# **ATTACHMENT 10**

CALTRANS MAINTENANCE YARD TRAFFIC ANALYSIS



## **MEMORANDUM**

Date: May 21, 2020

To: Bibiana Alvarez

Analytical Environmental Services

From: Steve Abrams

Subject: Analysis of Potential Traffic Impacts at the Caltrans Maintenance Yard

Entrance on Stenmark Drive from the Point Molate Development

The purpose of this memorandum is to summarize our review of the traffic analysis conducted to determine whether or not the planned Point Molate Mixed-Use Development would result in any impacts to traffic operations at the entrance to the Caltrans Bridge Maintenance Yard on Stenmark Drive, which is located adjacent to the ramps to I-580. The proposed project would be accessed via Stenmark Drive which connects to the I-580 Freeway just east of the Richmond-San Rafael Bridge. The Point Molate Development consists of the following components:

- 1) Retail and Restaurants 40,000 square feet
- 2) Office Space 584,574 square feet
- 3) Single Family Homes 274 units
- 4) Apartments, Townhomes, and Condominiums 986 units
- 5) Public Ferry Parking 100 parking spaces

Please note there may be some final refinements to the project description but the above listed quantities represent the maximum development assumptions for the project and the worst case assumption with respect to trip generation for the site. The majority of the existing buildings on the site are currently vacant so no reductions in traffic were taken to account for the removal of any existing land uses. Detailed information about the project trip generation forecasts and the project's transportation impacts can be found in the Draft Subsequent Environmental Impact Report for the project.<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> Draft Subsequent Environmental Impact Report for the Point Molate Mixed-Use Development Project, February 2020, Analytical Environmental Services, Sacramento, CA, February, 2020.



#### **SUMMARY**

Based on the analysis of traffic operations the traffic generated by the planned Point Molate Mixed Use Development would not result in any significant impacts to traffic operations, LOS, or queuing at the entrance to the Calrans Maintenance Yard on Stenmark Drive. At this intersection the project traffic would cause the side street delay (on the exit from the maintenance yard) to increase by no more than about 10 seconds per vehicle during the peak hour. Because the project traffic would be added mainly to through movements the overall delay at the intersection is actually forecast to decrease slightly with the addition of project traffic (from 7.5 seconds to 7.2 seconds per vehicle). This is because the through movements have the lowest delay, which is lower than the average delay for the intersection. Therefore, even though traffic is added to the through movements the additional delay from the added traffic is off-set by the fact that the traffic is only being added to movements with lower than average delay. The Synchro LOS results indicated the 95th percentile queues on all approaches would be less than one vehicle under all study scenarios.

#### **METHODOLOGY**

The primary focus of this traffic analysis was the evaluation of potential project impacts at the entrance to the Caltrans Bridge Maintenance Yard on Stenmark Drive. The traffic study evaluated the traffic operations at the entrance during AM, early afternoon, and PM peak periods using the 6th Highway Capacity Manual Operations Method contained in the standard traffic analysis software Synchro 8. This methodology determines intersection level of service (LOS) based on average control delay per vehicle for the overall intersection during peak-hour operating conditions. Evaluation of the study intersection was based on the HCM 6th Edition Unsignalized Methodology, also contained in Synchro.

#### Intersection Level of Service Analysis Methodology

Intersection Level of Service (LOS) is a qualitative description of the performance of an intersection based on the average delay per vehicle. The LOS rating ranges from LOS A, which indicates free flow or excellent conditions with short delays, to LOS F, which indicates congested or overloaded conditions with extremely long delays. For unsignalized intersections (all-way stop controlled and two-way stop controlled), the average control delay and LOS operating conditions are calculated by approach (e.g., northbound) and movement (e.g., northbound left-turn) for those movements that are subject to delay. In general, the operating conditions for unsignalized intersections are presented for the worst approach. **Table 1** summarizes the relationship between LOS and average control delay at unsignalized intersections.



	TABLE 1 UNSIGNALIZED INTERSECTION LEVEL OF SERVICE DEFINI	TIONS
Level of Service	Description of Operations	Average Delay (seconds/vehicle)
Α	No delay for stop-controlled approaches.	0 to 10
В	Operations with minor delays.	> 10 to 15
С	Operations with moderate delays.	> 15 to 25
D	Operations with some delays.	> 25 to 35
E	Operations with high delays and long queues.	> 35 to 50
F	Operation with extreme congestion, with very high delays and long queues unacceptable to most drivers.	> 50
	SOURCE: 2010 Highway Capacity Manual, Transportation Research Board, 2011.	

#### Significance Criteria

The goal of the City of Richmond is to maintain a Level of Service (LOS) D during the peak hours at intersections on Stenmark Drive according to the General Plan. Project-related operational impacts on unsignalized intersections are considered significant if project generated traffic causes the worst-case movement (or average of all movements for all-way stop-controlled intersections and roundabouts) to deteriorate from LOS D or better to LOS E or F.

#### **EXISTING INTERSECTION CAPACITY CONDITIONS**

To gather data on maintenance yard traffic AM, mid-afternoon, and PM peak period traffic counts were conducted at the maintenance yard entrance on April, 29, 2020 and May 12, 2020. During the counts there was a maximum of 8 vehicles recorded going in and out of the maintenance yard during any single hour during the day. To be conservative and provide a worst case analysis of traffic operations these calculations assumed a maximum of 60 vehicles entering and exiting the maintenance yard during the AM and PM peak hours. This included 20 left turns in and 20 right turns out (to and from the freeway ramps), as well as 10 left turns out and 10 right turns in, to and from the direction of the Point Molate Development (to the north). The through volumes were based on traffic counts conducted for the Point Molate SEIR at the adjacent Dutra Materials Road intersection with Stenmark Drive. Traffic counts at this intersection were conducted in May of 2019.



As shown in **Table 2**, the side street approach from the maintenance yard onto Stenmark Drive currently has acceptable conditions (LOS D or better) during the weekday AM and PM peak hours and is forecast to continue to have acceptable operations with the addition of traffic from the Point Molate Mixed-Use Development Project. The overall intersection delay at the entrance to the yard is very low because the through movements to and from the ramps do not stop at this location. As shown in **Table 3**, the only other left turn movement, the northbound left turn into the maintenance yard, also currently has acceptable traffic operations. The Synchro LOS results indicated the 95<sup>th</sup> percentile queues on all approaches would be less than one vehicle. The detailed Syncro LOS calculations are attached to this memo.

TABLE 2
MAINTENANCE YARD INTERSECTION LEVEL OF SERVICE CONDITIONS

	INTERSECTION	CONTROL	PEAK HOUR	EXIS	TING	EXISTING PLUS PROJECT		
			HOOK	Delay	LOS	Delay	LOS	
1	EVICTING SCENARIO	Side Street Stop	AM	8.8	Α	15.2	С	
'	EXISTING SCENARIO	Side Sileet Stop	PM	8.8	Α	17.5	С	
2 CUMULATIVE SCENARIO		Side Street Stop	AM	10.9	В	21.7	С	
_	CUIVIOLATIVE SCENARIO	Side Sileet Stop	PM	8.9	Α	17.3	С	

**SOURCE:** Abrams Associates, 2020

NOTES: Intersection LOS is presented in terms of intersection delay in seconds per vehicle. For side-

street stop controlled intersections the average delay and LOS for the worst side street

approach is presented.

### **CUMULATIVE (YEAR 2040) INTERSECTION CAPACITY CONDITIONS**

For the baseline cumulative conditions, the intersection traffic volumes were based on the existing turning movements plus incremental growth in traffic (0.5% per year) based on the County's traffic model. As shown in **Table 2**, the side street approach from the maintenance yard onto Stenmark Drive is forecast to continue to have acceptable operations (LOS D or better) during the weekday AM and PM peak hours. The overall delay at the intersection is forecast to remain low because the through movements to and from the ramps do not stop at this location. As shown in **Table 3**, the other left turn movement, the northbound left turn into the maintenance yard, is also forecast to continue to have acceptable traffic operations. The Synchro LOS results indicated the 95<sup>th</sup> percentile queues on all approaches would continue to be less than one vehicle. As noted above, the detailed Synchro LOS calculations for all scenarios are attached to this memo.



# TABLE 3 MAINTENANCE YARD INBOUND (NORTHBOUND) LEFT TURN MOVEMENT OPERATIONS

	INTERSECTION	CONTROL	PEAK HOUR	EXIS.	TING	EXISTING PROJ	
			HOOK	Delay	LOS	Delay	LOS
1	EXISTING SCENARIO	Side Street Stop	AM	7.3	Α	8.4	Α
'	EXISTING SCENARIO	Side Sireer Stop	PM	7.3	Α	9.0	Α
2	CUMULATIVE SCENARIO	Side Street Stop	AM	8.0	Α	9.3	Α
-	CUMULATIVE SCENARIO	Side Sileet Stop	PM	7.4	Α	8.9	A

SOURCE: Abrams Associates, 2020

NOTES: Intersection LOS is presented in terms of intersection delay in seconds per vehicle. For side-

street stop controlled intersections the average delay and LOS for the worst side street

approach is presented.

If you have any questions about this information, please don't hesitate to contact me at (925) 945-0201.

Sincerely,

Stephen C. Abrams

President, Abrams Associates

T.E. License No. 1852

Intersection						
Int Delay, s/veh	3.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥	LDIX	NDL	4		אומט
Traffic Vol, veh/h	<b>T</b> 10	20	20	<b>식</b> 23	<b>1</b> → 25	10
Future Vol, veh/h	10	20	20	23	25	10
Conflicting Peds, #/hr	0	0	0	0	0	0
	Stop		Free	Free	Free	Free
Sign Control RT Channelized	Stop -	Stop None	-		riee -	None
Storage Length	0	NOHE -	-	None -	_	None
		-	-	0	0	
Veh in Median Storage						
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	11	22	22	26	28	11
Major/Minor N	Minor2		Major1	N	/lajor2	
Conflicting Flow All	104	34	39	0	-	0
Stage 1	34	-	-	_	_	-
Stage 2	70	_	_	_	_	_
Critical Hdwy	6.43	6.23	4.13	_	_	_
Critical Hdwy Stg 1	5.43	-	-	_	_	_
Critical Hdwy Stg 2	5.43	_	_	_	_	_
Follow-up Hdwy	3.527	3.327	2 227	_	_	_
Pot Cap-1 Maneuver	892	1036	1565		_	
Stage 1	986	1030	1303	_	_	_
Stage 2	950	_	-	-	-	-
	900	_	-	-	-	-
Platoon blocked, %	000	1026	1505	-	-	-
Mov Cap-1 Maneuver	880	1036	1565	-	-	_
Mov Cap-2 Maneuver	880	_	_	-	-	-
Stage 1	972	-	-	-	-	-
Stage 2	950	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	8.8		3.4		0	
HCM LOS	Α		0.4		U	
I IOW LOO						
Minor Lane/Major Mvm	ıt	NBL	NBTI	EBLn1	SBT	SBR
Capacity (veh/h)		1565	-	978	-	-
HCM Lane V/C Ratio		0.014	-	0.034	-	-
HCM Control Delay (s)		7.3	0	8.8	-	-
HCM Lane LOS		Α	Α	Α	-	-
HCM 95th %tile Q(veh)		0	-	0.1	-	-

Intersection						
Int Delay, s/veh	3.6					
		EDD	NDI	NDT	CDT	CDD
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	<b>Y</b>	00	20	<del>ન</del>	<b>♣</b>	40
Traffic Vol, veh/h	10	20	20	26	28	10
Future Vol, veh/h	10	20	20	26	28	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-		-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	11	22	22	29	31	11
Major/Minor I	Minor2		Major1	N	Major2	
Conflicting Flow All	110	37	42	0	_	0
Stage 1	37	-	-	-	_	-
Stage 2	73	_	-	-	_	_
Critical Hdwy	6.43	6.23	4.13	_	_	_
Critical Hdwy Stg 1	5.43	-	-	_	_	_
Critical Hdwy Stg 2	5.43	_	_	_	_	_
Follow-up Hdwy	3.527	3.327	2.227	_	_	_
Pot Cap-1 Maneuver	885	1032	1561	_	_	_
Stage 1	983	-		_	_	_
Stage 2	947	_	_	_	_	_
Platoon blocked, %	JTI				_	_
Mov Cap-1 Maneuver	873	1032	1561		_	
Mov Cap-1 Maneuver	873	1032	1001	_	_	
Stage 1	969	-	-	-	-	-
_	969	-	•	•		•
Stage 2	341	-	-	-	-	_
Approach	EB		NB		SB	
HCM Control Delay, s	8.8		3.2		0	
HCM LOS	Α					
Minardan Amarikan Mana	.1	NDI	NDT	EDL 1	CDT	CDD
Minor Lane/Major Mvm	ιτ	NBL		EBLn1	SBT	SBR
Capacity (veh/h)		1561	-	0.0	-	-
HCM Lane V/C Ratio		0.014		0.034	-	-
HCM Control Delay (s)		7.3	0	8.8	-	-
HCM Lane LOS		A	Α	A	-	-
HCM 95th %tile Q(veh)	)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	<b>Y</b>	LDIX	NDL	11D1	)  }	אומט
Traffic Vol, veh/h	<b>T</b> 10	20	20	<b>€</b> 499	433	10
Future Vol, veh/h	10	20	20	499	433	10
	0	0	0	499	433	0
Conflicting Peds, #/hr	Stop		Free	Free	Free	Free
Sign Control RT Channelized	Slop -	Stop None	riee -		riee -	None
	0	None -	-		_	None
Storage Length Veh in Median Storage			-	0	0	
	-	-	-			-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	11	22	22	554	481	11
Major/Minor	Minor2		Major1	N	/lajor2	
Conflicting Flow All	1085	487	492	0	- -	0
Stage 1	487	-		-	_	-
Stage 2	598	<u>-</u>	_	_	_	_
Critical Hdwy	6.43	6.23	4.13	_	_	
Critical Hdwy Stg 1	5.43	0.20	7.10	_	_	_
Critical Hdwy Stg 2	5.43	_	_		_	_
Follow-up Hdwy	3.527	3.327	2 227	-	-	-
Pot Cap-1 Maneuver	239	579	1066	-	-	-
	616	519	1000	-	-	-
Stage 1		_	_	-	-	_
Stage 2	547	-	-	-	-	-
Platoon blocked, %	000	F70	1000	-	-	-
Mov Cap-1 Maneuver	232	579	1066	-	-	-
Mov Cap-2 Maneuver	232	-	-	-	-	-
Stage 1	598	-	-	-	-	-
Stage 2	547	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	15.2		0.3		0	
•	_		0.5		U	
HCM LOS	С					
Minor Lane/Major Mvm	nt	NBL	NBTI	EBLn1	SBT	SBR
Capacity (veh/h)		1066	-		-	_
HCM Lane V/C Ratio		0.021	-	0.086	-	-
HCM Control Delay (s)		8.4	0	15.2	-	_
HCM Lane LOS		Α	A	С	-	-
HCM 95th %tile Q(veh	)	0.1	_	0.3	_	-
	,					

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥	LDIK	NDL	4	- 1 <u>00</u> 1	אפט
Traffic Vol, veh/h	10	20	20	<b>456</b>	<b>578</b>	10
	10					
Future Vol, veh/h		20	20	456	578	10
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	e, # 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	11	22	22	507	642	11
					V	
Major/Minor I	Minor2	<u> </u>	Major1	N-	Major2	
Conflicting Flow All	1199	648	653	0	-	0
Stage 1	648	-	-	-	-	-
Stage 2	551	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	_	-
Critical Hdwy Stg 1	5.43	-	-	_	_	_
Critical Hdwy Stg 2	5.43	_	_	_	_	_
Follow-up Hdwy	3.527		2.227		_	
	204	469	929			_
Pot Cap-1 Maneuver			929	-	-	-
Stage 1	519	-			-	-
Stage 2	575	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	197	469	929	-	-	-
Mov Cap-2 Maneuver	197	-	-	-	-	-
Stage 1	502	-	-	-	-	-
Stage 2	575	-	-	-	-	-
, and the second						
Approach	EB		NB		SB	
HCM Control Delay, s	17.5		0.4		0	
HCM LOS	С					
Minor Lane/Major Mvm	ıt	NBL	NBI	EBLn1	SBT	SBR
Capacity (veh/h)		929	-	· ·	-	-
HCM Lane V/C Ratio		0.024	-	0.104	-	-
HCM Control Delay (s)		9	0	17.5	-	-
HCM Lane LOS		Α	Α	С	-	-
HCM 95th %tile Q(veh)	)	0.1	-	0.3	-	-

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			4	ĵ.	
Traffic Vol, veh/h	10	20	20	130	273	10
Future Vol, veh/h	10	20	20	130	273	10
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	_
Grade, %	0	_	_	0	0	_
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	11	22	22	144	303	11
WWW.CT IOW					000	•
		_				
	Minor2		Major1		/lajor2	
Conflicting Flow All	497	309	314	0	-	0
Stage 1	309	-	-	-	-	-
Stage 2	188	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	531	729	1241	-	-	-
Stage 1	742	-	-	-	-	-
Stage 2	842	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	521	729	1241	-	-	-
Mov Cap-2 Maneuver	521	-	-	-	-	-
Stage 1	728	-	-	-	-	-
Stage 2	842	_	_	_	_	_
J <b>G</b> .						
			ND		0.0	
Approach	EB		NB		SB	
HCM Control Delay, s	10.9		1.1		0	
HCM LOS	В					
Minor Lane/Major Mvm	nt	NBL	NBT I	EBLn1	SBT	SBR
Capacity (veh/h)		1241	_	643	_	_
HCM Lane V/C Ratio		0.018	_	0.052	_	_
HCM Control Delay (s)		8	0	10.9	_	_
HCM Lane LOS		A	A	В	_	_
HCM 95th %tile Q(veh	)	0.1	-	0.2	_	_
	1	0.1		J.L		

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
	¥	LDIN	NDL			ODIX
Lane Configurations		20	20	<del>વ</del>	<b>∱</b>	10
Traffic Vol, veh/h	10	20	20	29	35	10
Future Vol, veh/h	10	20	20	29	35	10
Conflicting Peds, #/hr		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	e, # 0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	11	22	22	32	39	11
WIVIII( I IOW				02	00	
Major/Minor	Minor2	- 1	Major1	N	Major2	
Conflicting Flow All	121	45	50	0	-	0
Stage 1	45	-	-	-	-	-
Stage 2	76	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	_	_	_
Critical Hdwy Stg 1	5.43	-	-	_	_	_
Critical Hdwy Stg 2	5.43	_			_	
	3.527	3.327	2 227	-	_	_
Follow-up Hdwy				-		-
Pot Cap-1 Maneuver	872	1022	1550	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	944	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	860	1022	1550	-	-	-
Mov Cap-2 Maneuver	860	-	-	-	-	-
Stage 1	961	_	-	-	-	_
Stage 2	944	_	_	_	_	_
Clago 2	011					
Approach	EB		NB		SB	
HCM Control Delay, s	8.9		3		0	
HCM LOS	Α					
Minor Lane/Major Mvr	nt	NBL	NBT I	EBLn1	SBT	SBR
Capacity (veh/h)		1550	-	962	-	-
HCM Lane V/C Ratio		0.014	-	0.035	-	-
HCM Control Delay (s	)	7.4	0	8.9	-	-
	,	Α	A	Α	_	_
HUM Lane LUS						
HCM Lane LOS HCM 95th %tile Q(veh	1)	0	-	0.1	_	

Intersection						
Int Delay, s/veh	0.6					
		EDD	NDI	NET	ODT	ODD
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			र्स	4	10
Traffic Vol, veh/h	10	20	20	606	681	10
Future Vol, veh/h	10	20	20	606	681	10
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	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	11	22	22	659	740	11
NA - : /NA:	\4:O		11-:1		4-10	
	Minor2		Major1		Major2	
Conflicting Flow All	1449	746	751	0	-	0
Stage 1	746	-	-	-	-	-
Stage 2	703	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	144	412	854	-	-	-
Stage 1	467	-	-	-	-	-
Stage 2	489	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	138	412	854	-	_	-
Mov Cap-2 Maneuver	138	-	-	-	-	-
Stage 1	448	_	_	_	_	-
Stage 2	489	_	_	-	_	_
S targe _						
Approach	EB		NB		SB	
HCM Control Delay, s	21.7		0.3		0	
HCM LOS	С					
Miner Lene/Meier Muse	nt	NBL	NRT	EBLn1	SBT	SBR
	it.		NDT	248	ODT	ODIX
Minor Lane/Major Mvm		OE1		740	-	-
Capacity (veh/h)		854	-			
Capacity (veh/h) HCM Lane V/C Ratio		0.025		0.131	-	-
Capacity (veh/h) HCM Lane V/C Ratio HCM Control Delay (s)		0.025 9.3	0	0.131 21.7	-	-
Capacity (veh/h) HCM Lane V/C Ratio		0.025		0.131		- - -

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	¥			4	<u>₽</u>	
Traffic Vol, veh/h	10	20	20	459	585	10
Future Vol, veh/h	10	20	20	459	585	10
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	_
Grade, %	0	_	_	0	0	_
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mymt Flow	11	22	22	499	636	11
IVIVIII I IOW	- 11	22	22	733	000	11
	Minor2		Major1		/lajor2	
Conflicting Flow All	1185	642	647	0	-	0
Stage 1	642	-	_	-	-	-
Stage 2	543	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	208	472	934	-	-	-
Stage 1	522	-	-	-	-	-
Stage 2	580	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	201	472	934	-	_	-
Mov Cap-2 Maneuver	201	_	_	_	_	_
Stage 1	505	-	_	_	-	-
Stage 2	580	_	_	_	_	_
otago 2	000					
Approach	EB		NB		SB	
HCM Control Delay, s	17.3		0.4		0	
HCM LOS	С					
Minor Lane/Major Mvm	nt	NBL	NRT	EBLn1	SBT	SBR
Capacity (veh/h)		934	ND11	326	OD I	OBIT
HCM Lane V/C Ratio		0.023	_	0.1	_	_
HCM Control Delay (s)		8.9	0	17.3	_	_
HCM Lane LOS		0.9 A	A	17.3 C	_	-
HCM 95th %tile Q(veh)	1	0.1	- -	0.3	<u>-</u>	-
HOW JOHN JOHNE W(VEH)		U. I	_	0.0	_	