

Appendix D

Traffic Study Update



CREATIVITY BEYOND ENGINEERING

MEMORANDUM

DATE: May 28, 2021

TO: Tim Bochum, P.E., City of Oxnard

FR: John Bruggeman T.E., raSmtih

CC: Everett Scofield, AIA, Lauterbach & Associates Architects

RE: U-Haul Oxnard North Development – Traffic Study Update

INTRODUCTION

U-Haul Corporation plans to construct a new storage facility and retail store at 2420 N. Oxnard Boulevard in Oxnard, California. raSmith previously prepared a traffic impact analysis (TIA) to document the existing traffic conditions, identify potential traffic impacts of the development on the surrounding roadway network, and recommend traffic mitigation measures. The report dated March 25, 2020 was submitted to the City of Oxnard for review.

The City's Development Advisory Committee (DAC) provided comments on the TIA from their February 3, 2021 meeting. The DAC requested several updates to the scope of the original TIA, including:

- Weekday evening peak hour traffic analysis
- Assessment of weekend conditions to determine queueing at the Oxnard Boulevard intersection with Orchard Place (under traffic signal control)
- Traffic signal warrant analysis at the Oxnard Boulevard intersection with Orchard Place
- Intersection analysis of Oxnard Boulevard intersection with Orchard Place that includes both unsignalized (restricted movements) and signalized traffic scenarios

This memorandum summarizes the procedures, methodology, and findings of the requested information as a supplemental document to the original TIA.

PROJECT DESCRIPTION

The U-Haul Development will be located at 2420 N. Oxnard Boulevard as shown in Exhibit 1. The site was formerly occupied by a Levitz Furniture store and warehouse facility. The proposed development will utilize the existing building footprint and add 89,132 square feet on a second and third level. The total square footage includes a 201,796 SF self-storage facility, 34,537 SF warehousing facility, and 5,341 SF retail/equipment rental store. Redevelopment of the site is expected in 2021.

Primary access to the site is proposed along N. Oxnard Boulevard at the existing Levitz Furniture main access driveway, aligning with Orchard Place. An existing Levitz furniture right-in/right-out access (approximately 550' south of the main access) will remain and provide cross-access to parcels to the south. The proposed site plan is shown in Exhibit 2.

EXISTING CONDITIONS

EXISTING TRANSPORTATION NETWORK

The original TIA analyzed intersections on Oxnard Boulevard from the US-101 Northbound Ramps to Gonzales Road. This technical memorandum focuses solely on the two U-Haul access points with Oxnard Boulevard as shown in Exhibit 3:

- Oxnard Boulevard intersection with Orchard Place/Old Levitz Furniture driveway
- Oxnard Boulevard intersection with Old Levitz Furniture right-in/right out driveway

Existing roadway geometrics, speed limits, and traffic control in the study area is shown in Exhibit 4.

A traffic signal warrant was conducted for the Oxnard Boulevard intersection with Orchard Place. The intersection meets signal warrants with the existing (Year 2021) traffic volumes. The intersection was analyzed with traffic signal control and two-way stop control (with the westbound left-turn restricted) for all scenarios at the request of the City.

A City improvement project is planned at the Oxnard Boulevard intersection with Orchard Place. The project will replace the painted median at the northbound left-turn lane with a raised median, remove eastbound right-turn island and free-flow right-turn condition, and modify turn bay lengths. The overall project timeline has not been finalized, but according to the City could start in Fall 2021. For purposes of this study, the existing geometrics or existing geometrics with driveway restrictions were analyzed for all traffic scenarios. A sensitivity analysis was performed for the Total Traffic conditions using the improvement project geometrics.

DATA COLLECTION

Quality Counts, LLC collected weekday 13-hour (6:00 am – 7:00 pm) and Saturday peak hour (11:00 am – 2:00pm) intersection turning movement counts at the Oxnard Boulevard intersection with Orchard Place in April 2021. These counts were compared to the counts from September 2018 at the same location to determine impacts due to COVID-19. The April 2021 entering peak hour intersection volumes were 75% of the September 2018 volumes. Therefore, a COVID factor (1.33) was applied to the 2021 traffic counts. The adjusted peak hour traffic volumes are summarized in Exhibit 5. Traffic count data is provided in Appendix A.

TRAFFIC SIGNAL WARRANT ANALYSIS

A traffic signal warrant analysis was conducted for the Oxnard Boulevard intersection with Orchard Place based on the adjusted Year 2021 existing traffic volumes and existing geometry. The warrant analysis followed the procedures and methodology outlined in the California MUTCD and focused on Warrants 1, 2, and 3. The analysis indicates a traffic signal meets all three warrants under existing conditions without the U-Haul development. A warrant analysis summary is provided in Appendix A.

EXISTING LEVEL OF SERVICE

The study intersections were analyzed using Intersection Capacity Utilization (ICU) methodology for signalized intersections and Highway Capacity Manual (HCM) 6th Edition methodology for unsignalized intersections. ICU worksheets were used to determine v/c ratios and corresponding LOS values for signalized intersections. For analysis and design purposes, Level of Service (LOS) 'C' was used to define acceptable peak hour operating conditions per City of Oxnard standards.

Under existing side street stop controlled conditions and restricted westbound left-turn movements from the existing Levitz main driveway, the N. Oxnard Boulevard intersection with Orchard Place operates at

LOS F, with long delays and queues for the eastbound left-turn movement during the weekday morning and weekday evening peak hours. The analysis indicates the Orchard Place intersection will operate at LOS A if a traffic signal is installed. The N. Oxnard Boulevard intersection with the existing right-in/right-out driveway operates at LOS C or better regardless of the traffic control at the Orchard Place intersection during the weekday morning and weekday evening peak hours.

These results are shown in Exhibit 6. ICU and HCM reports for all analysis scenarios are located in Appendix B and C, respectively.

EXISTING QUEUING ANALYSIS

The existing queues are shown in Exhibit 7. Under two-way stop control at Orchard Place, the eastbound left-turn/thru lane is operating over capacity and queues are expected to be long and potentially block adjacent intersections. With the traffic signal alternative, existing queues exceed the available storage for the northbound left-turn lane at Orchard Place. Queues at the right-in/right-out driveway are expected to be minimal under both traffic control scenarios at Orchard Place. Synchro queuing reports for all analysis scenarios are located in Appendix C.

PROJECT-SPECIFIC IMPACTS

U-HAUL SITE TRAFFIC FORECASTING

To address any potential future traffic impacts within the study area, it is necessary to identify the peak hourly volume of traffic generated by the proposed U-Haul development. Expected traffic volumes generated by the proposed development is based on the size and type of land use and on trip data published by the Institute of Transportation Engineers (ITE).

Trip Generation

U-Haul development traffic was estimated using ITE's *Trip Generation Manual*, 10th Edition. Representative land uses for self-storage, retail, and warehousing were selected based on the descriptions provided in the manual. The PODS storage portion of the site was considered warehousing and the equipment rental portion of the site was considered retail space the for trip generation purposes. Although there is potential for multi-modal trips to occur, all development trips were assumed to be completed via automobile for this study.

Table 1
U-Haul Development Trip Generation Summary

Land Use	ITE Code	Size (SF)	Weekday Daily Trips	Weekday AM Peak Hour Trips			Weekday PM Peak Hour Trips			Saturday Peak Hour Trips		
				In	Out	Total	In	Out	Total	In	Out	Total
Mini-Warehousing (U-Haul self-storage)	151	201,796	305	12	8	20	16	18	34	37	26	63
Warehousing (PODS storage area)	150	34,537	60	5	1	6	2	5	7	1	1	2
Shopping Center (U-Haul retail/rental)	820	5,341	202	3	2	5	9	11	20	12	12	24
Total New Trips			567	20	11	31	27	34	61	50	39	89

Trip distribution and trip assignments follow those used in the March 2020 TIA and are shown in Exhibit 8 and 9, respectively.

As shown in Table 1, the U-Haul development is expected to generate 31 new trips during the weekday morning peak hour (20 in/11 out), 61 new trips during the weekday afternoon peak hour (27 in/34 out), and 89 new trips during the Saturday peak hour (50 in/39 out).

EXISTING + PROJECT TRAFFIC ANALYSIS

Existing + Project Traffic volumes (Exhibit 10) were developed by summing the Existing Traffic (Exhibit 5) and the Project Trip Assignments (Exhibit 9). Existing + Project traffic was analyzed using the ICU worksheets and Synchro. The analysis results are shown in Exhibit 11. The Existing + Project queues are shown in Exhibit 12.

Traffic Signal Alternative at Orchard Place

Both study intersections are expected to operate at LOS C or better during the weekday morning and evening peak hours with the additional U-Haul project traffic. There was no change in intersection v/c ratios from existing conditions. The City's allowable change in v/c ratios resulting from additional project traffic is 0.02.

Queues exceed the available storage for the northbound left-turn lane at N. Oxnard Boulevard intersection with Orchard Place. This storage deficiency is also an existing condition and the additional project traffic does not adversely impact the storage needs at this location. All other locations at the study intersections continue to experience queues that are less than the available storage.

Two-way Stop Control Alternative at Orchard Place

The N. Oxnard Boulevard intersection with Orchard Place operates at LOS F under two-way stop control. This is the same deficiency as the existing analysis.

The eastbound shared left-turn/through queue at the N. Oxnard Boulevard intersection with Orchard Place is expected to be long and potentially block adjacent intersections. This deficiency is the same as existing and the additional project traffic does not adversely impact the operations at this location. The

northbound left-turn queue at the N. Oxnard Boulevard intersection with Orchard Place is also increased with the existing + project traffic.

CUMULATIVE (EXISTING + APPROVED/PENDING PROJECTS) IMPACTS

APPROVED/PENDING PROJECTS

A list of approved/pending projects was provided by the City of Oxnard and refined by raSmith. The locations of these projects are shown in Exhibit 13. The approved/pending projects are expected to generate 1,650 new trips during the weekday morning peak hour (756 in/848 out), 1,598 new trips during the weekday afternoon peak hour (867 in/957 out), and 1,942 new trips during the Saturday peak hour (871 in/945 out). The full approved/pending project trip generation table is included in Appendix A.

raSmith assigned the approved/pending project trips to the study intersections using similar trip distribution percentages as other traffic studies provided by the City. The trip assignments are shown in Exhibit 14. Trip assignments for all approved/pending projects were reviewed and approved by the City.

CUMULATIVE TRAFFIC ANALYSIS

Cumulative Traffic volumes (Exhibit 15) were developed by summing the Existing Traffic (Exhibit 5) and the Approved/Pending Project Trip Assignments (Exhibit 14). Cumulative traffic was analyzed using the ICU worksheets and Synchro. The results are shown in Exhibit 16. Cumulative Traffic queues are shown in Exhibit 17.

Traffic Signal Alternative at Orchard Place

All intersections are expected to operate at LOS C or better during peak hours with the additional U-Haul project traffic.

Queues exceed the available storage for the northbound left-turn lane at N. Oxnard Boulevard intersection with Orchard Place. This storage deficiency is also an existing condition, but the cumulative traffic increased the storage needed at this location. All other locations continue to experience queues that are less than the available storage.

Two-way Stop Control Alternative at Orchard Place

The Orchard Place intersection operates at LOS F under two-way stop control. With the intersection operating over capacity, the eastbound left-turn/thru queue is expected to be long and potentially block adjacent intersections. These deficiencies are the same as existing. The northbound left-turn queue at the N. Oxnard Boulevard intersection with Orchard Place is also increased with the cumulative traffic.

CUMULATIVE + UHAUL PROJECT IMPACTS

CUMULATIVE + UHAUL PROJECT TRAFFIC ANALYSIS

Cumulative + Project Traffic volumes (Exhibit 18) were developed by summing the Cumulative Traffic (Exhibit 15) and the Project Trip Assignments (Exhibit 9). Cumulative + Project traffic was analyzed using the ICU worksheets and Synchro. The results are shown in Exhibit 19. Cumulative + Project queues are shown in Exhibit 20.

Traffic Signal Alternative at Orchard Place

All intersections are expected to operate at LOS C or better during peak hours with the cumulative + project traffic. The maximum change in intersection v/c ratios from cumulative conditions is 0.01, which is less than the City's allowable difference of 0.02.

Queues exceed the available storage for the northbound left-turn lane at N. Oxnard Boulevard intersection with Orchard Place. This storage deficiency is the same as the existing analysis and the additional project traffic does not adversely impact the storage needs. All other locations at the study intersections continue to experience queues that are less than the available storage.

Two-way Stop Control Alternative at Orchard Place

The Orchard Place intersection operates at LOS F under two-way stop control. The eastbound shared left-turn/through queue at the N. Oxnard Boulevard intersection with Orchard Place is expected to be long and potentially block adjacent intersections. These are the same deficiencies as existing and the additional project traffic does not adversely impact the operations or queueing at this location. The northbound left-turn queue at the N. Oxnard Boulevard intersection with Orchard Place is also increased with the cumulative + project traffic.

WEEKEND ANALYSIS

The City requested a separate assessment of the weekend conditions with the project. A Saturday peak hour analysis was completed for the cumulative and cumulative + project traffic. With the traffic signal at the N. Oxnard Boulevard intersection with Orchard Place, the study intersections operate at LOS C or better. With two-way stop control, the N. Oxnard Boulevard intersection with Orchard Place operates at LOS F and the N. Oxnard Boulevard intersection with the right-in/right-out driveway operates at LOS D (cumulative + project only).

The Saturday queues are generally less than or equal to the weekday peak hour queues with the exception of the southbound left-turn queue at the N. Oxnard Boulevard intersection with Orchard Place under two-way stop control. During the weekday peak hours this queue is less than 25 feet, but increases to 35 feet in the Saturday peak hour.

raSmith's overall assessment of the weekend conditions in comparison to the detailed analysis performed for the weekday conditions indicates while select Saturday traffic volumes are slightly higher for both the existing and project traffic conditions, overall operations are expected to be comparable at the study intersections.

ANALYSIS WITH IMPROVEMENT PROJECT GEOMETRY

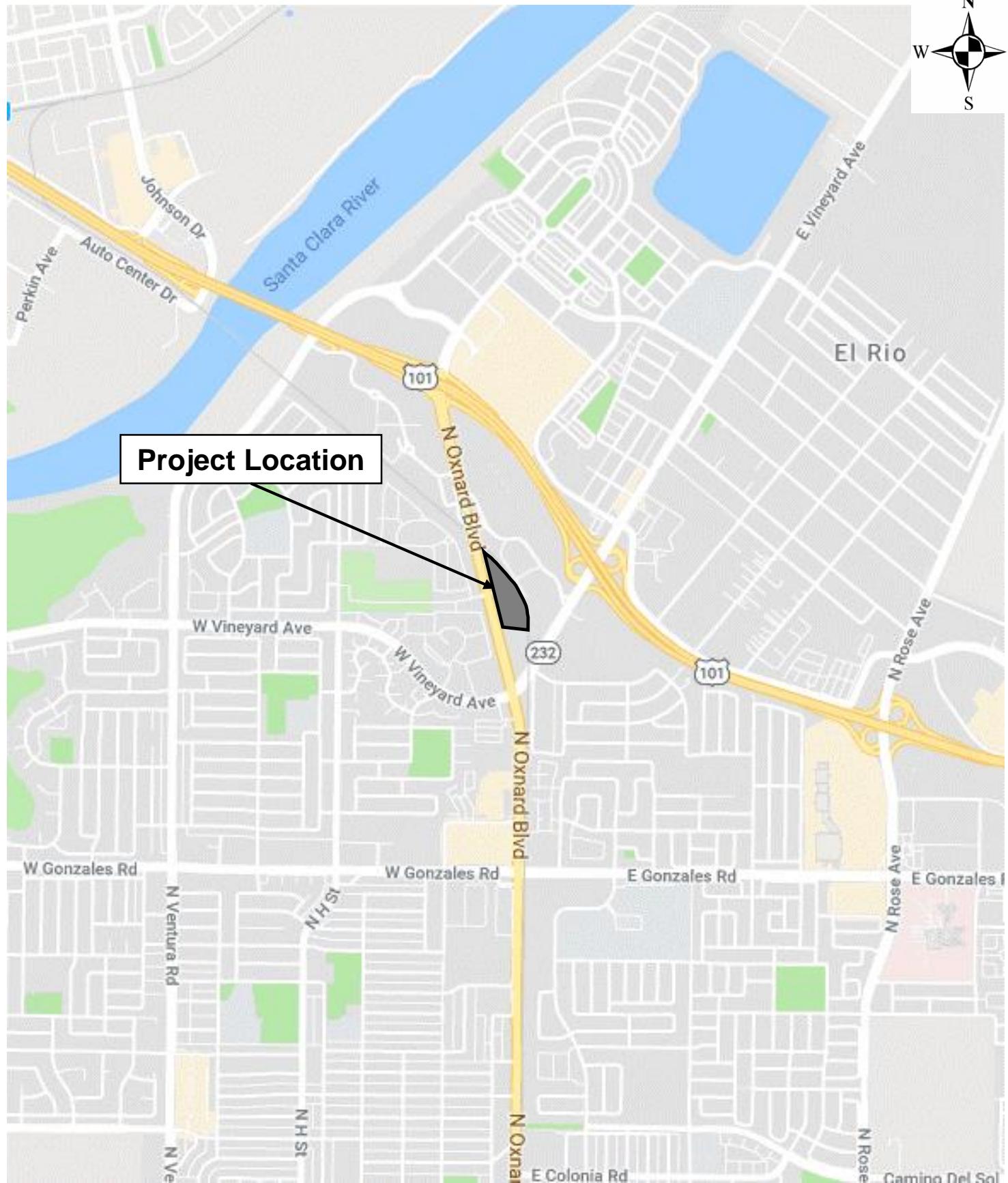
As noted previously, for purposes of this study, the existing geometrics were used to assess all traffic scenarios. The City's planned improvement project will modify the existing geometrics and eliminate the existing eastbound right-turn free-flow movement at the Orchard Place intersection. raSmith completed a sensitivity analysis to confirm the Orchard Place intersection would still operate acceptably with the improvement project geometrics. The results of the sensitivity analysis for the cumulative plus project conditions indicate the level of service and queues will be similar to the conditions with the existing geometry. The eastbound right-turn movement queue is 125 feet where it was previously negligible due to the free-flow condition. On-street parking restrictions on Orchard Place will be necessary to accommodate these right-turn queues.

RECOMMENDATIONS AND SUMMARY

The traffic impact analysis performed for the U-Haul Project indicates the new development traffic will not create a significant traffic impact to the area intersections with a traffic signal installed at the N. Oxnard Boulevard intersection with Orchard Place. The change in v/c does not exceed the City's maximum allowable difference of 0.02 when comparing traffic conditions with and without the U-Haul development. All intersections are expected to operate at LOS C or better for all traffic scenarios analyzed. Select locations were found to have queue storage deficiencies with or without the U-Haul development.

The Oxnard Boulevard intersection with Orchard Place currently operates over capacity. Traffic signal warrants are currently met without U-Haul or related project traffic. The City is planning an improvement project on N. Oxnard Boulevard. If the City project timeline coincides with the U-Haul development opening (currently planned in late 2021), a traffic signal could be installed as part of the City's project. If the development and City project schedules do not align, we recommend traffic signal installation prior to opening the U-Haul development.

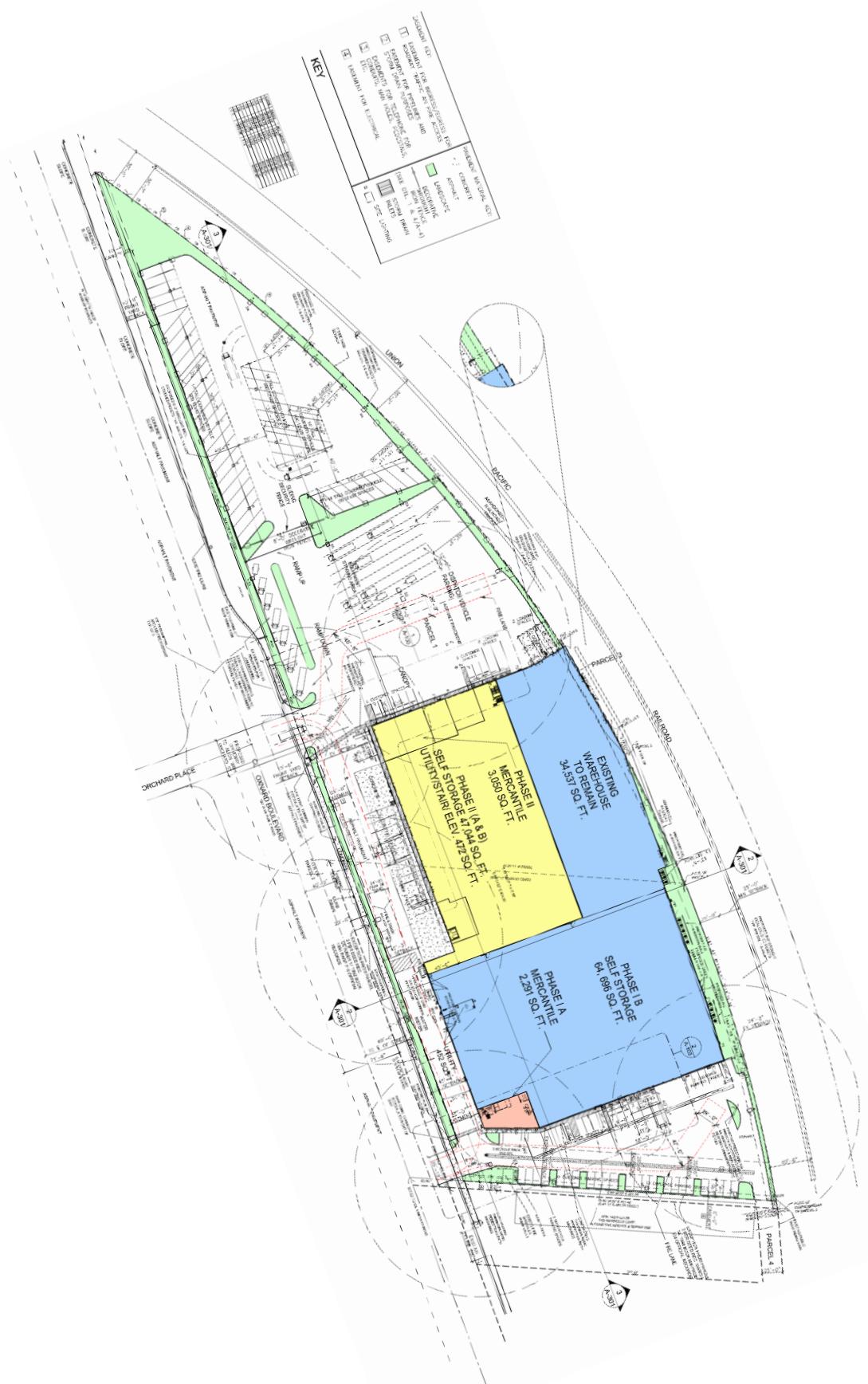
If the traffic signal is not installed, the intersection will continue to experience operational and queueing issues prior to the U-Haul development and introduce safety concerns with additional conflicting movements. Intersection modifications, signal designs, and required easements implemented prior to the City project shall not preclude future project improvements to the extent feasible.

**Legend**

■ = Proposed U-Haul Development

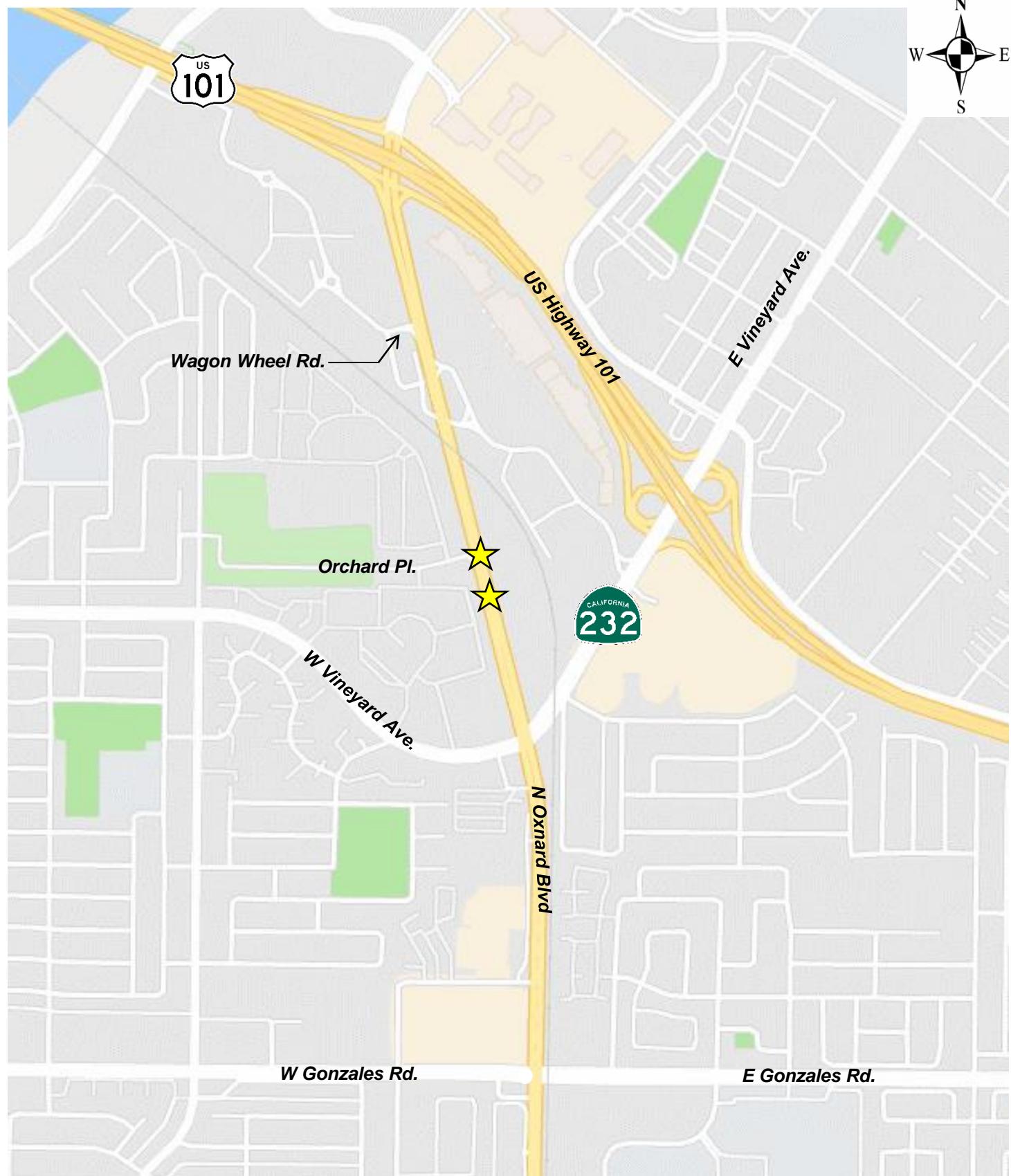
Project Location Map

Exhibit
1



Site Plan

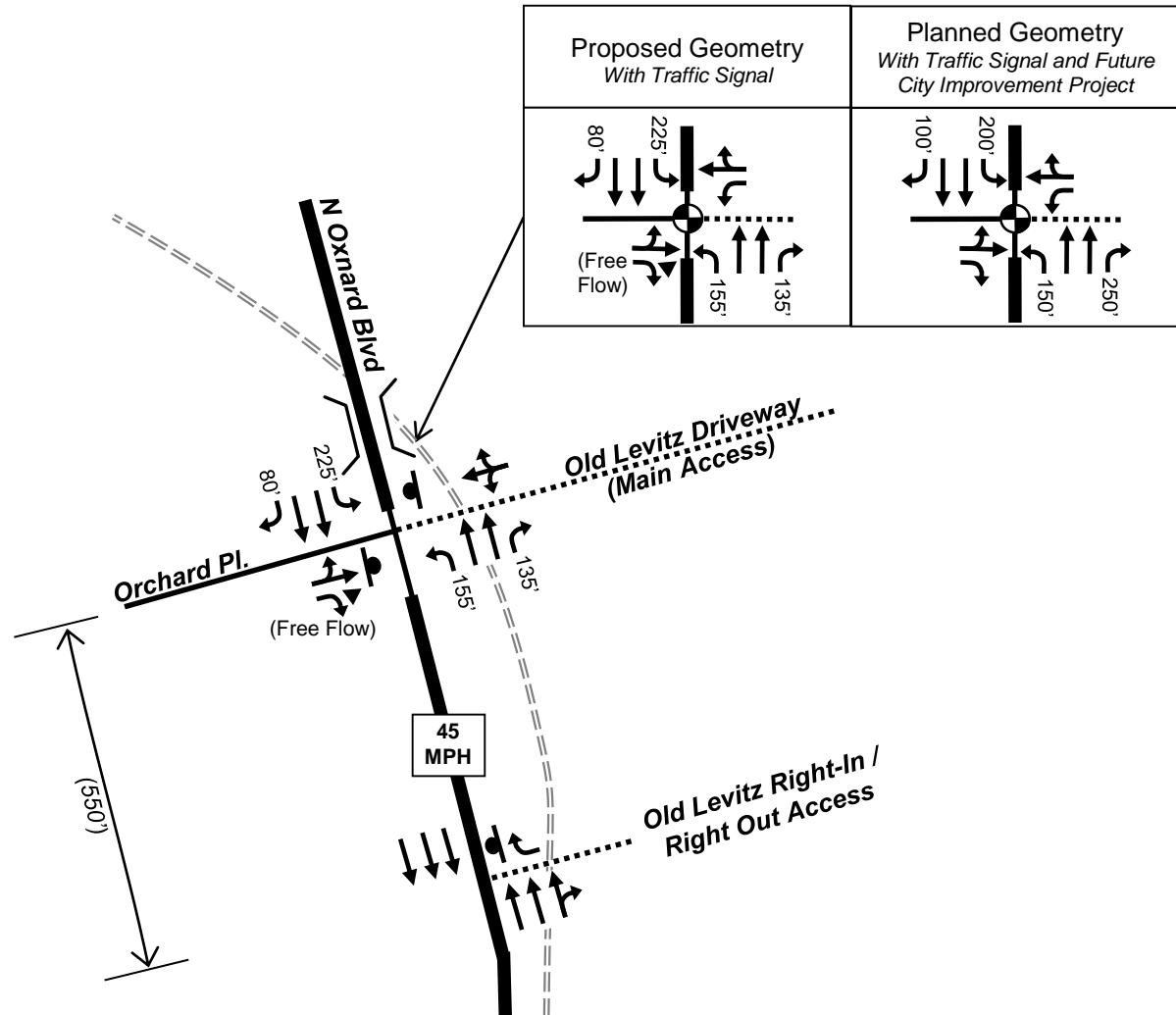
Exhibit
2

**Legend**

★ = Study Intersection

Study Intersections

Exhibit
3

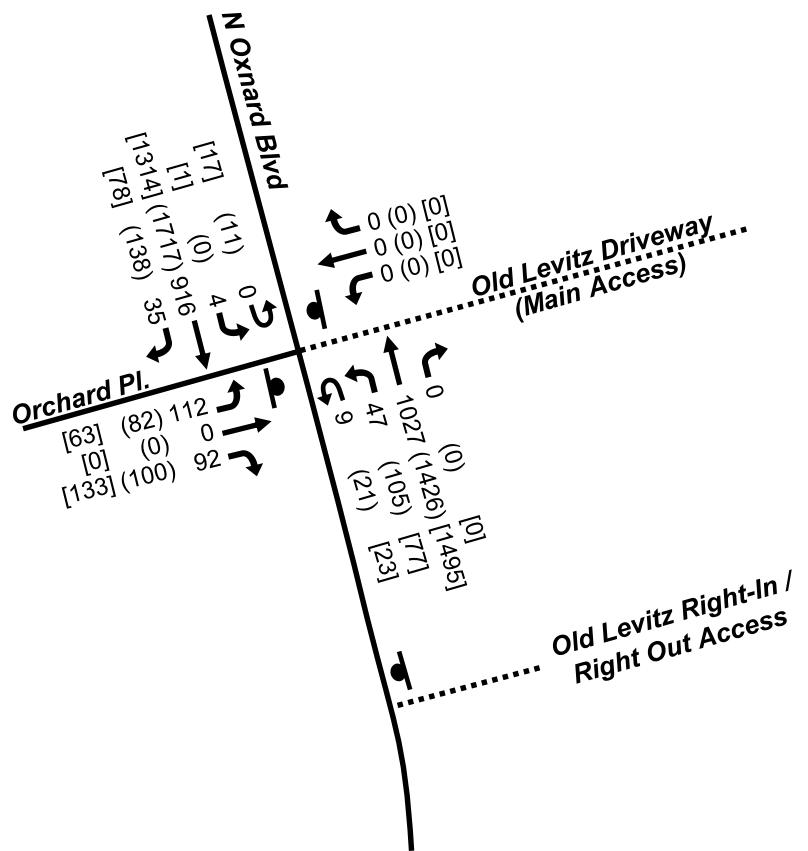
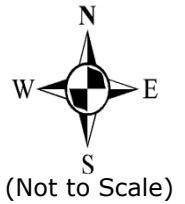
**Legend**

- ← = Lane Geometry
- █ = Raised Median
- = Stop Sign
- ⊕ = Traffic Signal
- == = Railroad Tracks

- XX' = Turn Bay Storage (feet)
- (XX') = Intersection Spacing (feet, centerline to centerline)
- XX MPH** = Speed Limit
- [] = Bridge Overpass

Existing Transportation Network

Exhibit
4



Note: Counts collected in April 2021 were about 75% of the counts collected in 2018 (due to impacts from COVID-19). Therefore, a factor of 1.33 was applied to the April 2021 counts.

Legend

XX	= Weekday Morning Peak Hour Volume
(XX)	= Weekday Evening Peak Hour Volume
[XX]	= Saturday Peak Hour Volume
█	= Stop Sign

◐ = Traffic Signal

**Existing
Traffic Volumes**

Exhibit
5

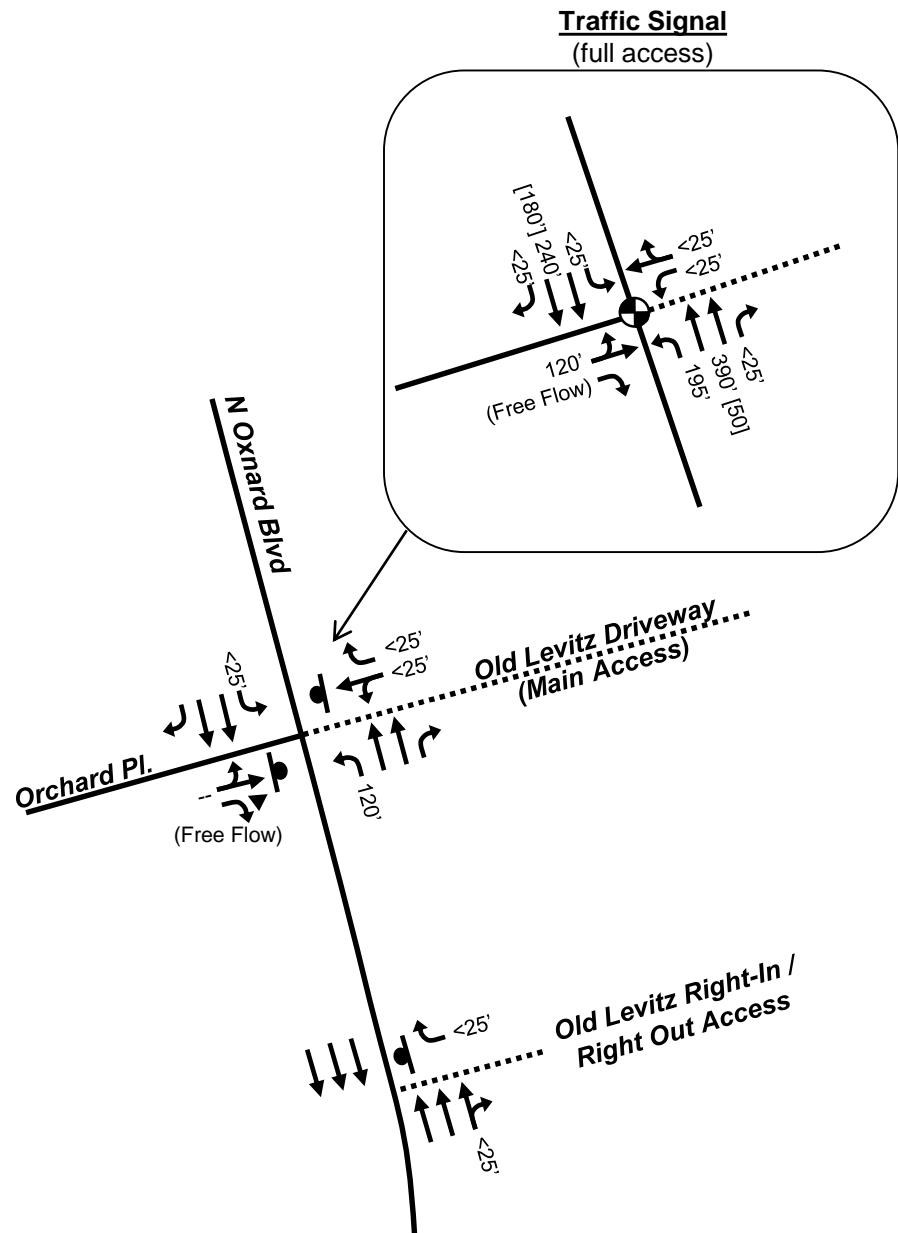
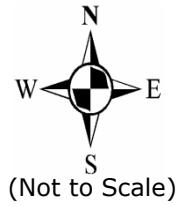
**Existing Traffic
Peak Hour Operating Conditions**

N. Oxnard Blvd Intersection with:	Traffic Control	Peak Hour	Level of Service	Volume/Capacity Ratio
Orchard Place	Traffic Signal ¹	AM	A	0.39
		PM	A	0.67
	Two-Way Stop ²	AM	F	3.59
		PM	F	-- ³
Right-in/Right-out Access	One-Way Stop ² <i>(with Traffic Signal at N Oxnard Blvd. with Orchard Place)</i>	AM	B	0.01
		PM	C	0.01
	One-Way Stop ² <i>(with Stop Control at N Oxnard Blvd. with Orchard Place)</i>	AM	B	0.01
		PM	C	0.01

¹IICU Level of Service and v/c ratio reported for traffic signals

²HCM 6th Edition Level of Service and v/c ratio reported for stop control (side street)

³-- indicates that Synchro does not report the v/c ratio due to the intersection exceeding capacity

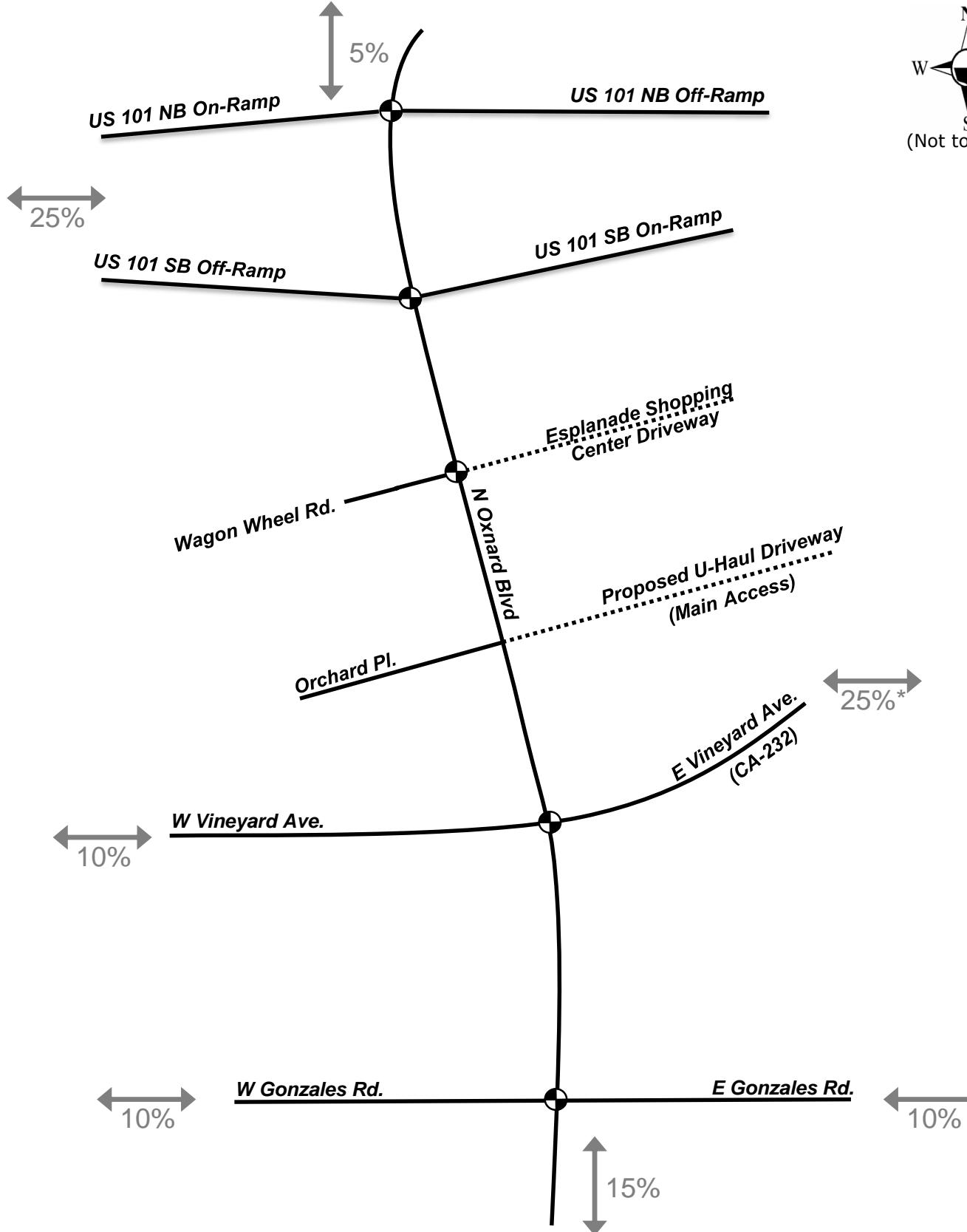
**Legend**

- XX' = Maximum (95th Percentile) Queues, ft
- [XX'] = 50th Percentile Queues, ft
- = Traffic Signal
- ▬ = Stop Sign

Note: "--" indicates that Synchro does not report due to intersection exceeding capacity

Existing Queues

Exhibit
7

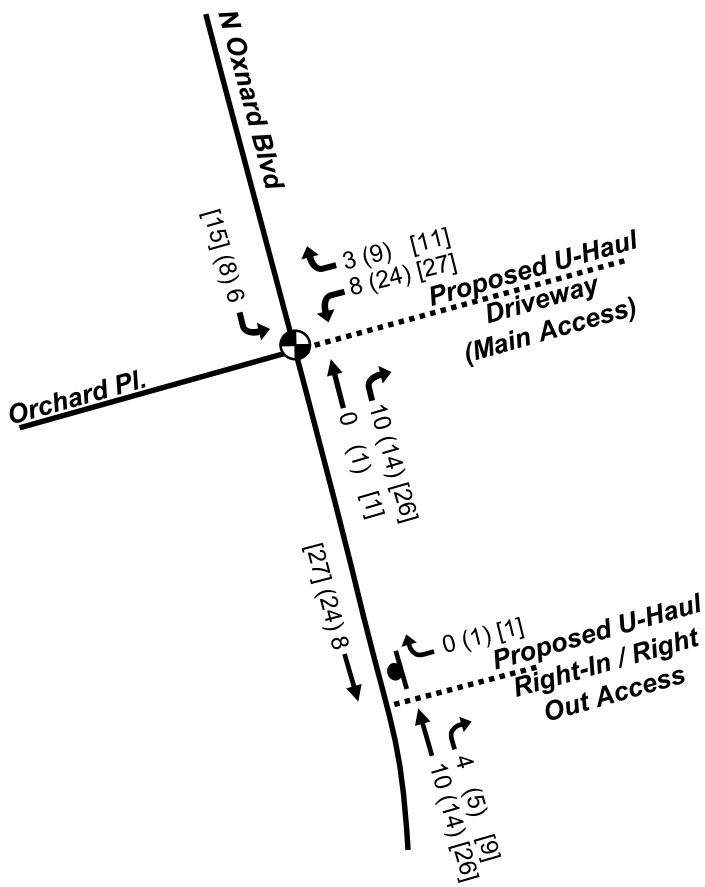
**Legend**

= Roadway Network Trip Distribution

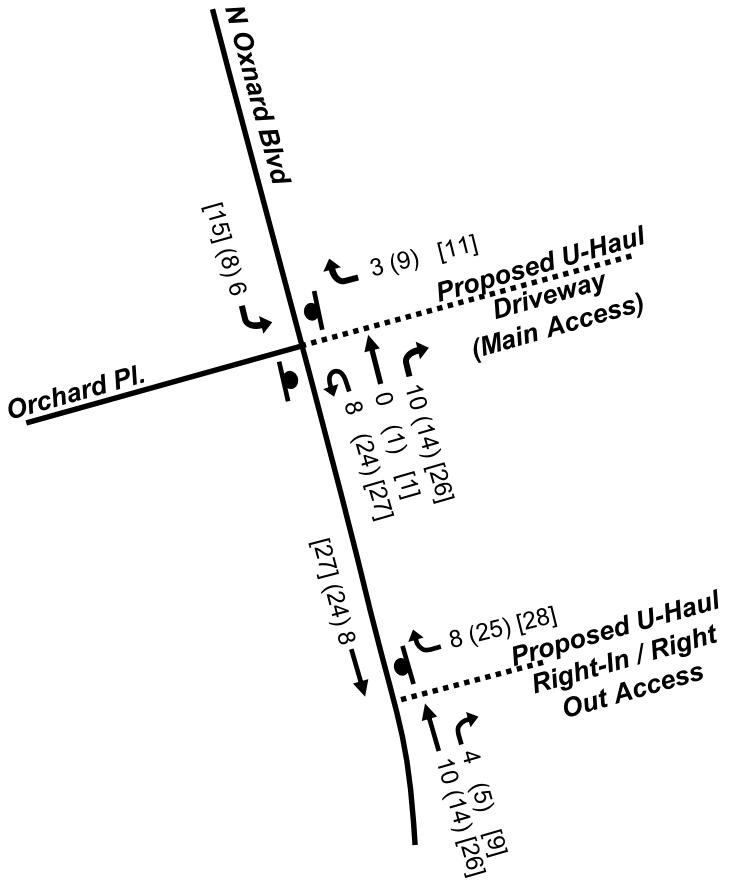
Project Trip Distribution
Exhibit
8



With Traffic Signal
(full access)



With Two-Way Stop Control
(restricted Westbound Left-Turn)



Legend

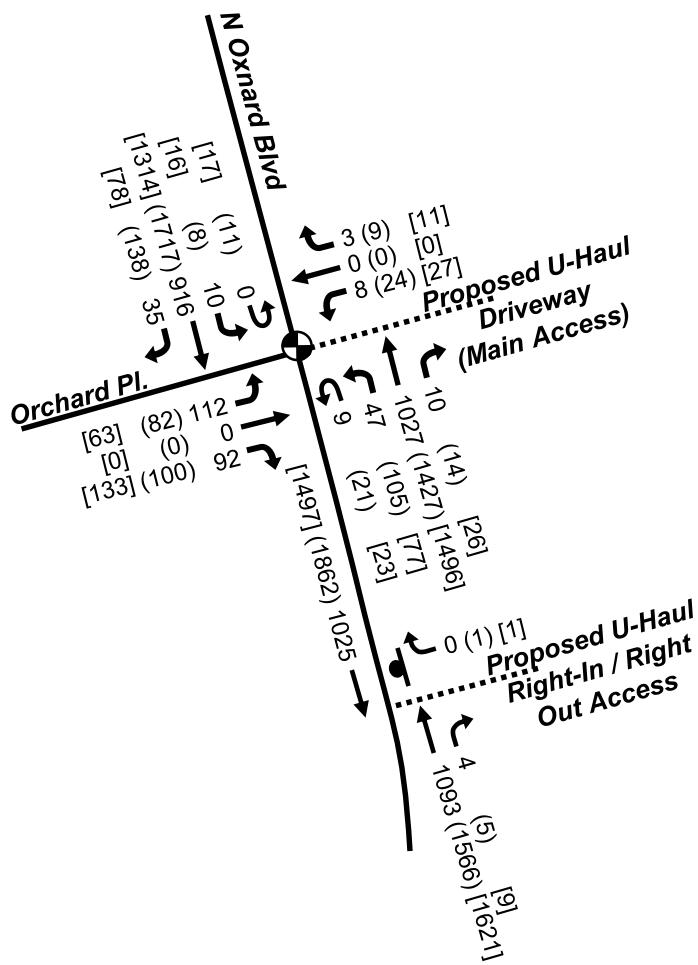
XX	= Weekday Morning Peak Hour Volume
(XX)	= Weekday Evening Peak Hour Volume
[XX]	= Saturday Peak Hour Volume
●	= Stop Sign
○	= Traffic Signal

Project Trip Assignments

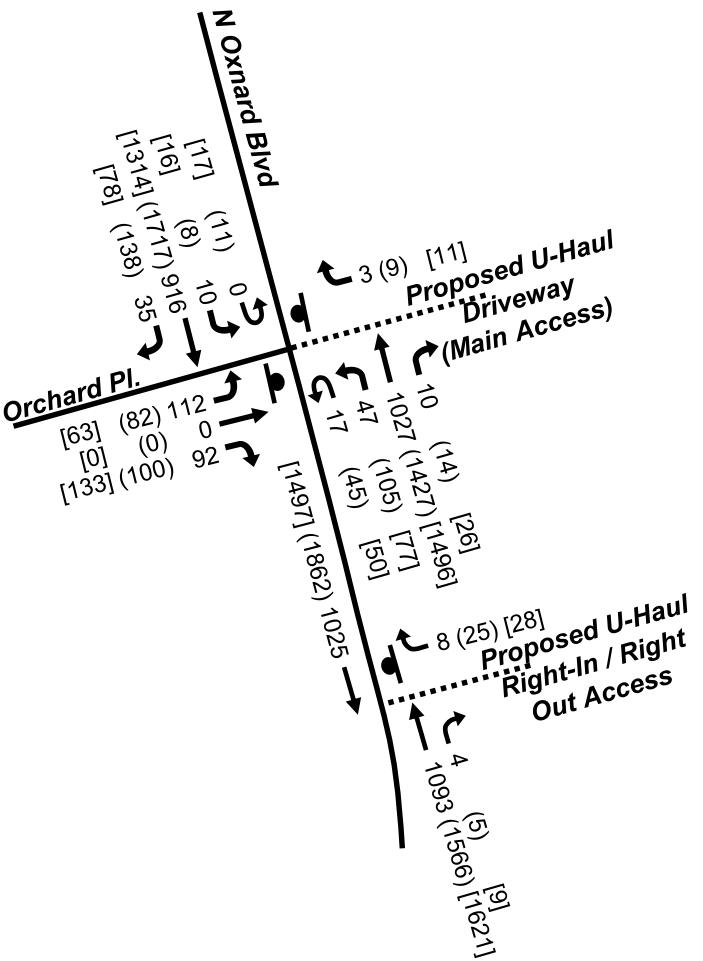
Exhibit
9



With Traffic Signal
(full access)



With Two-Way Stop Control
(restricted Westbound Left-Turn)



Legend

XX	= Weekday Morning Peak Hour Volume
(XX)	= Weekday Evening Peak Hour Volume
[XX]	= Saturday Peak Hour Volume
●	= Stop Sign
○	= Traffic Signal

Existing + Project Traffic Volumes

Exhibit
10

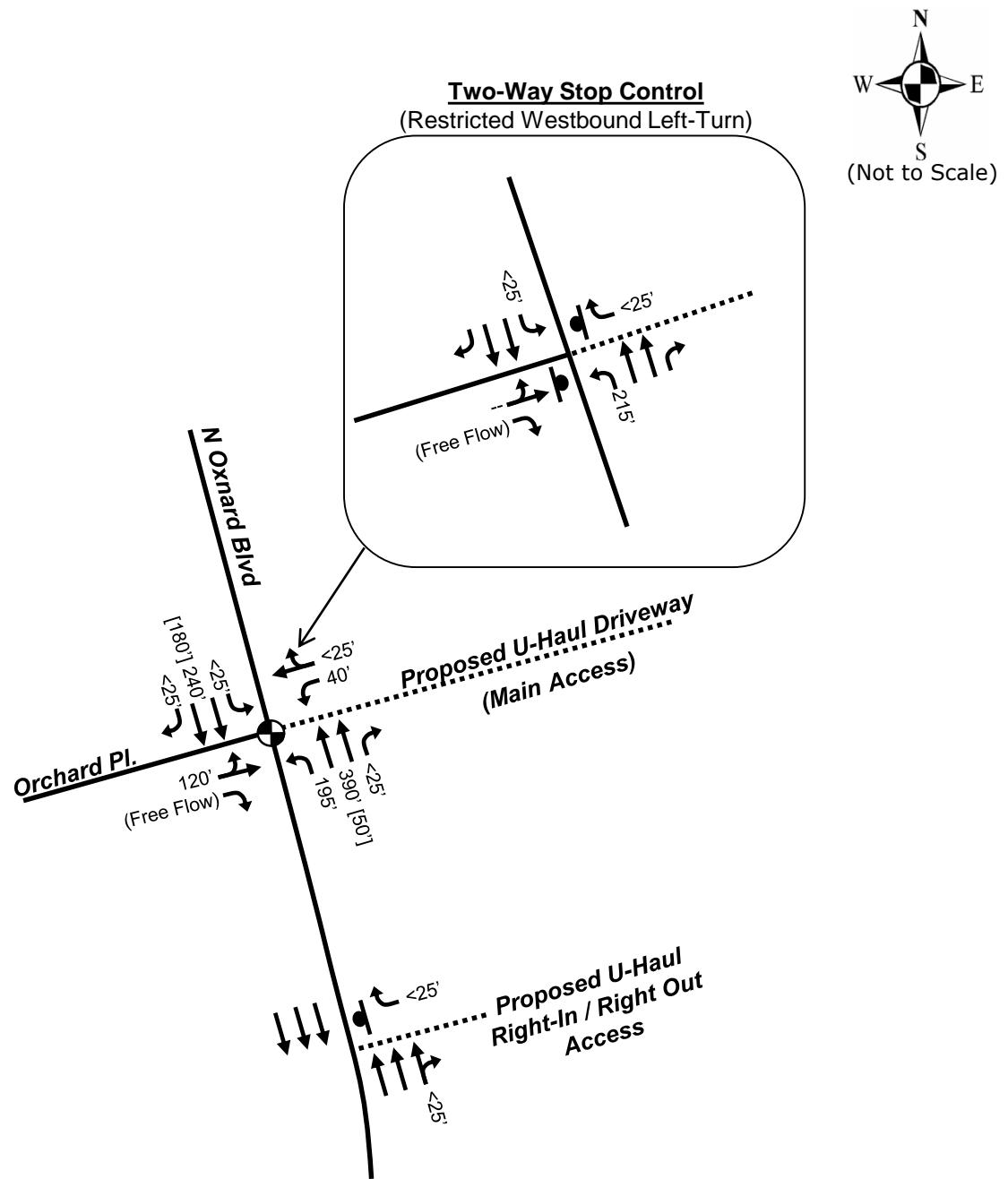
**Existing + Project
Weekday Peak Hour Level of Service**

N. Oxnard Blvd Intersection with:	Traffic Control	Peak Hour	Existing		Existing + Project		$\Delta v/c$	Impact?
			Level of Service	Volume/Capacity Ratio	Level of Service	Volume/Capacity Ratio		
Orchard Place	Traffic Signal ¹	AM	A	0.39	A	0.39	0.00	No
		PM	A	0.67	A	0.67	0.00	No
	Two-Way Stop ²	AM	F	3.59	F	3.86	0.27	Yes
		PM	F	-- ³	F	-- ³	Unknown	Unknown
Right-in/Right-out Access	One-Way Stop ² (with Traffic Signal at N Oxnard Blvd. with Orchard Place)	AM	B	0.01	B	0.01	0.00	No
		PM	C	0.01	C	0.01	0.00	No
	One-Way Stop ² (with Stop Control at N Oxnard Blvd. with Orchard Place)	AM	B	0.01	B	0.02	0.01	No
		PM	C	0.01	C	0.09	0.08	Yes

¹ICU Level of Service and v/c ratio reported for traffic signals

²HCM 6th Edition Level of Service and v/c ratio reported for stop control (side street)

³-- indicates that Synchro does not report the v/c ratio due to the intersection exceeding capacity. The change in the v/c ratio and the intersection impact is reported as "Unknown."

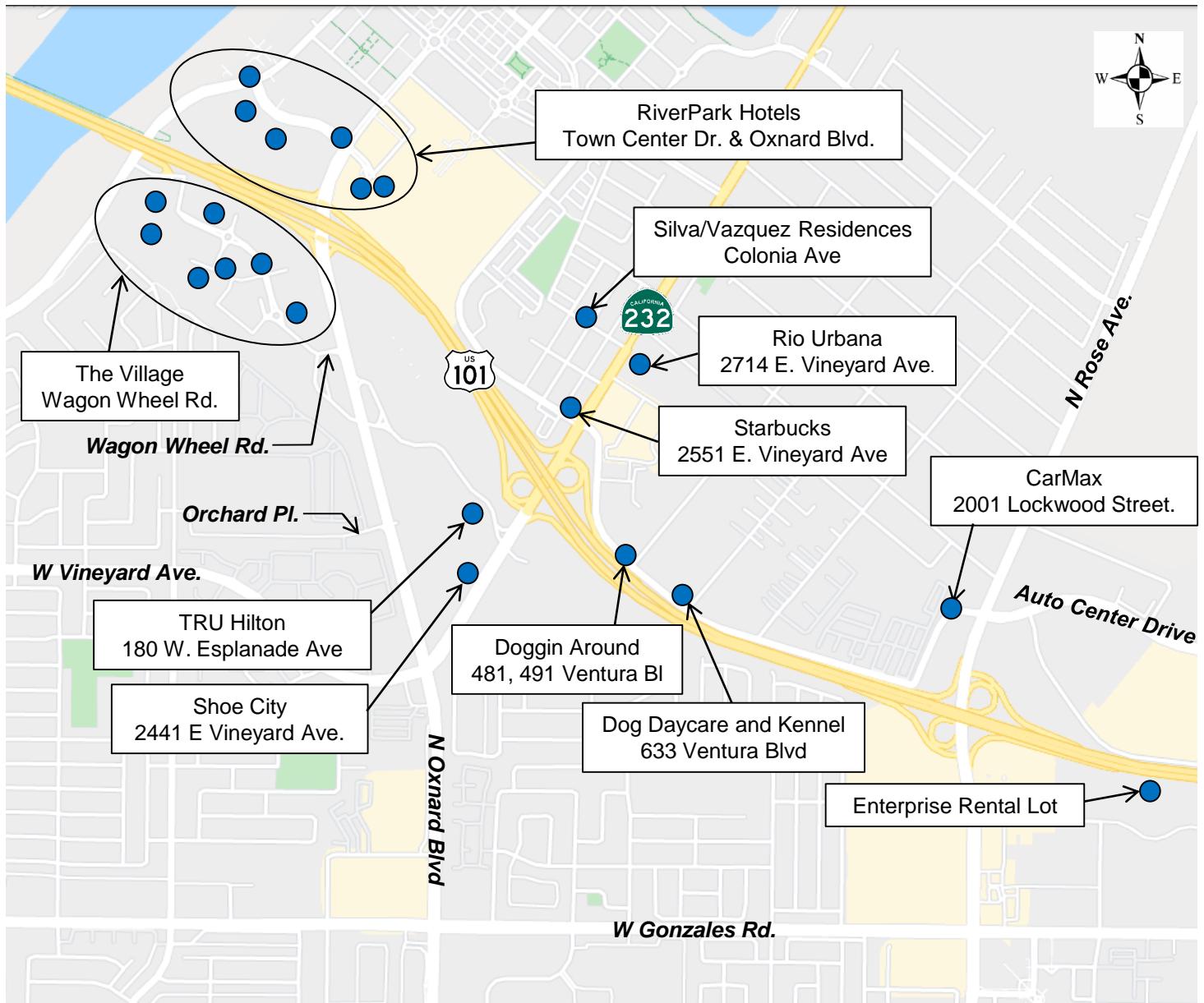
**Legend**

- XX' = Maximum (95th Percentile) Queues, ft
 [XX'] = 50th Percentile Queues, ft
 ● = Traffic Signal ■ = Stop Sign

Note: “--” indicates that Synchro does not report due to intersection exceeding capacity

Existing + Project Queues

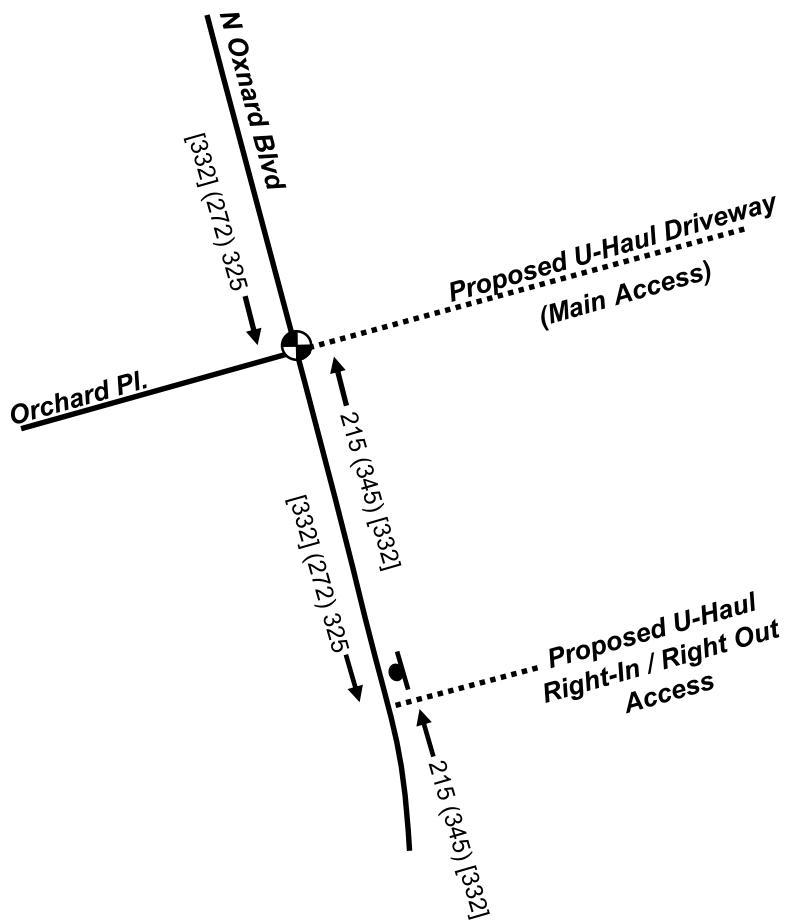
Exhibit
12

**Legend**

● = Approved/Pending Project

Approved/Pending Project Locations

Exhibit
13

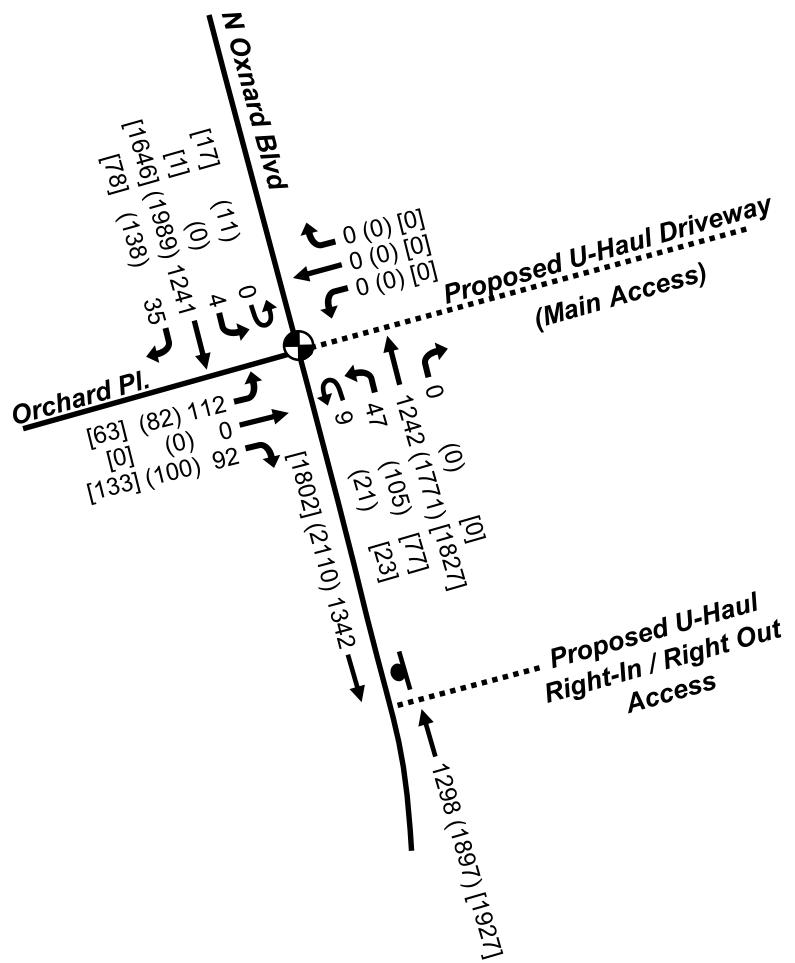
**Legend**

XX	= Weekday Morning Peak Hour Volume
(XX)	= Weekday Evening Peak Hour Volume
[XX]	= Saturday Peak Hour Volume
●	= Stop Sign

● = Traffic Signal

**Approved/Pending Project
Trip Assignment**

Exhibit
14

**Legend**

XX = Weekday Morning Peak Hour Volume
 (XX) = Weekday Evening Peak Hour Volume
 [XX] = Saturday Peak Hour Volume
 ⚡ = Stop Sign

● = Traffic Signal

Cumulative (Existing + Approved/Pending Project) Traffic Volumes

Exhibit
15

**Cumulative (Existing + Approved/Pending Project)
Weekday Peak Hour Level of Service**

N. Oxnard Blvd Intersection with:	Traffic Control	Peak Hour	Level of Service	Volume/Capacity Ratio
Orchard Place	Traffic Signal ¹	AM	A	0.49
		PM	A	0.75
	Two-Way Stop ²	AM	F	10.04
		PM	F	-- ³
Right-in/Right-out Access	One-Way Stop ² <i>(with Traffic Signal at N Oxnard Blvd. with Orchard Place)</i>	AM	B	0.01
		PM	C	0.01
	One-Way Stop ² <i>(with Stop Control at N Oxnard Blvd. with Orchard Place)</i>	AM	B	0.01
		PM	C	0.01

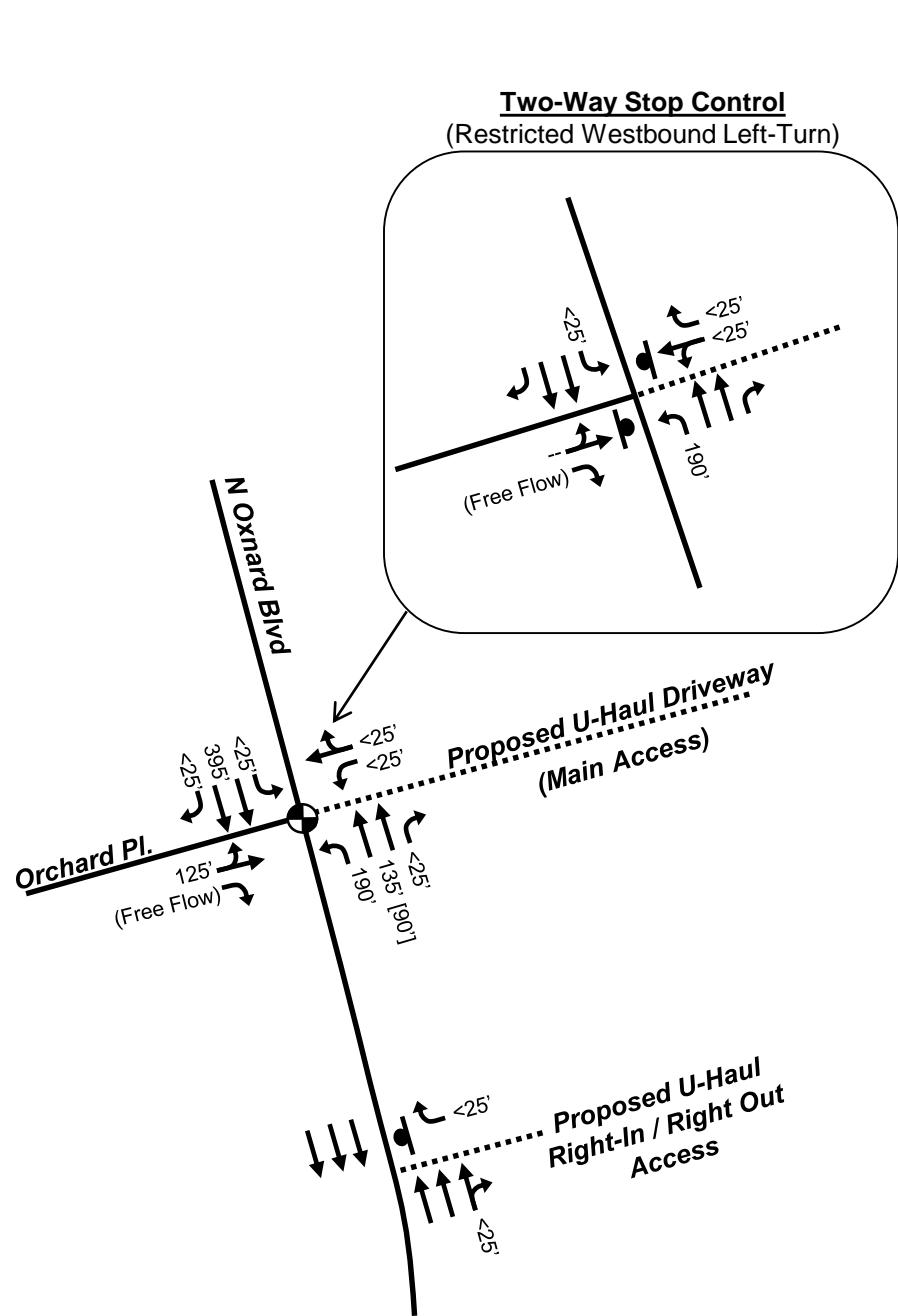
¹ICU Level of Service and v/c ratio reported for traffic signals

²HCM 6th Edition Level of Service and v/c ratio reported for stop control (side street)

³-- indicates that Synchro does not report the v/c ratio due to the intersection exceeding capacity

**Cumulative (Existing +
Approved/Pending Project)
Level of Service**

Exhibit
16

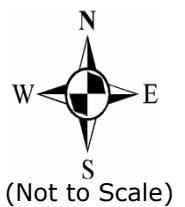
**Legend**

XX'	= Maximum (95 th Percentile) Queues, ft
[XX']	= 50 th Percentile Queues, ft
●	= Traffic Signal

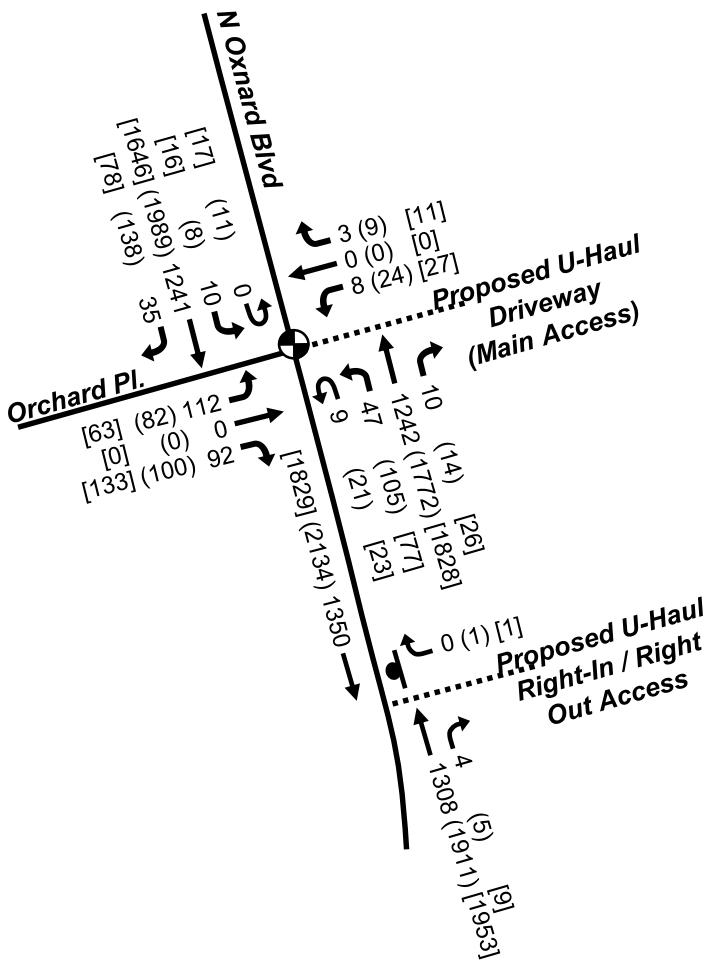
**Cumulative (Existing +
Approved/Pending Project) Queues**

Exhibit
17

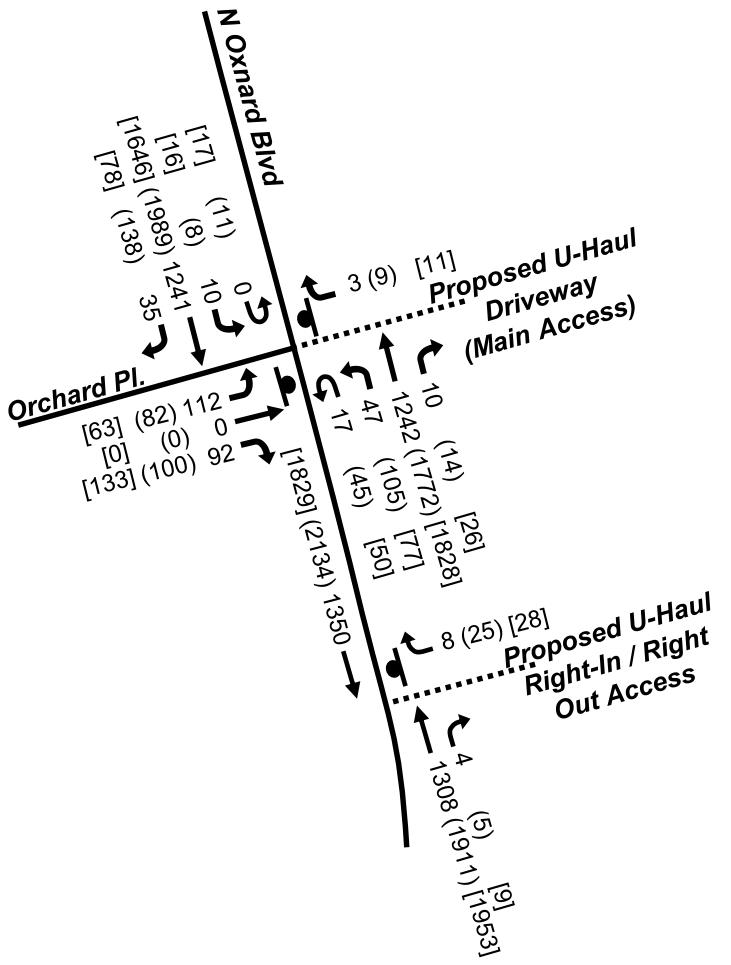
May 2021



With Traffic Signal
(full access)



With Two-Way Stop Control
(restricted Westbound Left-Turn)



Legend

XX	= Weekday Morning Peak Hour Volume
(XX)	= Weekday Evening Peak Hour Volume
[XX]	= Saturday Peak Hour Volume
●	= Stop Sign

● = Traffic Signal

**Total (Cumulative + Project)
Traffic Volumes**

Exhibit
18

Total Traffic
Weekday Peak Hour Operating Conditions

N. Oxnard Blvd Intersection with:	Traffic Control	Peak Hour	Cumulative		Cumulative + Project		$\Delta v/c$	Impact?
			Level of Service	Volume/Capacity Ratio	Level of Service	Volume/Capacity Ratio		
Orchard Place	Traffic Signal ¹	AM	A	0.49	A	0.49	0.00	No
		PM	A	0.75	A	0.76	0.01	No
	Two-Way Stop ²	AM	F	12.38	F	10.04	1.23	Yes
		PM	F	-- ³	F	80.0	Unknown	Unknown
Right-in/Right-out Access	One-Way Stop ² (with Traffic Signal at N Oxnard Blvd. with Orchard Place)	AM	B	0.01	B	0.01	0.00	No
		PM	C	0.01	C	0.01	0.00	No
	One-Way Stop ² (with Stop Control at N Oxnard Blvd. with Orchard Place)	AM	B	0.01	C	0.02	0.01	No
		PM	C	0.01	C	0.13	0.12	Yes

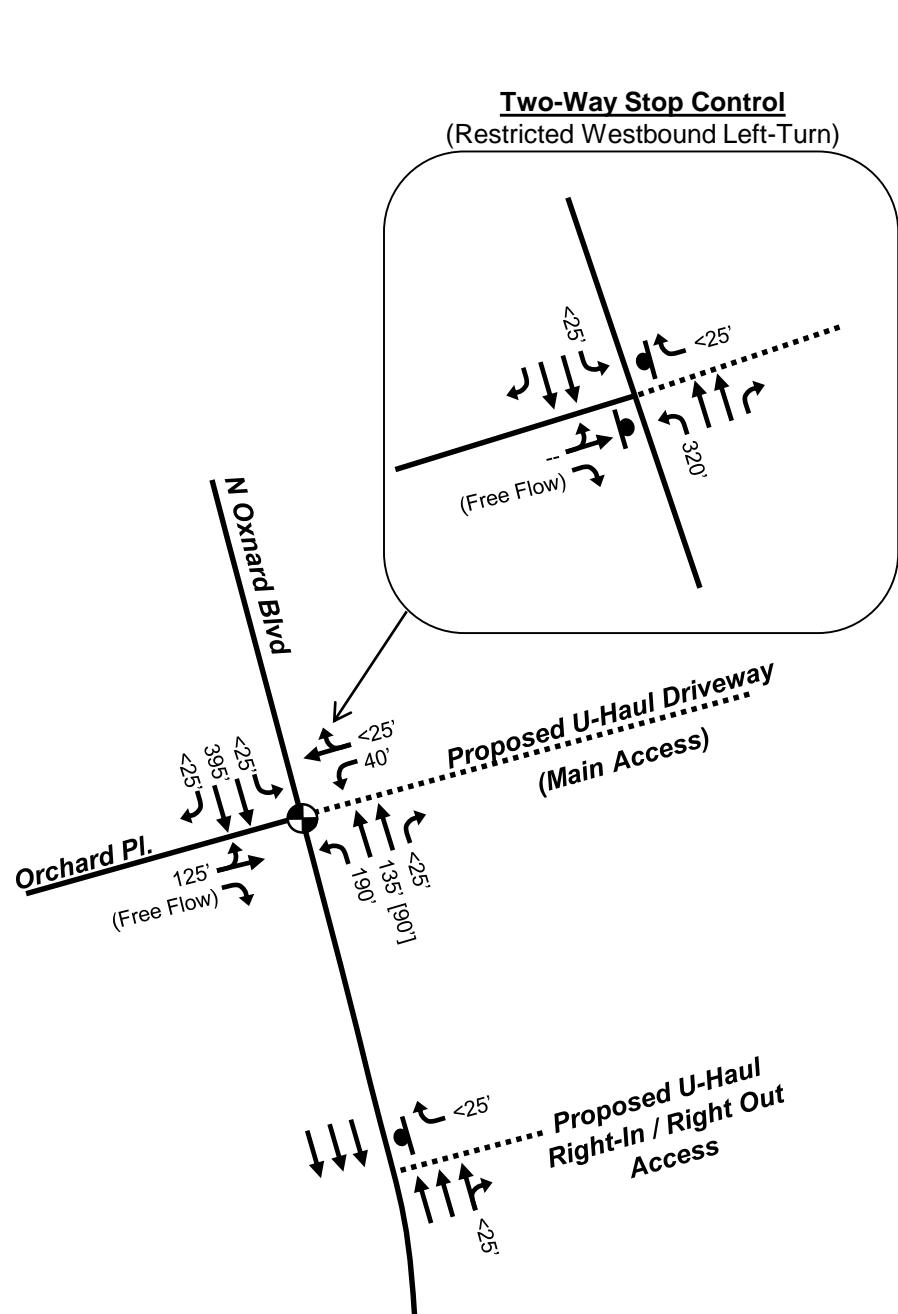
¹ICU Level of Service and v/c ratio reported for traffic signals

²HCM 6th Edition Level of Service and v/c ratio reported for stop control (side street)

³-- indicates that Synchro does not report the v/c ratio due to the intersection exceeding capacity. The change in the v/c ratio and the intersection impact is reported as "Unknown."

**Total (Cumulative + Project) Traffic
Level of Service**

Exhibit
19

**Legend**

XX'	= Maximum (95 th Percentile) Queues, ft
[XX']	= 50 th Percentile Queues, ft
●	= Traffic Signal

Total (Cumulative + Project) QueuesExhibit
20

APPENDIX A

**EXISTING TRAFFIC COUNTS
SIGNAL WARRANT ANALYSIS
APPROVED/PENDING PROJECTS TRIP
GENERATION TABLE**

EXISTING TRAFFIC COUNTS

Intersection N Oxnard Blvd & Orchard Place
 Count Date 4/22/2021
 Count Times 6:00 AM to 6:00 PM
 Day of Week Thursday
 Classification All Vehicles
 Counting Agency Quality Counts

raSmith

Weekday Morning Peak

	All Vehicles	Southbound				Westbound				Northbound				Eastbound				Sum	PHF	Hourly Total
		L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U			
7:15 AM	▼ I	1	156	0	0	0	0	0	0	12	212	0	2	27	0	12	0	#####	0.86	1689
7:45 AM		1	207	8	0	0	0	0	0	9	215	0	0	26	0	25	0	#####		
8:00 AM		0	179	10	0	0	0	0	0	7	156	1	4	12	0	19	0	#####		
8:15 AM		1	147	8	1	0	0	1	0	7	189	0	1	19	1	13	0	#####		
Movement Total		3	689	26	1	0	0	1	0	35	772	1	7	84	1	69	0	#####		
Rounded Total		5	690	25	0	0	0	0	0	35	770	0	5	85	0	70	0	#####		
Approach Total		719				1				815				154						
PHF		0.83				0.25				0.9				0.75						
Heavy Vehicles		0				0				1				1				0		
7:30:00 AM		0	9	0		0	0	0		1	13	0		1	0	0				
7:45 AM		0	13	0		0	0	0		0	8	0		0	0	0				
8:00 AM		0	10	1		0	0	0		0	15	0		1	0	0				
8:15 AM		0	5	1		0	0	0		0	19	0		1	0	0				
Movement Total		0	37	2		0	0	0		1	55	0		3	0	0				
Approach Total		39				0				56				3						
Hv%		5.4%				0.0%				6.9%				1.9%						

12:00 PM ▼

Weekday Afternoon Peak

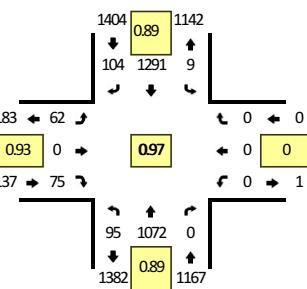
	All Vehicles	Southbound				Westbound				Northbound				Eastbound				Sum	PHF	Hourly Total
		L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U			
4:30 PM	▼ M	1	297	25	1	0	0	0	0	18	263	0	1	15	0	22	0	643	0.97	2708
5:15 PM		0	314	29	2	0	0	0	0	26	265	0	6	15	0	22	0	679		
5:30 PM		0	368	25	1	0	0	0	0	18	240	0	4	16	0	14	0	686		
5:45 PM		0	312	25	4	0	0	0	0	17	304	0	5	16	0	17	0	700		
Movement Total		1	1291	104	8	0	0	0	0	79	1072	0	16	62	0	75	0			
Rounded Total		0	1290	105	10	0	0	0	0	80	1070	0	15	60	0	75	0			
Approach Total		1404				0				1167				137						
PHF		0.89				#DIV/0!				0.89				0.93						
Heavy Vehicles		0				0				0				0						
5:00:00 PM		0	11	0		0	0	0		0	9	0		0	0	0				
5:15 PM		0	3	1		0	0	0		0	4	0		1	0	0				
5:30 PM		0	7	1		0	0	0		0	6	0		0	0	0				
5:45 PM		0	11	0		0	0	0		0	4	0		0	0	0				
Movement Total		0	32	2		0	0	0		0	23	0		1	0	0				
Approach Total		34				0				23				1						
Hv%		2.4%				#DIV/0!				2.0%				0.7%						

Type of peak hour being reported: Intersection Peak

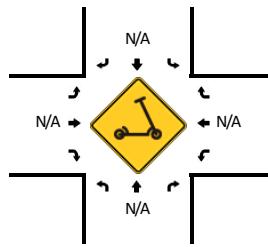
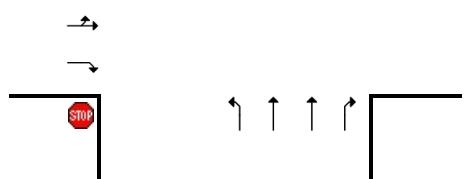
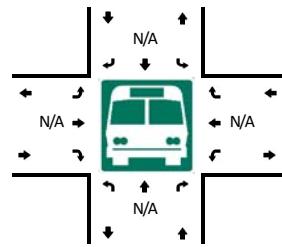
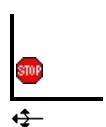
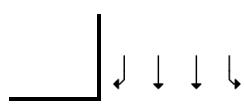
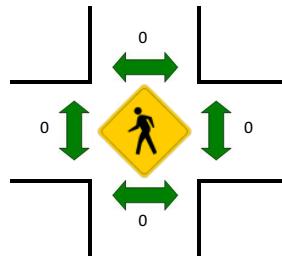
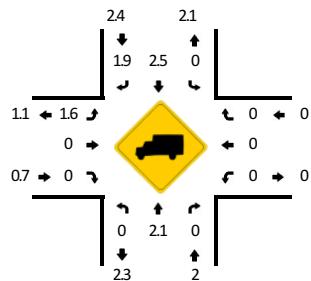
Method for determining peak hour: Total Entering Volume

LOCATION: Orchard Pl -- N Oxnard Blvd
CITY/STATE: Oxnard, CA

QC JOB #: 15409601
DATE: Thu, Apr 22 2021



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



15-Min Count Period Beginning At	Orchard Pl (Northbound)				Orchard Pl (Southbound)				N Oxnard Blvd (Eastbound)				N Oxnard Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	5	178	0	1	0	42	2	0	18	0	11	0	0	0	0	0	257	
6:15 AM	4	171	0	0	0	55	3	0	15	0	11	0	0	0	0	0	259	
6:30 AM	3	185	0	1	1	68	1	1	14	0	8	0	0	0	0	0	282	
6:45 AM	4	195	0	0	2	87	4	1	16	0	12	0	0	0	0	0	321	1119
7:00 AM	4	197	0	0	1	96	5	0	20	0	7	0	0	0	0	0	330	1192
7:15 AM	6	185	0	1	0	127	4	0	18	0	7	0	0	0	0	0	348	1281
7:30 AM	12	212	0	2	1	156	0	0	27	0	12	0	0	0	0	0	422	1421
7:45 AM	9	215	0	0	1	207	8	0	26	0	25	0	0	0	0	0	491	1591
8:00 AM	7	156	1	4	0	179	10	0	12	0	19	0	0	0	0	0	388	1649
8:15 AM	7	189	0	1	1	147	8	1	19	1	13	0	0	0	1	0	388	1689
8:30 AM	6	171	0	2	0	163	5	1	11	0	9	0	0	0	0	0	368	1635
8:45 AM	10	204	0	3	2	162	4	0	11	0	19	0	0	0	0	0	415	1559
9:00 AM	4	174	0	2	2	136	10	0	8	0	11	0	0	0	2	0	349	1520
9:15 AM	7	148	0	3	1	162	6	0	11	0	8	0	0	0	0	0	346	1478
9:30 AM	10	178	0	3	0	152	9	1	10	0	9	0	0	0	0	0	372	1482
9:45 AM	6	185	0	2	1	166	4	1	16	0	19	0	0	0	0	0	400	1467
10:00 AM	11	185	0	2	1	158	9	0	20	0	9	0	0	0	0	0	395	1513
10:15 AM	10	198	1	4	0	152	5	0	11	0	11	0	0	0	0	0	392	1559
10:30 AM	6	197	0	4	0	199	9	0	6	0	18	0	1	0	0	0	440	1627
10:45 AM	11	215	0	3	1	198	15	1	8	0	19	0	0	0	0	0	471	1698
11:00 AM	10	218	0	4	2	196	11	0	8	0	12	0	0	0	0	0	461	1764
11:15 AM	10	216	0	3	1	179	9	2	21	0	15	0	0	0	0	0	456	1828
11:30 AM	12	258	0	2	0	182	6	2	8	0	12	0	1	0	0	0	483	1871
11:45 AM	13	232	0	4	1	184	23	0	7	0	22	0	1	0	0	0	487	1887
12:00 PM	12	227	1	6	1	214	10	2	12	0	17	0	0	0	0	0	502	1928
12:15 PM	11	245	0	4	0	239	14	3	18	0	15	0	1	0	0	0	550	2022
12:30 PM	15	197	0	3	1	191	12	1	8	0	18	0	0	0	0	0	446	1985
12:45 PM	18	258	1	2	1	232	13	1	12	0	26	0	0	0	1	0	565	2063
1:00 PM	16	253	0	4	2	232	14	2	11	0	15	0	0	0	0	0	549	2110
1:15 PM	10	216	0	8	0	236	12	1	7	0	11	0	0	0	0	0	501	2061
1:30 PM	16	229	0	5	0	232	16	0	19	0	15	0	2	0	0	0	534	2149
1:45 PM	15	208	0	2	0	247	18	1	9	0	14	0	0	0	1	0	515	2099
2:00 PM	8	194	0	2	0	267	15	3	19	0	14	0	0	0	0	0	522	2072
2:15 PM	12	222	0	2	2	242	19	2	11	0	20	0	1	0	0	0	533	2104
2:30 PM	9	202	0	4	0	267	18	4	10	0	11	0	0	0	0	0	525	2095
2:45 PM	18	246	0	5	0	261	23	2	12	0	20	0	0	0	1	0	588	2168
3:00 PM	11	217	0	0	3	288	12	1	11	1	9	0	0	0	0	0	553	2199
3:15 PM	13	247	0	5	0	279	28	1	11	0	22	0	0	0	1	0	607	2273
3:30 PM	18	217	0	5	0	305	17	1	8	0	28	0	0	0	1	0	600	2348

15-Min Count Period Beginning At	Orchard PI (Northbound)				Orchard PI (Southbound)				N Oxnard Blvd (Eastbound)				N Oxnard Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:45 PM	26	246	0	4	1	326	25	2	12	0	21	0	0	0	0	0	663	2423
4:00 PM	18	243	0	2	0	323	26	0	12	0	25	0	0	0	0	0	649	2519
4:15 PM	19	235	0	3	1	322	21	1	10	0	24	0	0	0	2	0	638	2550
4:30 PM	12	231	0	2	1	384	20	0	10	0	16	0	0	0	0	0	676	2626
4:45 PM	22	248	0	4	1	351	20	1	11	0	20	0	0	0	1	0	679	2642
5:00 PM	18	263	0	1	1	297	25	1	15	0	22	0	0	0	0	0	643	2636
5:15 PM	26	265	0	6	0	314	29	2	15	0	22	0	0	0	0	0	679	2677
5:30 PM	18	240	0	4	0	368	25	1	16	0	14	0	0	0	0	0	686	2687
5:45 PM	17	304	0	5	0	312	25	4	16	0	17	0	0	0	0	0	700	2708
6:00 PM	9	246	0	4	0	313	17	0	13	0	19	0	0	0	0	0	621	2686
6:15 PM	18	260	0	7	0	248	22	2	10	0	14	0	0	0	0	0	581	2588
6:30 PM	14	228	0	3	0	241	19	2	9	0	17	0	0	0	0	0	533	2435
6:45 PM	14	219	0	8	0	212	15	0	13	0	10	0	0	0	0	0	491	2226
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	68	1216	0	20	0	1248	100	16	64	0	68	0	0	0	0	0	2800	
Heavy Trucks	0	16	0		0	44	0		0	0	0		0	0	0		60	
Buses																		
Pedestrians		0				0				0				0				0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scooters																		

Comments:

Report generated on 4/28/2021 2:52 PM

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

Intersection N Oxnard Blvd & Orchard Place
 Count Date 4/24/2021
 Count Times 11:00 AM to 2:00 PM
 Day of Week Saturday
 Classification All Vehicles
 Counting Agency Quality Counts

raSmith

7:15 AM

Saturday Midday Peak

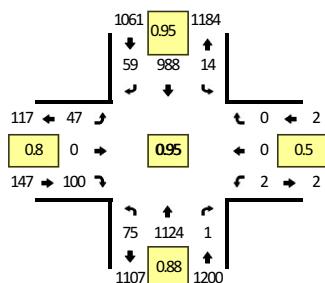
		Southbound				Westbound				Northbound				Eastbound				Sum	PHF	Hourly Total
		L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	U			
All Vehicles	11:30 AM	1	235	12	3	1	0	0	0	14	321	0	4	17	0	23	0	#####	0.95	2410
	12:00 PM	0	250	15	4	1	0	0	0	11	269	1	2	10	0	19	0	#####		
	12:15 PM	0	247	13	2	0	0	0	0	17	250	0	5	9	0	37	0	#####		
	12:30 PM	0	256	19	4	0	0	0	0	16	284	0	6	11	0	21	0	#####		
	Movement Total	1	988	59	13	2	0	0	0	58	1124	1	17	47	0	100	0	#####		
	Rounded Total	0	990	60	15	0	0	0	0	60	1125	0	15	45	0	100	0	#####		
	Approach Total	1061				2				1200				147						
Heavy Vehicles	PHF	0.95				0.5				0.88				0.80						
	11:45:00 AM	0	6	0		0	0	0		1	3	0		0	0	1				
	12:00 PM	0	9	0		0	0	0		0	9	0		0	0	0				
	12:15 PM	0	6	1		0	0	0		0	3	0		0	0	0				
	12:30 PM	0	1	0		0	0	0		0	7	0		0	0	0				
	Movement Total	0	22	1		0	0	0		1	22	0		0	0	1				
	Approach Total	23				0				23				1						
HV%		2.2%				0.0%				1.9%				0.7%						

Type of peak hour being reported: Intersection Peak

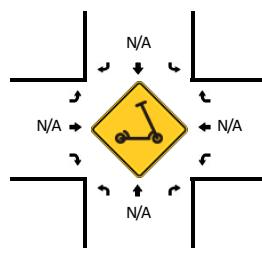
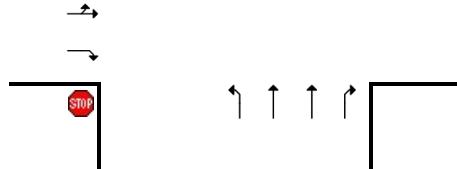
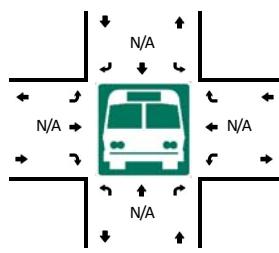
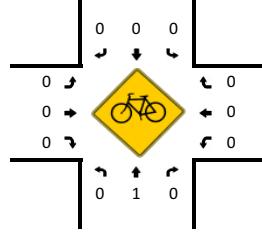
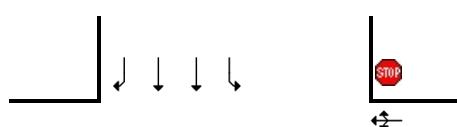
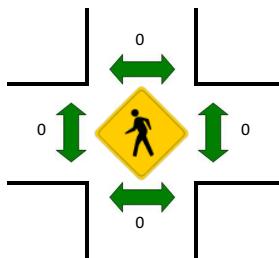
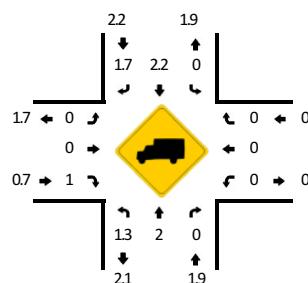
Method for determining peak hour: Total Entering Volume

LOCATION: Orchard Pl -- N Oxnard Blvd
CITY/STATE: Oxnard, CA

QC JOB #: 15409602
DATE: Sat, Apr 24 2021



Peak-Hour: 11:45 AM -- 12:45 PM
Peak 15-Min: 11:45 AM -- 12:00 PM



15-Min Count Period Beginning At	Orchard Pl (Northbound)				Orchard Pl (Southbound)				N Oxnard Blvd (Eastbound)				N Oxnard Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
11:00 AM	15	279	0	2	1	233	16	5	8	0	21	0	0	0	1	0	581	
11:15 AM	19	251	0	4	1	262	14	5	16	0	19	0	0	0	1	0	592	
11:30 AM	23	234	0	5	2	225	9	3	14	0	13	1	0	0	0	0	529	
11:45 AM	14	321	0	4	1	235	12	3	17	0	23	0	1	0	0	0	631	2333
12:00 PM	11	269	1	2	0	250	15	4	10	0	19	0	1	0	0	0	582	2334
12:15 PM	17	250	0	5	0	247	13	2	9	0	37	0	0	0	0	0	580	2322
12:30 PM	16	284	0	6	0	256	19	4	11	0	21	0	0	0	0	0	617	2410
12:45 PM	18	292	0	8	0	249	18	2	11	0	19	0	0	0	2	0	619	2398
1:00 PM	16	285	0	6	2	210	24	1	23	0	27	0	0	0	0	0	594	2410
1:15 PM	23	211	0	5	0	231	14	0	15	0	21	0	0	0	0	0	520	2350
1:30 PM	19	316	0	4	0	235	13	5	14	0	26	0	0	0	0	0	632	2365
1:45 PM	13	254	0	2	0	260	19	1	16	0	24	0	0	0	1	0	590	2336

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	56	1284	0	16	4	940	48	12	68	0	92	0	4	0	0	0	2524
Heavy Trucks		12	0		0	24	0		0	0	4		0	0	0		44
Buses																	0
Pedestrians	0	0	0		0	0	0		0	0	0		0	0	0		0
Bicycles																	
Scooters																	

Comments:

Report generated on 4/28/2021 2:52 PM

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

SIGNAL WARRANT ANALYSIS

Traffic Signal Warrant Summary Worksheet

70%

The Worksheet(s) attached are provided as an attachment to the Engineering Investigation Study for:

Intersection: North Oxnard Blvd & Orchard Place

County: Ventura County

City: Oxnard, CA

Major Street: N Oxnard Blvd

Minor Street: Orchard Place

Critical Approach Speed: 50 mph

Critical Approach Speed: 25 mph

Lanes: 2 or more lanes

Lanes: 1 lane

% Right Turns Included

From North (SB) 100%

In built-up area of isolated community of < 10,000 population? No

From East (WB) 0%

Total number of approaches at intersection? 4 or more

From South (NB) 100%

If it is a "T" intersection, inflate minor threshold to 150%? No

From West (EB) 0%

Manually set volume level? No

Analysis based on EXISTING volume data.

Date	Day of the Week	Time (HH:MM)			
		From	AM / PM	To	AM / PM
4/22/2021	Thursday	6:00	am	6:00	PM

Warrant Evaluation Summary

Warrant Met:

Warrant 1: Eight - Hour Vehicular Volume

Yes

Condition A: Minimum Vehicular Volume

No

Condition B: Interruption of Continuous Traffic

Yes

Condition C: Combination: 80% of A and B

No

Warrant 2: Four-Hour Volume

Yes

Warrant 3: Peak Hour Volume

Yes

Warrant 4: Pedestrian Volume

N/A

Criterion A: Four-Hour

Criterion B: Peak-Hour

Warrant 5: School Crossing

N/A

Warrant 6: Coordinated Signal System

N/A

Warrant 7: Crash Experience

N/A

Warrant 8: Roadway Network

N/A

Warrant 9: Intersection Near a Grade Crossing

N/A

Warrant Analysis Conducted By:

Name: LLS

Agency: raSmith

Date: 5/3/2021

Warrant 1: Eight - Hour Vehicular Volume

70%

Warrant Evaluated? Yes

Condition A :		
Min. Veh. Volume		
Volume Level	70%	56%
Major Rd. Req	420	336
Minor Rd. Req	105	84
Number of Hours	1	2

Satisfied? No

Condition B:		
Interruption of Continuous Traffic		
Volume Level	70%	56%
Major Rd. Req	630	504
Minor Rd. Req	53	42
Number of Hours	13	13

Satisfied? Yes

Condition C:		
Combination of A & B at 56%		
		Satisfied? No

Warrant Satisfied? Yes

Manually Set To:

6:00 AM		Enter Start Time (Military Time) (HH:MM)		
Time Period	From	To	Major Road: Both App. (VPH)	Minor Road: High App. (VPH)
1	6:00	7:00	1349	84
2	7:00	8:00	1927	121
3	8:00	9:00	1921	71
4	9:00	10:00	1826	60
5	10:00	11:00	2121	60
6	11:00	12:00	2367	59
7	12:00	13:00	2573	67
8	13:00	14:00	2654	61
9	14:00	15:00	2726	69
10	15:00	16:00	3056	57
11	16:00	17:00	3340	57
12	17:00	18:00	3419	82
13	18:00	19:00	2820	60
14	19:00	20:00	0	0
15	20:00	21:00	0	0
16	21:00	22:00	0	0

Total
1433
2048
1992
1886
2181
2426
2640
2715
2795
3113
3397
3501
2880
0
0
0

Warrant 2: Four-Hour Volume

70%

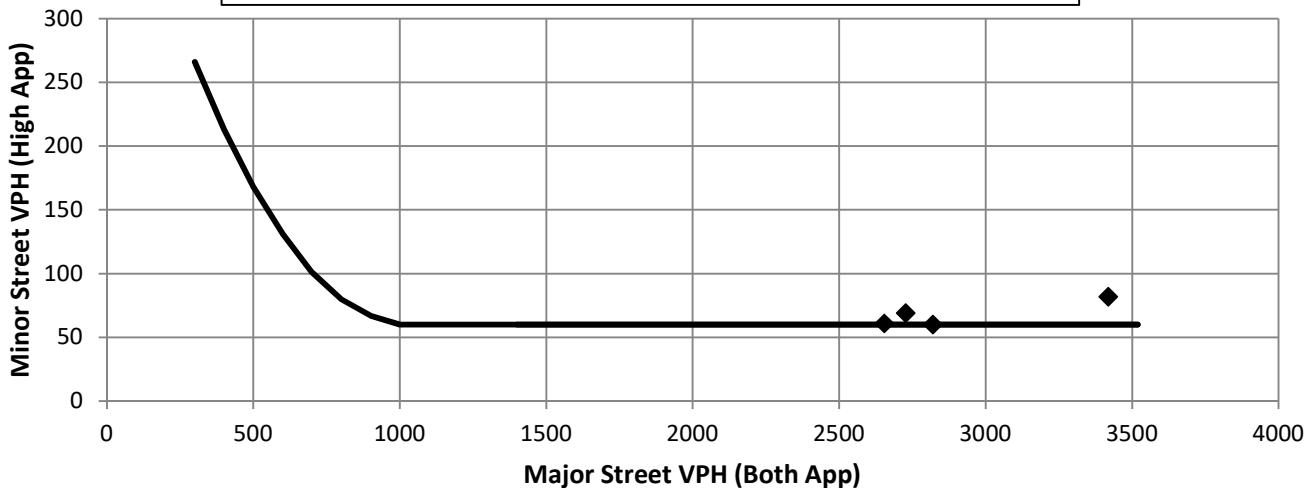
Warrant Evaluated? Yes

Warrant Satisfied? Yes

Manually Set To:

Hour Start	17:00	18:00	14:00	13:00
Major Road Vol.	3419	2820	2726	2654
Minor Road Vol.	82	60	69	61

Figure 4C-2 Warrant 2, Four-Hour Vehicular Volume (70% Factor)



Warrant 3: Peak Hour Volume

70%

Warrant Evaluated? Yes

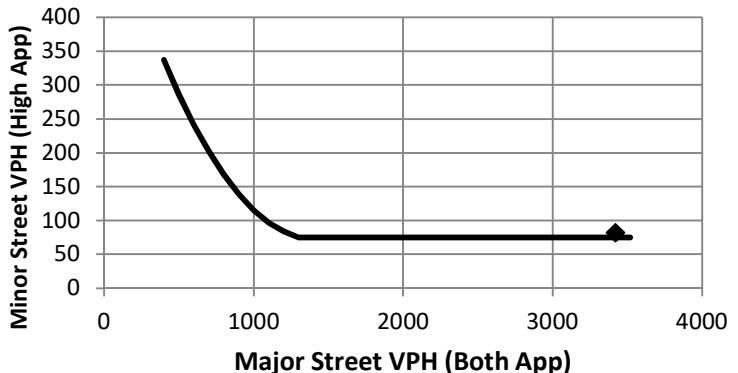
Condition justifying use of warrant:

Criteria	Met?
Delay on Minor Approach	4
Volume on Minor Approach	100
Total Entering Volume (veh/h)	800

Warrant Satisfied? Yes

Manually Set To:

Figure 4C-4 Warrant 3, Peak Hour (70% Factor)



Manually Set Peak Hour?

Peak Hour	Major Road Vol. (Both App.)	Minor Road Vol. (High App.)
17:00	3419	82

Warrant 4: Pedestrian Volume

70%

Warrant Evaluated?

Warrant Satisfied? N/A

Manually Set To:

Criterion A: Four Hour

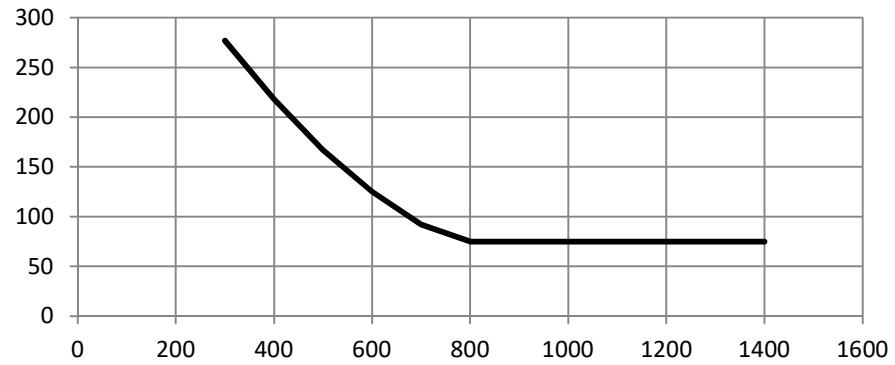
Hour (Start)	Pedestrian Volume	Major Road Vol.
		0
		0
		0
		0

Manually Set Major Rd Vol?

Avg. walk speed less than 3.5 ft/s?

Criterion A Satisfied?

Figure 4C-6 Warrant 4, Pedestrian Four-Hour Volume (70% Factor)

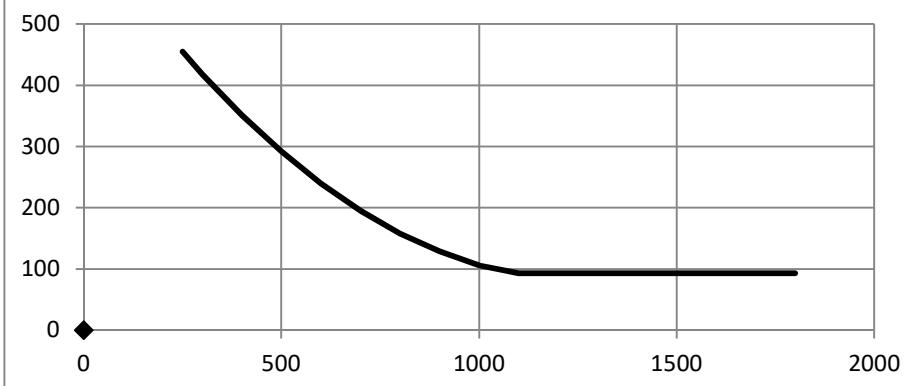


Criterion B: Peak Hour

Peak Hour	Pedestrian Vol.	Major Road Vol.
0:00	0	0

Criterion B Satisfied?

Figure 4C-8 Warrant 4, Pedestrian Peak Hour (70% Factor)



Hourly Volume Data - N. Oxnard & Orchard Place - Year 2021 (with Covid factor)

One Hour Time Period Start Time	↓ From North (SB)					← From East (WB)					↑ From South (NB)					→ From West (EB)					Total Vehicle Volume
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
	6:00	13	335	4	3	0	0	0	0	0	0	970	21	3	0	56	0	84	0	0	1489
AM	7:00	23	779	4	0	0	0	0	0	0	0	1076	41	4	0	68	0	121	0	0	2116
	8:00	36	866	4	3	1	0	0	0	0	1	958	40	13	0	80	1	70	0	0	2073
	9:00	39	819	5	3	3	0	0	0	0	0	911	36	13	0	63	0	60	0	0	1952
	10:00	51	940	3	1	0	0	1	0	0	1	1057	51	17	0	76	0	60	0	0	2258
MD	11:00	65	986	5	5	0	0	3	0	0	0	1229	60	17	0	81	0	59	0	0	2510
	12:00	65	1165	4	9	1	0	1	0	0	3	1233	74	20	0	101	0	67	0	0	2743
	13:00	80	1260	3	5	1	0	3	0	0	0	1205	76	25	0	73	0	61	0	0	2792
	14:00	100	1379	3	15	1	0	1	0	0	0	1149	63	17	0	86	0	69	0	0	2883
PM	15:00	109	1593	5	7	3	0	0	0	0	0	1233	90	19	0	106	1	56	0	0	3222
	16:00	116	1835	4	3	4	0	0	0	0	0	1273	94	15	0	113	0	57	0	0	3514
	17:00	138	1717	1	11	0	0	0	0	0	0	1426	105	21	0	100	0	82	0	0	3601
	18:00	97	1349	0	5	0	0	0	0	0	0	1267	73	29	0	80	0	60	0	0	2960
	19:00																			0	
	20:00																			0	
	21:00																			0	
Totals	932	15023	45	70	16070	14	0	9	0	23	5	14987	824	213	16029	1083	2	906	0	1991	34113

Note: Traffic volumes in 2021 were compared to traffic volumes from 2018 at study intersection (from previous study). The 2021 volumes were 75% of the 2018 volumes. Therefore, a COVID adjustment factor of 1.33 was applied to the 2021 traffic volumes to make them comparable for traffic analysis purposes.

Note: U-Turns are counted as Left Turns in the Volume Totals

Please Select the Major Road:

Major Road Left Turn as Minor Approach?

% Right Turns Included (Default 0%)

From North (SB)	<input checked="" type="checkbox"/> 100%
From East (WB)	<input type="checkbox"/> 0%
From South (NB)	<input checked="" type="checkbox"/> 100%
From West (EB)	<input type="checkbox"/> 0%

Major Road Volume Totals: North/South

Right	Thru	Left	T+LT	Total
13	1305	31	1336	1349
23	1855	49	1904	1927
37	1824	60	1884	1921
39	1730	57	1787	1826
52	1997	72	2069	2121
65	2215	87	2302	2367
68	2398	107	2505	2573
80	2465	109	2574	2654
100	2528	98	2626	2726
109	2826	121	2947	3056
116	3108	116	3224	3340
138	3143	138	3281	3419
97	2616	107	2723	2820
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
937	30010	1152	31162	32099

Minor Road Highest Volume: East/West

Right	Thru	Left	T+LT	Total
0	0	84	84	84
0	0	121	121	121
0	1	70	71	71
0	0	60	60	60
0	0	60	60	60
0	0	59	59	59
0	0	67	67	67
0	0	61	61	61
0	0	69	69	69
0	1	56	57	57
0	0	57	57	57
0	0	82	82	82
0	0	60	60	60
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	2	906	908	908

APPROVED/PENDING PROJECTS TRIP GENERATION TABLE

Table A-1
Approved/Pending Project Trip Generation

Approved/Pending Project	Land Use	ITE Code	Size	Weekday Daily Trips	Weekday AM Peak Hour Trips			Weekday PM Peak Hour Trips			Saturday Peak Hour Trips		
					In	Out	Total	In	Out	Total	In	Out	Total
Fore RiverPark	Apartments	221	333 Dwelling Units (DU)	1,812	31	89	120	90	57	147	72	75	147
RiverPark Hotels	Hotel	310	240 Rooms	2,006	67	46	113	73	71	144	97	76	173
Lot 1 of The Landing at Riverpark	Gas Station	960	5,477 SF	4,587	228	227	455	190	189	379	175	174	349
Lot 2 of The Landing at Riverpark	Fast Food Restaurant	934	2,700 SF	1,272	56	53	109	46	42	88	75	73	148
Lot 5 of The Landing at Riverpark	Fast Food Restaurant	934	2,300 SF	1,083	47	45	92	39	36	75	64	62	126
Lot 4 of The Landing at Riverpark	Shopping Center	820	7,236 SF	273	4	3	7	13	15	28	17	16	33
Wagon Wheel Development #4	Apartments	221	88 DU	479	8	24	32	24	15	39	19	20	39
Wagon Wheel Development # 5 & 11	Apartments	221	78 DU	424	7	21	28	21	13	34	17	17	34
Wagon Wheel Development # 7, 9, 10 & partial 8	Apartments	221	144 DU	783	14	38	52	38	25	63	31	32	63
Wagon Wheel Development #18 & 19	Apartments / Retail	221 / 820	219 DU / 16,303 SF	1,806	43	30	88	64	112	94	1	89	109
Wagon Wheel Development # 6	Single Family Housing / Condos	210 / 221	21 DU / 12 DU	263	15	5	51	15	149	20	1	16	124
Wagon Wheel Development # 16 & 17	Apartments	221	448 DU	2,437	42	119	161	120	77	197	97	100	197
Shoe City	Retail	820	15,300 SF	578	9	5	14	28	30	58	36	33	69
TRU Hotel by Hilton	Hotel	310	88 Rooms	736	24	17	41	27	26	53	35	28	63
Rio Urbana	Office	710	15,000 SF	146	15	2	17	3	14	17	4	4	8
Starbucks Drive Thru Site Renovations	Coffee Shop	937	2,400 SF	1,969	109	105	214	52	52	104	105	105	210
Silva Residence & Vazquez Residence	Single Family Housing	210	2 DU	19	0	1	1	1	1	2	1	1	2
Enterprise Rental Lot	Automobile Sales	840	1,600 SF	45	2	1	3	2	2	4	3	3	6
CarMax	Automobile Sales	840	1,452 SF	40	2	1	3	2	2	4	3	3	6
Doggin Around	Animal Hospital/Clinic	640	5,861 SF	126	14	7	21	8	13	21	8	8	16
Dog Daycare and Kennel	Animal Hospital/Clinic	640	7,595 SF	163	19	9	28	11	16	27	10	10	20
Total Approved/Pending Project Trips				21,047	756	848	1,650	867	957	1,598	871	945	1,942

APPENDIX B

INTERSECTION CAPACITY UTILIZATION (ICU) WORKSHEETS

Intersection Capacity Utilization (ICU) Worksheet												
Count Date	4/22/2021											
Time Period	AM Peak											
North-South Street	Oxnard Blvd											
East-West Street	Orchard Place											
Control Type	Traffic Signal											
Traffic Volume Summary												
	Northbound			Southbound			Eastbound			Westbound		
Volumes	L	T	R	L	T	R	L	T	R	L	T	R
Existing (A)	56	1027	0	4	916	35	112	0	92	0	0	0
Project (B)	0	0	10	6	0	0	0	0	0	8	0	3
Cumulative (C)	56	1242	0	4	1241	35	112	0	92	0	0	0
Geometrics												
Lane Geometrics	L	TT	R	L	TT	R		LT	R	L	TR	
											(LT, R for TWSC)	
Traffic Scenarios												
1 - Existing (A)												
2 - Existing + Project (A+B)												
3 - Cumulative (C)												
4 - Cumulative + Project (B+C)												
Level of Service Calculations												
	1600			Scenario Volumes			Scenario V/C Ratios					
Movements	# of Lanes	Capacity	1	2	3	4	1	2	3	4		
NBL	1	1600	56	56	56	56	0.04	*	0.04	*	0.04	*
NBT	2	3200	1027	1027	1242	1242	0.32		0.32		0.39	
NBR	1	1600	0	10	0	10	0.00		0.01		0.00	
SBL	1	1600	4	10	4	10	0.00		0.01		0.00	
SBT	2	3200	916	916	1241	1241	0.29	*	0.29	*	0.39	*
SBR	1	1600	35	35	35	35	0.02		0.02		0.02	
EBL	0	0	112	112	112	112						
EBT	1	1600	0	0	0	0	0.07	*	0.07	*	0.07	*
EBR	1	1600	92	92	92	92	0.06		0.06		0.06	
WBL	1	1600	0	8	0	8	0.00		0.01		0.00	
WBT	1	1600	0	0	0	0	0.00	*	0.00	*	0.00	*
WBR	0	0	0	3	0	3						
	Total Intersection Capacity Utilization (ICU)						0.39		0.39		0.49	
	Scenario Level of Service (LOS)						A		A		A	
								$\Delta v/c$	0.00		$\Delta v/c$	0.00

* = critical movement

Intersection Capacity Utilization (ICU) Worksheet												
Count Date	4/22/2021											
Time Period	PM Peak											
North-South Street	Oxnard Blvd											
East-West Street	Orchard Place											
Control Type	Traffic Signal											
Traffic Volume Summary												
	Northbound			Southbound			Eastbound			Westbound		
Volumes	L	T	R	L	T	R	L	T	R	L	T	R
Existing (A)	126	1426	0	11	1717	138	82	0	100	0	0	0
Project (B)	0	1	14	8	0	0	0	0	0	24	0	9
Cumulative (C)	126	1771	0	11	1989	138	82	0	100	0	0	0
Geometrics												
Lane Geometrics	L	TT	R	L	TT	R		LT	R	L	TR	
											(LT, R for TWSC)	
Traffic Scenarios												
1 - Existing (A)												
2 - Existing + Project (A+B)												
3 - Cumulative (C)												
4 - Cumulative + Project (B+C)												
Level of Service Calculations												
	1600			Scenario Volumes			Scenario V/C Ratios					
Movements	# of Lanes	Capacity	1	2	3	4	1		2	3	4	
NBL	1	1600	126	126	126	126	0.08	*	0.08	*	0.08	*
NBT	2	3200	1426	1427	1771	1772	0.45		0.45		0.55	
NBR	1	1600	0	14	0	14	0.00		0.01		0.00	
SBL	1	1600	11	19	11	19	0.01		0.01		0.01	
SBT	2	3200	1717	1717	1989	1989	0.54	*	0.54	*	0.62	*
SBR	1	1600	138	138	138	138	0.09		0.09		0.09	
EBL	0	0	82	82	82	82						
EBT	1	1600	0	0	0	0	0.05	*	0.05	*	0.05	*
EBR	1	1600	100	100	100	100	0.06		0.06		0.06	
WBL	1	1600	0	24	0	24	0.00		0.02		0.00	
WBT	1	1600	0	0	0	0	0.00	*	0.01	*	0.00	*
WBR	0	0	0	9	0	9						
	Total Intersection Capacity Utilization (ICU)					0.67		0.67		0.75		0.76
	Scenario Level of Service (LOS)					A		A		A		A
							$\Delta v/c$	0.01			$\Delta v/c$	0.01

* = critical movement

Intersection Capacity Utilization (ICU) Worksheet												
Count Date	4/24/2021											
Time Period	SAT Peak											
North-South Street	Oxnard Blvd											
East-West Street	Orchard Place											
Control Type	Traffic Signal											
Traffic Volume Summary												
	Northbound			Southbound			Eastbound			Westbound		
Volumes	L	T	R	L	T	R	L	T	R	L	T	R
Existing (A)	100	1495	0	18	1314	78	63	0	133	0	0	0
Project (B)	0	1	26	15	0	0	0	0	0	27	0	11
Cumulative (C)	100	1827	0	18	1646	78	63	0	133	0	0	0
Geometrics												
Lane Geometrics	L	TT	R	L	TT	R		LT	R	L	TR	
											(LT, R for TWSC)	
Traffic Scenarios												
1 - Existing (A)												
2 - Existing + Project (A+B)												
3 - Cumulative (C)												
4 - Cumulative + Project (B+C)												
Level of Service Calculations												
	1600			Scenario Volumes						Scenario V/C Ratios		
Movements	# of Lanes	Capacity	1	2	3	4	1		2	3	4	
NBL	1	1600	100	100	100	100	0.06	*	0.06	*	0.06	*
NBT	2	3200	1495	1496	1827	1828	0.47		0.47	0.57	0.57	
NBR	1	1600	0	26	0	26	0.00		0.02	0.00	0.02	
SBL	1	1600	18	33	18	33	0.01		0.02	0.01	0.02	
SBT	2	3200	1314	1314	1646	1646	0.41	*	0.41	*	0.51	*
SBR	1	1600	78	78	78	78	0.05		0.05	0.05	0.05	
EBL	0	0	63	63	63	63						
EBT	1	1600	0	0	0	0	0.04	*	0.04	*	0.04	*
EBR	1	1600	133	133	133	133	0.08		0.08	0.08	0.08	
WBL	1	1600	0	27	0	27	0.00		0.02	0.00	0.02	
WBT	1	1600	0	0	0	0	0.00	*	0.01	*	0.00	*
WBR	0	0	0	11	0	11						
	Total Intersection Capacity Utilization (ICU)						0.51		0.52		0.62	
	Scenario Level of Service (LOS)						A		A		A	
								$\Delta v/c$	0.01		$\Delta v/c$	0.01

* = critical movement

APPENDIX C

SYNCHRO & HCM TRAFFIC ANALYSIS REPORTS

EXISTING TRAFFIC ANALYSIS

Lanes, Volumes, Timings

15: N Oxnard Blvd. & Orchard Pl./Old Levitz Driveway

2021 AM Existing - TWSC

05/27/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	112	1	92	1	1	1	9	47	1027	1	1	4
Future Volume (vph)	112	1	92	1	1	1	9	47	1027	1	1	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0		155		155		225
Storage Lanes	0		1	0		1		1		1		1
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt			0.850			0.850				0.850		
Flt Protected		0.953			0.976			0.950				0.950
Satd. Flow (prot)	0	1775	1583	0	1818	1583	0	1687	3374	1509	0	1719
Flt Permitted		0.953			0.976			0.950				0.950
Satd. Flow (perm)	0	1775	1583	0	1818	1583	0	1687	3374	1509	0	1719
Link Speed (mph)		30			30			30				
Link Distance (ft)		360			103			580				
Travel Time (s)		8.2			2.3			13.2				
Peak Hour Factor	0.75	0.75	0.75	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.83	0.83
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	7%	7%	7%	7%	5%	5%
Adj. Flow (vph)	149	1	123	1	1	1	10	52	1141	1	1	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	123	0	2	1	0	62	1141	1	0	6
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		0			0				12			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16			16				
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Sign Control		Stop			Stop				Free			
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	54.6%								ICU Level of Service A			
Analysis Period (min)	15											

Lanes, Volumes, Timings
15: N Oxnard Blvd. & Orchard Pl./Old Levitz Driveway

2021 AM Existing - TWSC

05/27/2021



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	916	35
Future Volume (vph)	916	35
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)	50	
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3438	1538
Flt Permitted		
Satd. Flow (perm)	3438	1538
Link Speed (mph)	30	
Link Distance (ft)	1532	
Travel Time (s)	34.8	
Peak Hour Factor	0.83	0.83
Heavy Vehicles (%)	5%	5%
Adj. Flow (vph)	1104	42
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1104	42
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Sign Control	Free	
Intersection Summary		

Intersection															
Int Delay, s/veh 82.3															
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
Lane Configurations	4	1	1	4	1	1	9	47	1027	1	1	4	916	35	
Traffic Vol, veh/h	112	1	92	1	1	1	9	47	1027	1	1	4	916	35	
Future Vol, veh/h	112	1	92	1	1	1	9	47	1027	1	1	4	916	35	
Conflicting Peds, #/hr	0	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	Free	
RT Channelized	-	-	Free	-	-	None	-	-	-	None	-	-	-	None	
Storage Length	-	-	50	-	-	0	-	155	-	155	-	225	-	50	
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	-	0	-	-	-	0	-	
Peak Hour Factor	75	75	75	92	92	92	90	90	90	90	83	83	83	83	
Heavy Vehicles, %	2	2	2	2	2	2	7	7	7	7	5	5	5	5	
Mvmt Flow	149	1	123	1	1	1	10	52	1141	1	1	5	1104	42	
Major/Minor		Minor2		Minor1		Major1		Major2							
Conflicting Flow All	1811	2382	-	1830	2423	571	1104	1146	0	0	1141	1142	0	0	
Stage 1	1116	1116	-	1265	1265	-	-	-	-	-	-	-	-	-	
Stage 2	695	1266	-	565	1158	-	-	-	-	-	-	-	-	-	
Critical Hdwy	7.54	6.54	-	7.54	6.54	6.94	6.54	4.24	-	-	6.5	4.2	-	-	
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-	-	
Follow-up Hdwy	3.52	4.02	-	3.52	4.02	3.32	2.57	2.27	-	-	2.55	2.25	-	-	
Pot Cap-1 Maneuver	~ 49	34	0	48	32	464	272	578	-	-	262	591	-	-	
Stage 1	221	281	0	179	239	-	-	-	-	-	-	-	-	-	
Stage 2	399	238	0	477	269	-	-	-	-	-	-	-	-	-	
Platoon blocked, %															
Mov Cap-1 Maneuver	~ 42	29	-	41	28	464	489	489	-	-	472	472	-	-	
Mov Cap-2 Maneuver	~ 42	29	-	41	28	-	-	-	-	-	-	-	-	-	
Stage 1	193	277	-	156	209	-	-	-	-	-	-	-	-	-	
Stage 2	346	208	-	469	266	-	-	-	-	-	-	-	-	-	
Approach		EB		WB		NB		SB							
HCM Control Delay, \$	1363.7		85.3		0.7		0.1								
HCM LOS	F		F												
Minor Lane/Major Mvmt		NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR				
Capacity (veh/h)	489		-	-	42	-	33	464	472	-	-				
HCM Lane V/C Ratio	0.127		-	-	3.587	-	0.066	0.002	0.013	-	-				
HCM Control Delay (s)	13.4		-	\$ 1363.7	0	121.6	12.8	12.7	-	-					
HCM Lane LOS	B		-	-	F	A	F	B	B	-	-				
HCM 95th %tile Q(veh)	0.4		-	-	16.9	-	0.2	0	0	-	-				
Notes															
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon									

Lanes, Volumes, Timings
24: N Oxnard Blvd. & South Driveway

2021 AM Existing - TWSC

05/27/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑	↑↑		↑↑↑
Traffic Volume (vph)	0	1	1083	1	0	1017
Future Volume (vph)	0	1	1083	1	0	1017
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Fr _t			0.865			
Flt Protected						
Satd. Flow (prot)	0	1611	3374	0	0	4940
Flt Permitted						
Satd. Flow (perm)	0	1611	3374	0	0	4940
Link Speed (mph)	30		30			30
Link Distance (ft)	498		279			580
Travel Time (s)	11.3		6.3			13.2
Peak Hour Factor	0.92	0.92	0.90	0.90	0.83	0.83
Heavy Vehicles (%)	2%	2%	7%	7%	5%	5%
Adj. Flow (vph)	0	1	1203	1	0	1225
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1	1204	0	0	1225
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 40.0% ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	1083	1	0	1017
Future Vol, veh/h	0	1	1083	1	0	1017
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	90	90	83	83
Heavy Vehicles, %	2	2	7	7	5	5
Mvmt Flow	0	1	1203	1	0	1225
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	602	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	443	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	443	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	13.1	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT		
Capacity (veh/h)	-	-	443	-		
HCM Lane V/C Ratio	-	-	0.002	-		
HCM Control Delay (s)	-	-	13.1	-		
HCM Lane LOS	-	-	B	-		
HCM 95th %tile Q(veh)	-	-	0	-		

Lanes, Volumes, Timings

15: N Oxnard Blvd. & Orchard Pl./Old Levitz Driveway

2021 PM Existing - TWSC

05/27/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	82	1	100	1	1	1	21	105	1426	1	11	1
Future Volume (vph)	82	1	100	1	1	1	21	105	1426	1	11	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0		155		155		225
Storage Lanes	0		1	0		1		1		1		1
Taper Length (ft)	25			25				25				25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt			0.850			0.850				0.850		
Flt Protected		0.953			0.976			0.950				0.950
Satd. Flow (prot)	0	1793	1599	0	1818	1583	0	1770	3539	1583	0	1770
Flt Permitted		0.953			0.976			0.950				0.950
Satd. Flow (perm)	0	1793	1599	0	1818	1583	0	1770	3539	1583	0	1770
Link Speed (mph)		30			30			30				
Link Distance (ft)		360			103			580				
Travel Time (s)		8.2			2.3			13.2				
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	88	1	108	1	1	1	24	118	1602	1	12	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	108	0	2	1	0	142	1602	1	0	13
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		0			0				12			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16			16				
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Sign Control		Stop			Stop				Free			
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	77.3%								ICU Level of Service D			
Analysis Period (min)	15											

Lanes, Volumes, Timings
15: N Oxnard Blvd. & Orchard Pl./Old Levitz Driveway

2021 PM Existing - TWSC

05/27/2021



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1717	138
Future Volume (vph)	1717	138
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)	50	
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3539	1583
Flt Permitted		
Satd. Flow (perm)	3539	1583
Link Speed (mph)	30	
Link Distance (ft)	1532	
Travel Time (s)	34.8	
Peak Hour Factor	0.89	0.89
Heavy Vehicles (%)	2%	2%
Adj. Flow (vph)	1929	155
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1929	155
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Sign Control	Free	
Intersection Summary		

Intersection														
Int Delay, s/veh	2.4													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations	4	1	1	4	1	1	21	105	1426	1	11	1	1717	138
Traffic Vol, veh/h	82	1	100	1	1	1	21	105	1426	1	11	1	1717	138
Future Vol, veh/h	82	1	100	1	1	1	21	105	1426	1	11	1	1717	138
Conflicting Peds, #/hr	0	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	Free
RT Channelized	-	-	Free	-	-	None	-	-	-	None	-	-	-	None
Storage Length	-	-	50	-	-	0	-	155	-	155	-	225	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Peak Hour Factor	93	93	93	92	92	92	89	89	89	89	89	89	89	89
Heavy Vehicles, %	1	1	1	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	88	1	108	1	1	1	24	118	1602	1	12	1	1929	155
Major/Minor		Minor2		Minor1		Major1		Major2						
Conflicting Flow All	3041	3842	-	2877	3996	801	1929	2084	0	0	1602	1603	0	0
Stage 1	1955	1955	-	1886	1886	-	-	-	-	-	-	-	-	-
Stage 2	1086	1887	-	991	2110	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.52	-	7.54	6.54	6.94	6.44	4.14	-	-	6.44	4.14	-	-
Critical Hdwy Stg 1	6.52	5.52	-	6.54	5.54	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.52	-	6.54	5.54	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.01	-	3.52	4.02	3.32	2.52	2.22	-	-	2.52	2.22	-	-
Pot Cap-1 Maneuver	~ 6	4	0	7	3	327	83	262	-	-	135	404	-	-
Stage 1	~ 67	110	0	73	118	-	-	-	-	-	-	-	-	-
Stage 2	233	119	0	264	91	-	-	-	-	-	-	-	-	-
Platoon blocked, %														
Mov Cap-1 Maneuver	-	~ 1	-	-	~ 1	327	193	193	-	-	143	143	-	-
Mov Cap-2 Maneuver	-	~ 1	-	-	~ 1	-	-	-	-	-	-	-	-	-
Stage 1	~ 18	100	-	19	31	-	-	-	-	-	-	-	-	-
Stage 2	~ 59	31	-	237	83	-	-	-	-	-	-	-	-	-
Approach		EB		WB		NB		SB						
HCM Control Delay, s							5.1				0.2			
HCM LOS	-	-												
Minor Lane/Major Mvmt		NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR			
Capacity (veh/h)	193	-	-	-	-	-	-	-	327	143	-	-		
HCM Lane V/C Ratio	0.734	-	-	-	-	-	-	0.003	0.094	-	-			
HCM Control Delay (s)	62.7	-	-	-	0	-	-	16	32.8	-	-			
HCM Lane LOS	F	-	-	-	A	-	-	C	D	-	-			
HCM 95th %tile Q(veh)	4.8	-	-	-	-	-	-	0	0.3	-	-			
Notes														
~: Volume exceeds capacity		\$: Delay exceeds 300s	+:	Computation Not Defined				*:	All major volume in platoon					

Lanes, Volumes, Timings
24: N Oxnard Blvd. & South Driveway

2021 PM Existing - TWSC

05/27/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑	↑↑		↑↑↑
Traffic Volume (vph)	0	1	1552	1	0	1838
Future Volume (vph)	0	1	1552	1	0	1838
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Frt			0.865			
Flt Protected						
Satd. Flow (prot)	0	1611	3539	0	0	5085
Flt Permitted						
Satd. Flow (perm)	0	1611	3539	0	0	5085
Link Speed (mph)	30		30			30
Link Distance (ft)	498		279			580
Travel Time (s)	11.3		6.3			13.2
Peak Hour Factor	0.92	0.92	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	1	1744	1	0	2065
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1	1745	0	0	2065
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 52.9%

ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	1552	1	0	1838
Future Vol, veh/h	0	1	1552	1	0	1838
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	1744	1	0	2065
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	873	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	293	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	293	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	17.3	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT		
Capacity (veh/h)	-	-	293	-		
HCM Lane V/C Ratio	-	-	0.004	-		
HCM Control Delay (s)	-	-	17.3	-		
HCM Lane LOS	-	-	C	-		
HCM 95th %tile Q(veh)	-	-	0	-		

Lanes, Volumes, Timings

15: N Oxnard Blvd. & Orchard Pl./Old Levitz Driveway

2021 Existing AM - Signal

05/27/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	112	1	92	1	1	1	9	47	1027	1	1	4
Future Volume (vph)	112	1	92	1	1	1	9	47	1027	1	1	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0		155		155		225
Storage Lanes	0		1	1		0		1		1		1
Taper Length (ft)	25			25				25				25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt			0.850		0.925					0.850		
Flt Protected		0.953		0.950				0.950				0.950
Satd. Flow (prot)	0	1775	1583	1770	1723	0	0	1687	3374	1509	0	1719
Flt Permitted		0.727		0.515				0.235				0.224
Satd. Flow (perm)	0	1354	1583	959	1723	0	0	417	3374	1509	0	405
Right Turn on Red		Yes			Yes					Yes		
Satd. Flow (RTOR)		89			1					11		
Link Speed (mph)		30		30				30				
Link Distance (ft)		360		103				580				
Travel Time (s)		8.2		2.3				13.2				
Peak Hour Factor	0.75	0.75	0.75	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.83	0.83
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	7%	7%	7%	7%	5%	5%
Adj. Flow (vph)	149	1	123	1	1	1	10	52	1141	1	1	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	123	1	2	0	0	62	1141	1	0	6
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		12			12			12				
Link Offset(ft)		0			0			0				
Crosswalk Width(ft)		16			16			16				
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Number of Detectors	1	2	1	1	2		1	1	2	1	1	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Left	Thru	Right	Left	Left
Leading Detector (ft)	20	100	20	20	100		20	20	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	20	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Perm	NA	Free	Perm	NA		Perm	Perm	NA	Perm	Perm	Perm
Protected Phases		4			8			2				



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	916	35
Future Volume (vph)	916	35
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)	50	
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3438	1538
Flt Permitted		
Satd. Flow (perm)	3438	1538
Right Turn on Red		Yes
Satd. Flow (RTOR)		22
Link Speed (mph)	30	
Link Distance (ft)	1532	
Travel Time (s)	34.8	
Peak Hour Factor	0.83	0.83
Heavy Vehicles (%)	5%	5%
Adj. Flow (vph)	1104	42
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1104	42
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Number of Detectors	2	1
Detector Template	Thru	Right
Leading Detector (ft)	100	20
Trailing Detector (ft)	0	0
Detector 1 Position(ft)	0	0
Detector 1 Size(ft)	6	20
Detector 1 Type	Cl+Ex	Cl+Ex
Detector 1 Channel		
Detector 1 Extend (s)	0.0	0.0
Detector 1 Queue (s)	0.0	0.0
Detector 1 Delay (s)	0.0	0.0
Detector 2 Position(ft)	94	
Detector 2 Size(ft)	6	
Detector 2 Type	Cl+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	
Turn Type	NA	Perm
Protected Phases	6	

Lanes, Volumes, Timings

15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

2021 Existing AM - Signal

05/27/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Permitted Phases	4		Free	8			2	2		2	6	6
Detector Phase	4	4		8	8		2	2	2	2	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	22.5	22.5		22.5	22.5		23.7	23.7	23.7	23.7	23.7	23.7
Total Split (s)	30.0	30.0		30.0	30.0		70.0	70.0	70.0	70.0	70.0	70.0
Total Split (%)	30.0%	30.0%		30.0%	30.0%		70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Maximum Green (s)	26.0	26.0		26.0	26.0		64.3	64.3	64.3	64.3	64.3	64.3
Yellow Time (s)	3.0	3.0		3.0	3.0		4.7	4.7	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0			0.0	0.0		0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	4.0			4.0	4.0		5.7	5.7	5.7	5.7		5.7
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effect Green (s)	16.3	100.0	16.3	16.3			74.0	74.0	74.0			74.0
Actuated g/C Ratio	0.16	1.00	0.16	0.16			0.74	0.74	0.74			0.74
v/c Ratio	0.68	0.08	0.01	0.01			0.20	0.46	0.00			0.02
Control Delay	54.0	0.1	31.0	26.5			3.6	4.4	0.0			5.2
Queue Delay	0.0	0.0	0.0	0.0			0.0	0.0	0.0			0.0
Total Delay	54.0	0.1	31.0	26.5			3.6	4.4	0.0			5.2
LOS	D	A	C	C			A	A	A			A
Approach Delay	29.7			28.0			4.4					
Approach LOS	C			C			A					

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 46 (46%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 8.5

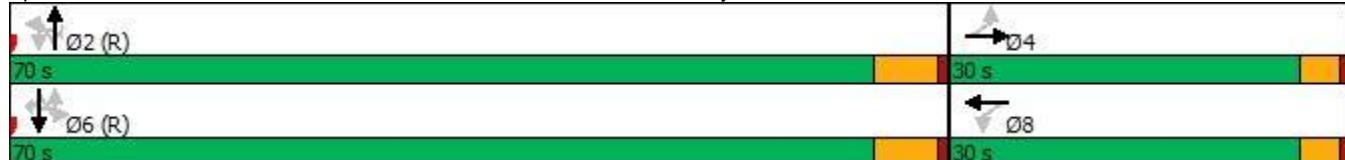
Intersection LOS: A

Intersection Capacity Utilization 66.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway





Lane Group	SBT	SBR
Permitted Phases		6
Detector Phase	6	6
Switch Phase		
Minimum Initial (s)	15.0	15.0
Minimum Split (s)	23.7	23.7
Total Split (s)	70.0	70.0
Total Split (%)	70.0%	70.0%
Maximum Green (s)	64.3	64.3
Yellow Time (s)	4.7	4.7
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	5.7	5.7
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	C-Max	C-Max
Walk Time (s)	7.0	7.0
Flash Dont Walk (s)	11.0	11.0
Pedestrian Calls (#/hr)	0	0
Act Effect Green (s)	74.0	74.0
Actuated g/C Ratio	0.74	0.74
v/c Ratio	0.43	0.04
Control Delay	7.9	4.1
Queue Delay	0.0	0.0
Total Delay	7.9	4.1
LOS	A	A
Approach Delay	7.8	
Approach LOS	A	
Intersection Summary		

Queues

15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

2021 Existing AM - Signal

05/27/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	150	123	1	2	62	1141	1	6	1104	42
v/c Ratio	0.68	0.08	0.01	0.01	0.20	0.46	0.00	0.02	0.43	0.04
Control Delay	54.0	0.1	31.0	26.5	3.6	4.4	0.0	5.2	7.9	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.0	0.1	31.0	26.5	3.6	4.4	0.0	5.2	7.9	4.1
Queue Length 50th (ft)	91	0	1	1	2	15	0	1	182	8
Queue Length 95th (ft)	118	0	5	6	m10	m390	m0	m3	238	18
Internal Link Dist (ft)	280			23		500			1452	
Turn Bay Length (ft)		50			155		155	225		50
Base Capacity (vph)	352	1583	249	448	308	2495	1119	299	2542	1143
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.08	0.00	0.00	0.20	0.46	0.00	0.02	0.43	0.04

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM 6th Signalized Intersection Summary
15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

2021 Existing AM - Signal
05/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	112	1	92	1	1	1	9	47	1027	1	1	4
Future Volume (veh/h)	112	1	92	1	1	1	9	47	1027	1	1	4
Initial Q (Q _b), veh	0	0	0	0	0	0	0	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	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1826	
Adj Flow Rate, veh/h	149	1	0	1	1	1	52	1141	1	1	5	
Peak Hour Factor	0.75	0.75	0.75	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.83	
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	5	
Cap, veh/h	251	1	292	110	110	388	2644	1179	1179	390		
Arrive On Green	0.13	0.13	0.00	0.13	0.13	0.13	0.77	0.77	0.77	0.77	0.77	
Sat Flow, veh/h	1397	9	1585	1416	858	858	471	3413	1522	1522	481	
Grp Volume(v), veh/h	150	0	0	1	0	2	52	1141	1	1	5	
Grp Sat Flow(s), veh/h/ln	1406	0	1585	1416	0	1716	471	1706	1522	1522	481	
Q Serve(g_s), s	10.3	0.0	0.0	0.0	0.0	0.1	4.1	11.3	0.0	0.0	0.4	
Cycle Q Clear(g_c), s	10.4	0.0	0.0	0.0	0.0	0.1	14.6	11.3	0.0	0.0	11.7	
Prop In Lane	0.99		1.00	1.00		0.50	1.00		1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	252	0	292	0	220	388	2644	1179	1179	390		
V/C Ratio(X)	0.59	0.00		0.00	0.00	0.01	0.13	0.43	0.00	0.00	0.01	
Avail Cap(c_a), veh/h	439	0	478	0	446	388	2644	1179	1179	390		
HCM Platoon Ratio	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	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	42.6	0.0	0.0	38.0	0.0	38.0	6.1	3.8	2.5	5.8		
Incr Delay (d2), s/veh	2.2	0.0	0.0	0.0	0.0	0.0	0.7	0.5	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	
%ile BackOfQ(50%), veh/ln	3.7	0.0	0.0	0.0	0.0	0.0	0.4	3.1	0.0	0.0	0.0	
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.8	0.0	0.0	38.0	0.0	38.1	6.9	4.3	2.5	5.8		
LnGrp LOS	D	A		D	A	D	A	A	A	A	A	
Approach Vol, veh/h	150	A		3			1194					
Approach Delay, s/veh	44.8			38.0			4.4					
Approach LOS	D			D			A					
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	83.2		16.8		83.2		16.8					
Change Period (Y+Rc), s	5.7		4.0		5.7		4.0					
Max Green Setting (Gmax), s	64.3		26.0		64.3		26.0					
Max Q Clear Time (g_c+l1), s	16.6		12.4		13.7		2.1					
Green Ext Time (p_c), s	12.8		0.6		11.3		0.0					
Intersection Summary												
HCM 6th Ctrl Delay			6.8									
HCM 6th LOS			A									
Notes												
User approved ignoring U-Turning movement.												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												



Movement	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (veh/h)	916	35
Future Volume (veh/h)	916	35
Initial Q (Q _b), 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	1826	1826
Adj Flow Rate, veh/h	1104	42
Peak Hour Factor	0.83	0.83
Percent Heavy Veh, %	5	5
Cap, veh/h	2688	1199
Arrive On Green	0.77	0.77
Sat Flow, veh/h	3469	1547
Grp Volume(v), veh/h	1104	42
Grp Sat Flow(s), veh/h/ln	1735	1547
Q Serve(g_s), s	10.5	0.6
Cycle Q Clear(g_c), s	10.5	0.6
Prop In Lane	1.00	
Lane Grp Cap(c), veh/h	2688	1199
V/C Ratio(X)	0.41	0.04
Avail Cap(c_a), veh/h	2688	1199
HCM Platoon Ratio	1.00	1.00
Upstream Filter(l)	1.00	1.00
Uniform Delay (d), s/veh	3.7	2.6
Incr Delay (d2), s/veh	0.5	0.1
Initial Q Delay(d3), s/veh	0.0	0.0
%ile BackOfQ(50%), veh/ln	2.9	0.2
Unsig. Movement Delay, s/veh		
LnGrp Delay(d), s/veh	4.2	2.7
LnGrp LOS	A	A
Approach Vol, veh/h	1151	
Approach Delay, s/veh	4.1	
Approach LOS	A	
Timer - Assigned Phs		

Lanes, Volumes, Timings
24: N Oxnard Blvd. & South Driveway

2021 Existing AM - Signal

05/27/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑	↑↑		↑↑↑
Traffic Volume (vph)	0	1	1083	1	0	1017
Future Volume (vph)	0	1	1083	1	0	1017
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Fr _t			0.865			
Flt Protected						
Satd. Flow (prot)	0	1611	3374	0	0	4940
Flt Permitted						
Satd. Flow (perm)	0	1611	3374	0	0	4940
Link Speed (mph)	30		30			30
Link Distance (ft)	498		279			580
Travel Time (s)	11.3		6.3			13.2
Peak Hour Factor	0.92	0.92	0.90	0.90	0.83	0.83
Heavy Vehicles (%)	2%	2%	7%	7%	5%	5%
Adj. Flow (vph)	0	1	1203	1	0	1225
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1	1204	0	0	1225
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 40.0% ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	1083	1	0	1017
Future Vol, veh/h	0	1	1083	1	0	1017
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	90	90	83	83
Heavy Vehicles, %	2	2	7	7	5	5
Mvmt Flow	0	1	1203	1	0	1225
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	602	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	443	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	443	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	13.1	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT		
Capacity (veh/h)	-	-	443	-		
HCM Lane V/C Ratio	-	-	0.002	-		
HCM Control Delay (s)	-	-	13.1	-		
HCM Lane LOS	-	-	B	-		
HCM 95th %tile Q(veh)	-	-	0	-		

Lanes, Volumes, Timings

15: N Oxnard Blvd. & Orchard Pl./Old Levitz Driveway

2021 PM Existing - Signal

05/27/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	82	1	100	1	1	1	21	105	1426	1	11	1
Future Volume (vph)	82	1	100	1	1	1	21	105	1426	1	11	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0		155		155		225
Storage Lanes	0		1	1		0		1		1		1
Taper Length (ft)	25			25				25				25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt			0.850		0.925					0.850		
Flt Protected		0.953		0.950				0.950				0.950
Satd. Flow (prot)	0	1793	1599	1770	1723	0	0	1770	3539	1583	0	1770
Flt Permitted		0.728		0.655				0.083				0.133
Satd. Flow (perm)	0	1370	1599	1220	1723	0	0	155	3539	1583	0	248
Right Turn on Red		Yes			Yes					Yes		
Satd. Flow (RTOR)		108			1					11		
Link Speed (mph)		30			30				30			
Link Distance (ft)		360			103				580			
Travel Time (s)		8.2			2.3				13.2			
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	88	1	108	1	1	1	24	118	1602	1	12	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	108	1	2	0	0	142	1602	1	0	13
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		12			12				12			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16				16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Number of Detectors	1	2	1	1	2		1	1	2	1	1	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Left	Thru	Right	Left	Left
Leading Detector (ft)	20	100	20	20	100		20	20	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	20	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94				94			
Detector 2 Size(ft)		6			6				6			
Detector 2 Type		Cl+Ex			Cl+Ex				Cl+Ex			
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0				0.0			
Turn Type	Perm	NA	Free	Perm	NA		Perm	Perm	NA	Perm	Perm	Perm
Protected Phases		4			8				2			

Lanes, Volumes, Timings
15: N Oxnard Blvd. & Orchard Pl./Old Levitz Driveway

2021 PM Existing - Signal
05/27/2021



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1717	138
Future Volume (vph)	1717	138
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)	50	
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3539	1583
Flt Permitted		
Satd. Flow (perm)	3539	1583
Right Turn on Red		Yes
Satd. Flow (RTOR)		58
Link Speed (mph)	30	
Link Distance (ft)	1532	
Travel Time (s)	34.8	
Peak Hour Factor	0.89	0.89
Heavy Vehicles (%)	2%	2%
Adj. Flow (vph)	1929	155
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1929	155
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Number of Detectors	2	1
Detector Template	Thru	Right
Leading Detector (ft)	100	20
Trailing Detector (ft)	0	0
Detector 1 Position(ft)	0	0
Detector 1 Size(ft)	6	20
Detector 1 Type	Cl+Ex	Cl+Ex
Detector 1 Channel		
Detector 1 Extend (s)	0.0	0.0
Detector 1 Queue (s)	0.0	0.0
Detector 1 Delay (s)	0.0	0.0
Detector 2 Position(ft)	94	
Detector 2 Size(ft)	6	
Detector 2 Type	Cl+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	
Turn Type	NA	Perm
Protected Phases	6	

Lanes, Volumes, Timings

15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

2021 PM Existing - Signal

05/27/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Permitted Phases	4		Free	8			2	2		2	6	6
Detector Phase	4	4		8	8		2	2	2	2	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	22.5	22.5		22.5	22.5		23.7	23.7	23.7	23.7	23.7	23.7
Total Split (s)	22.5	22.5		22.5	22.5		77.5	77.5	77.5	77.5	77.5	77.5
Total Split (%)	22.5%	22.5%		22.5%	22.5%		77.5%	77.5%	77.5%	77.5%	77.5%	77.5%
Maximum Green (s)	18.5	18.5		18.5	18.5		71.8	71.8	71.8	71.8	71.8	71.8
Yellow Time (s)	3.0	3.0		3.0	3.0		4.7	4.7	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0			0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0			4.0	4.0		5.7	5.7	5.7	5.7	5.7	5.7
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effect Green (s)	11.8	100.0	11.8	11.8			81.8	81.8	81.8			81.8
Actuated g/C Ratio	0.12	1.00	0.12	0.12			0.82	0.82	0.82			0.82
v/c Ratio	0.55	0.07	0.01	0.01			1.13	0.55	0.00			0.06
Control Delay	53.5	0.1	36.0	30.5			134.8	2.7	0.0			2.0
Queue Delay	0.0	0.0	0.0	0.0			0.0	0.0	0.0			0.0
Total Delay	53.5	0.1	36.0	30.5			134.8	2.7	0.0			2.0
LOS	D	A	D	C			F	A	A			A
Approach Delay	24.2			32.3				13.4				
Approach LOS	C			C				B				

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 84 (84%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.13

Intersection Signal Delay: 8.9

Intersection LOS: A

Intersection Capacity Utilization 84.1%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway





Lane Group	SBT	SBR
Permitted Phases		6
Detector Phase	6	6
Switch Phase		
Minimum Initial (s)	15.0	15.0
Minimum Split (s)	23.7	23.7
Total Split (s)	77.5	77.5
Total Split (%)	77.5%	77.5%
Maximum Green (s)	71.8	71.8
Yellow Time (s)	4.7	4.7
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	5.7	5.7
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	C-Max	C-Max
Walk Time (s)	7.0	7.0
Flash Dont Walk (s)	11.0	11.0
Pedestrian Calls (#/hr)	0	0
Act Effect Green (s)	81.8	81.8
Actuated g/C Ratio	0.82	0.82
v/c Ratio	0.67	0.12
Control Delay	4.0	0.5
Queue Delay	0.0	0.0
Total Delay	4.0	0.5
LOS	A	A
Approach Delay	3.7	
Approach LOS	A	
Intersection Summary		

Queues

15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

2021 PM Existing - Signal

05/27/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	89	108	1	2	142	1602	1	13	1929	155
v/c Ratio	0.55	0.07	0.01	0.01	1.13	0.55	0.00	0.06	0.67	0.12
Control Delay	53.5	0.1	36.0	30.5	134.8	2.7	0.0	2.0	4.0	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.5	0.1	36.0	30.5	134.8	2.7	0.0	2.0	4.0	0.5
Queue Length 50th (ft)	54	0	1	1	~111	51	0	1	56	1
Queue Length 95th (ft)	100	0	5	7	m#194	m76	m0	m2	187	6
Internal Link Dist (ft)	280			23		500			1452	
Turn Bay Length (ft)		50			155		155	225		50
Base Capacity (vph)	253	1599	225	319	126	2894	1297	203	2894	1305
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.07	0.00	0.01	1.13	0.55	0.00	0.06	0.67	0.12

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
- Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
- Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

HCM 6th Signalized Intersection Summary
15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

2021 PM Existing - Signal
05/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	82	1	100	1	1	1	21	105	1426	1	11	1
Future Volume (veh/h)	82	1	100	1	1	1	21	105	1426	1	11	1
Initial Q (Q _b), veh	0	0	0	0	0	0	0	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	1.00	1.00
Work Zone On Approach		No			No				No			
Adj Sat Flow, veh/h/ln	1885	1885	1885	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	88	1	0	1	1	1	118	1602	1	1		
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	1	1	2	2	2	2	2	2	2	2	2
Cap, veh/h	181	1		205	67	67	194	2931	1308	288		
Arrive On Green	0.08	0.08	0.00	0.08	0.08	0.08	0.82	0.82	0.82	0.82	0.82	0.82
Sat Flow, veh/h	1395	16	1598	1416	858	858	198	3554	1585	317		
Grp Volume(v), veh/h	89	0	0	1	0	2	118	1602	1	1		
Grp Sat Flow(s), veh/h/ln	1410	0	1598	1416	0	1716	198	1777	1585	317		
Q Serve(g_s), s	6.1	0.0	0.0	0.0	0.0	0.1	56.3	14.4	0.0	0.1		
Cycle Q Clear(g_c), s	6.2	0.0	0.0	0.1	0.0	0.1	77.1	14.4	0.0	14.5		
Prop In Lane	0.99		1.00	1.00		0.50	1.00		1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	182	0		205	0	134	194	2931	1308	288		
V/C Ratio(X)	0.49	0.00		0.00	0.00	0.01	0.61	0.55	0.00	0.00		
Avail Cap(c_a), veh/h	335	0		357	0	317	194	2931	1308	288		
HCM Platoon Ratio	1.00	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.4	0.0	0.0	42.5	0.0	42.5	18.1	2.8	1.5	5.1		
Incr Delay (d2), s/veh	2.0	0.0	0.0	0.0	0.0	0.0	13.3	0.7	0.0	0.0		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%), veh/ln	2.3	0.0	0.0	0.0	0.0	0.0	3.0	3.2	0.0	0.0		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.5	0.0	0.0	42.5	0.0	42.6	31.4	3.5	1.5	5.1		
LnGrp LOS	D	A		D	A	D	C	A	A	A		
Approach Vol, veh/h	89	A		3			1721					
Approach Delay, s/veh	47.5			42.6			5.4					
Approach LOS	D			D			A					
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	88.2		11.8		88.2		11.8					
Change Period (Y+Rc), s	5.7		4.0		5.7		4.0					
Max Green Setting (Gmax), s	71.8		18.5		71.8		18.5					
Max Q Clear Time (g_c+l1), s	79.1		8.2		22.8		2.1					
Green Ext Time (p_c), s	0.0		0.2		28.8		0.0					
Intersection Summary												
HCM 6th Ctrl Delay			5.8									
HCM 6th LOS			A									
Notes												
User approved ignoring U-Turning movement.												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

2021 PM Existing - Signal

05/27/2021



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	1717	138
Future Volume (veh/h)	1717	138
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	1929	155
Peak Hour Factor	0.89	0.89
Percent Heavy Veh, %	2	2
Cap, veh/h	2931	1308
Arrive On Green	0.82	0.82
Sat Flow, veh/h	3554	1585
Grp Volume(v), veh/h	1929	155
Grp Sat Flow(s), veh/h/ln	1777	1585
Q Serve(g_s), s	20.8	1.9
Cycle Q Clear(g_c), s	20.8	1.9
Prop In Lane	1.00	
Lane Grp Cap(c), veh/h	2931	1308
V/C Ratio(X)	0.66	0.12
Avail Cap(c_a), veh/h	2931	1308
HCM Platoon Ratio	1.00	1.00
Upstream Filter(l)	1.00	1.00
Uniform Delay (d), s/veh	3.4	1.7
Incr Delay (d2), s/veh	1.2	0.2
Initial Q Delay(d3), s/veh	0.0	0.0
%ile BackOfQ(50%), veh/ln	4.7	0.4
Unsig. Movement Delay, s/veh		
LnGrp Delay(d), s/veh	4.5	1.9
LnGrp LOS	A	A
Approach Vol, veh/h	2085	
Approach Delay, s/veh	4.3	
Approach LOS	A	
Timer - Assigned Phs		

Lanes, Volumes, Timings
24: N Oxnard Blvd. & South Driveway

2021 PM Existing - Signal

05/27/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑	↑↑		↑↑↑
Traffic Volume (vph)	0	1	1552	1	0	1838
Future Volume (vph)	0	1	1552	1	0	1838
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Frt			0.865			
Flt Protected						
Satd. Flow (prot)	0	1611	3539	0	0	5085
Flt Permitted						
Satd. Flow (perm)	0	1611	3539	0	0	5085
Link Speed (mph)	30		30			30
Link Distance (ft)	498		279			580
Travel Time (s)	11.3		6.3			13.2
Peak Hour Factor	0.92	0.92	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	1	1744	1	0	2065
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1	1745	0	0	2065
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 52.9%

ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	1552	1	0	1838
Future Vol, veh/h	0	1	1552	1	0	1838
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	1744	1	0	2065
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	873	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	293	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	293	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	17.3	0	0			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT		
Capacity (veh/h)	-	-	293	-		
HCM Lane V/C Ratio	-	-	0.004	-		
HCM Control Delay (s)	-	-	17.3	-		
HCM Lane LOS	-	-	C	-		
HCM 95th %tile Q(veh)	-	-	0	-		

EXISTING + PROJECT TRAFFIC ANALYSIS

Lanes, Volumes, Timings

15: N Oxnard Blvd. & Orchard Pl./Old Levitz Driveway

2021 AM Existing + Project - TWSC

05/27/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	112	1	92	0	0	3	17	47	1027	10	1	10
Future Volume (vph)	112	1	92	0	0	3	17	47	1027	10	1	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0		155		155		225
Storage Lanes	0		1	0		1		1		1		1
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt			0.850			0.865				0.850		
Flt Protected			0.953					0.950				0.950
Satd. Flow (prot)	0	1775	1583	0	0	1611	0	1687	3374	1509	0	1719
Flt Permitted			0.953					0.950				0.950
Satd. Flow (perm)	0	1775	1583	0	0	1611	0	1687	3374	1509	0	1719
Link Speed (mph)			30			30			30			
Link Distance (ft)			360			103			580			
Travel Time (s)			8.2			2.3			13.2			
Peak Hour Factor	0.75	0.75	0.75	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.83	0.83
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	7%	7%	7%	7%	5%	5%
Adj. Flow (vph)	149	1	123	0	0	3	19	52	1141	11	1	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	123	0	0	3	0	71	1141	11	0	13
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)			0			0			12			
Link Offset(ft)			0			0			0			
Crosswalk Width(ft)			16			16			16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Sign Control			Stop			Stop				Free		

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 54.6%

ICU Level of Service A

Analysis Period (min) 15



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	916	35
Future Volume (vph)	916	35
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)	50	
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3438	1538
Flt Permitted		
Satd. Flow (perm)	3438	1538
Link Speed (mph)	30	
Link Distance (ft)	1532	
Travel Time (s)	34.8	
Peak Hour Factor	0.83	0.83
Heavy Vehicles (%)	5%	5%
Adj. Flow (vph)	1104	42
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1104	42
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Sign Control	Free	
Intersection Summary		

Intersection

Int Delay, s/veh 89.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	112	1	92	0	0	3	17	47	1027	10	1	10	916	35
Future Vol, veh/h	112	1	92	0	0	3	17	47	1027	10	1	10	916	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free							
RT Channelized	-	-	Free	-	-	None	-	-	-	None	-	-	-	None
Storage Length	-	-	50	-	-	0	-	155	-	155	-	225	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Peak Hour Factor	75	75	75	92	92	92	90	90	90	90	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	7	7	7	7	5	5	5	5
Mvmt Flow	149	1	123	0	0	3	19	52	1141	11	1	12	1104	42

Major/Minor	Minor2	Minor1			Major1			Major2		
Conflicting Flow All	1843	2424	-	-	-	571	1104	1146	0	0
Stage 1	1130	1130	-	-	-	-	-	-	-	-
Stage 2	713	1294	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	-	-	-	6.94	6.54	4.24	-	-
Critical Hdwy Stg 1	6.54	5.54	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	-	-	-	3.32	2.57	2.27	-	-
Pot Cap-1 Maneuver	~ 46	32	0	0	0	464	272	578	-	-
Stage 1	217	277	0	0	0	-	-	-	-	-
Stage 2	389	231	0	0	0	-	-	-	-	-
Platoon blocked, %									-	-
Mov Cap-1 Maneuver	~ 39	26	-	-	-	464	445	445	-	-
Mov Cap-2 Maneuver	~ 39	26	-	-	-	-	-	-	-	-
Stage 1	182	270	-	-	-	-	-	-	-	-
Stage 2	325	194	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$	1500.2	12.8	0.8	0.1
HCM LOS	F	B		
<hr/>				
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBln1 EBln2 WBln1 SBL SBT SBR
Capacity (veh/h)	445	-	-	39 - 464 525 - -
HCM Lane V/C Ratio	0.16	-	-	3.863 - 0.007 0.025 - -
HCM Control Delay (s)	14.6	-	\$ 1500.2	0 12.8 12 - -
HCM Lane LOS	B	-	F	A B B - -
HCM 95th %tile Q(veh)	0.6	-	-	17.2 - 0 0.1 - -

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
24: N Oxnard Blvd. & South Driveway

2021 AM Existing + Project - TWSC

05/27/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑	↑↑		↑↑↑
Traffic Volume (vph)	0	8	1093	4	0	1025
Future Volume (vph)	0	8	1093	4	0	1025
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Fr _t			0.865			
Flt Protected						
Satd. Flow (prot)	0	1611	3374	0	0	4940
Flt Permitted						
Satd. Flow (perm)	0	1611	3374	0	0	4940
Link Speed (mph)	30		30			30
Link Distance (ft)	498		279			580
Travel Time (s)	11.3		6.3			13.2
Peak Hour Factor	0.92	0.92	0.90	0.90	0.83	0.83
Heavy Vehicles (%)	2%	2%	7%	7%	5%	5%
Adj. Flow (vph)	0	9	1214	4	0	1235
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	9	1218	0	0	1235
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 40.3% ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	8	1093	4	0	1025
Future Vol, veh/h	0	8	1093	4	0	1025
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	90	90	83	83
Heavy Vehicles, %	2	2	7	7	5	5
Mvmt Flow	0	9	1214	4	0	1235
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	609	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	438	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	438	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	13.4	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT		
Capacity (veh/h)	-	-	438	-		
HCM Lane V/C Ratio	-	-	0.02	-		
HCM Control Delay (s)	-	-	13.4	-		
HCM Lane LOS	-	-	B	-		
HCM 95th %tile Q(veh)	-	-	0.1	-		

Lanes, Volumes, Timings

15: N Oxnard Blvd. & Orchard Pl./Old Levitz Driveway

2021 PM Existing + Project - TWSC

05/27/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	82	1	100	0	0	9	45	105	1427	14	11	8
Future Volume (vph)	82	1	100	0	0	9	45	105	1427	14	11	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0		155		155		225
Storage Lanes	0		1	0		1		1		1		1
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt			0.850			0.865				0.850		
Flt Protected			0.953					0.950				0.950
Satd. Flow (prot)	0	1793	1599	0	0	1611	0	1770	3539	1583	0	1770
Flt Permitted			0.953					0.950				0.950
Satd. Flow (perm)	0	1793	1599	0	0	1611	0	1770	3539	1583	0	1770
Link Speed (mph)			30			30			30			
Link Distance (ft)			360			103			580			
Travel Time (s)			8.2			2.3			13.2			
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	88	1	108	0	0	10	51	118	1603	16	12	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	108	0	0	10	0	169	1603	16	0	21
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)			0			0			12			
Link Offset(ft)			0			0			0			
Crosswalk Width(ft)			16			16			16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Sign Control			Stop			Stop			Free			

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 72.0%

ICU Level of Service C

Analysis Period (min) 15



Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1717	138
Future Volume (vph)	1717	138
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)	50	
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3539	1583
Flt Permitted		
Satd. Flow (perm)	3539	1583
Link Speed (mph)	30	
Link Distance (ft)	1532	
Travel Time (s)	34.8	
Peak Hour Factor	0.89	0.89
Heavy Vehicles (%)	2%	2%
Adj. Flow (vph)	1929	155
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1929	155
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Sign Control	Free	
Intersection Summary		

Intersection

Int Delay, s/veh 6.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	82	1	100	0	0	9	45	105	1427	14	11	8	1717	138
Future Vol, veh/h	82	1	100	0	0	9	45	105	1427	14	11	8	1717	138
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free							
RT Channelized	-	-	Free	-	-	None	-	-	-	None	-	-	-	None
Storage Length	-	-	50	-	-	0	-	155	-	155	-	225	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Peak Hour Factor	93	93	93	92	92	92	89	89	89	89	89	89	89	89
Heavy Vehicles, %	1	1	1	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	88	1	108	0	0	10	51	118	1603	16	12	9	1929	155

Major/Minor	Minor2	Minor1			Major1			Major2						
Conflicting Flow All	3111	3928	-	-	-	802	1929	2084	0	0	1603	1619	0	0
Stage 1	1971	1971	-	-	-	-	-	-	-	-	-	-	-	
Stage 2	1140	1957	-	-	-	-	-	-	-	-	-	-	-	
Critical Hdwy	7.52	6.52	-	-	-	6.94	6.44	4.14	-	-	6.44	4.14	-	-
Critical Hdwy Stg 1	6.52	5.52	-	-	-	-	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	6.52	5.52	-	-	-	-	-	-	-	-	-	-	-	
Follow-up Hdwy	3.51	4.01	-	-	-	3.32	2.52	2.22	-	-	2.52	2.22	-	-
Pot Cap-1 Maneuver	~ 5	3	0	0	0	327	83	262	-	-	135	398	-	-
Stage 1	~ 65	108	0	0	0	-	-	-	-	-	-	-	-	
Stage 2	216	110	0	0	0	-	-	-	-	-	-	-	-	
Platoon blocked, %									-	-	-	-	-	
Mov Cap-1 Maneuver	-	0	-	-	-	327	159	159	-	-	183	183	-	-
Mov Cap-2 Maneuver	-	0	-	-	-	-	-	-	-	-	-	-	-	
Stage 1	~ 65	96	-	-	-	-	-	-	-	-	-	-	-	
Stage 2	-	0	-	-	-	-	-	-	-	-	-	-	-	

Approach	EB	WB	NB			SB			
HCM Control Delay, s			16.3			13.7			
HCM LOS	-		C						
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	159	-	-	-	-	327	183	-	-
HCM Lane V/C Ratio	1.06	-	-	-	-	0.03	0.117	-	-
HCM Control Delay (s)	145.7	-	-	-	0	16.3	27.3	-	-
HCM Lane LOS	F	-	-	-	A	C	D	-	-
HCM 95th %tile Q(veh)	8.6	-	-	-	-	0.1	0.4	-	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
24: N Oxnard Blvd. & South Driveway

2021 PM Existing + Project - TWSC

05/27/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑	↑↑		↑↑↑
Traffic Volume (vph)	0	25	1566	5	0	1862
Future Volume (vph)	0	25	1566	5	0	1862
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Fr _t		0.865	0.999			
Flt Protected						
Satd. Flow (prot)	0	1611	3536	0	0	5085
Flt Permitted						
Satd. Flow (perm)	0	1611	3536	0	0	5085
Link Speed (mph)	30		30			30
Link Distance (ft)	498		279			580
Travel Time (s)	11.3		6.3			13.2
Peak Hour Factor	0.92	0.92	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	27	1760	6	0	2092
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	27	1766	0	0	2092
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 53.4%

ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	25	1566	5	0	1862
Future Vol, veh/h	0	25	1566	5	0	1862
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	27	1760	6	0	2092
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	883	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	289	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	289	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	18.7	0	0			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT		
Capacity (veh/h)	-	-	289	-		
HCM Lane V/C Ratio	-	-	0.094	-		
HCM Control Delay (s)	-	-	18.7	-		
HCM Lane LOS	-	-	C	-		
HCM 95th %tile Q(veh)	-	-	0.3	-		

Lanes, Volumes, Timings

15: N Oxnard Blvd. & Orchard Pl./Old Levitz Driveway

2021 AM Existing + Project - Signal

05/27/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	112	1	92	8	1	3	9	47	1027	10	1	10
Future Volume (vph)	112	1	92	8	1	3	9	47	1027	10	1	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0		155		155		225
Storage Lanes	0		1	1		0		1		1		1
Taper Length (ft)	25			25				25				25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt			0.850		0.887					0.850		
Flt Protected		0.953		0.950				0.950				0.950
Satd. Flow (prot)	0	1775	1583	1770	1652	0	0	1687	3374	1509	0	1719
Flt Permitted		0.725		0.515				0.235				0.224
Satd. Flow (perm)	0	1350	1583	959	1652	0	0	417	3374	1509	0	405
Right Turn on Red			Yes			Yes				Yes		
Satd. Flow (RTOR)		89		3						11		
Link Speed (mph)		30		30				30				
Link Distance (ft)		360		103				580				
Travel Time (s)		8.2		2.3				13.2				
Peak Hour Factor	0.75	0.75	0.75	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.83	0.83
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	7%	7%	7%	7%	5%	5%
Adj. Flow (vph)	149	1	123	9	1	3	10	52	1141	11	1	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	123	9	4	0	0	62	1141	11	0	13
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		12			12				12			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16				16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Number of Detectors	1	2	1	1	2		1	1	2	1	1	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Left	Thru	Right	Left	Left
Leading Detector (ft)	20	100	20	20	100		20	20	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	20	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94				94			
Detector 2 Size(ft)		6			6				6			
Detector 2 Type		Cl+Ex			Cl+Ex				Cl+Ex			
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0				0.0			
Turn Type	Perm	NA	Free	Perm	NA		Perm	Perm	NA	Perm	Perm	Perm
Protected Phases		4			8				2			



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	916	35
Future Volume (vph)	916	35
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)	50	
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3438	1538
Flt Permitted		
Satd. Flow (perm)	3438	1538
Right Turn on Red		Yes
Satd. Flow (RTOR)		22
Link Speed (mph)	30	
Link Distance (ft)	1532	
Travel Time (s)	34.8	
Peak Hour Factor	0.83	0.83
Heavy Vehicles (%)	5%	5%
Adj. Flow (vph)	1104	42
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1104	42
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Number of Detectors	2	1
Detector Template	Thru	Right
Leading Detector (ft)	100	20
Trailing Detector (ft)	0	0
Detector 1 Position(ft)	0	0
Detector 1 Size(ft)	6	20
Detector 1 Type	Cl+Ex	Cl+Ex
Detector 1 Channel		
Detector 1 Extend (s)	0.0	0.0
Detector 1 Queue (s)	0.0	0.0
Detector 1 Delay (s)	0.0	0.0
Detector 2 Position(ft)	94	
Detector 2 Size(ft)	6	
Detector 2 Type	Cl+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	
Turn Type	NA	Perm
Protected Phases	6	

Lanes, Volumes, Timings

15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

2021 AM Existing + Project - Signal

05/27/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Permitted Phases	4		Free	8			2	2		2	6	6
Detector Phase	4	4		8	8		2	2	2	2	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	22.5	22.5		22.5	22.5		23.7	23.7	23.7	23.7	23.7	23.7
Total Split (s)	30.0	30.0		30.0	30.0		70.0	70.0	70.0	70.0	70.0	70.0
Total Split (%)	30.0%	30.0%		30.0%	30.0%		70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Maximum Green (s)	26.0	26.0		26.0	26.0		64.3	64.3	64.3	64.3	64.3	64.3
Yellow Time (s)	3.0	3.0		3.0	3.0		4.7	4.7	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0			0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0			4.0	4.0		5.7	5.7	5.7	5.7	5.7	5.7
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effect Green (s)	16.3	100.0	16.3	16.3			74.0	74.0	74.0			74.0
Actuated g/C Ratio	0.16	1.00	0.16	0.16			0.74	0.74	0.74			0.74
v/c Ratio	0.68	0.08	0.06	0.01			0.20	0.46	0.01			0.04
Control Delay	54.1	0.1	32.8	22.5			3.6	4.4	0.4			5.5
Queue Delay	0.0	0.0	0.0	0.0			0.0	0.0	0.0			0.0
Total Delay	54.1	0.1	32.8	22.5			3.6	4.4	0.4			5.5
LOS	D	A	C	C			A	A	A			A
Approach Delay	29.8			29.6			4.3					
Approach LOS	C			C			A					

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 46 (46%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 8.6

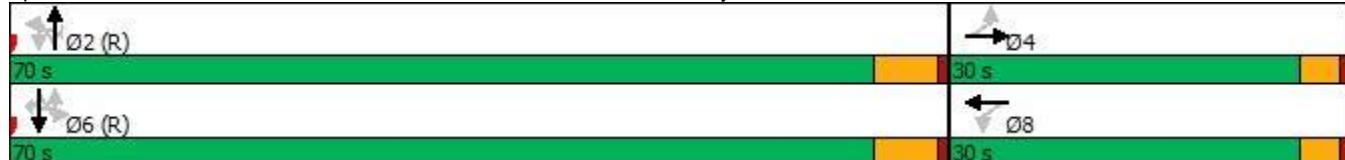
Intersection LOS: A

Intersection Capacity Utilization 66.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway





Lane Group	SBT	SBR
Permitted Phases		6
Detector Phase	6	6
Switch Phase		
Minimum Initial (s)	15.0	15.0
Minimum Split (s)	23.7	23.7
Total Split (s)	70.0	70.0
Total Split (%)	70.0%	70.0%
Maximum Green (s)	64.3	64.3
Yellow Time (s)	4.7	4.7
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	5.7	5.7
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	C-Max	C-Max
Walk Time (s)	7.0	7.0
Flash Dont Walk (s)	11.0	11.0
Pedestrian Calls (#/hr)	0	0
Act Effect Green (s)	74.0	74.0
Actuated g/C Ratio	0.74	0.74
v/c Ratio	0.43	0.04
Control Delay	7.9	4.1
Queue Delay	0.0	0.0
Total Delay	7.9	4.1
LOS	A	A
Approach Delay	7.8	
Approach LOS	A	
Intersection Summary		

Queues

15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

2021 AM Existing + Project - Signal

05/27/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	150	123	9	4	62	1141	11	13	1104	42
v/c Ratio	0.68	0.08	0.06	0.01	0.20	0.46	0.01	0.04	0.43	0.04
Control Delay	54.1	0.1	32.8	22.5	3.6	4.4	0.4	5.5	7.9	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.1	0.1	32.8	22.5	3.6	4.4	0.4	5.5	7.9	4.1
Queue Length 50th (ft)	91	0	5	1	2	16	0	3	182	8
Queue Length 95th (ft)	118	0	18	10	m11	m388	m0	m10	238	18
Internal Link Dist (ft)	280			23		500			1452	
Turn Bay Length (ft)		50			155		155	225		50
Base Capacity (vph)	351	1583	249	431	308	2495	1119	299	2542	1143
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.08	0.04	0.01	0.20	0.46	0.01	0.04	0.43	0.04

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM 6th Signalized Intersection Summary
15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

2021 AM Existing + Project - Signal
05/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	112	1	92	8	1	3	9	47	1027	10	1	10
Future Volume (veh/h)	112	1	92	8	1	3	9	47	1027	10	1	10
Initial Q (Q _b), veh	0	0	0	0	0	0	0	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	1.00	1.00
Work Zone On Approach		No			No				No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1826		
Adj Flow Rate, veh/h	149	1	0	9	1	3		52	1141	11		12
Peak Hour Factor	0.75	0.75	0.75	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.83	
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	5	
Cap, veh/h	251	1	295	54	161		386	2638	1177	386		
Arrive On Green	0.13	0.13	0.00	0.13	0.13	0.13	0.77	0.77	0.77	0.77	0.77	
Sat Flow, veh/h	1382	9	1585	1416	412	1236	471	3413	1522	476		
Grp Volume(v), veh/h	150	0	0	9	0	4	52	1141	11	12		
Grp Sat Flow(s), veh/h/ln	1392	0	1585	1416	0	1648	471	1706	1522	476		
Q Serve(g_s), s	10.3	0.0	0.0	0.0	0.0	0.2	4.1	11.4	0.2	0.9		
Cycle Q Clear(g_c), s	10.6	0.0	0.0	0.4	0.0	0.2	14.7	11.4	0.2	12.3		
Prop In Lane	0.99		1.00	1.00		0.75	1.00		1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	253	0	295	0	214		386	2638	1177	386		
V/C Ratio(X)	0.59	0.00		0.03	0.00	0.02	0.13	0.43	0.01	0.03		
Avail Cap(c_a), veh/h	437	0	479	0	428		386	2638	1177	386		
HCM Platoon Ratio	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	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	42.5	0.0	0.0	38.0	0.0	37.9	6.2	3.9	2.6	6.0		
Incr Delay (d2), s/veh	2.2	0.0	0.0	0.0	0.0	0.0	0.7	0.5	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	
%ile BackOfQ(50%), veh/ln	3.7	0.0	0.0	0.2	0.0	0.1	0.4	3.1	0.0	0.1		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.8	0.0	0.0	38.1	0.0	38.0	7.0	4.4	2.6	6.1		
LnGrp LOS	D	A		D	A	D	A	A	A	A		
Approach Vol, veh/h	150	A		13			1204					
Approach Delay, s/veh	44.8			38.0			4.5					
Approach LOS	D			D			A					
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	83.0		17.0		83.0		17.0					
Change Period (Y+Rc), s	5.7		4.0		5.7		4.0					
Max Green Setting (Gmax), s	64.3		26.0		64.3		26.0					
Max Q Clear Time (g_c+l1), s	16.7		12.6		14.3		2.4					
Green Ext Time (p_c), s	12.9		0.6		11.5		0.0					
Intersection Summary												
HCM 6th Ctrl Delay			6.9									
HCM 6th LOS			A									
Notes												
User approved ignoring U-Turning movement.												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												



Movement	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (veh/h)	916	35
Future Volume (veh/h)	916	35
Initial Q (Q _b), 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	1826	1826
Adj Flow Rate, veh/h	1104	42
Peak Hour Factor	0.83	0.83
Percent Heavy Veh, %	5	5
Cap, veh/h	2682	1196
Arrive On Green	0.77	0.77
Sat Flow, veh/h	3469	1547
Grp Volume(v), veh/h	1104	42
Grp Sat Flow(s), veh/h/ln	1735	1547
Q Serve(g_s), s	10.6	0.6
Cycle Q Clear(g_c), s	10.6	0.6
Prop In Lane	1.00	
Lane Grp Cap(c), veh/h	2682	1196
V/C Ratio(X)	0.41	0.04
Avail Cap(c_a), veh/h	2682	1196
HCM Platoon Ratio	1.00	1.00
Upstream Filter(l)	1.00	1.00
Uniform Delay (d), s/veh	3.8	2.6
Incr Delay (d2), s/veh	0.5	0.1
Initial Q Delay(d3), s/veh	0.0	0.0
%ile BackOfQ(50%), veh/ln	2.9	0.2
Unsig. Movement Delay, s/veh		
LnGrp Delay(d), s/veh	4.2	2.7
LnGrp LOS	A	A
Approach Vol, veh/h	1158	
Approach Delay, s/veh	4.2	
Approach LOS	A	
Timer - Assigned Phs		

Lanes, Volumes, Timings
24: N Oxnard Blvd. & South Driveway

2021 AM Existing + Project - Signal

05/27/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑	↑↑		↑↑↑
Traffic Volume (vph)	0	1	1093	4	0	1025
Future Volume (vph)	0	1	1093	4	0	1025
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Fr _t			0.865			
Flt Protected						
Satd. Flow (prot)	0	1611	3374	0	0	4940
Flt Permitted						
Satd. Flow (perm)	0	1611	3374	0	0	4940
Link Speed (mph)	30		30			30
Link Distance (ft)	498		279			580
Travel Time (s)	11.3		6.3			13.2
Peak Hour Factor	0.92	0.92	0.90	0.90	0.83	0.83
Heavy Vehicles (%)	2%	2%	7%	7%	5%	5%
Adj. Flow (vph)	0	1	1214	4	0	1235
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1	1218	0	0	1235
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 40.3% ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	1093	4	0	1025
Future Vol, veh/h	0	1	1093	4	0	1025
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	90	90	83	83
Heavy Vehicles, %	2	2	7	7	5	5
Mvmt Flow	0	1	1214	4	0	1235
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	609	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	438	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	438	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	13.2	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT		
Capacity (veh/h)	-	-	438	-		
HCM Lane V/C Ratio	-	-	0.002	-		
HCM Control Delay (s)	-	-	13.2	-		
HCM Lane LOS	-	-	B	-		
HCM 95th %tile Q(veh)	-	-	0	-		

Lanes, Volumes, Timings

15: N Oxnard Blvd. & Orchard Pl./Old Levitz Driveway

2021 PM Existing + Project - Signal

05/27/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	82	1	100	24	1	9	21	105	1427	14	11	8
Future Volume (vph)	82	1	100	24	1	9	21	105	1427	14	11	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0		155		155		225
Storage Lanes	0		1	1		0		1		1		1
Taper Length (ft)	25			25				25				25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt			0.850		0.864					0.850		
Flt Protected		0.953		0.950				0.950				0.950
Satd. Flow (prot)	0	1793	1599	1770	1609	0	0	1770	3539	1583	0	1770
Flt Permitted		0.721		0.656				0.083				0.132
Satd. Flow (perm)	0	1356	1599	1222	1609	0	0	155	3539	1583	0	246
Right Turn on Red		Yes			Yes					Yes		
Satd. Flow (RTOR)		108			10					16		
Link Speed (mph)		30			30				30			
Link Distance (ft)		360			103				580			
Travel Time (s)		8.2			2.3				13.2			
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	88	1	108	26	1	10	24	118	1603	16	12	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	108	26	11	0	0	142	1603	16	0	21
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		12			12				12			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16				16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Number of Detectors	1	2	1	1	2		1	1	2	1	1	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Left	Thru	Right	Left	Left
Leading Detector (ft)	20	100	20	20	100		20	20	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	20	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94				94			
Detector 2 Size(ft)		6			6				6			
Detector 2 Type		Cl+Ex			Cl+Ex				Cl+Ex			
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0				0.0			
Turn Type	Perm	NA	Free	Perm	NA		Perm	Perm	NA	Perm	Perm	Perm
Protected Phases		4			8				2			



Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1717	138
Future Volume (vph)	1717	138
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)	50	
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3539	1583
Flt Permitted		
Satd. Flow (perm)	3539	1583
Right Turn on Red		Yes
Satd. Flow (RTOR)		58
Link Speed (mph)	30	
Link Distance (ft)	1532	
Travel Time (s)	34.8	
Peak Hour Factor	0.89	0.89
Heavy Vehicles (%)	2%	2%
Adj. Flow (vph)	1929	155
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1929	155
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Number of Detectors	2	1
Detector Template	Thru	Right
Leading Detector (ft)	100	20
Trailing Detector (ft)	0	0
Detector 1 Position(ft)	0	0
Detector 1 Size(ft)	6	20
Detector 1 Type	Cl+Ex	Cl+Ex
Detector 1 Channel		
Detector 1 Extend (s)	0.0	0.0
Detector 1 Queue (s)	0.0	0.0
Detector 1 Delay (s)	0.0	0.0
Detector 2 Position(ft)	94	
Detector 2 Size(ft)	6	
Detector 2 Type	Cl+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	
Turn Type	NA	Perm
Protected Phases	6	

Lanes, Volumes, Timings

15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

2021 PM Existing + Project - Signal

05/27/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Permitted Phases	4		Free	8			2	2		2	6	6
Detector Phase	4	4		8	8		2	2	2	2	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	22.5	22.5		22.5	22.5		23.7	23.7	23.7	23.7	23.7	23.7
Total Split (s)	22.5	22.5		22.5	22.5		77.5	77.5	77.5	77.5	77.5	77.5
Total Split (%)	22.5%	22.5%		22.5%	22.5%		77.5%	77.5%	77.5%	77.5%	77.5%	77.5%
Maximum Green (s)	18.5	18.5		18.5	18.5		71.8	71.8	71.8	71.8	71.8	71.8
Yellow Time (s)	3.0	3.0		3.0	3.0		4.7	4.7	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0			0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0			4.0	4.0		5.7	5.7	5.7	5.7	5.7	5.7
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effect Green (s)	11.9	100.0	11.9	11.9			81.7	81.7	81.7			81.7
Actuated g/C Ratio	0.12	1.00	0.12	0.12			0.82	0.82	0.82			0.82
v/c Ratio	0.55	0.07	0.18	0.06			1.13	0.55	0.01			0.10
Control Delay	53.6	0.1	40.5	20.4			135.3	2.5	0.2			2.3
Queue Delay	0.0	0.0	0.0	0.0			0.0	0.0	0.0			0.0
Total Delay	53.6	0.1	40.5	20.4			135.3	2.5	0.2			2.3
LOS	D	A	D	C			F	A	A			A
Approach Delay	24.2			34.5				13.2				
Approach LOS	C			C				B				

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 70 (70%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.13

Intersection Signal Delay: 9.0

Intersection LOS: A

Intersection Capacity Utilization 84.1%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway





Lane Group	SBT	SBR
Permitted Phases		6
Detector Phase	6	6
Switch Phase		
Minimum Initial (s)	15.0	15.0
Minimum Split (s)	23.7	23.7
Total Split (s)	77.5	77.5
Total Split (%)	77.5%	77.5%
Maximum Green (s)	71.8	71.8
Yellow Time (s)	4.7	4.7
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	5.7	5.7
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	C-Max	C-Max
Walk Time (s)	7.0	7.0
Flash Dont Walk (s)	11.0	11.0
Pedestrian Calls (#/hr)	0	0
Act Effect Green (s)	81.7	81.7
Actuated g/C Ratio	0.82	0.82
v/c Ratio	0.67	0.12
Control Delay	3.9	0.4
Queue Delay	0.0	0.0
Total Delay	3.9	0.4
LOS	A	A
Approach Delay	3.7	
Approach LOS	A	
Intersection Summary		

Queues

15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

2021 PM Existing + Project - Signal

05/27/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	89	108	26	11	142	1603	16	21	1929	155
v/c Ratio	0.55	0.07	0.18	0.06	1.13	0.55	0.01	0.10	0.67	0.12
Control Delay	53.6	0.1	40.5	20.4	135.3	2.5	0.2	2.3	3.9	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.6	0.1	40.5	20.4	135.3	2.5	0.2	2.3	3.9	0.4
Queue Length 50th (ft)	54	0	15	1	~111	52	0	1	53	0
Queue Length 95th (ft)	100	0	38	16	m#196	m79	m0	4	80	6
Internal Link Dist (ft)	280			23		500			1452	
Turn Bay Length (ft)		50			155		155	225		50
Base Capacity (vph)	250	1599	226	305	126	2892	1296	201	2892	1304
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.07	0.12	0.04	1.13	0.55	0.01	0.10	0.67	0.12

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
- Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
- Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

HCM 6th Signalized Intersection Summary
15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

2021 PM Existing + Project - Signal
05/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	82	1	100	24	1	9	21	105	1427	14	11	8
Future Volume (veh/h)	82	1	100	24	1	9	21	105	1427	14	11	8
Initial Q (Q _b), veh	0	0	0	0	0	0	0	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		1.00
Work Zone On Approach		No			No				No			
Adj Sat Flow, veh/h/ln	1885	1885	1885	1870	1870	1870	1870	1870	1870	1870		1870
Adj Flow Rate, veh/h	88	1	0	26	1	10	118	1603	16	9		
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.89	0.89	0.89	0.89		0.89
Percent Heavy Veh, %	1	1	1	2	2	2	2	2	2	2		2
Cap, veh/h	185	1		220	13	128	190	2899	1293	279		
Arrive On Green	0.09	0.09	0.00	0.09	0.09	0.09	0.82	0.82	0.82	0.82		0.82
Sat Flow, veh/h	1302	15	1598	1416	146	1461	198	3554	1585	312		
Grp Volume(v), veh/h	89	0	0	26	0	11	118	1603	16	9		
Grp Sat Flow(s), veh/h/ln	1316	0	1598	1416	0	1607	198	1777	1585	312		
Q Serve(g_s), s	6.2	0.0	0.0	0.0	0.0	0.6	59.3	15.1	0.2	1.0		
Cycle Q Clear(g_c), s	6.8	0.0	0.0	1.4	0.0	0.6	81.2	15.1	0.2	16.1		
Prop In Lane	0.99		1.00	1.00		0.91	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	187	0		220	0	140	190	2899	1293	279		
V/C Ratio(X)	0.48	0.00		0.12	0.00	0.08	0.62	0.55	0.01	0.03		
Avail Cap(c_a), veh/h	325	0		359	0	297	190	2899	1293	279		
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	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00		1.00
Uniform Delay (d), s/veh	45.0	0.0	0.0	42.3	0.0	41.9	20.1	3.1	1.7	5.8		
Incr Delay (d2), s/veh	1.9	0.0	0.0	0.2	0.0	0.2	14.2	0.8	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		
%ile BackOfQ(50%), veh/ln	2.2	0.0	0.0	0.6	0.0	0.3	3.2	3.6	0.0	0.1		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	46.9	0.0	0.0	42.5	0.0	42.2	34.3	3.9	1.7	6.0		
LnGrp LOS	D	A		D	A	D	C	A	A	A		
Approach Vol, veh/h	89	A			37			1737				
Approach Delay, s/veh	46.9				42.4			5.9				
Approach LOS	D				D			A				
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	87.3		12.7		87.3		12.7					
Change Period (Y+Rc), s	5.7		4.0		5.7		4.0					
Max Green Setting (Gmax), s	71.8		18.5		71.8		18.5					
Max Q Clear Time (g_c+l1), s	83.2		8.8		23.9		3.4					
Green Ext Time (p_c), s	0.0		0.2		28.8		0.1					
Intersection Summary												
HCM 6th Ctrl Delay			6.6									
HCM 6th LOS			A									

Notes

User approved ignoring U-Turning movement.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (veh/h)	1717	138
Future Volume (veh/h)	1717	138
Initial Q (Q _b), 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	1929	155
Peak Hour Factor	0.89	0.89
Percent Heavy Veh, %	2	2
Cap, veh/h	2899	1293
Arrive On Green	0.82	0.82
Sat Flow, veh/h	3554	1585
Grp Volume(v), veh/h	1929	155
Grp Sat Flow(s), veh/h/ln	1777	1585
Q Serve(g_s), s	21.9	2.0
Cycle Q Clear(g_c), s	21.9	2.0
Prop In Lane	1.00	
Lane Grp Cap(c), veh/h	2899	1293
V/C Ratio(X)	0.67	0.12
Avail Cap(c_a), veh/h	2899	1293
HCM Platoon Ratio	1.00	1.00
Upstream Filter(l)	1.00	1.00
Uniform Delay (d), s/veh	3.7	1.9
Incr Delay (d2), s/veh	1.2	0.2
Initial Q Delay(d3), s/veh	0.0	0.0
%ile BackOfQ(50%), veh/ln	5.2	0.5
Unsig. Movement Delay, s/veh		
LnGrp Delay(d), s/veh	4.9	2.1
LnGrp LOS	A	A
Approach Vol, veh/h	2093	
Approach Delay, s/veh	4.7	
Approach LOS	A	
Timer - Assigned Phs		

Lanes, Volumes, Timings
24: N Oxnard Blvd. & South Driveway

2021 PM Existing + Project - Signal

05/27/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑	↑↑		↑↑↑
Traffic Volume (vph)	0	1	1566	5	0	1862
Future Volume (vph)	0	1	1566	5	0	1862
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Fr _t			0.865	0.999		
Flt Protected						
Satd. Flow (prot)	0	1611	3536	0	0	5085
Flt Permitted						
Satd. Flow (perm)	0	1611	3536	0	0	5085
Link Speed (mph)	30		30			30
Link Distance (ft)	498		279			580
Travel Time (s)	11.3		6.3			13.2
Peak Hour Factor	0.92	0.92	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	1	1760	6	0	2092
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1	1766	0	0	2092
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 53.4%

ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	1566	5	0	1862
Future Vol, veh/h	0	1	1566	5	0	1862
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	1760	6	0	2092
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	883	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	289	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	289	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	17.5	0	0			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT		
Capacity (veh/h)	-	-	289	-		
HCM Lane V/C Ratio	-	-	0.004	-		
HCM Control Delay (s)	-	-	17.5	-		
HCM Lane LOS	-	-	C	-		
HCM 95th %tile Q(veh)	-	-	0	-		

CUMULATIVE TRAFFIC ANALYSIS

Lanes, Volumes, Timings

2021 AM Cumulative - TWSC

15: N Oxnard Blvd. & Orchard Pl./Old Levitz Driveway

05/27/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	112	1	92	1	1	1	9	47	1242	1	1	4
Future Volume (vph)	112	1	92	1	1	1	9	47	1242	1	1	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0		155		155		225
Storage Lanes	0		1	0		1		1		1		1
Taper Length (ft)	25			25				25				25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt			0.850			0.850				0.850		
Flt Protected		0.953			0.976			0.950				0.950
Satd. Flow (prot)	0	1775	1583	0	1818	1583	0	1687	3374	1509	0	1719
Flt Permitted		0.953			0.976			0.950				0.950
Satd. Flow (perm)	0	1775	1583	0	1818	1583	0	1687	3374	1509	0	1719
Link Speed (mph)		30			30			30				
Link Distance (ft)		360			103			580				
Travel Time (s)		8.2			2.3			13.2				
Peak Hour Factor	0.75	0.75	0.75	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.83	0.83
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	7%	7%	7%	7%	5%	5%
Adj. Flow (vph)	149	1	123	1	1	1	10	52	1380	1	1	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	123	0	2	1	0	62	1380	1	0	6
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		0			0				12			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16			16				
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Sign Control		Stop			Stop				Free			

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 60.6%

ICU Level of Service B

Analysis Period (min) 15



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1241	35
Future Volume (vph)	1241	35
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)	50	
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3438	1538
Flt Permitted		
Satd. Flow (perm)	3438	1538
Link Speed (mph)	30	
Link Distance (ft)	1532	
Travel Time (s)	34.8	
Peak Hour Factor	0.83	0.83
Heavy Vehicles (%)	5%	5%
Adj. Flow (vph)	1495	42
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1495	42
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Sign Control	Free	
Intersection Summary		

Intersection

Int Delay, s/veh 219.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations	4	1	1	4	1	1	9	47	1242	1	1	4	1241	35
Traffic Vol, veh/h	112	1	92	1	1	1	9	47	1242	1	1	4	1241	35
Future Vol, veh/h	112	1	92	1	1	1	9	47	1242	1	1	4	1241	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free							
RT Channelized	-	-	Free	-	-	None	-	-	-	None	-	-	-	None
Storage Length	-	-	50	-	-	0	-	155	-	155	-	225	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Peak Hour Factor	75	75	75	92	92	92	90	90	90	90	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	7	7	7	7	5	5	5	5
Mvmt Flow	149	1	123	1	1	1	10	52	1380	1	1	5	1495	42

Major/Minor	Minor2	Minor1			Major1				Major2					
Conflicting Flow All	2322	3012	-	2264	3053	690	1495	1537	0	0	1380	1381	0	0
Stage 1	1507	1507	-	1504	1504	-	-	-	-	-	-	-	-	-
Stage 2	815	1505	-	760	1549	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	-	7.54	6.54	6.94	6.54	4.24	-	-	6.5	4.2	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	-	3.52	4.02	3.32	2.57	2.27	-	-	2.55	2.25	-	-
Pot Cap-1 Maneuver	~ 20	13	0	22	12	388	151	405	-	-	183	477	-	-
Stage 1	~ 127	182	0	127	183	-	-	-	-	-	-	-	-	-
Stage 2	338	182	0	364	174	-	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-	-	-	-	-
Mov Cap-1 Maneuver	~ 15	10	-	17	10	388	319	319	-	-	361	361	-	-
Mov Cap-2 Maneuver	~ 15	10	-	17	10	-	-	-	-	-	-	-	-	-
Stage 1	~ 102	179	-	102	147	-	-	-	-	-	-	-	-	-
Stage 2	269	147	-	355	171	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$	4566.1	225.5	0.8	0.1
HCM LOS	F	F		
<hr/>				
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBln1 EBln2 WBln1 WBln2 SBL SBT SBR
Capacity (veh/h)	319	-	-	15 - 13 388 361 - -
HCM Lane V/C Ratio	0.195	-	-	10.044 - 0.167 0.003 0.017 - -
HCM Control Delay (s)	19	-	-	\$ 4566.1 0\$ 331.1 14.3 15.1 - -
HCM Lane LOS	C	-	-	F A F B C - -
HCM 95th %tile Q(veh)	0.7	-	-	19.8 - 0.5 0 0.1 - -

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
24: N Oxnard Blvd. & South Driveway

2021 AM Cumulative - TWSC

05/27/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑	↑↑		↑↑↑
Traffic Volume (vph)	0	1	1298	1	0	1342
Future Volume (vph)	0	1	1298	1	0	1342
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Fr _t			0.865			
Flt Protected						
Satd. Flow (prot)	0	1611	3374	0	0	4940
Flt Permitted						
Satd. Flow (perm)	0	1611	3374	0	0	4940
Link Speed (mph)	30		30			30
Link Distance (ft)	498		279			580
Travel Time (s)	11.3		6.3			13.2
Peak Hour Factor	0.92	0.92	0.90	0.90	0.83	0.83
Heavy Vehicles (%)	2%	2%	7%	7%	5%	5%
Adj. Flow (vph)	0	1	1442	1	0	1617
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1	1443	0	0	1617
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 45.9% ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	1298	1	0	1342
Future Vol, veh/h	0	1	1298	1	0	1342
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	90	90	83	83
Heavy Vehicles, %	2	2	7	7	5	5
Mvmt Flow	0	1	1442	1	0	1617
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	722	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	369	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	369	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	14.8	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT		
Capacity (veh/h)	-	-	369	-		
HCM Lane V/C Ratio	-	-	0.003	-		
HCM Control Delay (s)	-	-	14.8	-		
HCM Lane LOS	-	-	B	-		
HCM 95th %tile Q(veh)	-	-	0	-		

Lanes, Volumes, Timings

2021 PM Cumulative - TWSC

15: N Oxnard Blvd. & Orchard Pl./Old Levitz Driveway

05/27/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	82	1	100	1	1	1	21	105	1771	1	11	1
Future Volume (vph)	82	1	100	1	1	1	21	105	1771	1	11	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0		155		155		225
Storage Lanes	0		1	0		1		1		1		1
Taper Length (ft)	25			25				25				25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt			0.850			0.850				0.850		
Flt Protected		0.953			0.976			0.950				0.950
Satd. Flow (prot)	0	1793	1599	0	1818	1583	0	1770	3539	1583	0	1770
Flt Permitted		0.953			0.976			0.950				0.950
Satd. Flow (perm)	0	1793	1599	0	1818	1583	0	1770	3539	1583	0	1770
Link Speed (mph)		30			30			30				
Link Distance (ft)		360			103			580				
Travel Time (s)		8.2			2.3			13.2				
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	88	1	108	1	1	1	24	118	1990	1	12	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	108	0	2	1	0	142	1990	1	0	13
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		0			0				12			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16			16				
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Sign Control		Stop			Stop				Free			

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 84.8%

ICU Level of Service E

Analysis Period (min) 15



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1989	138
Future Volume (vph)	1989	138
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)	50	
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3539	1583
Flt Permitted		
Satd. Flow (perm)	3539	1583
Link Speed (mph)	30	
Link Distance (ft)	1532	
Travel Time (s)	34.8	
Peak Hour Factor	0.89	0.89
Heavy Vehicles (%)	2%	2%
Adj. Flow (vph)	2235	155
Shared Lane Traffic (%)		
Lane Group Flow (vph)	2235	155
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Sign Control		Free
Intersection Summary		

Intersection

Int Delay, s/veh 4.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations	4	1	1	4	1	1	21	105	1771	1	11	1	1989	138
Traffic Vol, veh/h	82	1	100	1	1	1	21	105	1771	1	11	1	1989	138
Future Vol, veh/h	82	1	100	1	1	1	21	105	1771	1	11	1	1989	138
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free							
RT Channelized	-	-	Free	-	-	None	-	-	-	None	-	-	-	None
Storage Length	-	-	50	-	-	0	-	155	-	155	-	225	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Peak Hour Factor	93	93	93	92	92	92	89	89	89	89	89	89	89	89
Heavy Vehicles, %	1	1	1	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	88	1	108	1	1	1	24	118	1990	1	12	1	2235	155

Major/Minor	Minor2	Minor1			Major1			Major2		
Conflicting Flow All	3541	4536	-	3418	4690	995	2235	2390	0	0
Stage 1	2261	2261	-	2274	2274	-	-	-	-	-
Stage 2	1280	2275	-	1144	2416	-	-	-	-	-
Critical Hdwy	7.52	6.52	-	7.54	6.54	6.94	6.44	4.14	-	6.44
Critical Hdwy Stg 1	6.52	5.52	-	6.54	5.54	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.52	-	6.54	5.54	-	-	-	-	-
Follow-up Hdwy	3.51	4.01	-	3.52	4.02	3.32	2.52	2.22	-	2.52
Pot Cap-1 Maneuver	~ 2	~ 1	0	3	~ 1	243	52	198	-	75
Stage 1	~ 42	77	0	41	75	-	-	-	-	-
Stage 2	177	75	0	213	63	-	-	-	-	-
Platoon blocked, %									-	-
Mov Cap-1 Maneuver	-	0	-	-	0	243	135	135	-	80
Mov Cap-2 Maneuver	-	0	-	-	0	-	-	-	-	-
Stage 1	~ 42	64	-	41	0	-	-	-	-	-
Stage 2	-	0	-	175	53	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			10.3	0.3
HCM LOS	-	-		
Minor Lane/Major Mvmt	NBL	NBT	NBR	SBL
Capacity (veh/h)	135	-	-	-
HCM Lane V/C Ratio	1.049	-	-	0.004
HCM Control Delay (s)	155.7	-	0	19.9
HCM Lane LOS	F	-	A	C
HCM 95th %tile Q(veh)	7.7	-	-	0

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
24: N Oxnard Blvd. & South Driveway

2021 PM Cumulative - TWSC

05/27/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑	↑↑		↑↑↑
Traffic Volume (vph)	0	1	1897	1	0	2110
Future Volume (vph)	0	1	1897	1	0	2110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Frt			0.865			
Flt Protected						
Satd. Flow (prot)	0	1611	3539	0	0	5085
Flt Permitted						
Satd. Flow (perm)	0	1611	3539	0	0	5085
Link Speed (mph)	30		30			30
Link Distance (ft)	498		279			580
Travel Time (s)	11.3		6.3			13.2
Peak Hour Factor	0.92	0.92	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	1	2131	1	0	2371
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1	2132	0	0	2371
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 62.5%

ICU Level of Service B

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	1897	1	0	2110
Future Vol, veh/h	0	1	1897	1	0	2110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	2131	1	0	2371
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	1066	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	218	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	218	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	21.6	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT		
Capacity (veh/h)	-	-	218	-		
HCM Lane V/C Ratio	-	-	0.005	-		
HCM Control Delay (s)	-	-	21.6	-		
HCM Lane LOS	-	-	C	-		
HCM 95th %tile Q(veh)	-	-	0	-		

Lanes, Volumes, Timings

15: N Oxnard Blvd. & Orchard Pl./Old Levitz Driveway

2021 SAT Cumulative - TWSC

05/27/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	63	1	133	1	1	1	23	77	1827	1	17	1
Future Volume (vph)	63	1	133	1	1	1	23	77	1827	1	17	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0		155		155		225
Storage Lanes	0		1	0		1		1		1		1
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt			0.850			0.850				0.850		
Flt Protected		0.953			0.976			0.950				0.950
Satd. Flow (prot)	0	1793	1599	0	1818	1583	0	1770	3539	1583	0	1770
Flt Permitted		0.953			0.976			0.950				0.950
Satd. Flow (perm)	0	1793	1599	0	1818	1583	0	1770	3539	1583	0	1770
Link Speed (mph)		30			30			30				
Link Distance (ft)		360			103			580				
Travel Time (s)		8.2			2.3			13.2				
Peak Hour Factor	0.80	0.80	0.80	0.92	0.92	0.92	0.88	0.88	0.88	0.88	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	79	1	166	1	1	1	26	88	2076	1	18	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	80	166	0	2	1	0	114	2076	1	0	19
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		0			0				12			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16			16				
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Sign Control		Stop			Stop				Free			
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											
Intersection Capacity Utilization	75.9%								ICU Level of Service D			
Analysis Period (min)	15											



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1646	78
Future Volume (vph)	1646	78
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)	50	
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3539	1583
Flt Permitted		
Satd. Flow (perm)	3539	1583
Link Speed (mph)	30	
Link Distance (ft)	1532	
Travel Time (s)	34.8	
Peak Hour Factor	0.95	0.95
Heavy Vehicles (%)	2%	2%
Adj. Flow (vph)	1733	82
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1733	82
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Sign Control	Free	
Intersection Summary		

Intersection

Int Delay, s/veh 1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations	4	1	1	4	1	1	23	77	1827	1	17	1	1646	78
Traffic Vol, veh/h	63	1	133	1	1	1	23	77	1827	1	17	1	1646	78
Future Vol, veh/h	63	1	133	1	1	1	23	77	1827	1	17	1	1646	78
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free							
RT Channelized	-	-	Free	-	-	None	-	-	-	None	-	-	-	None
Storage Length	-	-	50	-	-	0	-	155	-	155	-	225	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Peak Hour Factor	80	80	80	92	92	92	88	88	88	88	95	95	95	95
Heavy Vehicles, %	1	1	1	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	79	1	166	1	1	1	26	88	2076	1	18	1	1733	82

Major/Minor	Minor2	Minor1			Major1			Major2						
Conflicting Flow All	3038	4076	-	3209	4157	1038	1733	1815	0	0	2076	2077	0	0
Stage 1	1771	1771	-	2304	2304	-	-	-	-	-	-	-	-	-
Stage 2	1267	2305	-	905	1853	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.52	-	7.54	6.54	6.94	6.44	4.14	-	-	6.44	4.14	-	-
Critical Hdwy Stg 1	6.52	5.52	-	6.54	5.54	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.52	-	6.54	5.54	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.01	-	3.52	4.02	3.32	2.52	2.22	-	-	2.52	2.22	-	-
Pot Cap-1 Maneuver	~ 6	3	0	4	2	228	111	334	-	-	66	264	-	-
Stage 1	87	136	0	39	72	-	-	-	-	-	-	-	-	-
Stage 2	180	73	0	298	122	-	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-	-	-	-	-
Mov Cap-1 Maneuver	-	~ 1	-	-	~ 1	228	228	228	-	-	69	69	-	-
Mov Cap-2 Maneuver	-	~ 1	-	-	~ 1	-	-	-	-	-	-	-	-	-
Stage 1	~ 44	98	-	20	36	-	-	-	-	-	-	-	-	-
Stage 2	87	37	-	213	88	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB		
HCM Control Delay, s			1.8	0.8		
HCM LOS	-	-				
Minor Lane/Major Mvmt	NBL	NBT	NBR	SBL	SBT	SBR
Capacity (veh/h)	228	-	-	228	69	-
HCM Lane V/C Ratio	0.498	-	-	0.005	0.275	-
HCM Control Delay (s)	35.4	-	-	20.9	76	-
HCM Lane LOS	E	-	-	C	F	-
HCM 95th %tile Q(veh)	2.5	-	-	0	1	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑	↑↑		↑↑↑
Traffic Volume (vph)	0	1	1927	1	0	1802
Future Volume (vph)	0	1	1927	1	0	1802
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Frt			0.865			
Flt Protected						
Satd. Flow (prot)	0	1611	3539	0	0	5085
Flt Permitted						
Satd. Flow (perm)	0	1611	3539	0	0	5085
Link Speed (mph)	30		30			30
Link Distance (ft)	498		279			580
Travel Time (s)	11.3		6.3			13.2
Peak Hour Factor	0.92	0.92	0.88	0.88	0.95	0.95
Adj. Flow (vph)	0	1	2190	1	0	1897
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1	2191	0	0	1897
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 63.3%

ICU Level of Service B

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	1927	1	0	1802
Future Vol, veh/h	0	1	1927	1	0	1802
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	88	88	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	2190	1	0	1897
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	1096	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	208	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	208	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	22.4	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT		
Capacity (veh/h)	-	-	208	-		
HCM Lane V/C Ratio	-	-	0.005	-		
HCM Control Delay (s)	-	-	22.4	-		
HCM Lane LOS	-	-	C	-		
HCM 95th %tile Q(veh)	-	-	0	-		

Lanes, Volumes, Timings

2021 AM Cumulative - Signal

15: N Oxnard Blvd. & Orchard Pl./Old Levitz Driveway

05/27/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	112	1	92	1	1	1	9	47	1242	1	1	4
Future Volume (vph)	112	1	92	1	1	1	9	47	1242	1	1	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0		155		155		225
Storage Lanes	0		1	1		0		1		1		1
Taper Length (ft)	25			25				25				25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt			0.850		0.925					0.850		
Flt Protected		0.953		0.950				0.950				0.950
Satd. Flow (prot)	0	1775	1583	1770	1723	0	0	1687	3374	1509	0	1719
Flt Permitted		0.727		0.503				0.142				0.166
Satd. Flow (perm)	0	1354	1583	937	1723	0	0	252	3374	1509	0	300
Right Turn on Red		Yes			Yes					Yes		
Satd. Flow (RTOR)		89			1					11		
Link Speed (mph)		30		30				30				
Link Distance (ft)		360		103				580				
Travel Time (s)		8.2		2.3				13.2				
Peak Hour Factor	0.75	0.75	0.75	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.83	0.83
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	7%	7%	7%	7%	5%	5%
Adj. Flow (vph)	149	1	123	1	1	1	10	52	1380	1	1	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	123	1	2	0	0	62	1380	1	0	6
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		12			12			12				
Link Offset(ft)		0			0			0				
Crosswalk Width(ft)		16			16			16				
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Number of Detectors	1	2	1	1	2		1	1	2	1	1	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Left	Thru	Right	Left	Left
Leading Detector (ft)	20	100	20	20	100		20	20	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	20	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Perm	NA	Free	Perm	NA		Perm	Perm	NA	Perm	Perm	Perm
Protected Phases		4			8			2				



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1241	35
Future Volume (vph)	1241	35
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)	50	
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3438	1538
Flt Permitted		
Satd. Flow (perm)	3438	1538
Right Turn on Red		Yes
Satd. Flow (RTOR)		20
Link Speed (mph)	30	
Link Distance (ft)	1532	
Travel Time (s)	34.8	
Peak Hour Factor	0.83	0.83
Heavy Vehicles (%)	5%	5%
Adj. Flow (vph)	1495	42
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1495	42
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Number of Detectors	2	1
Detector Template	Thru	Right
Leading Detector (ft)	100	20
Trailing Detector (ft)	0	0
Detector 1 Position(ft)	0	0
Detector 1 Size(ft)	6	20
Detector 1 Type	Cl+Ex	Cl+Ex
Detector 1 Channel		
Detector 1 Extend (s)	0.0	0.0
Detector 1 Queue (s)	0.0	0.0
Detector 1 Delay (s)	0.0	0.0
Detector 2 Position(ft)	94	
Detector 2 Size(ft)	6	
Detector 2 Type	Cl+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	
Turn Type	NA	Perm
Protected Phases	6	

Lanes, Volumes, Timings

15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

2021 AM Cumulative - Signal

05/27/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Permitted Phases	4		Free	8			2	2		2	6	6
Detector Phase	4	4		8	8		2	2	2	2	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	22.5	22.5		22.5	22.5		23.7	23.7	23.7	23.7	23.7	23.7
Total Split (s)	23.0	23.0		23.0	23.0		77.0	77.0	77.0	77.0	77.0	77.0
Total Split (%)	23.0%	23.0%		23.0%	23.0%		77.0%	77.0%	77.0%	77.0%	77.0%	77.0%
Maximum Green (s)	19.0	19.0		19.0	19.0		71.3	71.3	71.3	71.3	71.3	71.3
Yellow Time (s)	3.0	3.0		3.0	3.0		4.7	4.7	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0			0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0			4.0	4.0		5.7	5.7	5.7	5.7	5.7	5.7
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effect Green (s)	15.4	100.0	15.4	15.4			74.9	74.9	74.9			74.9
Actuated g/C Ratio	0.15	1.00	0.15	0.15			0.75	0.75	0.75			0.75
v/c Ratio	0.72	0.08	0.01	0.01			0.33	0.55	0.00			0.03
Control Delay	58.9	0.1	33.0	28.5			7.7	4.6	0.0			2.2
Queue Delay	0.0	0.0	0.0	0.0			0.0	0.0	0.0			0.0
Total Delay	58.9	0.1	33.0	28.5			7.7	4.6	0.0			2.2
LOS	E	A	C	C			A	A	A			A
Approach Delay	32.4			30.0					4.7			
Approach LOS	C			C					A			

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 32 (32%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 7.7

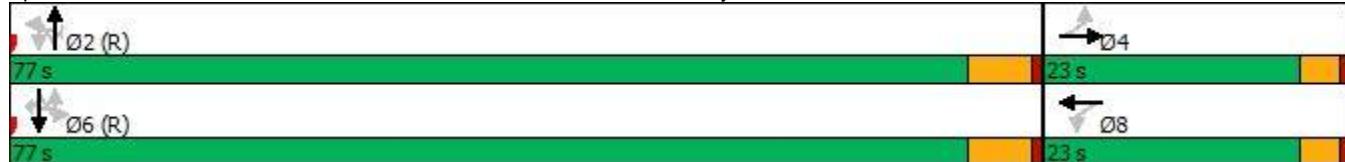
Intersection LOS: A

Intersection Capacity Utilization 67.5%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway





Lane Group	SBT	SBR
Permitted Phases		6
Detector Phase	6	6
Switch Phase		
Minimum Initial (s)	15.0	15.0
Minimum Split (s)	23.7	23.7
Total Split (s)	77.0	77.0
Total Split (%)	77.0%	77.0%
Maximum Green (s)	71.3	71.3
Yellow Time (s)	4.7	4.7
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	5.7	5.7
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	C-Max	C-Max
Walk Time (s)	7.0	7.0
Flash Dont Walk (s)	11.0	11.0
Pedestrian Calls (#/hr)	0	0
Act Effect Green (s)	74.9	74.9
Actuated g/C Ratio	0.75	0.75
v/c Ratio	0.58	0.04
Control Delay	6.2	1.3
Queue Delay	0.0	0.0
Total Delay	6.2	1.3
LOS	A	A
Approach Delay	6.1	
Approach LOS	A	
Intersection Summary		

Queues

2021 AM Cumulative - Signal

15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

05/27/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	150	123	1	2	62	1380	1	6	1495	42
v/c Ratio	0.72	0.08	0.01	0.01	0.33	0.55	0.00	0.03	0.58	0.04
Control Delay	58.9	0.1	33.0	28.5	7.7	4.6	0.0	2.2	6.2	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.9	0.1	33.0	28.5	7.7	4.6	0.0	2.2	6.2	1.3
Queue Length 50th (ft)	91	0	1	1	4	45	0	1	231	5
Queue Length 95th (ft)	124	0	5	7	m9	m79	m0	m0	275	0
Internal Link Dist (ft)	280			23		500			1452	
Turn Bay Length (ft)		50			155		155	225		50
Base Capacity (vph)	257	1583	178	328	188	2525	1132	224	2573	1156
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.08	0.01	0.01	0.33	0.55	0.00	0.03	0.58	0.04

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM 6th Signalized Intersection Summary
15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

2021 AM Cumulative - Signal
05/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	112	1	92	1	1	1	9	47	1242	1	1	4
Future Volume (veh/h)	112	1	92	1	1	1	9	47	1242	1	1	4
Initial Q (Q _b), veh	0	0	0	0	0	0	0	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	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1826	
Adj Flow Rate, veh/h	149	1	0	1	1	1	52	1380	1	5		
Peak Hour Factor	0.75	0.75	0.75	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.83	
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	5	
Cap, veh/h	248	1	289	108	108		269	2651	1182	311		
Arrive On Green	0.13	0.13	0.00	0.13	0.13	0.13	0.78	0.78	0.78	0.78	0.78	
Sat Flow, veh/h	1396	9	1585	1416	858	858	324	3413	1522	383		
Grp Volume(v), veh/h	150	0	0	1	0	2	52	1380	1	5		
Grp Sat Flow(s), veh/h/ln	1406	0	1585	1416	0	1716	324	1706	1522	383		
Q Serve(g_s), s	10.4	0.0	0.0	0.0	0.0	0.1	7.5	15.2	0.0	0.5		
Cycle Q Clear(g_c), s	10.5	0.0	0.0	0.0	0.0	0.1	24.4	15.2	0.0	15.7		
Prop In Lane	0.99		1.00	1.00		0.50	1.00		1.00		1.00	
Lane Grp Cap(c), veh/h	249	0	289	0	217		269	2651	1182	311		
V/C Ratio(X)	0.60	0.00		0.00	0.00	0.01	0.19	0.52	0.00	0.02		
Avail Cap(c_a), veh/h	340	0	379	0	326		269	2651	1182	311		
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	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	42.8	0.0	0.0	38.2	0.0	38.2	9.2	4.2	2.5	7.1		
Incr Delay (d2), s/veh	2.3	0.0	0.0	0.0	0.0	0.0	1.6	0.7	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	3.8	0.0	0.0	0.0	0.0	0.0	0.6	4.1	0.0	0.0		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	45.1	0.0	0.0	38.2	0.0	38.2	10.8	4.9	2.5	7.2		
LnGrp LOS	D	A		D	A	D	B	A	A	A		
Approach Vol, veh/h	150	A		3			1433					
Approach Delay, s/veh	45.1			38.2			5.1					
Approach LOS	D			D			A					
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	83.4		16.6		83.4		16.6					
Change Period (Y+Rc), s	5.7		4.0		5.7		4.0					
Max Green Setting (Gmax), s	71.3		19.0		71.3		19.0					
Max Q Clear Time (g_c+l1), s	26.4		12.5		18.9		2.1					
Green Ext Time (p_c), s	17.5		0.4		18.8		0.0					
Intersection Summary												
HCM 6th Ctrl Delay			7.1									
HCM 6th LOS			A									
Notes												
User approved ignoring U-Turning movement.												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	1241	35
Future Volume (veh/h)	1241	35
Initial Q (Q _b), 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/in	1826	1826
Adj Flow Rate, veh/h	1495	42
Peak Hour Factor	0.83	0.83
Percent Heavy Veh, %	5	5
Cap, veh/h	2695	1202
Arrive On Green	0.78	0.78
Sat Flow, veh/h	3469	1547
Grp Volume(v), veh/h	1495	42
Grp Sat Flow(s), veh/h/in	1735	1547
Q Serve(g_s), s	16.9	0.6
Cycle Q Clear(g_c), s	16.9	0.6
Prop In Lane	1.00	
Lane Grp Cap(c), veh/h	2695	1202
V/C Ratio(X)	0.55	0.03
Avail Cap(c_a), veh/h	2695	1202
HCM Platoon Ratio	1.00	1.00
Upstream Filter(l)	1.00	1.00
Uniform Delay (d), s/veh	4.4	2.6
Incr Delay (d2), s/veh	0.8	0.1
Initial Q Delay(d3), s/veh	0.0	0.0
%ile BackOfQ(50%), veh/in	4.7	0.2
Unsig. Movement Delay, s/veh		
LnGrp Delay(d), s/veh	5.2	2.6
LnGrp LOS	A	A
Approach Vol, veh/h	1542	
Approach Delay, s/veh	5.1	
Approach LOS	A	
Timer - Assigned Phs		

Lanes, Volumes, Timings
24: N Oxnard Blvd. & South Driveway

2021 AM Cumulative - Signal

05/27/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑	↑↑		↑↑↑
Traffic Volume (vph)	0	1	1298	1	0	1342
Future Volume (vph)	0	1	1298	1	0	1342
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Fr _t			0.865			
Flt Protected						
Satd. Flow (prot)	0	1611	3374	0	0	4940
Flt Permitted						
Satd. Flow (perm)	0	1611	3374	0	0	4940
Link Speed (mph)	30		30			30
Link Distance (ft)	498		279			580
Travel Time (s)	11.3		6.3			13.2
Peak Hour Factor	0.92	0.92	0.90	0.90	0.83	0.83
Heavy Vehicles (%)	2%	2%	7%	7%	5%	5%
Adj. Flow (vph)	0	1	1442	1	0	1617
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1	1443	0	0	1617
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 45.9% ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	1298	1	0	1342
Future Vol, veh/h	0	1	1298	1	0	1342
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	90	90	83	83
Heavy Vehicles, %	2	2	7	7	5	5
Mvmt Flow	0	1	1442	1	0	1617
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	722	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	369	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	369	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	14.8	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT		
Capacity (veh/h)	-	-	369	-		
HCM Lane V/C Ratio	-	-	0.003	-		
HCM Control Delay (s)	-	-	14.8	-		
HCM Lane LOS	-	-	B	-		
HCM 95th %tile Q(veh)	-	-	0	-		

Lanes, Volumes, Timings

2021 PM Cumulative - Signal

15: N Oxnard Blvd. & Orchard Pl./Old Levitz Driveway

05/27/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	82	1	100	1	1	1	21	105	1771	1	11	1
Future Volume (vph)	82	1	100	1	1	1	21	105	1771	1	11	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0		155		155		225
Storage Lanes	0		1	1		0		1		1		1
Taper Length (ft)	25			25				25				25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt			0.850		0.925					0.850		
Flt Protected		0.953		0.950				0.950				0.950
Satd. Flow (prot)	0	1793	1599	1770	1723	0	0	1770	3539	1583	0	1770
Flt Permitted		0.728		0.655				0.050				0.076
Satd. Flow (perm)	0	1370	1599	1220	1723	0	0	93	3539	1583	0	142
Right Turn on Red		Yes			Yes					Yes		
Satd. Flow (RTOR)		108			1					11		
Link Speed (mph)		30		30				30				
Link Distance (ft)		360		103				580				
Travel Time (s)		8.2		2.3				13.2				
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	88	1	108	1	1	1	24	118	1990	1	12	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	108	1	2	0	0	142	1990	1	0	13
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		12			12			12				
Link Offset(ft)		0			0			0				
Crosswalk Width(ft)		16			16			16				
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Number of Detectors	1	2	1	1	2		1	1	2	1	1	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Left	Thru	Right	Left	Left
Leading Detector (ft)	20	100	20	20	100		20	20	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	20	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Perm	NA	Free	Perm	NA		Perm	Perm	NA	Perm	Perm	Perm
Protected Phases		4			8			2				



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1989	138
Future Volume (vph)	1989	138
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)	50	
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3539	1583
Flt Permitted		
Satd. Flow (perm)	3539	1583
Right Turn on Red		Yes
Satd. Flow (RTOR)		50
Link Speed (mph)	30	
Link Distance (ft)	1532	
Travel Time (s)	34.8	
Peak Hour Factor	0.89	0.89
Heavy Vehicles (%)	2%	2%
Adj. Flow (vph)	2235	155
Shared Lane Traffic (%)		
Lane Group Flow (vph)	2235	155
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Number of Detectors	2	1
Detector Template	Thru	Right
Leading Detector (ft)	100	20
Trailing Detector (ft)	0	0
Detector 1 Position(ft)	0	0
Detector 1 Size(ft)	6	20
Detector 1 Type	Cl+Ex	Cl+Ex
Detector 1 Channel		
Detector 1 Extend (s)	0.0	0.0
Detector 1 Queue (s)	0.0	0.0
Detector 1 Delay (s)	0.0	0.0
Detector 2 Position(ft)	94	
Detector 2 Size(ft)	6	
Detector 2 Type	Cl+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	
Turn Type	NA	Perm
Protected Phases	6	

Lanes, Volumes, Timings

15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

2021 PM Cumulative - Signal

05/27/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Permitted Phases	4		Free	8			2	2		2	6	6
Detector Phase	4	4		8	8		2	2	2	2	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	22.5	22.5		22.5	22.5		23.7	23.7	23.7	23.7	23.7	23.7
Total Split (s)	22.5	22.5		22.5	22.5		77.5	77.5	77.5	77.5	77.5	77.5
Total Split (%)	22.5%	22.5%		22.5%	22.5%		77.5%	77.5%	77.5%	77.5%	77.5%	77.5%
Maximum Green (s)	18.5	18.5		18.5	18.5		71.8	71.8	71.8	71.8	71.8	71.8
Yellow Time (s)	3.0	3.0		3.0	3.0		4.7	4.7	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0			0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0			4.0	4.0		5.7	5.7	5.7	5.7	5.7	5.7
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effect Green (s)	11.8	100.0	11.8	11.8			81.8	81.8	81.8			81.8
Actuated g/C Ratio	0.12	1.00	0.12	0.12			0.82	0.82	0.82			0.82
v/c Ratio	0.55	0.07	0.01	0.01			1.87	0.69	0.00			0.11
Control Delay	53.5	0.1	36.0	30.5			453.2	4.7	0.0			3.8
Queue Delay	0.0	0.0	0.0	0.0			0.0	0.0	0.0			0.0
Total Delay	53.5	0.1	36.0	30.5			453.2	4.7	0.0			3.8
LOS	D	A	D	C			F	A	A			A
Approach Delay	24.2			32.3				34.5				
Approach LOS	C			C				C				

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 88 (88%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.87

Intersection Signal Delay: 19.7

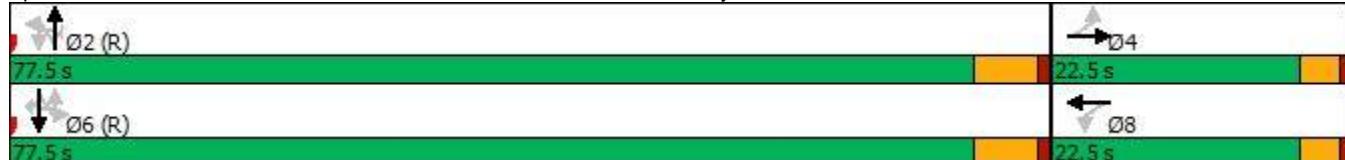
Intersection LOS: B

Intersection Capacity Utilization 91.6%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway





Lane Group	SBT	SBR
Permitted Phases		6
Detector Phase	6	6
Switch Phase		
Minimum Initial (s)	15.0	15.0
Minimum Split (s)	23.7	23.7
Total Split (s)	77.5	77.5
Total Split (%)	77.5%	77.5%
Maximum Green (s)	71.8	71.8
Yellow Time (s)	4.7	4.7
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	5.7	5.7
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	C-Max	C-Max
Walk Time (s)	7.0	7.0
Flash Dont Walk (s)	11.0	11.0
Pedestrian Calls (#/hr)	0	0
Act Effect Green (s)	81.8	81.8
Actuated g/C Ratio	0.82	0.82
v/c Ratio	0.77	0.12
Control Delay	6.5	1.0
Queue Delay	0.0	0.0
Total Delay	6.5	1.0
LOS	A	A
Approach Delay	6.1	
Approach LOS	A	
Intersection Summary		

Queues

2021 PM Cumulative - Signal

15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

05/27/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	89	108	1	2	142	1990	1	13	2235	155
v/c Ratio	0.55	0.07	0.01	0.01	1.87	0.69	0.00	0.11	0.77	0.12
Control Delay	53.5	0.1	36.0	30.5	453.2	4.7	0.0	3.8	6.5	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.5	0.1	36.0	30.5	453.2	4.7	0.0	3.8	6.5	1.0
Queue Length 50th (ft)	54	0	1	1	~144	90	0	1	393	4
Queue Length 95th (ft)	100	0	5	7	m#190	133	m0	m3	207	12
Internal Link Dist (ft)	280			23		500			1452	
Turn Bay Length (ft)		50			155		155	225		50
Base Capacity (vph)	253	1599	225	319	76	2894	1297	116	2894	1304
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.07	0.00	0.01	1.87	0.69	0.00	0.11	0.77	0.12

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
- Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
- Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

HCM 6th Signalized Intersection Summary
15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

2021 PM Cumulative - Signal
05/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	82	1	100	1	1	1	21	105	1771	1	11	1
Future Volume (veh/h)	82	1	100	1	1	1	21	105	1771	1	11	1
Initial Q (Q _b), veh	0	0	0	0	0	0	0	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	1.00	1.00
Work Zone On Approach	No			No			No					
Adj Sat Flow, veh/h/ln	1885	1885	1885	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	88	1	0	1	1	1	118	1990	1	1		
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	1	1	2	2	2	2	2	2	2	2	2
Cap, veh/h	181	1		205	67	67	149	2931	1308	203		
Arrive On Green	0.08	0.08	0.00	0.08	0.08	0.08	0.82	0.82	0.82	0.82	0.82	0.82
Sat Flow, veh/h	1395	16	1598	1416	858	858	146	3554	1585	217		
Grp Volume(v), veh/h	89	0	0	1	0	2	118	1990	1	1		
Grp Sat Flow(s), veh/h/ln	1410	0	1598	1416	0	1716	146	1777	1585	217		
Q Serve(g_s), s	6.1	0.0	0.0	0.0	0.0	0.1	52.8	22.3	0.0	0.2		
Cycle Q Clear(g_c), s	6.2	0.0	0.0	0.1	0.0	0.1	82.5	22.3	0.0	22.5		
Prop In Lane	0.99		1.00	1.00		0.50	1.00		1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	182	0		205	0	134	149	2931	1308	203		
V/C Ratio(X)	0.49	0.00		0.00	0.00	0.01	0.79	0.68	0.00	0.00		
Avail Cap(c_a), veh/h	335	0		357	0	317	149	2931	1308	203		
HCM Platoon Ratio	1.00	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.4	0.0	0.0	42.5	0.0	42.5	32.7	3.5	1.5	8.0		
Incr Delay (d2), s/veh	2.0	0.0	0.0	0.0	0.0	0.0	33.5	1.3	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		
%ile BackOfQ(50%), veh/ln	2.3	0.0	0.0	0.0	0.0	0.0	4.3	5.0	0.0	0.0		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.5	0.0	0.0	42.5	0.0	42.6	66.2	4.8	1.5	8.0		
LnGrp LOS	D	A		D	A	D	E	A	A	A		
Approach Vol, veh/h	89	A		3			2109					
Approach Delay, s/veh	47.5			42.6			8.2					
Approach LOS	D			D			A					
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	88.2		11.8		88.2		11.8					
Change Period (Y+Rc), s	5.7		4.0		5.7		4.0					
Max Green Setting (Gmax), s	71.8		18.5		71.8		18.5					
Max Q Clear Time (g_c+l1), s	84.5		8.2		31.7		2.1					
Green Ext Time (p_c), s	0.0		0.2		30.5		0.0					
Intersection Summary												
HCM 6th Ctrl Delay			7.7									
HCM 6th LOS			A									
Notes												
User approved ignoring U-Turning movement.												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	1989	138
Future Volume (veh/h)	1989	138
Initial Q (Q _b), 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/in	1870	1870
Adj Flow Rate, veh/h	2235	155
Peak Hour Factor	0.89	0.89
Percent Heavy Veh, %	2	2
Cap, veh/h	2931	1308
Arrive On Green	0.82	0.82
Sat Flow, veh/h	3554	1585
Grp Volume(v), veh/h	2235	155
Grp Sat Flow(s), veh/h/in	1777	1585
Q Serve(g_s), s	29.7	1.9
Cycle Q Clear(g_c), s	29.7	1.9
Prop In Lane	1.00	
Lane Grp Cap(c), veh/h	2931	1308
V/C Ratio(X)	0.76	0.12
Avail Cap(c_a), veh/h	2931	1308
HCM Platoon Ratio	1.00	1.00
Upstream Filter(l)	1.00	1.00
Uniform Delay (d), s/veh	4.1	1.7
Incr Delay (d2), s/veh	1.9	0.2
Initial Q Delay(d3), s/veh	0.0	0.0
%ile BackOfQ(50%), veh/in	6.8	0.4
Unsig. Movement Delay, s/veh		
LnGrp Delay(d), s/veh	6.1	1.9
LnGrp LOS	A	A
Approach Vol, veh/h	2391	
Approach Delay, s/veh	5.8	
Approach LOS	A	
Timer - Assigned Phs		

Lanes, Volumes, Timings
24: N Oxnard Blvd. & South Driveway

2021 PM Cumulative - Signal

05/27/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↑	↑↑			↑↑↑
Traffic Volume (vph)	0	1	1897	1	0	2110
Future Volume (vph)	0	1	1897	1	0	2110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Frt			0.865			
Flt Protected						
Satd. Flow (prot)	0	1611	3539	0	0	5085
Flt Permitted						
Satd. Flow (perm)	0	1611	3539	0	0	5085
Link Speed (mph)	30		30			30
Link Distance (ft)	498		279			580
Travel Time (s)	11.3		6.3			13.2
Peak Hour Factor	0.92	0.92	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	1	2131	1	0	2371
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1	2132	0	0	2371
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 62.5%

ICU Level of Service B

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	1897	1	0	2110
Future Vol, veh/h	0	1	1897	1	0	2110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	2131	1	0	2371
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	1066	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	218	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	218	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	21.6	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT		
Capacity (veh/h)	-	-	218	-		
HCM Lane V/C Ratio	-	-	0.005	-		
HCM Control Delay (s)	-	-	21.6	-		
HCM Lane LOS	-	-	C	-		
HCM 95th %tile Q(veh)	-	-	0	-		

Lanes, Volumes, Timings

15: N Oxnard Blvd. & Orchard Pl./Old Levitz Driveway

2021 SAT Cumulative - Signal

05/27/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	63	1	133	1	1	1	23	77	1827	1	17	1
Future Volume (vph)	63	1	133	1	1	1	23	77	1827	1	17	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0		155		155		225
Storage Lanes	0		1	1		0		1		1		1
Taper Length (ft)	25			25				25				25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt			0.850		0.925					0.850		
Flt Protected		0.953		0.950				0.950				0.950
Satd. Flow (prot)	0	1793	1599	1770	1723	0	0	1770	3539	1583	0	1770
Flt Permitted		0.728		0.691				0.112				0.067
Satd. Flow (perm)	0	1370	1599	1287	1723	0	0	209	3539	1583	0	125
Right Turn on Red		Yes			Yes					Yes		
Satd. Flow (RTOR)		166			1					11		
Link Speed (mph)		30		30				30				
Link Distance (ft)		360		103				580				
Travel Time (s)		8.2		2.3				13.2				
Peak Hour Factor	0.80	0.80	0.80	0.92	0.92	0.92	0.88	0.88	0.88	0.88	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	79	1	166	1	1	1	26	88	2076	1	18	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	80	166	1	2	0	0	114	2076	1	0	19
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		12			12			12				
Link Offset(ft)		0			0			0				
Crosswalk Width(ft)		16		16				16				
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Number of Detectors	1	2	1	1	2		1	1	2	1	1	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Left	Thru	Right	Left	Left
Leading Detector (ft)	20	100	20	20	100		20	20	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	20	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0		0.0		
Turn Type	Perm	NA	Free	Perm	NA		Perm	Perm	NA	Perm	Perm	Perm
Protected Phases		4			8			2				



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1646	78
Future Volume (vph)	1646	78
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)	50	
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3539	1583
Flt Permitted		
Satd. Flow (perm)	3539	1583
Right Turn on Red		Yes
Satd. Flow (RTOR)		34
Link Speed (mph)	30	
Link Distance (ft)	1532	
Travel Time (s)	34.8	
Peak Hour Factor	0.95	0.95
Heavy Vehicles (%)	2%	2%
Adj. Flow (vph)	1733	82
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1733	82
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Number of Detectors	2	1
Detector Template	Thru	Right
Leading Detector (ft)	100	20
Trailing Detector (ft)	0	0
Detector 1 Position(ft)	0	0
Detector 1 Size(ft)	6	20
Detector 1 Type	Cl+Ex	Cl+Ex
Detector 1 Channel		
Detector 1 Extend (s)	0.0	0.0
Detector 1 Queue (s)	0.0	0.0
Detector 1 Delay (s)	0.0	0.0
Detector 2 Position(ft)	94	
Detector 2 Size(ft)	6	
Detector 2 Type	Cl+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	
Turn Type	NA	Perm
Protected Phases	6	

Lanes, Volumes, Timings

15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

2021 SAT Cumulative - Signal

05/27/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Permitted Phases	4		Free	8			2	2		2	6	6
Detector Phase	4	4		8	8		2	2	2	2	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	22.5	22.5		22.5	22.5		23.7	23.7	23.7	23.7	23.7	23.7
Total Split (s)	22.5	22.5		22.5	22.5		77.5	77.5	77.5	77.5	77.5	77.5
Total Split (%)	22.5%	22.5%		22.5%	22.5%		77.5%	77.5%	77.5%	77.5%	77.5%	77.5%
Maximum Green (s)	18.5	18.5		18.5	18.5		71.8	71.8	71.8	71.8	71.8	71.8
Yellow Time (s)	3.0	3.0		3.0	3.0		4.7	4.7	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0			0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0			4.0	4.0		5.7	5.7	5.7	5.7	5.7	5.7
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effect Green (s)	11.2	100.0	11.2	11.2			82.4	82.4	82.4			82.4
Actuated g/C Ratio	0.11	1.00	0.11	0.11			0.82	0.82	0.82			0.82
v/c Ratio	0.52	0.10	0.01	0.01			0.66	0.71	0.00			0.18
Control Delay	53.1	0.1	37.0	31.5			26.3	4.8	0.0			5.4
Queue Delay	0.0	0.0	0.0	0.0			0.0	0.0	0.0			0.0
Total Delay	53.1	0.1	37.0	31.5			26.3	4.8	0.0			5.4
LOS	D	A	D	C			C	A	A			A
Approach Delay	17.4			33.3				5.9				
Approach LOS	B			C				A				

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 74 (74%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 5.4

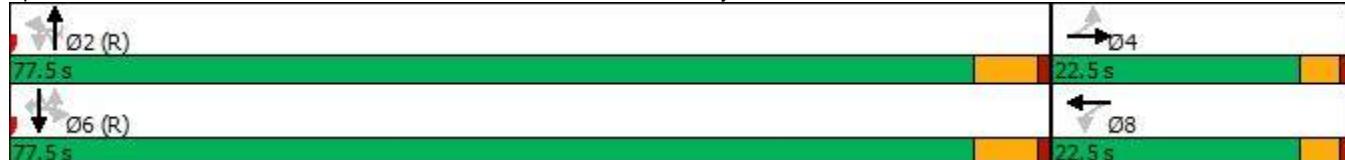
Intersection LOS: A

Intersection Capacity Utilization 86.0%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway





Lane Group	SBT	SBR
Permitted Phases		6
Detector Phase	6	6
Switch Phase		
Minimum Initial (s)	15.0	15.0
Minimum Split (s)	23.7	23.7
Total Split (s)	77.5	77.5
Total Split (%)	77.5%	77.5%
Maximum Green (s)	71.8	71.8
Yellow Time (s)	4.7	4.7
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	5.7	5.7
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	C-Max	C-Max
Walk Time (s)	7.0	7.0
Flash Dont Walk (s)	11.0	11.0
Pedestrian Calls (#/hr)	0	0
Act Effect Green (s)	82.4	82.4
Actuated g/C Ratio	0.82	0.82
v/c Ratio	0.59	0.06
Control Delay	3.3	0.5
Queue Delay	0.0	0.0
Total Delay	3.3	0.5
LOS	A	A
Approach Delay	3.2	
Approach LOS	A	
Intersection Summary		

Queues

15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

2021 SAT Cumulative - Signal

05/27/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	80	166	1	2	114	2076	1	19	1733	82
v/c Ratio	0.52	0.10	0.01	0.01	0.66	0.71	0.00	0.18	0.59	0.06
Control Delay	53.1	0.1	37.0	31.5	26.3	4.8	0.0	5.4	3.3	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.1	0.1	37.0	31.5	26.3	4.8	0.0	5.4	3.3	0.5
Queue Length 50th (ft)	49	0	1	1	9	87	0	1	46	0
Queue Length 95th (ft)	81	0	6	7	m#127	126	m0	m3	71	4
Internal Link Dist (ft)	280			23		500			1452	
Turn Bay Length (ft)		50			155		155	225		50
Base Capacity (vph)	253	1599	238	319	172	2916	1306	103	2916	1310
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.10	0.00	0.01	0.66	0.71	0.00	0.18	0.59	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM 6th Signalized Intersection Summary
15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

2021 SAT Cumulative - Signal
05/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	63	1	133	1	1	1	23	77	1827	1	17	1
Future Volume (veh/h)	63	1	133	1	1	1	23	77	1827	1	17	1
Initial Q (Q _b), veh	0	0	0	0	0	0	0	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	1.00	1.00
Work Zone On Approach		No			No				No			
Adj Sat Flow, veh/h/ln	1885	1885	1885	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	79	1	0	1	1	1	88	2076	1	1		
Peak Hour Factor	0.80	0.80	0.80	0.92	0.92	0.92	0.88	0.88	0.88	0.88	0.95	
Percent Heavy Veh, %	1	1	1	2	2	2	2	2	2	2	2	2
Cap, veh/h	170	1		192	60	60	246	2958	1320	191		
Arrive On Green	0.07	0.07	0.00	0.07	0.07	0.07	0.83	0.83	0.83	0.83	0.83	
Sat Flow, veh/h	1391	18	1598	1416	858	858	258	3554	1585	200		
Grp Volume(v), veh/h	80	0	0	1	0	2	88	2076	1	1		
Grp Sat Flow(s), veh/h/ln	1409	0	1598	1416	0	1716	258	1777	1585	200		
Q Serve(g_s), s	5.5	0.0	0.0	0.0	0.0	0.1	16.9	23.5	0.0	0.2		
Cycle Q Clear(g_c), s	5.6	0.0	0.0	0.1	0.0	0.1	32.9	23.5	0.0	23.7		
Prop In Lane	0.99		1.00	1.00		0.50	1.00		1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	171	0		192	0	121	246	2958	1320	191		
V/C Ratio(X)	0.47	0.00		0.01	0.00	0.02	0.36	0.70	0.00	0.01		
Avail Cap(c_a), veh/h	335	0		355	0	317	246	2958	1320	191		
HCM Platoon Ratio	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	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	45.9	0.0	0.0	43.2	0.0	43.3	8.1	3.4	1.4	8.2		
Incr Delay (d2), s/veh	2.0	0.0	0.0	0.0	0.0	0.1	4.0	1.4	0.0	0.0		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%), veh/ln	2.0	0.0	0.0	0.0	0.0	0.0	1.1	5.0	0.0	0.0		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.9	0.0	0.0	43.2	0.0	43.3	12.1	4.8	1.4	8.2		
LnGrp LOS	D	A		D	A	D	B	A	A	A		
Approach Vol, veh/h	80	A		3			2165					
Approach Delay, s/veh	47.9			43.3			5.1					
Approach LOS	D			D			A					
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	89.0		11.0		89.0		11.0					
Change Period (Y+Rc), s	5.7		4.0		5.7		4.0					
Max Green Setting (Gmax), s	71.8		18.5		71.8		18.5					
Max Q Clear Time (g_c+l1), s	34.9		7.6		25.7		2.1					
Green Ext Time (p_c), s	28.3		0.2		23.1		0.0					
Intersection Summary												
HCM 6th Ctrl Delay			5.3									
HCM 6th LOS			A									
Notes												
User approved ignoring U-Turning movement.												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	1646	78
Future Volume (veh/h)	1646	78
Initial Q (Q _b), 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/in	1870	1870
Adj Flow Rate, veh/h	1733	82
Peak Hour Factor	0.95	0.95
Percent Heavy Veh, %	2	2
Cap, veh/h	2958	1320
Arrive On Green	0.83	0.83
Sat Flow, veh/h	3554	1585
Grp Volume(v), veh/h	1733	82
Grp Sat Flow(s), veh/h/in	1777	1585
Q Serve(g_s), s	15.9	0.9
Cycle Q Clear(g_c), s	15.9	0.9
Prop In Lane	1.00	
Lane Grp Cap(c), veh/h	2958	1320
V/C Ratio(X)	0.59	0.06
Avail Cap(c_a), veh/h	2958	1320
HCM Platoon Ratio	1.00	1.00
Upstream Filter(l)	1.00	1.00
Uniform Delay (d), s/veh	2.7	1.5
Incr Delay (d2), s/veh	0.9	0.1
Initial Q Delay(d3), s/veh	0.0	0.0
%ile BackOfQ(50%), veh/in	3.3	0.2
Unsig. Movement Delay, s/veh		
LnGrp Delay(d), s/veh	3.6	1.6
LnGrp LOS	A	A
Approach Vol, veh/h	1816	
Approach Delay, s/veh	3.5	
Approach LOS	A	
Timer - Assigned Phs		

Lanes, Volumes, Timings
24: N Oxnard Blvd. & South Driveway

2021 SAT Cumulative - Signal

05/27/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑	↑↑		↑↑↑
Traffic Volume (vph)	0	1	1927	1	0	1802
Future Volume (vph)	0	1	1927	1	0	1802
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Fr _t			0.865			
Flt Protected						
Satd. Flow (prot)	0	1611	3539	0	0	5085
Flt Permitted						
Satd. Flow (perm)	0	1611	3539	0	0	5085
Link Speed (mph)	30		30			30
Link Distance (ft)	498		279			580
Travel Time (s)	11.3		6.3			13.2
Peak Hour Factor	0.92	0.92	0.88	0.88	0.95	0.95
Adj. Flow (vph)	0	1	2190	1	0	1897
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1	2191	0	0	1897
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 63.3%

ICU Level of Service B

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	1927	1	0	1802
Future Vol, veh/h	0	1	1927	1	0	1802
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	88	88	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	2190	1	0	1897
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	1096	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	208	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	208	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	22.4	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT		
Capacity (veh/h)	-	-	208	-		
HCM Lane V/C Ratio	-	-	0.005	-		
HCM Control Delay (s)	-	-	22.4	-		
HCM Lane LOS	-	-	C	-		
HCM 95th %tile Q(veh)	-	-	0	-		

CUMULATIVE + PROJECT TRAFFIC ANALYSIS

Lanes, Volumes, Timings

2021 AM Cumulative + Project - TWSC

15: N Oxnard Blvd. & Orchard Pl./Old Levitz Driveway

05/27/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	112	1	92	0	0	3	17	47	1242	10	1	10
Future Volume (vph)	112	1	92	0	0	3	17	47	1242	10	1	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0		155		155		225
Storage Lanes	0		1	0		1		1		1		1
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt			0.850			0.865				0.850		
Flt Protected			0.953					0.950				0.950
Satd. Flow (prot)	0	1775	1583	0	0	1611	0	1687	3374	1509	0	1719
Flt Permitted			0.953					0.950				0.950
Satd. Flow (perm)	0	1775	1583	0	0	1611	0	1687	3374	1509	0	1719
Link Speed (mph)			30			30			30			
Link Distance (ft)			360			103			580			
Travel Time (s)			8.2			2.3			13.2			
Peak Hour Factor	0.75	0.75	0.75	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.83	0.83
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	7%	7%	7%	7%	5%	5%
Adj. Flow (vph)	149	1	123	0	0	3	19	52	1380	11	1	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	123	0	0	3	0	71	1380	11	0	13
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)			0			0			12			
Link Offset(ft)			0			0			0			
Crosswalk Width(ft)			16			16			16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Sign Control			Stop			Stop				Free		

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 60.6%

ICU Level of Service B

Analysis Period (min) 15



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1241	35
Future Volume (vph)	1241	35
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)		50
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3438	1538
Flt Permitted		
Satd. Flow (perm)	3438	1538
Link Speed (mph)		30
Link Distance (ft)		1532
Travel Time (s)		34.8
Peak Hour Factor	0.83	0.83
Heavy Vehicles (%)	5%	5%
Adj. Flow (vph)	1495	42
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1495	42
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)		12
Link Offset(ft)		0
Crosswalk Width(ft)		16
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Sign Control		Free
Intersection Summary		

Intersection

Int Delay, s/veh 217.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	112	1	92	0	0	3	17	47	1242	10	1	10	1241	35
Future Vol, veh/h	112	1	92	0	0	3	17	47	1242	10	1	10	1241	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free							
RT Channelized	-	-	Free	-	-	None	-	-	-	None	-	-	-	None
Storage Length	-	-	50	-	-	0	-	155	-	155	-	225	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Peak Hour Factor	75	75	75	92	92	92	90	90	90	90	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	7	7	7	7	5	5	5	5
Mvmt Flow	149	1	123	0	0	3	19	52	1380	11	1	12	1495	42

Major/Minor	Minor2	Minor1			Major1			Major2						
Conflicting Flow All	2353	3054	-	-	-	690	1495	1537	0	0	1380	1391	0	0
Stage 1	1521	1521	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	832	1533	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	-	-	-	6.94	6.54	4.24	-	-	6.5	4.2	-	-
Critical Hdwy Stg 1	6.54	5.54	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	-	-	-	3.32	2.57	2.27	-	-	2.55	2.25	-	-
Pot Cap-1 Maneuver	~ 19	12	0	0	0	388	151	405	-	-	183	473	-	-
Stage 1	~ 124	179	0	0	0	-	-	-	-	-	-	-	-	-
Stage 2	330	177	0	0	0	-	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-	-	-	-	-
Mov Cap-1 Maneuver	~ 15	9	-	-	-	388	280	280	-	-	413	413	-	-
Mov Cap-2 Maneuver	~ 15	9	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	~ 93	173	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	244	132	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$	4566.1	14.4	1.1	0.1
HCM LOS	F	B		
<hr/>				
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBln1 EBln2 WBln1 SBL SBT SBR
Capacity (veh/h)	280	-	-	15 - 388 413 - -
HCM Lane V/C Ratio	0.254	-	-	10.044 - 0.008 0.032 - -
HCM Control Delay (s)	22.2	-	-	\$ 4566.1 0 14.4 14 - -
HCM Lane LOS	C	-	-	F A B B - -
HCM 95th %tile Q(veh)	1	-	-	19.8 - 0 0.1 - -

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
24: N Oxnard Blvd. & South Driveway

2021 AM Cumulative + Project - TWSC

05/27/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	8	1308	4	0	1350
Future Volume (vph)	0	8	1308	4	0	1350
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Fr _t			0.865			
Flt Protected						
Satd. Flow (prot)	0	1611	3374	0	0	4940
Flt Permitted						
Satd. Flow (perm)	0	1611	3374	0	0	4940
Link Speed (mph)	30		30			30
Link Distance (ft)	498		279			580
Travel Time (s)	11.3		6.3			13.2
Peak Hour Factor	0.92	0.92	0.90	0.90	0.83	0.83
Heavy Vehicles (%)	2%	2%	7%	7%	5%	5%
Adj. Flow (vph)	0	9	1453	4	0	1627
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	9	1457	0	0	1627
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 46.3% ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	8	1308	4	0	1350
Future Vol, veh/h	0	8	1308	4	0	1350
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	90	90	83	83
Heavy Vehicles, %	2	2	7	7	5	5
Mvmt Flow	0	9	1453	4	0	1627
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	729	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	365	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	365	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	15.1	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT		
Capacity (veh/h)	-	-	365	-		
HCM Lane V/C Ratio	-	-	0.024	-		
HCM Control Delay (s)	-	-	15.1	-		
HCM Lane LOS	-	-	C	-		
HCM 95th %tile Q(veh)	-	-	0.1	-		

Lanes, Volumes, Timings

2021 PM Cumulative + Project - TWSC

15: N Oxnard Blvd. & Orchard Pl./Old Levitz Driveway

05/27/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	82	1	100	0	0	9	45	105	1772	14	11	8
Future Volume (vph)	82	1	100	0	0	9	45	105	1772	14	11	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0		155		155		225
Storage Lanes	0		1	0		1		1		1		1
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt			0.850			0.865				0.850		
Flt Protected		0.953						0.950				0.950
Satd. Flow (prot)	0	1793	1599	0	0	1611	0	1770	3539	1583	0	1770
Flt Permitted		0.953						0.950				0.950
Satd. Flow (perm)	0	1793	1599	0	0	1611	0	1770	3539	1583	0	1770
Link Speed (mph)		30			30			30				
Link Distance (ft)		360			103			580				
Travel Time (s)		8.2			2.3			13.2				
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	88	1	108	0	0	10	51	118	1991	16	12	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	108	0	0	10	0	169	1991	16	0	21
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		0			0			12				
Link Offset(ft)		0			0			0				
Crosswalk Width(ft)		16			16			16				
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Sign Control		Stop			Stop			Free				

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 79.5%

ICU Level of Service D

Analysis Period (min) 15



Lane Group	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1989	138
Future Volume (vph)	1989	138
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)	50	
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3539	1583
Flt Permitted		
Satd. Flow (perm)	3539	1583
Link Speed (mph)	30	
Link Distance (ft)	1532	
Travel Time (s)	34.8	
Peak Hour Factor	0.89	0.89
Heavy Vehicles (%)	2%	2%
Adj. Flow (vph)	2235	155
Shared Lane Traffic (%)		
Lane Group Flow (vph)	2235	155
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Sign Control	Free	
Intersection Summary		

Intersection

Int Delay, s/veh 13.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	82	1	100	0	0	9	45	105	1772	14	11	8	1989	138
Future Vol, veh/h	82	1	100	0	0	9	45	105	1772	14	11	8	1989	138
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free							
RT Channelized	-	-	Free	-	-	None	-	-	-	None	-	-	-	None
Storage Length	-	-	50	-	-	0	-	155	-	155	-	225	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Peak Hour Factor	93	93	93	92	92	92	89	89	89	89	89	89	89	89
Heavy Vehicles, %	1	1	1	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	88	1	108	0	0	10	51	118	1991	16	12	9	2235	155

Major/Minor	Minor2	Minor1			Major1			Major2						
Conflicting Flow All	3611	4622	-	-	-	996	2235	2390	0	0	1991	2007	0	0
Stage 1	2277	2277	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	1334	2345	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.52	-	-	-	6.94	6.44	4.14	-	-	6.44	4.14	-	-
Critical Hdwy Stg 1	6.52	5.52	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.52	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.01	-	-	-	3.32	2.52	2.22	-	-	2.52	2.22	-	-
Pot Cap-1 Maneuver	~ 2	~ 1	0	0	0	243	52	198	-	-	75	281	-	-
Stage 1	~ 41	75	0	0	0	-	-	-	-	-	-	-	-	-
Stage 2	164	69	0	0	0	-	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-	-	-	-	-
Mov Cap-1 Maneuver	-	0	-	-	-	243	107	~ 107	-	-	105	105	-	-
Mov Cap-2 Maneuver	-	0	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	~ 41	60	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	0	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB			SB			
HCM Control Delay, s			20.4			28.4			
HCM LOS	-		C			0.4			
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	~ 107	-	-	-	-	243	105	-	-
HCM Lane V/C Ratio	1.575	-	-	-	-	0.04	0.203	-	-
HCM Control Delay (s)	\$ 366.3	-	-	-	0	20.4	47.9	-	-
HCM Lane LOS	F	-	-	-	A	C	E	-	-
HCM 95th %tile Q(veh)	12.7	-	-	-	-	0.1	0.7	-	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	25	1911	5	0	2134
Future Volume (vph)	0	25	1911	5	0	2134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Frt			0.865			
Flt Protected						
Satd. Flow (prot)	0	1611	3539	0	0	5085
Flt Permitted						
Satd. Flow (perm)	0	1611	3539	0	0	5085
Link Speed (mph)	30		30			30
Link Distance (ft)	498		279			580
Travel Time (s)	11.3		6.3			13.2
Peak Hour Factor	0.92	0.92	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	27	2147	6	0	2398
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	27	2153	0	0	2398
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 63.0%

ICU Level of Service B

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	25	1911	5	0	2134
Future Vol, veh/h	0	25	1911	5	0	2134
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	27	2147	6	0	2398
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	1077	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	215	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	215	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	24.2	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT		
Capacity (veh/h)	-	-	215	-		
HCM Lane V/C Ratio	-	-	0.126	-		
HCM Control Delay (s)	-	-	24.2	-		
HCM Lane LOS	-	-	C	-		
HCM 95th %tile Q(veh)	-	-	0.4	-		

Lanes, Volumes, Timings

2021 SAT Cumulative + Project - TWSC

15: N Oxnard Blvd. & Orchard Pl./Old Levitz Driveway

05/27/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	63	1	133	0	0	11	50	77	1828	26	17	16
Future Volume (vph)	63	1	133	0	0	11	50	77	1828	26	17	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0		155		155		225
Storage Lanes	0		1	0		1		1		1		1
Taper Length (ft)	25			25			25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt			0.850			0.865				0.850		
Flt Protected			0.953					0.950				0.950
Satd. Flow (prot)	0	1793	1599	0	0	1611	0	1770	3539	1583	0	1770
Flt Permitted			0.953					0.950				0.950
Satd. Flow (perm)	0	1793	1599	0	0	1611	0	1770	3539	1583	0	1770
Link Speed (mph)			30			30			30			
Link Distance (ft)			360			103			580			
Travel Time (s)			8.2			2.3			13.2			
Peak Hour Factor	0.80	0.80	0.80	0.92	0.92	0.92	0.88	0.88	0.88	0.88	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	79	1	166	0	0	12	57	88	2077	30	18	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	80	166	0	0	12	0	145	2077	30	0	35
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)			0			0			12			
Link Offset(ft)			0			0			0			
Crosswalk Width(ft)			16			16			16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Sign Control			Stop			Stop				Free		

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 74.1%

ICU Level of Service D

Analysis Period (min) 15



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1646	78
Future Volume (vph)	1646	78
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)	50	
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3539	1583
Flt Permitted		
Satd. Flow (perm)	3539	1583
Link Speed (mph)	30	
Link Distance (ft)	1532	
Travel Time (s)	34.8	
Peak Hour Factor	0.95	0.95
Heavy Vehicles (%)	2%	2%
Adj. Flow (vph)	1733	82
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1733	82
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Sign Control	Free	
Intersection Summary		

Intersection

Int Delay, s/veh 813.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Traffic Vol, veh/h	63	1	133	0	0	11	50	77	1828	26	17	16	1646	78
Future Vol, veh/h	63	1	133	0	0	11	50	77	1828	26	17	16	1646	78
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free							
RT Channelized	-	-	Free	-	-	None	-	-	-	None	-	-	-	None
Storage Length	-	-	50	-	-	0	-	155	-	155	-	225	-	50
Veh in Median Storage, #	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	-	0	-
Peak Hour Factor	80	80	80	92	92	92	88	88	88	88	95	95	95	95
Heavy Vehicles, %	1	1	1	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	79	1	166	0	0	12	57	88	2077	30	18	17	1733	82

Major/Minor	Minor2	Minor1			Major1			Major2						
Conflicting Flow All	3132	4200	-	-	-	1039	1733	1815	0	0	2077	2107	0	0
Stage 1	1803	1803	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	1329	2397	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.52	-	-	-	6.94	6.44	4.14	-	-	6.44	4.14	-	-
Critical Hdwy Stg 1	6.52	5.52	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.52	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.01	-	-	-	3.32	2.52	2.22	-	-	2.52	2.22	-	-
Pot Cap-1 Maneuver	~ 5	2	0	0	0	227	111	334	-	-	66	257	-	-
Stage 1	83	131	0	0	0	-	-	-	-	-	-	-	-	-
Stage 2	165	65	0	0	0	-	-	-	-	-	-	-	-	-
Platoon blocked, %									-	-	-	-	-	-
Mov Cap-1 Maneuver	~ 1	0	-	-	-	227	186	186	-	-	99	99	-	-
Mov Cap-2 Maneuver	~ 1	0	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	~ 19	85	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	~ 36	15	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay \$42488.1		21.7	4.5	1.1
HCM LOS	F	C		
<hr/>				
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBln1 EBln2 WBln1 SBL SBT SBR
Capacity (veh/h)	186	-	-	1 - 227 99 - -
HCM Lane V/C Ratio	0.776	-	-	80 - 0.053 0.351 - -
HCM Control Delay (s)	69.9	-	\$ 42488.1	0 21.7 59.6 - -
HCM Lane LOS	F	-	-	F A C F - -
HCM 95th %tile Q(veh)	5.2	-	-	12.3 - 0.2 1.4 - -

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lanes, Volumes, Timings
24: N Oxnard Blvd. & South Driveway

2021 SAT Cumulative + Project - TWSC

05/27/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↑	↑↑			↑↑↑
Traffic Volume (vph)	0	28	1953	9	0	1829
Future Volume (vph)	0	28	1953	9	0	1829
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Fr _t		0.865	0.999			
Flt Protected						
Satd. Flow (prot)	0	1611	3536	0	0	5085
Flt Permitted						
Satd. Flow (perm)	0	1611	3536	0	0	5085
Link Speed (mph)	30		30			30
Link Distance (ft)	498		279			580
Travel Time (s)	11.3		6.3			13.2
Peak Hour Factor	0.92	0.92	0.88	0.88	0.95	0.95
Adj. Flow (vph)	0	30	2219	10	0	1925
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	30	2229	0	0	1925
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 64.3%

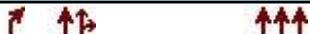
ICU Level of Service C

Analysis Period (min) 15

Intersection

Int Delay, s/veh 0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
----------	-----	-----	-----	-----	-----	-----

Lane Configurations 

Traffic Vol, veh/h 0 28 1953 9 0 1829

Future Vol, veh/h 0 28 1953 9 0 1829

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length - 0 - - - -

Veh in Median Storage, # 0 - 0 - - - 0

Grade, % 0 - 0 - - - 0

Peak Hour Factor 92 92 88 88 95 95

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 0 30 2219 10 0 1925

Major/Minor	Minor1	Major1	Major2
-------------	--------	--------	--------

Conflicting Flow All - 1115 0 0 - -

Stage 1 - - - - - -

Stage 2 - - - - - -

Critical Hdwy - 6.94 - - - -

Critical Hdwy Stg 1 - - - - - -

Critical Hdwy Stg 2 - - - - - -

Follow-up Hdwy - 3.32 - - - -

Pot Cap-1 Maneuver 0 202 - - 0 -

Stage 1 0 - - - 0 -

Stage 2 0 - - - 0 -

Platoon blocked, % - - - - - -

Mov Cap-1 Maneuver - 202 - - - -

Mov Cap-2 Maneuver - - - - - -

Stage 1 - - - - - -

Stage 2 - - - - - -

Approach	WB	NB	SB
----------	----	----	----

HCM Control Delay, s 26 0 0

HCM LOS D

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
-----------------------	-----	-----	-------	-----

Capacity (veh/h) - - 202 -

HCM Lane V/C Ratio - - 0.151 -

HCM Control Delay (s) - - 26 -

HCM Lane LOS - - D -

HCM 95th %tile Q(veh) - - 0.5 -

Lanes, Volumes, Timings

2021 AM Cumulative + Project - Signal

15: N Oxnard Blvd. & Orchard Pl./Old Levitz Driveway

05/27/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	112	1	92	8	1	3	9	47	1242	10	1	10
Future Volume (vph)	112	1	92	8	1	3	9	47	1242	10	1	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0		155		155		225
Storage Lanes	0		1	1		0		1		1		1
Taper Length (ft)	25			25				25				25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt			0.850		0.887					0.850		
Flt Protected		0.953		0.950				0.950				0.950
Satd. Flow (prot)	0	1775	1583	1770	1652	0	0	1687	3374	1509	0	1719
Flt Permitted		0.725		0.504				0.142				0.166
Satd. Flow (perm)	0	1350	1583	939	1652	0	0	252	3374	1509	0	300
Right Turn on Red		Yes			Yes					Yes		
Satd. Flow (RTOR)		89		3						11		
Link Speed (mph)		30		30				30				
Link Distance (ft)		360		103				580				
Travel Time (s)		8.2		2.3				13.2				
Peak Hour Factor	0.75	0.75	0.75	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.83	0.83
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	7%	7%	7%	7%	5%	5%
Adj. Flow (vph)	149	1	123	9	1	3	10	52	1380	11	1	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	123	9	4	0	0	62	1380	11	0	13
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		12			12				12			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16				16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Number of Detectors	1	2	1	1	2		1	1	2	1	1	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Left	Thru	Right	Left	Left
Leading Detector (ft)	20	100	20	20	100		20	20	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	20	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94				94			
Detector 2 Size(ft)		6			6				6			
Detector 2 Type		Cl+Ex			Cl+Ex				Cl+Ex			
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0				0.0			
Turn Type	Perm	NA	Free	Perm	NA		Perm	Perm	NA	Perm	Perm	Perm
Protected Phases		4			8				2			



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1241	35
Future Volume (vph)	1241	35
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)	50	
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3438	1538
Flt Permitted		
Satd. Flow (perm)	3438	1538
Right Turn on Red		Yes
Satd. Flow (RTOR)		20
Link Speed (mph)	30	
Link Distance (ft)	1532	
Travel Time (s)	34.8	
Peak Hour Factor	0.83	0.83
Heavy Vehicles (%)	5%	5%
Adj. Flow (vph)	1495	42
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1495	42
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Number of Detectors	2	1
Detector Template	Thru	Right
Leading Detector (ft)	100	20
Trailing Detector (ft)	0	0
Detector 1 Position(ft)	0	0
Detector 1 Size(ft)	6	20
Detector 1 Type	Cl+Ex	Cl+Ex
Detector 1 Channel		
Detector 1 Extend (s)	0.0	0.0
Detector 1 Queue (s)	0.0	0.0
Detector 1 Delay (s)	0.0	0.0
Detector 2 Position(ft)	94	
Detector 2 Size(ft)	6	
Detector 2 Type	Cl+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	
Turn Type	NA	Perm
Protected Phases	6	

Lanes, Volumes, Timings

15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

2021 AM Cumulative + Project - Signal

05/27/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Permitted Phases	4		Free	8			2	2		2	6	6
Detector Phase	4	4		8	8		2	2	2	2	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	22.5	22.5		22.5	22.5		23.7	23.7	23.7	23.7	23.7	23.7
Total Split (s)	23.0	23.0		23.0	23.0		77.0	77.0	77.0	77.0	77.0	77.0
Total Split (%)	23.0%	23.0%		23.0%	23.0%		77.0%	77.0%	77.0%	77.0%	77.0%	77.0%
Maximum Green (s)	19.0	19.0		19.0	19.0		71.3	71.3	71.3	71.3	71.3	71.3
Yellow Time (s)	3.0	3.0		3.0	3.0		4.7	4.7	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0			0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0			4.0	4.0		5.7	5.7	5.7	5.7	5.7	5.7
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effect Green (s)	15.5	100.0	15.5	15.5			74.8	74.8	74.8			74.8
Actuated g/C Ratio	0.16	1.00	0.16	0.16			0.75	0.75	0.75			0.75
v/c Ratio	0.72	0.08	0.06	0.02			0.33	0.55	0.01			0.06
Control Delay	59.0	0.1	34.8	24.2			7.6	4.5	0.8			2.5
Queue Delay	0.0	0.0	0.0	0.0			0.0	0.0	0.0			0.0
Total Delay	59.0	0.1	34.8	24.2			7.6	4.5	0.8			2.5
LOS	E	A	C	C			A	A	A			A
Approach Delay	32.4			31.5			4.6					
Approach LOS	C			C			A					

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 32 (32%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 7.7

Intersection LOS: A

Intersection Capacity Utilization 67.5%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway





Lane Group	SBT	SBR
Permitted Phases		6
Detector Phase	6	6
Switch Phase		
Minimum Initial (s)	15.0	15.0
Minimum Split (s)	23.7	23.7
Total Split (s)	77.0	77.0
Total Split (%)	77.0%	77.0%
Maximum Green (s)	71.3	71.3
Yellow Time (s)	4.7	4.7
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	5.7	5.7
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	C-Max	C-Max
Walk Time (s)	7.0	7.0
Flash Dont Walk (s)	11.0	11.0
Pedestrian Calls (#/hr)	0	0
Act Effect Green (s)	74.8	74.8
Actuated g/C Ratio	0.75	0.75
v/c Ratio	0.58	0.04
Control Delay	6.2	1.3
Queue Delay	0.0	0.0
Total Delay	6.2	1.3
LOS	A	A
Approach Delay	6.1	
Approach LOS	A	
Intersection Summary		

Queues

15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

2021 AM Cumulative + Project - Signal

05/27/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	150	123	9	4	62	1380	11	13	1495	42
v/c Ratio	0.72	0.08	0.06	0.02	0.33	0.55	0.01	0.06	0.58	0.04
Control Delay	59.0	0.1	34.8	24.2	7.6	4.5	0.8	2.5	6.2	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.0	0.1	34.8	24.2	7.6	4.5	0.8	2.5	6.2	1.3
Queue Length 50th (ft)	91	0	5	1	4	46	0	2	231	5
Queue Length 95th (ft)	125	0	19	10	m9	m80	m0	m1	275	0
Internal Link Dist (ft)	280			23		500			1452	
Turn Bay Length (ft)		50			155		155	225		50
Base Capacity (vph)	256	1583	178	316	188	2525	1132	224	2573	1156
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.08	0.05	0.01	0.33	0.55	0.01	0.06	0.58	0.04

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM 6th Signalized Intersection Summary
15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

2021 AM Cumulative + Project - Signal
05/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	112	1	92	8	1	3	9	47	1242	10	1	10
Future Volume (veh/h)	112	1	92	8	1	3	9	47	1242	10	1	10
Initial Q (Q _b), veh	0	0	0	0	0	0	0	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	1.00	1.00
Work Zone On Approach		No			No				No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1826	
Adj Flow Rate, veh/h	149	1	0	9	1	3		52	1380	11	12	
Peak Hour Factor	0.75	0.75	0.75	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.83	
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	5	
Cap, veh/h	248	1	292	53	158		268	2645	1180	308		
Arrive On Green	0.13	0.13	0.00	0.13	0.13	0.13	0.78	0.78	0.78	0.78	0.78	
Sat Flow, veh/h	1382	9	1585	1416	412	1236	324	3413	1522	379		
Grp Volume(v), veh/h	150	0	0	9	0	4	52	1380	11	12		
Grp Sat Flow(s), veh/h/ln	1391	0	1585	1416	0	1648	324	1706	1522	379		
Q Serve(g_s), s	10.4	0.0	0.0	0.0	0.0	0.2	7.5	15.3	0.2	1.2		
Cycle Q Clear(g_c), s	10.6	0.0	0.0	0.4	0.0	0.2	24.6	15.3	0.2	16.5		
Prop In Lane	0.99		1.00	1.00		0.75	1.00		1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	250	0	292	0	211		268	2645	1180	308		
V/C Ratio(X)	0.60	0.00		0.03	0.00	0.02	0.19	0.52	0.01	0.04		
Avail Cap(c_a), veh/h	338	0	380	0	313		268	2645	1180	308		
HCM Platoon Ratio	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	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	42.7	0.0	0.0	38.2	0.0	38.1	9.3	4.2	2.5	7.4		
Incr Delay (d2), s/veh	2.3	0.0	0.0	0.0	0.0	0.0	1.6	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	
%ile BackOfQ(50%), veh/ln	3.8	0.0	0.0	0.2	0.0	0.1	0.6	4.2	0.0	0.1		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	45.1	0.0	0.0	38.3	0.0	38.2	10.9	5.0	2.6	7.6		
LnGrp LOS	D	A		D	A	D	B	A	A	A		
Approach Vol, veh/h	150	A		13			1443					
Approach Delay, s/veh	45.1			38.2			5.2					
Approach LOS	D			D			A					
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	83.2		16.8		83.2		16.8					
Change Period (Y+Rc), s	5.7		4.0		5.7		4.0					
Max Green Setting (Gmax), s	71.3		19.0		71.3		19.0					
Max Q Clear Time (g_c+l1), s	26.6		12.6		19.0		2.4					
Green Ext Time (p_c), s	17.5		0.3		19.1		0.0					
Intersection Summary												
HCM 6th Ctrl Delay			7.2									
HCM 6th LOS			A									
Notes												
User approved ignoring U-Turning movement.												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												



Movement	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (veh/h)	1241	35
Future Volume (veh/h)	1241	35
Initial Q (Q _b), 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	1826	1826
Adj Flow Rate, veh/h	1495	42
Peak Hour Factor	0.83	0.83
Percent Heavy Veh, %	5	5
Cap, veh/h	2689	1199
Arrive On Green	0.78	0.78
Sat Flow, veh/h	3469	1547
Grp Volume(v), veh/h	1495	42
Grp Sat Flow(s), veh/h/ln	1735	1547
Q Serve(g_s), s	17.0	0.6
Cycle Q Clear(g_c), s	17.0	0.6
Prop In Lane	1.00	
Lane Grp Cap(c), veh/h	2689	1199
V/C Ratio(X)	0.56	0.04
Avail Cap(c_a), veh/h	2689	1199
HCM Platoon Ratio	1.00	1.00
Upstream Filter(l)	1.00	1.00
Uniform Delay (d), s/veh	4.4	2.6
Incr Delay (d2), s/veh	0.8	0.1
Initial Q Delay(d3), s/veh	0.0	0.0
%ile BackOfQ(50%), veh/ln	4.7	0.2
Unsig. Movement Delay, s/veh		
LnGrp Delay(d), s/veh	5.3	2.7
LnGrp LOS	A	A
Approach Vol, veh/h	1549	
Approach Delay, s/veh	5.2	
Approach LOS	A	
Timer - Assigned Phs		

Lanes, Volumes, Timings
24: N Oxnard Blvd. & South Driveway

2021 AM Cumulative + Project - Signal

05/27/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	1	1308	4	0	1350
Future Volume (vph)	0	1	1308	4	0	1350
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Fr _t			0.865			
Flt Protected						
Satd. Flow (prot)	0	1611	3374	0	0	4940
Flt Permitted						
Satd. Flow (perm)	0	1611	3374	0	0	4940
Link Speed (mph)	30		30			30
Link Distance (ft)	498		279			580
Travel Time (s)	11.3		6.3			13.2
Peak Hour Factor	0.92	0.92	0.90	0.90	0.83	0.83
Heavy Vehicles (%)	2%	2%	7%	7%	5%	5%
Adj. Flow (vph)	0	1	1453	4	0	1627
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1	1457	0	0	1627
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 46.3% ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	1308	4	0	1350
Future Vol, veh/h	0	1	1308	4	0	1350
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	90	90	83	83
Heavy Vehicles, %	2	2	7	7	5	5
Mvmt Flow	0	1	1453	4	0	1627
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	729	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	365	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	365	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	14.9	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT		
Capacity (veh/h)	-	-	365	-		
HCM Lane V/C Ratio	-	-	0.003	-		
HCM Control Delay (s)	-	-	14.9	-		
HCM Lane LOS	-	-	B	-		
HCM 95th %tile Q(veh)	-	-	0	-		

Lanes, Volumes, Timings

2021 PM Cumulative + Project - Signal

15: N Oxnard Blvd. & Orchard Pl./Old Levitz Driveway

05/27/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	82	1	100	24	1	9	21	105	1772	14	11	8
Future Volume (vph)	82	1	100	24	1	9	21	105	1772	14	11	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0		155		155		225
Storage Lanes	0		1	1		0		1		1		1
Taper Length (ft)	25			25				25				25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt			0.850		0.864					0.850		
Flt Protected		0.953		0.950				0.950				0.950
Satd. Flow (prot)	0	1793	1599	1770	1609	0	0	1770	3539	1583	0	1770
Flt Permitted		0.721		0.656				0.050				0.075
Satd. Flow (perm)	0	1356	1599	1222	1609	0	0	93	3539	1583	0	140
Right Turn on Red		Yes			Yes					Yes		
Satd. Flow (RTOR)		108			10					14		
Link Speed (mph)		30			30				30			
Link Distance (ft)		360			103				580			
Travel Time (s)		8.2			2.3				13.2			
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	88	1	108	26	1	10	24	118	1991	16	12	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	108	26	11	0	0	142	1991	16	0	21
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		12			12				12			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16				16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Number of Detectors	1	2	1	1	2		1	1	2	1	1	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Left	Thru	Right	Left	Left
Leading Detector (ft)	20	100	20	20	100		20	20	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	20	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94				94			
Detector 2 Size(ft)		6			6				6			
Detector 2 Type		Cl+Ex			Cl+Ex				Cl+Ex			
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0				0.0			
Turn Type	Perm	NA	Free	Perm	NA		Perm	Perm	NA	Perm	Perm	Perm
Protected Phases		4			8				2			



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1989	138
Future Volume (vph)	1989	138
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)	50	
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3539	1583
Flt Permitted		
Satd. Flow (perm)	3539	1583
Right Turn on Red		Yes
Satd. Flow (RTOR)		50
Link Speed (mph)	30	
Link Distance (ft)	1532	
Travel Time (s)	34.8	
Peak Hour Factor	0.89	0.89
Heavy Vehicles (%)	2%	2%
Adj. Flow (vph)	2235	155
Shared Lane Traffic (%)		
Lane Group Flow (vph)	2235	155
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Number of Detectors	2	1
Detector Template	Thru	Right
Leading Detector (ft)	100	20
Trailing Detector (ft)	0	0
Detector 1 Position(ft)	0	0
Detector 1 Size(ft)	6	20
Detector 1 Type	Cl+Ex	Cl+Ex
Detector 1 Channel		
Detector 1 Extend (s)	0.0	0.0
Detector 1 Queue (s)	0.0	0.0
Detector 1 Delay (s)	0.0	0.0
Detector 2 Position(ft)	94	
Detector 2 Size(ft)	6	
Detector 2 Type	Cl+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	
Turn Type	NA	Perm
Protected Phases	6	

Lanes, Volumes, Timings

15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

2021 PM Cumulative + Project - Signal

05/27/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Permitted Phases	4		Free	8			2	2		2	6	6
Detector Phase	4	4		8	8		2	2	2	2	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	22.5	22.5		22.5	22.5		23.7	23.7	23.7	23.7	23.7	23.7
Total Split (s)	22.5	22.5		22.5	22.5		77.5	77.5	77.5	77.5	77.5	77.5
Total Split (%)	22.5%	22.5%		22.5%	22.5%		77.5%	77.5%	77.5%	77.5%	77.5%	77.5%
Maximum Green (s)	18.5	18.5		18.5	18.5		71.8	71.8	71.8	71.8	71.8	71.8
Yellow Time (s)	3.0	3.0		3.0	3.0		4.7	4.7	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0			0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.0		4.0			5.7	5.7	5.7	5.7		5.7
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effect Green (s)	11.9	100.0	11.9	11.9			81.7	81.7	81.7			81.7
Actuated g/C Ratio	0.12	1.00	0.12	0.12			0.82	0.82	0.82			0.82
v/c Ratio	0.55	0.07	0.18	0.06			1.87	0.69	0.01			0.18
Control Delay	53.6	0.1	40.5	20.4			457.7	4.4	0.5			5.5
Queue Delay	0.0	0.0	0.0	0.0			0.0	0.0	0.0			0.0
Total Delay	53.6	0.1	40.5	20.4			457.7	4.4	0.5			5.5
LOS	D	A	D	C			F	A	A			A
Approach Delay		24.2		34.5				34.3				
Approach LOS		C		C				C				

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 70 (70%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.87

Intersection Signal Delay: 19.8

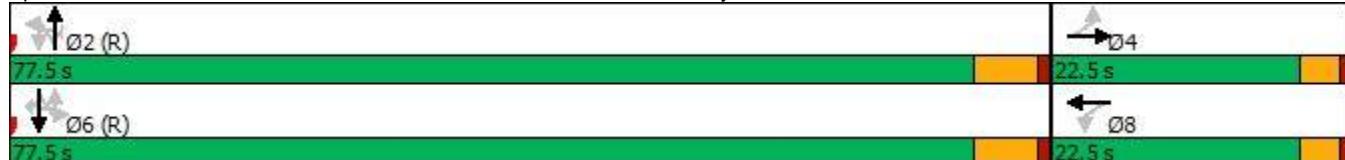
Intersection LOS: B

Intersection Capacity Utilization 91.6%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway





Lane Group	SBT	SBR
Permitted Phases		6
Detector Phase	6	6
Switch Phase		
Minimum Initial (s)	15.0	15.0
Minimum Split (s)	23.7	23.7
Total Split (s)	77.5	77.5
Total Split (%)	77.5%	77.5%
Maximum Green (s)	71.8	71.8
Yellow Time (s)	4.7	4.7
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	5.7	5.7
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	C-Max	C-Max
Walk Time (s)	7.0	7.0
Flash Dont Walk (s)	11.0	11.0
Pedestrian Calls (#/hr)	0	0
Act Effect Green (s)	81.7	81.7
Actuated g/C Ratio	0.82	0.82
v/c Ratio	0.77	0.12
Control Delay	6.6	1.0
Queue Delay	0.0	0.0
Total Delay	6.6	1.0
LOS	A	A
Approach Delay	6.2	
Approach LOS	A	
Intersection Summary		

Queues

15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

2021 PM Cumulative + Project - Signal

05/27/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	89	108	26	11	142	1991	16	21	2235	155
v/c Ratio	0.55	0.07	0.18	0.06	1.87	0.69	0.01	0.18	0.77	0.12
Control Delay	53.6	0.1	40.5	20.4	457.7	4.4	0.5	5.5	6.6	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.6	0.1	40.5	20.4	457.7	4.4	0.5	5.5	6.6	1.0
Queue Length 50th (ft)	54	0	15	1	~144	91	0	1	393	4
Queue Length 95th (ft)	100	0	38	16	m#190	137	m1	6	205	12
Internal Link Dist (ft)	280			23		500			1452	
Turn Bay Length (ft)		50			155		155	225		50
Base Capacity (vph)	250	1599	226	305	76	2892	1296	114	2892	1302
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.07	0.12	0.04	1.87	0.69	0.01	0.18	0.77	0.12

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
- Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
- Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

HCM 6th Signalized Intersection Summary
15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

2021 PM Cumulative + Project - Signal
05/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	82	1	100	24	1	9	21	105	1772	14	11	8
Future Volume (veh/h)	82	1	100	24	1	9	21	105	1772	14	11	8
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	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	1885	1885	1885	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	88	1	0	26	1	10	118	1991	16	9		
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	1	1	2	2	2	2	2	2	2	2	2
Cap, veh/h	185	1		220	13	128	146	2899	1293	196		
Arrive On Green	0.09	0.09	0.00	0.09	0.09	0.09	0.82	0.82	0.82	0.82	0.82	
Sat Flow, veh/h	1302	15	1598	1416	146	1461	146	3554	1585	214		
Grp Volume(v), veh/h	89	0	0	26	0	11	118	1991	16	9		
Grp Sat Flow(s), veh/h/ln	1316	0	1598	1416	0	1607	146	1777	1585	214		
Q Serve(g_s), s	6.2	0.0	0.0	0.0	0.0	0.6	50.3	23.5	0.2	1.8		
Cycle Q Clear(g_c), s	6.8	0.0	0.0	1.4	0.0	0.6	81.6	23.5	0.2	25.3		
Prop In Lane	0.99		1.00	1.00		0.91	1.00	1.00	1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	187	0		220	0	140	146	2899	1293	196		
V/C Ratio(X)	0.48	0.00		0.12	0.00	0.08	0.81	0.69	0.01	0.05		
Avail Cap(c_a), veh/h	325	0		359	0	297	146	2899	1293	196		
HCM Platoon Ratio	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	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	45.0	0.0	0.0	42.3	0.0	41.9	34.3	3.9	1.7	9.2		
Incr Delay (d2), s/veh	1.9	0.0	0.0	0.2	0.0	0.2	36.8	1.3	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	
%ile BackOfQ(50%), veh/ln	2.2	0.0	0.0	0.6	0.0	0.3	4.4	5.6	0.0	0.1		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	46.9	0.0	0.0	42.5	0.0	42.2	71.1	5.2	1.7	9.6		
LnGrp LOS	D	A		D	A	D	E	A	A	A		
Approach Vol, veh/h	89	A			37			2125				
Approach Delay, s/veh	46.9				42.4			8.8				
Approach LOS	D				D			A				
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	87.3		12.7		87.3		12.7					
Change Period (Y+Rc), s	5.7		4.0		5.7		4.0					
Max Green Setting (Gmax), s	71.8		18.5		71.8		18.5					
Max Q Clear Time (g_c+l1), s	83.6		8.8		33.2		3.4					
Green Ext Time (p_c), s	0.0		0.2		29.9		0.1					
Intersection Summary												
HCM 6th Ctrl Delay			8.6									
HCM 6th LOS			A									

Notes

User approved ignoring U-Turning movement.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	1989	138
Future Volume (veh/h)	1989	138
Initial Q (Q _b), 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	2235	155
Peak Hour Factor	0.89	0.89
Percent Heavy Veh, %	2	2
Cap, veh/h	2899	1293
Arrive On Green	0.82	0.82
Sat Flow, veh/h	3554	1585
Grp Volume(v), veh/h	2235	155
Grp Sat Flow(s), veh/h/ln	1777	1585
Q Serve(g_s), s	31.2	2.0
Cycle Q Clear(g_c), s	31.2	2.0
Prop In Lane	1.00	
Lane Grp Cap(c), veh/h	2899	1293
V/C Ratio(X)	0.77	0.12
Avail Cap(c_a), veh/h	2899	1293
HCM Platoon Ratio	1.00	1.00
Upstream Filter(l)	1.00	1.00
Uniform Delay (d), s/veh	4.6	1.9
Incr Delay (d2), s/veh	2.1	0.2
Initial Q Delay(d3), s/veh	0.0	0.0
%ile BackOfQ(50%), veh/ln	7.6	0.5
Unsig. Movement Delay, s/veh		
LnGrp Delay(d), s/veh	6.6	2.1
LnGrp LOS	A	A
Approach Vol, veh/h	2399	
Approach Delay, s/veh	6.3	
Approach LOS	A	
Timer - Assigned Phs		

Lanes, Volumes, Timings
24: N Oxnard Blvd. & South Driveway

2021 PM Cumulative + Project - Signal

05/27/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	1	1911	5	0	2134
Future Volume (vph)	0	1	1911	5	0	2134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Frt			0.865			
Flt Protected						
Satd. Flow (prot)	0	1611	3539	0	0	5085
Flt Permitted						
Satd. Flow (perm)	0	1611	3539	0	0	5085
Link Speed (mph)	30		30			30
Link Distance (ft)	498		279			580
Travel Time (s)	11.3		6.3			13.2
Peak Hour Factor	0.92	0.92	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	1	2147	6	0	2398
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1	2153	0	0	2398
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 63.0%

ICU Level of Service B

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	1911	5	0	2134
Future Vol, veh/h	0	1	1911	5	0	2134
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	2147	6	0	2398
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	1077	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	215	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	215	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	21.8	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT		
Capacity (veh/h)	-	-	215	-		
HCM Lane V/C Ratio	-	-	0.005	-		
HCM Control Delay (s)	-	-	21.8	-		
HCM Lane LOS	-	-	C	-		
HCM 95th %tile Q(veh)	-	-	0	-		

Lanes, Volumes, Timings

2021 SAT Cumulative + Project - Signal

15: N Oxnard Blvd. & Orchard Pl./Old Levitz Driveway

05/27/2021



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	63	1	133	27	1	11	23	77	1828	26	17	16
Future Volume (vph)	63	1	133	27	1	11	23	77	1828	26	17	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0		155		155		225
Storage Lanes	0		1	1		0		1		1		1
Taper Length (ft)	25			25				25				25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt			0.850		0.862					0.850		
Flt Protected		0.953		0.950				0.950				0.950
Satd. Flow (prot)	0	1793	1599	1770	1606	0	0	1770	3539	1583	0	1770
Flt Permitted		0.720		0.691				0.112				0.066
Satd. Flow (perm)	0	1354	1599	1287	1606	0	0	209	3539	1583	0	123
Right Turn on Red		Yes			Yes					Yes		
Satd. Flow (RTOR)		166			12					25		
Link Speed (mph)		30			30				30			
Link Distance (ft)		360			103				580			
Travel Time (s)		8.2			2.3				13.2			
Peak Hour Factor	0.80	0.80	0.80	0.92	0.92	0.92	0.88	0.88	0.88	0.88	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	79	1	166	29	1	12	26	88	2077	30	18	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	80	166	29	13	0	0	114	2077	30	0	35
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		12			12				12			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16				16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Number of Detectors	1	2	1	1	2		1	1	2	1	1	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Left	Thru	Right	Left	Left
Leading Detector (ft)	20	100	20	20	100		20	20	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	20	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94				94			
Detector 2 Size(ft)		6			6				6			
Detector 2 Type		Cl+Ex			Cl+Ex				Cl+Ex			
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0				0.0			
Turn Type	Perm	NA	Free	Perm	NA		Perm	Perm	NA	Perm	Perm	Perm
Protected Phases		4			8				2			



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1646	78
Future Volume (vph)	1646	78
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)	50	
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3539	1583
Flt Permitted		
Satd. Flow (perm)	3539	1583
Right Turn on Red		Yes
Satd. Flow (RTOR)		34
Link Speed (mph)	30	
Link Distance (ft)	1532	
Travel Time (s)	34.8	
Peak Hour Factor	0.95	0.95
Heavy Vehicles (%)	2%	2%
Adj. Flow (vph)	1733	82
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1733	82
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Number of Detectors	2	1
Detector Template	Thru	Right
Leading Detector (ft)	100	20
Trailing Detector (ft)	0	0
Detector 1 Position(ft)	0	0
Detector 1 Size(ft)	6	20
Detector 1 Type	Cl+Ex	Cl+Ex
Detector 1 Channel		
Detector 1 Extend (s)	0.0	0.0
Detector 1 Queue (s)	0.0	0.0
Detector 1 Delay (s)	0.0	0.0
Detector 2 Position(ft)	94	
Detector 2 Size(ft)	6	
Detector 2 Type	Cl+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	
Turn Type	NA	Perm
Protected Phases	6	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Permitted Phases	4		Free	8			2	2		2	6	6
Detector Phase	4	4		8	8		2	2	2	2	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	22.5	22.5		22.5	22.5		23.7	23.7	23.7	23.7	23.7	23.7
Total Split (s)	22.5	22.5		22.5	22.5		77.5	77.5	77.5	77.5	77.5	77.5
Total Split (%)	22.5%	22.5%		22.5%	22.5%		77.5%	77.5%	77.5%	77.5%	77.5%	77.5%
Maximum Green (s)	18.5	18.5		18.5	18.5		71.8	71.8	71.8	71.8	71.8	71.8
Yellow Time (s)	3.0	3.0		3.0	3.0		4.7	4.7	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0			0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0			4.0	4.0		5.7	5.7	5.7	5.7	5.7	5.7
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0
Act Effect Green (s)	11.3	100.0	11.3	11.3			82.4	82.4	82.4	82.4	82.4	82.4
Actuated g/C Ratio	0.11	1.00	0.11	0.11			0.82	0.82	0.82	0.82	0.82	0.82
v/c Ratio	0.53	0.10	0.20	0.07			0.66	0.71	0.02	0.35		
Control Delay	53.4	0.1	41.9	19.9			26.2	4.7	0.4	12.5		
Queue Delay	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	
Total Delay	53.4	0.1	41.9	19.9			26.2	4.7	0.4	12.5		
LOS	D	A	D	B			C	A	A		B	
Approach Delay	17.5			35.1			5.8					
Approach LOS	B			D			A					

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 76 (76%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 5.7

Intersection LOS: A

Intersection Capacity Utilization 86.1%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway





Lane Group	SBT	SBR
Permitted Phases		6
Detector Phase	6	6
Switch Phase		
Minimum Initial (s)	15.0	15.0
Minimum Split (s)	23.7	23.7
Total Split (s)	77.5	77.5
Total Split (%)	77.5%	77.5%
Maximum Green (s)	71.8	71.8
Yellow Time (s)	4.7	4.7
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	5.7	5.7
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	C-Max	C-Max
Walk Time (s)	7.0	7.0
Flash Dont Walk (s)	11.0	11.0
Pedestrian Calls (#/hr)	0	0
Act Effect Green (s)	82.4	82.4
Actuated g/C Ratio	0.82	0.82
v/c Ratio	0.59	0.06
Control Delay	3.3	0.5
Queue Delay	0.0	0.0
Total Delay	3.3	0.5
LOS	A	A
Approach Delay	3.3	
Approach LOS	A	
Intersection Summary		

Queues

2021 SAT Cumulative + Project - Signal

15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

05/27/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	80	166	29	13	114	2077	30	35	1733	82
v/c Ratio	0.53	0.10	0.20	0.07	0.66	0.71	0.02	0.35	0.59	0.06
Control Delay	53.4	0.1	41.9	19.9	26.2	4.7	0.4	12.5	3.3	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.4	0.1	41.9	19.9	26.2	4.7	0.4	12.5	3.3	0.5
Queue Length 50th (ft)	49	0	17	1	9	89	0	2	47	0
Queue Length 95th (ft)	81	0	43	18	m#129	130	m1	18	70	4
Internal Link Dist (ft)	280			23		500			1452	
Turn Bay Length (ft)		50			155		155	225		50
Base Capacity (vph)	250	1599	238	306	172	2915	1308	101	2915	1309
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.10	0.12	0.04	0.66	0.71	0.02	0.35	0.59	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM 6th Signalized Intersection Summary
15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

2021 SAT Cumulative + Project - Signal
05/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	63	1	133	27	1	11	23	77	1828	26	17	16
Future Volume (veh/h)	63	1	133	27	1	11	23	77	1828	26	17	16
Initial Q (Q _b), veh	0	0	0	0	0	0	0	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	1.00	1.00
Work Zone On Approach	No			No			No					
Adj Sat Flow, veh/h/ln	1885	1885	1885	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	79	1	0	29	1	12	88	2077	30	17		
Peak Hour Factor	0.80	0.80	0.80	0.92	0.92	0.92	0.88	0.88	0.88	0.88	0.95	
Percent Heavy Veh, %	1	1	1	2	2	2	2	2	2	2	2	
Cap, veh/h	176	1		211	10	121	240	2917	1301	182		
Arrive On Green	0.08	0.08	0.00	0.08	0.08	0.08	0.82	0.82	0.82	0.82	0.82	
Sat Flow, veh/h	1271	16	1598	1416	123	1480	258	3554	1585	194		
Grp Volume(v), veh/h	80	0	0	29	0	13	88	2077	30	17		
Grp Sat Flow(s), veh/h/ln	1287	0	1598	1416	0	1604	258	1777	1585	194		
Q Serve(g_s), s	5.5	0.0	0.0	0.0	0.0	0.8	18.1	25.2	0.3	4.1		
Cycle Q Clear(g_c), s	6.3	0.0	0.0	1.5	0.0	0.8	35.1	25.2	0.3	29.3		
Prop In Lane	0.99		1.00	1.00		0.92	1.00		1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	177	0		211	0	132	240	2917	1301	182		
V/C Ratio(X)	0.45	0.00		0.14	0.00	0.10	0.37	0.71	0.02	0.09		
Avail Cap(c_a), veh/h	323	0		357	0	297	240	2917	1301	182		
HCM Platoon Ratio	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	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	45.4	0.0	0.0	42.8	0.0	42.5	9.3	3.9	1.6	10.2		
Incr Delay (d2), s/veh	1.8	0.0	0.0	0.3	0.0	0.3	4.3	1.5	0.0	1.0		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%), veh/ln	2.0	0.0	0.0	0.7	0.0	0.3	1.2	5.9	0.1	0.2		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.2	0.0	0.0	43.1	0.0	42.8	13.6	5.4	1.7	11.2		
LnGrp LOS	D	A		D	A	D	B	A	A	B		
Approach Vol, veh/h	80	A		42			2195					
Approach Delay, s/veh	47.2			43.0			5.6					
Approach LOS	D			D			A					
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	87.8		12.2		87.8		12.2					
Change Period (Y+Rc), s	5.7		4.0		5.7		4.0					
Max Green Setting (Gmax), s	71.8		18.5		71.8		18.5					
Max Q Clear Time (g_c+l1), s	37.1		8.3		31.3		3.5					
Green Ext Time (p_c), s	27.0		0.2		22.6		0.1					
Intersection Summary												
HCM 6th Ctrl Delay			6.1									
HCM 6th LOS			A									
Notes												
User approved ignoring U-Turning movement.												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (veh/h)	1646	78
Future Volume (veh/h)	1646	78
Initial Q (Q _b), 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	1733	82
Peak Hour Factor	0.95	0.95
Percent Heavy Veh, %	2	2
Cap, veh/h	2917	1301
Arrive On Green	0.82	0.82
Sat Flow, veh/h	3554	1585
Grp Volume(v), veh/h	1733	82
Grp Sat Flow(s), veh/h/ln	1777	1585
Q Serve(g_s), s	17.0	1.0
Cycle Q Clear(g_c), s	17.0	1.0
Prop In Lane	1.00	
Lane Grp Cap(c), veh/h	2917	1301
V/C Ratio(X)	0.59	0.06
Avail Cap(c_a), veh/h	2917	1301
HCM Platoon Ratio	1.00	1.00
Upstream Filter(l)	1.00	1.00
Uniform Delay (d), s/veh	3.1	1.7
Incr Delay (d2), s/veh	0.9	0.1
Initial Q Delay(d3), s/veh	0.0	0.0
%ile BackOfQ(50%), veh/ln	3.9	0.2
Unsig. Movement Delay, s/veh		
LnGrp Delay(d), s/veh	4.0	1.8
LnGrp LOS	A	A
Approach Vol, veh/h	1832	
Approach Delay, s/veh	4.0	
Approach LOS	A	
Timer - Assigned Phs		

Lanes, Volumes, Timings
24: N Oxnard Blvd. & South Driveway

2021 SAT Cumulative + Project - Signal

05/27/2021



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑	↑↑		↑↑↑
Traffic Volume (vph)	0	1	1953	9	0	1829
Future Volume (vph)	0	1	1953	9	0	1829
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Fr _t			0.865	0.999		
Flt Protected						
Satd. Flow (prot)	0	1611	3536	0	0	5085
Flt Permitted						
Satd. Flow (perm)	0	1611	3536	0	0	5085
Link Speed (mph)	30		30			30
Link Distance (ft)	498		279			580
Travel Time (s)	11.3		6.3			13.2
Peak Hour Factor	0.92	0.92	0.88	0.88	0.95	0.95
Adj. Flow (vph)	0	1	2219	10	0	1925
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1	2229	0	0	1925
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 64.3%

ICU Level of Service C

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	1953	9	0	1829
Future Vol, veh/h	0	1	1953	9	0	1829
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	88	88	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	2219	10	0	1925
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	1115	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	202	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	202	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	22.9	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT		
Capacity (veh/h)	-	-	202	-		
HCM Lane V/C Ratio	-	-	0.005	-		
HCM Control Delay (s)	-	-	22.9	-		
HCM Lane LOS	-	-	C	-		
HCM 95th %tile Q(veh)	-	-	0	-		

Lanes, Volumes, Timings

2021 AM Cumulative + Project - Signal - EBR Sig

15: N Oxnard Blvd. & Orchard Pl./Old Levitz Driveway

05/27/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	112	1	92	8	1	3	9	47	1242	10	1	10
Future Volume (vph)	112	1	92	8	1	3	9	47	1242	10	1	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0		155		155		225
Storage Lanes	0		1	1		0		1		1		1
Taper Length (ft)	25			25				25				25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt			0.850		0.887					0.850		
Flt Protected		0.953		0.950				0.950				0.950
Satd. Flow (prot)	0	1775	1583	1770	1652	0	0	1687	3374	1509	0	1719
Flt Permitted		0.725		0.504				0.142				0.166
Satd. Flow (perm)	0	1350	1583	939	1652	0	0	252	3374	1509	0	300
Right Turn on Red			Yes			Yes				Yes		
Satd. Flow (RTOR)		65		3						11		
Link Speed (mph)		30		30				30				
Link Distance (ft)		360		103					580			
Travel Time (s)		8.2		2.3				13.2				
Peak Hour Factor	0.75	0.75	0.75	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.83	0.83
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	7%	7%	7%	7%	5%	5%
Adj. Flow (vph)	149	1	123	9	1	3	10	52	1380	11	1	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	123	9	4	0	0	62	1380	11	0	13
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		12			12				12			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16				16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Number of Detectors	1	2	1	1	2		1	1	2	1	1	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Left	Thru	Right	Left	Left
Leading Detector (ft)	20	100	20	20	100		20	20	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	20	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94				94			
Detector 2 Size(ft)		6			6				6			
Detector 2 Type		Cl+Ex			Cl+Ex				Cl+Ex			
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0				0.0			
Turn Type	Perm	NA	Perm	Perm	NA		Perm	Perm	NA	Perm	Perm	Perm
Protected Phases		4			8				2			



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1241	35
Future Volume (vph)	1241	35
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)	50	
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3438	1538
Flt Permitted		
Satd. Flow (perm)	3438	1538
Right Turn on Red		Yes
Satd. Flow (RTOR)		20
Link Speed (mph)	30	
Link Distance (ft)	1532	
Travel Time (s)	34.8	
Peak Hour Factor	0.83	0.83
Heavy Vehicles (%)	5%	5%
Adj. Flow (vph)	1495	42
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1495	42
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Number of Detectors	2	1
Detector Template	Thru	Right
Leading Detector (ft)	100	20
Trailing Detector (ft)	0	0
Detector 1 Position(ft)	0	0
Detector 1 Size(ft)	6	20
Detector 1 Type	Cl+Ex	Cl+Ex
Detector 1 Channel		
Detector 1 Extend (s)	0.0	0.0
Detector 1 Queue (s)	0.0	0.0
Detector 1 Delay (s)	0.0	0.0
Detector 2 Position(ft)	94	
Detector 2 Size(ft)	6	
Detector 2 Type	Cl+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	
Turn Type	NA	Perm
Protected Phases	6	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Permitted Phases	4		4	8			2	2		2	6	6
Detector Phase	4	4	4	8	8		2	2	2	2	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		23.7	23.7	23.7	23.7	23.7	23.7
Total Split (s)	23.0	23.0	23.0	23.0	23.0		77.0	77.0	77.0	77.0	77.0	77.0
Total Split (%)	23.0%	23.0%	23.0%	23.0%	23.0%		77.0%	77.0%	77.0%	77.0%	77.0%	77.0%
Maximum Green (s)	19.0	19.0	19.0	19.0	19.0		71.3	71.3	71.3	71.3	71.3	71.3
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		4.7	4.7	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0			5.7	5.7	5.7	5.7	5.7	5.7
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0	0	0	0	0
Act Effect Green (s)	15.5	15.5	15.5	15.5			74.8	74.8	74.8			74.8
Actuated g/C Ratio	0.16	0.16	0.16	0.16			0.75	0.75	0.75			0.75
v/c Ratio	0.72	0.41	0.06	0.02			0.33	0.55	0.01			0.06
Control Delay	59.0	22.7	34.8	24.2			7.6	4.5	0.8			2.5
Queue Delay	0.0	0.0	0.0	0.0			0.0	0.0	0.0			0.0
Total Delay	59.0	22.7	34.8	24.2			7.6	4.5	0.8			2.5
LOS	E	C	C	C			A	A	A			A
Approach Delay	42.6			31.5			4.6					
Approach LOS	D			C			A					

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 32 (32%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 8.6

Intersection LOS: A

Intersection Capacity Utilization 69.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway





Lane Group	SBT	SBR
Permitted Phases		6
Detector Phase	6	6
Switch Phase		
Minimum Initial (s)	15.0	15.0
Minimum Split (s)	23.7	23.7
Total Split (s)	77.0	77.0
Total Split (%)	77.0%	77.0%
Maximum Green (s)	71.3	71.3
Yellow Time (s)	4.7	4.7
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	5.7	5.7
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	C-Max	C-Max
Walk Time (s)	7.0	7.0
Flash Dont Walk (s)	11.0	11.0
Pedestrian Calls (#/hr)	0	0
Act Effect Green (s)	74.8	74.8
Actuated g/C Ratio	0.75	0.75
v/c Ratio	0.58	0.04
Control Delay	6.2	1.3
Queue Delay	0.0	0.0
Total Delay	6.2	1.3
LOS	A	A
Approach Delay	6.1	
Approach LOS	A	
Intersection Summary		

Queues

2021 AM Cumulative + Project - Signal - EBR Sig

15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

05/27/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	150	123	9	4	62	1380	11	13	1495	42
v/c Ratio	0.72	0.41	0.06	0.02	0.33	0.55	0.01	0.06	0.58	0.04
Control Delay	59.0	22.7	34.8	24.2	7.6	4.5	0.8	2.5	6.2	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.0	22.7	34.8	24.2	7.6	4.5	0.8	2.5	6.2	1.3
Queue Length 50th (ft)	91	32	5	1	4	46	0	2	231	5
Queue Length 95th (ft)	125	61	19	10	m9	m80	m0	m1	275	0
Internal Link Dist (ft)	280			23		500			1452	
Turn Bay Length (ft)		50			155		155	225		50
Base Capacity (vph)	256	353	178	316	188	2525	1132	224	2573	1156
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.35	0.05	0.01	0.33	0.55	0.01	0.06	0.58	0.04

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM 6th Signalized Intersection Summary 2021 AM Cumulative + Project - Signal - EBR Sig
15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

05/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	112	1	92	8	1	3	9	47	1242	10	1	10
Future Volume (veh/h)	112	1	92	8	1	3	9	47	1242	10	1	10
Initial Q (Q _b), veh	0	0	0	0	0	0	0	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	1.00	1.00
Work Zone On Approach		No			No				No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1796	1796	1796	1796	1826	
Adj Flow Rate, veh/h	149	1	123	9	1	3		52	1380	11	12	
Peak Hour Factor	0.75	0.75	0.75	0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.83	
Percent Heavy Veh, %	2	2	2	2	2	2	7	7	7	7	5	
Cap, veh/h	255	1	210	106	54	163	266	2630	1173	305		
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13	0.77	0.77	0.77	0.77	0.77	
Sat Flow, veh/h	1383	9	1585	1267	412	1236	324	3413	1522	379		
Grp Volume(v), veh/h	150	0	123	9	0	4	52	1380	11	12		
Grp Sat Flow(s), veh/h/ln	1392	0	1585	1267	0	1648	324	1706	1522	379		
Q Serve(g_s), s	10.3	0.0	7.3	0.7	0.0	0.2	7.7	15.6	0.2	1.3		
Cycle Q Clear(g_c), s	10.5	0.0	7.3	11.2	0.0	0.2	25.1	15.6	0.2	16.8		
Prop In Lane	0.99		1.00	1.00		0.75	1.00		1.00		1.00	
Lane Grp Cap(c), veh/h	256	0	210	106	0	218	266	2630	1173	305		
V/C Ratio(X)	0.59	0.00	0.59	0.08	0.00	0.02	0.20	0.52	0.01	0.04		
Avail Cap(c_a), veh/h	338	0	301	179	0	313	266	2630	1173	305		
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	42.3	0.0	40.8	47.7	0.0	37.7	9.7	4.4	2.6	7.7		
Incr Delay (d2), s/veh	2.1	0.0	2.6	0.3	0.0	0.0	1.6	0.8	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	
%ile BackOfQ(50%), veh/ln	3.7	0.0	3.0	0.2	0.0	0.1	0.6	4.3	0.0	0.1		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.4	0.0	43.4	48.0	0.0	37.8	11.3	5.2	2.7	7.9		
LnGrp LOS	D	A	D	D	A	D	B	A	A	A		
Approach Vol, veh/h	273				13			1443				
Approach Delay, s/veh	44.0				44.9			5.4				
Approach LOS	D				D			A				
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	82.8		17.2		82.8		17.2					
Change Period (Y+Rc), s	5.7		4.0		5.7		4.0					
Max Green Setting (Gmax), s	71.3		19.0		71.3		19.0					
Max Q Clear Time (g_c+l1), s	27.1		12.5		19.4		13.2					
Green Ext Time (p_c), s	17.5		0.6		19.0		0.0					
Intersection Summary												
HCM 6th Ctrl Delay			8.8									
HCM 6th LOS			A									
Notes												
User approved ignoring U-Turning movement.												

HCM 6th Signalized Intersection Summary 2021 AM Cumulative + Project - Signal - EBR Sig
 15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway 05/27/2021



Movement	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (veh/h)	1241	35
Future Volume (veh/h)	1241	35
Initial Q (Q _b), 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	1826	1826
Adj Flow Rate, veh/h	1495	42
Peak Hour Factor	0.83	0.83
Percent Heavy Veh, %	5	5
Cap, veh/h	2674	1193
Arrive On Green	0.77	0.77
Sat Flow, veh/h	3469	1547
Grp Volume(v), veh/h	1495	42
Grp Sat Flow(s), veh/h/ln	1735	1547
Q Serve(g_s), s	17.4	0.6
Cycle Q Clear(g_c), s	17.4	0.6
Prop In Lane	1.00	
Lane Grp Cap(c), veh/h	2674	1193
V/C Ratio(X)	0.56	0.04
Avail Cap(c_a), veh/h	2674	1193
HCM Platoon Ratio	1.00	1.00
Upstream Filter(l)	1.00	1.00
Uniform Delay (d), s/veh	4.6	2.7
Incr Delay (d2), s/veh	0.9	0.1
Initial Q Delay(d3), s/veh	0.0	0.0
%ile BackOfQ(50%), veh/ln	4.9	0.2
Unsig. Movement Delay, s/veh		
LnGrp Delay(d), s/veh	5.5	2.8
LnGrp LOS	A	A
Approach Vol, veh/h	1549	
Approach Delay, s/veh	5.4	
Approach LOS	A	
Timer - Assigned Phs		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	1	1308	4	0	1350
Future Volume (vph)	0	1	1308	4	0	1350
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Fr _t			0.865			
Flt Protected						
Satd. Flow (prot)	0	1611	3374	0	0	4940
Flt Permitted						
Satd. Flow (perm)	0	1611	3374	0	0	4940
Link Speed (mph)	30		30			30
Link Distance (ft)	498		279			580
Travel Time (s)	11.3		6.3			13.2
Peak Hour Factor	0.92	0.92	0.90	0.90	0.83	0.83
Heavy Vehicles (%)	2%	2%	7%	7%	5%	5%
Adj. Flow (vph)	0	1	1453	4	0	1627
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1	1457	0	0	1627
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 46.3% ICU Level of Service A

Analysis Period (min) 15

Intersection

Int Delay, s/veh 0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
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Lane Configurations	
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Traffic Vol, veh/h	0	1	1308	4	0	1350
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Future Vol, veh/h	0	1	1308	4	0	1350
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Conflicting Peds, #/hr	0	0	0	0	0	0
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Sign Control	Stop	Stop	Free	Free	Free	Free
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RT Channelized	-	None	-	None	-	None
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Storage Length	-	0	-	-	-	-
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Veh in Median Storage, #	0	-	0	-	-	0
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Grade, %	0	-	0	-	-	0
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Peak Hour Factor	92	92	90	90	83	83
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Heavy Vehicles, %	2	2	7	7	5	5
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Mvmt Flow	0	1	1453	4	0	1627
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Major/Minor	Minor1	Major1	Major2
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Conflicting Flow All	-	729	0	0	-	-
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Stage 1	-	-	-	-	-	-
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Stage 2	-	-	-	-	-	-
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Critical Hdwy	-	6.94	-	-	-	-
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Critical Hdwy Stg 1	-	-	-	-	-	-
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Critical Hdwy Stg 2	-	-	-	-	-	-
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Follow-up Hdwy	-	3.32	-	-	-	-
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Pot Cap-1 Maneuver	0	365	-	-	0	-
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Stage 1	0	-	-	-	0	-
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Stage 2	0	-	-	-	0	-
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Platoon blocked, %	-	-	-	-	-	-
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Mov Cap-1 Maneuver	-	365	-	-	-	-
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Mov Cap-2 Maneuver	-	-	-	-	-	-
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Stage 1	-	-	-	-	-	-
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Stage 2	-	-	-	-	-	-
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Approach	WB	NB	SB
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HCM Control Delay, s	14.9	0	0
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HCM LOS	B		
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Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
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Capacity (veh/h)	-	-	365	-
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HCM Lane V/C Ratio	-	-	0.003	-
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HCM Control Delay (s)	-	-	14.9	-
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HCM Lane LOS	-	-	B	-
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HCM 95th %tile Q(veh)	-	-	0	-
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	82	1	100	24	1	9	21	105	1772	14	11	8
Future Volume (vph)	82	1	100	24	1	9	21	105	1772	14	11	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0		155		155		225
Storage Lanes	0		1	1		0		1		1		1
Taper Length (ft)	25			25				25				25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt			0.850		0.864					0.850		
Flt Protected		0.953		0.950				0.950				0.950
Satd. Flow (prot)	0	1793	1599	1770	1609	0	0	1770	3539	1583	0	1770
Flt Permitted		0.721		0.665				0.051				0.072
Satd. Flow (perm)	0	1356	1599	1239	1609	0	0	95	3539	1583	0	134
Right Turn on Red			Yes			Yes				Yes		
Satd. Flow (RTOR)			29		10					14		
Link Speed (mph)		30		30				30				
Link Distance (ft)		360		103				580				
Travel Time (s)		8.2		2.3				13.2				
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	88	1	108	26	1	10	24	118	1991	16	12	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	108	26	11	0	0	142	1991	16	0	21
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)		12			12				12			
Link Offset(ft)		0			0				0			
Crosswalk Width(ft)		16			16				16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Number of Detectors	1	2	1	1	2		1	1	2	1	1	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Left	Thru	Right	Left	Left
Leading Detector (ft)	20	100	20	20	100		20	20	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	20	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0		0.0		
Turn Type	Perm	NA	Perm	Perm	NA		Perm	Perm	NA	Perm	Perm	Perm
Protected Phases		4			8			2				



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1989	138
Future Volume (vph)	1989	138
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)	50	
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3539	1583
Flt Permitted		
Satd. Flow (perm)	3539	1583
Right Turn on Red		Yes
Satd. Flow (RTOR)		50
Link Speed (mph)	30	
Link Distance (ft)	1532	
Travel Time (s)	34.8	
Peak Hour Factor	0.89	0.89
Heavy Vehicles (%)	2%	2%
Adj. Flow (vph)	2235	155
Shared Lane Traffic (%)		
Lane Group Flow (vph)	2235	155
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Number of Detectors	2	1
Detector Template	Thru	Right
Leading Detector (ft)	100	20
Trailing Detector (ft)	0	0
Detector 1 Position(ft)	0	0
Detector 1 Size(ft)	6	20
Detector 1 Type	Cl+Ex	Cl+Ex
Detector 1 Channel		
Detector 1 Extend (s)	0.0	0.0
Detector 1 Queue (s)	0.0	0.0
Detector 1 Delay (s)	0.0	0.0
Detector 2 Position(ft)	94	
Detector 2 Size(ft)	6	
Detector 2 Type	Cl+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	
Turn Type	NA	Perm
Protected Phases	6	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Permitted Phases	4		4	8			2	2		2	6	6
Detector Phase	4	4	4	8	8		2	2	2	2	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		23.7	23.7	23.7	23.7	23.7	23.7
Total Split (s)	22.5	22.5	22.5	22.5	22.5		77.5	77.5	77.5	77.5	77.5	77.5
Total Split (%)	22.5%	22.5%	22.5%	22.5%	22.5%		77.5%	77.5%	77.5%	77.5%	77.5%	77.5%
Maximum Green (s)	18.5	18.5	18.5	18.5	18.5		71.8	71.8	71.8	71.8	71.8	71.8
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		4.7	4.7	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0			5.7	5.7	5.7	5.7	5.7	5.7
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0	0	0	0	0
Act Effect Green (s)	11.9	11.9	11.9	11.9	11.9		78.4	78.4	78.4	78.4	78.4	78.4
Actuated g/C Ratio	0.12	0.12	0.12	0.12	0.12		0.78	0.78	0.78	0.78	0.78	0.78
v/c Ratio	0.55	0.50	0.18	0.06			1.92	0.72	0.01	0.20		
Control Delay	53.6	37.2	40.4	20.4			475.4	4.9	0.5	6.3		
Queue Delay	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0		
Total Delay	53.6	37.2	40.4	20.4			475.4	4.9	0.5	6.3		
LOS	D	D	D	C			F	A	A		A	
Approach Delay	44.6			34.5			35.9					
Approach LOS	D			C			D					

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 70 (70%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.92

Intersection Signal Delay: 21.9

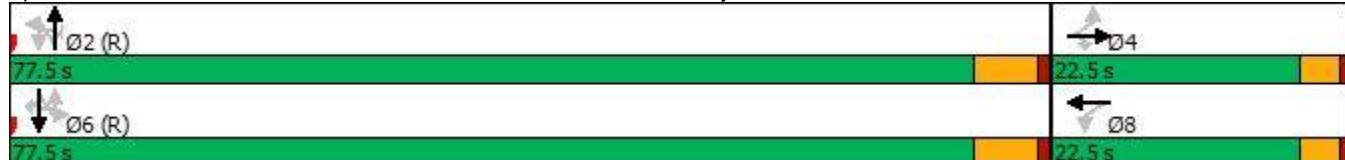
Intersection LOS: C

Intersection Capacity Utilization 95.7%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway





Lane Group	SBT	SBR
Permitted Phases		6
Detector Phase	6	6
Switch Phase		
Minimum Initial (s)	15.0	15.0
Minimum Split (s)	23.7	23.7
Total Split (s)	77.5	77.5
Total Split (%)	77.5%	77.5%
Maximum Green (s)	71.8	71.8
Yellow Time (s)	4.7	4.7
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	5.7	5.7
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	C-Max	C-Max
Walk Time (s)	7.0	7.0
Flash Dont Walk (s)	11.0	11.0
Pedestrian Calls (#/hr)	0	0
Act Effect Green (s)	78.4	78.4
Actuated g/C Ratio	0.78	0.78
v/c Ratio	0.81	0.12
Control Delay	7.9	1.1
Queue Delay	0.0	0.0
Total Delay	7.9	1.1
LOS	A	A
Approach Delay	7.4	
Approach LOS	A	
Intersection Summary		

Queues

2021 PM Cumulative + Project - Signal - EBR Sig

15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

05/27/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	89	108	26	11	142	1991	16	21	2235	155
v/c Ratio	0.55	0.50	0.18	0.06	1.92	0.72	0.01	0.20	0.81	0.12
Control Delay	53.6	37.2	40.4	20.4	475.4	4.9	0.5	6.3	7.9	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.6	37.2	40.4	20.4	475.4	4.9	0.5	6.3	7.9	1.1
Queue Length 50th (ft)	54	47	15	1	~143	91	0	1	393	4
Queue Length 95th (ft)	100	96	38	16	m#188	137	m1	6	205	12
Internal Link Dist (ft)	280			23		500			1452	
Turn Bay Length (ft)		50			155		155	225		50
Base Capacity (vph)	250	319	229	305	74	2773	1243	105	2773	1251
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.34	0.11	0.04	1.92	0.72	0.01	0.20	0.81	0.12

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
- Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
- Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

HCM 6th Signalized Intersection Summary 2021 PM Cumulative + Project - Signal - EBR Sig
 15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway 05/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	82	1	100	24	1	9	21	105	1772	14	11	8
Future Volume (veh/h)	82	1	100	24	1	9	21	105	1772	14	11	8
Initial Q (Q _b), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	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	1885	1885	1885	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	88	1	108	26	1	10	118	1991	16	9		
Peak Hour Factor	0.93	0.93	0.93	0.92	0.92	0.92	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	1	1	1	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	2	170	123	16	155	138	2831	1263	187		
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.80	0.80	0.80	0.80	0.80	0.80
Sat Flow, veh/h	1323	15	1598	1284	146	1461	146	3554	1585	214		
Grp Volume(v), veh/h	89	0	108	26	0	11	118	1991	16	9		
Grp Sat Flow(s), veh/h/ln	1338	0	1598	1284	0	1607	146	1777	1585	214		
Q Serve(g_s), s	6.0	0.0	6.5	2.0	0.0	0.6	45.2	25.9	0.2	2.0		
Cycle Q Clear(g_c), s	6.6	0.0	6.5	8.6	0.0	0.6	79.7	25.9	0.2	28.0		
Prop In Lane	0.99		1.00	1.00		0.91	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	214	0	170	123	0	171	138	2831	1263	187		
V/C Ratio(X)	0.42	0.00	0.64	0.21	0.00	0.06	0.85	0.70	0.01	0.05		
Avail Cap(c_a), veh/h	325	0	296	225	0	297	138	2831	1263	187		
HCM Platoon Ratio	1.00	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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.2	0.0	42.8	47.0	0.0	40.2	37.3	4.7	2.1	11.2		
Incr Delay (d2), s/veh	1.3	0.0	3.9	0.8	0.0	0.2	45.2	1.5	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		
%ile BackOfQ(50%), veh/ln	2.2	0.0	2.7	0.7	0.0	0.3	4.7	6.9	0.1	0.1		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.5	0.0	46.7	47.9	0.0	40.4	82.5	6.2	2.1	11.7		
LnGrp LOS	D	A	D	D	A	D	F	A	A	B		
Approach Vol, veh/h	197				37		2125					
Approach Delay, s/veh	45.7				45.6			10.4				
Approach LOS	D				D			B				
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+R _c), s	85.4		14.6		85.4		14.6					
Change Period (Y+R _c), s	5.7		4.0		5.7		4.0					
Max Green Setting (Gmax), s	71.8		18.5		71.8		18.5					
Max Q Clear Time (g_c+l1), s	81.7		8.6		36.5		10.6					
Green Ext Time (p_c), s	0.0		0.5		27.9		0.0					
Intersection Summary												
HCM 6th Ctrl Delay			10.7									
HCM 6th LOS			B									
Notes												
User approved ignoring U-Turning movement.												



Movement	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (veh/h)	1989	138
Future Volume (veh/h)	1989	138
Initial Q (Q _b), 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	2235	155
Peak Hour Factor	0.89	0.89
Percent Heavy Veh, %	2	2
Cap, veh/h	2831	1263
Arrive On Green	0.80	0.80
Sat Flow, veh/h	3554	1585
Grp Volume(v), veh/h	2235	155
Grp Sat Flow(s), veh/h/ln	1777	1585
Q Serve(g_s), s	34.5	2.2
Cycle Q Clear(g_c), s	34.5	2.2
Prop In Lane	1.00	
Lane Grp Cap(c), veh/h	2831	1263
V/C Ratio(X)	0.79	0.12
Avail Cap(c_a), veh/h	2831	1263
HCM Platoon Ratio	1.00	1.00
Upstream Filter(l)	1.00	1.00
Uniform Delay (d), s/veh	5.6	2.3
Incr Delay (d2), s/veh	2.3	0.2
Initial Q Delay(d3), s/veh	0.0	0.0
%ile BackOfQ(50%), veh/ln	9.3	0.5
Unsig. Movement Delay, s/veh		
LnGrp Delay(d), s/veh	7.9	2.5
LnGrp LOS	A	A
Approach Vol, veh/h	2399	
Approach Delay, s/veh	7.6	
Approach LOS	A	
Timer - Assigned Phs		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑	↑↑		↑↑↑
Traffic Volume (vph)	0	1	1911	5	0	2134
Future Volume (vph)	0	1	1911	5	0	2134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Fr _t			0.865			
Flt Protected						
Satd. Flow (prot)	0	1611	3539	0	0	5085
Flt Permitted						
Satd. Flow (perm)	0	1611	3539	0	0	5085
Link Speed (mph)	30		30			30
Link Distance (ft)	498		279			580
Travel Time (s)	11.3		6.3			13.2
Peak Hour Factor	0.92	0.92	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	1	2147	6	0	2398
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1	2153	0	0	2398
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 63.0%

ICU Level of Service B

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	1911	5	0	2134
Future Vol, veh/h	0	1	1911	5	0	2134
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	2147	6	0	2398
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	1077	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	215	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	215	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	21.8	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT		
Capacity (veh/h)	-	-	215	-		
HCM Lane V/C Ratio	-	-	0.005	-		
HCM Control Delay (s)	-	-	21.8	-		
HCM Lane LOS	-	-	C	-		
HCM 95th %tile Q(veh)	-	-	0	-		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	63	1	133	27	1	11	23	77	1828	26	17	16
Future Volume (vph)	63	1	133	27	1	11	23	77	1828	26	17	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		50	0		0		155		155		225
Storage Lanes	0		1	1		0		1		1		1
Taper Length (ft)	25			25				25				25
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt			0.850		0.862					0.850		
Flt Protected			0.953		0.950			0.950				0.950
Satd. Flow (prot)	0	1793	1599	1770	1606	0	0	1770	3539	1583	0	1770
Flt Permitted			0.720		0.703			0.105				0.059
Satd. Flow (perm)	0	1354	1599	1310	1606	0	0	196	3539	1583	0	110
Right Turn on Red			Yes			Yes				Yes		
Satd. Flow (RTOR)			40		12					25		
Link Speed (mph)			30		30				30			
Link Distance (ft)			360		103				580			
Travel Time (s)			8.2		2.3				13.2			
Peak Hour Factor	0.80	0.80	0.80	0.92	0.92	0.92	0.88	0.88	0.88	0.88	0.95	0.95
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	79	1	166	29	1	12	26	88	2077	30	18	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	80	166	29	13	0	0	114	2077	30	0	35
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right	Left	Left	Right	R NA	Left	Left	Right	R NA	Left
Median Width(ft)			12		12				12			
Link Offset(ft)			0		0				0			
Crosswalk Width(ft)			16		16				16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	9	15		9	9	15
Number of Detectors	1	2	1	1	2		1	1	2	1	1	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Left	Thru	Right	Left	Left
Leading Detector (ft)	20	100	20	20	100		20	20	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	20	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94		94				94			
Detector 2 Size(ft)			6		6				6			
Detector 2 Type			Cl+Ex		Cl+Ex				Cl+Ex			
Detector 2 Channel												
Detector 2 Extend (s)			0.0		0.0				0.0			
Turn Type	Perm	NA	Perm	Perm	NA		Perm	Perm	NA	Perm	Perm	Perm
Protected Phases		4			8				2			



Lane Group	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (vph)	1646	78
Future Volume (vph)	1646	78
Ideal Flow (vphpl)	1900	1900
Storage Length (ft)	50	
Storage Lanes		1
Taper Length (ft)		
Lane Util. Factor	0.95	1.00
Frt		0.850
Flt Protected		
Satd. Flow (prot)	3539	1583
Flt Permitted		
Satd. Flow (perm)	3539	1583
Right Turn on Red		Yes
Satd. Flow (RTOR)		34
Link Speed (mph)	30	
Link Distance (ft)	1532	
Travel Time (s)	34.8	
Peak Hour Factor	0.95	0.95
Heavy Vehicles (%)	2%	2%
Adj. Flow (vph)	1733	82
Shared Lane Traffic (%)		
Lane Group Flow (vph)	1733	82
Enter Blocked Intersection	No	No
Lane Alignment	Left	Right
Median Width(ft)	12	
Link Offset(ft)	0	
Crosswalk Width(ft)	16	
Two way Left Turn Lane		
Headway Factor	1.00	1.00
Turning Speed (mph)		9
Number of Detectors	2	1
Detector Template	Thru	Right
Leading Detector (ft)	100	20
Trailing Detector (ft)	0	0
Detector 1 Position(ft)	0	0
Detector 1 Size(ft)	6	20
Detector 1 Type	Cl+Ex	Cl+Ex
Detector 1 Channel		
Detector 1 Extend (s)	0.0	0.0
Detector 1 Queue (s)	0.0	0.0
Detector 1 Delay (s)	0.0	0.0
Detector 2 Position(ft)	94	
Detector 2 Size(ft)	6	
Detector 2 Type	Cl+Ex	
Detector 2 Channel		
Detector 2 Extend (s)	0.0	
Turn Type	NA	Perm
Protected Phases	6	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Permitted Phases	4		4	8			2	2		2	6	6
Detector Phase	4	4	4	8	8		2	2	2	2	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0		15.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		23.7	23.7	23.7	23.7	23.7	23.7
Total Split (s)	22.5	22.5	22.5	22.5	22.5		77.5	77.5	77.5	77.5	77.5	77.5
Total Split (%)	22.5%	22.5%	22.5%	22.5%	22.5%		77.5%	77.5%	77.5%	77.5%	77.5%	77.5%
Maximum Green (s)	18.5	18.5	18.5	18.5	18.5		71.8	71.8	71.8	71.8	71.8	71.8
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		4.7	4.7	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0			5.7	5.7	5.7	5.7	5.7	5.7
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0	0	0	0	0
Act Effect Green (s)	13.1	13.1	13.1	13.1	13.1		77.2	77.2	77.2	77.2	77.2	77.2
Actuated g/C Ratio	0.13	0.13	0.13	0.13	0.13		0.77	0.77	0.77	0.77	0.77	0.77
v/c Ratio	0.45	0.68	0.17	0.06			0.75	0.76	0.02	0.42		
Control Delay	46.9	44.7	38.7	18.6			39.2	5.9	0.4	19.8		
Queue Delay	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0		
Total Delay	46.9	44.7	38.7	18.6			39.2	5.9	0.4	19.8		
LOS	D	D	D	B			D	A	A		B	
Approach Delay	45.4			32.5			7.5					
Approach LOS	D			C			A					

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 76 (76%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 8.8

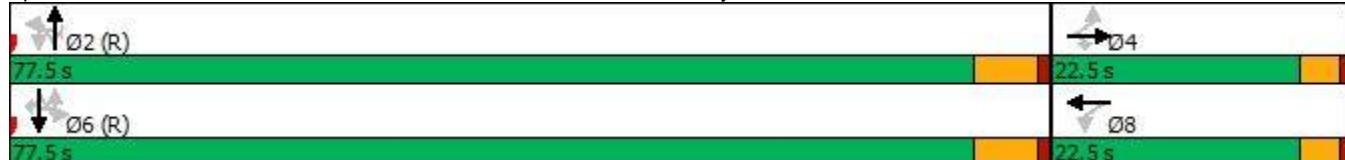
Intersection LOS: A

Intersection Capacity Utilization 88.2%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway





Lane Group	SBT	SBR
Permitted Phases		6
Detector Phase	6	6
Switch Phase		
Minimum Initial (s)	15.0	15.0
Minimum Split (s)	23.7	23.7
Total Split (s)	77.5	77.5
Total Split (%)	77.5%	77.5%
Maximum Green (s)	71.8	71.8
Yellow Time (s)	4.7	4.7
All-Red Time (s)	1.0	1.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	5.7	5.7
Lead/Lag		
Lead-Lag Optimize?		
Vehicle Extension (s)	3.0	3.0
Recall Mode	C-Max	C-Max
Walk Time (s)	7.0	7.0
Flash Dont Walk (s)	11.0	11.0
Pedestrian Calls (#/hr)	0	0
Act Effect Green (s)	77.2	77.2
Actuated g/C Ratio	0.77	0.77
v/c Ratio	0.63	0.07
Control Delay	4.9	0.5
Queue Delay	0.0	0.0
Total Delay	4.9	0.5
LOS	A	A
Approach Delay	5.0	
Approach LOS	A	
Intersection Summary		

Queues

2021 SAT Cumulative + Project - Signal - EBR Sig

15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

05/27/2021



Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	80	166	29	13	114	2077	30	35	1733	82
v/c Ratio	0.45	0.68	0.17	0.06	0.75	0.76	0.02	0.42	0.63	0.07
Control Delay	46.9	44.7	38.7	18.6	39.2	5.9	0.4	19.8	4.9	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.9	44.7	38.7	18.6	39.2	5.9	0.4	19.8	4.9	0.5
Queue Length 50th (ft)	48	77	17	1	11	102	0	2	52	0
Queue Length 95th (ft)	78	117	41	17	m#139	146	m1	#59	70	4
Internal Link Dist (ft)	280			23		500			1452	
Turn Bay Length (ft)		50			155		155	225		50
Base Capacity (vph)	250	328	242	306	151	2731	1227	84	2731	1229
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.51	0.12	0.04	0.75	0.76	0.02	0.42	0.63	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM 6th Signalized Intersection Summary 2021 SAT Cumulative + Project - Signal - EBR Sig
15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

05/27/2021

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (veh/h)	63	1	133	27	1	11	23	77	1828	26	17	16
Future Volume (veh/h)	63	1	133	27	1	11	23	77	1828	26	17	16
Initial Q (Q _b), veh	0	0	0	0	0	0	0	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	1.00	1.00
Work Zone On Approach		No			No				No			
Adj Sat Flow, veh/h/ln	1885	1885	1885	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	79	1	166	29	1	12		88	2077	30		17
Peak Hour Factor	0.80	0.80	0.80	0.92	0.92	0.92		0.88	0.88	0.88		0.95
Percent Heavy Veh, %	1	1	1	2	2	2		2	2	2		2
Cap, veh/h	238	3	202	153	16	187		218	2760	1231		162
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.13		0.78	0.78	0.78		0.78
Sat Flow, veh/h	1320	20	1598	1218	123	1480		258	3554	1585		194
Grp Volume(v), veh/h	80	0	166	29	0	13		88	2077	30		17
Grp Sat Flow(s), veh/h/ln	1340	0	1598	1218	0	1604		258	1777	1585		194
Q Serve(g_s), s	5.2	0.0	10.1	2.3	0.0	0.7		22.6	31.4	0.4		5.2
Cycle Q Clear(g_c), s	6.0	0.0	10.1	8.2	0.0	0.7		43.8	31.4	0.4		36.6
Prop In Lane	0.99		1.00	1.00		0.92		1.00		1.00		1.00
Lane Grp Cap(c), veh/h	241	0	202	153	0	202		218	2760	1231		162
V/C Ratio(X)	0.33	0.00	0.82	0.19	0.00	0.06		0.40	0.75	0.02		0.11
Avail Cap(c_a), veh/h	324	0	296	225	0	297		218	2760	1231		162
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	0.00	1.00	1.00	0.00	1.00		1.00	1.00	1.00		1.00
Uniform Delay (d), s/veh	41.1	0.0	42.6	44.6	0.0	38.5		14.4	6.0	2.5		15.8
Incr Delay (d2), s/veh	0.8	0.0	11.4	0.6	0.0	0.1		5.5	1.9	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		0.0
%ile BackOfQ(50%), veh/ln	1.9	0.0	4.6	0.7	0.0	0.3		1.6	9.1	0.1		0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	41.9	0.0	54.0	45.2	0.0	38.6		19.9	7.9	2.6		17.1
LnGrp LOS	D	A	D	D	A	D		B	A	A		B
Approach Vol, veh/h	246				42				2195			
Approach Delay, s/veh	50.0				43.2				8.3			
Approach LOS	D				D				A			
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	83.4		16.6		83.4		16.6					
Change Period (Y+Rc), s	5.7		4.0		5.7		4.0					
Max Green Setting (Gmax), s	71.8		18.5		71.8		18.5					
Max Q Clear Time (g_c+l1), s	45.8		12.1		38.6		10.2					
Green Ext Time (p_c), s	21.4		0.5		20.2		0.0					
Intersection Summary												
HCM 6th Ctrl Delay			10.0									
HCM 6th LOS			B									
Notes												
User approved ignoring U-Turning movement.												

HCM 6th Signalized Intersection Summary 2021 SAT Cumulative + Project - Signal - EBR Sig
 15: N Oxnard Blvd. & Ochard Pl./Old Levitz Driveway

05/27/2021



Movement	SBT	SBR
Lane Configurations	↑↑	↑
Traffic Volume (veh/h)	1646	78
Future Volume (veh/h)	1646	78
Initial Q (Q _b), 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	1733	82
Peak Hour Factor	0.95	0.95
Percent Heavy Veh, %	2	2
Cap, veh/h	2760	1231
Arrive On Green	0.78	0.78
Sat Flow, veh/h	3554	1585
Grp Volume(v), veh/h	1733	82
Grp Sat Flow(s), veh/h/ln	1777	1585
Q Serve(g_s), s	21.2	1.2
Cycle Q Clear(g_c), s	21.2	1.2
Prop In Lane	1.00	
Lane Grp Cap(c), veh/h	2760	1231
V/C Ratio(X)	0.63	0.07
Avail Cap(c_a), veh/h	2760	1231
HCM Platoon Ratio	1.00	1.00
Upstream Filter(l)	1.00	1.00
Uniform Delay (d), s/veh	4.9	2.6
Incr Delay (d2), s/veh	1.1	0.1
Initial Q Delay(d3), s/veh	0.0	0.0
%ile BackOfQ(50%), veh/ln	6.1	0.3
Unsig. Movement Delay, s/veh		
LnGrp Delay(d), s/veh	6.0	2.7
LnGrp LOS	A	A
Approach Vol, veh/h	1832	
Approach Delay, s/veh	5.9	
Approach LOS	A	
Timer - Assigned Phs		



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑	↑↑		↑↑↑
Traffic Volume (vph)	0	1	1953	9	0	1829
Future Volume (vph)	0	1	1953	9	0	1829
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Fr _t			0.865	0.999		
Flt Protected						
Satd. Flow (prot)	0	1611	3536	0	0	5085
Flt Permitted						
Satd. Flow (perm)	0	1611	3536	0	0	5085
Link Speed (mph)	30		30			30
Link Distance (ft)	498		279			580
Travel Time (s)	11.3		6.3			13.2
Peak Hour Factor	0.92	0.92	0.88	0.88	0.95	0.95
Adj. Flow (vph)	0	1	2219	10	0	1925
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1	2229	0	0	1925
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		24			24
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 64.3%

ICU Level of Service C

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	1953	9	0	1829
Future Vol, veh/h	0	1	1953	9	0	1829
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	88	88	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	2219	10	0	1925
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	1115	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	202	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	202	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	22.9	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT		
Capacity (veh/h)	-	-	202	-		
HCM Lane V/C Ratio	-	-	0.005	-		
HCM Control Delay (s)	-	-	22.9	-		
HCM Lane LOS	-	-	C	-		
HCM 95th %tile Q(veh)	-	-	0	-		