.5	0.0				10.8	0.0	9.6
Cycle Q Clear(g_c), s	0.0	0.0	12.3	13.2	0.5	0.0				10.8	0.0	9.6
Prop In Lane	0.00		0.13	1.00		0.00				0.41		0.20
Lane Grp Cap(c), veh/h	0	0	882	368	911	0				640	0	621
V/C Ratio(X)	0.00	0.00	0.58	0.08	0.41	0.00				0.62	0.00	0.57
Avail Cap(c_a), veh/h	0	0	882	368	911	0				950	0	922
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	0.88	0.88	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	11.0	3.4	0.4	0.0				16.2	0.0	15.8
Incr Delay (d2), s/veh	0.0	0.0	2.8	0.4	1.2	0.0				2.2	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	4.9	0.1	0.4	0.0				4.4	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	13.9	3.8	1.6	0.0				18.4	0.0	17.7
LnGrp LOS	A	A	B	A	A	A				B	A	B
Approach Vol, veh/h		516			403						750	
Approach Delay, s/veh		13.9			1.8						18.1	
Approach LOS		B			A						B	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		34.1		25.9		34.1						
Change Period (Y+Rc), s		4.9		4.9		4.9						
Max Green Setting (Gmax), s		19.1		31.1		19.1						
Max Q Clear Time (g_c+I1), s		14.3		12.8		15.2						
Green Ext Time (p_c), s		2.4		8.1		1.5						
Intersection Summary												
HCM 6th Ctrl Delay			12.8									
HCM 6th LOS			B									

NPMC Howard-Orange Mobility Assessment
 11: Fairmount Ave & Orange Ave

Near Term (2022) Conditions
 Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕	↗	↖	↗	
Traffic Volume (veh/h)	84	414	79	54	313	132	107	393	49	63	142	16
Future Volume (veh/h)	84	414	79	54	313	132	107	393	49	63	142	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.98		0.94	0.98		0.89	0.94		0.89	0.96		0.89
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	91	450	86	59	340	143	116	427	53	68	154	17
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	398	762	146	549	608	256	399	1038	128	318	540	60
Arrive On Green	1.00	1.00	1.00	0.51	0.51	0.51	0.33	0.33	0.33	0.11	0.11	0.11
Sat Flow, veh/h	896	1508	288	848	1202	506	1141	3136	385	880	1630	180
Grp Volume(v), veh/h	91	0	536	59	0	483	116	240	240	68	0	171
Grp Sat Flow(s),veh/h/ln	896	0	1796	848	0	1708	1141	1777	1744	880	0	1810
Q Serve(g_s), s	2.9	0.0	0.0	2.2	0.0	11.7	5.1	6.3	6.4	4.4	0.0	5.2
Cycle Q Clear(g_c), s	14.6	0.0	0.0	2.2	0.0	11.7	10.3	6.3	6.4	10.8	0.0	5.2
Prop In Lane	1.00		0.16	1.00		0.30	1.00		0.22	1.00		0.10
Lane Grp Cap(c), veh/h	398	0	908	549	0	863	399	588	578	318	0	600
V/C Ratio(X)	0.23	0.00	0.59	0.11	0.00	0.56	0.29	0.41	0.42	0.21	0.00	0.29
Avail Cap(c_a), veh/h	398	0	908	549	0	863	593	891	875	468	0	908
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	0.80	0.00	0.80	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	2.8	0.0	0.0	7.9	0.0	10.2	19.1	15.5	15.6	25.7	0.0	20.2
Incr Delay (d2), s/veh	1.1	0.0	2.3	0.4	0.0	2.6	1.7	2.0	2.0	1.4	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.6	0.4	0.0	4.4	1.4	2.6	2.6	1.1	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.9	0.0	2.3	8.3	0.0	12.8	20.8	17.5	17.6	27.2	0.0	21.3
LnGrp LOS	A	A	A	A	A	B	C	B	B	C	A	C
Approach Vol, veh/h		627			542			596			239	
Approach Delay, s/veh		2.5			12.3			18.2			23.0	
Approach LOS		A			B			B			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		35.2		24.8		35.2		24.8				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		20.1		30.1		20.1		30.1				
Max Q Clear Time (g_c+I1), s		16.6		12.3		13.7		12.8				
Green Ext Time (p_c), s		2.1		7.4		3.2		2.9				
Intersection Summary												
HCM 6th Ctrl Delay											12.3	
HCM 6th LOS											B	

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↗			↔			↔	
Traffic Vol, veh/h	0	474	21	18	380	0	11	0	16	16	14	62
Future Vol, veh/h	0	474	21	18	380	0	11	0	16	16	14	62
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	515	23	20	413	0	12	0	17	17	15	67

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	538	0	0	1021	980	527	988	991	413
Stage 1	-	-	-	-	-	-	527	527	-	453	453	-
Stage 2	-	-	-	-	-	-	494	453	-	535	538	-
Critical Hdwy	-	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	1030	-	0	215	250	551	226	246	639
Stage 1	0	-	-	-	-	0	535	528	-	586	570	-
Stage 2	0	-	-	-	-	0	557	570	-	529	522	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1030	-	-	183	245	551	216	241	639
Mov Cap-2 Maneuver	-	-	-	-	-	-	313	360	-	342	351	-
Stage 1	-	-	-	-	-	-	535	528	-	586	559	-
Stage 2	-	-	-	-	-	-	475	559	-	512	522	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.4			14.2			14		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	421	-	-	1030	-	501
HCM Lane V/C Ratio	0.07	-	-	0.019	-	0.2
HCM Control Delay (s)	14.2	-	-	8.6	-	14
HCM Lane LOS	B	-	-	A	-	B
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-	0.7

Intersection	
Intersection Delay, s/veh	20.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↕			↕	
Traffic Vol, veh/h	23	403	38	36	299	33	31	56	21	23	67	32
Future Vol, veh/h	23	403	38	36	299	33	31	56	21	23	67	32
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	448	42	40	332	37	34	62	23	26	74	36
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	28	17.5	11.9	12
HCM LOS	D	C	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	29%	100%	0%	100%	0%	19%
Vol Thru, %	52%	0%	91%	0%	90%	55%
Vol Right, %	19%	0%	9%	0%	10%	26%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	108	23	441	36	332	122
LT Vol	31	23	0	36	0	23
Through Vol	56	0	403	0	299	67
RT Vol	21	0	38	0	33	32
Lane Flow Rate	120	26	490	40	369	136
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.228	0.046	0.806	0.074	0.619	0.254
Departure Headway (Hd)	6.848	6.488	5.919	6.625	6.045	6.736
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	527	548	608	536	590	535
Service Time	4.856	4.275	3.705	4.42	3.84	4.742
HCM Lane V/C Ratio	0.228	0.047	0.806	0.075	0.625	0.254
HCM Control Delay	11.9	9.6	29	10	18.3	12
HCM Lane LOS	B	A	D	A	C	B
HCM 95th-tile Q	0.9	0.1	8	0.2	4.2	1

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	18	395	11	13	295	32	0	0	0	25	1	32
Future Vol, veh/h	18	395	11	13	295	32	0	0	0	25	1	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	439	12	14	328	36	0	0	0	28	1	36

Major/Minor	Major1			Major2			Minor2			
Conflicting Flow All	364	0	0	451	0	0		859	865	346
Stage 1	-	-	-	-	-	-		374	374	-
Stage 2	-	-	-	-	-	-		485	491	-
Critical Hdwy	4.12	-	-	4.12	-	-		6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-		5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-		5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-		3.518	4.018	3.318
Pot Cap-1 Maneuver	1195	-	-	1109	-	-		327	292	697
Stage 1	-	-	-	-	-	-		696	618	-
Stage 2	-	-	-	-	-	-		619	548	-
Platoon blocked, %		-	-	-	-	-				
Mov Cap-1 Maneuver	1195	-	-	1109	-	-		315	0	697
Mov Cap-2 Maneuver	-	-	-	-	-	-		315	0	-
Stage 1	-	-	-	-	-	-		670	0	-
Stage 2	-	-	-	-	-	-		619	0	-

Approach	EB			WB			SB		
HCM Control Delay, s	0.3			0.3			14.2		
HCM LOS							B		

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1195	-	-	1109	-	-	455
HCM Lane V/C Ratio	0.017	-	-	0.013	-	-	0.142
HCM Control Delay (s)	8.1	0	-	8.3	0	-	14.2
HCM Lane LOS	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0.5

NPMC Howard-Orange Mobility Assessment
 15: Euclid Ave & Orange Ave

Near Term (2022) Conditions
 Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	298	93	74	227	64	60	252	62	41	316	65
Future Volume (veh/h)	50	298	93	74	227	64	60	252	62	41	316	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	54	324	101	80	247	70	65	274	67	45	343	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	76	427	133	103	459	130	146	423	95	115	472	93
Arrive On Green	0.04	0.31	0.31	0.06	0.33	0.33	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1781	1367	426	1781	1402	397	178	1253	283	100	1398	274
Grp Volume(v), veh/h	54	0	425	80	0	317	406	0	0	459	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1794	1781	0	1799	1713	0	0	1772	0	0
Q Serve(g_s), s	1.5	0.0	10.4	2.2	0.0	7.0	0.0	0.0	0.0	1.4	0.0	0.0
Cycle Q Clear(g_c), s	1.5	0.0	10.4	2.2	0.0	7.0	9.5	0.0	0.0	10.9	0.0	0.0
Prop In Lane	1.00		0.24	1.00		0.22	0.16		0.17	0.10		0.15
Lane Grp Cap(c), veh/h	76	0	560	103	0	589	665	0	0	680	0	0
V/C Ratio(X)	0.71	0.00	0.76	0.78	0.00	0.54	0.61	0.00	0.00	0.68	0.00	0.00
Avail Cap(c_a), veh/h	1100	0	1477	1100	0	1482	2091	0	0	2198	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.0	0.0	15.1	22.6	0.0	13.3	13.7	0.0	0.0	14.2	0.0	0.0
Incr Delay (d2), s/veh	4.5	0.0	2.0	4.7	0.0	0.7	0.9	0.0	0.0	1.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	4.0	1.0	0.0	2.6	3.3	0.0	0.0	3.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.5	0.0	17.0	27.3	0.0	14.0	14.7	0.0	0.0	15.4	0.0	0.0
LnGrp LOS	C	A	B	C	A	B	B	A	A	B	A	A
Approach Vol, veh/h		479			397			406			459	
Approach Delay, s/veh		18.2			16.7			14.7			15.4	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	20.1		21.3	6.5	20.8		21.3				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	30.0	40.0		60.0	30.0	40.0		60.0				
Max Q Clear Time (g_c+I1), s	4.2	12.4		12.9	3.5	9.0		11.5				
Green Ext Time (p_c), s	0.1	2.8		3.5	0.1	2.0		3.1				

Intersection Summary		
HCM 6th Ctrl Delay		16.3
HCM 6th LOS		B

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↕			↕	
Traffic Vol, veh/h	30	334	24	23	242	11	21	14	11	4	18	46
Future Vol, veh/h	30	334	24	23	242	11	21	14	11	4	18	46
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	352	25	24	255	12	22	15	12	4	19	48

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	267	0	0	377	0	0	772	744	365	751	750	261
Stage 1	-	-	-	-	-	-	429	429	-	309	309	-
Stage 2	-	-	-	-	-	-	343	315	-	442	441	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1297	-	-	1181	-	-	317	343	680	327	340	778
Stage 1	-	-	-	-	-	-	604	584	-	701	660	-
Stage 2	-	-	-	-	-	-	672	656	-	594	577	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1297	-	-	1181	-	-	275	328	680	300	325	778
Mov Cap-2 Maneuver	-	-	-	-	-	-	275	328	-	300	325	-
Stage 1	-	-	-	-	-	-	589	569	-	683	647	-
Stage 2	-	-	-	-	-	-	599	643	-	555	563	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6			0.7			17.3			12.8		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	340	1297	-	-	1181	-	-	532
HCM Lane V/C Ratio	0.142	0.024	-	-	0.021	-	-	0.135
HCM Control Delay (s)	17.3	7.8	-	-	8.1	-	-	12.8
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0.1	-	-	0.5

Intersection	
Intersection Delay, s/veh	14.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	319	16	28	258	5	23	24	15	13	34	33
Future Vol, veh/h	30	319	16	28	258	5	23	24	15	13	34	33
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	37	394	20	35	319	6	28	30	19	16	42	41
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	16.4	13.4	10.1	10.2
HCM LOS	C	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	37%	100%	0%	100%	0%	16%
Vol Thru, %	39%	0%	95%	0%	98%	43%
Vol Right, %	24%	0%	5%	0%	2%	41%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	62	30	335	28	263	80
LT Vol	23	30	0	28	0	13
Through Vol	24	0	319	0	258	34
RT Vol	15	0	16	0	5	33
Lane Flow Rate	77	37	414	35	325	99
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.131	0.062	0.628	0.059	0.504	0.163
Departure Headway (Hd)	6.146	6.007	5.468	6.103	5.584	5.946
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	582	597	662	588	646	602
Service Time	4.192	3.735	3.196	3.832	3.313	3.991
HCM Lane V/C Ratio	0.132	0.062	0.625	0.06	0.503	0.164
HCM Control Delay	10.1	9.1	17	9.2	13.9	10.2
HCM Lane LOS	B	A	C	A	B	B
HCM 95th-tile Q	0.4	0.2	4.4	0.2	2.8	0.6

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑			↑↑↑					↑			↑
Traffic Vol, veh/h	0	906	15	0	774	12	0	0	24	0	0	24
Future Vol, veh/h	0	906	15	0	774	12	0	0	24	0	0	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	985	16	0	841	13	0	0	26	0	0	26

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	-	-	0	-	-	501	-	-	427
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	441	0	0	492
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	441	-	-	492
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0		0		13.7		12.7	
HCM LOS					B		B	

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	441	-	-	-	-	492
HCM Lane V/C Ratio	0.059	-	-	-	-	0.053
HCM Control Delay (s)	13.7	-	-	-	-	12.7
HCM Lane LOS	B	-	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	-	0.2

NPMC Howard-Orange Mobility Assessment
 19: 35th St & El Cajon Blvd

Near Term (2022) Conditions
 Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	778	83	70	673	37	50	70	52	36	69	63
Future Volume (veh/h)	70	778	83	70	673	37	50	70	52	36	69	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	828	88	74	716	39	53	74	55	38	73	67
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	95	3390	1052	95	3390	1052	84	103	64	100	173	261
Arrive On Green	0.05	0.66	0.66	0.05	0.66	0.66	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	276	622	389	360	1050	1585
Grp Volume(v), veh/h	74	828	88	74	716	39	182	0	0	111	0	67
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1288	0	0	1411	0	1585
Q Serve(g_s), s	4.9	7.8	2.4	4.9	6.6	1.0	9.4	0.0	0.0	0.0	0.0	4.4
Cycle Q Clear(g_c), s	4.9	7.8	2.4	4.9	6.6	1.0	17.1	0.0	0.0	7.7	0.0	4.4
Prop In Lane	1.00		1.00	1.00		1.00	0.29		0.30	0.34		1.00
Lane Grp Cap(c), veh/h	95	3390	1052	95	3390	1052	251	0	0	273	0	261
V/C Ratio(X)	0.78	0.24	0.08	0.78	0.21	0.04	0.73	0.00	0.00	0.41	0.00	0.26
Avail Cap(c_a), veh/h	224	3390	1052	224	3390	1052	450	0	0	478	0	464
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.96	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.1	8.1	7.2	56.1	7.9	7.0	49.6	0.0	0.0	44.7	0.0	43.7
Incr Delay (d2), s/veh	5.2	0.2	0.2	5.2	0.1	0.1	1.4	0.0	0.0	0.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	2.8	0.8	2.4	2.4	0.4	5.5	0.0	0.0	3.0	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.3	8.3	7.3	61.3	8.0	7.0	51.0	0.0	0.0	45.1	0.0	43.9
LnGrp LOS	E	A	A	E	A	A	D	A	A	D	A	D
Approach Vol, veh/h		990			829			182				178
Approach Delay, s/veh		12.1			12.7			51.0				44.7
Approach LOS		B			B			D				D
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.8	84.6		24.7	10.8	84.6		24.7				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	15.1	55.6		35.1	15.1	55.6		35.1				
Max Q Clear Time (g_c+I1), s	6.9	8.6		19.1	6.9	9.8		9.7				
Green Ext Time (p_c), s	0.0	3.8		0.6	0.0	4.6		0.5				

Intersection Summary

HCM 6th Ctrl Delay	18.3
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑			↑↑↑					↑			↑
Traffic Vol, veh/h	0	1574	47	0	815	37	0	0	56	0	0	56
Future Vol, veh/h	0	1574	47	0	815	37	0	0	56	0	0	56
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1711	51	0	886	40	0	0	61	0	0	61

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	-	-	0	-	-	881	-	-	463
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	249	0	0	467
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	249	-	-	467
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	24.1	13.9
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	249	-	-	-	-	467
HCM Lane V/C Ratio	0.244	-	-	-	-	0.13
HCM Control Delay (s)	24.1	-	-	-	-	13.9
HCM Lane LOS	C	-	-	-	-	B
HCM 95th %tile Q(veh)	0.9	-	-	-	-	0.4

NPMC Howard-Orange Mobility Assessment
21: Fairmount Ave & El Cajon Blvd

Near Term (2022) Conditions
Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	1332	153	0	742	163	110	388	117	0	0	0
Future Volume (veh/h)	89	1332	153	0	742	163	110	388	117	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1900	1870	1900			
Adj Flow Rate, veh/h	92	1373	158	0	765	168	113	400	121			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	2	2	2	0	2	2	0	2	0			
Cap, veh/h	116	2534	1130	0	1771	389	126	462	147			
Arrive On Green	0.07	0.71	0.71	0.00	0.61	0.61	0.41	0.41	0.41			
Sat Flow, veh/h	1781	3554	1585	0	2990	636	612	2253	716			
Grp Volume(v), veh/h	92	1373	158	0	469	464	340	0	294			
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	0	1777	1756	1840	0	1742			
Q Serve(g_s), s	6.1	21.7	3.8	0.0	16.7	16.7	20.7	0.0	18.1			
Cycle Q Clear(g_c), s	6.1	21.7	3.8	0.0	16.7	16.7	20.7	0.0	18.1			
Prop In Lane	1.00		1.00	0.00		0.36	0.33		0.41			
Lane Grp Cap(c), veh/h	116	2534	1130	0	1086	1073	377	0	357			
V/C Ratio(X)	0.79	0.54	0.14	0.00	0.43	0.43	0.90	0.00	0.82			
Avail Cap(c_a), veh/h	402	2534	1130	0	1086	1073	492	0	466			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00			
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.95	0.95	0.90	0.00	0.90			
Uniform Delay (d), s/veh	55.3	8.0	5.5	0.0	12.3	12.3	34.2	0.0	33.5			
Incr Delay (d2), s/veh	4.5	0.8	0.3	0.0	1.2	1.2	12.9	0.0	6.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.9	7.8	1.3	0.0	6.8	6.7	8.8	0.0	6.8			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.8	8.9	5.7	0.0	13.5	13.5	47.1	0.0	39.8			
LnGrp LOS	E	A	A	A	B	B	D	A	D			
Approach Vol, veh/h		1623			933			634				
Approach Delay, s/veh		11.5			13.5			43.7				
Approach LOS		B			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		90.5			12.2	78.3		29.5				
Change Period (Y+Rc), s		4.9			4.4	4.9		4.9				
Max Green Setting (Gmax), s		46.6			27.1	46.6		32.1				
Max Q Clear Time (g_c+I1), s		23.7			8.1	18.7		22.7				
Green Ext Time (p_c), s		8.3			0.1	4.3		1.9				

Intersection Summary

HCM 6th Ctrl Delay	18.5
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

NPMC Howard-Orange Mobility Assessment
 22: Euclid Ave & El Cajon Blvd

Near Term (2022) Conditions
 Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1088	154	88	736	57	55	163	96	52	260	42
Future Volume (veh/h)	40	1088	154	88	736	57	55	163	96	52	260	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	42	1133	160	92	767	59	57	170	100	54	271	44
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	67	1827	257	105	2026	156	144	263	155	170	374	61
Arrive On Green	0.04	0.58	0.58	0.06	0.61	0.61	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3127	440	1781	3344	257	1065	1104	649	1109	1570	255
Grp Volume(v), veh/h	42	642	651	92	407	419	57	0	270	54	0	315
Grp Sat Flow(s),veh/h/ln	1781	1777	1791	1781	1777	1824	1065	0	1753	1109	0	1824
Q Serve(g_s), s	2.8	28.3	28.5	6.1	14.1	14.1	6.3	0.0	16.6	5.5	0.0	19.1
Cycle Q Clear(g_c), s	2.8	28.3	28.5	6.1	14.1	14.1	25.3	0.0	16.6	22.2	0.0	19.1
Prop In Lane	1.00		0.25	1.00		0.14	1.00		0.37	1.00		0.14
Lane Grp Cap(c), veh/h	67	1038	1046	105	1076	1105	144	0	418	170	0	435
V/C Ratio(X)	0.63	0.62	0.62	0.87	0.38	0.38	0.39	0.00	0.65	0.32	0.00	0.72
Avail Cap(c_a), veh/h	105	1038	1046	105	1076	1105	415	0	864	453	0	899
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.78	1.00	1.00	1.00	0.73	0.00	0.73	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.9	16.2	16.3	56.0	12.1	12.1	53.7	0.0	41.2	51.1	0.0	42.1
Incr Delay (d2), s/veh	2.8	2.2	2.2	48.6	1.0	1.0	0.5	0.0	0.5	0.4	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	11.7	11.8	4.2	5.7	5.9	1.7	0.0	7.2	1.6	0.0	8.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.7	18.4	18.5	104.6	13.1	13.1	54.2	0.0	41.6	51.5	0.0	43.0
LnGrp LOS	E	B	B	F	B	B	D	A	D	D	A	D
Approach Vol, veh/h		1335			918			327			369	
Approach Delay, s/veh		19.7			22.3			43.8			44.2	
Approach LOS		B			C			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	1.5	75.0		33.5	8.9	77.6		33.5				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	39.6			59.1	7.1	39.6		59.1				
Max Q Clear Time (g_c+1/3), s	30.5			24.2	4.8	16.1		27.3				
Green Ext Time (p_c), s	0.0	6.0		1.4	0.0	6.0		1.3				
Intersection Summary												
HCM 6th Ctrl Delay				26.3								
HCM 6th LOS				C								

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	18	0	120	174	0
Future Vol, veh/h	11	18	0	120	174	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	19	0	128	185	0
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach RightNB			EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.5	7.9	8.2
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	38%	0%
Vol Thru, %	100%	0%	100%
Vol Right, %	0%	62%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	120	29	174
LT Vol	0	11	0
Through Vol	120	0	174
RT Vol	0	18	0
Lane Flow Rate	128	31	185
Geometry Grp	1	1	1
Degree of Util (X)	0.146	0.037	0.21
Departure Headway (Hd)	4.127	4.31	4.083
Convergence, Y/N	Yes	Yes	Yes
Cap	862	836	874
Service Time	2.185	2.31	2.131
HCM Lane V/C Ratio	0.148	0.037	0.212
HCM Control Delay	7.9	7.5	8.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0.1	0.8

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	30	22	39	0	0	0	0	556	35	18	271	0
Future Vol, veh/h	30	22	39	0	0	0	0	556	35	18	271	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	31	23	41	0	0	0	0	579	36	19	282	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	610	935	282	-	0	0	615	0	0
Stage 1	320	320	-	-	-	-	-	-	-
Stage 2	290	615	-	-	-	-	-	-	-
Critical Hdwy	6.63	6.53	6.23	-	-	-	4.13	-	-
Critical Hdwy Stg 1	5.43	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.83	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	-	-	-	2.219	-	-
Pot Cap-1 Maneuver	442	265	756	0	-	-	963	-	0
Stage 1	735	652	-	0	-	-	-	-	0
Stage 2	735	481	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	432	0	756	-	-	-	963	-	-
Mov Cap-2 Maneuver	432	0	-	-	-	-	-	-	-
Stage 1	718	0	-	-	-	-	-	-	-
Stage 2	735	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.6	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	570	963	-
HCM Lane V/C Ratio	-	-	0.166	0.019	-
HCM Control Delay (s)	-	-	12.6	8.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0.1	-

NPMC Howard-Orange Mobility Assessment
25: Euclid Ave & Polk Ave

Near Term (2022) Conditions
Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Volume (veh/h)	36	49	55	0	0	0	0	379	19	28	485	0
Future Volume (veh/h)	36	49	55	0	0	0	0	379	19	28	485	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	39	53	59				0	408	20	30	522	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	0				0	2	2	2	2	0
Cap, veh/h	54	74	82				0	824	40	180	833	0
Arrive On Green	0.12	0.12	0.12				0.00	0.47	0.47	0.47	0.47	0.00
Sat Flow, veh/h	446	606	675				0	1768	87	43	1786	0
Grp Volume(v), veh/h	151	0	0				0	0	428	552	0	0
Grp Sat Flow(s),veh/h/ln	1727	0	0				0	0	1855	1829	0	0
Q Serve(g_s), s	2.0	0.0	0.0				0.0	0.0	3.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.0	0.0	0.0				0.0	0.0	3.8	5.3	0.0	0.0
Prop In Lane	0.26		0.39				0.00		0.05	0.05		0.00
Lane Grp Cap(c), veh/h	210	0	0				0	0	865	1012	0	0
V/C Ratio(X)	0.72	0.00	0.00				0.00	0.00	0.50	0.55	0.00	0.00
Avail Cap(c_a), veh/h	2550	0	0				0	0	4299	4306	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.0	0.0	0.0				0.0	0.0	4.4	4.8	0.0	0.0
Incr Delay (d2), s/veh	1.7	0.0	0.0				0.0	0.0	0.4	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0				0.0	0.0	0.4	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.8	0.0	0.0				0.0	0.0	4.8	5.2	0.0	0.0
LnGrp LOS	B	A	A				A	A	A	A	A	A
Approach Vol, veh/h		151						428			552	
Approach Delay, s/veh		11.8						4.8			5.2	
Approach LOS		B						A			A	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		16.0		7.8		16.0						
Change Period (Y+Rc), s		4.9		4.9		4.9						
Max Green Setting (Gmax), s		55.1		35.1		55.1						
Max Q Clear Time (g_c+l1), s		5.8		4.0		7.3						
Green Ext Time (p_c), s		2.7		0.6		3.8						
Intersection Summary												
HCM 6th Ctrl Delay		5.9										
HCM 6th LOS		A										

Intersection												
Int Delay, s/veh	5.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	12	85	17	0	0	0	0	54	18	11	30	0
Future Vol, veh/h	12	85	17	0	0	0	0	54	18	11	30	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	61	61	61	61	61	61	61	61	61	61	61	61
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	139	28	0	0	0	0	89	30	18	49	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	189	204	49	-	0	0	119	0	0
Stage 1	85	85	-	-	-	-	-	-	-
Stage 2	104	119	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	-	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	800	692	1020	0	-	-	1469	-	0
Stage 1	938	824	-	0	-	-	-	-	0
Stage 2	920	797	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	790	0	1020	-	-	-	1469	-	-
Mov Cap-2 Maneuver	790	0	-	-	-	-	-	-	-
Stage 1	926	0	-	-	-	-	-	-	-
Stage 2	920	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	0	2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	910	1469	-
HCM Lane V/C Ratio	-	-	0.205	0.012	-
HCM Control Delay (s)	-	-	10	7.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.8	0	-

NPMC Howard-Orange Mobility Assessment
27: 35th St & University Ave

Near Term (2022) Conditions
Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	471	33	30	421	23	41	46	23	68	81	50
Future Volume (veh/h)	25	471	33	30	421	23	41	46	23	68	81	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	496	35	32	443	24	43	48	24	72	85	53
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	673	1241	88	623	1264	68	131	132	52	137	117	64
Arrive On Green	0.72	0.72	0.72	0.72	0.72	0.72	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	926	1727	122	873	1758	95	430	865	342	479	772	422
Grp Volume(v), veh/h	26	0	531	32	0	467	115	0	0	210	0	0
Grp Sat Flow(s),veh/h/ln	926	0	1848	873	0	1853	1637	0	0	1673	0	0
Q Serve(g_s), s	0.8	0.0	8.6	1.1	0.0	7.2	0.0	0.0	0.0	4.5	0.0	0.0
Cycle Q Clear(g_c), s	8.0	0.0	8.6	9.8	0.0	7.2	4.6	0.0	0.0	9.1	0.0	0.0
Prop In Lane	1.00		0.07	1.00		0.05	0.37		0.21	0.34		0.25
Lane Grp Cap(c), veh/h	673	0	1329	623	0	1332	314	0	0	318	0	0
V/C Ratio(X)	0.04	0.00	0.40	0.05	0.00	0.35	0.37	0.00	0.00	0.66	0.00	0.00
Avail Cap(c_a), veh/h	673	0	1329	623	0	1332	466	0	0	475	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.5	0.0	4.2	6.1	0.0	4.0	29.2	0.0	0.0	31.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.9	0.2	0.0	0.7	0.3	0.0	0.0	0.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	2.6	0.2	0.0	2.2	1.9	0.0	0.0	3.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.6	0.0	5.1	6.3	0.0	4.7	29.5	0.0	0.0	31.9	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	C	A	A	C	A	A
Approach Vol, veh/h		557			499			115				210
Approach Delay, s/veh		5.1			4.8			29.5				31.9
Approach LOS		A			A			C				C
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		59.5		16.5		59.5		16.5				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		47.1		19.1		47.1		19.1				
Max Q Clear Time (g_c+I1), s		10.6		11.1		11.8		6.6				
Green Ext Time (p_c), s		5.6		0.5		5.3		0.3				

Intersection Summary

HCM 6th Ctrl Delay	11.1
HCM 6th LOS	B

NPMC Howard-Orange Mobility Assessment
28: Fairmount Ave & University Ave

Near Term (2022) Conditions
Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗		↖	↖↗		↖	↗	
Traffic Volume (veh/h)	97	653	116	106	351	91	140	426	91	134	183	41
Future Volume (veh/h)	97	653	116	106	351	91	140	426	91	134	183	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	98	660	117	107	355	92	141	430	92	135	185	41
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	1459	258	134	1372	351	170	517	110	163	257	57
Arrive On Green	0.07	0.48	0.48	0.08	0.49	0.49	0.10	0.18	0.18	0.09	0.17	0.17
Sat Flow, veh/h	1781	3017	534	1781	2801	717	1781	2917	619	1781	1483	329
Grp Volume(v), veh/h	98	388	389	107	223	224	141	261	261	135	0	226
Grp Sat Flow(s),veh/h/ln	1781	1777	1774	1781	1777	1741	1781	1777	1759	1781	0	1811
Q Serve(g_s), s	5.9	15.6	15.6	6.4	7.9	8.1	8.4	15.3	15.5	8.0	0.0	12.7
Cycle Q Clear(g_c), s	5.9	15.6	15.6	6.4	7.9	8.1	8.4	15.3	15.5	8.0	0.0	12.7
Prop In Lane	1.00		0.30	1.00		0.41	1.00		0.35	1.00		0.18
Lane Grp Cap(c), veh/h	123	859	858	134	870	853	170	315	311	163	0	314
V/C Ratio(X)	0.79	0.45	0.45	0.80	0.26	0.26	0.83	0.83	0.84	0.83	0.00	0.72
Avail Cap(c_a), veh/h	208	859	858	340	870	853	224	380	376	208	0	371
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	49.5	18.4	18.4	49.1	16.1	16.1	48.0	42.9	42.9	48.2	0.0	42.1
Incr Delay (d2), s/veh	4.3	1.7	1.7	4.1	0.7	0.7	13.9	12.3	13.5	15.5	0.0	5.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	6.7	6.7	3.0	3.4	3.4	4.4	7.7	7.9	4.3	0.0	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.8	20.1	20.2	53.2	16.8	16.9	61.9	55.2	56.5	63.7	0.0	48.0
LnGrp LOS	D	C	C	D	B	B	E	E	E	E	A	D
Approach Vol, veh/h		875			554			663			361	
Approach Delay, s/veh		23.9			23.9			57.1			53.9	
Approach LOS		C			C			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	2.5	57.1	14.7	23.6	11.9	57.8	14.3	24.0				
Change Period (Y+Rc), s	4.4	4.9	4.4	4.9	4.4	4.9	4.4	4.9				
Max Green Setting (Gmax), s	20.6	33.1	13.6	22.1	12.6	41.1	12.6	23.1				
Max Q Clear Time (g_c+1.4), s	19.4	17.6	10.4	14.7	7.9	10.1	10.0	17.5				
Green Ext Time (p_c), s	0.1	6.3	0.1	0.8	0.0	4.0	0.0	1.6				

Intersection Summary

HCM 6th Ctrl Delay	37.3
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	624	87	203	501	54	56	266	205	53	413	74
Future Volume (veh/h)	71	624	87	203	501	54	56	266	205	53	413	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	650	91	211	522	56	58	277	214	55	430	77
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	554	1194	167	243	654	70	152	338	261	148	534	96
Arrive On Green	0.31	0.38	0.38	0.14	0.20	0.20	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	1781	3131	438	1781	3238	346	892	978	756	906	1544	276
Grp Volume(v), veh/h	74	369	372	211	286	292	58	0	491	55	0	507
Grp Sat Flow(s),veh/h/ln	1781	1777	1792	1781	1777	1808	892	0	1734	906	0	1821
Q Serve(g_s), s	3.1	16.8	16.9	12.1	15.9	16.0	6.6	0.0	26.9	6.1	0.0	26.3
Cycle Q Clear(g_c), s	3.1	16.8	16.9	12.1	15.9	16.0	32.8	0.0	26.9	33.0	0.0	26.3
Prop In Lane	1.00		0.24	1.00		0.19	1.00		0.44	1.00		0.15
Lane Grp Cap(c), veh/h	554	678	683	243	359	365	152	0	599	148	0	629
V/C Ratio(X)	0.13	0.54	0.55	0.87	0.80	0.80	0.38	0.00	0.82	0.37	0.00	0.81
Avail Cap(c_a), veh/h	554	678	683	336	668	680	162	0	619	158	0	649
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.78	0.00	0.78
Uniform Delay (d), s/veh	25.8	25.1	25.1	44.0	39.5	39.5	45.7	0.0	31.1	46.1	0.0	30.9
Incr Delay (d2), s/veh	0.0	3.1	3.1	12.8	16.6	16.7	1.3	0.0	8.2	1.7	0.0	6.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	7.6	7.6	6.1	8.5	8.7	1.5	0.0	12.3	1.4	0.0	12.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.8	28.2	28.2	56.7	56.0	56.2	47.1	0.0	39.3	47.8	0.0	36.9
LnGrp LOS	C	C	C	E	E	E	D	A	D	D	A	D
Approach Vol, veh/h		815			789			549				562
Approach Delay, s/veh		28.0			56.3			40.1				38.0
Approach LOS		C			E			D				D
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.6	44.6		40.8	37.2	25.9		40.8				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.9	* 4.9		4.9				
Max Green Setting (Gmax), s	19.6	33.1		37.1	13.6	* 39		37.1				
Max Q Clear Time (g_c+1/4), s	14.1	18.9		35.0	5.1	18.0		34.8				
Green Ext Time (p_c), s	0.1	4.9		0.9	0.0	3.0		0.8				

Intersection Summary

HCM 6th Ctrl Delay	40.7
HCM 6th LOS	D

Notes

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

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Vol, veh/h	18	869	711	22	14	49
Future Vol, veh/h	18	869	711	22	14	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	185	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	19	915	748	23	15	52

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	771	0	0	1256	386
Stage 1	-	-	-	760	-
Stage 2	-	-	-	496	-
Critical Hdwy	4.14	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	3.52	3.32
Pot Cap-1 Maneuver	840	-	-	163	612
Stage 1	-	-	-	422	-
Stage 2	-	-	-	577	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	840	-	-	156	612
Mov Cap-2 Maneuver	-	-	-	156	-
Stage 1	-	-	-	403	-
Stage 2	-	-	-	577	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	16.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	840	-	-	-	371
HCM Lane V/C Ratio	0.023	-	-	-	0.179
HCM Control Delay (s)	9.4	0.2	-	-	16.8
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	
Traffic Volume (veh/h)	1305	81	25	784	62	54
Future Volume (veh/h)	1305	81	25	784	62	54
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1900	1900
Adj Flow Rate, veh/h	1418	88	27	852	67	59
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	0	0
Cap, veh/h	2471	153	240	2583	181	160
Arrive On Green	0.73	0.73	0.73	0.73	0.20	0.20
Sat Flow, veh/h	3493	210	348	3647	889	783
Grp Volume(v), veh/h	739	767	27	852	127	0
Grp Sat Flow(s),veh/h/ln	1777	1833	348	1777	1685	0
Q Serve(g_s), s	25.3	25.5	5.1	11.2	8.4	0.0
Cycle Q Clear(g_c), s	25.3	25.5	30.7	11.2	8.4	0.0
Prop In Lane		0.11	1.00		0.53	0.46
Lane Grp Cap(c), veh/h	1292	1332	240	2583	343	0
V/C Ratio(X)	0.57	0.58	0.11	0.33	0.37	0.00
Avail Cap(c_a), veh/h	1292	1332	240	2583	343	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.81	0.81	0.92	0.92	1.00	0.00
Uniform Delay (d), s/veh	8.3	8.3	15.5	6.4	44.6	0.0
Incr Delay (d2), s/veh	1.5	1.5	0.2	0.1	3.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.3	9.7	0.4	3.9	3.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.8	9.8	15.7	6.4	47.6	0.0
LnGrp LOS	A	A	B	A	D	A
Approach Vol, veh/h	1506			879	127	
Approach Delay, s/veh	9.8			6.7	47.6	
Approach LOS	A			A	D	
Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		99.0			99.0	31.0
Change Period (Y+Rc), s		4.5			4.5	4.5
Max Green Setting (Gmax), s		94.5			94.5	26.5
Max Q Clear Time (g_c+I1), s		27.5			32.7	10.4
Green Ext Time (p_c), s		17.8			8.5	0.3

Intersection Summary

HCM 6th Ctrl Delay	10.6
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Intersection												
Intersection Delay, s/veh	8.8											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	9	31	1	50	137	18	0	176	30	15	54
Future Vol, veh/h	20	9	31	1	50	137	18	0	176	30	15	54
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	10	34	1	54	149	20	0	191	33	16	59
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	8.3	9.3	8.6	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	9%	100%	0%	100%	0%	30%
Vol Thru, %	0%	0%	22%	0%	27%	15%
Vol Right, %	91%	0%	78%	0%	73%	55%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	194	20	40	1	187	99
LT Vol	18	20	0	1	0	30
Through Vol	0	0	9	0	50	15
RT Vol	176	0	31	0	137	54
Lane Flow Rate	211	22	43	1	203	108
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.246	0.036	0.059	0.002	0.27	0.136
Departure Headway (Hd)	4.192	5.941	4.888	5.803	4.782	4.557
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	854	601	729	615	748	784
Service Time	2.226	3.697	2.644	3.551	2.53	2.599
HCM Lane V/C Ratio	0.247	0.037	0.059	0.002	0.271	0.138
HCM Control Delay	8.6	8.9	8	8.6	9.3	8.3
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	1	0.1	0.2	0	1.1	0.5

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↖	↗		↔	
Traffic Vol, veh/h	1	46	15	30	128	0	28	1	29	0	0	3
Future Vol, veh/h	1	46	15	30	128	0	28	1	29	0	0	3
Conflicting Peds, #/hr	9	0	9	8	0	8	9	0	8	8	0	9
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	70	-	-	100	-	-	-	-	40	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	52	17	34	144	0	31	1	33	0	0	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	153	0	0	78	0	0	295	293	78	309	301	162
Stage 1	-	-	-	-	-	-	72	72	-	221	221	-
Stage 2	-	-	-	-	-	-	223	221	-	88	80	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1428	-	-	1520	-	-	657	618	983	643	612	883
Stage 1	-	-	-	-	-	-	938	835	-	781	720	-
Stage 2	-	-	-	-	-	-	780	720	-	920	828	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1416	-	-	1507	-	-	632	593	967	600	587	868
Mov Cap-2 Maneuver	-	-	-	-	-	-	632	593	-	600	587	-
Stage 1	-	-	-	-	-	-	930	827	-	774	697	-
Stage 2	-	-	-	-	-	-	753	697	-	880	820	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			1.4			10			9.2		
HCM LOS							B			A		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	631	967	1416	-	-	1507	-	-	868
HCM Lane V/C Ratio	0.052	0.034	0.001	-	-	0.022	-	-	0.004
HCM Control Delay (s)	11	8.9	7.5	-	-	7.4	-	-	9.2
HCM Lane LOS	B	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0.1	0	-	-	0.1	-	-	0

NPMC Howard-Orange Mobility Assessment
2: Alley/33rd St & Orange Ave

Near Term with Project
Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Volume (veh/h)	94	49	0	2	71	226	5	4	0	55	2	121
Future Volume (veh/h)	94	49	0	2	71	226	5	4	0	55	2	121
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	102	53	0	2	77	246	5	4	0	60	2	132
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	536	235	0	135	147	461	15	12	0	304	4	267
Arrive On Green	0.37	0.37	0.00	0.37	0.37	0.37	0.01	0.01	0.00	0.17	0.17	0.17
Sat Flow, veh/h	850	635	0	3	397	1245	1011	809	0	1781	24	1565
Grp Volume(v), veh/h	155	0	0	325	0	0	9	0	0	60	0	134
Grp Sat Flow(s),veh/h/ln	1486	0	0	1645	0	0	1820	0	0	1781	0	1589
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.8	0.0	2.1
Cycle Q Clear(g_c), s	1.6	0.0	0.0	4.2	0.0	0.0	0.1	0.0	0.0	0.8	0.0	2.1
Prop In Lane	0.66		0.00	0.01		0.76	0.56		0.00	1.00		0.99
Lane Grp Cap(c), veh/h	772	0	0	744	0	0	26	0	0	304	0	271
V/C Ratio(X)	0.20	0.00	0.00	0.44	0.00	0.00	0.34	0.00	0.00	0.20	0.00	0.50
Avail Cap(c_a), veh/h	1369	0	0	1535	0	0	1551	0	0	1518	0	1354
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.8	0.0	0.0	6.7	0.0	0.0	13.2	0.0	0.0	9.6	0.0	10.1
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.2	0.0	0.0	2.8	0.0	0.0	0.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	0.9	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.9	0.0	0.0	6.9	0.0	0.0	16.0	0.0	0.0	9.7	0.0	10.7
LnGrp LOS	A	A	A	A	A	A	B	A	A	A	A	B
Approach Vol, veh/h		155			325			9				194
Approach Delay, s/veh		5.9			6.9			16.0				10.4
Approach LOS		A			A			B				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		14.0		4.4		14.0		8.6				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		23.0		23.0		23.0		23.0				
Max Q Clear Time (g_c+I1), s		3.6		2.1		6.2		4.1				
Green Ext Time (p_c), s		0.7		0.0		1.5		0.6				
Intersection Summary												
HCM 6th Ctrl Delay				7.8								
HCM 6th LOS				A								

Intersection												
Int Delay, s/veh	6.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	53	22	23	9	81	4	101	10	35	5	4	48
Future Vol, veh/h	53	22	23	9	81	4	101	10	35	5	4	48
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	56	23	24	10	86	4	107	11	37	5	4	51

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	90	0	0	47	0	0	283	257	35	279	267	88
Stage 1	-	-	-	-	-	-	147	147	-	108	108	-
Stage 2	-	-	-	-	-	-	136	110	-	171	159	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1505	-	-	1560	-	-	669	647	1038	673	639	970
Stage 1	-	-	-	-	-	-	856	775	-	897	806	-
Stage 2	-	-	-	-	-	-	867	804	-	831	766	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1505	-	-	1560	-	-	609	618	1038	618	610	970
Mov Cap-2 Maneuver	-	-	-	-	-	-	609	618	-	618	610	-
Stage 1	-	-	-	-	-	-	823	746	-	863	800	-
Stage 2	-	-	-	-	-	-	811	798	-	760	737	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	4			0.7			11.9			9.3		
HCM LOS							B			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	677	1505	-	-	1560	-	-	889
HCM Lane V/C Ratio	0.229	0.037	-	-	0.006	-	-	0.068
HCM Control Delay (s)	11.9	7.5	0	-	7.3	0	-	9.3
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.9	0.1	-	-	0	-	-	0.2

NPMC Howard-Orange Mobility Assessment
4: 35th St & Orange Ave

Near Term with Project
Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↑	↗		↑			↑	
Traffic Volume (veh/h)	0	0	40	0	0	151	4	140	48	3	93	20
Future Volume (veh/h)	0	0	40	0	0	151	4	140	48	3	93	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.96	0.98		0.97	0.98		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	43	0	0	164	4	152	52	3	101	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	0	629	503	0	629	511	113	490	164	114	544	116
Arrive On Green	0.00	0.00	0.34	0.00	0.00	0.34	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	0	1870	1496	0	1870	1519	9	1319	443	10	1465	312
Grp Volume(v), veh/h	0	0	43	0	0	164	208	0	0	126	0	0
Grp Sat Flow(s),veh/h/ln	0	1870	1496	0	1870	1519	1770	0	0	1787	0	0
Q Serve(g_s), s	0.0	0.0	0.7	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.7	0.0	0.0	2.7	2.8	0.0	0.0	1.6	0.0	0.0
Prop In Lane	0.00		1.00	0.00		1.00	0.02		0.25	0.02		0.17
Lane Grp Cap(c), veh/h	0	629	503	0	629	511	767	0	0	774	0	0
V/C Ratio(X)	0.00	0.00	0.09	0.00	0.00	0.32	0.27	0.00	0.00	0.16	0.00	0.00
Avail Cap(c_a), veh/h	0	1449	1159	0	1449	1176	1423	0	0	1434	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	7.6	0.0	0.0	8.3	7.5	0.0	0.0	7.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	0.0	0.4	0.2	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.2	0.0	0.0	0.7	0.8	0.0	0.0	0.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	7.7	0.0	0.0	8.6	7.7	0.0	0.0	7.2	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		43			164			208				126
Approach Delay, s/veh		7.7			8.6			7.7				7.2
Approach LOS		A			A			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		16.2		17.4		16.2		17.4				
Change Period (Y+Rc), s		4.9		4.9		4.9		* 4.9				
Max Green Setting (Gmax), s		26.0		25.0		26.0		* 25				
Max Q Clear Time (g_c+I1), s		2.7		4.8		4.7		3.6				
Green Ext Time (p_c), s		0.1		1.2		0.5		0.6				

Intersection Summary

HCM 6th Ctrl Delay	7.9
HCM 6th LOS	A

Notes

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

Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	29	16	74	136	16	23	9	33	12	5	8
Future Vol, veh/h	14	29	16	74	136	16	23	9	33	12	5	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	33	18	83	153	18	26	10	37	13	6	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	171	0	0	51	0	0	410	411	42	426	411	162
Stage 1	-	-	-	-	-	-	74	74	-	328	328	-
Stage 2	-	-	-	-	-	-	336	337	-	98	83	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1406	-	-	1555	-	-	552	531	1029	539	531	883
Stage 1	-	-	-	-	-	-	935	833	-	685	647	-
Stage 2	-	-	-	-	-	-	678	641	-	908	826	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1406	-	-	1555	-	-	513	494	1029	484	494	883
Mov Cap-2 Maneuver	-	-	-	-	-	-	513	494	-	484	494	-
Stage 1	-	-	-	-	-	-	924	823	-	677	609	-
Stage 2	-	-	-	-	-	-	626	603	-	854	816	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.8			2.4			10.9			11.7		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	683	1406	-	-	1555	-	-	569
HCM Lane V/C Ratio	0.107	0.011	-	-	0.053	-	-	0.049
HCM Control Delay (s)	10.9	7.6	0	-	7.4	0	-	11.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0	-	-	0.2	-	-	0.2

Intersection												
Int Delay, s/veh	4.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	25	67	16	15	78	70	10	4	44	62	3	7
Future Vol, veh/h	25	67	16	15	78	70	10	4	44	62	3	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	73	17	16	85	76	11	4	48	67	3	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	161	0	0	90	0	0	297	329	82	317	299	123
Stage 1	-	-	-	-	-	-	136	136	-	155	155	-
Stage 2	-	-	-	-	-	-	161	193	-	162	144	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1418	-	-	1505	-	-	655	590	978	636	613	928
Stage 1	-	-	-	-	-	-	867	784	-	847	769	-
Stage 2	-	-	-	-	-	-	841	741	-	840	778	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1418	-	-	1505	-	-	631	571	978	587	593	928
Mov Cap-2 Maneuver	-	-	-	-	-	-	631	571	-	587	593	-
Stage 1	-	-	-	-	-	-	850	768	-	830	760	-
Stage 2	-	-	-	-	-	-	821	732	-	779	762	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.8			0.7			9.5			11.8		
HCM LOS							A			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	855	1418	-	-	1505	-	-	609
HCM Lane V/C Ratio	0.074	0.019	-	-	0.011	-	-	0.129
HCM Control Delay (s)	9.5	7.6	0	-	7.4	0	-	11.8
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.4

Intersection												
Int Delay, s/veh	6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	52	107	47	40	91	172	51	53	75	17	7	38
Future Vol, veh/h	52	107	47	40	91	172	51	53	75	17	7	38
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	57	116	51	43	99	187	55	58	82	18	8	41

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	286	0	0	167	0	0	559	628	142	605	560	193
Stage 1	-	-	-	-	-	-	256	256	-	279	279	-
Stage 2	-	-	-	-	-	-	303	372	-	326	281	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1276	-	-	1411	-	-	440	400	906	410	437	849
Stage 1	-	-	-	-	-	-	749	696	-	728	680	-
Stage 2	-	-	-	-	-	-	706	619	-	687	678	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1276	-	-	1411	-	-	386	366	906	307	400	849
Mov Cap-2 Maneuver	-	-	-	-	-	-	386	366	-	307	400	-
Stage 1	-	-	-	-	-	-	712	661	-	692	655	-
Stage 2	-	-	-	-	-	-	639	596	-	542	644	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	2			1			16.8			12.8		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	498	1276	-	-	1411	-	-	527
HCM Lane V/C Ratio	0.391	0.044	-	-	0.031	-	-	0.128
HCM Control Delay (s)	16.8	8	0	-	7.6	0	-	12.8
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.8	0.1	-	-	0.1	-	-	0.4

NPMC Howard-Orange Mobility Assessment
 8: Marlborough Ave S/Alley & Orange Ave

Near Term with Project
 Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	0	121	57	74	260	0	122	0	72	0	2	3
Future Volume (veh/h)	0	121	57	74	260	0	122	0	72	0	2	3
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	132	62	80	283	0	133	0	78	0	2	3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	409	192	297	500	0	456	0	102	0	128	193
Arrive On Green	0.00	0.34	0.34	0.34	0.34	0.00	0.19	0.00	0.19	0.00	0.19	0.19
Sat Flow, veh/h	0	1203	565	254	1471	0	915	0	537	0	675	1013
Grp Volume(v), veh/h	0	0	194	363	0	0	211	0	0	0	0	5
Grp Sat Flow(s),veh/h/ln	0	0	1769	1725	0	0	1452	0	0	0	0	1688
Q Serve(g_s), s	0.0	0.0	1.7	1.3	0.0	0.0	2.8	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.0	0.0	1.7	3.5	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.1
Prop In Lane	0.00		0.32	0.22		0.00	0.63		0.37	0.00		0.60
Lane Grp Cap(c), veh/h	0	0	601	797	0	0	558	0	0	0	0	321
V/C Ratio(X)	0.00	0.00	0.32	0.46	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.02
Avail Cap(c_a), veh/h	0	0	2036	2000	0	0	1548	0	0	0	0	1862
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	5.1	5.7	0.0	0.0	8.0	0.0	0.0	0.0	0.0	6.9
Incr Delay (d2), s/veh	0.0	0.0	0.2	0.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.3	0.6	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	5.3	5.9	0.0	0.0	8.2	0.0	0.0	0.0	0.0	6.9
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		194			363			211				5
Approach Delay, s/veh		5.3			5.9			8.2				6.9
Approach LOS		A			A			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		12.0		8.9		12.0		8.9				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		24.0		23.0		22.2		18.0				
Max Q Clear Time (g_c+I1), s		3.7		2.1		5.5		4.9				
Green Ext Time (p_c), s		0.8		0.0		1.6		0.7				
Intersection Summary												
HCM 6th Ctrl Delay				6.4								
HCM 6th LOS				A								

Intersection												
Int Delay, s/veh	9.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	82	49	18	7	114	25	169	45	37	2	3	15
Future Vol, veh/h	82	49	18	7	114	25	169	45	37	2	3	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	89	53	20	8	124	27	184	49	40	2	3	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	151	0	0	73	0	0	404	408	63	440	405	138
Stage 1	-	-	-	-	-	-	241	241	-	154	154	-
Stage 2	-	-	-	-	-	-	163	167	-	286	251	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1430	-	-	1527	-	-	557	533	1002	527	535	910
Stage 1	-	-	-	-	-	-	762	706	-	848	770	-
Stage 2	-	-	-	-	-	-	839	760	-	721	699	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1430	-	-	1527	-	-	515	495	1002	443	497	910
Mov Cap-2 Maneuver	-	-	-	-	-	-	515	495	-	443	497	-
Stage 1	-	-	-	-	-	-	712	660	-	793	765	-
Stage 2	-	-	-	-	-	-	816	755	-	599	654	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	4.2			0.4			17.8			10		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	550	1430	-	-	1527	-	-	740
HCM Lane V/C Ratio	0.496	0.062	-	-	0.005	-	-	0.029
HCM Control Delay (s)	17.8	7.7	0	-	7.4	0	-	10
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	2.7	0.2	-	-	0	-	-	0.1

NPMC Howard-Orange Mobility Assessment
 10: 43rd St & Orange Ave

Near Term with Project
 Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	78	43	3	95	0	0	0	0	51	273	112
Future Volume (veh/h)	0	78	43	3	95	0	0	0	0	51	273	112
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	0.97		1.00				1.00		0.92
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1900	1870	1900
Adj Flow Rate, veh/h	0	84	46	3	102	0				55	294	120
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	2	2	0				0	2	0
Cap, veh/h	0	598	328	70	996	0				116	633	269
Arrive On Green	0.00	0.54	0.54	0.54	0.54	0.00				0.29	0.29	0.29
Sat Flow, veh/h	0	1113	609	11	1854	0				396	2156	917
Grp Volume(v), veh/h	0	0	130	105	0	0				257	0	212
Grp Sat Flow(s),veh/h/ln	0	0	1722	1865	0	0				1851	0	1617
Q Serve(g_s), s	0.0	0.0	2.2	0.0	0.0	0.0				6.6	0.0	6.2
Cycle Q Clear(g_c), s	0.0	0.0	2.2	1.6	0.0	0.0				6.6	0.0	6.2
Prop In Lane	0.00		0.35	0.03		0.00				0.21		0.57
Lane Grp Cap(c), veh/h	0	0	926	1066	0	0				543	0	475
V/C Ratio(X)	0.00	0.00	0.14	0.10	0.00	0.00				0.47	0.00	0.45
Avail Cap(c_a), veh/h	0	0	926	1066	0	0				766	0	669
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	6.7	6.6	0.0	0.0				16.8	0.0	16.7
Incr Delay (d2), s/veh	0.0	0.0	0.3	0.2	0.0	0.0				1.4	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.8	0.6	0.0	0.0				2.8	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	7.0	6.8	0.0	0.0				18.3	0.0	18.1
LnGrp LOS	A	A	A	A	A	A				B	A	B
Approach Vol, veh/h		130			105						469	
Approach Delay, s/veh		7.0			6.8						18.2	
Approach LOS		A			A						B	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		36.1		21.9		36.1						
Change Period (Y+Rc), s		4.9		4.9		4.9						
Max Green Setting (Gmax), s		24.0		24.0		20.1						
Max Q Clear Time (g_c+I1), s		4.2		8.6		3.6						
Green Ext Time (p_c), s		1.3		4.5		0.9						
Intersection Summary												
HCM 6th Ctrl Delay			14.4									
HCM 6th LOS			B									

NPMC Howard-Orange Mobility Assessment
 11: Fairmount Ave & Orange Ave

Near Term with Project
 Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↑	↗		↑↑			↖	
Traffic Volume (veh/h)	0	0	67	0	0	110	10	916	59	1	62	5
Future Volume (veh/h)	0	0	67	0	0	110	10	916	59	1	62	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.93	1.00		0.91	0.93		0.90	0.99		0.90
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	73	0	0	120	11	996	64	1	67	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	0	886	701	0	886	682	57	1268	81	53	655	48
Arrive On Green	0.00	0.00	0.47	0.00	0.00	0.47	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	0	1870	1481	0	1870	1440	12	3281	209	3	1694	125
Grp Volume(v), veh/h	0	0	73	0	0	120	570	0	501	73	0	0
Grp Sat Flow(s),veh/h/ln	0	1870	1481	0	1870	1440	1864	0	1638	1822	0	0
Q Serve(g_s), s	0.0	0.0	1.9	0.0	0.0	3.4	0.6	0.0	18.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	1.9	0.0	0.0	3.4	18.9	0.0	18.9	1.8	0.0	0.0
Prop In Lane	0.00		1.00	0.00		1.00	0.02		0.13	0.01		0.07
Lane Grp Cap(c), veh/h	0	886	701	0	886	682	773	0	633	757	0	0
V/C Ratio(X)	0.00	0.00	0.10	0.00	0.00	0.18	0.74	0.00	0.79	0.10	0.00	0.00
Avail Cap(c_a), veh/h	0	886	701	0	886	682	986	0	821	960	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	10.2	0.0	0.0	10.6	19.0	0.0	19.0	13.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.3	0.0	0.0	0.6	2.2	0.0	4.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/lr0.0	0.0	0.0	0.6	0.0	0.0	1.1	7.9	0.0	7.2	0.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	10.5	0.0	0.0	11.1	21.1	0.0	23.0	13.8	0.0	0.0
LnGrp LOS	A	A	B	A	A	B	C	A	C	B	A	A
Approach Vol, veh/h		73			120			1071			73	
Approach Delay, s/veh		10.5			11.1			22.0			13.8	
Approach LOS		B			B			C			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		38.0		32.0		38.0		32.0				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		25.1		35.1		25.1		35.1				
Max Q Clear Time (g_c+I1), s		3.9		20.9		5.4		3.8				
Green Ext Time (p_c), s		0.2		6.2		0.4		0.4				
Intersection Summary												
HCM 6th Ctrl Delay											19.9	
HCM 6th LOS											B	

Intersection												
Int Delay, s/veh	5.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↶			↷			↶↷			↶↷	
Traffic Vol, veh/h	0	18	14	41	96	0	17	0	26	37	8	50
Future Vol, veh/h	0	18	14	41	96	0	17	0	26	37	8	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	19	15	43	101	0	18	0	27	39	8	53

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	34	0	0	245	214	27	227	221	101
Stage 1	-	-	-	-	-	-	27	27	-	187	187	-
Stage 2	-	-	-	-	-	-	218	187	-	40	34	-
Critical Hdwy	-	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	1578	-	0	709	684	1048	728	678	954
Stage 1	0	-	-	-	-	0	990	873	-	815	745	-
Stage 2	0	-	-	-	-	0	784	745	-	975	867	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1578	-	-	649	664	1048	693	658	954
Mov Cap-2 Maneuver	-	-	-	-	-	-	649	664	-	693	658	-
Stage 1	-	-	-	-	-	-	990	873	-	815	723	-
Stage 2	-	-	-	-	-	-	711	723	-	950	867	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			2.2			9.5			10.1		
HCM LOS							A			B		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	843	-	-	1578	-	805
HCM Lane V/C Ratio	0.054	-	-	0.027	-	0.124
HCM Control Delay (s)	9.5	-	-	7.3	0	10.1
HCM Lane LOS	A	-	-	A	A	B
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-	0.4

Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	20	24	19	12	101	60	48	185	30	46	111	25
Future Vol, veh/h	20	24	19	12	101	60	48	185	30	46	111	25
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	28	22	14	116	69	55	213	34	53	128	29
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.1	10.2	11.3	10.1
HCM LOS	A	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	18%	32%	7%	25%
Vol Thru, %	70%	38%	58%	61%
Vol Right, %	11%	30%	35%	14%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	263	63	173	182
LT Vol	48	20	12	46
Through Vol	185	24	101	111
RT Vol	30	19	60	25
Lane Flow Rate	302	72	199	209
Geometry Grp	1	1	1	1
Degree of Util (X)	0.408	0.11	0.285	0.289
Departure Headway (Hd)	4.855	5.449	5.16	5.077
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	732	661	700	711
Service Time	2.954	3.456	3.16	3.077
HCM Lane V/C Ratio	0.413	0.109	0.284	0.294
HCM Control Delay	11.3	9.1	10.2	10.1
HCM Lane LOS	B	A	B	B
HCM 95th-tile Q	2	0.4	1.2	1.2

Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	58	54	21	32	79	26	0	0	0	6	28	54
Future Vol, veh/h	58	54	21	32	79	26	0	0	0	6	28	54
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	62	58	23	34	85	28	0	0	0	6	30	58





















Major/Minor	Major1			Major2			Minor2			
Conflicting Flow All	113	0	0	81	0	0		361	372	99
Stage 1	-	-	-	-	-	-		167	167	-
Stage 2	-	-	-	-	-	-		194	205	-
Critical Hdwy	4.12	-	-	4.12	-	-		6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-		5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-		5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-		3.518	4.018	3.318
Pot Cap-1 Maneuver	1476	-	-	1517	-	-		638	558	957
Stage 1	-	-	-	-	-	-		863	760	-
Stage 2	-	-	-	-	-	-		839	732	-
Platoon blocked, %		-	-		-	-				
Mov Cap-1 Maneuver	1476	-	-	1517	-	-		595	0	957
Mov Cap-2 Maneuver	-	-	-	-	-	-		595	0	-
Stage 1	-	-	-	-	-	-		805	0	-
Stage 2	-	-	-	-	-	-		839	0	-

Approach	EB		WB		SB	
HCM Control Delay, s	3.3		1.7		9.5	
HCM LOS					A	

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1476	-	-	1517	-	-	902
HCM Lane V/C Ratio	0.042	-	-	0.023	-	-	0.105
HCM Control Delay (s)	7.5	0	-	7.4	0	-	9.5
HCM Lane LOS	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-	-	0.3

NPMC Howard-Orange Mobility Assessment
 15: Euclid Ave & Orange Ave

Near Term with Project
 Timing Plan: AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	79	0	0	127	5	378	45	1	169	57
Future Volume (veh/h)	0	0	79	0	0	127	5	378	45	1	169	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	86	0	0	138	5	411	49	1	184	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	0	404	342	0	404	342	631	666	79	471	544	183
Arrive On Green	0.00	0.00	0.22	0.00	0.00	0.22	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	0	1870	1585	0	1870	1585	1134	1640	195	932	1338	451
Grp Volume(v), veh/h	0	0	86	0	0	138	5	0	460	1	0	246
Grp Sat Flow(s),veh/h/ln	0	1870	1585	0	1870	1585	1134	0	1835	932	0	1789
Q Serve(g_s), s	0.0	0.0	1.2	0.0	0.0	1.9	0.1	0.0	5.2	0.0	0.0	2.5
Cycle Q Clear(g_c), s	0.0	0.0	1.2	0.0	0.0	1.9	2.5	0.0	5.2	5.2	0.0	2.5
Prop In Lane	0.00		1.00	0.00		1.00	1.00		0.11	1.00		0.25
Lane Grp Cap(c), veh/h	0	404	342	0	404	342	631	0	746	471	0	727
V/C Ratio(X)	0.00	0.00	0.25	0.00	0.00	0.40	0.01	0.00	0.62	0.00	0.00	0.34
Avail Cap(c_a), veh/h	0	2673	2265	0	2673	2265	2926	0	4461	2357	0	4349
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	8.4	0.0	0.0	8.7	6.2	0.0	6.1	8.2	0.0	5.3
Incr Delay (d2), s/veh	0.0	0.0	0.4	0.0	0.0	0.8	0.0	0.0	0.8	0.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.3	0.0	0.0	0.5	0.0	0.0	1.0	0.0	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	8.8	0.0	0.0	9.5	6.2	0.0	6.9	8.2	0.0	5.6
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		86			138			465			247	
Approach Delay, s/veh		8.8			9.5			6.9			5.6	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6			8			
Phs Duration (G+Y+Rc), s		10.5		15.5		10.5		15.5				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		37.1		63.1		37.1		63.1				
Max Q Clear Time (g_c+I1), s		3.2		7.2		3.9		7.2				
Green Ext Time (p_c), s		0.3		1.7		0.5		3.4				
Intersection Summary												
HCM 6th Ctrl Delay			7.1									
HCM 6th LOS			A									

Intersection												
Int Delay, s/veh	5.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	20	22	5	62	124	13	25	32	27	6	13	46
Future Vol, veh/h	20	22	5	62	124	13	25	32	27	6	13	46
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	26	6	73	146	15	29	38	32	7	15	54

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	161	0	0	32	0	0	411	384	29	412	380	154
Stage 1	-	-	-	-	-	-	77	77	-	300	300	-
Stage 2	-	-	-	-	-	-	334	307	-	112	80	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1418	-	-	1580	-	-	551	550	1046	550	552	892
Stage 1	-	-	-	-	-	-	932	831	-	709	666	-
Stage 2	-	-	-	-	-	-	680	661	-	893	828	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1418	-	-	1580	-	-	480	513	1046	478	515	892
Mov Cap-2 Maneuver	-	-	-	-	-	-	480	513	-	478	515	-
Stage 1	-	-	-	-	-	-	916	817	-	697	632	-
Stage 2	-	-	-	-	-	-	591	627	-	812	814	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	3.2		2.3		12.2		10.5	
HCM LOS					B		B	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	599	1418	-	-	1580	-	-	727
HCM Lane V/C Ratio	0.165	0.017	-	-	0.046	-	-	0.105
HCM Control Delay (s)	12.2	7.6	0	-	7.4	0	-	10.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.6	0.1	-	-	0.1	-	-	0.4

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	21	40	8	39	144	3	27	36	42	35	36	31
Future Vol, veh/h	21	40	8	39	144	3	27	36	42	35	36	31
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	44	9	43	160	3	30	40	47	39	40	34
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.3	9.3	8.4	8.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	26%	30%	21%	34%
Vol Thru, %	34%	58%	77%	35%
Vol Right, %	40%	12%	2%	30%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	105	69	186	102
LT Vol	27	21	39	35
Through Vol	36	40	144	36
RT Vol	42	8	3	31
Lane Flow Rate	117	77	207	113
Geometry Grp	1	1	1	1
Degree of Util (X)	0.148	0.1	0.264	0.146
Departure Headway (Hd)	4.554	4.706	4.593	4.63
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	786	760	781	773
Service Time	2.588	2.746	2.626	2.665
HCM Lane V/C Ratio	0.149	0.101	0.265	0.146
HCM Control Delay	8.4	8.3	9.3	8.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.3	1.1	0.5

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑			↑↑↑					↑			↑
Traffic Vol, veh/h	0	450	14	0	1423	28	0	0	67	0	0	11
Future Vol, veh/h	0	450	14	0	1423	28	0	0	67	0	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	489	15	0	1547	30	0	0	73	0	0	12

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	-	-	0	-	-	252	-	-	789
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	637	0	0	286
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	637	-	-	286
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	11.4	18.1
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	637	-	-	-	-	286
HCM Lane V/C Ratio	0.114	-	-	-	-	0.042
HCM Control Delay (s)	11.4	-	-	-	-	18.1
HCM Lane LOS	B	-	-	-	-	C
HCM 95th %tile Q(veh)	0.4	-	-	-	-	0.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	468	32	20	1132	76	195	116	17	51	42	84
Future Volume (veh/h)	17	468	32	20	1132	76	195	116	17	51	42	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	482	33	21	1167	78	201	120	18	53	43	87
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	28	2876	893	31	2885	896	258	125	19	257	194	456
Arrive On Green	0.02	0.56	0.56	0.02	0.57	0.57	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	712	435	64	712	675	1585
Grp Volume(v), veh/h	18	482	33	21	1167	78	339	0	0	96	0	87
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1212	0	0	1387	0	1585
Q Serve(g_s), s	1.1	4.9	1.0	1.3	13.9	2.4	24.9	0.0	0.0	0.0	0.0	4.5
Cycle Q Clear(g_c), s	1.1	4.9	1.0	1.3	13.9	2.4	30.1	0.0	0.0	5.2	0.0	4.5
Prop In Lane	1.00		1.00	1.00		1.00	0.59		0.05	0.55		1.00
Lane Grp Cap(c), veh/h	28	2876	893	31	2885	896	402	0	0	451	0	456
V/C Ratio(X)	0.65	0.17	0.04	0.68	0.40	0.09	0.84	0.00	0.00	0.21	0.00	0.19
Avail Cap(c_a), veh/h	233	2876	893	233	2885	896	402	0	0	451	0	456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.9	11.4	10.5	52.8	13.2	10.7	40.5	0.0	0.0	29.1	0.0	29.0
Incr Delay (d2), s/veh	9.4	0.1	0.1	9.4	0.4	0.2	14.0	0.0	0.0	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.8	0.4	0.6	5.2	0.9	10.5	0.0	0.0	1.9	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.2	11.5	10.6	62.2	13.7	10.9	54.5	0.0	0.0	29.2	0.0	29.0
LnGrp LOS	E	B	B	E	B	B	D	A	A	C	A	C
Approach Vol, veh/h		533			1266			339				183
Approach Delay, s/veh		13.2			14.3			54.5				29.1
Approach LOS		B			B			D				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.1	65.9		36.0	6.3	65.7		36.0				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	14.1	48.6		31.1	14.1	48.6		31.1				
Max Q Clear Time (g_c+I1), s	3.1	15.9		32.1	3.3	6.9		7.2				
Green Ext Time (p_c), s	0.0	6.9		0.0	0.0	2.4		0.5				

Intersection Summary

HCM 6th Ctrl Delay	21.1
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑			↑↑↑					↑			↑
Traffic Vol, veh/h	0	1054	20	0	1608	40	0	0	152	0	0	75
Future Vol, veh/h	0	1054	20	0	1608	40	0	0	152	0	0	75
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1146	22	0	1748	43	0	0	165	0	0	82

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	-	-	0	-	-	584	-	-	896
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	390	0	0	243
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	390	-	-	243
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0		0		20.8		27.1	
HCM LOS					C		D	

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	390	-	-	-	-	243
HCM Lane V/C Ratio	0.424	-	-	-	-	0.335
HCM Control Delay (s)	20.8	-	-	-	-	27.1
HCM Lane LOS	C	-	-	-	-	D
HCM 95th %tile Q(veh)	2.1	-	-	-	-	1.4

NPMC Howard-Orange Mobility Assessment
21: Fairmount Ave & El Cajon Blvd

Near Term with Project
Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	793	52	0	1463	359	139	831	42	0	0	0
Future Volume (veh/h)	230	793	52	0	1463	359	139	831	42	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1900	1870	1900			
Adj Flow Rate, veh/h	240	826	54	0	1524	374	145	866	44			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	2	2	0	2	2	0	2	0			
Cap, veh/h	232	2313	1032	0	1381	326	129	814	43			
Arrive On Green	0.13	0.65	0.65	0.00	0.48	0.48	0.27	0.27	0.27			
Sat Flow, veh/h	1781	3554	1585	0	2945	674	484	3042	161			
Grp Volume(v), veh/h	240	826	54	0	928	970	553	0	502			
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	0	1777	1749	1846	0	1841			
Q Serve(g_s), s	15.6	12.7	1.5	0.0	58.1	58.1	32.1	0.0	32.1			
Cycle Q Clear(g_c), s	15.6	12.7	1.5	0.0	58.1	58.1	32.1	0.0	32.1			
Prop In Lane	1.00		1.00	0.00		0.39	0.26		0.09			
Lane Grp Cap(c), veh/h	232	2313	1032	0	860	847	494	0	493			
V/C Ratio(X)	1.04	0.36	0.05	0.00	1.08	1.15	1.12	0.00	1.02			
Avail Cap(c_a), veh/h	232	2313	1032	0	860	847	494	0	493			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.77	0.77	0.68	0.00	0.68			
Uniform Delay (d), s/veh	52.2	9.5	7.6	0.0	31.0	31.0	44.0	0.0	44.0			
Incr Delay (d2), s/veh	69.0	0.4	0.1	0.0	50.7	76.6	71.4	0.0	38.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	11.4	4.8	0.5	0.0	36.0	41.5	24.3	0.0	19.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	121.2	10.0	7.7	0.0	81.7	107.5	115.4	0.0	82.3			
LnGrp LOS	F	A	A	A	F	F	F	A	F			
Approach Vol, veh/h		1120			1898			1055				
Approach Delay, s/veh		33.7			94.9			99.6				
Approach LOS		C			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		83.0			20.0	63.0		37.0				
Change Period (Y+Rc), s		4.9			4.4	4.9		4.9				
Max Green Setting (Gmax), s		78.1			15.6	58.1		32.1				
Max Q Clear Time (g_c+I1), s		14.7			17.6	60.1		34.1				
Green Ext Time (p_c), s		4.5			0.0	0.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	79.3
HCM 6th LOS	E

Notes

User approved ignoring U-Turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	34	636	58	71	1264	111	280	190	44	34	90	51
Future Volume (veh/h)	34	636	58	71	1264	111	280	190	44	34	90	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	36	669	61	75	1331	117	295	200	46	36	95	54
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	62	1667	152	96	1735	152	381	473	109	304	360	205
Arrive On Green	0.03	0.51	0.51	0.05	0.52	0.52	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1781	3293	300	1781	3306	290	1239	1471	338	1134	1119	636
Grp Volume(v), veh/h	36	361	369	75	713	735	295	0	246	36	0	149
Grp Sat Flow(s),veh/h/ln	1781	1777	1816	1781	1777	1818	1239	0	1809	1134	0	1756
Q Serve(g_s), s	2.4	15.1	15.1	5.0	38.2	38.7	27.8	0.0	12.8	3.1	0.0	7.5
Cycle Q Clear(g_c), s	2.4	15.1	15.1	5.0	38.2	38.7	35.4	0.0	12.8	15.9	0.0	7.5
Prop In Lane	1.00		0.17	1.00		0.16	1.00		0.19	1.00		0.36
Lane Grp Cap(c), veh/h	62	900	920	96	933	954	381	0	582	304	0	565
V/C Ratio(X)	0.58	0.40	0.40	0.79	0.76	0.77	0.77	0.00	0.42	0.12	0.00	0.26
Avail Cap(c_a), veh/h	105	900	920	150	933	954	489	0	740	403	0	718
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.98	0.98	0.98	1.00	1.00	1.00	0.91	0.00	0.91	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.0	18.4	18.4	56.1	22.6	22.7	43.3	0.0	31.9	38.2	0.0	30.2
Incr Delay (d2), s/veh	3.1	1.3	1.3	5.3	5.9	6.0	3.9	0.0	0.2	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	6.5	6.6	2.4	17.0	17.6	8.9	0.0	5.6	0.9	0.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.1	19.7	19.6	61.4	28.6	28.7	47.1	0.0	32.1	38.2	0.0	30.2
LnGrp LOS	E	B	B	E	C	C	D	A	C	D	A	C
Approach Vol, veh/h		766			1523			541				185
Approach Delay, s/veh		21.6			30.2			40.3				31.8
Approach LOS		C			C			D				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.8	65.7		43.5	8.6	67.9		43.5				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	40.0	46.6		49.1	7.1	46.6		49.1				
Max Q Clear Time (g_c+1), s	17.1	17.1		17.9	4.4	40.7		37.4				
Green Ext Time (p_c), s	0.0	5.9		0.6	0.0	4.4		1.3				
Intersection Summary												
HCM 6th Ctrl Delay												29.9
HCM 6th LOS												C

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	21	23	0	128	113	0
Future Vol, veh/h	21	23	0	128	113	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	28	0	156	138	0
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right NB			EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.7	8.1	8
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	48%	0%
Vol Thru, %	100%	0%	100%
Vol Right, %	0%	52%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	128	44	113
LT Vol	0	21	0
Through Vol	128	0	113
RT Vol	0	23	0
Lane Flow Rate	156	54	138
Geometry Grp	1	1	1
Degree of Util (X)	0.179	0.065	0.159
Departure Headway (Hd)	4.133	4.356	4.147
Convergence, Y/N	Yes	Yes	Yes
Cap	860	827	856
Service Time	2.199	2.356	2.216
HCM Lane V/C Ratio	0.181	0.065	0.161
HCM Control Delay	8.1	7.7	8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.6	0.2	0.6

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	12	12	18	0	0	0	0	955	35	17	101	0
Future Vol, veh/h	12	12	18	0	0	0	0	955	35	17	101	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	13	19	0	0	0	0	995	36	18	105	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	639	1172	105	-	0	0	1031	0	0
Stage 1	141	141	-	-	-	-	-	-	-
Stage 2	498	1031	-	-	-	-	-	-	-
Critical Hdwy	6.63	6.53	6.23	-	-	-	4.13	-	-
Critical Hdwy Stg 1	5.43	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.83	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	-	-	-	2.219	-	-
Pot Cap-1 Maneuver	424	192	949	0	-	-	672	-	0
Stage 1	885	780	-	0	-	-	-	-	0
Stage 2	577	309	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	412	0	949	-	-	-	672	-	-
Mov Cap-2 Maneuver	412	0	-	-	-	-	-	-	-
Stage 1	860	0	-	-	-	-	-	-	-
Stage 2	577	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.2	0	1.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	624	672	-
HCM Lane V/C Ratio	-	-	0.07	0.026	-
HCM Control Delay (s)	-	-	11.2	10.5	0
HCM Lane LOS	-	-	B	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Volume (veh/h)	25	18	36	0	0	0	0	490	19	19	252	0
Future Volume (veh/h)	25	18	36	0	0	0	0	490	19	19	252	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	27	19	39				0	527	20	20	271	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	0				0	2	2	2	2	0
Cap, veh/h	40	28	58				0	853	32	199	843	0
Arrive On Green	0.07	0.07	0.07				0.00	0.48	0.48	0.48	0.48	0.00
Sat Flow, veh/h	541	381	781				0	1790	68	47	1768	0
Grp Volume(v), veh/h	85	0	0				0	0	547	291	0	0
Grp Sat Flow(s),veh/h/ln	1703	0	0				0	0	1858	1815	0	0
Q Serve(g_s), s	1.1	0.0	0.0				0.0	0.0	4.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.1	0.0	0.0				0.0	0.0	4.8	2.1	0.0	0.0
Prop In Lane	0.32		0.46				0.00		0.04	0.07		0.00
Lane Grp Cap(c), veh/h	126	0	0				0	0	886	1042	0	0
V/C Ratio(X)	0.68	0.00	0.00				0.00	0.00	0.62	0.28	0.00	0.00
Avail Cap(c_a), veh/h	2742	0	0				0	0	4697	4591	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.8	0.0	0.0				0.0	0.0	4.2	3.5	0.0	0.0
Incr Delay (d2), s/veh	2.4	0.0	0.0				0.0	0.0	0.6	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.0				0.0	0.0	0.4	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.2	0.0	0.0				0.0	0.0	4.8	3.7	0.0	0.0
LnGrp LOS	B	A	A				A	A	A	A	A	A
Approach Vol, veh/h		85						547			291	
Approach Delay, s/veh		12.2						4.8			3.7	
Approach LOS		B						A			A	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		15.3		6.5				15.3				
Change Period (Y+Rc), s		4.9		4.9				4.9				
Max Green Setting (Gmax), s		55.1		35.1				55.1				
Max Q Clear Time (g_c+I1), s		6.8		3.1				4.1				
Green Ext Time (p_c), s		3.6		0.3				1.8				
Intersection Summary												
HCM 6th Ctrl Delay			5.1									
HCM 6th LOS			A									

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	17	24	12	0	0	0	0	59	6	3	81	0
Future Vol, veh/h	17	24	12	0	0	0	0	59	6	3	81	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	30	15	0	0	0	0	73	7	4	100	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	185	188	100	-	0	0	80	0	0
Stage 1	108	108	-	-	-	-	-	-	-
Stage 2	77	80	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	-	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	804	707	956	0	-	-	1518	-	0
Stage 1	916	806	-	0	-	-	-	-	0
Stage 2	946	828	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	802	0	956	-	-	-	1518	-	-
Mov Cap-2 Maneuver	802	0	-	-	-	-	-	-	-
Stage 1	913	0	-	-	-	-	-	-	-
Stage 2	946	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.5	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	859	1518	-
HCM Lane V/C Ratio	-	-	0.076	0.002	-
HCM Control Delay (s)	-	-	9.5	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	272	15	19	619	67	118	40	20	85	29	32
Future Volume (veh/h)	28	272	15	19	619	67	118	40	20	85	29	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	29	278	15	19	632	68	120	41	20	87	30	33
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	501	1247	67	817	1177	127	232	58	25	202	63	51
Arrive On Green	0.71	0.71	0.71	0.71	0.71	0.71	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	746	1758	95	1086	1660	179	979	395	171	809	431	350
Grp Volume(v), veh/h	29	0	293	19	0	700	181	0	0	150	0	0
Grp Sat Flow(s),veh/h/ln	746	0	1853	1086	0	1838	1545	0	0	1589	0	0
Q Serve(g_s), s	1.3	0.0	3.7	0.4	0.0	12.2	1.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	13.5	0.0	3.7	4.1	0.0	12.2	7.5	0.0	0.0	5.9	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.10	0.66		0.11	0.58		0.22
Lane Grp Cap(c), veh/h	501	0	1314	817	0	1303	315	0	0	317	0	0
V/C Ratio(X)	0.06	0.00	0.22	0.02	0.00	0.54	0.58	0.00	0.00	0.47	0.00	0.00
Avail Cap(c_a), veh/h	501	0	1314	817	0	1303	510	0	0	515	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.8	0.0	3.4	4.1	0.0	4.6	27.9	0.0	0.0	27.2	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.4	0.1	0.0	1.6	0.6	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	1.0	0.1	0.0	3.5	2.8	0.0	0.0	2.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.0	0.0	3.8	4.2	0.0	6.2	28.5	0.0	0.0	27.6	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	C	A	A	C	A	A
Approach Vol, veh/h		322			719			181				150
Approach Delay, s/veh		4.2			6.2			28.5				27.6
Approach LOS		A			A			C				C
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		53.1		14.9		53.1		14.9				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		39.1		19.1		39.1		19.1				
Max Q Clear Time (g_c+I1), s		15.5		7.9		14.2		9.5				
Green Ext Time (p_c), s		2.6		0.4		8.0		0.5				
Intersection Summary												
HCM 6th Ctrl Delay				11.0								
HCM 6th LOS				B								



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	413	71	89	587	160	208	651	58	97	92	12
Future Volume (veh/h)	126	413	71	89	587	160	208	651	58	97	92	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	131	430	74	93	611	167	217	678	60	101	96	12
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	160	587	100	554	1158	316	248	805	71	127	286	36
Arrive On Green	0.09	0.19	0.19	0.31	0.42	0.42	0.14	0.24	0.24	0.07	0.18	0.18
Sat Flow, veh/h	1781	3035	519	1781	2759	753	1781	3303	292	1781	1630	204
Grp Volume(v), veh/h	131	251	253	93	393	385	217	364	374	101	0	108
Grp Sat Flow(s),veh/h/ln	1781	1777	1777	1781	1777	1735	1781	1777	1818	1781	0	1834
Q Serve(g_s), s	7.7	14.0	14.2	4.0	17.5	17.5	12.7	20.7	20.7	5.9	0.0	5.5
Cycle Q Clear(g_c), s	7.7	14.0	14.2	4.0	17.5	17.5	12.7	20.7	20.7	5.9	0.0	5.5
Prop In Lane	1.00		0.29	1.00		0.43	1.00		0.16	1.00		0.11
Lane Grp Cap(c), veh/h	160	344	344	554	746	728	248	433	443	127	0	322
V/C Ratio(X)	0.82	0.73	0.74	0.17	0.53	0.53	0.87	0.84	0.84	0.80	0.00	0.34
Avail Cap(c_a), veh/h	229	588	588	554	746	728	329	521	533	195	0	400
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.4	40.1	40.2	26.5	22.9	22.9	44.7	38.1	38.1	48.5	0.0	38.3
Incr Delay (d2), s/veh	9.8	12.7	13.2	0.1	2.7	2.7	14.9	10.4	10.3	5.9	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	7.3	7.4	1.7	7.7	7.6	6.6	10.1	10.4	2.8	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.2	52.8	53.4	26.6	25.6	25.7	59.6	48.5	48.4	54.4	0.0	39.0
LnGrp LOS	E	D	D	C	C	C	E	D	D	D	A	D
Approach Vol, veh/h		635			871			955			209	
Approach Delay, s/veh		54.0			25.7			51.0			46.4	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	37.9	25.4	19.2	23.5	13.9	49.4	11.9	30.7				
Change Period (Y+Rc), s	4.9	* 4.9	4.4	4.9	4.4	4.9	4.4	4.9				
Max Green Setting (Gmax), s	30.6	* 35	19.6	23.1	13.6	31.1	11.6	31.1				
Max Q Clear Time (g_c+1/3), s	16.2	16.2	14.7	7.5	9.7	19.5	7.9	22.7				
Green Ext Time (p_c), s	0.0	4.3	0.1	0.5	0.1	4.9	0.0	3.1				

Intersection Summary

HCM 6th Ctrl Delay	43.1
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	67	308	37	187	796	79	159	365	119	39	254	2
Future Volume (veh/h)	67	308	37	187	796	79	159	365	119	39	254	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	72	331	40	201	856	85	171	392	128	42	273	2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	390	1302	156	235	1030	102	287	418	136	100	574	4
Arrive On Green	0.22	0.41	0.41	0.13	0.32	0.32	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1781	3195	383	1781	3265	324	1104	1350	441	882	1854	14
Grp Volume(v), veh/h	72	183	188	201	466	475	171	0	520	42	0	275
Grp Sat Flow(s),veh/h/ln	1781	1777	1801	1781	1777	1812	1104	0	1791	882	0	1868
Q Serve(g_s), s	3.1	6.4	6.5	10.4	22.9	22.9	13.9	0.0	26.6	2.5	0.0	11.2
Cycle Q Clear(g_c), s	3.1	6.4	6.5	10.4	22.9	22.9	25.1	0.0	26.6	29.1	0.0	11.2
Prop In Lane	1.00		0.21	1.00		0.18	1.00		0.25	1.00		0.01
Lane Grp Cap(c), veh/h	390	724	734	235	560	571	287	0	554	100	0	578
V/C Ratio(X)	0.18	0.25	0.26	0.86	0.83	0.83	0.60	0.00	0.94	0.42	0.00	0.48
Avail Cap(c_a), veh/h	390	724	734	296	758	773	287	0	554	100	0	578
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.98	0.00	0.98
Uniform Delay (d), s/veh	29.9	18.4	18.4	39.9	29.9	29.9	36.5	0.0	31.6	46.3	0.0	26.3
Incr Delay (d2), s/veh	0.1	0.8	0.8	15.1	13.5	13.2	3.1	0.0	23.8	3.8	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	2.7	2.8	5.5	11.6	11.7	3.9	0.0	14.7	1.1	0.0	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.0	19.2	19.3	55.0	43.3	43.1	39.6	0.0	55.4	50.1	0.0	27.1
LnGrp LOS	C	B	B	E	D	D	D	A	E	D	A	C
Approach Vol, veh/h		443		1142		691		317				
Approach Delay, s/veh		21.0		45.3		51.5		30.2				
Approach LOS		C		D		D		C				
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.8	43.2		34.0	25.5	34.5		34.0				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.9	* 4.9		4.9				
Max Green Setting (Gmax), s	15.6	35.1		29.1	10.6	* 40		29.1				
Max Q Clear Time (g_c+1/2, s)	11.4	8.5		31.1	5.1	24.9		28.6				
Green Ext Time (p_c), s	0.1	2.8		0.0	0.0	4.8		0.2				

Intersection Summary

HCM 6th Ctrl Delay	40.9
HCM 6th LOS	D

Notes

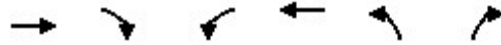
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	
Traffic Vol, veh/h	23	549	1001	21	7	68
Future Vol, veh/h	23	549	1001	21	7	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	185	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	23	555	1011	21	7	69

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1032	0	-	0	1346 516
Stage 1	-	-	-	-	1022 -
Stage 2	-	-	-	-	324 -
Critical Hdwy	4.14	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	2.22	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	669	-	-	-	143 504
Stage 1	-	-	-	-	308 -
Stage 2	-	-	-	-	705 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	669	-	-	-	136 504
Mov Cap-2 Maneuver	-	-	-	-	136 -
Stage 1	-	-	-	-	293 -
Stage 2	-	-	-	-	705 -

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	16
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	669	-	-	-	402
HCM Lane V/C Ratio	0.035	-	-	-	0.188
HCM Control Delay (s)	10.6	0.2	-	-	16
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.7



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑	↘	
Traffic Volume (veh/h)	597	27	25	1377	200	33
Future Volume (veh/h)	597	27	25	1377	200	33
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1900	1900
Adj Flow Rate, veh/h	649	29	27	1497	217	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	0	0
Cap, veh/h	2637	118	593	2705	244	41
Arrive On Green	0.76	0.76	0.76	0.76	0.16	0.16
Sat Flow, veh/h	3558	155	762	3647	1496	248
Grp Volume(v), veh/h	333	345	27	1497	254	0
Grp Sat Flow(s),veh/h/ln	1777	1843	762	1777	1751	0
Q Serve(g_s), s	7.1	7.2	1.4	22.6	18.5	0.0
Cycle Q Clear(g_c), s	7.1	7.2	8.6	22.6	18.5	0.0
Prop In Lane		0.08	1.00		0.85	0.14
Lane Grp Cap(c), veh/h	1353	1403	593	2705	286	0
V/C Ratio(X)	0.25	0.25	0.05	0.55	0.89	0.00
Avail Cap(c_a), veh/h	1353	1403	593	2705	862	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.94	0.94	0.56	0.56	1.00	0.00
Uniform Delay (d), s/veh	4.6	4.6	5.8	6.4	53.2	0.0
Incr Delay (d2), s/veh	0.4	0.4	0.0	0.1	9.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	2.6	0.2	7.5	8.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	5.0	5.0	5.8	6.5	62.3	0.0
LnGrp LOS	A	A	A	A	E	A
Approach Vol, veh/h	678			1524	254	
Approach Delay, s/veh	5.0			6.5	62.3	
Approach LOS	A			A	E	
Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		103.9			103.9	26.1
Change Period (Y+Rc), s		4.9			4.9	4.9
Max Green Setting (Gmax), s		56.2			56.2	64.0
Max Q Clear Time (g_c+I1), s		9.2			24.6	20.5
Green Ext Time (p_c), s		4.8			15.4	0.8
Intersection Summary						
HCM 6th Ctrl Delay			11.9			
HCM 6th LOS			B			

Intersection				
Intersection Delay, s/veh	4.4			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	91	325	88	85
Demand Flow Rate, veh/h	93	332	89	87
Vehicles Circulating, veh/h	87	65	119	109
Vehicles Exiting, veh/h	109	143	61	288
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	3.5	5.1	3.6	3.6
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	93	332	89	87
Cap Entry Lane, veh/h	1263	1291	1222	1235
Entry HV Adj Factor	0.980	0.979	0.986	0.975
Flow Entry, veh/h	91	325	88	85
Cap Entry, veh/h	1238	1264	1205	1204
V/C Ratio	0.074	0.257	0.073	0.070
Control Delay, s/veh	3.5	5.1	3.6	3.6
LOS	A	A	A	A
95th %tile Queue, veh	0	1	0	0

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	153	41	45	128	3	19	1	55	0	0	1
Future Vol, veh/h	1	153	41	45	128	3	19	1	55	0	0	1
Conflicting Peds, #/hr	9	0	9	8	0	8	9	0	8	8	0	9
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	70	-	-	100	-	-	-	-	40	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	172	46	51	144	3	21	1	62	0	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	156	0	0	227	0	0	463	464	212	494	486	164
Stage 1	-	-	-	-	-	-	206	206	-	257	257	-
Stage 2	-	-	-	-	-	-	257	258	-	237	229	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1424	-	-	1341	-	-	509	495	828	486	481	881
Stage 1	-	-	-	-	-	-	796	731	-	748	695	-
Stage 2	-	-	-	-	-	-	748	694	-	766	715	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1412	-	-	1330	-	-	485	467	815	428	454	866
Mov Cap-2 Maneuver	-	-	-	-	-	-	485	467	-	428	454	-
Stage 1	-	-	-	-	-	-	789	724	-	741	662	-
Stage 2	-	-	-	-	-	-	712	661	-	701	708	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			2			10.6			9.2		
HCM LOS							B			A		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	484	815	1412	-	-	1330	-	-	866
HCM Lane V/C Ratio	0.046	0.076	0.001	-	-	0.038	-	-	0.001
HCM Control Delay (s)	12.8	9.8	7.6	-	-	7.8	-	-	9.2
HCM Lane LOS	B	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0.2	0	-	-	0.1	-	-	0

NPMC Howard-Orange Mobility Assessment
2: Alley/33rd St & Orange Ave

Near Term with Project
Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕		↕	↕	
Traffic Volume (veh/h)	90	125	0	3	91	154	1	0	0	266	5	130
Future Volume (veh/h)	90	125	0	3	91	154	1	0	0	266	5	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	98	136	0	3	99	167	1	0	0	289	5	141
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	337	390	0	127	217	359	6	0	0	431	13	372
Arrive On Green	0.34	0.34	0.00	0.34	0.34	0.34	0.00	0.00	0.00	0.24	0.24	0.24
Sat Flow, veh/h	468	1134	0	5	632	1043	1781	0	0	1781	55	1539
Grp Volume(v), veh/h	234	0	0	269	0	0	1	0	0	289	0	146
Grp Sat Flow(s),veh/h/ln	1602	0	0	1680	0	0	1781	0	0	1781	0	1593
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	2.2
Cycle Q Clear(g_c), s	2.7	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	4.3	0.0	2.2
Prop In Lane	0.42		0.00	0.01		0.62	1.00		0.00	1.00		0.97
Lane Grp Cap(c), veh/h	727	0	0	703	0	0	6	0	0	431	0	385
V/C Ratio(X)	0.32	0.00	0.00	0.38	0.00	0.00	0.16	0.00	0.00	0.67	0.00	0.38
Avail Cap(c_a), veh/h	1378	0	0	1451	0	0	1409	0	0	1409	0	1260
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.2	0.0	0.0	7.4	0.0	0.0	14.5	0.0	0.0	10.0	0.0	9.2
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.2	0.0	0.0	4.5	0.0	0.0	0.7	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.3	0.0	0.0	7.7	0.0	0.0	19.0	0.0	0.0	10.7	0.0	9.4
LnGrp LOS	A	A	A	A	A	A	B	A	A	B	A	A
Approach Vol, veh/h		234			269			1				435
Approach Delay, s/veh		7.3			7.7			19.0				10.2
Approach LOS		A			A			B				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		14.0		4.0		14.0		11.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		23.0		23.0		23.0		23.0				
Max Q Clear Time (g_c+I1), s		4.7		2.0		5.6		6.3				
Green Ext Time (p_c), s		1.0		0.0		1.2		1.0				
Intersection Summary												
HCM 6th Ctrl Delay				8.8								
HCM 6th LOS				A								

Intersection												
Int Delay, s/veh	5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	62	136	92	14	46	13	85	2	41	2	7	30
Future Vol, veh/h	62	136	92	14	46	13	85	2	41	2	7	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	66	145	98	15	49	14	90	2	44	2	7	32



















Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	63	0	0	243	0	0	432	419	194	435	461	56
Stage 1	-	-	-	-	-	-	326	326	-	86	86	-
Stage 2	-	-	-	-	-	-	106	93	-	349	375	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1540	-	-	1323	-	-	534	525	847	531	497	1011
Stage 1	-	-	-	-	-	-	687	648	-	922	824	-
Stage 2	-	-	-	-	-	-	900	818	-	667	617	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1540	-	-	1323	-	-	487	493	847	478	467	1011
Mov Cap-2 Maneuver	-	-	-	-	-	-	487	493	-	478	467	-
Stage 1	-	-	-	-	-	-	653	616	-	876	814	-
Stage 2	-	-	-	-	-	-	853	808	-	599	586	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.6			1.5			13.4			9.8		
HCM LOS							B			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	564	1540	-	-	1323	-	-	798
HCM Lane V/C Ratio	0.241	0.043	-	-	0.011	-	-	0.052
HCM Control Delay (s)	13.4	7.4	0	-	7.8	0	-	9.8
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.9	0.1	-	-	0	-	-	0.2

NPMC Howard-Orange Mobility Assessment
4: 35th St & Orange Ave

Near Term with Project
Timing Plan: PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	146	0	0	86	2	82	32	3	122	41
Future Volume (veh/h)	0	0	146	0	0	86	2	82	32	3	122	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.96	0.98		0.97	0.98		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	159	0	0	93	2	89	35	3	133	45
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	0	648	519	0	648	526	110	462	179	110	480	160
Arrive On Green	0.00	0.00	0.35	0.00	0.00	0.35	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	0	1870	1498	0	1870	1520	6	1265	489	7	1314	437
Grp Volume(v), veh/h	0	0	159	0	0	93	126	0	0	181	0	0
Grp Sat Flow(s),veh/h/ln	0	1870	1498	0	1870	1520	1761	0	0	1759	0	0
Q Serve(g_s), s	0.0	0.0	2.6	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	2.6	0.0	0.0	1.4	1.7	0.0	0.0	2.5	0.0	0.0
Prop In Lane	0.00		1.00	0.00		1.00	0.02		0.28	0.02		0.25
Lane Grp Cap(c), veh/h	0	648	519	0	648	526	751	0	0	750	0	0
V/C Ratio(X)	0.00	0.00	0.31	0.00	0.00	0.18	0.17	0.00	0.00	0.24	0.00	0.00
Avail Cap(c_a), veh/h	0	1431	1146	0	1321	1073	1398	0	0	1398	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	8.1	0.0	0.0	7.7	7.4	0.0	0.0	7.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.3	0.0	0.0	0.2	0.1	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.7	0.0	0.0	0.4	0.5	0.0	0.0	0.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	8.5	0.0	0.0	7.9	7.5	0.0	0.0	7.8	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		159			93			126			181	
Approach Delay, s/veh		8.5			7.9			7.5			7.8	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		16.7		17.3		16.7		17.3				
Change Period (Y+Rc), s		4.9		4.9		4.9		* 4.9				
Max Green Setting (Gmax), s		26.0		25.0		24.0		* 25				
Max Q Clear Time (g_c+I1), s		4.6		3.7		3.4		4.5				
Green Ext Time (p_c), s		0.5		0.7		0.2		1.0				
Intersection Summary												
HCM 6th Ctrl Delay			7.9									
HCM 6th LOS			A									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection												
Int Delay, s/veh	5.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	24	34	6	65	68	20	20	13	20	14	4	23
Future Vol, veh/h	24	34	6	65	68	20	20	13	20	14	4	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	38	7	73	76	22	22	15	22	16	4	26

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	98	0	0	45	0	0	344	340	42	347	332	87
Stage 1	-	-	-	-	-	-	96	96	-	233	233	-
Stage 2	-	-	-	-	-	-	248	244	-	114	99	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1495	-	-	1563	-	-	610	582	1029	607	588	971
Stage 1	-	-	-	-	-	-	911	815	-	770	712	-
Stage 2	-	-	-	-	-	-	756	704	-	891	813	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1495	-	-	1563	-	-	559	542	1029	551	548	971
Mov Cap-2 Maneuver	-	-	-	-	-	-	559	542	-	551	548	-
Stage 1	-	-	-	-	-	-	894	800	-	755	676	-
Stage 2	-	-	-	-	-	-	694	669	-	839	798	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.8			3.2			10.9			10.3		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	669	1495	-	-	1563	-	-	727
HCM Lane V/C Ratio	0.089	0.018	-	-	0.047	-	-	0.063
HCM Control Delay (s)	10.9	7.5	0	-	7.4	0	-	10.3
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0.1	-	-	0.2

Intersection												
Int Delay, s/veh	5.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	86	17	24	100	52	13	5	89	72	8	21
Future Vol, veh/h	7	86	17	24	100	52	13	5	89	72	8	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	93	18	26	109	57	14	5	97	78	9	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	166	0	0	111	0	0	324	336	102	359	317	138
Stage 1	-	-	-	-	-	-	118	118	-	190	190	-
Stage 2	-	-	-	-	-	-	206	218	-	169	127	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1412	-	-	1479	-	-	629	585	953	596	599	910
Stage 1	-	-	-	-	-	-	887	798	-	812	743	-
Stage 2	-	-	-	-	-	-	796	723	-	833	791	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1412	-	-	1479	-	-	595	570	953	522	584	910
Mov Cap-2 Maneuver	-	-	-	-	-	-	595	570	-	522	584	-
Stage 1	-	-	-	-	-	-	882	793	-	807	729	-
Stage 2	-	-	-	-	-	-	752	709	-	739	786	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	1	9.8	12.7
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	863	1412	-	-	1479	-	-	578
HCM Lane V/C Ratio	0.135	0.005	-	-	0.018	-	-	0.19
HCM Control Delay (s)	9.8	7.6	0	-	7.5	0	-	12.7
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.5	0	-	-	0.1	-	-	0.7

Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	30	161	21	35	100	54	37	17	52	12	12	30
Future Vol, veh/h	30	161	21	35	100	54	37	17	52	12	12	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	175	23	38	109	59	40	18	57	13	13	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	168	0	0	198	0	0	491	497	187	505	479	139
Stage 1	-	-	-	-	-	-	253	253	-	215	215	-
Stage 2	-	-	-	-	-	-	238	244	-	290	264	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1410	-	-	1375	-	-	488	475	855	478	486	909
Stage 1	-	-	-	-	-	-	751	698	-	787	725	-
Stage 2	-	-	-	-	-	-	765	704	-	718	690	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1410	-	-	1375	-	-	441	448	855	414	459	909
Mov Cap-2 Maneuver	-	-	-	-	-	-	441	448	-	414	459	-
Stage 1	-	-	-	-	-	-	731	680	-	767	703	-
Stage 2	-	-	-	-	-	-	701	682	-	635	672	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.1			1.4			12.7			11.5		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	580	1410	-	-	1375	-	-	613
HCM Lane V/C Ratio	0.199	0.023	-	-	0.028	-	-	0.096
HCM Control Delay (s)	12.7	7.6	0	-	7.7	0	-	11.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.7	0.1	-	-	0.1	-	-	0.3

NPMC Howard-Orange Mobility Assessment
 8: Marlborough Ave S/Alley & Orange Ave

Near Term with Project
 Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	0	181	86	80	164	0	75	0	46	2	0	1
Future Volume (veh/h)	0	181	86	80	164	0	75	0	46	2	0	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	197	93	87	178	0	82	0	50	2	0	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	407	192	373	384	0	429	0	61	464	0	63
Arrive On Green	0.00	0.34	0.34	0.34	0.34	0.00	0.11	0.00	0.11	0.11	0.00	0.11
Sat Flow, veh/h	0	1201	567	306	1133	0	920	0	561	1154	0	577
Grp Volume(v), veh/h	0	0	290	265	0	0	132	0	0	3	0	0
Grp Sat Flow(s),veh/h/ln	0	0	1768	1440	0	0	1480	0	0	1731	0	0
Q Serve(g_s), s	0.0	0.0	2.3	0.5	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	2.3	2.8	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.00		0.32	0.33		0.00	0.62		0.38	0.67		0.33
Lane Grp Cap(c), veh/h	0	0	599	757	0	0	491	0	0	528	0	0
V/C Ratio(X)	0.00	0.00	0.48	0.35	0.00	0.00	0.27	0.00	0.00	0.01	0.00	0.00
Avail Cap(c_a), veh/h	0	0	2390	2137	0	0	1826	0	0	2216	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	4.6	4.6	0.0	0.0	7.7	0.0	0.0	7.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.3	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.3	0.2	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	5.0	4.8	0.0	0.0	7.8	0.0	0.0	7.1	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		290			265			132				3
Approach Delay, s/veh		5.0			4.8			7.8				7.1
Approach LOS		A			A			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		10.9		6.8		10.9		6.8				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		24.0		23.0		22.2		18.0				
Max Q Clear Time (g_c+I1), s		4.3		2.0		4.8		3.5				
Green Ext Time (p_c), s		1.3		0.0		1.2		0.4				
Intersection Summary												
HCM 6th Ctrl Delay				5.5								
HCM 6th LOS				A								

Intersection												
Int Delay, s/veh	6.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	68	104	48	22	58	12	94	16	42	7	7	32
Future Vol, veh/h	68	104	48	22	58	12	94	16	42	7	7	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	74	113	52	24	63	13	102	17	46	8	8	35

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	76	0	0	165	0	0	426	411	139	437	431	70
Stage 1	-	-	-	-	-	-	287	287	-	118	118	-
Stage 2	-	-	-	-	-	-	139	124	-	319	313	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1523	-	-	1413	-	-	539	531	909	530	517	993
Stage 1	-	-	-	-	-	-	720	674	-	887	798	-
Stage 2	-	-	-	-	-	-	864	793	-	693	657	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1523	-	-	1413	-	-	486	493	909	463	480	993
Mov Cap-2 Maneuver	-	-	-	-	-	-	486	493	-	463	480	-
Stage 1	-	-	-	-	-	-	681	638	-	839	784	-
Stage 2	-	-	-	-	-	-	811	779	-	606	622	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.3			1.8			14.1			10.2		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	559	1523	-	-	1413	-	-	743
HCM Lane V/C Ratio	0.296	0.049	-	-	0.017	-	-	0.067
HCM Control Delay (s)	14.1	7.5	0	-	7.6	0	-	10.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	1.2	0.2	-	-	0.1	-	-	0.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		1			1						1	1
Traffic Volume (veh/h)	0	56	89	9	25	0	0	0	0	155	491	85
Future Volume (veh/h)	0	56	89	9	25	0	0	0	0	155	491	85
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	0.97		1.00				1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1900	1870	1900
Adj Flow Rate, veh/h	0	60	96	10	27	0				167	528	91
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	0	2	2	2	2	0				0	2	0
Cap, veh/h	0	309	494	254	647	0				250	829	149
Arrive On Green	0.00	0.49	0.49	0.49	0.49	0.00				0.34	0.34	0.34
Sat Flow, veh/h	0	624	999	360	1308	0				729	2423	436
Grp Volume(v), veh/h	0	0	156	37	0	0				420	0	366
Grp Sat Flow(s),veh/h/ln	0	0	1623	1668	0	0				1834	0	1755
Q Serve(g_s), s	0.0	0.0	3.2	0.0	0.0	0.0				11.7	0.0	10.4
Cycle Q Clear(g_c), s	0.0	0.0	3.2	0.6	0.0	0.0				11.7	0.0	10.4
Prop In Lane	0.00		0.62	0.27		0.00				0.40		0.25
Lane Grp Cap(c), veh/h	0	0	802	901	0	0				628	0	601
V/C Ratio(X)	0.00	0.00	0.19	0.04	0.00	0.00				0.67	0.00	0.61
Avail Cap(c_a), veh/h	0	0	802	901	0	0				737	0	705
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	8.5	7.8	0.0	0.0				16.8	0.0	16.4
Incr Delay (d2), s/veh	0.0	0.0	0.5	0.1	0.0	0.0				3.2	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	1.1	0.2	0.0	0.0				4.9	0.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	9.0	7.9	0.0	0.0				20.0	0.0	18.7
LnGrp LOS	A	A	A	A	A	A				B	A	B
Approach Vol, veh/h		156			37						786	
Approach Delay, s/veh		9.0			7.9						19.4	
Approach LOS		A			A						B	
Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		34.6		25.4		34.6						
Change Period (Y+Rc), s		4.9		4.9		4.9						
Max Green Setting (Gmax), s		26.1		24.1		26.1						
Max Q Clear Time (g_c+I1), s		5.2		13.7		2.6						
Green Ext Time (p_c), s		1.8		5.8		0.3						
Intersection Summary												
HCM 6th Ctrl Delay				17.3								
HCM 6th LOS				B								



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↑	↗		↑↑			↘	
Traffic Volume (veh/h)	0	0	82	0	0	189	6	443	49	4	172	16
Future Volume (veh/h)	0	0	82	0	0	189	6	443	49	4	172	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.94	1.00		0.92	0.94		0.88	0.96		0.88
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	89	0	0	205	7	482	53	4	187	17
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	0	1029	821	0	1029	801	57	961	104	55	512	46
Arrive On Green	0.00	0.00	0.55	0.00	0.00	0.55	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	0	1870	1493	0	1870	1455	13	3103	336	9	1653	148
Grp Volume(v), veh/h	0	0	89	0	0	205	291	0	251	208	0	0
Grp Sat Flow(s),veh/h/ln	0	1870	1493	0	1870	1455	1862	0	1589	1809	0	0
Q Serve(g_s), s	0.0	0.0	2.0	0.0	0.0	5.2	0.0	0.0	9.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	2.0	0.0	0.0	5.2	8.9	0.0	9.1	6.2	0.0	0.0
Prop In Lane	0.00		1.00	0.00		1.00	0.02		0.21	0.02		0.08
Lane Grp Cap(c), veh/h	0	1029	821	0	1029	801	629	0	492	613	0	0
V/C Ratio(X)	0.00	0.00	0.11	0.00	0.00	0.26	0.46	0.00	0.51	0.34	0.00	0.00
Avail Cap(c_a), veh/h	0	1029	821	0	1029	801	982	0	797	954	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.99	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	7.5	0.0	0.0	8.2	19.8	0.0	19.8	18.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.3	0.0	0.0	0.8	0.5	0.0	0.8	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.6	0.0	0.0	1.6	3.7	0.0	3.3	2.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	7.8	0.0	0.0	9.0	20.3	0.0	20.6	19.2	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	C	A	C	B	A	A
Approach Vol, veh/h		89			205			542			208	
Approach Delay, s/veh		7.8			9.0			20.4			19.2	
Approach LOS		A			A			C			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		43.4		26.6		43.4		26.6				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		25.1		35.1		25.1		35.1				
Max Q Clear Time (g_c+I1), s		4.0		11.1		7.2		8.2				
Green Ext Time (p_c), s		0.2		3.4		0.7		1.2				
Intersection Summary												
HCM 6th Ctrl Delay			16.9									
HCM 6th LOS			B									

Intersection												
Int Delay, s/veh	6.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↻			↻			↻			↻	
Traffic Vol, veh/h	0	29	21	50	52	0	11	0	95	46	14	62
Future Vol, veh/h	0	29	21	50	52	0	11	0	95	46	14	62
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	31	22	53	55	0	12	0	100	48	15	65

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	53	0	0	243	203	42	253	214	55
Stage 1	-	-	-	-	-	-	42	42	-	161	161	-
Stage 2	-	-	-	-	-	-	201	161	-	92	53	-
Critical Hdwy	-	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	1553	-	0	711	693	1029	700	684	1012
Stage 1	0	-	-	-	-	0	972	860	-	841	765	-
Stage 2	0	-	-	-	-	0	801	765	-	915	851	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1553	-	-	636	669	1029	615	660	1012
Mov Cap-2 Maneuver	-	-	-	-	-	-	636	669	-	615	660	-
Stage 1	-	-	-	-	-	-	972	860	-	841	738	-
Stage 2	-	-	-	-	-	-	709	738	-	826	851	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			3.6			9.2			10.6		
HCM LOS							A			B		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	967	-	-	1553	-	776
HCM Lane V/C Ratio	0.115	-	-	0.034	-	0.165
HCM Control Delay (s)	9.2	-	-	7.4	0	10.6
HCM Lane LOS	A	-	-	A	A	B
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-	0.6

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	12	35	14	4	102	33	71	61	21	43	77	32
Future Vol, veh/h	12	35	14	4	102	33	71	61	21	43	77	32
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	40	16	5	117	38	82	70	24	49	89	37
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.4	9	9.2	9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	46%	20%	3%	28%
Vol Thru, %	40%	57%	73%	51%
Vol Right, %	14%	23%	24%	21%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	153	61	139	152
LT Vol	71	12	4	43
Through Vol	61	35	102	77
RT Vol	21	14	33	32
Lane Flow Rate	176	70	160	175
Geometry Grp	1	1	1	1
Degree of Util (X)	0.23	0.095	0.209	0.225
Departure Headway (Hd)	4.704	4.863	4.708	4.628
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	761	733	759	774
Service Time	2.748	2.917	2.755	2.672
HCM Lane V/C Ratio	0.231	0.095	0.211	0.226
HCM Control Delay	9.2	8.4	9	9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.9	0.3	0.8	0.9

Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕						↕	
Traffic Vol, veh/h	45	135	11	13	24	6	0	0	0	25	21	55
Future Vol, veh/h	45	135	11	13	24	6	0	0	0	25	21	55
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	145	12	14	26	6	0	0	0	27	23	59

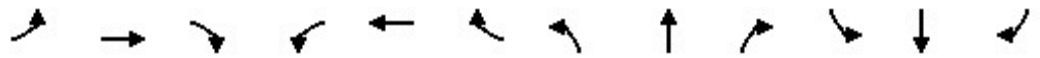
Major/Minor	Major1			Major2			Minor2			
Conflicting Flow All	32	0	0	157	0	0		304	310	29
Stage 1	-	-	-	-	-	-		57	57	-
Stage 2	-	-	-	-	-	-		247	253	-
Critical Hdwy	4.12	-	-	4.12	-	-		6.42	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-		5.42	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-		5.42	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-		3.518	4.018	3.318
Pot Cap-1 Maneuver	1580	-	-	1423	-	-		688	605	1046
Stage 1	-	-	-	-	-	-		966	847	-
Stage 2	-	-	-	-	-	-		794	698	-
Platoon blocked, %		-	-	-	-	-				
Mov Cap-1 Maneuver	1580	-	-	1423	-	-		658	0	1046
Mov Cap-2 Maneuver	-	-	-	-	-	-		658	0	-
Stage 1	-	-	-	-	-	-		924	0	-
Stage 2	-	-	-	-	-	-		794	0	-

Approach	EB		WB		SB	
HCM Control Delay, s	1.7		2.3		9.6	
HCM LOS					A	

Minor Lane/Major Mvmt	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1580	-	-	1423	-	-	883
HCM Lane V/C Ratio	0.031	-	-	0.01	-	-	0.123
HCM Control Delay (s)	7.3	0	-	7.6	0	-	9.6
HCM Lane LOS	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-	-	0.4

NPMC Howard-Orange Mobility Assessment
 15: Euclid Ave & Orange Ave

Near Term with Project
 Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↑	↗	↖	↑	↖	↖	↑	↖
Traffic Volume (veh/h)	0	0	136	0	0	120	3	281	62	2	336	65
Future Volume (veh/h)	0	0	136	0	0	120	3	281	62	2	336	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	148	0	0	130	3	305	67	2	365	71
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	0	2	2	2	2	2	2	2	2
Cap, veh/h	0	435	369	0	435	369	466	581	128	513	595	116
Arrive On Green	0.00	0.00	0.23	0.00	0.00	0.23	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	0	1870	1585	0	1870	1585	953	1485	326	1010	1521	296
Grp Volume(v), veh/h	0	0	148	0	0	130	3	0	372	2	0	436
Grp Sat Flow(s),veh/h/ln	0	1870	1585	0	1870	1585	953	0	1812	1010	0	1817
Q Serve(g_s), s	0.0	0.0	2.1	0.0	0.0	1.8	0.1	0.0	4.1	0.0	0.0	5.0
Cycle Q Clear(g_c), s	0.0	0.0	2.1	0.0	0.0	1.8	5.1	0.0	4.1	4.1	0.0	5.0
Prop In Lane	0.00		1.00	0.00		1.00	1.00		0.18	1.00		0.16
Lane Grp Cap(c), veh/h	0	435	369	0	435	369	466	0	709	513	0	711
V/C Ratio(X)	0.00	0.00	0.40	0.00	0.00	0.35	0.01	0.00	0.52	0.00	0.00	0.61
Avail Cap(c_a), veh/h	0	2662	2256	0	2662	2256	2399	0	4386	2563	0	4399
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	8.5	0.0	0.0	8.4	8.4	0.0	6.1	7.7	0.0	6.4
Incr Delay (d2), s/veh	0.0	0.0	0.7	0.0	0.0	0.6	0.0	0.0	0.6	0.0	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.8	0.0	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	9.2	0.0	0.0	8.9	8.4	0.0	6.7	7.7	0.0	7.2
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		148			130			375			438	
Approach Delay, s/veh		9.2			8.9			6.7			7.2	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		11.0		15.1		11.0		15.1				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		37.1		63.1		37.1		63.1				
Max Q Clear Time (g_c+I1), s		4.1		7.0		3.8		7.1				
Green Ext Time (p_c), s		0.5		3.2		0.4		2.6				
Intersection Summary												
HCM 6th Ctrl Delay			7.5									
HCM 6th LOS			A									

Intersection												
Int Delay, s/veh	6.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	30	36	24	83	65	16	21	17	31	12	18	46
Future Vol, veh/h	30	36	24	83	65	16	21	17	31	12	18	46
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	35	42	28	98	76	19	25	20	36	14	21	54

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	95	0	0	70	0	0	445	417	56	436	422	86
Stage 1	-	-	-	-	-	-	126	126	-	282	282	-
Stage 2	-	-	-	-	-	-	319	291	-	154	140	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1499	-	-	1531	-	-	523	527	1011	531	523	973
Stage 1	-	-	-	-	-	-	878	792	-	725	678	-
Stage 2	-	-	-	-	-	-	693	672	-	848	781	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1499	-	-	1531	-	-	445	480	1011	461	476	973
Mov Cap-2 Maneuver	-	-	-	-	-	-	445	480	-	461	476	-
Stage 1	-	-	-	-	-	-	857	773	-	708	632	-
Stage 2	-	-	-	-	-	-	590	626	-	777	762	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.5			3.8			11.8			11.1		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	609	1499	-	-	1531	-	-	684
HCM Lane V/C Ratio	0.133	0.024	-	-	0.064	-	-	0.131
HCM Control Delay (s)	11.8	7.5	0	-	7.5	0	-	11.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0.2	-	-	0.4

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	21	48	3	49	123	5	23	24	70	34	34	33
Future Vol, veh/h	21	48	3	49	123	5	23	24	70	34	34	33
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	53	3	54	137	6	26	27	78	38	38	37
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.4	9.2	8.3	8.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	20%	29%	28%	34%
Vol Thru, %	21%	67%	69%	34%
Vol Right, %	60%	4%	3%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	117	72	177	101
LT Vol	23	21	49	34
Through Vol	24	48	123	34
RT Vol	70	3	5	33
Lane Flow Rate	130	80	197	112
Geometry Grp	1	1	1	1
Degree of Util (X)	0.159	0.106	0.252	0.144
Departure Headway (Hd)	4.407	4.756	4.622	4.614
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	812	752	777	777
Service Time	2.441	2.795	2.656	2.649
HCM Lane V/C Ratio	0.16	0.106	0.254	0.144
HCM Control Delay	8.3	8.4	9.2	8.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.4	1	0.5

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑			↑↑↑					↑			↑
Traffic Vol, veh/h	0	991	15	0	965	12	0	0	76	0	0	24
Future Vol, veh/h	0	991	15	0	965	12	0	0	76	0	0	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1077	16	0	1049	13	0	0	83	0	0	26

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	-	-	0	-	-	547	-	-	531
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	412	0	0	422
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	412	-	-	422
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	15.9	14.1
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	412	-	-	-	-	422
HCM Lane V/C Ratio	0.201	-	-	-	-	0.062
HCM Control Delay (s)	15.9	-	-	-	-	14.1
HCM Lane LOS	C	-	-	-	-	B
HCM 95th %tile Q(veh)	0.7	-	-	-	-	0.2

NPMC Howard-Orange Mobility Assessment
 19: 35th St & El Cajon Blvd

Near Term with Project
 Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	915	83	70	796	37	98	70	34	59	46	63
Future Volume (veh/h)	70	915	83	70	796	37	98	70	34	59	46	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	72	943	86	72	821	38	101	72	35	61	47	65
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	93	3112	966	93	3112	966	149	99	40	187	130	328
Arrive On Green	0.05	0.61	0.61	0.05	0.61	0.61	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1781	5106	1585	1781	5106	1585	481	476	194	650	629	1585
Grp Volume(v), veh/h	72	943	86	72	821	38	208	0	0	108	0	65
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1781	1702	1585	1151	0	0	1279	0	1585
Q Serve(g_s), s	4.3	9.6	2.4	4.3	8.1	1.0	12.3	0.0	0.0	0.0	0.0	3.7
Cycle Q Clear(g_c), s	4.3	9.6	2.4	4.3	8.1	1.0	19.8	0.0	0.0	7.5	0.0	3.7
Prop In Lane	1.00		1.00	1.00		1.00	0.49		0.17	0.56		1.00
Lane Grp Cap(c), veh/h	93	3112	966	93	3112	966	288	0	0	317	0	328
V/C Ratio(X)	0.78	0.30	0.09	0.78	0.26	0.04	0.72	0.00	0.00	0.34	0.00	0.20
Avail Cap(c_a), veh/h	233	3112	966	233	3112	966	408	0	0	437	0	456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.6	10.1	8.7	50.6	9.8	8.4	43.5	0.0	0.0	36.7	0.0	35.4
Incr Delay (d2), s/veh	5.2	0.3	0.2	5.2	0.2	0.1	1.6	0.0	0.0	0.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	3.5	0.9	2.0	2.9	0.4	5.6	0.0	0.0	2.5	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.7	10.4	8.9	55.7	10.0	8.5	45.0	0.0	0.0	36.9	0.0	35.5
LnGrp LOS	E	B	A	E	B	A	D	A	A	D	A	D
Approach Vol, veh/h		1101			931			208				173
Approach Delay, s/veh		13.2			13.5			45.0				36.4
Approach LOS		B			B			D				D
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	70.7		27.3	10.0	70.7		27.3				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	14.1	48.6		31.1	14.1	48.6		31.1				
Max Q Clear Time (g_c+I1), s	6.3	10.1		21.8	6.3	11.6		9.5				
Green Ext Time (p_c), s	0.0	4.4		0.5	0.0	5.3		0.5				

Intersection Summary

HCM 6th Ctrl Delay	17.7
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑			↑↑↑					↑			↑
Traffic Vol, veh/h	0	1694	47	0	1056	37	0	0	96	0	0	56
Future Vol, veh/h	0	1694	47	0	1056	37	0	0	96	0	0	56
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1841	51	0	1148	40	0	0	104	0	0	61

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	-	-	0	-	-	946	-	-	594
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	225	0	0	384
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	225	-	-	384
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	34.1	16.1
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	225	-	-	-	-	384
HCM Lane V/C Ratio	0.464	-	-	-	-	0.159
HCM Control Delay (s)	34.1	-	-	-	-	16.1
HCM Lane LOS	D	-	-	-	-	C
HCM 95th %tile Q(veh)	2.3	-	-	-	-	0.6

NPMC Howard-Orange Mobility Assessment
 21: Fairmount Ave & El Cajon Blvd

Near Term with Project
 Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	1483	124	0	887	163	207	388	87	0	0	0
Future Volume (veh/h)	89	1483	124	0	887	163	207	388	87	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1900	1870	1900			
Adj Flow Rate, veh/h	93	1545	129	0	924	170	216	404	91			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	2	2	0	2	2	0	2	0			
Cap, veh/h	117	2443	1090	0	1754	323	241	478	112			
Arrive On Green	0.07	0.69	0.69	0.00	0.59	0.59	0.23	0.23	0.23			
Sat Flow, veh/h	1781	3554	1585	0	3090	551	1046	2072	484			
Grp Volume(v), veh/h	93	1545	129	0	548	546	375	0	336			
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	0	1777	1771	1818	0	1783			
Q Serve(g_s), s	6.2	28.8	3.3	0.0	22.2	22.2	24.0	0.0	21.4			
Cycle Q Clear(g_c), s	6.2	28.8	3.3	0.0	22.2	22.2	24.0	0.0	21.4			
Prop In Lane	1.00		1.00	0.00		0.31	0.58		0.27			
Lane Grp Cap(c), veh/h	117	2443	1090	0	1040	1037	420	0	412			
V/C Ratio(X)	0.80	0.63	0.12	0.00	0.53	0.53	0.89	0.00	0.82			
Avail Cap(c_a), veh/h	232	2443	1090	0	1040	1037	486	0	477			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(l)	1.00	1.00	1.00	0.00	0.91	0.91	0.83	0.00	0.83			
Uniform Delay (d), s/veh	55.3	10.4	6.4	0.0	14.9	14.9	44.7	0.0	43.7			
Incr Delay (d2), s/veh	4.6	1.3	0.2	0.0	1.7	1.7	13.6	0.0	6.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.9	10.7	1.1	0.0	9.2	9.1	12.4	0.0	10.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.9	11.6	6.6	0.0	16.6	16.7	58.4	0.0	50.5			
LnGrp LOS	E	B	A	A	B	B	E	A	D			
Approach Vol, veh/h		1767			1094			711				
Approach Delay, s/veh		13.8			16.7			54.7				
Approach LOS		B			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		87.4			12.3	75.1		32.6				
Change Period (Y+Rc), s		4.9			4.4	4.9		4.9				
Max Green Setting (Gmax), s		78.1			15.6	58.1		32.1				
Max Q Clear Time (g_c+I1), s		30.8			8.2	24.2		26.0				
Green Ext Time (p_c), s		11.8			0.1	5.5		1.7				

Intersection Summary

HCM 6th Ctrl Delay	22.8
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1208	154	88	852	57	140	163	72	71	241	42
Future Volume (veh/h)	40	1208	154	88	852	57	140	163	72	71	241	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	42	1272	162	93	897	60	147	172	76	75	254	44
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	67	1650	209	116	1851	124	232	364	161	266	460	80
Arrive On Green	0.04	0.52	0.52	0.07	0.55	0.55	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1781	3173	402	1781	3380	226	1081	1229	543	1132	1553	269
Grp Volume(v), veh/h	42	710	724	93	471	486	147	0	248	75	0	298
Grp Sat Flow(s),veh/h/ln	1781	1777	1798	1781	1777	1830	1081	0	1773	1132	0	1822
Q Serve(g_s), s	2.8	38.3	38.9	6.2	19.6	19.6	15.9	0.0	13.7	7.0	0.0	16.5
Cycle Q Clear(g_c), s	2.8	38.3	38.9	6.2	19.6	19.6	32.4	0.0	13.7	20.7	0.0	16.5
Prop In Lane	1.00		0.22	1.00		0.12	1.00		0.31	1.00		0.15
Lane Grp Cap(c), veh/h	67	924	935	116	973	1002	232	0	525	266	0	540
V/C Ratio(X)	0.63	0.77	0.77	0.80	0.48	0.48	0.63	0.00	0.47	0.28	0.00	0.55
Avail Cap(c_a), veh/h	105	924	935	150	973	1002	354	0	725	394	0	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.77	1.00	1.00	1.00	0.94	0.00	0.94	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.9	23.0	23.1	55.3	16.7	16.7	49.1	0.0	34.5	43.0	0.0	35.5
Incr Delay (d2), s/veh	2.7	4.7	4.9	15.9	1.7	1.7	1.0	0.0	0.2	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	16.7	17.2	3.3	8.3	8.5	4.3	0.0	6.0	2.0	0.0	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.6	27.8	28.0	71.2	18.4	18.4	50.1	0.0	34.8	43.2	0.0	35.8
LnGrp LOS	E	C	C	E	B	B	D	A	C	D	A	D
Approach Vol, veh/h		1476			1050			395			373	
Approach Delay, s/veh		28.8			23.1			40.5			37.3	
Approach LOS		C			C			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	2.2	67.3		40.5	8.9	70.6		40.5				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	46.6			49.1	7.1	46.6		49.1				
Max Q Clear Time (g_c+1/3), s	40.9			22.7	4.8	21.6		34.4				
Green Ext Time (p_c), s	0.0	4.4		1.3	0.0	7.4		1.2				

Intersection Summary

HCM 6th Ctrl Delay	29.3
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	18	0	106	191	0
Future Vol, veh/h	11	18	0	106	191	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	22	0	129	233	0
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB	EB	
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.6	8	8.6
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	38%	0%
Vol Thru, %	100%	0%	100%
Vol Right, %	0%	62%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	106	29	191
LT Vol	0	11	0
Through Vol	106	0	191
RT Vol	0	18	0
Lane Flow Rate	129	35	233
Geometry Grp	1	1	1
Degree of Util (X)	0.15	0.043	0.265
Departure Headway (Hd)	4.17	4.419	4.092
Convergence, Y/N	Yes	Yes	Yes
Cap	851	815	871
Service Time	2.244	2.419	2.146
HCM Lane V/C Ratio	0.152	0.043	0.268
HCM Control Delay	8	7.6	8.6
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0.1	1.1

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Vol, veh/h	30	22	39	0	0	0	0	505	35	66	271	0
Future Vol, veh/h	30	22	39	0	0	0	0	505	35	66	271	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	31	23	41	0	0	0	0	526	36	69	282	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	683	982	282	-	0	0	562	0	0
Stage 1	420	420	-	-	-	-	-	-	-
Stage 2	263	562	-	-	-	-	-	-	-
Critical Hdwy	6.63	6.53	6.23	-	-	-	4.13	-	-
Critical Hdwy Stg 1	5.43	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.83	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	-	-	-	2.219	-	-
Pot Cap-1 Maneuver	399	248	756	0	-	-	1007	-	0
Stage 1	662	589	-	0	-	-	-	-	0
Stage 2	758	509	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	367	0	756	-	-	-	1007	-	-
Mov Cap-2 Maneuver	367	0	-	-	-	-	-	-	-
Stage 1	608	0	-	-	-	-	-	-	-
Stage 2	758	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.5	0	1.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	518	1007	-
HCM Lane V/C Ratio	-	-	0.183	0.068	-
HCM Control Delay (s)	-	-	13.5	8.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0.2	-

NPMC Howard-Orange Mobility Assessment
 25: Euclid Ave & Polk Ave

Near Term with Project
 Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↕			↕	
Traffic Volume (veh/h)	36	49	55	0	0	0	0	350	19	55	466	0
Future Volume (veh/h)	36	49	55	0	0	0	0	350	19	55	466	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	39	53	59				0	376	20	59	501	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	0				0	2	2	2	2	0
Cap, veh/h	54	74	82				0	832	44	212	795	0
Arrive On Green	0.12	0.12	0.12				0.00	0.47	0.47	0.47	0.47	0.00
Sat Flow, veh/h	446	606	675				0	1760	94	100	1681	0
Grp Volume(v), veh/h	151	0	0				0	0	396	560	0	0
Grp Sat Flow(s),veh/h/ln	1727	0	0				0	0	1854	1781	0	0
Q Serve(g_s), s	2.0	0.0	0.0				0.0	0.0	3.5	0.4	0.0	0.0
Cycle Q Clear(g_c), s	2.0	0.0	0.0				0.0	0.0	3.5	5.5	0.0	0.0
Prop In Lane	0.26		0.39				0.00		0.05	0.11		0.00
Lane Grp Cap(c), veh/h	210	0	0				0	0	877	1007	0	0
V/C Ratio(X)	0.72	0.00	0.00				0.00	0.00	0.45	0.56	0.00	0.00
Avail Cap(c_a), veh/h	2508	0	0				0	0	4226	4096	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00				0.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.2	0.0	0.0				0.0	0.0	4.3	4.8	0.0	0.0
Incr Delay (d2), s/veh	1.7	0.0	0.0				0.0	0.0	0.3	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0				0.0	0.0	0.4	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.0	0.0	0.0				0.0	0.0	4.6	5.2	0.0	0.0
LnGrp LOS	B	A	A				A	A	A	A	A	A
Approach Vol, veh/h		151						396			560	
Approach Delay, s/veh		12.0						4.6			5.2	
Approach LOS		B						A			A	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		16.3		7.8				16.3				
Change Period (Y+Rc), s		4.9		4.9				4.9				
Max Green Setting (Gmax), s		55.1		35.1				55.1				
Max Q Clear Time (g_c+l1), s		5.5		4.0				7.5				
Green Ext Time (p_c), s		2.4		0.6				3.9				
Intersection Summary												
HCM 6th Ctrl Delay			5.9									
HCM 6th LOS			A									

Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕						↔			↕	
Traffic Vol, veh/h	12	105	17	0	0	0	0	70	18	11	90	0
Future Vol, veh/h	12	105	17	0	0	0	0	70	18	11	90	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	130	21	0	0	0	0	86	22	14	111	0

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	236	247	111	-	0	0	108	0	0
Stage 1	139	139	-	-	-	-	-	-	-
Stage 2	97	108	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	-	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	752	655	942	0	-	-	1483	-	0
Stage 1	888	782	-	0	-	-	-	-	0
Stage 2	927	806	-	0	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	744	0	942	-	-	-	1483	-	-
Mov Cap-2 Maneuver	744	0	-	-	-	-	-	-	-
Stage 1	879	0	-	-	-	-	-	-	-
Stage 2	927	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.3	0	0.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	SBL	SBT
Capacity (veh/h)	-	-	849	1483	-
HCM Lane V/C Ratio	-	-	0.195	0.009	-
HCM Control Delay (s)	-	-	10.3	7.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	601	33	30	706	23	55	32	23	188	81	36
Future Volume (veh/h)	25	601	33	30	706	23	55	32	23	188	81	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	613	34	31	720	23	56	33	23	192	83	37
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	380	1104	61	443	1134	36	225	128	71	300	98	42
Arrive On Green	0.63	0.63	0.63	0.63	0.63	0.63	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	717	1755	97	784	1802	58	642	563	312	947	434	186
Grp Volume(v), veh/h	26	0	647	31	0	743	112	0	0	312	0	0
Grp Sat Flow(s),veh/h/ln	717	0	1853	784	0	1860	1517	0	0	1567	0	0
Q Serve(g_s), s	1.6	0.0	13.5	1.6	0.0	16.8	0.0	0.0	0.0	9.1	0.0	0.0
Cycle Q Clear(g_c), s	18.4	0.0	13.5	15.1	0.0	16.8	3.8	0.0	0.0	12.9	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.03	0.50		0.21	0.62		0.12
Lane Grp Cap(c), veh/h	380	0	1166	443	0	1170	423	0	0	441	0	0
V/C Ratio(X)	0.07	0.00	0.56	0.07	0.00	0.64	0.26	0.00	0.00	0.71	0.00	0.00
Avail Cap(c_a), veh/h	380	0	1166	443	0	1170	503	0	0	521	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.5	0.0	7.2	11.5	0.0	7.8	21.7	0.0	0.0	25.0	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	1.9	0.3	0.0	2.6	0.1	0.0	0.0	2.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	4.7	0.3	0.0	6.0	1.4	0.0	0.0	4.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.8	0.0	9.1	11.8	0.0	10.4	21.9	0.0	0.0	27.6	0.0	0.0
LnGrp LOS	B	A	A	B	A	B	C	A	A	C	A	A
Approach Vol, veh/h		673			774			112				312
Approach Delay, s/veh		9.3			10.5			21.9				27.6
Approach LOS		A			B			C				C
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		47.7		20.3		47.7		20.3				
Change Period (Y+Rc), s		4.9		4.9		4.9		4.9				
Max Green Setting (Gmax), s		39.1		19.1		39.1		19.1				
Max Q Clear Time (g_c+I1), s		20.4		14.9		18.8		5.8				
Green Ext Time (p_c), s		5.9		0.5		8.0		0.3				
Intersection Summary												
HCM 6th Ctrl Delay				13.6								
HCM 6th LOS				B								



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	860	116	106	635	91	191	375	91	195	183	16
Future Volume (veh/h)	97	860	116	106	635	91	191	375	91	195	183	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	101	896	121	110	661	95	199	391	95	203	191	17
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	127	1002	135	381	1454	209	230	505	121	195	267	24
Arrive On Green	0.07	0.32	0.32	0.21	0.47	0.47	0.13	0.18	0.18	0.11	0.16	0.16
Sat Flow, veh/h	1781	3146	425	1781	3119	448	1781	2841	683	1781	1693	151
Grp Volume(v), veh/h	101	506	511	110	376	380	199	243	243	203	0	208
Grp Sat Flow(s),veh/h/ln	1781	1777	1794	1781	1777	1790	1781	1777	1747	1781	0	1843
Q Serve(g_s), s	5.9	28.8	28.8	5.5	15.2	15.2	11.6	13.8	14.1	11.6	0.0	11.4
Cycle Q Clear(g_c), s	5.9	28.8	28.8	5.5	15.2	15.2	11.6	13.8	14.1	11.6	0.0	11.4
Prop In Lane	1.00		0.24	1.00		0.25	1.00		0.39	1.00		0.08
Lane Grp Cap(c), veh/h	127	566	571	381	828	834	230	316	311	195	0	291
V/C Ratio(X)	0.79	0.89	0.89	0.29	0.45	0.46	0.86	0.77	0.78	1.04	0.00	0.72
Avail Cap(c_a), veh/h	229	588	594	381	828	834	329	521	513	195	0	402
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.5	34.4	34.4	34.9	19.2	19.2	45.2	41.5	41.6	47.2	0.0	42.4
Incr Delay (d2), s/veh	4.2	19.2	19.0	0.2	1.8	1.8	11.4	4.3	4.7	75.7	0.0	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	15.2	15.3	2.4	6.5	6.6	5.8	6.4	6.4	9.2	0.0	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.7	53.6	53.5	35.0	21.0	21.0	56.6	45.8	46.3	122.9	0.0	46.6
LnGrp LOS	D	D	D	D	C	C	E	D	D	F	A	D
Approach Vol, veh/h		1118			866			685			411	
Approach Delay, s/veh		53.4			22.8			49.1			84.3	
Approach LOS		D			C			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	37.6	38.7	18.1	21.6	12.0	54.3	16.0	23.7				
Change Period (Y+Rc), s	4.9	* 4.9	4.4	4.9	4.4	4.9	4.4	4.9				
Max Green Setting (Gmax), s	30.6	* 35	19.6	23.1	13.6	31.1	11.6	31.1				
Max Q Clear Time (g_c+1), s	30.8	30.8	13.6	13.4	7.9	17.2	13.6	16.1				
Green Ext Time (p_c), s	0.0	3.0	0.1	0.8	0.1	5.3	0.0	2.8				

Intersection Summary

HCM 6th Ctrl Delay	48.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	71	795	87	203	783	54	85	237	205	89	413	39
Future Volume (veh/h)	71	795	87	203	783	54	85	237	205	89	413	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	76	855	94	218	842	58	91	255	220	96	444	42
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	412	1285	141	252	1021	70	133	287	248	120	521	49
Arrive On Green	0.23	0.40	0.40	0.14	0.30	0.30	0.31	0.31	0.31	0.31	0.31	0.31
Sat Flow, veh/h	1781	3228	355	1781	3373	232	910	927	800	919	1683	159
Grp Volume(v), veh/h	76	471	478	218	444	456	91	0	475	96	0	486
Grp Sat Flow(s),veh/h/ln	1781	1777	1806	1781	1777	1829	910	0	1726	919	0	1842
Q Serve(g_s), s	3.2	20.4	20.4	11.3	21.8	21.8	5.8	0.0	24.6	4.5	0.0	23.3
Cycle Q Clear(g_c), s	3.2	20.4	20.4	11.3	21.8	21.8	29.1	0.0	24.6	29.1	0.0	23.3
Prop In Lane	1.00		0.20	1.00		0.13	1.00		0.46	1.00		0.09
Lane Grp Cap(c), veh/h	412	707	719	252	538	553	133	0	534	120	0	570
V/C Ratio(X)	0.18	0.67	0.67	0.87	0.82	0.82	0.68	0.00	0.89	0.80	0.00	0.85
Avail Cap(c_a), veh/h	412	707	719	296	758	780	133	0	534	120	0	570
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.76	0.00	0.76
Uniform Delay (d), s/veh	29.0	23.2	23.2	39.5	30.5	30.5	45.2	0.0	30.9	46.0	0.0	30.4
Incr Delay (d2), s/veh	0.1	4.9	4.8	18.3	13.4	13.1	13.0	0.0	16.6	25.4	0.0	9.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	9.2	9.3	6.1	11.1	11.3	2.6	0.0	12.4	3.1	0.0	11.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.1	28.1	28.0	57.8	43.9	43.6	58.2	0.0	47.5	71.3	0.0	40.1
LnGrp LOS	C	C	C	E	D	D	E	A	D	E	A	D
Approach Vol, veh/h		1025			1118			566				582
Approach Delay, s/veh		28.1			46.5			49.2				45.2
Approach LOS		C			D			D				D
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.7	42.3		34.0	26.6	33.4		34.0				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.9	* 4.9		4.9				
Max Green Setting (Gmax), s	15.6	35.1		29.1	10.6	* 40		29.1				
Max Q Clear Time (g_c+1/3), s	11.3	22.4		31.1	5.2	23.8		31.1				
Green Ext Time (p_c), s	0.1	5.9		0.0	0.0	4.6		0.0				

Intersection Summary

HCM 6th Ctrl Delay	41.0
HCM 6th LOS	D

Notes

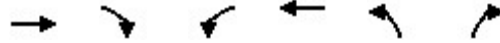
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	1.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑	
Traffic Vol, veh/h	34	1060	956	22	14	109
Future Vol, veh/h	34	1060	956	22	14	109
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	185	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	99	99	99	99	99	99
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	34	1071	966	22	14	110

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	988	0	-	0	1581 494
Stage 1	-	-	-	-	977 -
Stage 2	-	-	-	-	604 -
Critical Hdwy	4.14	-	-	-	6.84 6.94
Critical Hdwy Stg 1	-	-	-	-	5.84 -
Critical Hdwy Stg 2	-	-	-	-	5.84 -
Follow-up Hdwy	2.22	-	-	-	3.52 3.32
Pot Cap-1 Maneuver	695	-	-	-	100 521
Stage 1	-	-	-	-	325 -
Stage 2	-	-	-	-	508 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	695	-	-	-	88 521
Mov Cap-2 Maneuver	-	-	-	-	88 -
Stage 1	-	-	-	-	286 -
Stage 2	-	-	-	-	508 -

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	22
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	695	-	-	-	334
HCM Lane V/C Ratio	0.049	-	-	-	0.372
HCM Control Delay (s)	10.4	0.6	-	-	22
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0.2	-	-	-	1.7



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	
Traffic Volume (veh/h)	1496	81	25	1029	62	54
Future Volume (veh/h)	1496	81	25	1029	62	54
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1900	1900
Adj Flow Rate, veh/h	1626	88	27	1118	67	59
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	0	0
Cap, veh/h	2857	154	249	2960	81	72
Arrive On Green	0.83	0.83	0.83	0.83	0.09	0.09
Sat Flow, veh/h	3523	185	285	3647	889	783
Grp Volume(v), veh/h	838	876	27	1118	127	0
Grp Sat Flow(s),veh/h/ln	1777	1837	285	1777	1685	0
Q Serve(g_s), s	19.4	19.8	4.3	10.0	9.6	0.0
Cycle Q Clear(g_c), s	19.4	19.8	24.1	10.0	9.6	0.0
Prop In Lane		0.10	1.00		0.53	0.46
Lane Grp Cap(c), veh/h	1480	1530	249	2960	154	0
V/C Ratio(X)	0.57	0.57	0.11	0.38	0.82	0.00
Avail Cap(c_a), veh/h	1480	1530	249	2960	830	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.81	0.81	1.00	0.00
Uniform Delay (d), s/veh	3.4	3.5	7.3	2.6	58.0	0.0
Incr Delay (d2), s/veh	1.1	1.1	0.2	0.1	10.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	5.8	0.3	2.6	4.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	4.5	4.6	7.5	2.7	68.4	0.0
LnGrp LOS	A	A	A	A	E	A
Approach Vol, veh/h	1714			1145	127	
Approach Delay, s/veh	4.6			2.8	68.4	
Approach LOS	A			A	E	
Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		113.2			113.2	16.8
Change Period (Y+Rc), s		4.9			4.9	4.9
Max Green Setting (Gmax), s		56.2			56.2	64.0
Max Q Clear Time (g_c+I1), s		21.8			26.1	11.6
Green Ext Time (p_c), s		18.2			10.8	0.4
Intersection Summary						
HCM 6th Ctrl Delay			6.6			
HCM 6th LOS			A			

Intersection				
Intersection Delay, s/veh	3.6			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	106	134	91	81
Demand Flow Rate, veh/h	109	137	92	83
Vehicles Circulating, veh/h	71	56	114	64
Vehicles Exiting, veh/h	76	150	66	129
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	3.6	3.7	3.6	3.4
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	109	137	92	83
Cap Entry Lane, veh/h	1283	1303	1228	1293
Entry HV Adj Factor	0.974	0.982	0.988	0.973
Flow Entry, veh/h	106	134	91	81
Cap Entry, veh/h	1250	1279	1213	1258
V/C Ratio	0.085	0.105	0.075	0.064
Control Delay, s/veh	3.6	3.7	3.6	3.4
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	0

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑				↑			↑
Traffic Vol, veh/h	0	450	14	0	1423	28	0	0	67	0	0	11
Future Vol, veh/h	0	450	14	0	1423	28	0	0	67	0	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	489	15	0	1547	30	0	0	73	0	0	12

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	-	-	0	-	-	252	-	-	789
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	748	0	0	333
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	748	-	-	333
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	10.3	16.2
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	748	-	-	-	-	333
HCM Lane V/C Ratio	0.097	-	-	-	-	0.036
HCM Control Delay (s)	10.3	-	-	-	-	16.2
HCM Lane LOS	B	-	-	-	-	C
HCM 95th %tile Q(veh)	0.3	-	-	-	-	0.1

NPMC Howard-Orange Mobility Assessment
19: 35th St & El Cajon Blvd

Near-Term with Project & Bus Only Lane

Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	468	32	20	1132	76	195	116	17	51	42	84
Future Volume (veh/h)	17	468	32	20	1132	76	195	116	17	51	42	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	482	33	21	1167	78	201	120	18	53	43	87
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	28	2002	893	31	2008	896	258	125	19	257	194	456
Arrive On Green	0.02	0.56	0.56	0.02	0.57	0.57	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	712	435	64	712	675	1585
Grp Volume(v), veh/h	18	482	33	21	1167	78	339	0	0	96	0	87
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1212	0	0	1387	0	1585
Q Serve(g_s), s	1.1	7.4	1.0	1.3	23.0	2.4	24.9	0.0	0.0	0.0	0.0	4.5
Cycle Q Clear(g_c), s	1.1	7.4	1.0	1.3	23.0	2.4	30.1	0.0	0.0	5.2	0.0	4.5
Prop In Lane	1.00		1.00	1.00		1.00	0.59		0.05	0.55		1.00
Lane Grp Cap(c), veh/h	28	2002	893	31	2008	896	402	0	0	451	0	456
V/C Ratio(X)	0.65	0.24	0.04	0.68	0.58	0.09	0.84	0.00	0.00	0.21	0.00	0.19
Avail Cap(c_a), veh/h	233	2002	893	233	2008	896	402	0	0	451	0	456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.94	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.9	11.9	10.5	52.8	15.2	10.7	40.5	0.0	0.0	29.1	0.0	29.0
Incr Delay (d2), s/veh	9.4	0.3	0.1	9.4	1.2	0.2	13.5	0.0	0.0	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.9	0.4	0.6	9.2	0.9	10.4	0.0	0.0	1.9	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.2	12.2	10.6	62.2	16.4	10.9	54.1	0.0	0.0	29.2	0.0	29.0
LnGrp LOS	E	B	B	E	B	B	D	A	A	C	A	C
Approach Vol, veh/h		533			1266			339				183
Approach Delay, s/veh		13.8			16.9			54.1				29.1
Approach LOS		B			B			D				C
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.1	65.9		36.0	6.3	65.7		36.0				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	14.1	48.6		31.1	14.1	48.6		31.1				
Max Q Clear Time (g_c+I1), s	3.1	25.0		32.1	3.3	9.4		7.2				
Green Ext Time (p_c), s	0.0	6.6		0.0	0.0	2.4		0.5				

Intersection Summary

HCM 6th Ctrl Delay	22.6
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑			↑↑↑					↑			↑
Traffic Vol, veh/h	0	1054	20	0	1608	40	0	0	152	0	0	75
Future Vol, veh/h	0	1054	20	0	1608	40	0	0	152	0	0	75
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1146	22	0	1748	43	0	0	165	0	0	82

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	-	-	0	-	-	584	-	-	896
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.14	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.92	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	390	0	0	243
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	390	-	-	243
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	20.8	27.1
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	390	-	-	-	-	243
HCM Lane V/C Ratio	0.424	-	-	-	-	0.335
HCM Control Delay (s)	20.8	-	-	-	-	27.1
HCM Lane LOS	C	-	-	-	-	D
HCM 95th %tile Q(veh)	2.1	-	-	-	-	1.4

NPMC Howard-Orange Mobility Assessment
21: Fairmount Ave & El Cajon Blvd

Near-Term with Project & Bus Only Lane

Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	793	52	0	1373	359	139	831	42	0	0	0
Future Volume (veh/h)	230	793	52	0	1373	359	139	831	42	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1900	1870	1900			
Adj Flow Rate, veh/h	240	826	54	0	1430	374	145	866	44			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	2	2	0	2	2	0	2	0			
Cap, veh/h	214	2354	1050	0	1428	362	127	798	42			
Arrive On Green	0.12	0.66	0.66	0.00	0.51	0.51	0.26	0.26	0.26			
Sat Flow, veh/h	1781	3554	1585	0	2902	711	484	3042	161			
Grp Volume(v), veh/h	240	826	54	0	888	916	553	0	502			
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	0	1777	1742	1846	0	1841			
Q Serve(g_s), s	15.6	13.3	1.5	0.0	63.8	66.1	34.1	0.0	34.1			
Cycle Q Clear(g_c), s	15.6	13.3	1.5	0.0	63.8	66.1	34.1	0.0	34.1			
Prop In Lane	1.00		1.00	0.00		0.41	0.26		0.09			
Lane Grp Cap(c), veh/h	214	2354	1050	0	903	886	484	0	483			
V/C Ratio(X)	1.12	0.35	0.05	0.00	0.98	1.03	1.14	0.00	1.04			
Avail Cap(c_a), veh/h	214	2354	1050	0	903	886	484	0	483			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	57.2	9.7	7.7	0.0	31.4	32.0	48.0	0.0	48.0			
Incr Delay (d2), s/veh	98.5	0.0	0.0	0.0	25.6	39.4	86.1	0.0	51.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	12.9	5.0	0.5	0.0	32.8	36.5	27.2	0.0	22.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	155.7	9.7	7.7	0.0	56.9	71.4	134.1	0.0	99.5			
LnGrp LOS	F	A	A	A	E	F	F	A	F			
Approach Vol, veh/h		1120			1804			1055				
Approach Delay, s/veh		40.9			64.3			117.6				
Approach LOS		D			E			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		91.0			20.0	71.0		39.0				
Change Period (Y+Rc), s		4.9			4.4	4.9		4.9				
Max Green Setting (Gmax), s		86.1			15.6	66.1		34.1				
Max Q Clear Time (g_c+I1), s		15.3			17.6	68.1		36.1				
Green Ext Time (p_c), s		4.5			0.0	0.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	71.8
HCM 6th LOS	E

Notes

User approved ignoring U-Turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	636	58	71	1264	111	280	190	44	34	90	51
Future Volume (veh/h)	34	636	58	71	1264	111	280	190	44	34	90	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	36	669	61	75	1331	117	295	200	46	36	95	54
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	62	1667	152	96	1735	152	381	473	109	304	360	205
Arrive On Green	0.03	0.51	0.51	0.05	0.52	0.52	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1781	3293	300	1781	3306	290	1239	1471	338	1134	1119	636
Grp Volume(v), veh/h	36	361	369	75	713	735	295	0	246	36	0	149
Grp Sat Flow(s),veh/h/ln	1781	1777	1816	1781	1777	1818	1239	0	1809	1134	0	1756
Q Serve(g_s), s	2.4	15.1	15.1	5.0	38.2	38.7	27.8	0.0	12.8	3.1	0.0	7.5
Cycle Q Clear(g_c), s	2.4	15.1	15.1	5.0	38.2	38.7	35.4	0.0	12.8	15.9	0.0	7.5
Prop In Lane	1.00		0.17	1.00		0.16	1.00		0.19	1.00		0.36
Lane Grp Cap(c), veh/h	62	900	920	96	933	954	381	0	582	304	0	565
V/C Ratio(X)	0.58	0.40	0.40	0.79	0.76	0.77	0.77	0.00	0.42	0.12	0.00	0.26
Avail Cap(c_a), veh/h	105	900	920	150	933	954	489	0	740	403	0	718
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	0.98	1.00	1.00	1.00	0.93	0.00	0.93	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.0	18.4	18.4	56.1	22.6	22.7	43.3	0.0	31.9	38.2	0.0	30.2
Incr Delay (d2), s/veh	3.1	1.3	1.3	5.3	5.9	6.0	3.9	0.0	0.2	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	6.5	6.6	2.4	17.0	17.6	8.9	0.0	5.6	0.9	0.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.1	19.7	19.6	61.4	28.6	28.7	47.2	0.0	32.1	38.2	0.0	30.2
LnGrp LOS	E	B	B	E	C	C	D	A	C	D	A	C
Approach Vol, veh/h		766		1523		541		185				
Approach Delay, s/veh		21.6		30.2		40.3		31.8				
Approach LOS		C		C		D		C				
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.8	65.7		43.5	8.6	67.9		43.5				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	10.8	46.6		49.1	7.1	46.6		49.1				
Max Q Clear Time (g_c+1T), s	17.1	17.1		17.9	4.4	40.7		37.4				
Green Ext Time (p_c), s	0.0	5.9		0.6	0.0	4.4		1.3				
Intersection Summary												
HCM 6th Ctrl Delay				29.9								
HCM 6th LOS				C								



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	
Traffic Volume (veh/h)	597	27	25	1377	110	33
Future Volume (veh/h)	597	27	25	1377	110	33
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1900	1900
Adj Flow Rate, veh/h	649	29	27	1497	120	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	0	0
Cap, veh/h	2831	126	645	2903	143	43
Arrive On Green	0.82	0.82	0.82	0.82	0.11	0.11
Sat Flow, veh/h	3558	155	762	3647	1324	397
Grp Volume(v), veh/h	333	345	27	1497	157	0
Grp Sat Flow(s),veh/h/ln	1777	1843	762	1777	1733	0
Q Serve(g_s), s	5.5	5.5	1.1	17.3	11.6	0.0
Cycle Q Clear(g_c), s	5.5	5.5	6.6	17.3	11.6	0.0
Prop In Lane		0.08	1.00		0.76	0.23
Lane Grp Cap(c), veh/h	1452	1505	645	2903	186	0
V/C Ratio(X)	0.23	0.23	0.04	0.52	0.84	0.00
Avail Cap(c_a), veh/h	1452	1505	645	2903	853	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.56	0.56	1.00	0.00
Uniform Delay (d), s/veh	2.7	2.7	3.4	3.8	56.9	0.0
Incr Delay (d2), s/veh	0.3	0.3	0.0	0.1	9.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	1.7	0.1	4.8	5.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	3.0	3.0	3.4	3.9	66.7	0.0
LnGrp LOS	A	A	A	A	E	A
Approach Vol, veh/h	678			1524	157	
Approach Delay, s/veh	3.0			3.8	66.7	
Approach LOS	A			A	E	
Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		111.1			111.1	18.9
Change Period (Y+Rc), s		4.9			4.9	4.9
Max Green Setting (Gmax), s		56.2			56.2	64.0
Max Q Clear Time (g_c+I1), s		7.5			19.3	13.6
Green Ext Time (p_c), s		4.8			16.5	0.5
Intersection Summary						
HCM 6th Ctrl Delay			7.8			
HCM 6th LOS			A			

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑				↑			↑
Traffic Vol, veh/h	0	991	15	0	965	12	0	0	76	0	0	24
Future Vol, veh/h	0	991	15	0	965	12	0	0	76	0	0	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1077	16	0	1049	13	0	0	83	0	0	26

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	-	-	0	-	-	547	-	-	531
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	481	0	0	493
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	481	-	-	493
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	14	12.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	481	-	-	-	-	493
HCM Lane V/C Ratio	0.172	-	-	-	-	0.053
HCM Control Delay (s)	14	-	-	-	-	12.7
HCM Lane LOS	B	-	-	-	-	B
HCM 95th %tile Q(veh)	0.6	-	-	-	-	0.2

NPMC Howard-Orange Mobility Assessment
19: 35th St & El Cajon Blvd

Near Term with Project & Bus Only Lane

Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	915	83	70	796	37	98	70	34	59	46	63
Future Volume (veh/h)	70	915	83	70	796	37	98	70	34	59	46	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	72	943	86	72	821	38	101	72	35	61	47	65
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	93	2166	966	93	2166	966	149	99	40	187	130	328
Arrive On Green	0.05	0.61	0.61	0.05	0.61	0.61	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	481	476	194	650	629	1585
Grp Volume(v), veh/h	72	943	86	72	821	38	208	0	0	108	0	65
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1151	0	0	1279	0	1585
Q Serve(g_s), s	4.3	15.2	2.4	4.3	12.7	1.0	12.3	0.0	0.0	0.0	0.0	3.7
Cycle Q Clear(g_c), s	4.3	15.2	2.4	4.3	12.7	1.0	19.8	0.0	0.0	7.5	0.0	3.7
Prop In Lane	1.00		1.00	1.00		1.00	0.49		0.17	0.56		1.00
Lane Grp Cap(c), veh/h	93	2166	966	93	2166	966	288	0	0	317	0	328
V/C Ratio(X)	0.78	0.44	0.09	0.78	0.38	0.04	0.72	0.00	0.00	0.34	0.00	0.20
Avail Cap(c_a), veh/h	233	2166	966	233	2166	966	408	0	0	437	0	456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.6	11.2	8.7	50.6	10.7	8.4	43.5	0.0	0.0	36.7	0.0	35.4
Incr Delay (d2), s/veh	5.2	0.6	0.2	5.2	0.5	0.1	1.5	0.0	0.0	0.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	5.9	0.9	2.0	4.9	0.4	5.6	0.0	0.0	2.5	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.7	11.9	8.9	55.7	11.2	8.5	45.0	0.0	0.0	36.9	0.0	35.5
LnGrp LOS	E	B	A	E	B	A	D	A	A	D	A	D
Approach Vol, veh/h		1101			931			208				173
Approach Delay, s/veh		14.5			14.6			45.0				36.4
Approach LOS		B			B			D				D
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	70.7		27.3	10.0	70.7		27.3				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	14.1	48.6		31.1	14.1	48.6		31.1				
Max Q Clear Time (g_c+I1), s	6.3	14.7		21.8	6.3	17.2		9.5				
Green Ext Time (p_c), s	0.0	4.4		0.5	0.0	5.3		0.5				

Intersection Summary

HCM 6th Ctrl Delay	18.7
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↓			↑↓				↑			↑
Traffic Vol, veh/h	0	1694	47	0	1056	37	0	0	106	0	0	56
Future Vol, veh/h	0	1694	47	0	1056	37	0	0	106	0	0	56
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1841	51	0	1148	40	0	0	115	0	0	61

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	-	0	0	-	-	0	-	-	946	-	-	594
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	262	0	0	448
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	262	-	-	448
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	29.1	14.3
HCM LOS			D	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	262	-	-	-	-	448
HCM Lane V/C Ratio	0.44	-	-	-	-	0.136
HCM Control Delay (s)	29.1	-	-	-	-	14.3
HCM Lane LOS	D	-	-	-	-	B
HCM 95th %tile Q(veh)	2.1	-	-	-	-	0.5

NPMC Howard-Orange Mobility Assessment
21: Fairmount Ave & El Cajon Blvd

Near Term with Project & Bus Only Lane

Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	1493	124	0	887	163	207	388	77	0	0	0
Future Volume (veh/h)	89	1493	124	0	887	163	207	388	77	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1900	1870	1900			
Adj Flow Rate, veh/h	93	1555	129	0	924	170	216	404	80			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96			
Percent Heavy Veh, %	2	2	2	0	2	2	0	2	0			
Cap, veh/h	117	2455	1095	0	1764	324	242	481	99			
Arrive On Green	0.07	0.69	0.69	0.00	0.59	0.59	0.23	0.23	0.23			
Sat Flow, veh/h	1781	3554	1585	0	3090	551	1065	2112	433			
Grp Volume(v), veh/h	93	1555	129	0	548	546	369	0	331			
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	0	1777	1771	1817	0	1792			
Q Serve(g_s), s	6.2	28.9	3.3	0.0	22.0	22.0	23.6	0.0	21.0			
Cycle Q Clear(g_c), s	6.2	28.9	3.3	0.0	22.0	22.0	23.6	0.0	21.0			
Prop In Lane	1.00		1.00	0.00		0.31	0.59		0.24			
Lane Grp Cap(c), veh/h	117	2455	1095	0	1046	1042	414	0	408			
V/C Ratio(X)	0.80	0.63	0.12	0.00	0.52	0.52	0.89	0.00	0.81			
Avail Cap(c_a), veh/h	232	2455	1095	0	1046	1042	486	0	479			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	1.00	0.00	0.91	0.91	0.83	0.00	0.83			
Uniform Delay (d), s/veh	55.3	10.2	6.2	0.0	14.7	14.7	44.9	0.0	43.9			
Incr Delay (d2), s/veh	4.6	1.3	0.2	0.0	1.7	1.7	13.0	0.0	6.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.9	10.7	1.1	0.0	9.1	9.0	12.1	0.0	10.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.9	11.5	6.5	0.0	16.4	16.4	57.9	0.0	50.3			
LnGrp LOS	E	B	A	A	B	B	E	A	D			
Approach Vol, veh/h		1777			1094			700				
Approach Delay, s/veh		13.6			16.4			54.3				
Approach LOS		B			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		87.8			12.3	75.5		32.2				
Change Period (Y+Rc), s		4.9			4.4	4.9		4.9				
Max Green Setting (Gmax), s		78.1			15.6	58.1		32.1				
Max Q Clear Time (g_c+I1), s		30.9			8.2	24.0		25.6				
Green Ext Time (p_c), s		12.0			0.1	5.5		1.7				

Intersection Summary

HCM 6th Ctrl Delay	22.5
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

NPMC Howard-Orange Mobility Assessment
 22: Euclid Ave & El Cajon Blvd

Near Term with Project & Bus Only Lane

Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1208	154	88	852	57	140	163	72	71	241	42
Future Volume (veh/h)	40	1208	154	88	852	57	140	163	72	71	241	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No		No		No		No		No		No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	42	1272	162	93	897	60	147	172	76	75	254	44
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	67	1650	209	116	1851	124	232	364	161	266	460	80
Arrive On Green	0.04	0.52	0.52	0.07	0.55	0.55	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1781	3173	402	1781	3380	226	1081	1229	543	1132	1553	269
Grp Volume(v), veh/h	42	710	724	93	471	486	147	0	248	75	0	298
Grp Sat Flow(s),veh/h/ln	1781	1777	1798	1781	1777	1830	1081	0	1773	1132	0	1822
Q Serve(g_s), s	2.8	38.3	38.9	6.2	19.6	19.6	15.9	0.0	13.7	7.0	0.0	16.5
Cycle Q Clear(g_c), s	2.8	38.3	38.9	6.2	19.6	19.6	32.4	0.0	13.7	20.7	0.0	16.5
Prop In Lane	1.00		0.22	1.00		0.12	1.00		0.31	1.00		0.15
Lane Grp Cap(c), veh/h	67	924	935	116	973	1002	232	0	525	266	0	540
V/C Ratio(X)	0.63	0.77	0.77	0.80	0.48	0.48	0.63	0.00	0.47	0.28	0.00	0.55
Avail Cap(c_a), veh/h	105	924	935	150	973	1002	354	0	725	394	0	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.77	1.00	1.00	1.00	0.96	0.00	0.96	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.9	23.0	23.1	55.3	16.7	16.7	49.1	0.0	34.5	43.0	0.0	35.5
Incr Delay (d2), s/veh	2.7	4.7	4.9	15.9	1.7	1.7	1.0	0.0	0.2	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	16.7	17.2	3.3	8.3	8.5	4.3	0.0	6.0	2.0	0.0	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.6	27.8	28.0	71.2	18.4	18.4	50.2	0.0	34.8	43.2	0.0	35.8
LnGrp LOS	E	C	C	E	B	B	D	A	C	D	A	D
Approach Vol, veh/h		1476		1050		395		373				
Approach Delay, s/veh		28.8		23.1		40.5		37.3				
Approach LOS		C		C		D		D				
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	62.2	67.3		40.5	8.9	70.6		40.5				
Change Period (Y+Rc), s	4.4	4.9		4.9	4.4	4.9		4.9				
Max Green Setting (Gmax), s	40.6	46.6		49.1	7.1	46.6		49.1				
Max Q Clear Time (g_c+10), s	40.9	40.9		22.7	4.8	21.6		34.4				
Green Ext Time (p_c), s	0.0	4.4		1.3	0.0	7.4		1.2				
Intersection Summary												
HCM 6th Ctrl Delay				29.3								
HCM 6th LOS				C								



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↵	↑↑	↵	
Traffic Volume (veh/h)	1496	81	25	1029	62	54
Future Volume (veh/h)	1496	81	25	1029	62	54
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1900	1900
Adj Flow Rate, veh/h	1626	88	27	1118	67	59
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	0	0
Cap, veh/h	2857	154	249	2960	81	72
Arrive On Green	0.83	0.83	0.83	0.83	0.09	0.09
Sat Flow, veh/h	3523	185	285	3647	889	783
Grp Volume(v), veh/h	838	876	27	1118	127	0
Grp Sat Flow(s),veh/h/ln	1777	1837	285	1777	1685	0
Q Serve(g_s), s	19.4	19.8	4.3	10.0	9.6	0.0
Cycle Q Clear(g_c), s	19.4	19.8	24.1	10.0	9.6	0.0
Prop In Lane		0.10	1.00		0.53	0.46
Lane Grp Cap(c), veh/h	1480	1530	249	2960	154	0
V/C Ratio(X)	0.57	0.57	0.11	0.38	0.82	0.00
Avail Cap(c_a), veh/h	1480	1530	249	2960	830	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.81	0.81	1.00	0.00
Uniform Delay (d), s/veh	3.4	3.5	7.3	2.6	58.0	0.0
Incr Delay (d2), s/veh	1.1	1.1	0.2	0.1	10.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	5.8	0.3	2.6	4.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	4.5	4.6	7.5	2.7	68.4	0.0
LnGrp LOS	A	A	A	A	E	A
Approach Vol, veh/h	1714			1145	127	
Approach Delay, s/veh	4.6			2.8	68.4	
Approach LOS	A			A	E	
Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		113.2			113.2	16.8
Change Period (Y+Rc), s		4.9			4.9	4.9
Max Green Setting (Gmax), s		56.2			56.2	64.0
Max Q Clear Time (g_c+I1), s		21.8			26.1	11.6
Green Ext Time (p_c), s		18.2			10.8	0.4
Intersection Summary						
HCM 6th Ctrl Delay			6.6			
HCM 6th LOS			A			

APPENDIX E

EL CAJON BOULEVARD PILOT PROJECT ANALYSIS

APPENDIX E

The City of San Diego, SANDAG, and MTS are currently considering implementation of a transit-only lane pilot project along segments of El Cajon Boulevard. This project is currently in the planning phase and, if implemented, will reduce the number of general purpose travel lanes on eastbound and westbound El Cajon Boulevard to provide space for a transit-only lane west of 43rd Street. At this time, it is assumed that traffic volumes on the corridor would not change with the implementation of the pilot project.

As shown in **Table E-1**, all intersections within the study area would operate at LOS D or better with the addition of the proposed project except for the following intersections:

- El Cajon Boulevard and Fairmount Avenue (LOS E – AM Peak)

The El Cajon Boulevard and Fairmount Avenue intersection is expected to operate at LOS E under Near Term (2022) Plus Project conditions, with or without the transit-only lanes alternative. **Appendix D** contains the intersection LOS calculation worksheets.

Table E-2 displays the roadway segment analysis under the Near Term (2022) Plus Project and Transit-Only Lanes Conditions per City of San Diego guidelines. As shown in the table, all study roadway segments would continue to operate at LOS D or better with the addition of the transit-only lanes on El Cajon Boulevard.

Table E-1
Near Term (2022) Plus Project and El Cajon Blvd Transit-Only Lanes Pilot Project
Intersection Analysis Summary

Intersection		Traffic Control (a)	Peak Hour	Near Term Plus Project and Alternative Conditions	
				Delay (b)	LOS (c)
18	El Cajon Blvd & Swift Ave	TWSC	AM	16.2	C
			PM	12.7	B
19	El Cajon Blvd & 35th St	Signal	AM	22.6	C
			PM	18.7	B
20	El Cajon Blvd & Van Dyke Ave	TWSC	AM	27.1	D
			PM	29.1	D
21	El Cajon Blvd & Fairmount Ave	Signal	AM	71.8	E
			PM	22.5	C
22	El Cajon Blvd & Euclid Ave	Signal	AM	29.9	C
			PM	29.3	C
31	University Ave & 48th St	Signal	AM	7.8	A
			PM	6.6	A

Notes:
Bold values indicate intersections operating at LOS E or F.
 (a) Signal = Traffic Signal, TWSC = Two-Way Stop Control, AWSC = All Way Stop Control.
 (b) Delay refers to the average control delay for the entire intersection measured in seconds per vehicle. At TWSC intersections, delay refers to the worst movement.
 (c) LOS calculations based on methodologies outlined in the 6th Edition HCM and performed using Synchro 10.

APPENDIX E

Table E-2
Near Term (2022) Plus Project and El Cajon Blvd Transit-Only Lanes Pilot Project
Roadway Analysis Summary

Roadway Segment	Roadway Classification (a)	LOS E Capacity	Near Term Plus Project and Alternative Conditions		
			ADT	V/C Ratio (b)	LOS
34th Street to Swift Avenue	4 Lane Major Arterial	40,000	20,650	0.516	B
35th Street to Wilson Avenue	4 Lane Major Arterial	40,000	20,230	0.506	B
Copeland Avenue to Van Dyke Avenue	4 Lane Major Arterial	40,000	28,760	0.719	C
43rd Street to Fairmount Avenue	5 Lane Major Arterial	45,000	29,785	0.662	C
Fairmount Avenue to 44th Street	4 Lane Major Arterial	40,000	29,260	0.732	C
Euclid Avenue to 48th Street	4 Lane Major Arterial	40,000	25,735	0.643	C

APPENDIX F

HISTORICAL COLLISION DATA (2013-2017)

CASE_ID	ACCIDENT_Y	PROC_DATE	JURIS	COLLISION_	COLLISION1	OFFICER_ID	REPORTING_	DAY_OF_WEE	CHP_SHIFT
5910025	2013	1/8/2015	3711	4/9/2013	2002	4897		2	5
5911803	2013	12/20/2013	3711	11/22/2013	1833	5972		5	5
5932855	2013	2/5/2014	3711	3/1/2013	1533	4495		5	5
5976394	2013	3/28/2014	3711	1/2/2013	1605	6744	SD	3	5
5988183	2013	2/10/2014	3711	3/9/2013	2230	6960		6	5
5992304	2013	2/8/2014	3711	3/14/2013	730	6963		4	5
5995629	2013	2/3/2014	3711	2/14/2013	1611	6706	MID C	4	5
5999902	2013	1/18/2014	3711	1/29/2013	1019	6443		2	5
6004119	2013	1/30/2014	3711	2/22/2013	1240	6199		5	5
6004127	2013	1/30/2014	3711	2/22/2013	1918	6391		5	5
6011071	2013	1/30/2014	3711	2/25/2013	1604	6553		1	5
6028814	2013	2/12/2014	3711	4/9/2013	2045	6405		2	5
6033388	2013	2/8/2014	3711	3/25/2013	820	5061		1	5
6044778	2013	4/5/2014	3711	4/13/2013	1000	6224	SD	6	5
6060357	2013	2/13/2014	3711	4/9/2013	1836	4897		2	5
6072290	2013	4/3/2014	3711	5/4/2013	1447	6869		6	5
6082760	2013	2/22/2014	3711	5/26/2013	133	6332		7	5
6082771	2013	2/24/2014	3711	5/24/2013	2023	6120		5	5
6082865	2013	2/25/2014	3711	5/12/2013	2018	4653		7	5
6105349	2013	3/1/2014	3711	6/9/2013	2125	6971		7	5
6116276	2013	3/3/2014	3711	6/14/2013	1145	6483		5	5
6116304	2013	3/3/2014	3711	6/16/2013	1545	6034		7	5
6116362	2013	2/28/2014	3711	6/9/2013	2116	6553		7	5
6119552	2013	3/4/2014	3711	6/27/2013	710	6555		4	5
6120185	2013	3/10/2014	3711	7/1/2013	1934	7009		1	5
6134610	2013	3/13/2014	3711	7/5/2013	1939	6712		5	5
6134612	2013	3/14/2014	3711	7/5/2013	1010	6753		5	5
6173821	2013	3/28/2014	3711	8/14/2013	2021	3792	3711	3	5
6196463	2013	4/11/2014	3711	9/6/2013	2318	6946		5	5
6198499	2013	6/12/2014	3711	9/3/2013	1930	7021		2	5
6203129	2013	4/4/2014	3711	9/16/2013	2118	4576		1	5
6230473	2013	4/15/2014	3711	10/1/2013	1745	7006		2	5
6231433	2013	4/16/2014	3711	9/20/2013	2258	5916		5	5
6233964	2013	4/29/2014	3711	9/30/2013	1949	6603		1	5
6236906	2013	4/24/2014	3711	10/9/2013	1715	7031	SANDI	3	5
6274666	2013	4/19/2014	3711	10/31/2013	750	5964		4	5

CASE_ID	ACCIDENT_Y	PROC_DATE	JURIS	COLLISION_	COLLISION1	OFFICER_ID	REPORTING_	DAY_OF_WEE	CHP_SHIFT
6277573	2013	5/5/2014	3711	11/28/2013	1518	5558		4	5
6317255	2013	5/30/2014	3711	12/13/2013	1340	0		5	5
6318652	2013	5/22/2014	3711	12/31/2013	1440	6332		2	5
6322696	2013	5/27/2014	3711	12/9/2013	1759	4897		1	5
6336188	2013	6/4/2014	3711	12/22/2013	1325	5313		7	5
6338047	2013	1/27/2014	3711	10/21/2013	810	6760		1	5
6342227	2013	5/22/2014	3711	12/30/2013	1619	4897		1	5
8522286	2017	2/21/2018	3711	12/18/2017	1549	7410		1	5
8517106	2017	7/5/2018	3711	12/8/2017	2120	7114 SD		5	5
8509122	2017	6/29/2018	3711	11/30/2017	830	7673		4	5
8506185	2017	12/18/2017	3711	11/19/2017	1344	7082		7	5
8503556	2017	12/8/2017	3711	11/14/2017	1526	7464 SDPD		2	5
8499736	2017	12/7/2017	3711	11/19/2017	751	6774		7	5
8494275	2017	12/14/2017	3711	11/8/2017	330	4576		3	5
7150920	2015	1/14/2016	3711	12/30/2015	1730	7371		3	5
7149399	2015	1/6/2016	3711	12/23/2015	1925	6811 SD		3	5
7145955	2015	1/4/2016	3711	12/15/2015	1215	7368		2	5
7142359	2015	12/29/2015	3711	12/7/2015	1243	7082		1	5
7142231	2015	1/6/2016	3711	12/3/2015	2325	7169		4	5
7142161	2015	12/28/2015	3711	12/12/2015	800	7130		6	5
7141893	2015	12/30/2015	3711	12/18/2015	1813	7165		5	5
7137331	2015	12/23/2015	3711	12/9/2015	830	7341		3	5
7137122	2015	12/17/2015	3711	12/7/2015	1354	7341		1	5
7129032	2015	12/9/2015	3711	11/24/2015	843	7333		2	5
7129020	2015	12/9/2015	3711	11/24/2015	1948	7364 SANDI		2	5
7127696	2015	8/10/2016	3711	11/17/2015	750	6897		2	5
7125117	2015	12/2/2015	3711	11/21/2015	2013	6676 SD		6	5
7124078	2015	12/1/2015	3711	11/11/2015	1721	6000		3	5
7124075	2015	12/1/2015	3711	11/12/2015	1820	6495 SD		4	5
7108618	2015	11/7/2015	3711	10/20/2015	1907	6487 SD		2	5
7106790	2015	10/29/2015	3711	10/14/2015	719	7323		3	5
7106786	2015	10/29/2015	3711	10/14/2015	658	5888		3	5
7103004	2015	10/29/2015	3711	10/7/2015	1637	7330		3	5
7102297	2015	10/26/2015	3711	9/18/2015	653	5838		5	5
7102293	2015	10/26/2015	3711	9/18/2015	654	5838		5	5
7098619	2015	10/21/2015	3711	10/5/2015	1851	6676 SD		1	5

CASE_ID	ACCIDENT_Y	PROC_DATE	JURIS	COLLISION_	COLLISION1	OFFICER_ID	REPORTING_	DAY_OF_WEE	CHP_SHIFT
7098448	2015	11/23/2015	3711	10/8/2015	1156	6795	SANDI	4	5
7088028	2015	10/9/2015	3711	9/17/2015	1738	6487	SD	4	5
7082012	2015	10/17/2015	3711	9/25/2015	2100	3762		5	5
7067048	2015	9/22/2015	3711	9/5/2015	1023	6391		6	5
7060964	2015	10/28/2015	3711	10/9/2015	1936	6487	SD	5	5
7058170	2015	11/24/2015	3711	11/3/2015	1600	6540		2	5
7031722	2015	9/17/2015	3711	8/16/2015	2108	6366		7	5
7010507	2015	8/4/2015	3711	7/26/2015	1847	4653		7	5
7004183	2015	8/7/2015	3711	7/12/2015	1907	6886		7	5
6989719	2015	7/18/2015	3711	7/1/2015	655	7309		3	5
6978554	2015	7/13/2015	3711	6/19/2015	1020	5106		5	5
6975664	2015	7/8/2015	3711	6/23/2015	1433	6896		2	5
6784601	2014	1/29/2015	3711	9/2/2014	1827	6772	SANDI	2	5
6771289	2014	2/19/2015	3711	12/30/2014	1815	6521		2	5
6732672	2014	1/29/2015	3711	12/2/2014	1817	6768		2	5
6731885	2014	2/17/2015	3711	12/5/2014	1015	6284	839	5	5
6690583	2014	12/24/2014	3711	10/23/2014	1601	6332		4	5
6689122	2014	12/23/2014	3711	10/24/2014	1644	7138		5	5
6688933	2014	12/26/2014	3711	10/23/2014	2200	5105		4	5
6683153	2014	12/29/2014	3711	10/27/2014	912	7197	SANDI	1	5
6680469	2014	12/12/2014	3711	10/17/2014	409	6203		5	5
6680467	2014	12/12/2014	3711	10/19/2014	2130	3691		7	5
6668848	2014	11/26/2014	3711	10/6/2014	1818	7138	SD	1	5
6666814	2014	11/14/2014	3711	10/3/2014	1625	6959		5	5
6659230	2014	11/26/2014	3711	9/28/2014	1931	5972		7	5
6640633	2014	10/13/2014	3711	9/10/2014	1826	7189		3	5
6638316	2014	10/8/2014	3711	9/18/2014	2028	6902		4	5
6638311	2014	10/8/2014	3711	9/11/2014	827	6513		4	5
6638309	2014	10/8/2014	3711	9/17/2014	747	6659		3	5
6636803	2014	10/31/2014	3711	9/17/2014	1930	4939		3	5
6629337	2014	10/9/2014	3711	9/9/2014	855	6391		2	5
6619632	2014	10/27/2014	3711	9/2/2014	1620	7189		2	5
6612232	2014	9/16/2014	3711	8/26/2014	1915	7180	SANDI	2	5
6611898	2014	9/23/2014	3711	8/24/2014	2100	6540		7	5
6601691	2014	9/10/2014	3711	8/25/2014	942	6793		1	5
6601687	2014	9/10/2014	3711	8/23/2014	1230	7086		6	5

CASE_ID	ACCIDENT_Y	PROC_DATE	JURIS	COLLISION_	COLLISION1	OFFICER_ID	REPORTING_	DAY_OF_WEE	CHP_SHIFT
6601166	2014	9/4/2014	3711	8/9/2014	2239	6876		6	5
6596001	2014	1/5/2016	3711	8/8/2014	1759	7040		5	5
6595482	2014	9/25/2014	3711	8/6/2014	1523	7129		3	5
6580685	2014	9/3/2014	3711	7/24/2014	1718	5983		4	5
6580624	2014	9/2/2014	3711	7/25/2014	2342	6768		5	5
6572803	2014	9/2/2014	3711	7/23/2014	1719	6576	MIDCI	3	5
6560191	2014	8/21/2014	3711	7/7/2014	747	7120		1	5
6560151	2014	8/26/2014	3711	7/9/2014	1850	7119		3	5
6550187	2014	8/25/2014	3711	6/30/2014	1955	6827		1	5
6546930	2014	8/29/2014	3711	6/26/2014	1356	6372		4	5
6529776	2014	8/20/2014	3711	6/13/2014	1535	0		5	5
6524981	2014	8/8/2014	3711	6/7/2014	1624	6000		6	5
6524965	2014	8/8/2014	3711	6/10/2014	1630	6653		2	5
6524197	2014	8/6/2014	3711	5/4/2014	2242	4576		7	5
6516121	2014	8/11/2014	3711	6/11/2014	2315	7134		3	5
6505598	2014	7/28/2014	3711	5/30/2014	2010	6632	MC2	5	5
6501146	2014	7/29/2014	3711	5/14/2014	1418	6391		3	5
6480178	2014	7/24/2014	3711	4/28/2014	946	6540		1	5
6451641	2014	8/14/2015	3711	2/24/2014	1912	5952		1	5
6450996	2014	7/3/2014	3711	3/25/2014	626	6483		2	5
6449107	2014	7/8/2014	3711	3/14/2014	1805	6262		5	5
6443776	2014	7/11/2014	3711	3/30/2014	1825	6858		7	5
6443022	2014	7/2/2014	3711	3/18/2014	1950	6750		2	5
6442998	2014	7/11/2014	3711	3/28/2014	1143	6971	MC	5	5
6428606	2014	6/26/2014	3711	2/24/2014	1659	6479		1	5
6417349	2014	6/24/2014	3711	3/12/2014	1415	6768		3	5
6416841	2014	6/27/2014	3711	3/9/2014	1826	5072		7	5
6401503	2014	6/6/2014	3711	1/28/2014	1129	7006		2	5
6381851	2014	6/18/2014	3711	2/14/2014	1127	6971	MCI	5	5
6381847	2014	6/18/2014	3711	2/17/2014	945	6768		1	5
6376660	2014	7/8/2014	3711	2/4/2014	1600	6995	SANDI	2	5
6373243	2014	6/6/2014	3711	1/23/2014	750	6768		4	5
6352464	2014	6/5/2014	3711	1/16/2014	1800	6784		4	5
6916228	2015	6/11/2015	3711	4/11/2015	1115	7273		6	5
6909243	2015	5/15/2015	3711	4/30/2015	2200	5903		4	5
6907192	2015	6/6/2016	3711	4/28/2015	1427	6692	SANDI	2	5

CASE_ID	ACCIDENT_Y	PROC_DATE	JURIS	COLLISION_	COLLISION1	OFFICER_ID	REPORTING_	DAY_OF_WEE	CHP_SHIFT
6902484	2015	5/12/2015	3711	4/24/2015	956	6768		5	5
6894639	2015	5/11/2015	3711	4/18/2015	1805	7032		6	5
6894588	2015	5/9/2015	3711	4/16/2015	705	7008 SANDI		4	5
6882371	2015	4/22/2015	3711	4/1/2015	1044	6035		3	5
6869365	2015	4/16/2015	3711	3/22/2015	1000	6699		7	5
6865958	2015	4/10/2015	3711	3/24/2015	1630	7032		2	5
6859968	2015	3/30/2015	3711	3/13/2015	1602	6946 SD		5	5
6859038	2015	3/30/2015	3711	3/13/2015	1722	6000		5	5
6857182	2015	4/7/2016	3711	3/17/2015	1830	6529 SANDI		2	5
6856709	2015	4/16/2015	3711	3/4/2015	722	6035		3	5
6844399	2015	3/23/2015	3711	3/1/2015	1050	6483		7	5
6837091	2015	3/16/2015	3711	2/25/2015	1840	6391		3	5
6833684	2015	3/12/2015	3711	2/17/2015	2110	6760		2	5
6822597	2015	3/12/2015	3711	2/11/2015	2041	6391		3	5
6820583	2015	3/10/2015	3711	2/6/2015	2045	7032		5	5
6820558	2015	3/9/2015	3711	2/4/2015	1015	7120		3	5
6815822	2015	3/5/2015	3711	2/3/2015	924	6443		2	5
6811176	2015	3/27/2015	3711	2/2/2015	1803	8613		1	5
6802350	2015	2/25/2015	3711	1/23/2015	1533	6632 MCZ		5	5
6801944	2015	9/2/2016	3711	1/23/2015	1345	6963 5D		5	5
6795808	2015	2/23/2015	3711	1/22/2015	1745	7016 MC		4	5
6789087	2015	2/27/2015	3711	1/28/2015	1112	6366		3	5
6789055	2015	2/27/2015	3711	1/22/2015	1352	4897		4	5
6785303	2015	2/19/2015	3711	1/8/2015	2004	6483		4	5
6718332	2015	4/20/2017	3711	1/31/2015	1807	5916		6	5
8487096	2017	11/20/2017	3711	10/26/2017	740	6180		4	5
8487073	2017	11/17/2017	3711	10/28/2017	1905	7360	3711	6	5
8481236	2017	11/17/2017	3711	10/24/2017	1518	8568		2	5
8458758	2017	10/9/2017	3711	9/20/2017	2148	6639		3	5
8455732	2017	9/27/2017	3711	9/15/2017	2210	6813		5	5
8447569	2017	10/2/2017	3711	8/22/2017	1512	6180		2	5
8446456	2017	9/14/2017	3711	9/3/2017	2145	7442		7	5
8443827	2017	9/12/2017	3711	8/28/2017	1949	7238		1	5
8443807	2017	9/12/2017	3711	8/27/2017	2244	7464 SPD		7	5
8414058	2017	8/11/2017	3711	7/28/2017	2218	7410		5	5
8410598	2017	7/27/2017	3711	7/11/2017	1235	8192		2	5

CASE_ID	ACCIDENT_Y	PROC_DATE	JURIS	COLLISION_	COLLISION1	OFFICER_ID	REPORTING_	DAY_OF_WEE	CHP_SHIFT
8409628	2017	8/4/2017	3711	7/9/2017	2307	6876		7	5
8387536	2017	6/14/2017	3711	5/31/2017	121	7616		3	5
8372054	2017	5/23/2017	3711	5/9/2017	1344	8192		2	5
8370045	2017	5/17/2017	3711	5/5/2017	1430	7453		5	5
8363302	2017	5/15/2017	3711	4/27/2017	1455	7154		4	5
8359422	2017	5/9/2017	3711	4/26/2017	1830	6795		3	5
8343743	2017	4/14/2017	3711	3/29/2017	1343	7464	SDPD	3	5
8338652	2017	4/7/2017	3711	3/26/2017	2129	7238		7	5
8336948	2017	5/13/2017	3711	4/29/2017	2040	7321		6	5
8328940	2017	3/27/2017	3711	3/8/2017	1554	6896		3	5
8304095	2017	2/8/2017	3711	1/29/2017	810	6329		7	5
8286916	2017	1/25/2017	3711	1/8/2017	2130	7532		7	5
8206953	2017	1/31/2017	3711	1/1/2017	1316	7086		7	5
8202968	2016	1/13/2017	3711	12/21/2016	1552	6886	SD	3	5
8199326	2016	1/3/2017	3711	12/15/2016	1810	6412		4	5
8199313	2016	1/3/2017	3711	12/16/2016	1320	7086		5	5
8199259	2016	1/4/2017	3711	12/12/2016	710	7559		1	5
8198093	2016	1/6/2017	3711	12/22/2016	840	6760		4	5
8193724	2016	1/14/2017	3711	12/12/2016	1720	6902	SD	1	5
8192386	2016	12/22/2016	3711	12/9/2016	1710	6909		5	5
8192334	2016	12/30/2016	3711	12/9/2016	1430	7335	SD	5	5
8188789	2016	3/30/2017	3711	12/1/2016	1724	7542		4	5
8179469	2016	12/9/2016	3711	11/23/2016	1803	0	SDPD	3	5
8178718	2016	12/6/2016	3711	11/7/2016	2049	6553		1	5
8165336	2016	11/14/2016	3711	11/2/2016	715	7130		3	5
8164387	2016	11/14/2016	3711	10/30/2016	1120	6760		7	5
8151946	2016	10/27/2016	3711	10/18/2016	1800	7545		2	5
8139702	2016	10/6/2016	3711	9/28/2016	1646	6412		3	5
8138510	2016	10/13/2016	3711	8/25/2016	1815	6760		4	5
8110952	2016	8/30/2016	3711	8/20/2016	1643	8192		6	5
8107451	2016	8/22/2016	3711	8/10/2016	2010	6811	SD	3	5
8105426	2016	8/26/2016	3711	8/9/2016	1829	5985		2	5
8105404	2016	8/26/2016	3711	8/16/2016	1818	7082		2	5
8101547	2016	8/18/2016	3711	8/4/2016	512	6857		4	5
8101517	2016	9/2/2016	3711	8/9/2016	1427	5985		2	5
8096669	2016	8/11/2016	3711	7/20/2016	1955	6242		3	5

CASE_ID	ACCIDENT_Y	PROC_DATE	JURIS	COLLISION_	COLLISION1	OFFICER_ID	REPORTING_	DAY_OF_WEE	CHP_SHIFT
8090362	2016	7/28/2016	3711	7/15/2016	1830	7368		5	5
8087570	2016	7/25/2016	3711	7/11/2016	1707	7130		1	5
8081530	2016	7/11/2016	3711	6/28/2016	1727	6443		2	5
8068094	2016	6/22/2016	3711	6/11/2016	1557	7323		6	5
8055351	2016	6/8/2016	3711	5/25/2016	1558	7125		3	5
8046698	2016	5/17/2016	3711	5/8/2016	1905	7008	SD	7	5
8037617	2016	5/11/2016	3711	4/28/2016	1521	7425		4	5
8037595	2016	5/12/2016	3711	4/29/2016	650	7441	SANDI	5	5
8031943	2016	5/12/2016	3711	5/2/2016	1628	6495		1	5
8017405	2016	4/19/2016	3711	4/10/2016	926	6268		7	5
8016326	2016	4/15/2016	3711	4/2/2016	1700	8192		6	5
8000942	2016	3/30/2016	3711	3/18/2016	1945	6443		5	5
7209403	2016	3/16/2016	3711	3/3/2016	900	6749	CA	4	5
7187048	2016	2/26/2016	3711	2/13/2016	1825	6555		6	5
7184446	2016	2/18/2016	3711	1/28/2016	1436	5072		4	5
7168307	2016	2/10/2017	3711	1/12/2016	1623	6483		2	5
7165642	2016	1/25/2016	3711	1/11/2016	630	5983		1	5
7165638	2016	1/25/2016	3711	1/11/2016	624	7130		1	5
7159821	2016	1/20/2016	3711	1/2/2016	915	7008	SANDI	6	5
6353308	2016	3/23/2016	3711	3/14/2016	2311	5983		1	5
6347708	2016	3/28/2016	3711	3/12/2016	1134	6487	SD	6	5

CASE_ID	POPULATION	CNTY_CITY_	SPECIAL_CO	BEAT_TYPE	CHP_BEAT_T	CITY_DIVIS	CHP_BEAT_C	BEAT_NUMBE
5910025		7	3711	0	0	0	0	838
5911803		7	3711	0	0	0	0	832
5932855		7	3711	0	0	0	0	834
5976394		7	3711	0	0	0	0	838
5988183		7	3711	0	0	0	0	834
5992304		7	3711	0	0	0	0	831
5995629		7	3711	0	0	0	0	836
5999902		7	3711	0	0	0	0	833
6004119		7	3711	0	0	0	0	831
6004127		7	3711	0	0	0	0	838
6011071		7	3711	0	0	0	0	811
6028814		7	3711	0	0	0	0	827
6033388		7	3711	0	0	0	0	838
6044778		7	3711	0	0	0	0	834
6060357		7	3711	0	0	0	0	839
6072290		7	3711	0	0	0	0	831
6082760		7	3711	0	0	0	0	826
6082771		7	3711	0	0	0	0	834
6082865		7	3711	0	0	0	0	831
6105349		7	3711	0	0	0	0	833
6116276		7	3711	0	0	0	0	838
6116304		7	3711	0	0	0	0	831
6116362		7	3711	0	0	0	0	831
6119552		7	3711	0	0	0	0	838
6120185		7	3711	0	0	0	0	831
6134610		7	3711	0	0	0	0	831
6134612		7	3711	0	0	0	0	826
6173821		7	3711	0	0	0	0	828
6196463		7	3711	0	0	0	0	828
6198499		7	3711	0	0	0	0	826
6203129		7	3711	0	0	0	0	831
6230473		7	3711	0	0	0	0	838
6231433		7	3711	0	0	0	0	826
6233964		7	3711	0	0	0	0	838
6236906		7	3711	0	0	0	0	832
6274666		7	3711	0	0	0	0	826

CASE_ID	POPULATION	CNTY_CITY_	SPECIAL_CO	BEAT_TYPE	CHP_BEAT_T	CITY_DIVIS	CHP_BEAT_C	BEAT_NUMBE
6277573		7	3711	0	0	0	0	838
6317255		7	3711	0	0	0	0	832
6318652		7	3711	0	0	0	0	826
6322696		7	3711	0	0	0	0	833
6336188		7	3711	0	0	0	0	839
6338047		7	3711	0	0	0	0	834
6342227		7	3711	0	0	0	0	839
8522286		7	3711	0	0	0	0	829
8517106		7	3711	0	0	0	0	832
8509122		7	3711	0	0	0	0	838
8506185		7	3711	0	0	0	0	833
8503556		7	3711	0	0	0	0	838
8499736		7	3711	0	0	0	0	838
8494275		7	3711	0	0	0	0	831
7150920		7	3711	0	0	0	0	838
7149399		7	3711	0	0	0	0	838
7145955		7	3711	0	0	0	0	833
7142359		7	3711	0	0	0	0	833
7142231		7	3711	0	0	0	0	831
7142161		7	3711	0	0	0	0	831
7141893		7	3711	0	0	0	0	831
7137331		7	3711	0	0	0	0	838
7137122		7	3711	0	0	0	0	826
7129032		7	3711	0	0	0	0	839
7129020		7	3711	0	0	0	0	839
7127696		7	3711	0	0	0	0	838
7125117		7	3711	0	0	0	0	831
7124078		7	3711	0	0	0	0	838
7124075		7	3711	0	0	0	0	832
7108618		7	3711	0	0	0	0	383
7106790		7	3711	0	0	0	0	839
7106786		7	3711	0	0	0	0	826
7103004		7	3711	0	0	0	0	831
7102297		7	3711	0	0	0	0	838
7102293		7	3711	0	0	0	0	838
7098619		7	3711	0	0	0	0	831

CASE_ID	POPULATION	CNTY_CITY_	SPECIAL_CO	BEAT_TYPE	CHP_BEAT_T	CITY_DIVIS	CHP_BEAT_C	BEAT_NUMBE
7098448		7	3711	0	0	0	0	831
7088028		7	3711	0	0	0	0	833
7082012		7	3711	0	0	0	0	832
7067048		7	3711	0	0	0	0	832
7060964		7	3711	0	0	0	0	831
7058170		7	3711	0	0	0	0	831
7031722		7	3711	0	0	0	0	833
7010507		7	3711	0	0	0	0	833
7004183		7	3711	0	0	0	0	824
6989719		7	3711	0	0	0	0	832
6978554		7	3711	0	0	0	0	833
6975664		7	3711	0	0	0	0	838
6784601		7	3711	0	0	0	0	831
6771289		7	3711	0	0	0	0	831
6732672		7	3711	0	0	0	0	834
6731885		7	3711	0	0	0	0	0
6690583		7	3711	0	0	0	0	831
6689122		7	3711	0	0	0	0	826
6688933		7	3711	0	0	0	0	811
6683153		7	3711	0	0	0	0	839
6680469		7	3711	0	0	0	0	832
6680467		7	3711	0	0	0	0	831
6668848		7	3711	0	0	0	0	826
6666814		7	3711	0	0	0	0	831
6659230		7	3711	0	0	0	0	831
6640633		7	3711	0	0	0	0	831
6638316		7	3711	0	0	0	0	813
6638311		7	3711	0	0	0	0	833
6638309		7	3711	0	0	0	0	838
6636803		7	3711	0	0	0	0	828
6629337		7	3711	0	0	0	0	838
6619632		7	3711	0	0	0	0	838
6612232		7	3711	0	0	0	0	832
6611898		7	3711	0	0	0	0	832
6601691		7	3711	0	0	0	0	831
6601687		7	3711	0	0	0	0	832

CASE_ID	POPULATION	CNTY_CITY_	SPECIAL_CO	BEAT_TYPE	CHP_BEAT_T	CITY_DIVIS	CHP_BEAT_C	BEAT_NUMBE
6601166		7	3711	0	0	0	0	824
6596001		7	3711	0	0	0	0	826
6595482		7	3711	0	0	0	0	831
6580685		7	3711	0	0	0	0	831
6580624		7	3711	0	0	0	0	831
6572803		7	3711	0	0	0	0	833
6560191		7	3711	0	0	0	0	831
6560151		7	3711	0	0	0	0	826
6550187		7	3711	0	0	0	0	839
6546930		7	3711	0	0	0	0	839
6529776		7	3711	0	0	0	0	832
6524981		7	3711	0	0	0	0	832
6524965		7	3711	0	0	0	0	833
6524197		7	3711	0	0	0	0	826
6516121		7	3711	0	0	0	0	838
6505598		7	3711	0	0	0	0	838
6501146		7	3711	0	0	0	0	831
6480178		7	3711	0	0	0	0	832
6451641		7	3711	0	0	0	0	831
6450996		7	3711	0	0	0	0	839
6449107		7	3711	0	0	0	0	838
6443776		7	3711	0	0	0	0	832
6443022		7	3711	0	0	0	0	831
6442998		7	3711	0	0	0	0	833
6428606		7	3711	0	0	0	0	0
6417349		7	3711	0	0	0	0	833
6416841		7	3711	0	0	0	0	831
6401503		7	3711	0	0	0	0	833
6381851		7	3711	0	0	0	0	834
6381847		7	3711	0	0	0	0	731
6376660		7	3711	0	0	0	0	831
6373243		7	3711	0	0	0	0	838
6352464		7	3711	0	0	0	0	811
6916228		7	3711	0	0	0	0	0
6909243		7	3711	0	0	0	0	832
6907192		7	3711	0	0	0	0	833

CASE_ID	POPULATION	CNTY_CITY_	SPECIAL_CO	BEAT_TYPE	CHP_BEAT_T	CITY_DIVIS	CHP_BEAT_C	BEAT_NUMBE
6902484		7	3711	0	0	0	0	834
6894639		7	3711	0	0	0	0	831
6894588		7	3711	0	0	0	0	838
6882371		7	3711	0	0	0	0	831
6869365		7	3711	0	0	0	0	831
6865958		7	3711	0	0	0	0	838
6859968		7	3711	0	0	0	0	833
6859038		7	3711	0	0	0	0	831
6857182		7	3711	0	0	0	0	831
6856709		7	3711	0	0	0	0	831
6844399		7	3711	0	0	0	0	832
6837091		7	3711	0	0	0	0	839
6833684		7	3711	0	0	0	0	834
6822597		7	3711	0	0	0	0	826
6820583		7	3711	0	0	0	0	838
6820558		7	3711	0	0	0	0	831
6815822		7	3711	0	0	0	0	839
6811176		7	3711	0	0	0	0	834
6802350		7	3711	0	0	0	0	832
6801944		7	3711	0	0	0	0	839
6795808		7	3711	0	0	0	0	839
6789087		7	3711	0	0	0	0	838
6789055		7	3711	0	0	0	0	833
6785303		7	3711	0	0	0	0	824
6718332		7	3711	0	0	0	0	833
8487096		7	3711	0	0	0	0	832
8487073		7	3711	0	0	0	0	834
8481236		7	3711	0	0	0	0	831
8458758		7	3711	0	0	0	0	811
8455732		7	3711	0	0	0	0	811
8447569		7	3711	0	0	0	0	834
8446456		7	3711	0	0	0	0	832
8443827		7	3711	0	0	0	0	833
8443807		7	3711	0	0	0	0	832
8414058		7	3711	0	0	0	0	832
8410598		7	3711	0	0	0	0	826

CASE_ID	POPULATION	CNTY_CITY_	SPECIAL_CO	BEAT_TYPE	CHP_BEAT_T	CITY_DIVIS	CHP_BEAT_C	BEAT_NUMBE
8409628		7	3711	0	0	0	0	834
8387536		7	3711	0	0	0	0	834
8372054		7	3711	0	0	0	0	824
8370045		7	3711	0	0	0	0	831
8363302		7	3711	0	0	0	0	8
8359422		7	3711	0	0	0	0	839
8343743		7	3711	0	0	0	0	839
8338652		7	3711	0	0	0	0	838
8336948		7	3711	0	0	0	0	838
8328940		7	3711	0	0	0	0	0
8304095		7	3711	0	0	0	0	838
8286916		7	3711	0	0	0	0	834
8206953		7	3711	0	0	0	0	824
8202968		7	3711	0	0	0	0	831
8199326		7	3711	0	0	0	0	834
8199313		7	3711	0	0	0	0	831
8199259		7	3711	0	0	0	0	834
8198093		7	3711	0	0	0	0	838
8193724		7	3711	0	0	0	0	826
8192386		7	3711	0	0	0	0	826
8192334		7	3711	0	0	0	0	811
8188789		7	3711	0	0	0	0	0
8179469		7	3711	0	0	0	0	831
8178718		7	3711	0	0	0	0	833
8165336		7	3711	0	0	0	0	831
8164387		7	3711	0	0	0	0	833
8151946		7	3711	0	0	0	0	832
8139702		7	3711	0	0	0	0	831
8138510		7	3711	0	0	0	0	839
8110952		7	3711	0	0	0	0	831
8107451		7	3711	0	0	0	0	832
8105426		7	3711	0	0	0	0	833
8105404		7	3711	0	0	0	0	832
8101547		7	3711	0	0	0	0	831
8101517		7	3711	0	0	0	0	838
8096669		7	3711	0	0	0	0	834

CASE_ID	POPULATION	CNTY_CITY_	SPECIAL_CO	BEAT_TYPE	CHP_BEAT_T	CITY_DIVIS	CHP_BEAT_C	BEAT_NUMBE
8090362		7	3711	0	0	0	0	838
8087570		7	3711	0	0	0	0	831
8081530		7	3711	0	0	0	0	832
8068094		7	3711	0	0	0	0	831
8055351		7	3711	0	0	0	0	834
8046698		7	3711	0	0	0	0	831
8037617		7	3711	0	0	0	0	833
8037595		7	3711	0	0	0	0	833
8031943		7	3711	0	0	0	0	826
8017405		7	3711	0	0	0	0	832
8016326		7	3711	0	0	0	0	825
8000942		7	3711	0	0	0	0	832
7209403		7	3711	0	0	0	0	824
7187048		7	3711	0	0	0	0	839
7184446		7	3711	0	0	0	0	833
7168307		7	3711	0	0	0	0	838
7165642		7	3711	0	0	0	0	831
7165638		7	3711	0	0	0	0	831
7159821		7	3711	0	0	0	0	839
6353308		7	3711	0	0	0	0	826
6347708		7	3711	0	0	0	0	832

CASE_ID	PRIMARY_RD	SECONDARY_	DISTANCE	DIRECTION	INTERSECTI	WEATHER_1	WEATHER_2	STATE_HWY_
5910025	UNIVERSITY AV	36TH ST	0		Y	A	-	N
5911803	ORANGE AV	41ST ST	0		Y	B	-	N
5932855	UNIVERSITY AV	VAN DYKE AV	0		Y	A	-	N
5976394	35TH ST	ORANGE AV	55	N	N	A	-	N
5988183	UNIVERSITY AV	VAN DYKE AV	0		Y	A	-	N
5992304	ORANGE	CHAMOUNE	0		Y	A	-	N
5995629	UNIVERSITY AV	HIGHLAND AV	0		Y	A	-	N
5999902	UNIVERSITY AV	44TH ST	0		Y	A	-	N
6004119	UNIVERSITY AV	MARLBOROUGH AV	0		Y	A	-	N
6004127	EL CAJON BL	WILSON AV	25	W	N	A	-	N
6011071	EL CAJON BL	36TH ST	0		Y	A	-	N
6028814	UNIVERSITY AV	EUCLID AV	3	E	N	A	-	N
6033388	39TH ST	UNIVERSITY AV	281	N	N	A	-	N
6044778	ORANGE AV	HIGHLAND AV	50	E	N	B	-	Y
6060357	UNIVERSITY AV	CHEROKEE AV	0		Y	A	-	N
6072290	EL CAJON BL	HIGHLAND AV	7	E	N	B	G	N
6082760	EL CAJON BL	EUCLID AV	125	E	N	A	-	N
6082771	UNIVERSITY AV	41ST ST	0		Y	A	-	N
6082865	UNIVERSITY AV	44TH ST	0		Y	A	-	N
6105349	UNIVERSITY AV	CHAMOUNE AV	0		Y	A	-	N
6116276	EL CAJON BL	SWIFT AV	5	W	N	A	-	N
6116304	EL CAJON BL	37TH ST	148	W	N	A	-	N
6116362	FAIRMOUNT AV	POLK AV	0		Y	A	-	N
6119552	EL CAJON BL	37TH ST	0		Y	A	-	N
6120185	46TH ST	ORANGE	231	S	N	A	-	N
6134610	ORANGE AV	44TH ST	8	E	N	A	-	N
6134612	ESTRELLA AV	EL CAJON BL	15	S	N	A	-	N
6173821	UNIVERSITY AV	ESTRELLA AV	65	W	N	A	-	N
6196463	EUCLID	UNIVERSITY	72	S	N	A	-	N
6198499	EL CAJON BL	ESTRELLA AV	0		Y	A	-	N
6203129	HIGHLAND AV	ORANGE AV	0		Y	A	-	N
6230473	37TH ST	ORANGE AV	0		Y	B	-	N
6231433	POLK AV	ESTRELLA AV	0		Y	B	-	N
6233964	37TH ST	UNIVERSITY AV	210	N	N	A	-	N
6236906	CHAMOUNE AV	POLK AV	0		Y	B	C	N
6274666	ESTRELLA AV	UNIVERSITY AV	0		Y	A	-	N

CASE_ID	PRIMARY_RD	SECONDARY_	DISTANCE	DIRECTION	INTERSECTI	WEATHER_1	WEATHER_2	STATE_HWY_
6277573	POLK AV	36TH ST	169	E	N	A	-	N
6317255	43RD ST	POLK AV	82	N	N	A	-	N
6318652	ESTRELLA AV	ORANGE AV	15	S	N	A	-	N
6322696	UNIVERSITY AV	44TH ST	0		Y	A	-	N
6336188	UNIVERSITY AV	CHEROKEE AV	91	W	N	A	-	N
6338047	UNIVERSITY AV	42ND ST	0		Y	B	-	N
6342227	UNIVERSITY AV	CHEROKEE AV	69	W	N	A	-	N
8522286	38TH ST	UNIVERSITY AV	0		Y	A	-	N
8517106	EL CAJON BL	RT 15	0		Y	A	-	Y
8509122	UNIVERSITY AV	RT 15	3	E	N	B	-	Y
8506185	UNIVERSITY AV	HIGHLAND AV	100	E	N	A	-	N
8503556	35TH ST	EL CAJON BL	110	S	N	A	-	N
8499736	UNIVERSITY AV	39TH ST	9	E	N	A	-	N
8494275	EUCLID AV	EL CAJON BL	46	S	N	B	-	N
7150920	UNIVERSITY AV	39TH ST	135	W	N	A	-	N
7149399	EL CAJON BL	33RD ST	250	W	N	A	-	N
7145955	UNIVERSITY AV	FAIRMOUNT AV	0		Y	A	-	N
7142359	UNIVERSITY AV	FAIRMOUNT AV	0		Y	A	-	N
7142231	UNIVERSITY AV	45TH	71	W	N	A	-	N
7142161	ORANGE AV	CHAMOUNE AV	33	W	N	A	-	N
7141893	47TH ST	EL CAJON BL	15	S	N	A	-	N
7137331	EL CAJON BL	37TH ST	0		Y	A	-	N
7137122	ESTRELLA AV	TROJAN AV	0		Y	A	-	N
7129032	UNIVERSITY AV	SWIFT	9	E	N	A	-	N
7129020	UNIVERSITY AV	37TH ST	114	E	N	A	-	N
7127696	ORANGE AV	35TH ST	0		Y	A	-	N
7125117	UNIVERSITY AV	MENLO AV	12	E	N	A	-	N
7124078	EL CAJON BL	36TH ST	0		Y	A	-	N
7124075	ORANGE AV	40TH ST	2	E	N	A	-	N
7108618	EL CAJON BL	36TH ST	0		Y	B	-	N
7106790	UNIVERSITY AV	39TH ST	0		Y	A	-	N
7106786	EUCLID AV	POLK AV	156	N	N	A	-	N
7103004	FAIRMOUNT AV	ORANGE AV	9	S	N	A	-	N
7102297	EL CAJON BL	36TH ST	0		Y	A	-	N
7102293	EL CAJON BL	36TH ST	48	E	N	A	-	N
7098619	POLK AV	44TH ST	90	W	N	A	-	N

CASE_ID	PRIMARY_RD	SECONDARY_	DISTANCE	DIRECTION	INTERSECTI	WEATHER_1	WEATHER_2	STATE_HWY_
7098448	HIGHLAND	EL CAJON BL		6 S	N	A	-	N
7088028	UNIVERSITY AV	44TH ST		0	Y	A	-	N
7082012	ORANGE AV	CENTRAL AV		9 W	N	A	-	N
7067048	UNIVERSITY AV	43RD ST		0	Y	A	-	N
7060964	FAIRMOUNT AV	POLK AV		20 S	N	A	-	N
7058170	UNIVERSITY AV	MENLO		100 W	N	A	B	N
7031722	UNIVERSITY AV	44TH ST		12 W	N	A	-	N
7010507	UNIVERSITY AV	44TH ST		0	Y	A	-	N
7004183	EUCLID AV	EL CAJON BL		7 N	N	A	-	N
6989719	COPELAND AV	EL CAJON BL		0	Y	B	-	N
6978554	FAIRMOUNT AV	UNIVERSITY AV		10 W	N	A	-	N
6975664	33RD ST	EL CAJON BL		5 S	N	A	-	N
6784601	ORANGE AV	HIGHLAND AV		5.4 E	N	A	-	N
6771289	EUCLID AV	TROJAN AV		0	Y	B	C	N
6732672	UNIVERSITY AV	MARLBOROUGH AV		5 E	N	C	-	N
6731885	UNIVERSITY AV	CHEROKEE		3 W	N	B	-	N
6690583	UNIVERSITY AV	47TH ST		3 E	N	A	-	N
6689122	TROJAN AV	48TH ST		0	Y	A	-	N
6688933	EL CAJON BL	35TH ST		0	Y	A	-	N
6683153	UNIVERSITY AV	39TH ST		0	Y	A	-	N
6680469	FAIRMONT AV	ORANGE AV		12 N	N	A	-	N
6680467	ORANGE AV	FAIRMONT AV		0	Y	A	-	N
6668848	48TH ST	ORANGE AV		250 S	N	A	-	N
6666814	EL CAJON BL	HIGHLAND AV		0	Y	A	-	N
6659230	ORANGE AV	46TH ST		0	Y	A	-	N
6640633	EUCLID AV	UNIVERSITY AV		105 N	N	A	-	N
6638316	UNIVERSITY AV	39TH ST		0	Y	A	-	N
6638311	UNIVERSITY AV	CHAMOUNE AV		0	Y	A	-	N
6638309	UNIVERSITY AV	SWIFT AV		8 E	N	A	-	N
6636803	UNIVERSITY AV	EUCLID AV		0	Y	A	-	N
6629337	UNIVERSITY AV	35TH ST		5 E	N	A	-	N
6619632	WILSON AV	EL CAJON BL		0	Y	-	-	N
6612232	MARLBOROUGH	UNIVERSITY		4 N	N	A	-	N
6611898	41ST ST	POLK AV		60 N	N	A	-	N
6601691	45TH ST	ORANGE AV		42 N	N	A	-	N
6601687	EL CAJON BL	COPELAND AV		0	Y	A	-	N

CASE_ID	PRIMARY_RD	SECONDARY_	DISTANCE	DIRECTION	INTERSECTI	WEATHER_1	WEATHER_2	STATE_HWY_
6601166	EL CAJON BL	45TH ST	94	E	N	A	-	N
6596001	ESTRELLA AV	ORANGE AV	150	S	N	A	-	N
6595482	MENLO AV	UNIVERSITY AV	8	N	N	A	-	N
6580685	UNIVERSITY AV	45TH ST	0		Y	A	-	N
6580624	POLK AV	45TH ST	100	E	N	A	-	N
6572803	UNIVERSITY AV	CHAMOUNE AV	6	E	N	A	-	N
6560191	47TH ST	UNIVERSITY AV	20	N	N	A	-	N
6560151	EUCLID AV	ORANGE AV	2	N	N	A	-	N
6550187	UNIVERSITY AV	37TH ST	0		Y	A	-	N
6546930	UNIVERSITY AV	WABASH ST	63	W	N	A	-	N
6529776	43RD ST	POLK AV	0		Y	A	-	N
6524981	42ND ST	ORANGE AV	233	N	N	A	-	N
6524965	UNIVERSITY AV	47TH ST	0		Y	A	-	N
6524197	EUCLID AV	POLK AV	49	N	N	B	-	N
6516121	EL CAJON BL	39TH ST	180	E	N	A	-	N
6505598	UNIVERSITY AV	33RD ST	140	E	N	A	-	N
6501146	EUCLID AV	TROJAN AV	108	S	N	A	-	N
6480178	42ND ST	POLK	60	S	N	A	-	N
6451641	FAIRMOUNT	ORANGE AV	42	S	N	A	-	N
6450996	UNIVERSITY AV	SWIFT AV	0		Y	B	-	N
6449107	33RD ST	ORANGE ST	0		Y	A	-	N
6443776	43RD ST	ORANGE AV	0		Y	A	-	N
6443022	ORANGE AV	44TH ST	9	W	N	A	-	N
6442998	UNIVERSITY AV	MENLO ST	0		Y	A	-	N
6428606	UNIVERSITY AV	45TH ST	60	E	N	A	-	N
6417349	UNIVERSITY AV	FAIRMOUNT AV	0		Y	B	-	N
6416841	EL CAJON BL	47TH ST	0		Y	A	-	N
6401503	47TH ST	UNIVERSITY AV	0		Y	A	-	N
6381851	UNIVERSITY AV	43RD ST	0		Y	A	-	N
6381847	ORANGE AV	FAIRMOUNT AV	0		Y	A	-	N
6376660	47TH ST	ORANGE AV	528	N	N	A	-	N
6373243	UNIVERSITY AV	39TH ST	0		Y	E	-	N
6352464	EL CAJON BL	36TH ST	6	W	N	A	-	N
6916228	EL CAJON BL	33RD ST	9	W	N	A	-	N
6909243	ORANGE AV	43RD ST	135	E	N	-	-	N
6907192	UNIVERSITY AV	MENLO AV	5	E	N	A	-	N

CASE_ID	PRIMARY_RD	SECONDARY_	DISTANCE	DIRECTION	INTERSECTI	WEATHER_1	WEATHER_2	STATE_HWY_
6902484	UNIVERSITY AV	FAIRMOUNT AV	50	E	N	B	C	N
6894639	ORANGE AV	CHAMOUNE AV	0		Y	A	-	N
6894588	ORANGE AV	CHEROKEE AV	0		Y	-	-	N
6882371	UNIVERSITY AV	EUCLID AV	39	W	N	A	-	N
6869365	EL CAJON BL	FAIRMOUNT AV	68	E	N	A	-	N
6865958	ORANGE AV	39TH ST	0		Y	A	-	N
6859968	UNIVERSITY	45TH ST	45	W	N	A	-	N
6859038	44TH ST	ORANGE AV	9	S	N	A	-	N
6857182	POLK AV	HIGHLAND AV	0		Y	-	-	N
6856709	POLK AV	HIGHLAND AV	3	W	N	A	-	N
6844399	POLK AV	MARLBOROUGH AV	0		Y	C	-	N
6837091	UNIVERSITY AV	WABASH AV	0		Y	A	-	N
6833684	43RD ST	ORANGE AV	0		Y	A	-	N
6822597	ORANGE AV	EUCLID AV	6	E	N	A	-	N
6820583	37TH ST	EL CAJON BL	30	S	N	A	-	N
6820558	UNIVERSITY AV	CHAMOUNE AV	7.5	W	N	A	-	N
6815822	UNIVERSITY AV	SWIFT AV	0		Y	-	-	N
6811176	UNIVERSITY AV	46TH ST	6	E	N	A	-	N
6802350	VAN DYKE AV	EL CAJON BL	7	S	N	A	-	N
6801944	EL CAJON BL	RT 15	0	W	N	A	-	Y
6795808	UNIVERSITY AV	37TH ST	120	W	N	A	-	N
6789087	33RD ST	EL CAJON BL	0		Y	B	-	N
6789055	UNIVERSITY AV	MENLO AV	0		Y	A	-	N
6785303	EL CAJON BL	47TH ST	0		Y	A	-	N
6718332	UNIVERSITY AV	47TH ST	82.9	W	N	B	-	N
8487096	UNIVERSITY AV	FAIRMOUNT AV	12	E	N	A	-	N
8487073	ORANGE AV	34TH ST	0		Y	A	-	N
8481236	44TH ST	UNIVERSITY AV	269	N	N	A	-	N
8458758	EL CAJON BL	35TH ST	135	W	N	A	-	N
8455732	36TH ST	EL CAJON BL	32	S	N	A	-	N
8447569	UNIVERSITY AV	MARLBOROUGH AV	0		Y	A	-	N
8446456	VAN DYKE AV	UNIVERSITY AV	0		Y	A	-	N
8443827	UNIVERSITY AV	HIGHLAND AV	350	W	N	A	-	N
8443807	EL CAJON BL	MARLBOROUGH AV	23	S	N	A	-	N
8414058	EL CAJON BL	RT 15	0		Y	A	-	N
8410598	ORANGE AV	EUCLID AV	0		Y	A	-	N

CASE_ID	PRIMARY_RD	SECONDARY_	DISTANCE	DIRECTION	INTERSECTI	WEATHER_1	WEATHER_2	STATE_HWY_
8409628	UNIVERSITY AV	41ST ST	178	W	N	A	-	N
8387536	42ND ST	UNIVERSITY AV	12	S	N	A	-	N
8372054	EL CAJON BL	HIGHLAND AV	5	W	N	B	-	N
8370045	ORANGE AV	CENTRAL AV	0		Y	A	-	N
8363302	POLK AV	MARLBOROUGH AV	17	E	N	A	-	N
8359422	CHEROKEE AV	UNIVERSITY	9	N	N	A	-	N
8343743	UNIVERSITY AV	SWIFT AV	0		Y	A	-	N
8338652	ORANGE AV	33RD ST	10	S	N	A	-	N
8336948	EL CAJON BL	36TH ST	8	W	N	A	-	N
8328940	VAN DYKE AV	ORANGE AV	0		Y	A	-	N
8304095	UNIVERSITY AV	39TH ST	0		Y	A	-	N
8286916	UNIVERSITY AV	43RD ST	3	E	N	A	-	N
8206953	EL CAJON BL	FAIRMOUNT AV	0		Y	B	-	N
8202968	EL CAJON BL	MENLO AV	12	E	N	B	-	N
8199326	UNIVERSITY AV	41ST ST	48	W	N	C	-	N
8199313	ORANGE AV	HIGHLAND AV	0		Y	C	-	N
8199259	UNIVERSITY	41ST ST	18	W	N	A	-	N
8198093	UNIVERSITY AV	39TH ST	0		Y	C	-	N
8193724	48TH ST	ORANGE AV	48	N	N	A	-	N
8192386	POLK AV	EUCLID AV	0		Y	B	-	N
8192334	EL CAJON BL	37TH ST	0		Y	A	-	N
8188789	CHAMOUNE AV	POLK AV	10	S	N	A	-	N
8179469	ORANGE AV	FAIRMONT AV	0		Y	A	-	N
8178718	UNIVERSITY AV	47TH ST	0		Y	A	-	N
8165336	FAIRMOUNT AV	POLK AV	0		Y	A	-	N
8164387	FAIRMONT AV	UNIVERSITY AV	100	S	N	A	-	N
8151946	EL CAJON BL	MARLBOROUGH AV	0		Y	A	-	N
8139702	POLK AV	44TH ST	174	E	N	A	-	N
8138510	UNIVERSITY AV	WABASH AV	75	W	N	A	-	N
8110952	EL CAJON BL	MENLO AV	5	E	N	A	-	N
8107451	ORANGE AV	43RD AV	50	W	N	A	-	N
8105426	UNIVERSITY AV	FAIRMOUNT AV	128	E	N	A	-	N
8105404	40TH ST	ORANGE AV	0		Y	A	-	N
8101547	POLK AV	HIGHLAND AV	15	W	N	A	-	N
8101517	EL CAJON BL	36TH ST	0		Y	A	-	N
8096669	VAN DYKE AV	UNIVERSITY AV	115	N	N	A	-	N

CASE_ID	PRIMARY_RD	SECONDARY_	DISTANCE	DIRECTION	INTERSECTI	WEATHER_1	WEATHER_2	STATE_HWY_
8090362	36TH ST	ORANGE AV	0		Y	A	-	N
8087570	ORANGE AV	46TH ST	0		Y	A	-	N
8081530	ORANGE AV	CENTRAL AV	0		Y	A	-	N
8068094	UNIVERSITY AV	44TH ST	60 E		N	A	-	N
8055351	UNIVERSITY AV	FAIRMOUNT AV	0		Y	A	-	N
8046698	EL CAJON BL	HIGHLAND AV	0		Y	A	-	N
8037617	UNIVERSITY AV	MENLO AV	35 S		N	B	-	N
8037595	UNIVERSITY AV	FAIRMONT AV	15 E		N	A	-	N
8031943	EUCLID AV	EL CAJON BL	90 S		N	A	-	N
8017405	COPELAND AV	EL CAJON BL	0		Y	B	-	N
8016326	EL CAJON BL	42ND ST	0		Y	A	-	N
8000942	FAIRMOUNT AV	POLK AV	0		Y	B	-	N
7209403	POLK AV	47TH ST	0		Y	A	-	N
7187048	37TH ST	UNIVERSITY AV	15 S		N	A	-	N
7184446	UNIVERSITY AV	FAIRMOUNT AV	0		Y	A	-	N
7168307	UNIVERSITY AV	RT 15	0		Y	A	-	Y
7165642	UNIVERSITY AV	44TH ST	0		Y	A	-	N
7165638	FAIRMOUNT AV	ORANGE AV	14 W		N	B	-	N
7159821	UNIVERSITY AV	WILSON AV	0		Y	A	-	N
6353308	EUCLID AV	EL CAJON BL	180 S		N	A	-	N
6347708	EL CAJON BL	CENTRAL AV	4 W		N	B	-	N

CASE_ID	SIDE_OF_HW	TOW_AWAY	COLLISIO_1	NUMBER_KIL	NUMBER_INJ	PARTY_COUN	PRIMARY_CO	PCF_CODE_O
5910025		N		1	1	0	2 A	-
5911803		Y		1	1	0	2 A	-
5932855		N		3	0	1	2 A	-
5976394		N		4	0	1	2 A	-
5988183		N		3	0	1	2 A	-
5992304		N		3	0	1	2 A	-
5995629		N		4	0	1	2 D	-
5999902		N		4	0	1	2 A	-
6004119		N		3	0	1	2 A	-
6004127		N		4	0	1	2 A	-
6011071		N		4	0	1	2 A	-
6028814		N		4	0	1	2 A	-
6033388		N		2	0	1	2 A	-
6044778		N		3	0	1	2 A	-
6060357		N		3	0	1	2 A	-
6072290		N		3	0	1	1 A	-
6082760		N		3	0	1	2 A	-
6082771		N		3	0	1	2 A	-
6082865		N		2	0	1	2 A	-
6105349		N		4	0	1	2 A	-
6116276		N		4	0	1	2 A	-
6116304		N		3	0	1	2 A	-
6116362		Y		2	0	1	2 A	-
6119552		N		4	0	1	2 A	-
6120185		N		3	0	1	2 A	-
6134610		N		4	0	1	2 A	-
6134612		N		4	0	1	2 A	-
6173821		N		3	0	1	2 A	-
6196463		N		4	0	1	2 A	-
6198499		N		4	0	1	2 A	-
6203129		N		4	0	1	2 A	-
6230473		N		3	0	1	2 A	-
6231433		N		2	0	1	2 A	-
6233964		N		4	0	1	2 A	-
6236906		N		3	0	1	2 A	-
6274666		N		4	0	1	3 A	-

CASE_ID	SIDE_OF_HW	TOW_AWAY	COLLISIO_1	NUMBER_KIL	NUMBER_INJ	PARTY_COUN	PRIMARY_CO	PCF_CODE_O
6277573		N		3	0	1	2 A	-
6317255		N		4	0	1	2 B	-
6318652		N		3	0	1	2 A	-
6322696		N		2	0	2	2 A	-
6336188		N		2	0	1	3 A	-
6338047		N		4	0	1	2 A	-
6342227		N		3	0	1	2 A	-
8522286		N		3	0	1	2 A	-
8517106 S		N		3	0	1	2 A	-
8509122 S		N		4	0	1	2 A	-
8506185		N		3	0	1	2 A	-
8503556		N		4	0	1	2 A	-
8499736		N		3	0	1	2 A	-
8494275		Y		3	0	1	2 A	-
7150920		N		4	0	1	2 A	-
7149399		N		3	0	1	2 A	-
7145955		N		4	0	1	2 A	-
7142359		N		4	0	1	2 A	-
7142231		Y		2	0	2	2 -	-
7142161		N		3	0	1	2 A	-
7141893		N		3	0	1	2 A	-
7137331		N		4	0	1	2 A	-
7137122		N		4	0	1	2 A	-
7129032		N		2	0	1	2 A	-
7129020		N		3	0	1	2 A	-
7127696		N		3	0	1	2 A	-
7125117		N		4	0	1	2 A	-
7124078		N		2	0	1	2 A	-
7124075		N		4	0	1	2 A	-
7108618		N		3	0	1	2 A	-
7106790		N		3	0	1	2 A	-
7106786		N		3	0	1	2 A	-
7103004		N		4	0	1	2 A	-
7102297		N		2	0	2	3 A	-
7102293		N		2	0	3	4 A	-
7098619		N		3	0	1	2 A	-

CASE_ID	SIDE_OF_HW	TOW_AWAY	COLLISIO_1	NUMBER_KIL	NUMBER_INJ	PARTY_COUN	PRIMARY_CO	PCF_CODE_O
7098448		N		4	0	1	2 A	-
7088028		N		3	0	1	2 A	-
7082012		N		3	0	1	2 A	-
7067048		N		3	0	1	2 A	-
7060964		N		3	0	1	2 A	-
7058170		N		4	0	1	2 A	-
7031722		N		4	0	1	2 A	-
7010507		Y		3	0	1	2 A	-
7004183		N		3	0	1	2 A	-
6989719		N		4	0	1	2 A	-
6978554		N		3	0	1	2 A	-
6975664		N		3	0	1	2 A	-
6784601		N		3	0	1	1 A	-
6771289		N		4	0	1	2 A	-
6732672		N		3	0	1	2 A	-
6731885		N		4	0	1	2 A	-
6690583		N		3	0	1	2 A	-
6689122		N		3	0	1	2 A	-
6688933		N		4	0	1	2 A	-
6683153		N		4	0	1	2 A	-
6680469		N		4	0	1	2 A	-
6680467		N		4	0	1	2 A	-
6668848		N		4	0	1	2 C	-
6666814		N		3	0	1	2 A	-
6659230		N		3	0	2	3 A	-
6640633		N		3	0	1	2 A	-
6638316		N		3	0	1	2 A	-
6638311		Y		2	0	1	2 A	-
6638309		N		4	0	1	2 D	-
6636803		N		4	0	1	2 A	-
6629337		N		3	0	1	2 A	-
6619632		Y		3	0	1	2 A	-
6612232		Y		4	0	1	2 -	-
6611898		N		4	0	1	2 A	-
6601691				4	0	1	3 A	-
6601687		N		4	0	1	2 A	-

CASE_ID	SIDE_OF_HW	TOW_AWAY	COLLISIO_1	NUMBER_KIL	NUMBER_INJ	PARTY_COUN	PRIMARY_CO	PCF_CODE_O
6601166		N		2	0	1	2 A	-
6596001		N		4	0	1	2 A	-
6595482		N		4	0	1	2 A	-
6580685		N		4	0	1	2 A	-
6580624		N		4	0	1	2 A	-
6572803		N		3	0	1	2 A	-
6560191		N		4	0	1	2 A	-
6560151		N		4	0	1	2 A	-
6550187		N		3	0	1	2 A	-
6546930		N		3	0	1	2 A	-
6529776		N		4	0	1	2 A	-
6524981		N		3	0	1	2 A	-
6524965		N		4	0	1	2 A	-
6524197		N		3	0	1	2 A	-
6516121		N		4	0	2	2 A	-
6505598		N		4	0	1	2 B	-
6501146		N		3	0	1	2 A	-
6480178		N		3	0	1	2 A	-
6451641		N		3	0	1	2 A	-
6450996		N		3	0	1	2 A	-
6449107		N		4	0	1	2 A	-
6443776		N		4	0	1	2 A	-
6443022		Y		2	0	1	2 A	-
6442998		N		4	0	2	3 A	-
6428606		N		3	0	1	2 A	-
6417349		N		4	0	1	2 A	-
6416841		N		3	0	1	2 A	-
6401503		N		4	0	1	2 A	-
6381851		N		4	0	1	2 A	-
6381847		N		4	0	1	2 A	-
6376660		N		4	0	1	2 A	-
6373243		N		4	0	1	2 A	-
6352464		N		4	0	1	2 A	-
6916228		N		3	0	1	2 A	-
6909243				3	0	1	2 A	-
6907192				3	0	1	2 A	-

CASE_ID	SIDE_OF_HW	TOW_AWAY	COLLISIO_1	NUMBER_KIL	NUMBER_INJ	PARTY_COUN	PRIMARY_CO	PCF_CODE_O
6902484		N		4	0	1	2 A	-
6894639		N		4	0	1	2 A	-
6894588		N		4	0	1	2 A	-
6882371		N		3	0	2	2 A	-
6869365		N		4	0	1	2 A	-
6865958		N		3	0	1	2 A	-
6859968		N		4	0	1	2 A	-
6859038		N		2	0	1	2 A	-
6857182		N		4	0	1	2 A	-
6856709		N		4	0	1	2 A	-
6844399		N		3	0	1	2 A	-
6837091		N		4	0	1	2 A	-
6833684		N		3	0	1	2 A	-
6822597		N		4	0	1	2 A	-
6820583		N		4	0	1	2 A	-
6820558		N		4	0	1	2 A	-
6815822		N		4	0	1	2 A	-
6811176		N		3	0	1	2 A	-
6802350		N		4	0	1	2 A	-
6801944 S		N		3	0	1	2 A	-
6795808		N		3	0	1	2 A	-
6789087		N		2	0	1	2 A	-
6789055		N		3	0	1	2 A	-
6785303		N		3	0	1	2 A	-
6718332		N		1	1	0	2 A	-
8487096		N		3	0	1	2 A	-
8487073		N		4	0	1	2 A	-
8481236		N		4	0	1	2 A	-
8458758		N		3	0	1	2 A	-
8455732		N		3	0	1	2 A	-
8447569		N		4	0	1	2 A	-
8446456		N		4	0	1	2 A	-
8443827		N		3	0	1	2 A	-
8443807		N		4	0	1	2 A	-
8414058		N		4	0	1	2 -	-
8410598		Y		3	0	1	2 A	-

CASE_ID	SIDE_OF_HW	TOW_AWAY	COLLISIO_1	NUMBER_KIL	NUMBER_INJ	PARTY_COUN	PRIMARY_CO	PCF_CODE_O
8409628				3	0	1	2 A	-
8387536				3	0	1	2 A	-
8372054		N		4	0	1	2 A	-
8370045		N		3	0	1	2 A	-
8363302		N		4	0	1	2 A	-
8359422		N		4	0	1	2 A	-
8343743		N		4	0	1	2 A	-
8338652				3	0	1	2 A	-
8336948		N		3	0	1	2 A	-
8328940		N		3	0	1	3 A	-
8304095		N		4	0	1	2 A	-
8286916		N		4	0	1	2 A	-
8206953		N		4	0	1	2 A	-
8202968		N		4	0	1	2 A	-
8199326		N		4	0	1	2 A	-
8199313		N		4	0	1	2 A	-
8199259		N		3	0	1	2 A	-
8198093		N		4	0	1	2 A	-
8193724		N		4	0	1	2 A	-
8192386		N		4	0	2	3 A	-
8192334		N		3	0	1	2 A	-
8188789		N		3	0	1	2 A	-
8179469		N		3	0	1	2 A	-
8178718		Y		2	0	1	2 A	-
8165336		N		4	0	1	2 A	-
8164387		N		3	0	1	2 A	-
8151946		N		4	0	1	2 A	-
8139702		N		4	0	1	2 A	-
8138510		N		4	0	1	2 A	-
8110952		N		4	0	1	2 A	-
8107451		N		4	0	1	2 A	-
8105426		N		2	0	1	2 A	-
8105404		N		3	0	1	3 A	-
8101547		N		4	0	1	2 A	-
8101517		N		4	0	1	2 A	-
8096669		N		3	0	1	2 A	-

CASE_ID	SIDE_OF_HW	TOW_AWAY	COLLISIO_1	NUMBER_KIL	NUMBER_INJ	PARTY_COUN	PRIMARY_CO	PCF_CODE_O
8090362		N		3	0	1	2 A	-
8087570		N		4	0	1	2 A	-
8081530		N		3	0	1	2 A	-
8068094		N		3	0	1	2 A	-
8055351		N		3	0	2	3 A	-
8046698				4	0	1	2 A	-
8037617		N		4	0	1	2 C	-
8037595		N		4	0	1	2 A	-
8031943		N		4	0	1	2 A	-
8017405				4	0	1	2 A	-
8016326		N		3	0	1	2 A	-
8000942		N		3	0	1	2 A	-
7209403		N		3	0	1	2 A	-
7187048		N		3	0	1	2 A	-
7184446		N		3	0	1	2 A	-
7168307 S		N		4	0	1	2 A	-
7165642		N		3	0	1	2 A	-
7165638		N		3	0	1	2 A	-
7159821		N		4	0	1	2 A	-
6353308		N		4	0	1	2 A	-
6347708		N		4	0	1	2 A	-

CASE_ID	PCF_VIOL_C	PCF_VIOLAT	PCF_VIOL_S	HIT_AND_RU	TYPE_OF_CO	MVIW	PED_ACTION	ROAD_SURFA
5910025	11	21954	A	N	G	B	D	A
5911803	10	21950	A	N	G	B	D	A
5932855	11	21950	B	N	G	B	B	A
5976394	8	22107		N	H	G	A	A
5988183	11	21456	B	F	G	B	B	A
5992304	10	21950	A	M	G	B	B	A
5995629	0	0		N	G	B	B	A
5999902	10	21950	A	N	G	B	B	A
6004119	0	0		N	-	B	B	A
6004127	0	0		N	G	B	D	A
6011071	9	21801	A	N	D	G	A	A
6028814	10	21950	C	N	G	B	B	A
6033388	11	21954	A	N	G	B	D	A
6044778	9	21804	A	N	E	G	A	A
6060357	10	21950	A	N	G	B	B	A
6072290	0	0		N	E	A	A	A
6082760	9	21804	A	M	D	G	A	A
6082771	11	21456	B	N	A	B	B	A
6082865	10	21950	A	N	G	B	B	A
6105349	10	21950	A	N	G	B	B	A
6116276	12	22450	A	N	D	G	A	A
6116304	3	22350		N	C	G	A	A
6116362	10	21950	A	N	G	B	B	A
6119552	10	21950	A	N	-	B	B	A
6120185	11	21954	A	N	G	B	D	A
6134610	9	21802	A	N	D	G	A	A
6134612	11	21950	B	N	G	B	D	A
6173821	11	21954	A	N	G	B	D	A
6196463	11	21955		N	G	B	D	A
6198499	10	21950	A	N	G	B	B	A
6203129	9	21804	A	N	D	G	A	A
6230473	8	22107		N	A	G	A	A
6231433	5	21650		1 N	D	G	A	A
6233964	11	21954	A	N	G	B	E	A
6236906	12	22450	A	N	D	G	A	B
6274666	10	21950	A	N	G	B	B	A

CASE_ID	PCF_VIOL_C	PCF_VIOLAT	PCF_VIOL_S	HIT_AND_RU	TYPE_OF_CO	MVIW	PED_ACTION	ROAD_SURFA
6277573	9	21804	A	N	D	G	A	A
6317255	22	0		N	G	B	F	A
6318652	10	21950	A	N	G	B	B	A
6322696	10	21950	A	N	G	B	B	A
6336188	8	22107		N	G	B	E	A
6338047	0	0		N	G	B	B	-
6342227	21	22106		M	B	G	A	A
8522286	10	21950	A	N	G	B	B	A
8517106	11	21456	B	N	G	B	B	A
8509122	11	21456	B	N	G	B	B	A
8506185	8	22107		N	B	G	A	A
8503556	8	22107		N	B	G	A	A
8499736	10	21950	A	N	G	B	B	A
8494275	9	21453	C	M	E	I	F	A
7150920	21	22106		N	G	B	F	A
7149399	11	21950	B	N	G	B	D	A
7145955	10	21950	A	N	G	B	B	A
7142359	11	21950	B	N	G	B	B	A
7142231	0	0		N	G	B	F	A
7142161	12	22450	A	N	D	G	A	A
7141893	11	21950	B	N	G	B	D	A
7137331	0	12950	A	N	G	B	B	A
7137122	10	21950	A	N	G	B	B	A
7129032	10	21950	A	N	G	B	B	A
7129020	11	21950	B	N	G	B	D	A
7127696	8	22107		N	G	B	B	A
7125117	10	21950	A	M	D	B	-	A
7124078	10	21950	A	N	G	B	B	A
7124075	11	21950	B	M	D	B	B	A
7108618	10	21950	A	N	G	B	B	A
7106790	12	21453	A	N	D	G	A	A
7106786	17	22517		N	H	G	A	A
7103004	5	21202	A	N	H	G	A	A
7102297	10	21950	A	N	G	B	B	A
7102293	3	22350		N	G	B	E	A
7098619	11	21950	B	M	G	B	D	A

CASE_ID	PCF_VIOL_C	PCF_VIOLAT	PCF_VIOL_S	HIT_AND_RU	TYPE_OF_CO	MVIW	PED_ACTION	ROAD_SURFA
7098448		5	21650	1 N	A	G	A	A
7088028		10	21950 A	F	G	B	C	A
7082012		9	21801 A	N	D	G	A	A
7067048		10	21950 A	N	G	B	B	A
7060964		11	21954 A	N	G	B	D	A
7058170		6	21750 A	N	D	G	A	A
7031722		10	21950 A	N	G	B	B	A
7010507		10	21950	N	G	B	B	A
7004183		10	21950 A	N	A	B	B	A
6989719		11	21456 B	N	H	G	A	A
6978554		11	21950 B	N	B	B	F	A
6975664		11	21456 B	N	D	G	A	A
6784601		8	22107	N	H	A	A	A
6771289		11	21955	M	G	B	D	B
6732672		9	21801 A	N	G	B	D	B
6731885		5	21650	1 N	D	G	A	A
6690583		8	22107	M	B	B	D	-
6689122		9	21804 A	N	D	G	A	A
6688933		0	0	N	G	B	B	A
6683153		9	21801 A	N	G	B	B	A
6680469		12	21453 A	N	C	G	A	A
6680467		10	21950 A	N	B	G	A	A
6668848		18	0	N	D	B	E	A
6666814		9	21801 A	N	D	G	A	A
6659230		10	21950 A	N	G	B	B	A
6640633		3	22350	M	G	B	D	A
6638316		12	22450 A	M	D	G	A	A
6638311		12	21453 A	N	H	G	A	A
6638309		0	0	N	A	B	-	A
6636803		3	22350	N	G	B	B	A
6629337		11	21456 B	N	D	G	A	A
6619632		9	21802 A	N	-	G	A	-
6612232		0	0	N	A	G	A	A
6611898		21	22106	N	G	B	D	A
6601691		21	22106	N	G	B	E	A
6601687		17	22517	N	H	G	A	A

CASE_ID	PCF_VIOL_C	PCF_VIOLAT	PCF_VIOL_S	HIT_AND_RU	TYPE_OF_CO	MVIW	PED_ACTION	ROAD_SURFA
6601166		11	21954 A	N	G	B	D	A
6596001		11	21954 A	N	G	B	D	A
6595482		10	21950 A	N	G	B	B	A
6580685		10	21950 A	N	G	B	D	A
6580624		21	22106	N	G	B	E	A
6572803		10	21950 A	M	G	B	B	A
6560191		10	21950 A	N	G	B	B	A
6560151		11	21456 B	N	G	B	B	A
6550187		3	22350	N	C	G	A	A
6546930		6	21754	N	B	G	A	A
6529776		9	21802 A	N	D	G	A	A
6524981		5	21650	1 N	A	G	A	A
6524965		9	21802 A	M	D	G	A	A
6524197		0	0	M	G	B	E	A
6516121		8	22107	N	C	G	A	A
6505598		22	0	N	D	G	A	A
6501146		8	22107	N	C	E	A	A
6480178		21	22106	N	G	B	E	A
6451641		12	21453 A	N	H	G	A	A
6450996		10	21950 A	N	A	B	B	A
6449107		9	21800 A	N	D	G	A	A
6443776		21	22106	N	G	B	D	A
6443022		10	21950 A	N	G	B	D	A
6442998		10	21950 A	N	G	B	B	A
6428606		17	22517	N	H	G	A	A
6417349		0	0	N	G	B	D	A
6416841		10	21950 A	N	G	B	B	A
6401503		9	21801 A	N	D	G	A	A
6381851		10	21950 A	N	G	B	B	A
6381847		12	21453 A	N	G	B	B	A
6376660		8	22107	M	D	G	A	A
6373243		10	21950 A	N	G	B	B	A
6352464		10	21950 A	N	G	B	B	A
6916228		10	21950 A	N	G	B	B	A
6909243		8	22107	N	D	G	A	-
6907192		9	21801 A	N	G	B	C	A

CASE_ID	PCF_VIOL_C	PCF_VIOLAT	PCF_VIOL_S	HIT_AND_RU	TYPE_OF_CO	MVIW	PED_ACTION	ROAD_SURFA
6902484		5	21650	1 N	H	G	A	B
6894639		3	22350	N	G	B	D	A
6894588		9	21801 A	N	A	G	A	A
6882371		5	21650	1 N	D	G	A	A
6869365		8	22107	N	-	I	F	A
6865958		3	22350	N	G	B	B	A
6859968		5	21650	1 N	D	G	A	A
6859038		9	21804 A	N	D	G	A	A
6857182	10		21950 A	M	-	-	-	-
6856709	12		22450 A	N	D	B	B	A
6844399	10		21950 A	N	A	B	B	B
6837091	10		21950 A	N	G	B	B	A
6833684	8		22107	M	G	B	-	A
6822597	0	0		M	G	B	B	A
6820583	9		21801 A	N	G	B	B	A
6820558	10		21950 A	N	G	B	B	A
6815822	10		21950 A	N	G	B	B	A
6811176	10		21950 A	N	G	B	-	A
6802350	12		22450 A	N	D	G	A	A
6801944	10		21950 A	M	-	B	B	A
6795808	6		21750	N	H	G	A	A
6789087	10		21950 A	N	G	B	B	A
6789055	10		21950 A	N	G	B	B	A
6785303	9		21801 A	N	D	G	A	A
6718332	11		21954 A	N	G	B	D	A
8487096	12		21453 A	M	-	B	B	A
8487073	12		22450 A	M	D	B	B	A
8481236	8		22107	N	G	B	E	A
8458758	10		21950 A	N	D	B	D	A
8455732	11		21955	N	D	B	-	A
8447569	9		21801 A	N	-	G	A	A
8446456	10		21950 A	N	G	B	B	A
8443827	5		21650	1 N	D	G	A	A
8443807	10		21950 A	M	G	B	B	A
8414058	0	0		N	G	G	A	A
8410598	8		22107	N	D	G	A	A

CASE_ID	PCF_VIOL_C	PCF_VIOLAT	PCF_VIOL_S	HIT_AND_RU	TYPE_OF_CO	MVIW	PED_ACTION	ROAD_SURFA
8409628	0	21760	C	M	B	G	A	A
8387536	11	21950	B	N	G	B	D	A
8372054	10	21950	A	N	A	B	B	A
8370045	8	22107		N	D	G	A	A
8363302	10	21950	A	M	G	B	B	A
8359422	9	21804		N	D	G	A	A
8343743	3	22350		N	D	G	A	A
8338652	11	21954	A	N	A	B	D	A
8336948	10	21950	A	N	G	B	C	A
8328940	21	22106		N	D	B	B	A
8304095	10	21950	A	M	-	B	B	A
8286916	12	21453	A	M	G	B	B	A
8206953	12	22450	A	N	D	B	B	A
8202968	11	21456	B	N	G	B	B	A
8199326	8	22107		N	D	G	A	B
8199313	12	22450	A	N	G	B	B	B
8199259	10	21950	A	N	G	B	B	A
8198093	10	21950	A	N	A	B	B	B
8193724	3	22350		M	G	B	E	A
8192386	10	21950	A	N	G	B	B	A
8192334	3	22350		M	G	B	B	A
8188789	9	21800	A	F	B	G	A	A
8179469	3	22350		F	G	B	B	A
8178718	12	22450	A	N	D	G	A	A
8165336	9	21802	A	N	D	G	A	A
8164387	10	21950	C	N	A	B	F	A
8151946	0	20002		M	G	B	D	A
8139702	9	21804	A	N	D	G	A	A
8138510	10	21950	A	N	A	B	B	A
8110952	10	21950	A	N	A	B	B	A
8107451	8	22107		M	C	G	A	A
8105426	11	21954	A	N	G	B	D	A
8105404	9	21801	A	N	D	G	A	A
8101547	0	21050	A	N	G	B	D	A
8101517	5	21650		1 N	H	G	A	A
8096669	3	22350		M	A	G	A	A

CASE_ID	PCF_VIOL_C	PCF_VIOLAT	PCF_VIOL_S	HIT_AND_RU	TYPE_OF_CO	MVIW	PED_ACTION	ROAD_SURFA
8090362		8	22107	N	G	B	B	A
8087570		12	22450 A	N	D	G	A	A
8081530		10	21950 A	N	G	B	D	A
8068094		21	22106	N	G	B	F	A
8055351		11	21950 B	N	G	B	D	A
8046698		0	0	M	D	G	A	A
8037617		18	0	F	A	B	F	A
8037595		10	21950 A	M	G	B	B	A
8031943		8	22107	N	-	G	A	A
8017405		9	21804 A	N	G	B	D	A
8016326		8	22107	M	D	G	A	A
8000942		9	21804 A	N	D	G	A	A
7209403		17	21657	M	-	B	-	A
7187048		10	21950 A	N	-	B	-	A
7184446		11	21456 B	N	G	B	B	A
7168307		12	21453 A	N	D	G	A	A
7165642		10	21950 A	N	G	B	B	A
7165638		9	21801 A	N	G	B	B	A
7159821		10	21950 A	N	B	B	B	A
6353308		21	22106	N	G	B	E	A
6347708		10	21950 A	N	G	B	B	A

CASE_ID	ROAD_COND_	ROAD_COND1	LIGHTING	CONTROL_DE	CHP_ROAD_T	PEDESTRIAN	BICYCLE_AC	MOTORCYCLE
5910025	H	-	C	D		0 Y		
5911803	H	-	C	D		0 Y		
5932855	H	-	A	A		0 Y		
5976394	H	-	A	D		0	Y	
5988183	H	-	C	A		0 Y		
5992304	H	-	B	A		0 Y		
5995629	H	-	A	A		0 Y		
5999902	H	-	A	D		0 Y		
6004119	H	-	A	A		0 Y		
6004127	H	-	D	D		0 Y		
6011071	H	-	A	D		0	Y	
6028814	H	-	C	A		0 Y		
6033388	H	-	A	D		0 Y		
6044778	H	-	A	A		0	Y	
6060357	H	-	A	D		0 Y		
6072290	H	-	A	A		0	Y	
6082760	H	-	D	-		0	Y	
6082771	H	-	C	A		0 Y		
6082865	H	-	C	A		0 Y		
6105349	H	-	C	A		0 Y		
6116276	H	-	A	A		0	Y	
6116304	H	-	A	A		0	Y	
6116362	H	-	C	D		0 Y		
6119552	H	-	A	A		0 Y		
6120185	H	-	B	D		0 Y		
6134610	H	-	B	D		0	Y	
6134612	H	-	A	D		0 Y		
6173821	H	-	C	D		0 Y		
6196463	H	-	C	D		0 Y		
6198499	H	-	B	D		0 Y		
6203129	H	-	C	A		0	Y	
6230473	H	-	B	D		0	Y	
6231433	H	-	C	D		0	Y	
6233964	H	-	D	D		0 Y		
6236906	H	-	A	A		0	Y	
6274666	H	-	A	D		0 Y		

CASE_ID	ROAD_COND_	ROAD_COND1	LIGHTING	CONTROL_DE	CHP_ROAD_T	PEDESTRIAN	BICYCLE_AC	MOTORCYCLE
6277573	H	-	A	D		0	Y	
6317255	H	-	A	D		0 Y		
6318652	H	-	A	D		0 Y		
6322696	H	-	C	A		0 Y		
6336188	H	-	A	D		0 Y		
6338047	A	H	A	A		0 Y		
6342227	H	-	A	D		0	Y	
8522286	H	-	A	D		0 Y		
8517106	H	-	C	A		0 Y		
8509122	H	-	A	A		0 Y		
8506185	H	-	A	D		0	Y	
8503556	H	-	A	D		0	Y	
8499736	H	-	A	A		0 Y		
8494275	H	-	C	A		0 Y		
7150920	H	-	C	D		0 Y		
7149399	H	-	C	D		0 Y		
7145955	H	-	A	A		0 Y		
7142359	H	-	A	A		0 Y		
7142231	H	-	C	D		0 Y		
7142161	H	-	A	D		0	Y	
7141893	-	-	D	D		0 Y		
7137331	H	-	A	A		0 Y		
7137122	H	-	A	A		0 Y		
7129032	H	-	A	A		0 Y		
7129020	H	-	C	D		0 Y		
7127696	H	-	A	A		0 Y		
7125117	H	-	C	D		0 Y		
7124078	H	-	C	D		0 Y		
7124075	-	-	C	A		0 Y		
7108618	H	-	C	D		0 Y		
7106790	H	-	A	A		0	Y	
7106786	H	-	A	D		0	Y	
7103004	H	-	A	A		0	Y	
7102297	H	-	A	A		0 Y		
7102293	G	-	A	A		0 Y		
7098619	H	-	C	D		0 Y		

CASE_ID	ROAD_COND_	ROAD_COND1	LIGHTING	CONTROL_DE	CHP_ROAD_T	PEDESTRIAN	BICYCLE_AC	MOTORCYCLE
7098448	H	-	A	A		0	Y	
7088028	H	-	A	A		0 Y		
7082012	H	-	C	D		0	Y	
7067048	H	-	A	A		0 Y		
7060964	H	-	C	D		0 Y		
7058170	H	-	A	D		0	Y	
7031722	H	-	C	D		0 Y		
7010507	H	-	A	A		0 Y		
7004183	H	-	A	A		0 Y		
6989719	H	-	A	A		0	Y	
6978554	H	-	A	A		0 Y		
6975664	H	-	A	A		0	Y	
6784601	H	-	A	A		0	Y	
6771289	H	-	D	D		0 Y		
6732672	H	-	C	A		0 Y		
6731885	H	-	A	D		0	Y	
6690583	H	-	A	-		0 Y		
6689122	H	-	A	D		0	Y	
6688933	H	-	C	A		0 Y		
6683153	H	-	A	A		0 Y		
6680469	H	-	C	A		0	Y	
6680467	H	-	C	A		0	Y	
6668848	H	-	A	D		0 Y		
6666814	H	-	A	A		0	Y	
6659230	H	-	E	D		0 Y		
6640633	H	-	A	D		0 Y		
6638316	H	-	C	D		0	Y	
6638311	H	-	A	A		0	Y	
6638309	H	-	A	A		0 Y		
6636803	H	-	C	A		0 Y		
6629337	H	-	A	A		0	Y	
6619632	-	-	-	D		0	Y	
6612232	H	-	B	D		0	Y	
6611898	H	-	C	D		0 Y		
6601691	H	-	A	D		0 Y		
6601687	H	-	A	D		0	Y	

CASE_ID	ROAD_COND_	ROAD_COND1	LIGHTING	CONTROL_DE	CHP_ROAD_T	PEDESTRIAN	BICYCLE_AC	MOTORCYCLE
6601166	H	-	C	D		0 Y		
6596001	H	-	A	D		0 Y		
6595482	H	-	A	D		0 Y		
6580685	H	-	A	D		0 Y		
6580624	H	-	C	D		0 Y		
6572803	H	-	A	A		0 Y		
6560191	H	-	A	D		0 Y		
6560151	H	-	A	A		0 Y		
6550187	H	-	B	D		0	Y	
6546930	H	-	A	A		0	Y	
6529776	H	-	A	A		0	Y	
6524981	H	-	A	D		0	Y	
6524965	H	-	A	A		0	Y	
6524197	H	-	D	D		0 Y		
6516121	H	-	C	A		0	Y	
6505598	H	-	B	D		0	Y	
6501146	H	-	A	D		0	Y	
6480178	H	-	A	D		0 Y		
6451641	-	-	C	A		0	Y	
6450996	H	-	B	A		0 Y		
6449107	H	-	A	D		0	Y	
6443776	H	-	A	A		0 Y		
6443022	H	-	C	D		0 Y		
6442998	H	-	A	D		0 Y		
6428606	H	-	A	D		0	Y	
6417349	H	-	A	A		0 Y		
6416841	H	-	A	D		0 Y		
6401503	H	-	A	D		0	Y	
6381851	H	-	A	A		0 Y		
6381847	H	-	A	A		0 Y		
6376660	H	-	A	D		0	Y	
6373243	H	-	A	A		0 Y		
6352464	H	-	C	D		0 Y		
6916228	H	-	A	A		0 Y		
6909243	-	-	-	D		0	Y	
6907192	H	-	A	D		0 Y		

CASE_ID	ROAD_COND_	ROAD_COND1	LIGHTING	CONTROL_DE	CHP_ROAD_T	PEDESTRIAN	BICYCLE_AC	MOTORCYCLE
6902484	H	-	A	D		0	Y	
6894639	H	-	A	A		0 Y		
6894588	H	-	A	A		0	Y	
6882371	H	-	A	A		0	Y	
6869365	H	-	A	A		0 Y		
6865958	H	-	A	A		0 Y		
6859968	H	-	-	-		0	Y	
6859038	H	-	A	D		0	Y	
6857182	-	-	-	-		0 Y		
6856709	H	-	A	A		0 Y		
6844399	H	-	A	A		0 Y		
6837091	H	-	C	A		0 Y		
6833684	H	-	C	-		0 Y		
6822597	H	-	C	A		0 Y		
6820583	H	-	C	A		0 Y		
6820558	H	-	A	A		0 Y		
6815822	H	-	A	A		0 Y		
6811176	H	-	C	D		0 Y		
6802350	H	-	A	D		0	Y	
6801944	H	-	A	A		0 Y		
6795808	H	-	C	D		0	Y	
6789087	H	-	A	A		0 Y		
6789055	H	-	A	A		0 Y		
6785303	H	-	C	A		0	Y	
6718332	H	-	C	D		0 Y		
8487096	H	-	A	A		0 Y		
8487073	H	-	B	D		0 Y		
8481236	A	-	A	D		0 Y		
8458758	H	-	C	D		0 Y		
8455732	H	-	C	A		0 Y		
8447569	G	-	A	A		0	Y	
8446456	H	-	C	A		0 Y		
8443827	H	-	C	D		0	Y	
8443807	H	-	C	A		0 Y		
8414058	H	-	C	A		0	Y	
8410598	H	-	A	D		0	Y	

CASE_ID	ROAD_COND_	ROAD_COND1	LIGHTING	CONTROL_DE	CHP_ROAD_T	PEDESTRIAN	BICYCLE_AC	MOTORCYCLE
8409628	H	-	C	D		0	Y	
8387536	H	-	C	A		0 Y		
8372054	H	-	A	A		0 Y		
8370045	H	-	A	D		0	Y	
8363302	H	-	A	D		0 Y		
8359422	H	-	A	D		0	Y	
8343743	H	-	A	A		0	Y	
8338652	H	-	C	D		0 Y		
8336948	H	-	C	D		0 Y		
8328940	H	-	A	D		0 Y	Y	
8304095	H	-	A	A		0 Y		
8286916	H	-	A	A		0 Y		
8206953	H	-	A	A		0 Y		
8202968	H	-	A	A		0 Y		
8199326	H	-	C	D		0	Y	
8199313	H	-	A	A		0 Y		
8199259	H	-	A	A		0 Y		
8198093	H	-	A	A		0 Y		
8193724	H	-	B	D		0 Y		
8192386	H	-	C	A		0 Y		
8192334	H	-	A	A		0 Y		
8188789	H	-	C	A		0	Y	
8179469	H	-	C	A		0 Y		
8178718	H	-	C	A		0	Y	
8165336	H	-	A	A		0	Y	
8164387	H	-	A	-		0 Y		
8151946	H	-	B	A		0 Y		
8139702	H	-	A	-		0	Y	
8138510	-	-	A	A		0 Y		
8110952	H	-	A	A		0 Y		
8107451	H	-	C	D		0	Y	
8105426	H	-	A	D		0 Y		
8105404	H	-	A	A		0	Y	
8101547	H	-	B	D		0 Y		
8101517	H	-	A	A		0	Y	
8096669	H	-	C	A		0	Y	

CASE_ID	ROAD_COND_	ROAD_COND1	LIGHTING	CONTROL_DE	CHP_ROAD_T	PEDESTRIAN	BICYCLE_AC	MOTORCYCLE
8090362	H	-	A	D		0 Y		
8087570	H	-	A	D		0	Y	
8081530	H	-	A	D		0 Y		
8068094	H	-	A	D		0 Y		
8055351	H	-	A	A		0 Y		
8046698	H	-	A	A		0	Y	
8037617	H	-	A	D		0 Y		
8037595	H	-	A	A		0 Y		
8031943	H	-	A	D		0	Y	
8017405	H	-	A	D		0 Y		
8016326	G	-	A	A		0	Y	
8000942	H	-	C	A		0	Y	
7209403	H	-	A	A		0 Y		
7187048	H	-	C	-		0 Y		
7184446	H	-	A	A		0 Y		
7168307	H	-	A	A		0	Y	
7165642	H	-	C	A		0 Y		
7165638	H	-	C	A		0 Y		
7159821	H	-	A	A		0 Y		
6353308	H	-	C	D		0 Y		
6347708	H	-	A	A		0 Y		

CASE_ID	TRUCK_ACCI	NOT_PRIVAT	ALCOHOL_IN	STWD_VEHTY	CHP_VEHTYP	COUNT_SEVE	COUNT_VISI	COUNT_COMP
5910025		Y		N		60	0	0
5911803		Y		A		1	0	0
5932855		Y		N		60	0	1
5976394		Y		L		4	0	0
5988183		Y	Y	N		60	0	1
5992304		Y		-		99	0	1
5995629		Y		-	-		0	0
5999902		Y		D		22	0	0
6004119		Y		-	-		0	1
6004127		Y		N		60	0	0
6011071		Y		-	-		0	0
6028814		Y		-	-		0	0
6033388		Y		N		60	1	0
6044778		Y		-	-		0	1
6060357		Y		A		1	0	1
6072290		Y		L		4	0	1
6082760		Y		-	-		0	1
6082771		Y		N		60	0	1
6082865		Y		A		7	1	0
6105349		Y		-	-		0	0
6116276		Y		-	-		0	0
6116304		Y		L		4	0	1
6116362		Y		A		1	1	0
6119552		Y		-	-		0	0
6120185		Y		N		60	0	1
6134610		Y		-	-		0	0
6134612		Y		N		60	0	0
6173821		Y		N		60	0	1
6196463		Y		N		60	0	0
6198499		Y		-	-		0	0
6203129		Y		L		4	0	0
6230473		Y		-	-		0	1
6231433		Y		L		4	1	0
6233964		Y		-	-		0	0
6236906		Y		L		4	0	1
6274666		Y		-	-		0	0

CASE_ID	TRUCK_ACCI	NOT_PRIVAT	ALCOHOL_IN	STWD_VEHTY	CHP_VEHTYP	COUNT_SEVE	COUNT_VISI	COUNT_COMP	
6277573		Y		L		4	0	1	0
6317255		Y		-	-		0	0	1
6318652		Y		-	-		0	1	0
6322696		Y		A		1	1	1	0
6336188		Y		A		1	1	0	0
6338047		Y		-	-		0	0	1
6342227		Y	Y	A		1	0	1	0
8522286		Y		-			0	1	0
8517106		Y		N		60	0	1	0
8509122		Y		N		60	0	0	1
8506185		Y		A		1	0	1	0
8503556		Y		L		4	0	0	1
8499736		Y		A		1	0	1	0
8494275		Y		A		7	0	1	0
7150920		Y		A		1	0	0	1
7149399		Y	Y	N		60	0	1	0
7145955		Y		D		22	0	0	1
7142359		Y		N		60	0	0	1
7142231		Y		-	-		1	1	0
7142161		Y	Y	-			0	1	0
7141893		Y		N		60	0	1	0
7137331		Y		D		22	0	0	1
7137122		Y		A		1	0	0	1
7129032		Y		-			1	0	0
7129020		Y	Y	N		60	0	1	0
7127696		Y		-			0	1	0
7125117		Y		-			0	0	1
7124078		Y		A		1	1	0	0
7124075		Y		N		60	0	0	1
7108618		Y		-			0	1	0
7106790		Y		-			0	1	0
7106786		Y		-			0	1	0
7103004		Y		L		4	0	0	1
7102297		Y		A		1	1	0	1
7102293		Y		A		1	1	1	1
7098619		Y		N		60	0	1	0

CASE_ID	TRUCK_ACCI	NOT_PRIVAT	ALCOHOL_IN	STWD_VEHTY	CHP_VEHTYP	COUNT_SEVE	COUNT_VISI	COUNT_COMP	
7098448		Y		L		4	0	0	1
7088028		Y	Y	-			0	1	0
7082012		Y		-			0	1	0
7067048		Y		-			0	1	0
7060964		Y		N		60	0	1	0
7058170		Y		L		4	0	0	1
7031722		Y		D		22	0	0	1
7010507		Y	Y	A		1	0	1	0
7004183		Y		-			0	1	0
6989719		Y		L		4	0	0	1
6978554		Y		N		60	0	1	0
6975664		Y		L		4	0	1	0
6784601		Y		-	-		0	1	0
6771289		Y		-	-		0	0	1
6732672		Y		A		1	0	1	0
6731885		Y		L		4	0	0	1
6690583		Y		-			0	1	0
6689122		Y		L		4	0	1	0
6688933		Y		N		60	0	0	1
6683153		Y		-			0	0	1
6680469		Y		A		1	0	0	1
6680467		Y		-			0	0	1
6668848		Y		-	-		0	0	1
6666814		Y		-			0	1	0
6659230		Y	Y	A		1	0	2	0
6640633		Y	Y	-		99	0	1	0
6638316		Y	Y	-			0	1	0
6638311		Y		L		4	1	0	0
6638309		Y		-	-		0	0	1
6636803		Y		N		60	0	0	1
6629337		Y		L		4	0	1	0
6619632		Y		A		1	0	1	0
6612232		Y		-	-		0	0	1
6611898		Y		-			0	0	1
6601691		Y		-			0	0	1
6601687		Y		-			0	0	1

CASE_ID	TRUCK_ACCI	NOT_PRIVAT	ALCOHOL_IN	STWD_VEHTY	CHP_VEHTYP	COUNT_SEVE	COUNT_VISI	COUNT_COMP
6601166		Y	Y	N		60	1	0
6596001		Y		N		60	0	0
6595482		Y		-			0	0
6580685		Y	Y	A		1	0	0
6580624		Y	Y	A		1	0	0
6572803		Y		-			0	1
6560191		Y		-			0	0
6560151		Y		N		60	0	0
6550187		Y		L		4	0	1
6546930		Y		L		4	0	1
6529776		Y		L		4	0	0
6524981		Y		L		4	0	1
6524965		Y		-			0	0
6524197		Y		N		60	0	1
6516121		Y		L		4	0	0
6505598		Y		L		4	0	0
6501146		Y	Y	L		4	0	1
6480178		Y		-			0	1
6451641		Y		L		4	0	1
6450996		Y		-			0	1
6449107		Y		L		4	0	0
6443776		Y		A		1	0	0
6443022		Y	Y	N		60	1	0
6442998		Y		-	-		0	0
6428606		Y		-	-		0	1
6417349		Y		N		60	0	0
6416841		Y		A		1	0	1
6401503		Y		-			0	0
6381851		Y		-			0	0
6381847		Y		A		1	0	0
6376660		Y		L		4	0	0
6373243		Y		A		1	0	0
6352464		Y		-			0	0
6916228		Y		-			0	1
6909243		Y		A		1	0	1
6907192		Y		-			0	1

CASE_ID	TRUCK_ACCI	NOT_PRIVAT	ALCOHOL_IN	STWD_VEHTY	CHP_VEHTYP	COUNT_SEVE	COUNT_VISI	COUNT_COMP	
6902484		Y		L		4	0	0	1
6894639		Y	Y	-			0	0	1
6894588		Y		-			0	0	1
6882371		Y		L		4	0	1	1
6869365		Y		-			0	0	1
6865958		Y		-			0	1	0
6859968		Y		L		4	0	0	1
6859038		Y		L		4	1	0	0
6857182		Y		-			0	0	1
6856709		Y		A		1	0	0	1
6844399		Y		-			0	1	0
6837091		Y		-			0	0	1
6833684		Y		-		99	0	1	0
6822597		Y		-		99	0	0	1
6820583		Y		-			0	0	1
6820558		Y		-			0	0	1
6815822		Y		-			0	0	1
6811176		Y		-			0	1	0
6802350		Y		-			0	0	1
6801944		Y		-			0	1	0
6795808		Y		L		4	0	1	0
6789087		Y		A		1	1	0	0
6789055		Y		A		1	0	1	0
6785303		Y		-			0	1	0
6718332		Y		N		60	0	0	0
8487096		Y		-			0	1	0
8487073		Y		-			0	0	1
8481236		Y		-			0	0	1
8458758		Y		N		60	0	1	0
8455732		Y		-	-		0	1	0
8447569		Y		A		1	0	0	1
8446456		Y		-			0	0	1
8443827		Y		L		4	0	1	0
8443807		Y		-			0	0	1
8414058		Y		-	-		0	0	1
8410598		Y		A		1	0	1	0

CASE_ID	TRUCK_ACCI	NOT_PRIVAT	ALCOHOL_IN	STWD_VEHTY	CHP_VEHTYP	COUNT_SEVE	COUNT_VISI	COUNT_COMP	
8409628		Y	Y	-	-		0	1	0
8387536		Y		N		60	0	1	0
8372054		Y		A		7	0	0	1
8370045		Y		A		1	0	1	0
8363302		Y		-		99	0	0	1
8359422		Y		L		4	0	0	1
8343743		Y		L		4	0	0	1
8338652		Y		N		60	0	1	0
8336948		Y		-			0	1	0
8328940		Y		-			0	1	0
8304095		Y		-			0	0	1
8286916		Y		A		1	0	0	1
8206953		Y		-			0	0	1
8202968		Y		N		60	0	0	1
8199326		Y		L		4	0	0	1
8199313		Y		-			0	0	1
8199259		Y		-			0	1	0
8198093		Y		A		1	0	0	1
8193724		Y		-			0	0	1
8192386		Y		-			0	0	2
8192334		Y		-		99	0	1	0
8188789		Y		-			0	1	0
8179469		Y		A		1	0	1	0
8178718		Y		L		4	1	0	0
8165336		Y		L		4	0	0	1
8164387		Y		D		22	0	1	0
8151946		Y	Y	-			0	0	1
8139702		Y		L		4	0	0	1
8138510		Y		-			0	0	1
8110952		Y		A		1	0	0	1
8107451		Y		-			0	0	1
8105426		Y		N		60	1	0	0
8105404		Y		A		1	0	1	0
8101547		Y		-		99	0	0	1
8101517		Y		L		4	0	0	1
8096669		Y		-			0	1	0

CASE_ID	TRUCK_ACCI	NOT_PRIVAT	ALCOHOL_IN	STWD_VEHTY	CHP_VEHTYP	COUNT_SEVE	COUNT_VISI	COUNT_COMP	
8090362		Y		A		1	0	1	0
8087570		Y		A		7	0	0	1
8081530		Y		A		1	0	1	0
8068094		Y		A		1	0	1	0
8055351		Y		N		60	0	1	1
8046698		Y		L		4	0	0	1
8037617		Y	Y	-	-		0	0	1
8037595		Y		-			0	0	1
8031943		Y		L		4	0	0	1
8017405		Y		-			0	0	1
8016326		Y		-		99	0	1	0
8000942		Y		L		4	0	1	0
7209403		Y		N		60	0	1	0
7187048		Y		-			0	1	0
7184446		Y		N		60	0	1	0
7168307		Y		L		4	0	0	1
7165642		Y		D		22	0	1	0
7165638		Y		-			0	1	0
7159821		Y		-			0	0	1
6353308		Y		A		1	0	0	1
6347708		Y		-			0	0	1

CASE_ID	COUNT_PED_	COUNT_PED1	COUNT_BICY	COUNT_BI_1	COUNT_MC_K	COUNT_MC_I	PRIMARY_RA	SECONDARY1
5910025	1	0	0	0	0	0	0 -	-
5911803	1	0	0	0	0	0	0 -	-
5932855	0	1	0	0	0	0	0 -	-
5976394	0	0	0	1	0	0	0 -	-
5988183	0	1	0	0	0	0	0 -	-
5992304	0	1	0	0	0	0	0 -	-
5995629	0	1	0	0	0	0	0 -	-
5999902	0	1	0	0	0	0	0 -	-
6004119	0	1	0	0	0	0	0 -	-
6004127	0	1	0	0	0	0	0 -	-
6011071	0	0	0	1	0	0	0 -	-
6028814	0	1	0	0	0	0	0 -	-
6033388	0	1	0	0	0	0	0 -	-
6044778	0	0	0	1	0	0	0 -	-
6060357	0	1	0	0	0	0	0 -	-
6072290	0	0	0	1	0	0	0 -	-
6082760	0	0	0	1	0	0	0 -	-
6082771	0	1	0	0	0	0	0 -	-
6082865	0	1	0	0	0	0	0 -	-
6105349	0	1	0	0	0	0	0 -	-
6116276	0	0	0	1	0	0	0 -	-
6116304	0	0	0	1	0	0	0 -	-
6116362	0	1	0	0	0	0	0 -	-
6119552	0	1	0	0	0	0	0 -	-
6120185	0	1	0	0	0	0	0 -	-
6134610	0	0	0	1	0	0	0 -	-
6134612	0	1	0	0	0	0	0 -	-
6173821	0	1	0	0	0	0	0 -	-
6196463	0	1	0	0	0	0	0 -	-
6198499	0	1	0	0	0	0	0 -	-
6203129	0	0	0	1	0	0	0 -	-
6230473	0	0	0	1	0	0	0 -	-
6231433	0	0	0	1	0	0	0 -	-
6233964	0	1	0	0	0	0	0 -	-
6236906	0	0	0	1	0	0	0 -	-
6274666	0	1	0	0	0	0	0 -	-

CASE_ID	COUNT_PED_	COUNT_PED1	COUNT_BICY	COUNT_BI_1	COUNT_MC_K	COUNT_MC_I	PRIMARY_RA	SECONDARY1
6277573	0	0	0	0	1	0	0 -	-
6317255	0	1	0	0	0	0	0 -	-
6318652	0	1	0	0	0	0	0 -	-
6322696	0	1	0	0	0	0	0 -	-
6336188	0	1	0	0	0	0	0 -	-
6338047	0	1	0	0	0	0	0 -	-
6342227	0	0	0	1	0	0	0 -	-
8522286	0	1	0	0	0	0	0 -	-
8517106	0	1	0	0	0	0	0 -	SO
8509122	0	1	0	0	0	0	0 -	SF
8506185	0	0	0	1	0	0	0 -	-
8503556	0	0	0	1	0	0	0 -	-
8499736	0	1	0	0	0	0	0 -	-
8494275	0	1	0	0	0	0	0 -	-
7150920	0	1	0	0	0	0	0 -	-
7149399	0	1	0	0	0	0	0 -	-
7145955	0	1	0	0	0	0	0 -	-
7142359	0	1	0	0	0	0	0 -	-
7142231	0	1	0	0	0	0	0 -	-
7142161	0	0	0	1	0	0	0 -	-
7141893	0	1	0	0	0	0	0 -	-
7137331	0	1	0	0	0	0	0 -	-
7137122	0	1	0	0	0	0	0 -	-
7129032	0	1	0	0	0	0	0 -	-
7129020	0	1	0	0	0	0	0 -	-
7127696	0	1	0	0	0	0	0 -	-
7125117	0	1	0	0	0	0	0 -	-
7124078	0	1	0	0	0	0	0 -	-
7124075	0	1	0	0	0	0	0 -	-
7108618	0	1	0	0	0	0	0 -	-
7106790	0	0	0	1	0	0	0 -	-
7106786	0	0	0	1	0	0	0 -	-
7103004	0	0	0	1	0	0	0 -	-
7102297	0	2	0	0	0	0	0 -	-
7102293	0	3	0	0	0	0	0 -	-
7098619	0	1	0	0	0	0	0 -	-

CASE_ID	COUNT_PED_	COUNT_PED1	COUNT_BICY	COUNT_BI_1	COUNT_MC_K	COUNT_MC_I	PRIMARY_RA	SECONDARY1
7098448	0	0	0	0	1	0	0 -	-
7088028	0	1	0	0	0	0	0 -	-
7082012	0	0	0	0	1	0	0 -	-
7067048	0	1	0	0	0	0	0 -	-
7060964	0	1	0	0	0	0	0 -	-
7058170	0	0	0	0	1	0	0 -	-
7031722	0	1	0	0	0	0	0 -	-
7010507	0	1	0	0	0	0	0 -	-
7004183	0	1	0	0	0	0	0 -	-
6989719	0	0	0	0	1	0	0 -	-
6978554	0	1	0	0	0	0	0 -	-
6975664	0	0	0	0	1	0	0 -	-
6784601	0	0	0	0	1	0	0 -	-
6771289	0	0	0	0	0	0	0 -	-
6732672	0	1	0	0	0	0	0 -	-
6731885	0	0	0	0	1	0	0 -	-
6690583	0	1	0	0	0	0	0 -	-
6689122	0	0	0	0	1	0	0 -	-
6688933	0	1	0	0	0	0	0 -	-
6683153	0	1	0	0	0	0	0 -	-
6680469	0	0	0	0	1	0	0 -	-
6680467	0	0	0	0	1	0	0 -	-
6668848	0	1	0	0	0	0	0 -	-
6666814	0	0	0	0	1	0	0 -	-
6659230	0	2	0	0	0	0	0 -	-
6640633	0	1	0	0	0	0	0 -	-
6638316	0	0	0	0	1	0	0 -	-
6638311	0	0	0	0	1	0	0 -	-
6638309	0	1	0	0	0	0	0 -	-
6636803	0	1	0	0	0	0	0 -	-
6629337	0	0	0	0	1	0	0 -	-
6619632	0	0	0	0	1	0	0 -	-
6612232	0	0	0	0	1	0	0 -	-
6611898	0	1	0	0	0	0	0 -	-
6601691	0	1	0	0	0	0	0 -	-
6601687	0	0	0	0	1	0	0 -	-

CASE_ID	COUNT_PED_	COUNT_PED1	COUNT_BICY	COUNT_BI_1	COUNT_MC_K	COUNT_MC_I	PRIMARY_RA	SECONDARY1
6601166	0	1	0	0	0	0	0 -	-
6596001	0	1	0	0	0	0	0 -	-
6595482	0	1	0	0	0	0	0 -	-
6580685	0	1	0	0	0	0	0 -	-
6580624	0	1	0	0	0	0	0 -	-
6572803	0	1	0	0	0	0	0 -	-
6560191	0	1	0	0	0	0	0 -	-
6560151	0	1	0	0	0	0	0 -	-
6550187	0	0	0	1	0	0	0 -	-
6546930	0	0	0	1	0	0	0 -	-
6529776	0	0	0	1	0	0	0 -	-
6524981	0	0	0	1	0	0	0 -	-
6524965	0	0	0	1	0	0	0 -	-
6524197	0	1	0	0	0	0	0 -	-
6516121	0	0	0	1	0	0	0 -	-
6505598	0	0	0	1	0	0	0 -	-
6501146	0	0	0	1	0	0	0 -	-
6480178	0	1	0	0	0	0	0 -	-
6451641	0	0	0	1	0	0	0 -	-
6450996	0	1	0	0	0	0	0 -	-
6449107	0	0	0	1	0	0	0 -	-
6443776	0	1	0	0	0	0	0 -	-
6443022	0	1	0	0	0	0	0 -	-
6442998	0	2	0	0	0	0	0 -	-
6428606	0	0	0	1	0	0	0 -	-
6417349	0	1	0	0	0	0	0 -	-
6416841	0	1	0	0	0	0	0 -	-
6401503	0	0	0	1	0	0	0 -	-
6381851	0	1	0	0	0	0	0 -	-
6381847	0	1	0	0	0	0	0 -	-
6376660	0	0	0	1	0	0	0 -	-
6373243	0	1	0	0	0	0	0 -	-
6352464	0	1	0	0	0	0	0 -	-
6916228	0	1	0	0	0	0	0 -	-
6909243	0	0	0	1	0	0	0 -	-
6907192	0	1	0	0	0	0	0 -	-

CASE_ID	COUNT_PED_	COUNT_PED1	COUNT_BICY	COUNT_BI_1	COUNT_MC_K	COUNT_MC_I	PRIMARY_RA	SECONDARY1
6902484	0	0	0	0	1	0	0 -	-
6894639	0	1	0	0	0	0	0 -	-
6894588	0	0	0	0	1	0	0 -	-
6882371	0	0	0	0	2	0	0 -	-
6869365	0	1	0	0	0	0	0 -	-
6865958	0	1	0	0	0	0	0 -	-
6859968	0	0	0	0	1	0	0 -	-
6859038	0	0	0	0	1	0	0 -	-
6857182	0	1	0	0	0	0	0 -	-
6856709	0	1	0	0	0	0	0 -	-
6844399	0	1	0	0	0	0	0 -	-
6837091	0	1	0	0	0	0	0 -	-
6833684	0	1	0	0	0	0	0 -	-
6822597	0	1	0	0	0	0	0 -	-
6820583	0	1	0	0	0	0	0 -	-
6820558	0	1	0	0	0	0	0 -	-
6815822	0	1	0	0	0	0	0 -	-
6811176	0	1	0	0	0	0	0 -	-
6802350	0	0	0	0	1	0	0 -	-
6801944	0	1	0	0	0	0	0 -	-
6795808	0	0	0	0	1	0	0 -	-
6789087	0	1	0	0	0	0	0 -	-
6789055	0	1	0	0	0	0	0 -	-
6785303	0	0	0	0	1	0	0 -	-
6718332	1	0	0	0	0	0	0 -	-
8487096	0	1	0	0	0	0	0 -	-
8487073	0	1	0	0	0	0	0 -	-
8481236	0	1	0	0	0	0	0 -	-
8458758	0	1	0	0	0	0	0 -	-
8455732	0	1	0	0	0	0	0 -	-
8447569	0	0	0	0	1	0	0 -	-
8446456	0	1	0	0	0	0	0 -	-
8443827	0	0	0	0	1	0	0 -	-
8443807	0	1	0	0	0	0	0 -	-
8414058	0	0	0	0	1	0	0 -	-
8410598	0	0	0	0	1	0	0 -	-

CASE_ID	COUNT_PED_	COUNT_PED1	COUNT_BICY	COUNT_BI_1	COUNT_MC_K	COUNT_MC_I	PRIMARY_RA	SECONDARY1
8409628	0	0	0	0	1	0	0 -	-
8387536	0	1	0	0	0	0	0 -	-
8372054	0	1	0	0	0	0	0 -	-
8370045	0	0	0	1	0	0	0 -	-
8363302	0	1	0	0	0	0	0 -	-
8359422	0	0	0	1	0	0	0 -	-
8343743	0	0	0	1	0	0	0 -	-
8338652	0	1	0	0	0	0	0 -	-
8336948	0	1	0	0	0	0	0 -	-
8328940	0	1	0	0	0	0	0 -	-
8304095	0	1	0	0	0	0	0 -	-
8286916	0	1	0	0	0	0	0 -	-
8206953	0	1	0	0	0	0	0 -	-
8202968	0	1	0	0	0	0	0 -	-
8199326	0	0	0	1	0	0	0 -	-
8199313	0	1	0	0	0	0	0 -	-
8199259	0	1	0	0	0	0	0 -	-
8198093	0	1	0	0	0	0	0 -	-
8193724	0	1	0	0	0	0	0 -	-
8192386	0	2	0	0	0	0	0 -	-
8192334	0	1	0	0	0	0	0 -	-
8188789	0	0	0	1	0	0	0 -	-
8179469	0	1	0	0	0	0	0 -	-
8178718	0	0	0	1	0	0	0 -	-
8165336	0	0	0	1	0	0	0 -	-
8164387	0	1	0	0	0	0	0 -	-
8151946	0	1	0	0	0	0	0 -	-
8139702	0	0	0	1	0	0	0 -	-
8138510	0	1	0	0	0	0	0 -	-
8110952	0	1	0	0	0	0	0 -	-
8107451	0	0	0	1	0	0	0 -	-
8105426	0	1	0	0	0	0	0 -	-
8105404	0	0	0	1	0	0	0 -	-
8101547	0	1	0	0	0	0	0 -	-
8101517	0	0	0	1	0	0	0 -	-
8096669	0	0	0	1	0	0	0 -	-

CASE_ID	COUNT_PED_	COUNT_PED1	COUNT_BICY	COUNT_BI_1	COUNT_MC_K	COUNT_MC_I	PRIMARY_RA	SECONDARY1
8090362	0	1	0	0	0	0	0 -	-
8087570	0	0	0	0	1	0	0 -	-
8081530	0	1	0	0	0	0	0 -	-
8068094	0	1	0	0	0	0	0 -	-
8055351	0	2	0	0	0	0	0 -	-
8046698	0	0	0	1	0	0	0 -	-
8037617	0	1	0	0	0	0	0 -	-
8037595	0	1	0	0	0	0	0 -	-
8031943	0	0	0	1	0	0	0 -	-
8017405	0	1	0	0	0	0	0 -	-
8016326	0	0	0	1	0	0	0 -	-
8000942	0	0	0	1	0	0	0 -	-
7209403	0	1	0	0	0	0	0 -	-
7187048	0	1	0	0	0	0	0 -	-
7184446	0	1	0	0	0	0	0 -	-
7168307	0	0	0	1	0	0	0 -	-
7165642	0	1	0	0	0	0	0 -	-
7165638	0	1	0	0	0	0	0 -	-
7159821	0	1	0	0	0	0	0 -	-
6353308	0	1	0	0	0	0	0 -	-
6347708	0	1	0	0	0	0	0 -	-

CASE_ID	LATITUDE	LONGITUDE	COUNTY	CITY	POINT_X	POINT_Y
5910025			SAN DIEGO	SAN DIEGO	-117.115592	32.749735
5911803			SAN DIEGO	SAN DIEGO	-117.107212	32.753215
5932855			SAN DIEGO	SAN DIEGO	-117.103252	32.749635
5976394			SAN DIEGO	SAN DIEGO	-117.117987	32.753445
5988183			SAN DIEGO	SAN DIEGO	-117.103252	32.749635
5992304			SAN DIEGO	SAN DIEGO	-117.096562	32.753135
5995629			SAN DIEGO	SAN DIEGO	-117.098752	32.749585
5999902			SAN DIEGO	SAN DIEGO	-117.099832	32.749595
6004119			SAN DIEGO	SAN DIEGO	-117.105712	32.749665
6004127			SAN DIEGO	SAN DIEGO	-117.116943	32.755296
6011071			SAN DIEGO	SAN DIEGO	-117.115792	32.755285
6028814			SAN DIEGO	SAN DIEGO	-117.092292	32.749535
6033388			SAN DIEGO	SAN DIEGO	-117.110655	32.750454
6044778			SAN DIEGO	SAN DIEGO	-117.09855	32.753153
6060357			SAN DIEGO	SAN DIEGO	-117.114352	32.749725
6072290			SAN DIEGO	SAN DIEGO	-117.099179	32.755158
6082760			SAN DIEGO	SAN DIEGO	-117.091812	32.75614
6082771			SAN DIEGO	SAN DIEGO	-117.106942	32.749655
6082865			SAN DIEGO	SAN DIEGO	-117.099832	32.749595
6105349			SAN DIEGO	SAN DIEGO	-117.096602	32.749575
6116276			SAN DIEGO	SAN DIEGO	-117.119028	32.755315
6116304			SAN DIEGO	SAN DIEGO	-117.114132	32.75527
6116362			SAN DIEGO	SAN DIEGO	-117.100872	32.751425
6119552			SAN DIEGO	SAN DIEGO	-117.113652	32.755275
6120185			SAN DIEGO	SAN DIEGO	-117.095496	32.752492
6134610			SAN DIEGO	SAN DIEGO	-117.099776	32.753164
6134612			SAN DIEGO	SAN DIEGO	-117.090092	32.756244
6173821			SAN DIEGO	SAN DIEGO	-117.090233	32.749518
6196463			SAN DIEGO	SAN DIEGO	-117.092304	32.749338
6198499			SAN DIEGO	SAN DIEGO	-117.090092	32.756285
6203129			SAN DIEGO	SAN DIEGO	-117.098712	32.753155
6230473			SAN DIEGO	SAN DIEGO	-117.113662	32.753265
6231433			SAN DIEGO	SAN DIEGO	-117.090142	32.751325
6233964			SAN DIEGO	SAN DIEGO	-117.113116	32.75029
6236906			SAN DIEGO	SAN DIEGO	-117.096582	32.751395
6274666			SAN DIEGO	SAN DIEGO	-117.090022	32.749515

CASE_ID	LATITUDE	LONGITUDE	COUNTY	CITY	POINT_X	POINT_Y
6277573			SAN DIEGO	SAN DIEGO	-117.115024	32.75154
6317255			SAN DIEGO	SAN DIEGO	-117.101965	32.751669
6318652			SAN DIEGO	SAN DIEGO	-117.090122	32.753044
6322696			SAN DIEGO	SAN DIEGO	-117.099832	32.749595
6336188			SAN DIEGO	SAN DIEGO	-117.114647	32.749727
6338047			SAN DIEGO	SAN DIEGO	-117.104472	32.749645
6342227			SAN DIEGO	SAN DIEGO	-117.114576	32.749727
8522286			SAN DIEGO	SAN DIEGO	-117.11189	32.7497
8517106			SAN DIEGO	SAN DIEGO	-117.108981	32.754037
8509122			SAN DIEGO	SAN DIEGO	-117.108993	32.751282
8506185			SAN DIEGO	SAN DIEGO	-117.098406	32.74961
8503556			SAN DIEGO	SAN DIEGO	-117.117924	32.754999
8499736			SAN DIEGO	SAN DIEGO	-117.110621	32.74969
8494275			SAN DIEGO	SAN DIEGO	-117.092211	32.755914
7150920			SAN DIEGO	SAN DIEGO	-117.111088	32.749694
7149399			SAN DIEGO	SAN DIEGO	-117.12304	32.755219
7145955			SAN DIEGO	SAN DIEGO	-117.1009	32.7496
7142359			SAN DIEGO	SAN DIEGO	-117.1009	32.7496
7142231			SAN DIEGO	SAN DIEGO	-117.09788	32.74961
7142161			SAN DIEGO	SAN DIEGO	-117.096677	32.753132
7141893			SAN DIEGO	SAN DIEGO	-117.093271	32.755869
7137331			SAN DIEGO	SAN DIEGO	-117.11365	32.75527
7137122			SAN DIEGO	SAN DIEGO	-117.09007	32.75493
7129032			SAN DIEGO	SAN DIEGO	-117.119251	32.74977
7129020			SAN DIEGO	SAN DIEGO	-117.112741	32.749718
7127696			SAN DIEGO	SAN DIEGO	-117.11796	32.75329
7125117			SAN DIEGO	SAN DIEGO	-117.094391	32.74958
7124078			SAN DIEGO	SAN DIEGO	-117.11578	32.75529
7124075			SAN DIEGO	SAN DIEGO	-117.109404	32.75324
7108618			SAN DIEGO	SAN DIEGO	-117.11578	32.75529
7106790			SAN DIEGO	SAN DIEGO	-117.11065	32.74969
7106786			SAN DIEGO	SAN DIEGO	-117.092265	32.751777
7103004			SAN DIEGO	SAN DIEGO	-117.10086	32.753145
7102297			SAN DIEGO	SAN DIEGO	-117.11578	32.75529
7102293			SAN DIEGO	SAN DIEGO	-117.115624	32.755289
7098619			SAN DIEGO	SAN DIEGO	-117.100092	32.75141

CASE_ID	LATITUDE	LONGITUDE	COUNTY	CITY	POINT_X	POINT_Y
7098448			SAN DIEGO	SAN DIEGO	-117.0992	32.7551
7088028			SAN DIEGO	SAN DIEGO	-117.09981	32.74961
7082012			SAN DIEGO	SAN DIEGO	-117.108269	32.75321
7067048			SAN DIEGO	SAN DIEGO	-117.10202	32.74962
7060964			SAN DIEGO	SAN DIEGO	-117.100881	32.751355
7058170			SAN DIEGO	SAN DIEGO	-117.094754	32.74958
7031722			SAN DIEGO	SAN DIEGO	-117.099849	32.74961
7010507			SAN DIEGO	SAN DIEGO	-117.09981	32.74961
7004183			SAN DIEGO	SAN DIEGO	-117.092209	32.756059
6989719			SAN DIEGO	SAN DIEGO	-117.10404	32.75521
6978554			SAN DIEGO	SAN DIEGO	-117.1009	32.7496
6975664			SAN DIEGO	SAN DIEGO	-117.12223	32.755196
6784601			SAN DIEGO	SAN DIEGO	-117.098673	32.75314
6771289			SAN DIEGO	SAN DIEGO	-117.09222	32.75495
6732672			SAN DIEGO	SAN DIEGO	-117.105674	32.74968
6731885			SAN DIEGO	SAN DIEGO	-117.11435	32.74972
6690583			SAN DIEGO	SAN DIEGO	-117.09332	32.74957
6689122			SAN DIEGO	SAN DIEGO	-117.09115	32.75495
6688933			SAN DIEGO	SAN DIEGO	-117.11792	32.7553
6683153			SAN DIEGO	SAN DIEGO	-117.11065	32.74969
6680469			SAN DIEGO	SAN DIEGO	-117.10086	32.753203
6680467			SAN DIEGO	SAN DIEGO	-117.10086	32.75317
6668848			SAN DIEGO	SAN DIEGO	-117.091158	32.752395
6666814			SAN DIEGO	SAN DIEGO	-117.0992	32.7551
6659230			SAN DIEGO	SAN DIEGO	-117.09546	32.75312
6640633			SAN DIEGO	SAN DIEGO	-117.092286	32.749838
6638316			SAN DIEGO	SAN DIEGO	-117.11065	32.74969
6638311			SAN DIEGO	SAN DIEGO	-117.09658	32.7496
6638309			SAN DIEGO	SAN DIEGO	-117.119254	32.74977
6636803			SAN DIEGO	SAN DIEGO	-117.09229	32.74955
6629337			SAN DIEGO	SAN DIEGO	-117.118034	32.74976
6619632			SAN DIEGO	SAN DIEGO	-117.11683	32.7553
6612232			SAN DIEGO	SAN DIEGO	-117.10569	32.749691
6611898			SAN DIEGO	SAN DIEGO	-117.10691	32.751634
6601691			SAN DIEGO	SAN DIEGO	-117.097649	32.753265
6601687			SAN DIEGO	SAN DIEGO	-117.10404	32.75521

CASE_ID	LATITUDE	LONGITUDE	COUNTY	CITY	POINT_X	POINT_Y
6601166			SAN DIEGO	SAN DIEGO	-117.09733	32.755343
6596001			SAN DIEGO	SAN DIEGO	-117.090085	32.752669
6595482			SAN DIEGO	SAN DIEGO	-117.094429	32.749602
6580685			SAN DIEGO	SAN DIEGO	-117.09765	32.74961
6580624			SAN DIEGO	SAN DIEGO	-117.097316	32.751387
6572803			SAN DIEGO	SAN DIEGO	-117.096561	32.7496
6560191			SAN DIEGO	SAN DIEGO	-117.09333	32.749625
6560151			SAN DIEGO	SAN DIEGO	-117.09225	32.753105
6550187			SAN DIEGO	SAN DIEGO	-117.11311	32.74973
6546930			SAN DIEGO	SAN DIEGO	-117.120937	32.749072
6529776			SAN DIEGO	SAN DIEGO	-117.10199	32.7514
6524981			SAN DIEGO	SAN DIEGO	-117.105067	32.753838
6524965			SAN DIEGO	SAN DIEGO	-117.09333	32.74957
6524197			SAN DIEGO	SAN DIEGO	-117.092268	32.751484
6516121			SAN DIEGO	SAN DIEGO	-117.109837	32.755253
6505598			SAN DIEGO	SAN DIEGO	-117.121546	32.748893
6501146			SAN DIEGO	SAN DIEGO	-117.092225	32.754654
6480178			SAN DIEGO	SAN DIEGO	-117.104444	32.751276
6451641			SAN DIEGO	SAN DIEGO	-117.100862	32.753055
6450996			SAN DIEGO	SAN DIEGO	-117.11928	32.74977
6449107			SAN DIEGO	SAN DIEGO	-117.12294	32.75332
6443776			SAN DIEGO	SAN DIEGO	-117.10193	32.75317
6443022			SAN DIEGO	SAN DIEGO	-117.099799	32.75316
6442998			SAN DIEGO	SAN DIEGO	-117.09443	32.74958
6428606			SAN DIEGO	SAN DIEGO	-117.097456	32.749608
6417349			SAN DIEGO	SAN DIEGO	-117.1009	32.7496
6416841			SAN DIEGO	SAN DIEGO	-117.09327	32.75591
6401503			SAN DIEGO	SAN DIEGO	-117.09333	32.74957
6381851			SAN DIEGO	SAN DIEGO	-117.10202	32.74962
6381847			SAN DIEGO	SAN DIEGO	-117.10086	32.75317
6376660			SAN DIEGO	SAN DIEGO	-117.093289	32.754546
6373243			SAN DIEGO	SAN DIEGO	-117.11065	32.74969
6352464			SAN DIEGO	SAN DIEGO	-117.115799	32.75529
6916228			SAN DIEGO	SAN DIEGO	-117.122259	32.75521
6909243			SAN DIEGO	SAN DIEGO	-117.101492	32.75317
6907192			SAN DIEGO	SAN DIEGO	-117.094414	32.74958

CASE_ID	LATITUDE	LONGITUDE	COUNTY	CITY	POINT_X	POINT_Y
6902484			SAN DIEGO	SAN DIEGO	-117.100738	32.749607
6894639			SAN DIEGO	SAN DIEGO	-117.09657	32.75313
6894588			SAN DIEGO	SAN DIEGO	-117.11475	32.75327
6882371			SAN DIEGO	SAN DIEGO	-117.092416	32.749552
6869365			SAN DIEGO	SAN DIEGO	-117.100611	32.755178
6865958			SAN DIEGO	SAN DIEGO	-117.11063	32.75324
6859968			SAN DIEGO	SAN DIEGO	-117.097796	32.74961
6859038			SAN DIEGO	SAN DIEGO	-117.09977	32.753135
6857182			SAN DIEGO	SAN DIEGO	-117.09871	32.7514
6856709			SAN DIEGO	SAN DIEGO	-117.09872	32.7514
6844399			SAN DIEGO	SAN DIEGO	-117.10567	32.75144
6837091			SAN DIEGO	SAN DIEGO	-117.1208	32.7492
6833684			SAN DIEGO	SAN DIEGO	-117.10193	32.75317
6822597			SAN DIEGO	SAN DIEGO	-117.092231	32.7531
6820583			SAN DIEGO	SAN DIEGO	-117.11365	32.755188
6820558			SAN DIEGO	SAN DIEGO	-117.096604	32.7496
6815822			SAN DIEGO	SAN DIEGO	-117.11928	32.74977
6811176			SAN DIEGO	SAN DIEGO	-117.095491	32.74958
6802350			SAN DIEGO	SAN DIEGO	-117.10294	32.7552
6801944			SAN DIEGO	SAN DIEGO	-117.108981	32.754037
6795808			SAN DIEGO	SAN DIEGO	-117.113499	32.74973
6789087			SAN DIEGO	SAN DIEGO	-117.12223	32.75521
6789055			SAN DIEGO	SAN DIEGO	-117.09443	32.74958
6785303			SAN DIEGO	SAN DIEGO	-117.09327	32.75591
6718332			SAN DIEGO	SAN DIEGO	-117.093599	32.749575
8487096			SAN DIEGO	SAN DIEGO	-117.100861	32.749602
8487073			SAN DIEGO	SAN DIEGO	-117.12048	32.75331
8481236			SAN DIEGO	SAN DIEGO	-117.099806	32.750347
8458758			SAN DIEGO	SAN DIEGO	-117.118358	32.755304
8455732			SAN DIEGO	SAN DIEGO	-117.11578	32.755202
8447569			SAN DIEGO	SAN DIEGO	-117.10569	32.74968
8446456			SAN DIEGO	SAN DIEGO	-117.1032	32.74966
8443827			SAN DIEGO	SAN DIEGO	-117.099865	32.74961
8443807			SAN DIEGO	SAN DIEGO	-117.10615	32.75522
8414058			SAN DIEGO	SAN DIEGO	-117.10899	32.75526
8410598			SAN DIEGO	SAN DIEGO	-117.09225	32.7531

CASE_ID	LATITUDE	LONGITUDE	COUNTY	CITY	POINT_X	POINT_Y
8409628			SAN DIEGO	SAN DIEGO	-117.107517	32.74969
8387536			SAN DIEGO	SAN DIEGO	-117.10448	32.749637
8372054			SAN DIEGO	SAN DIEGO	-117.099216	32.755098
8370045			SAN DIEGO	SAN DIEGO	-117.10824	32.75321
8363302			SAN DIEGO	SAN DIEGO	-117.105615	32.751439
8359422			SAN DIEGO	SAN DIEGO	-117.11434	32.749745
8343743			SAN DIEGO	SAN DIEGO	-117.11928	32.74977
8338652			SAN DIEGO	SAN DIEGO	-117.12294	32.75332
8336948			SAN DIEGO	SAN DIEGO	-117.115806	32.75529
8328940			SAN DIEGO	SAN DIEGO	-117.10318	32.75318
8304095			SAN DIEGO	SAN DIEGO	-117.11065	32.74969
8286916			SAN DIEGO	SAN DIEGO	-117.10201	32.74962
8206953			SAN DIEGO	SAN DIEGO	-117.10083	32.7552
8202968			SAN DIEGO	SAN DIEGO	-117.094302	32.755756
8199326			SAN DIEGO	SAN DIEGO	-117.107096	32.74969
8199313			SAN DIEGO	SAN DIEGO	-117.09869	32.75314
8199259			SAN DIEGO	SAN DIEGO	-117.106998	32.74969
8198093			SAN DIEGO	SAN DIEGO	-117.11065	32.74969
8193724			SAN DIEGO	SAN DIEGO	-117.09115	32.753211
8192386			SAN DIEGO	SAN DIEGO	-117.09227	32.75135
8192334			SAN DIEGO	SAN DIEGO	-117.11365	32.75527
8188789			SAN DIEGO	SAN DIEGO	-117.096541	32.751353
8179469			SAN DIEGO	SAN DIEGO	-117.10086	32.75317
8178718			SAN DIEGO	SAN DIEGO	-117.09333	32.74957
8165336			SAN DIEGO	SAN DIEGO	-117.10088	32.75141
8164387			SAN DIEGO	SAN DIEGO	-117.100907	32.749326
8151946			SAN DIEGO	SAN DIEGO	-117.10615	32.75522
8139702			SAN DIEGO	SAN DIEGO	-117.099236	32.751405
8138510			SAN DIEGO	SAN DIEGO	-117.120971	32.749056
8110952			SAN DIEGO	SAN DIEGO	-117.094324	32.755752
8107451			SAN DIEGO	SAN DIEGO	-117.102092	32.75317
8105426			SAN DIEGO	SAN DIEGO	-117.100485	32.74961
8105404			SAN DIEGO	SAN DIEGO	-117.10941	32.75324
8101547			SAN DIEGO	SAN DIEGO	-117.098759	32.7514
8101517			SAN DIEGO	SAN DIEGO	-117.11578	32.75529
8096669			SAN DIEGO	SAN DIEGO	-117.103202	32.749975

CASE_ID	LATITUDE	LONGITUDE	COUNTY	CITY	POINT_X	POINT_Y
8090362			SAN DIEGO	SAN DIEGO	-117.1158	32.75328
8087570			SAN DIEGO	SAN DIEGO	-117.09546	32.75312
8081530			SAN DIEGO	SAN DIEGO	-117.10824	32.75321
8068094			SAN DIEGO	SAN DIEGO	-117.099616	32.74961
8055351			SAN DIEGO	SAN DIEGO	-117.1009	32.7496
8046698			SAN DIEGO	SAN DIEGO	-117.0992	32.7551
8037617			SAN DIEGO	SAN DIEGO	-117.09443	32.74958
8037595			SAN DIEGO	SAN DIEGO	-117.100851	32.749602
8031943			SAN DIEGO	SAN DIEGO	-117.092212	32.755793
8017405			SAN DIEGO	SAN DIEGO	-117.10404	32.75521
8016326			SAN DIEGO	SAN DIEGO	-117.10504	32.75521
8000942			SAN DIEGO	SAN DIEGO	-117.10088	32.75141
7209403			SAN DIEGO	SAN DIEGO	-117.09334	32.75136
7187048			SAN DIEGO	SAN DIEGO	-117.11311	32.749689
7184446			SAN DIEGO	SAN DIEGO	-117.1009	32.7496
7168307			SAN DIEGO	SAN DIEGO	-117.108993	32.751282
7165642			SAN DIEGO	SAN DIEGO	-117.09981	32.74961
7165638			SAN DIEGO	SAN DIEGO	-117.10086	32.75317
7159821			SAN DIEGO	SAN DIEGO	-117.11682	32.74975
6353308			SAN DIEGO	SAN DIEGO	-117.092215	32.755547
6347708			SAN DIEGO	SAN DIEGO	-117.108233	32.75526