SBE Certified

David R. Shropshire, PE, PP A Andrew Feranda, PE, PTOE, CME Randal C. Barranger, PE Nathan B. Mosley, PE, CME

(via email: joe.mcelwee@cshpe.com)

#### Traffic Engineering, Transportation Planning & Design

277 White Horse Pike, Suite 203, Atco, NJ 08004 P: 609-714-0400 F: 609-714-9944 www.sallc.org

March 31, 2022

Mr. Joseph McElwee CSH Old Tappan, LLC 1275 Pennsylvania Avenue NW 2<sup>nd</sup> Floor Washington, DC 20004

Re: Updated Traffic Engineering Assessment

CSH - Old Tappan

Borough of Old Tappan, Bergen County, NJ

SA Project No. 21020A

Dear Mr. McElwee:

In response to your request, Shropshire Associates LLC has prepared an updated traffic engineering assessment to evaluate the impact of the traffic to be generated by the proposed assisted living facility with up to 100 beds. The proposed residence is located along westbound Old Tappan Road in the Borough of Old Tappan, Bergen County, New Jersey (Figure 1). Access to the development is proposed via one (1) full-movement driveway along westbound Old Tappan Road creating a fourth leg to the existing Old Tappan Road and Vandervoot Avenue stop-controlled intersection. Currently the site is developed with a single-family dwelling and a freestanding barn. The update is based on 2022 traffic count data which provides a more normalized roadway condition than previous counts taken in 2021.

#### **Existing Conditions**

A field reconnaissance was conducted in the vicinity of the site to determine the features of the adjacent roadway network within the study area. A description of the roadways and intersections are provided below.

In the vicinity of the site, **Old Tappan Road (CR 110)** is a two-lane roadway that is under the jurisdiction of Bergen County and is classified<sup>1</sup> as an Urban Minor Arterial. Old Tappan Road consists of one lane in each direction and has an approximate cartway width of 28'. There are minimum shoulders along both directions of Old Tappan Road along the site frontage and signs for No Stopping or Standing. The posted speed limit along Old Tappan Road is 35 MPH. Along the site frontage, Old Tappan Road has a continuous No Passing Zone. There are sidewalks in each direction along the site frontage. For the purpose of this study, Old Tappan Road is assumed to extend in a general east-west direction.

In the vicinity of the site, **Leonard Drive** is a two-lane local roadway that consists of one lane in each direction and has an approximate cartway width of 30'. The posted speed limit along Leonard Drive is 25 MPH. For the purpose of this study, Leonard Drive is assumed to extend in a general north-south direction.

<sup>&</sup>lt;sup>1</sup> NJDOT Straight Line Diagrams



In the vicinity of the site, **Vandervoot Avenue** (Holbrook Court) is a two-lane local roadway that consists of one lane in each direction and has an approximate cartway width of 30'. The posted speed limit along Vandervoot Avenue is 25 MPH. For the purpose of this study, Vandervoot Avenue is assumed to extend in a general north-south direction.

The **Old Tappan Road/Leonard Drive** intersection is a T-shaped intersection that is stop-controlled along the northbound Leonard Drive approach. All approaches to the intersection consist of one lane for all permitted movements.

The **Old Tappan Road/Vandervoot Avenue** intersection is a T-shaped intersection that is stop-controlled along the northbound Vandervoot Avenue approach. All approaches to the intersection consist of one lane for all permitted movements.

#### Traffic Counts

To determine the amount of traffic on the adjacent roadway network, manual turning movement counts (MTMC) were conducted at the study intersections on Thursday, February 17, 2022 during the weekday AM (7:00 AM - 9:00 AM) and weekday PM (2:00 PM - 6:00 PM) peak periods. A summary of the traffic counts can be found in the appendix to this assessment and the existing volumes are illustrated on Figure 2. The weekday AM peak traffic hour occurred between 7:30 AM to 8:30 AM and the weekday PM peak traffic hour occurred between 2:45 PM and 3:45 PM.

#### **Future Conditions**

As indicated above, the proposal is to construct a 100-bed assisted living facility on the site. The development is expected to be fully built-out and occupied by 2024. It can be expected that the traffic volumes along the adjacent roadway network will increase as a result of other developments in the area of the site and general area traffic growth. Based on the *Annual Background Growth Table* prepared by the New Jersey Department of Transportation (NJDOT), a 2.50% annual traffic growth is projected along Old Tappan Road and a 1.00% annual traffic growth is projected along Leonard Drive and Vandervoot Avenue. Additionally, approved development within the vicinity of the proposed site is anticipated to be built prior to the anticipated 2024 build out. The developments within the vicinity of the site includes a 26-unit residential development along Central Avenue, a 72-bed senior living facility along Central Avenue, and a mixed-use residential (229 units) and retail (21,000 SF) development on Old Tappan Road at Central Avenue. By applying a 2.50% and 1.00% annual growth rate to the respective 2022 roadway volumes and including the traffic generated by the approved developments in the vicinity of the site, the 2024 No-Build volumes were estimated and are indicated on Figure 3.

#### Trip Generation

The amount of traffic to be generated by the proposed assisted living development can best be estimated based on data published by the Institute of Transportation Engineers (ITE). ITE has compiled data from thousands of studies for various land uses, independent variables and study periods, and published the results in *Trip Generation*, *10th Edition*. The proposed development is most similar to ITE Land Use 254: Assisted Living. It should be noted that the trip generation is based upon the number of beds in the facility, which is anticipated to be a maximum of 100-beds. Table 1 below indicates the total traffic to be generated by the



development based on the ITE trip generation data (the trip generation worksheets are attached for reference).

	ITE Trip		ble 1 on – Assis	ted Living		
Land Use	Wee	kday AM I	Peak	Weel	kday PM F	Peak
Land Ose	In	Out	Total	In	Out	Total
Assisted Living (100 beds)	12	7	19	10	16	26

The traffic to be generated by the proposed development during the peak hours must then be distributed to the adjacent street network in a manner which the employees and residents can reasonably be expected to travel. The site traffic was assigned to the street network based on the existing distribution of traffic along the adjacent street network, as illustrated on Figure 4. The resulting site traffic assignment is illustrated on Figure 5. The site traffic was then added to the 2024 No-Build traffic volumes (Figure 3) to project the 2024 Build traffic volumes, which are illustrated on Figure 6.

#### **Operational Analysis**

In order to measure the quality of the traffic flow for the adjacent roadway, capacity analysis for the study locations were performed based upon the methods outlined in the *Highway Capacity Manual*. Capacity analysis is a procedure used to estimate the ability of the roadway network to carry traffic. Capacity analyses are performed based on a Level of Service methodology. Level of Service (LOS) is a qualitative measure that characterizes the operational conditions of a roadway or intersection based on the perceptions by motorists and passengers. Levels of Service are defined for each type of facility (i.e. freeways, highways, signalized intersections, unsignalized intersections). These Levels of Service range from LOS A to LOS F, with a LOS A representing the best operating conditions and a LOS F representing the worst operating conditions. The Level of Service criteria for unsignalized and signalized intersections is summarized in Table 2.

L	Table 2 .evel of Service Criter	ia
Level of Service	Unsignalized Delay	Signalized Delay
Level of Service	(sec)	(sec)
Α	≤ 10	≤ 10
В	> 10 and ≤ 15	> 10 and ≤ 20
С	> 15 and ≤ 25	> 20 and ≤ 35
D	> 25 and ≤ 35	> 35 and ≤ 55
E	> 35 and ≤ 50	> 55 and ≤ 80
F	> 50	> 80

The Level of Service for an unsignalized intersection is determined based on the average control delay associated with each minor movement (i.e. yielding left-turn movements from the major roads and stop-controlled movements from the minor approaches). The Levels of Service for signalized intersections are classified in terms of delay, which is based on the extent of driver discomfort and frustration, fuel consumption and lost travel time. The delay experienced by a motorist consists of many factors that relate to control, geometrics, and traffic. Some of these factors include the quality of progression, traffic signal cycle length, the green ratio, and the volume-to-capacity ratio.



The operating conditions at the study intersections and the proposed site access were evaluated using the above-described methodology and the latest Synchro software. The Existing, No-Build, and Build Levels of Service are illustrated on Figures 7, 8 and 9; respectively. The detailed capacity analyses worksheets for the intersection analyses are attached to this assessment with a description of the operating conditions summarized below.

#### Old Tappan Road (CR 110) and Leonard Drive Intersection

Under the existing conditions, the westbound Old Tappan Road left-turn movements operate with a LOS A during the weekday AM and weekday PM peak hours. The northbound Leonard Drive shared left-turn/right-turn movements operate with a LOS C during the weekday AM peak hour and a LOS C during the weekday PM peak hour. Under both the No-Build and Build conditions, all movements at the intersection will continue to operate with existing levels of service.

#### Old Tappan Road and Vandervoot Avenue and Site Driveway Intersection

Under the existing conditions, the westbound Old Tappan Road left-turn movements operate with a LOS A during the weekday AM and weekday PM peak hours. The northbound Vandervoot Avenue shared left-turn/right-turn movements operate with a LOS B during the weekday AM peak hour and a LOS C during the weekday PM peak hour. Under the No-Build conditions, all movements at the intersection will continue to operate with existing levels of service.

Under the Build conditions, a new stop-controlled full-movement site driveway will be constructed as the fourth leg to the intersection. Both the eastbound and westbound Old Tappan Road left-turn movements will operate with a LOS A during the weekday AM and weekday PM peak hours. The northbound Vandervoot Avenue shared left-turn/through/right-turn movements will operate with a LOS B during the weekday AM peak hour and a LOS C during the weekday PM peak hour. The southbound Site Driveway shared left-turn/through/right-turn movements will operate with a LOS D during the weekday AM peak hour and a LOS C during the weekday PM peak hour. As a result, there is no change in the operation conditions anticipated from the trips to be generated by the proposed assisted living residence. During the weekday peak hours, the proposed site will generate approximately 2% of the total 2024 projected traffic volume at the intersection.

It should be noted that there is proposed 12'+/- widening of Old Tappan Road along the site frontage extending from the existing church driveway and then tapering back down to the existing cartway at the western property boundary. This improvement will improve traffic conditions along the site frontage to match the width of Old Tappan Road to the east of the property.

#### **Conclusion**

The traffic generated by the proposed assisted living facility development will have an insignificant impact on the adjacent street network based upon the following results from this traffic engineering assessment:

 Based upon the current ITE trip generation rates, the proposed assisted living facility development will generate approximately 19 total trips during the weekday AM peak hour and approximately 26 total trips during the weekday PM peak hour.



- The traffic resulting from the proposed assisted living facility development will cause no changes in the existing levels of service at the Old Tappan Road and Vandervoot Avenue study location during the weekday AM and weekday PM peak hours.
- The traffic resulting from the proposed assisted living facility development will cause no changes to the individual levels of service at the Old Tappan Road and Leonard Drive stop-controlled intersection.

Should you have any questions or require any additional information, please feel free to contact us.

Sincerely,

**Shropshire Associates LLC** 

David R. Shropshire, P.E., P.P.

Professional Engineer N.J. License No. 33943

DRS/jab Attachments

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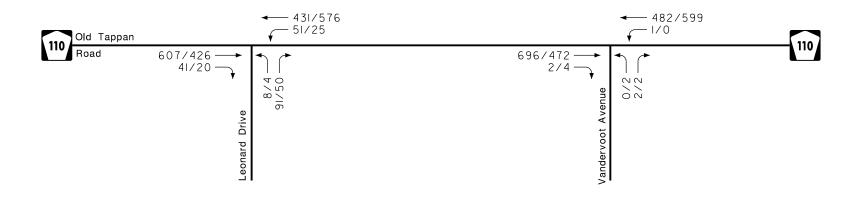


### **CSH** Old Tappan

Borough of Old Tappan, Bergen County, New Jersey
March 2022

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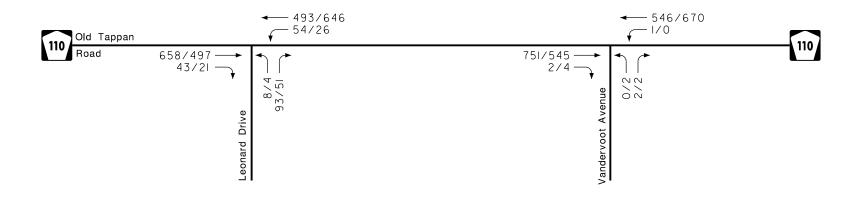


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### **CSH** Old Tappan

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FIGURE 4
TRIP DISTRIBUTION





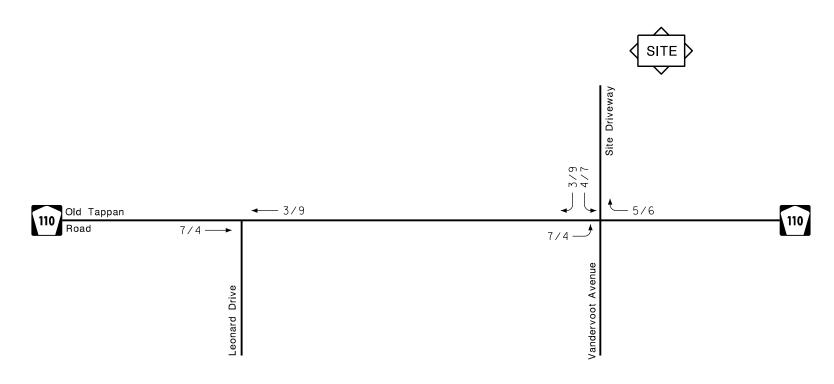
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FIGURE 5 SITE TRAFFIC

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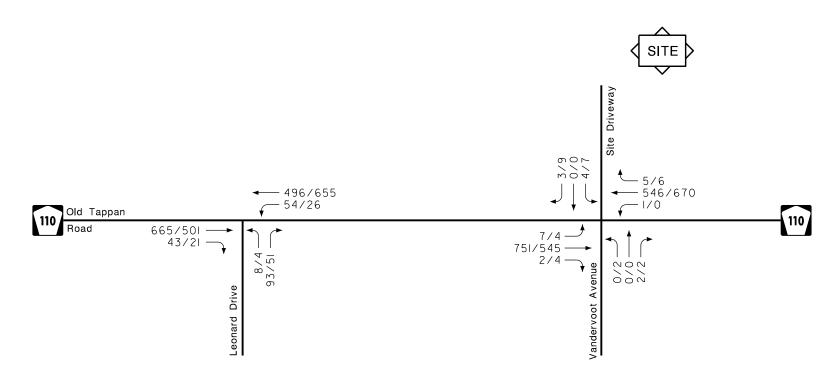


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## **CSH Old Tappan**

Borough of Old Tappan, Bergen County, New Jersey March 2022

FIGURE 7 EXISTING LEVELS OF SERVICE

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### **CSH** Old Tappan

Borough of Old Tappan, Bergen County, New Jersey
March 2022

## FIGURE 8 NO-BUILD LEVELS OF SERVICE

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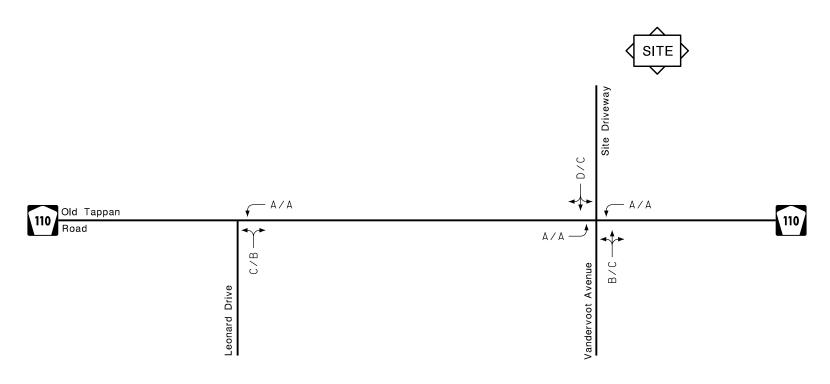
### **CSH** Old Tappan

Borough of Old Tappan, Bergen County, New Jersey March 2022

FIGURE 9
BUILD LEVELS OF SERVICE

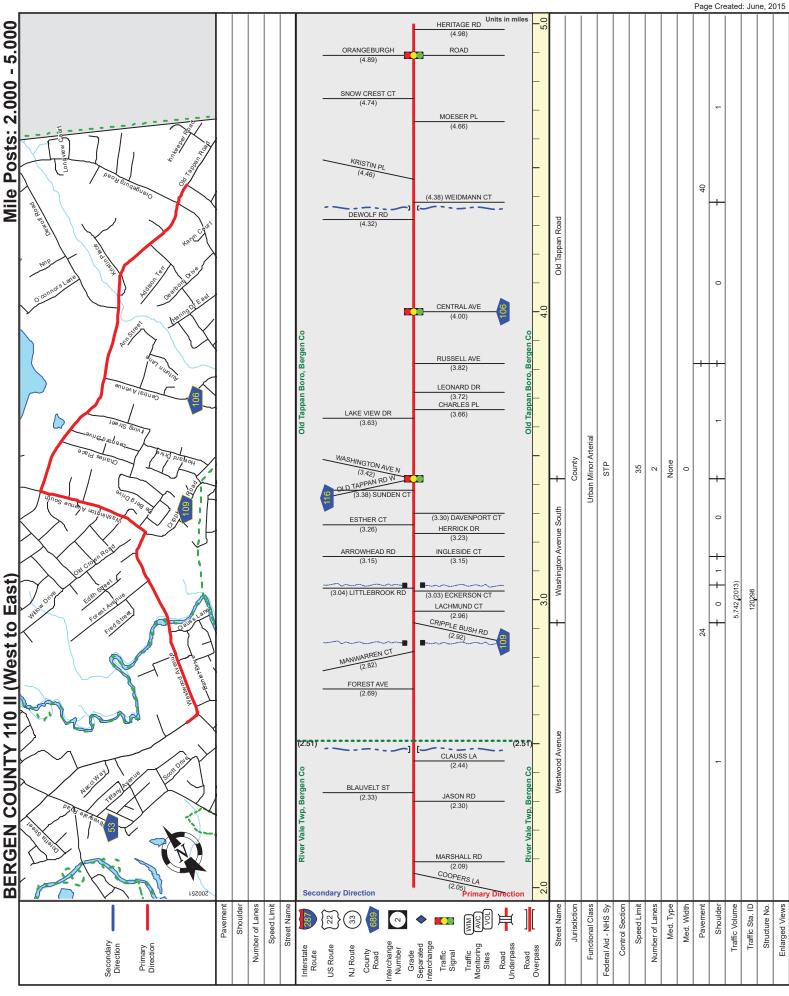
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## **CSH Old Tappan**

Borough of Old Tappan, Bergen County, New Jersey March 2022



## Assisted Living (254)

Vehicle Trip Ends vs: **Beds** 

> On a: Weekday,

> > Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

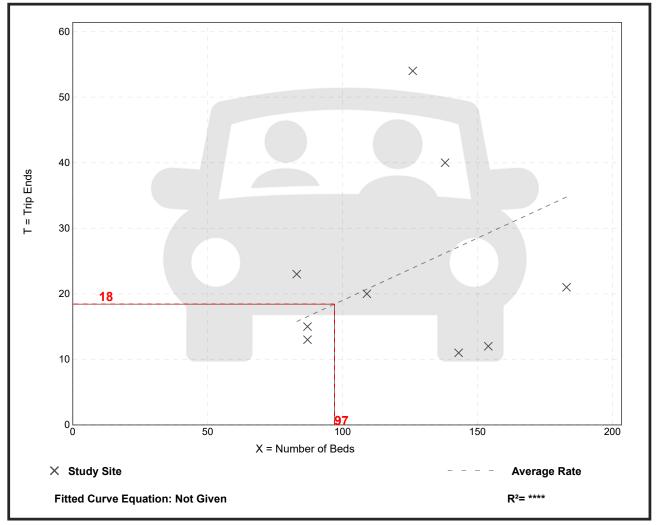
Number of Studies: Avg. Num. of Beds: 123

Directional Distribution: 63% entering, 37% exiting

### **Vehicle Trip Generation per Bed**

Average Rate	Range of Rates	Standard Deviation
0.19	0.08 - 0.43	0.12

### **Data Plot and Equation**



## Assisted Living (254)

**Vehicle Trip Ends vs: Beds** 

> On a: Weekday,

> > Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

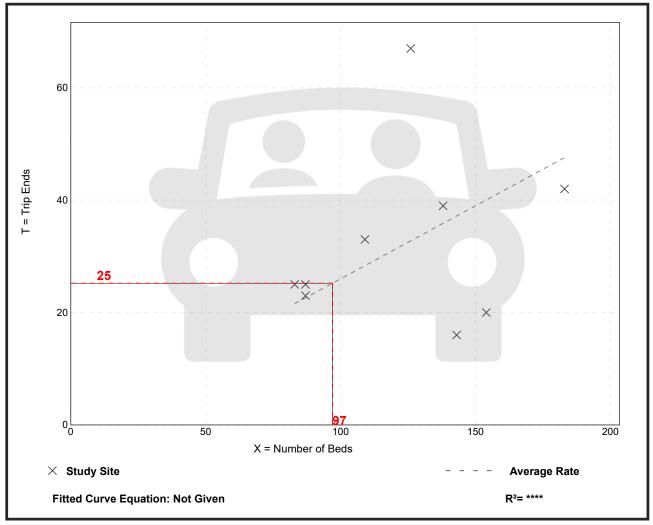
Number of Studies: Avg. Num. of Beds: 123

Directional Distribution: 38% entering, 62% exiting

### **Vehicle Trip Generation per Bed**

Average Rate	Range of Rates	Standard Deviation
0.26	0.11 - 0.53	0.13

### **Data Plot and Equation**



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N/S Route: Leonard Dr. File Name : 21020002 E/W Route: Old Tappan Rd. Site Code : 21020002 Old Tappan/Bergen County/NJ Thursday/Cloudy/EM/T-2538 Start Date : 2/17/2022

Page No : 1

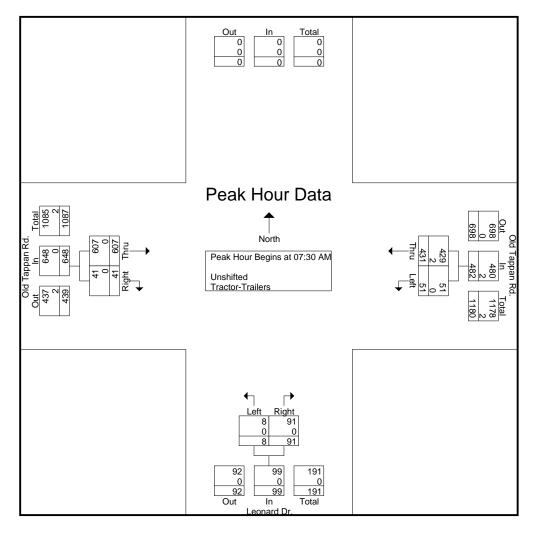
			Gro	ups Printed-	Unshifted	- Trailers				
		d Tappan F			Leonard Di			d Tappan I		
		Westbound			<u>Northboun</u>			Eastbound		
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
07:00 AM	59	0	59	0	0	0	0	67	67	126
07:15 AM	55	3	58	0	1	1	1	107	108	167
07:30 AM	80	2	82	1	2	3	3	120	123	208
07:45 AM	68	4	72	24	2	26	7	171	178	276
Total	262	9	271	25	5	30	11	465	476	777
08:00 AM	174	32	206	24	0	24	13	109	122	352
08:15 AM	109	13	122	42	4	46	18	207	225	393
08:30 AM	61	1	62	9	2	11	3	111	114	187
08:45 AM	99	2	101	5	0	5	1_	88	89	195
Total	443	48	491	80	6	86	35	515	550	1127
*** BREAK ***										
02:00 PM	76	1	77	3	2	5	0	79	79	161
02:15 PM	107	3	110	4	2 5	9	1	100	101	220
02:30 PM	98	18	116	9	2	11	6	100	106	233
02:45 PM	163	14	177	9	1	10	8	72	80	267
Total	444	36	480	25	10	35	15	351	366	881
03:00 PM	129	8	137	35	3	38	6	144	150	325
03:15 PM	129	2	131	3	0	3	3	96	99	233
03:30 PM	155	1	156	3	0	3	3	114	117	276
03:45 PM	123	4	127	3	0	3	3	104	107	237
Total	536	15	551	<u>3</u> 44	3	47	<u></u>	458	473	1071
Total	550		551	44	-	47		430	4/3	1071
04:00 PM	130	2	132	7	2	9	2	154	156	297
04:15 PM	120	0	120	3	1	4	3	100	103	227
04:30 PM	146	1	147	4	1	5	0	100	100	252
04:45 PM	115	0	115	4	0	4	1	98	99	218
Total	511	3	514	18	4	22	6	452	458	994
05:00 PM	93	3	96	2	1	3	5	107	112	211
05:15 PM	143	1	144	2	1	3	4	93	97	244
05:30 PM	110	3	113	2	0	2	1	98	99	214
05:45 PM	134	3	137	1	1	2	2	112	114	253
Total	480	10	490	7	3	10	12	410	422	922
Grand Total	2676	121	2797	199	31	230	94	2651	2745	5772
Apprch %	95.7	4.3		86.5	13.5		3.4	96.6		
Total %	46.4	2.1	48.5	3.4	0.5	4	1.6	45.9	47.6	
Unshifted	2672	121	2793	199	31	230	94	2646	2740	5763
% Unshifted	99.9	100	99.9	100	100	100	100	99.8	99.8	99.8
Tractor-Trailers	4	0	4	0	0	0	0	5	5	9
% Tractor-Trailers	0.1	0	0.1	0	0	0	0	0.2	0.2	0.2

# Shropshire Associates LLC 277 Whitehorse Pike, Suite 203 Atco, NJ 08004

N/S Route: Leonard Dr. File Name: 21020002 Site Code : 21020002 E/W Route: Old Tappan Rd. Old Tappan/Bergen County/NJ Start Date : 2/17/2022

Thursday/Cloudy/EM/T-2538 Page No : 2

		d Tappan F Westbound			Leonard Dr Northbound		С	ld Tappan F Eastbound		
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis Fr	om 07:00 AN	I to 08:45 A	AM - Peak 1 c	f 1						
Peak Hour for Entire In	tersection B	egins at 07:	:30 AM							
07:30 AM	80	2	82	1	2	3	3	120	123	208
07:45 AM	68	4	72	24	2	26	7	171	178	276
08:00 AM	174	32	206	24	0	24	13	109	122	352
08:15 AM	109	13	122	42	4	46	18	207	225	393
Total Volume	431	51	482	91	8	99	41	607	648	1229
% App. Total	89.4	10.6		91.9	8.1		6.3	93.7		
PHF	.619	.398	.585	.542	.500	.538	.569	.733	.720	.782
Unshifted	429	51	480	91	8	99	41	607	648	1227
% Unshifted	99.5	100	99.6	100	100	100	100	100	100	99.8
Tractor-Trailers	2	0	2	0	0	0	0	0	0	2
% Tractor-Trailers	0.5	0	0.4	0	0	0	0	0	0	0.2

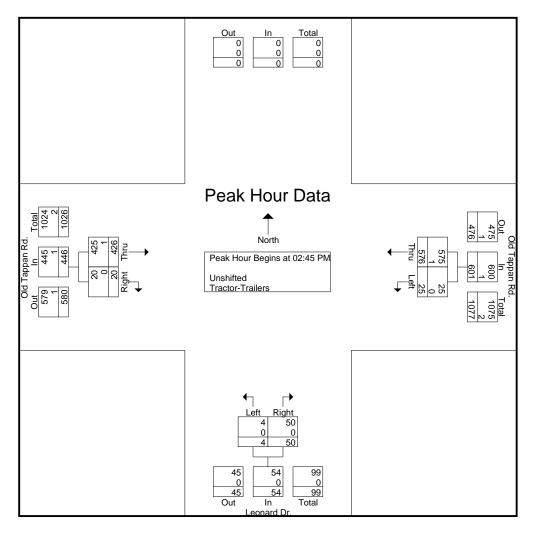


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N/S Route: Leonard Dr. File Name: 21020002 E/W Route: Old Tappan Rd. Site Code : 21020002 Old Tappan/Bergen County/NJ Start Date : 2/17/2022

Thursday/Cloudy/EM/T-2538 Page No : 3

		Tappan R			Leonard Dr.		0	ld Tappan I		
		<u>Nestbound</u>			Northbound			Eastboung		
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis Fr	om 02:00 PM	to 05:45 P	M - Peak 1 o	f 1						
Peak Hour for Entire In	tersection Be	egins at 02:	45 PM							
02:45 PM	163	14	177	9	1	10	8	72	80	267
03:00 PM	129	8	137	35	3	38	6	144	150	325
03:15 PM	129	2	131	3	0	3	3	96	99	233
03:30 PM	155	1	156	3	0	3	3	114	117	276
Total Volume	576	25	601	50	4	54	20	426	446	1101
% App. Total	95.8	4.2		92.6	7.4		4.5	95.5		
PHF	.883	.446	.849	.357	.333	.355	.625	.740	.743	.847
Unshifted	575	25	600	50	4	54	20	425	445	1099
% Unshifted	99.8	100	99.8	100	100	100	100	99.8	99.8	99.8
Tractor-Trailers	1	0	1	0	0	0	0	1	1	2
% Tractor-Trailers	0.2	0	0.2	0	0	0	0	0.2	0.2	0.2



277 Whitehorse Pike, Suite 203 Atco, NJ 08004

N/S Route: Vandervoot Ave. File Name: 21020002 - Vandervoot Ave.

E/W Route: Old Tappan Rd. Site Code : 21020002 Old Tappan/Bergen County/NJ Thursday/Cloudy/EM/T-2538 Start Date : 2/17/2022

Page No : 1

Groups Printed- Vandervoot Ave. Turns

	Old Tapı Westb	pan Rd.	\	/andervoot A	ve.		ppan Rd. bound	
Start Time	Left	App. Total	Right	Left	App. Total	Right	App. Total	Int. Total
*** BREAK ***								
08:30 AM	0	0	1	0	1	0	0	1
08:45 AM	11	1	1_	0	1	2	2	4
Total	1	1	2	0	2	2	2	5
*** BREAK ***								
04:30 PM	0	0	0	1	1	1	1	2
04:45 PM	0	0	2	1	3	2	2	5_
Total	0	0	2	2	4	3	3	7
05:00 PM   *** BREAK ***	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	1	1	1
Grand Total Apprch %	1 100	1	4 66.7	2 33.3	6	6 100	6	13
Total %	7.7	7.7	30.8	15.4	46.2	46.2	46.2	

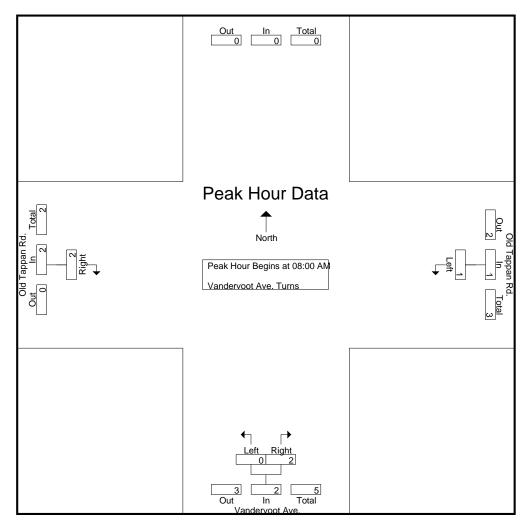
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Site Code : 21020002 E/W Route: Old Tappan Rd. Old Tappan/Bergen County/NJ Start Date : 2/17/2022

Thursday/Cloudy/EM/T-2538 Page No : 2

	Old Ta	ppan Rd.	,	Vandervoot A	ve.	Old Tap	pan Rd.	
	West	tbound		Northbound	t	Eastl	oound	
Start Time	Left	App. Total	Right	Left	App. Total	Right	App. Total	Int. Total
Peak Hour Analysis From (	07:00 AM to 08	8:45 AM - Peak	1 of 1			_		
Peak Hour for Entire Inters	ection Begins	at 08:00 AM						
08:00 AM	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0
08:30 AM	0	0	1	0	1	0	0	1
08:45 AM	1	1	1	0	1	2	2	4
Total Volume	1	1	2	0	2	2	2	5
% App. Total	100		100	0		100		
PHF	.250	.250	.500	.000	.500	.250	.250	.313



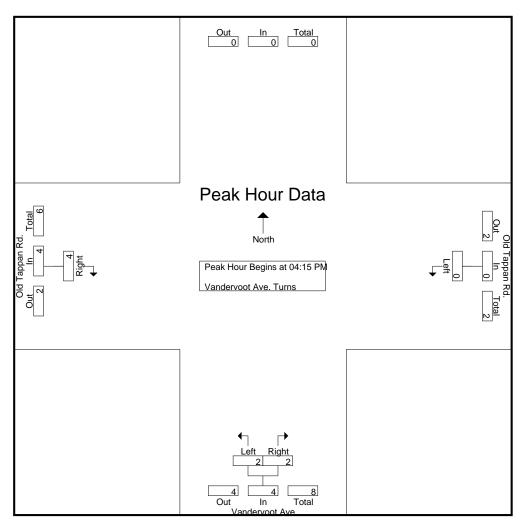
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Site Code : 21020002 E/W Route: Old Tappan Rd. Old Tappan/Bergen County/NJ Start Date : 2/17/2022

Thursday/Cloudy/EM/T-2538 Page No : 3

	Old Tap	pan Rd.	1	Vandervoot A	/e.	Old Tap	pan Rd.	
	Westh	oound		Northbound		Eastb	ound	
Start Time	Left	App. Total	Right	Left	App. Total	Right	App. Total	Int. Total
Peak Hour Analysis From (	02:00 PM to 05:	:45 PM - Peak	1 of 1			<u>-</u>		
Peak Hour for Entire Inters	ection Begins a	at 04:15 PM						
04:15 PM	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	1	1	1	1	2
04:45 PM	0	0	2	1	3	2	2	5
05:00 PM	0	0	0	0	0	1	1	1_
Total Volume	0	0	2	2	4	4	4	8
% App. Total	0		50	50		100		
PHF	.000	.000	.250	.500	.333	.500	.500	.400



1.8 EBT \$	EBR	WBL	шот		
<b>4</b>	EBR	WBL	MOT		
<b>4</b>			WBT	NBL	NBR
			4	¥	HOIL
001	41	51	431	8	91
607	41	51	431	8	91
007	0	0	0	0	0
Free	Free	Free	Free	Stop	Stop
-		-		- Stop	None
		_			-
		_			_
					_
					92
					92
660	45	55	468	9	99
Major1	1	Major2	1	Minor1	
					683
-	-	-	-		-
_	_	_	_		_
_	_	4 12	-		6.22
_	_	-	_		-
_	_	_	_		_
_	_	2 218	_		3 318
	_		_		449
_	_	-	_		-
_	_	_	_		_
	_			001	
		803		172	449
	_	-	_		-
	-	-	<u>-</u>		_
	•	-	-		
-	-	-	-	514	-
EB		WB		NB	
0		1		17.4	
					=
nt		EBT	EBR		WBT
		-			-
		-	-		-
		-	-		0
		-	-		Α
)	1.1	-	-	0.2	-
	B, # 0 0 92 2 660 Major1 0	e, # 0 - 92 92 2 2 2 660 45  Major1 0 0	e, # 0	e, # 0 0 92 92 92 92 2 2 2 2 2 660 45 55 468  Major1 Major2 N 0 0 705 0 4.12 2.218 893 893 893 1 893 1 893 1 893 1 893 1 893 1 893 1 893 1 893 1 893 1 893 1 7.4 C	e, # 0 0 0 0 0 0 92 92 92 92 92 2 2 2 2 2 2 660 45 55 468 9    Major1

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Future Vol, veh/h         696         2         1         4           Conflicting Peds, #/hr         0         0         0           Sign Control         Free         Pree         Aunion<	62 62 0 0 0 0 0 0 22 2 24 Mil	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 2 0 Stop None - - 92 2 2
Traffic Vol, veh/h Future Vol, veh/h Future Vol, veh/h Future Vol, veh/h Conflicting Peds, #/hr Sign Control Sign Control Free Free Free Free Free Free Free Fre	62 62 0 0 0 0 0 0 22 2 24 Mil	Stop  Stop  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 2 0 Stop None - - 92 2 2
Traffic Vol, veh/h Future Vol, veh/h Future Vol, veh/h Future Vol, veh/h Conflicting Peds, #/hr Sign Control Sign Control Free Free Free Free Free Free Free Fre	62 62 0 0 0 0 0 0 22 2 24 Mil	Stop  Stop  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 2 0 Stop None - - 92 2 2
Traffic Vol, veh/h         696         2         1         4           Future Vol, veh/h         696         2         1         4           Conflicting Peds, #/hr         0         0         0           Sign Control         Free         Free </td <td>32 0 ee 0 0 0 0 0 2 2 2 4 4</td> <td>8 0 0 0 9 Stopp 9 0 0 0 0 0 0 2 92 2 2 0 0 Minor1 1284 758</td> <td>2 2 0 Stop None - - - 92 2 2</td>	32 0 ee 0 0 0 0 0 2 2 2 4 4	8 0 0 0 9 Stopp 9 0 0 0 0 0 0 2 92 2 2 0 0 Minor1 1284 758	2 2 0 Stop None - - - 92 2 2
Future Vol, veh/h         696         2         1         4           Conflicting Peds, #/hr         0         0         0           Sign Control         Free         4.02         2	82 0 ee ee 0 0 0 0 0 2 2 2 4 4	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 0 Stop None - - 92 2 2
Conflicting Peds, #/hr         0         0         0           Sign Control         Free         Free <td>0 o e e e e e e e e e e e e e e e e e e</td> <td>0 0 Stopp 0 0 0 0 0 2 92 2 2 0 0 Minor1 1284</td> <td>0 Stop None - - 92 2 2 2</td>	0 o e e e e e e e e e e e e e e e e e e	0 0 Stopp 0 0 0 0 0 2 92 2 2 0 0 Minor1 1284	0 Stop None - - 92 2 2 2
Sign Control         Free         Ro           Storage Length         - <td>ee - 0 0 0 0 0 0 2 2 2 4 4 Mii 0</td> <td>Stopp 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td> <td>Stop None - - 92 2 2</td>	ee - 0 0 0 0 0 0 2 2 2 4 4 Mii 0	Stopp 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Stop None - - 92 2 2
RT Channelized         - None         - None           Storage Length	0 0 0 0 2 2 2 4 Mi	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	None 92 2 2 758
Storage Length         -         -         -           Veh in Median Storage, #         0         -         -           Grade, %         0         -         -           Peak Hour Factor         92         92         92           Heavy Vehicles, %         2         2         2           Mymt Flow         757         2         1         5           Major/Minor         Major1         Major2           Conflicting Flow All         0         0         759           Stage 1         -         -         -           Stage 2         -         -         -           Critical Hdwy         -         4.12         -           Critical Hdwy Stg 1         -         -         -           Critical Hdwy Stg 2         -         -         -           Follow-up Hdwy         -         2.218           Pot Cap-1 Maneuver         -         852           Stage 1         -         -           Stage 2         -         -           Platoon blocked, %         -         -           Mov Cap-1 Maneuver         -         852           Mov Cap-2 Maneuver         -         -<	- 0 0 0 2 2 2 4 Mi	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	- - 92 2 2
Veh in Median Storage, #         0         -         -           Grade, %         0         -         -           Peak Hour Factor         92         92         92           Heavy Vehicles, %         2         2         2           Mvmt Flow         757         2         1         5           Major/Minor         Major1         Major2           Conflicting Flow All         0         0         759           Stage 1         -         -         -           Stage 2         -         -         -           Critical Hdwy         -         -         4.12           Critical Hdwy Stg 1         -         -         -           Critical Hdwy Stg 2         -         -         -           Follow-up Hdwy         -         2.218         -           Pot Cap-1 Maneuver         -         852         -           Stage 1         -         -         -           Stage 2         -         -         -           Platoon blocked, %         -         -         -           Mov Cap-1 Maneuver         -         -         -           Stage 1         -         -	0 0 0 2 2 4 Mi 0	0 0 0 92 2 92 2 2 0 0 Minor1 1284 - 758	- 92 2 2 2
Grade, %         0         -         -           Peak Hour Factor         92         92         92           Heavy Vehicles, %         2         2         2           Mymt Flow         757         2         1         5           Major/Minor         Major1         Major2           Conflicting Flow All         0         0         759           Stage 1         -         -         -           Stage 2         -         -         -           Critical Hdwy         -         -         4.12           Critical Hdwy Stg 1         -         -         -           Critical Hdwy Stg 2         -         -         -           Follow-up Hdwy         -         2.218           Pot Cap-1 Maneuver         -         852           Stage 1         -         -           Stage 2         -         -           Platoon blocked, %         -         -           Mov Cap-1 Maneuver         -         852           Mov Cap-2 Maneuver         -         -           Stage 1         -         -           Stage 2         -         -           Approach	0 2 2 4 Mi 0	0 92 2 2 0 0 Minor1 1284 - 758	92 2 2 2 758
Peak Hour Factor         92         92         92           Heavy Vehicles, %         2         2         2           Mvmt Flow         757         2         1         5           Major/Minor         Major1         Major2           Conflicting Flow All         0         0         759           Stage 1         -         -         -           Stage 2         -         -         -           Critical Hdwy         -         -         -           Critical Hdwy Stg 1         -         -         -           Critical Hdwy Stg 2         -         -         -           Follow-up Hdwy         -         2.218           Pot Cap-1 Maneuver         -         852           Stage 1         -         -           Stage 2         -         -           Mov Cap-1 Maneuver         -         852           Mov Cap-2 Maneuver         -         -           Stage 1         -         -           Stage 2         -         -           Approach         EB         WB	02 2 24 Mi 0	92 2 2 0 0 Minor1 1284 - 758	92 2 2 2 758
Heavy Vehicles, %         2         2         2           Mvmt Flow         757         2         1         5           Major/Minor         Major1         Major2           Conflicting Flow All         0         0         759           Stage 1         -         -         -           Stage 2         -         -         -           Critical Hdwy         -         -         -           Critical Hdwy Stg 1         -         -         -           Critical Hdwy Stg 2         -         -         -           Follow-up Hdwy         -         -         2.218           Pot Cap-1 Maneuver         -         852           Stage 1         -         -           Stage 2         -         -           Platoon blocked, %         -         -           Mov Cap-1 Maneuver         -         852           Mov Cap-2 Maneuver         -         -           Stage 1         -         -           Stage 2         -         -           Approach         EB         WB	2 24 <u>Mi</u> 0	Minor1 1284 758	2 2 758
Moment Flow         757         2         1         5           Major/Minor         Major1         Major2           Conflicting Flow All         0         0         759           Stage 1         -         -         -           Stage 2         -         -         -           Critical Hdwy         -         -         -           Critical Hdwy Stg 1         -         -         -           Critical Hdwy Stg 2         -         -         -           Follow-up Hdwy         -         -         2.218           Pot Cap-1 Maneuver         -         852           Stage 1         -         -           Stage 2         -         -           Platoon blocked, %         -         -           Mov Cap-1 Maneuver         -         852           Mov Cap-2 Maneuver         -         -           Stage 1         -         -           Stage 2         -         -           Approach         EB         WB	Mi 0 - -	Minor1 1284 758	758
Major/Minor         Major1         Major2           Conflicting Flow All         0         0         759           Stage 1         -         -         -           Stage 2         -         -         -           Critical Hdwy         -         -         -           Critical Hdwy Stg 1         -         -         -           Critical Hdwy Stg 2         -         -         -           Follow-up Hdwy         -         -         2.218           Pot Cap-1 Maneuver         -         852         -           Stage 1         -         -         -           Stage 2         -         -         -           Mov Cap-1 Maneuver         -         852           Mov Cap-2 Maneuver         -         -           Stage 1         -         -           Stage 2         -         -           Approach         EB         WB	Mi 0 - -	Minor1 1284 758	758 -
Conflicting Flow All         0         0         759           Stage 1         -         -         -           Stage 2         -         -         -           Critical Hdwy         -         -         4.12           Critical Hdwy Stg 1         -         -         -           Critical Hdwy Stg 2         -         -         -           Follow-up Hdwy         -         -         2.218           Pot Cap-1 Maneuver         -         -         852           Stage 1         -         -         -           Stage 2         -         -         -           Mov Cap-1 Maneuver         -         852           Mov Cap-2 Maneuver         -         -           Stage 1         -         -           Stage 2         -         -           Approach         EB         WB	0 <i>′</i> - -	1284 758	758 -
Conflicting Flow All         0         0         759           Stage 1         -         -         -           Stage 2         -         -         -           Critical Hdwy         -         -         4.12           Critical Hdwy Stg 1         -         -         -           Critical Hdwy Stg 2         -         -         -           Follow-up Hdwy         -         -         2.218           Pot Cap-1 Maneuver         -         -         852           Stage 1         -         -         -           Stage 2         -         -         -           Mov Cap-1 Maneuver         -         852           Mov Cap-2 Maneuver         -         -           Stage 1         -         -           Stage 2         -         -           Approach         EB         WB	0 <i>′</i> - -	1284 758	758 -
Stage 1       -       -       -         Stage 2       -       -       -         Critical Hdwy       -       -       -         Critical Hdwy Stg 1       -       -       -         Critical Hdwy Stg 2       -       -       -         Follow-up Hdwy       -       -       2.218         Pot Cap-1 Maneuver       -       852         Stage 1       -       -         Stage 2       -       -         Platoon blocked, %       -       -         Mov Cap-1 Maneuver       -       852         Mov Cap-2 Maneuver       -       -         Stage 1       -       -         Stage 2       -       -         Approach       EB       WB	-	758	-
Stage 1       -       -       -         Stage 2       -       -       -         Critical Hdwy       -       -       -         Critical Hdwy Stg 1       -       -       -         Critical Hdwy Stg 2       -       -       -         Follow-up Hdwy       -       -       2.218         Pot Cap-1 Maneuver       -       852         Stage 1       -       -         Stage 2       -       -         Platoon blocked, %       -       -         Mov Cap-1 Maneuver       -       852         Mov Cap-2 Maneuver       -       -         Stage 1       -       -         Stage 2       -       -         Approach       EB       WB	-	758	-
Stage 2       -       -       -         Critical Hdwy       -       -       4.12         Critical Hdwy Stg 1       -       -       -         Critical Hdwy Stg 2       -       -       -         Follow-up Hdwy       -       -       2.218         Pot Cap-1 Maneuver       -       852         Stage 1       -       -         Stage 2       -       -         Platoon blocked, %       -       -         Mov Cap-1 Maneuver       -       -         Stage 1       -       -         Stage 2       -       -         Approach       EB       WB			
Critical Hdwy         -         -         4.12           Critical Hdwy Stg 1         -         -         -           Critical Hdwy Stg 2         -         -         -           Follow-up Hdwy         -         -         2.218           Pot Cap-1 Maneuver         -         -         852           Stage 1         -         -         -           Stage 2         -         -         -           Platoon blocked, %         -         -           Mov Cap-1 Maneuver         -         -         852           Mov Cap-2 Maneuver         -         -         -           Stage 1         -         -         -           Stage 2         -         -         -		-	-
Critical Hdwy Stg 1       -       -       -         Critical Hdwy Stg 2       -       -       -         Follow-up Hdwy       -       -       2.218         Pot Cap-1 Maneuver       -       -       852         Stage 1       -       -       -         Stage 2       -       -       -         Platoon blocked, %       -       -       -         Mov Cap-1 Maneuver       -       -       -         Mov Cap-2 Maneuver       -       -       -         Stage 1       -       -       -         Stage 2       -       -       -	-	6.42	6.22
Critical Hdwy Stg 2       -       -       -         Follow-up Hdwy       -       2.218         Pot Cap-1 Maneuver       -       852         Stage 1       -       -         Stage 2       -       -         Platoon blocked, %       -       -         Mov Cap-1 Maneuver       -       852         Mov Cap-2 Maneuver       -       -         Stage 1       -       -         Stage 2       -       -    Approach  EB  WB			
Follow-up Hdwy 2.218  Pot Cap-1 Maneuver - 852  Stage 1  Stage 2  Platoon blocked, %  Mov Cap-1 Maneuver - 852  Mov Cap-2 Maneuver 852  Stage 1  Stage 2		- 10	
Pot Cap-1 Maneuver       -       -       852         Stage 1       -       -       -         Stage 2       -       -       -         Platoon blocked, %       -       -       -         Mov Cap-1 Maneuver       -       -       -         Stage 1       -       -       -         Stage 2       -       -       -    Approach  EB  WB		3.518	
Stage 1       -       -       -         Stage 2       -       -       -         Platoon blocked, %       -       -       -         Mov Cap-1 Maneuver       -       -       852         Mov Cap-2 Maneuver       -       -       -         Stage 1       -       -       -         Stage 2       -       -       -    Approach  EB  WB	_	400	
Stage 2       -       -       -         Platoon blocked, %       -       -         Mov Cap-1 Maneuver       -       -       852         Mov Cap-2 Maneuver       -       -       -         Stage 1       -       -       -         Stage 2       -       -       -    Approach  EB  WB			
Platoon blocked, %       -       -         Mov Cap-1 Maneuver       -       -       852         Mov Cap-2 Maneuver       -       -       -         Stage 1       -       -       -         Stage 2       -       -       -    Approach  EB  WB	-	=00	
Mov Cap-1 Maneuver       -       -       852         Mov Cap-2 Maneuver       -       -       -         Stage 1       -       -       -         Stage 2       -       -       -         Approach       EB       WB	-		
Mov Cap-2 Maneuver       -       -       -         Stage 1       -       -       -         Stage 2       -       -       -         Approach       EB       WB	-	400	407
Stage 1         -         -         -           Stage 2         -         -         -           Approach         EB         WB	_		
Stage 2 Approach EB WB	-	400	
Approach EB WB	-	=00	
	-	. 592	-
		NB	
HCM Control Delay, s 0 0		13.9	
HCM LOS		В	
Miner Lene/Major Mymt NDL -1 FDT F		\\\DI	WDT
	י ם		
Capacity (veh/h) 407 -			
HCM Lane V/C Ratio 0.005 -	-	0.001	
HCM Control Delay (s) 13.9 -	- - 0	9.2	
HCM Lane LOS B -	- - 0 -		
HCM 95th %tile Q(veh) 0 -	- - 0	-	-

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Intersection						
Int Delay, s/veh	0.8					
		EDD	WDI	WDT	NDI	NDD
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	<b>}</b>	00	0.5	<b>€</b>	Y	<b>50</b>
Traffic Vol, veh/h	426	20	25	576	4	50
Future Vol, veh/h	426	20	25	576	4	50
Conflicting Peds, #/hr	_ 0	0	0	_ 0	0	0
3	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage,		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	463	22	27	626	4	54
Major/Minor M	laiar1		Majara		Minar1	
	lajor1		Major2		Minor1	474
Conflicting Flow All	0	0	485	0	1154	474
Stage 1	-	-	-	-	474	-
Stage 2	-	-	-	-	680	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1078	-	218	590
Stage 1	-	-	-	-	626	-
Stage 2	-	-	-	-	503	-
Platoon blocked, %	-	_		_		
Mov Cap-1 Maneuver	_	_	1078	_	210	590
Mov Cap-2 Maneuver	_	_	-	_	210	-
Stage 1	_	_	_	_	626	_
Stage 2		_	_	_	484	
Staye 2					404	_
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.4		12.8	
					В	
HCM LOS					_	
HCM LOS						
Minor Lane/Major Mvmt	1	NBLn1	EBT	EBR	WBL	WBT
Minor Lane/Major Mvmt Capacity (veh/h)	ı	520	EBT -	-	1078	WBT -
Minor Lane/Major Mvmt Capacity (veh/h) HCM Lane V/C Ratio	1	520 0.113		-	1078 0.025	-
Minor Lane/Major Mvmt Capacity (veh/h) HCM Lane V/C Ratio HCM Control Delay (s)	1	520 0.113 12.8	-	-	1078 0.025 8.4	- - 0
Minor Lane/Major Mvmt Capacity (veh/h) HCM Lane V/C Ratio HCM Control Delay (s) HCM Lane LOS	1	520 0.113 12.8 B	-	-	1078 0.025 8.4 A	-
Minor Lane/Major Mvmt Capacity (veh/h) HCM Lane V/C Ratio HCM Control Delay (s)	1	520 0.113 12.8	- - -	- - -	1078 0.025 8.4	- - 0

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Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations		LDIX	VVDL		₩.	NOIN
	<b>1→</b> 472	1	٥	<b>4</b>		2
Traffic Vol, veh/h		4	0	599	2	2
Future Vol, veh/h	472	4	0	599	2	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage	e, # 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	513	4	0	651	2	2
William Town	0.0	•	Ū	001	_	_
Major/Minor	Major1	1	Major2	N	Minor1	
Conflicting Flow All	0	0	517	0	1166	515
Stage 1	-	-	-	-	515	-
Stage 2	-	-	-	-	651	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	_	_	_	_	5.42	_
Critical Hdwy Stg 2	_	_	_	_	5.42	_
Follow-up Hdwy	_	_	2.218		3.518	3.318
Pot Cap-1 Maneuver	-	_		_	214	560
Stage 1	_	_	1043	<u>-</u>	600	-
Stage 2	_	_	_	_	519	_
		-	-		519	-
Platoon blocked, %	-	-	1010	-	044	F00
Mov Cap-1 Maneuver	-	-	1049	-	214	560
Mov Cap-2 Maneuver	-	-	-	-	214	-
Stage 1	-	-	-	-	600	-
Stage 2	-	-	-	-	519	-
Annroach	ΓD		WD		ND	
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		16.8	
HCM LOS					С	
Minor Lane/Major Mvm	nt N	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	. 1	310	-		1049	-
HCM Lane V/C Ratio		0.014	_	-		-
		16.8	-	-	0	
HCM Long LOS			-			
HCM Lane LOS	\	С	-	-	A	-
HCM 95th %tile Q(veh	)	0	-	-	0	-
(	,					

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Intersection						
Int Delay, s/veh	1.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	₽			4	¥	
Traffic Vol, veh/h	658	43	54	493	8	93
Future Vol, veh/h	658	43	54	493	8	93
Conflicting Peds, #/hr	0	0	0	0	0	0
	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-		-	None
Storage Length	_	-	_	-	0	-
Veh in Median Storage,	# 0	_	_	0	0	_
Grade, %	0	_	_	0	0	_
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mymt Flow	715	47	59	536	9	101
IVIVIII( I IOW	110	71	00	550	J	101
Major/Minor M	lajor1	N	Major2	ľ	Minor1	
Conflicting Flow All	0	0	762	0	1393	739
Stage 1	-	-	-	-	739	-
Stage 2	-	-	-	-	654	-
Critical Hdwy	_	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	_	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	_	-	850	-	156	417
Stage 1	-	-	-	-	472	-
Stage 2	-	-	_	_	517	_
Platoon blocked, %	_	_		-		
Mov Cap-1 Maneuver	_	-	850	_	141	417
Mov Cap-2 Maneuver	_	_	-	_	141	- TI
Stage 1		_	_	_	472	_
Stage 2	_	_	_	_	466	_
Olago Z					700	
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.9		19.3	
HCM LOS					С	
Minor Lane/Major Mvmt	N	NBLn1	EBT	EBR	WBL	WBT
IVIII OI LAHE/IVIAJOI IVIVIIIL	I	361				
			-	-	850	-
Capacity (veh/h)					0.000	
Capacity (veh/h) HCM Lane V/C Ratio		0.304	-		0.069	-
Capacity (veh/h) HCM Lane V/C Ratio HCM Control Delay (s)		0.304 19.3	-	-	9.5	0
Capacity (veh/h) HCM Lane V/C Ratio		0.304	-			

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Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	<b>1</b>	LDIX	WDL	₩ <u>₩</u>	NDL W	אטא
Traffic Vol, veh/h	751	2	1	<b>546</b>	<b>T</b>	2
Future Vol, veh/h	751	2	1	546	0	2
<u> </u>	0	0	0	0	0	0
Conflicting Peds, #/hr	Free	Free	Free	Free		
Sign Control RT Channelized	-ree	None	Free -		Stop -	Stop
Storage Length	-	None -	-	None -	0	None
Veh in Median Storage,		-	_	0	0	-
	# 0 0			0	0	
Grade, %		-	92	92	92	92
Peak Hour Factor	92	92				
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	816	2	1	593	0	2
Major/Minor M	ajor1	N	Major2	N	Minor1	
Conflicting Flow All	0	0	818	0	1412	817
Stage 1	_	_	_	-	817	-
Stage 2	_	_	-	_	595	_
Critical Hdwy	-	_	4.12	-	6.42	6.22
Critical Hdwy Stg 1	_	_	-	_	5.42	-
Critical Hdwy Stg 2	-	_	-	-	5.42	_
Follow-up Hdwy	_	_	2.218	_	3.518	3.318
Pot Cap-1 Maneuver	-	_	810	_	152	376
Stage 1	_	_	-	_	434	-
Stage 2	_	_	_	_	551	_
Platoon blocked, %	_	_		_	001	
Mov Cap-1 Maneuver	_	_	810	_	152	376
Mov Cap-2 Maneuver	_	_	-	_	152	-
Stage 1	_	_	_	_	434	_
Stage 2	_	_	_	_	550	<u>-</u>
Olage 2					550	
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		14.6	
HCM LOS					В	
Minor Lane/Major Mvmt	N	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	<u> </u>	376			212	
HCM Lane V/C Ratio			-	-		-
		0.006	-		0.001	-
HCM Control Delay (s) HCM Lane LOS			_	-		0
		B 0	-	-	A 0	Α
HCM 95th %tile Q(veh)		U	-	-	U	-

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Intersection						
Int Delay, s/veh	0.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	<u>₽</u>	בטול	TYDL	₩ <u>₩</u>	₩.	אטא
Traffic Vol, veh/h	497	21	26	646	<b>T</b> 4	51
						51
Future Vol, veh/h	497	21	26	646	4	
Conflicting Peds, #/hr		0	0	_ 0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storag	e,# 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	540	23	28	702	4	55
				-		
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	563	0	1310	552
Stage 1	-	-	-	-	552	-
Stage 2	-	-	-	-	758	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	_	5.42	-
Follow-up Hdwy	-	-	2.218	_	3.518	3.318
Pot Cap-1 Maneuver	_	_	1008	_	175	533
Stage 1	_	_	-	_	577	-
Stage 2	_	_	_	_	463	_
Platoon blocked, %	_	_	_	_	400	_
		-	1008		167	533
Mov Cap-1 Maneuver		-	1006	-	167	วงง
Mov Cap-2 Maneuver		-	-	-	167	-
Stage 1	-	-	-	-	577	-
Stage 2	-	-	-	-	442	-
Approach	EB		WB		NB	
			0.3		14	
HCM Control Delay, s	0		0.3			
HCM LOS					В	
Minor Lane/Major Mvr	nt N	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		460	-		1008	-
HCM Lane V/C Ratio		0.13			0.028	_
HCM Control Delay (s	.\	14	_	-	8.7	0
	7)		-			
HCM Lane LOS	-\	В	-	-	A	Α
HCM 95th %tile Q(veh	1)	0.4	-	-	0.1	-

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Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	ĵ.			4	¥	
Traffic Vol, veh/h	545	4	0	670	2	2
Future Vol. veh/h	545	4	0	670	2	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-		-	None	-	None
Storage Length	_	-	-	-	0	-
Veh in Median Storage	e,# 0	-	-	0	0	_
Grade, %	0	_	_	0	0	_
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mymt Flow	592	4	0	728	2	2
WWIIICTIOW	002	7	U	120		
	Major1	ľ	Major2		Minor1	
Conflicting Flow All	0	0	596	0	1322	594
Stage 1	-	-	-	-	594	-
Stage 2	-	-	-	-	728	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	980	-	173	505
Stage 1	-	-	-	-	552	-
Stage 2	-	-	-	-	478	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	980	-	173	505
Mov Cap-2 Maneuver	-	-	-	-	173	-
Stage 1	-	-	-	-	552	-
Stage 2	_	_	_	_	478	_
5 g =						
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		19.2	
HCM LOS					С	
Minor Lane/Major Mvn	nt I	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	ıı l	258	LDI	LDIX	980	VVD1
HCM Lane V/C Ratio		0.017	-	-		-
		19.2	-	-	0	-
HCM Control Delay (s) HCM Lane LOS		19.2 C	-	-	A	-
HCM 95th %tile Q(veh	\	0.1	-	-	0	-
HOW BOTH WITH MICHAEL	)	U. I	-	-	U	-

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Intersection						
Int Delay, s/veh	1.8					
		EDD	WDI	WDT	NDI	NDD
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	<b>\$</b>	40	T 4	4	À	00
Traffic Vol, veh/h	665	43	54	496	8	93
Future Vol, veh/h	665	43	54	496	8	93
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-		-	None
Storage Length	- 4	-	-	-	0	-
Veh in Median Storage,		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	723	47	59	539	9	101
Major/Minor M	lajor1		Major2		Minor1	
Conflicting Flow All	0	0	770	0	1404	747
Stage 1	-	-	-	-	747	
Stage 2	_	_	_	_	657	_
Critical Hdwy	_	_	4.12	_	6.42	6.22
Critical Hdwy Stg 1	_	_	7.12	_	5.42	-
Critical Hdwy Stg 2	_	_	_	_	5.42	_
Follow-up Hdwy	_		2.218		3.518	
Pot Cap-1 Maneuver	_	_	844	_	154	413
Stage 1	<u>-</u>	_	-	_	468	-
Stage 2	_	_	_	_	516	_
Platoon blocked, %	_	_	_	_	310	_
Mov Cap-1 Maneuver			844		139	413
			044	-	139	
Mov Cap-2 Maneuver	-	-	-	-		-
Stage 1	-	-	-	-	468	-
Stage 2	-	-	-	-	464	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.9		19.5	
HCM LOS					С	
		IDI 4	EDT	<b></b>	MDI	MOT
Minor Lane/Major Mvmt	ſ	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		357	-	-	844	-
HCM Lane V/C Ratio		0.308	-	-	0.07	-
HCM Control Delay (s)		19.5	-	-	9.6	0
HCM Lane LOS		С	-	-	Α	Α
HCM 95th %tile Q(veh)		1.3	-	-	0.2	-

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Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	7	751	2	1	546	5	0	0	2	4	0	3
Future Vol, veh/h	7	751	2	1	546	5	0	0	2	4	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage	,# -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	816	2	1	593	5	0	0	2	4	0	3
Major/Minor I	Major1		ľ	Major2			Minor1		N	Minor2		
Conflicting Flow All	598	0	0	818	0	0	1432	1433	817	1432	1432	596
Stage 1	-	-	-	_	_	-	833	833	_	598	598	-
Stage 2	-	-	-	-	-	_	599	600	_	834	834	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	_	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	979	-	-	810	-	-	112	134	376	112	134	504
Stage 1	-	-	-	-	-	-	363	384	-	489	491	-
Stage 2	-	-	-	-	-	-	488	490	-	362	383	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	979	-	-	810	-	-	110	132	376	110	132	504
Mov Cap-2 Maneuver	-	-	-	-	-	-	110	132	-	110	132	-
Stage 1	-	-	-	-	-	-	358	378	-	482	490	-
Stage 2	-	-	-	-	-	-	484	489	-	355	377	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0			14.6			27.9		
HCM LOS							В			D		
Minor Lane/Major Mvm	it I	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)		376	979	-	_	810	-	-	40-			
HCM Lane V/C Ratio		0.006		_		0.001	-		0.046			
HCM Control Delay (s)		14.6	8.7	0	-	9.4	0	-				
HCM Lane LOS		В	A	A	-	Α	A	-	D			
HCM 95th %tile Q(veh)		0	0	-	-	0	-	-	0.1			
((****)												

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Intersection						
Int Delay, s/veh	0.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	<b>1</b>	LDI	1102	4	¥	ADIT
Traffic Vol, veh/h	501	21	26	655	4	51
Future Vol, veh/h	501	21	26	655	4	51
Conflicting Peds, #/hr	0	0	0	000	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	Stop -	None
Storage Length	-	NONE -	_	NOTIE	0	NONE -
Veh in Median Storage			_	0	0	-
	e, # 0 0			0	0	
Grade, %		- 02	- 02			-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	545	23	28	712	4	55
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	568	0	1325	557
Stage 1	-	-	-	-	557	-
Stage 2	_	_	_	_	768	_
Critical Hdwy	_	_	4.12	-	6.42	6.22
Critical Hdwy Stg 1	_		7.1∠		5.42	0.22
Critical Hdwy Stg 2	-	-	_	<u>-</u>	5.42	_
	-	-	2.218	-	3.518	
Follow-up Hdwy		-	1004		172	530
Pot Cap-1 Maneuver	-	-	1004	-		
Stage 1	-	-	-	-	574	-
Stage 2	-	-	-	-	458	-
Platoon blocked, %	-	-	1001	-	40.	=
Mov Cap-1 Maneuver	-	-	1004	-	164	530
Mov Cap-2 Maneuver	-	-	-	-	164	-
Stage 1	-	-	-	-	574	-
Stage 2	-	-	-	-	437	-
Annroach	EB		WB		NB	
Approach						
HCM Control Delay, s	0		0.3		14.1	
HCM LOS					В	
Minor Lane/Major Mvn	nt l	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)		456			1004	-
HCM Lane V/C Ratio		0.131	_		0.028	_
HCM Control Delay (s)		14.1	_	_	8.7	0
HCM Lane LOS		14.1 B	_	-	Α	A
HCM 95th %tile Q(veh	\	0.4	-	-	0.1	- -
HOW JOHN JOHN W(VEN	1	0.4	_	_	U. I	-

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Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	4	545	4	0	670	6	2	0	2	7	0	9
Future Vol, veh/h	4	545	4	0	670	6	2	0	2	7	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage	, # -	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	592	4	0	728	7	2	0	2	8	0	10
Major/Minor I	Major1		ľ	Major2			Minor1		N	Minor2		
Conflicting Flow All	735	0	0	596	0	0	1339	1337	594	1335	1336	732
Stage 1	_	-	-	_	_	-	602	602	-	732	732	-
Stage 2	-	-	-	-	_	_	737	735	_	603	604	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	870	-	-	980	-	-	130	153	505	131	153	421
Stage 1	-	-	-	-	-	-	486	489	-	413	427	-
Stage 2	-	-	-	-	-	-	410	425	-	486	488	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	870	-	-	980	-	-	126	152	505	130	152	421
Mov Cap-2 Maneuver	-	-	-	-	-	-	126	152	-	130	152	-
Stage 1	-	-	-	-	-	-	483	486	-	410	427	-
Stage 2	-	-	-	-	-	-	400	425	-	481	485	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0			23.2			23.4		
HCM LOS							C			C		
Minor Lane/Major Mvm	it I	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SRI n1			
Capacity (veh/h)		202	870	LDI	LDIX	980	VVDI	-	0.40			
HCM Lane V/C Ratio		0.022		-	-	900	-		0.082			
HCM Control Delay (s)		23.2	9.2	0		0	-	-				
HCM Lane LOS		23.2 C	9.2 A	A	-	A	-	-	23.4 C			
HCM 95th %tile Q(veh)		0.1	0	-	_	0	-	-	0.3			
HOW JOHN JOHN Q(VEII)		0.1				0			0.0			

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