## **REPORT**

Pope Lick Station, LLC 14005 Taylorsville Road Louisville, KY

**Traffic Impact Study** 

Louisville Metro Planning Commission

June 28, 2016



.

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### Introduction

The proposed retail center by Pope Lick Station LLC is located on Taylorsville Road between South Pope Lick Road and Hatmaker Trail in Louisville, KY. The center will have three buildings with 27,000 square feet of retail and restaurant space. **Figure 1** displays a map of the site. Access to the site will be from an entrance on Taylorsville Road opposite Hatmaker Trail. The purpose of this study is to examine the traffic impacts of the proposed development upon the adjacent highway system. For this study the impact area was defined to be the intersection of Taylorsville Road at South Pope Lick Road.

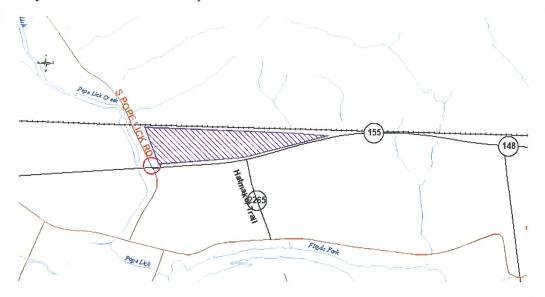


Figure 1
Site Location

#### **Existing Conditions**

Taylorsville Road, KY 155, is maintained by the Kentucky Transportation Cabinet with an estimated 2016 ADT of 19,500 vehicles per day between I 265 and Pope Lick Road, as estimated from the Kentucky Transportation Cabinet (KYTC) 2015 count at station 996. The road is a two-lane highway with 11 foot lanes, four foot shoulders (measurements provided by KYTC). The speed limit is 55 mph. There are no sidewalks. The intersections with Pope Lick Road and Hatmaker Trail are controlled with stop signs, on the side street.

A.m. and p.m. peak hour traffic counts were obtained at the intersection on June 2, 2016 (see Appendix A). The a.m. peak hour occurred between 7:15 and 8:15 and the p.m. peak hour occurred between 4:15 and 5:15 p.m. **Figure 2** illustrates the existing peak hour traffic volumes.



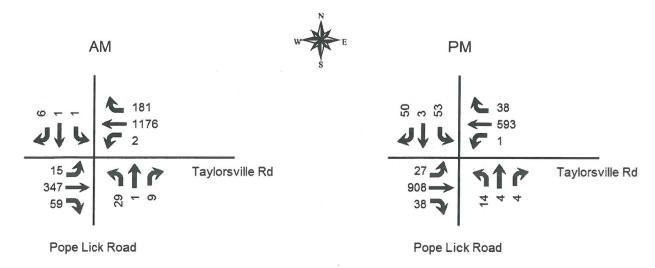


Figure 2 2016 Peak Hour Counts

#### **Future Conditions**

The projected completion year for this development is 2018, so the analysis year for this study is 2018. To predict traffic conditions in 2018, one percent annual growth in traffic was added. This growth is based upon a review of the historical count data at the Kentucky Transportation Cabinet count station 996. **Figure 3** displays the 2018 No Build volumes.

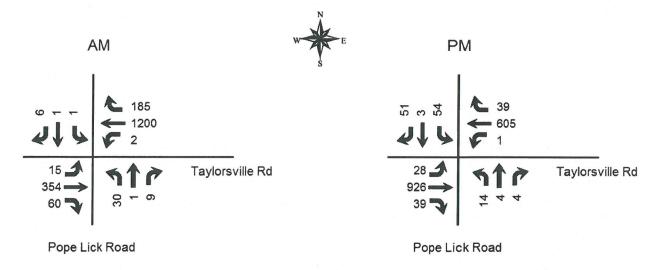


Figure 3 2018 No Build Peak Hour Volumes



#### **Trip Generation**

The Institute of Transportation Engineers <u>Trip Generation Manual</u>, 9th Edition contains trip generation rates for a wide range of developments. The land uses of "Specialty Retail" (826), "High-Turnover Sit-Down Restaurant" (932) and "Fast-Food Restaurant with Drive-Through Window" (934) best describe this development. The trip generation results are listed in **Table 1**. The results of the trip generation analysis are that this development will generate 156 a.m. peak hour trips and 191 p.m. peak hour trips. The trips were assigned to the highway network with 50 percent to/from the west 50 percent to/from the east. Both "Fast-Food" and "High-Turnover" restaurants have pass-by trip data. Pass-by trips are trips that are already on the adjacent highway that will visit the site. **Figure 4** shows the trips generated by this development and distributed throughout the road network for the year 2018 during the peak hours. The pass-by trips are shown in parenthesis. **Figure 5** displays the individual turning movements for the year 2018 for the peak hours when the development is completed.

Table 1 - Trip Generation

	AM P	eak Hou	r		PM	Peak Ho	our	
	Total	Enter	Exit	Pass-by	Total	Enter	Exit	Pass-by
Specialty Retail (19,000 sq ft)	Not Open				67	29	38	
High-Turnover Restaurant (6,000 sq ft)	65	36	29		59	35	24	-15
Fast-Food Restaurant (2,000 sq ft)	91	46	45	-23	65	34	31	-17
TOTAL	156	82	74	-23	191	98	93	-32

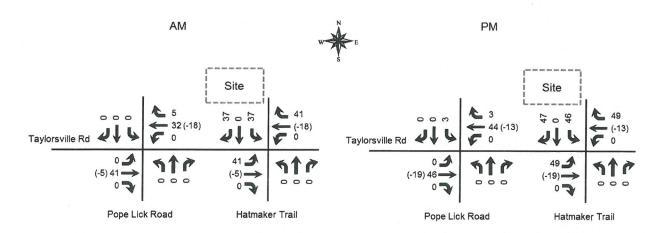


Figure 4
Trip Distribution for Site



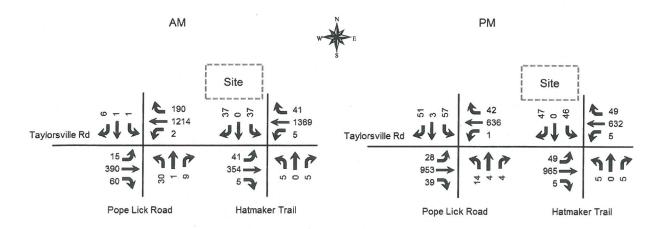


Figure 5 2018 Build Peak Hour Volumes

#### **Analysis**

The qualitative measure of operation for a roadway facility or intersection is evaluated by assigning a "Level of Service" or LOS. Level of Service is a ranking scale from A through F with each level representing a range. LOS results depend upon the type of facility that is analyzed. In this case, the LOS is based upon the average vehicle delay each movement experiences at an intersection.

To evaluate the impact of the proposed development, the vehicle delays at the intersection were determined using procedures detailed in the <u>Highway Capacity Manual</u>, 2010 edition. Future delay and Level of Service were determined for the intersection using HCS 2010 Streets software (version 6.80). **Table 2** shows the results of the analysis for the three scenarios analyzed. The full printouts are included in Appendix B.

Table 2 - Level of Service Results

	А	M Peak Hour		PI	VI Peak Hour	
	2016 Existing	2018 No Build	2018 Build	2016 Existing	2018 No Build	2018 Build
Taylorsville Road at Pope Lick Road						
Taylorsville Road Eastbound (left)	В	В	В	Α	Α	Α
	13.8	14.1	14.2	9.0	9.1	9.2
Taylorsville Road Westbound (left)	Α	Α	А	Α	В	В
	8.2	8.2	8.3	10.0	10.0	10.2
Pope Lick Road Northbound	F	F	F	F	F	F
	100.0	114.2	134.9	61.0	65.7	75.2
Pope Lick Road Southbound	С	С	С	F	F	F
	21.0	21.6	22.1	96.7	113.6	163.6



	AM Peak Hour	PM Peak Hour
Taylorsville Road at Entrance		
Taylorsville Road Eastbound (left)	В	A
	13.8	9.2
Taylorsville Road Westbound (left)	A	В
	8.1	10.2
Hatmaker Trail Northbound	E	D
	37.4	33.6
Entrance Southbound	E	F
	40.0	88.0

Note: Level of Service, delay in seconds

Using the Kentucky Transportation Cabinet <u>Auxiliary Turn Lane</u> Policy dated 7/20/2009 and the volumes in **Figure 5**, the volumes at the entrance meet the warrants for an eastbound left turn lane and a westbound right turn lane on Taylorsville Road.

#### **Conclusions**

Based upon the volume of traffic generated by the development and the amount of traffic forecasted for the year 2018, there will be an impact to the existing highway network. The proposed entrance will require an eastbound left turn lane and a westbound right turn lane.



# Appendix A<br/>Traffic Counts

#### Study Name Taylorsville Rd & S Pope Lick Rd Start Date 06/02/2016 Start Time 7:00 AM Site Code

		Pope Lie Southl				Taylorsv Westt		d		Pope Li		d		Taylorsv Eastb		d	
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Total
7:00 AM	1	0	0	0	35	291	0	0	1	1	4	0	11	60	3	0	407
7:15 AM	3	0	0	0	58	273	1	0	2	1	5	0	10	81	6	0	440
7:30 AM	1	1	1	0	46	313	0	0	3	0	2	0	14	75	4	0	460
7:45 AM	0	0	0	0	35	305	1	0	0	0	10	0	21	106	2	2	482
8:00 AM	2	0	0	0	42	285	0	0	4	0	12	0	14	85	1	0	445
8:15 AM	1	1	0	0	41	289	1	1	1	0	6	0	14	77	3	0	435
8:30 AM	0	0	1	0	51	255	2	0	2	0	6	0	8	88	4	0	417
8:45 AM	1	0	0	0	40	232	1	0	1	0	3	0	7	85	9	0	379
4:00 PM	4	0	8	0	2	111	1	0	2	0	2	0	16	232	4	0	382
4:15 PM	9	2	13	0	10	134	0	0	1	1	5	0	13	241	1	0	430
4:30 PM	17	0	7	0	8	156	0	0	1	3	2	0	6	234	4	0	438
4:45 PM	9	0	15	0	12	162	0	0	1	0	4	0	7	210	6	0	426
5:00 PM	15	1	18	0	8	141	1	0	1	0	3	0	12	223	16	0	439
5:15 PM	19	1	24	0	17	62	2	0	2	1	4	0	8	147	8	0	295
5:30 PM	12	6	17	0	9	23	0	0	3	6	4	0	7	124	13	0	224
5:45 PM	9	1	17	0	28	195	0	0	2	0	4	0	6	217	11	0	490

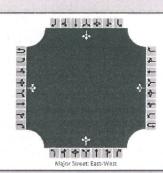
		Pope Lic South		1		Taylorsv West		d		Pope Li Northi	ck Road bound	,		Faylorsv Eastb		d	
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Total
7:15 AM	3	0	0	0	58	273	1	0	2	1	5	0	10	81	6	0	440
7:30 AM	1	1	1	0	46	313	0	0	3	0	2	0	14	75	4	0	460
7:45 AM	0	0	0	0	35	305	1	0	0	0	10	0	21	106	2	2	482
8:00 AM	2	0	0	0	42	285	0	0	4	0	12	0	14	85	1	0	445
TOTAL	6	1	1	0	181	1176	2	0	9	1	29	0	59	347	13	2	1827
4:15 PM	9	2	13	0	10	134	0	0	1	1	5	0	13	241	1	0	430
4:30 PM	17	0	7	0	8	156	0	0	1	3	2	0	6	234	4	0	438
4:45 PM	9	0	15	0	12	162	0	0	1	0	4	0	7	210	6	0	426
5:00 PM	15	1	18	0	8	141	1	0	1	0	3	0	12	223	16	0	439
TOTAL	50	3	53	0	38	593	1	0	4	4	14	0	38	908	27	0	1733



# Appendix B HCS Reports

	HCS 2010 Two-W	ay Stop Control Summary F	Report
General Information		Site Information	
Analyst	DBZ	Intersection	Taylorsville Rd at Pope L
Agency/Co.	CDM Smith	Jurisdiction	
Date Performed	6/23/2016	East/West Street	Taylorsville Rd
Analysis Year	2016	North/South Street	Pope Lick Road
Time Analyzed	AM Peak	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Pope Lick Station		

#### Lanes



Vehicle	Volumes	and Ad	justments
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Approach		East	bound			West	bound			North	bound			South	bound	
Movement	U	L	T	R	U	L	Т	R	U	L	T	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0	-13	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		15	347	59		2	1176	181		29	1	9		1	1	6
Percent Heavy Vehicles		20				0				3	3	3		0	0	17
Proportion Time Blocked										1	13.6					
Right Turn Channelized		١	10			1	No			١	10			N	No	Access mensor
Median Type								Undi	vided							
Median Storage							-						Control Section 1			THE RESERVE

#### Delay, Queue Length, and Level of Service

Flow Rate (veh/h)	16	2	41	8
Capacity	424	1143	75	233
v/c Ratio	0.04	0.00	0.55	0,03
95% Queue Length	0.1	0.0	2.3	0.1
Control Delay (s/veh)	13.8	8.2	100.0	21.0
Level of Service (LOS)	В	Α	F F	C
Approach Delay (s/veh)	1.2	0.1	100.0	21.0
Approach LOS			F	C

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Analyst DSZ Interse	ction Taylorsville Rd at Pope
AIG	
Agency/Co. CDM Smith Jurisdie	ction
Date Performed 6/23/2016 East/W	est Street Taylorsville Rd
Analysis Year 2018 North/	South Street Pope Lick Road
Time Analyzed AM Peak No Build Peak H	our Factor 0.95
Intersection Orientation East-West Analysi	is Time Period (hrs) 0.25
Project Description Pope Lick Station	
Lanes	
741747	The state of the s



#### **Vehicle Volumes and Adjustments** Approach Eastbound Westbound Northbound Southbound Movement U R R R R Priority 10 3 6 7 9 1 2 4U 4 5 8 10 11 12 Number of Lanes 0 0 1 0 0 0 1 0 0 1 0 0 1 0 Configuration LTR LTR LTR Volume (veh/h) 354 1200 185 30 1 15 60 2 1 9 1 6 Percent Heavy Vehicles 20 0 3 3 3 0 0 17 Proportion Time Blocked Right Turn Channelized No No No No Undivided Median Type Median Storage

Flow Rate (veh/h)	16	2	42	8
Capacity	413	1135	70	224
v/c Ratio	0.04	0.00	0.60	0.04
95% Queue Length	0.1	0.0	2.6	0.1
Control Delay (s/veh)	14.1	8.2	114.2	21.6
Level of Service (LOS)	В	Α	F. F.	С
Approach Delay (s/veh)	1.2	0.1	114.2	21.6
Approach LOS			F	С

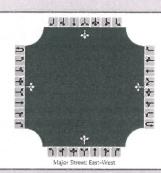
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	HCS 2010 Two-Wa	ay Stop Control Summary F	Report
General Information		Site Information	
Analyst	DBZ	Intersection	Taylorsville Rd at Pope L
Agency/Co.	CDM Smith	Jurisdiction	
Date Performed	6/23/2016	East/West Street	Taylorsville Rd
Analysis Year	2018	North/South Street	Pope Lick Road
Time Analyzed	AM Peak Build	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Pope Lick Station		

#### Lanes



Vehicle	Volumes	and	Adjustm	ents
Annearch				Γ-

Approach		East	oound			West	bound			North	bound			South	bound	
Movement	U	L	T	R	U	L	Т	R	U	L	T	R	U	L	T	R
Priority	10	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0	1000	0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		15	390	60		2	1214	190		30	1	9		1	1	6
Percent Heavy Vehicles		20				0				3	3	3		0	0	17
Proportion Time Blocked										1						
Right Turn Channelized		١	lo			1	No			١	lo			١	lo	
Median Type								Undi	vided							
Median Storage			-		-		AND DESCRIPTION OF THE PARTY OF			-					-	- CHIMNE

#### Delay, Queue Length, and Level of Service

Flow Rate (veh/h)	16	2	42	8
Capacity	406	1099	64	219
v/c Ratio	0.04	0.00	0.66	0.04
95% Queue Length	0.1	0.0	2.8	0.1
Control Delay (s/veh)	14.2	8.3	134.9	22.1
Level of Service (LOS)	В	A	F	С
Approach Delay (s/veh)	1.2	0.1	134.9	22.1
Approach LOS			F	c ·

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	HC:	5 201	LO IN		ay Si	tob (	ontr	01.30	ımm	ary F	Repoi	rt				
General Information							Site	Infor	matio	n						
Analyst	DBZ						Inters	section			Taylo	orsville F	Rd at Pop	e L		
Agency/Co.	CDM	Smith					Juriso	diction								
Date Performed	6/23	/2016			-		East/	West St	reet		Taylo	orsville R	ld			
Analysis Year	2016						North	h/South	Street		Pope	Lick Ro	ad	Day 51		
Time Analyzed	PM F	eak					Peak	Hour Fa	ctor		0.99				-	
Intersection Orientation	East-	West	19.41	W. (1)			Analy	sis Time	e Period	(hrs)	0.25					
Project Description	Pope	Lick Sta	tion													
Lanes																
Webble Web	\ d!			1144446		† †Y vr Street: E		i d	* } } ;							
Vehicle Volumes and A	Aajustme	Season .	oound													
Approach		casti	bouriu			West	bound	-		North	bound			South	bound	
Approach  Movement	U	L	T	R	U	L	bound T	R	U	North	T	R	U	South	T	R
	U 1U			R 3	U 4U			R 6	U			R 9	U		_	
Movement		L	T			L	Т		U	L	T		U	L	Т	
Movement Priority	10	L 1	T 2	3	4U	L 4	T 5	6	U	L 7	T 8	9	U	L 10	T 11	12
Movement Priority Number of Lanes	10	L 1	T 2 1	3	4U	L 4	T 5	6	U	L 7	8 1	9	U	L 10	11 1	0
Movement Priority Number of Lanes Configuration	10	L 1	T 2 1 LTR	3	4U	L 4 0	T 5 1 LTR	6	U	7 0	T 8 1 LTR	9	U	10 0	T 11 1 LTR	12
Movement Priority Number of Lanes Configuration Volume (veh/h)	10	L 1 0 27	T 2 1 LTR	3	4U	L 4 0 1	T 5 1 LTR	6	U	14	8 1 LTR 4	9 0	U	10 0 53	11 1 1 LTR 3	12 0 50
Movement Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles	10	L 1 0 27 7	T 2 1 LTR	3	4U	1 0	T 5 1 LTR	6	U	14 7	8 1 LTR 4	9 0	U	10 0 53 2	11 1 1 LTR 3	12 0 50
Movement Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles Proportion Time Blocked	10	L 1 0 27 7	T 2 1 LTR 908	3	4U	1 0	T 5 1 LTR 593	6 0 38	U	14 7	T 8 1 LTR 4 3	9 0	U	10 0 53 2	T 11 1 LTR 3 0	12 0 50
Movement Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles Proportion Time Blocked Right Turn Channelized	10	L 1 0 27 7	T 2 1 LTR 908	3	4U	1 0	T 5 1 LTR 593	6 0 38		14 7	T 8 1 LTR 4 3	9 0	U	10 0 53 2	T 11 1 LTR 3 0	0 50
Movement Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles Proportion Time Blocked Right Turn Channelized Median Type Median Storage	10 0	27 7	T 2 1 LTR 908	3	4U	1 0	T 5 1 LTR 593	6 0 38		14 7	T 8 1 LTR 4 3	9 0	U	10 0 53 2	T 11 1 LTR 3 0	0 50
Movement Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles Proportion Time Blocked Right Turn Channelized Median Type Median Storage Delay, Queue Length, a	10 0	27 7	T 2 1 LTR 908	3	4U	1 0	T 5 1 LTR 593	6 0 38		14 7	T 8 1 LTR 4 3	9 0	U	10 0 53 2	T 11 1 LTR 3 0	0 50
Movement Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles Proportion Time Blocked Right Turn Channelized Median Type Median Storage Delay, Queue Length, a	10 0	27 7	T 2 1 LTR 908	3	4U	1 0	T 5 1 LTR 593	6 0 38		14 7	T 8 1 LTR 4 3	9 0	U	10 0 53 2	T 11 1 LTR 3 0	0 50
Movement Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles Proportion Time Blocked Right Turn Channelized Median Type Median Storage Delay, Queue Length, a Flow Rate (veh/h) Capacity	10 0	27 7 1 of Se 27	T 2 1 LTR 908	3	4U	1 0	T 5 1 LTR 593	6 0 38		14 7	T 8 1 LTR 4 3	9 0	U	10 0 53 2	T 11 1 1 LTR 3 0	0 50
Movement Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles Proportion Time Blocked Right Turn Channelized Median Type Median Storage Delay, Queue Length, a Flow Rate (veh/h) Capacity v/c Ratio	10 0	27 7 7 N N N N N N N N N N N N N N N N N	T 2 1 LTR 908	3	4U	1 728	T 5 1 LTR 593	6 0 38		14 7	T 8 1 LTR 4 3 No 22 86	9 0	U	10 0 53 2	T 11 1 1 LTR 3 0	0 50
Movement Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles Proportion Time Blocked Right Turn Channelized Median Type Median Storage Delay, Queue Length, a Flow Rate (veh/h) Capacity v/c Ratio 95% Queue Length	10 0	27 7 P P P P P P P P P P P P P P P P P P	T 2 1 LTR 908	3	4U	1 728 0.00	T 5 1 LTR 593	6 0 38		14 7	T 8 1 LTR 4 3 No 22 86 0.26	9 0	U	10 0 53 2	108 134 0.81	0 50
Movement Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles Proportion Time Blocked Right Turn Channelized Median Type Median Storage Delay, Queue Length, a Flow Rate (veh/h) Capacity v/c Ratio	10 0	27 7 N N S 27 924 0.03 0.1	T 2 1 LTR 908	3	4U	1 0 1 728 0.00 0.0	T 5 1 LTR 593	6 0 38		14 7	T 8 1 LTR 4 3 No 22 86 0.26 0.9	9 0		10 0 53 2	108 134 0.81 5.0	12 0 50

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General Information							Site	Infor	matio	1						
Analyst	DBZ				***************************************		Inters	ection			Taylo	rsville R	d at Pop	e L		
Agency/Co.	CDM	Smith					Jurisd	liction								
Date Performed	6/23/	2016				-	East/\	West Str	eet		Taylo	rsville R	d			
Analysis Year	2018	455					North	/South	Street		Pope	Lick Ro	ad			
Time Analyzed	PM P	eak No l	Build				Peak	Hour Fa	ctor		0.99					
Intersection Orientation	East-	West					Analy	sis Time	Period (	hrs)	0.25	not be				
Project Description	Pope	Lick Sta	tion	ALIACIA AGRICADA LUNCARO			discussion and				Anatomic Street St.					and the contract of the contra
					ACCUPATION NAMED IN		4 4 6									
				74 1 74 5 6 6		*		*								
Vehicle Volumes and Ac	ljustme	nts		74 144 5 6 8				*								
<b>Vehicle Volumes and Ac</b> Approach	ljustme		ound	74174516		† • Y • Street Ea				North	bound			South	bound	
	ljustme		ound T	3414456		† • Y • Street Ea	sst-West	R	U	North L	bound	R	U	South	bound	R
Approach					Major	Y Street Ea	oound					R 9	U			-
Approach Movement	U	Eastb	Т	R	Major	Y Street: Ea	oound T	R		L	T		U	L	Т	12
Approach Movement Priority	U 1U	Eastb L 1	T 2	R 3	Major U 4U	Vestil	oound T	R 6		L 7	T 8	9	U	L 10	T 11	12
Approach  Movement  Priority  Number of Lanes	U 1U	Eastb L 1	T 2	R 3	Major U 4U	Vestil	oound T 5	R 6		L 7	8 1	9	U	L 10	T 11	R 122 0

Right Turn Channelized	No	No	No	No
Median Type		Ui	ndivided	
Median Storage				
Delay, Queue Length, an	d Level of Service			
Flow Rate (veh/h)	28	1	22	110
Capacity	914	716	81	127
v/c Ratio	0.03	. 0.00	0.27	0.87
95% Queue Length	0.1	0.0	1.0	5.5
Control Delay (s/veh)	9.1	10.0	65.7	113.6
Level of Service (LOS)	A	B	F	F
Approach Delay (s/veh)	0.8	0.0	65.7	113.6
Approach LOS			F	F

Proportion Time Blocked

HCS 2010<sup>th</sup> TWSC Version 6.80 PM 18 NB.xtw Generated: 6/23/2016 3:03:16 PM

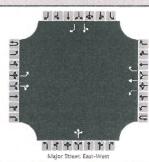


											THE RESERVE					10,130
General Information							Site	Infor	matio	n						
Analyst	DBZ						Inter	section		and cool married manadacay	Taylo	orsville R	Rd at Pop	oe L		
Agency/Co.	CDM	Smith					Jurise	diction								
Date Performed	6/23/	2016					East/	West St	reet		Taylo	orsville R	Rd			
Analysis Year	2018						Nort	h/South	Street		Pope	Lick Ro	ad			
Time Analyzed	PM P	eak Buil	d				Peak	Hour Fa	ctor		0.99					
Intersection Orientation	East-	West					Analy	ysis Time	Period	(hrs)	0.25			i kik		
Project Description	Pope	Lick Sta	ition													
Lanes																
				8744717		*Y			-							
Vehicle Volumes and A	djustme															
Approach	. 1	East	oound		1	West	bound			North	bound			South	bound	
Approach Movement	U	East!	T	R	U	West	bound	R	U	North	bound	R	U	South	bound	
	U 1U			R 3	U 4U			R 6	U	7		R 9	U			
Movement		L	Т			L	T		U	L	Т		U	L	Т	1
Movement Priority	10	L 1	T 2	3	4U	L 4	T 5	6	U	L 7	T 8	9	U	L 10	T 11	1
Movement Priority Number of Lanes	10	L 1	T 2 1	3	4U	L 4	7 5	6	U	L 7	8 1	9	U	L 10	11 1	1
Movement Priority Number of Lanes Configuration	10	1 0	T 2 1 LTR	3	4U	L 4 0	7 5 1 LTR	6	U	L 7	T 8 1 LTR	9	U	10 0	T 11 1 LTR	5
Movement Priority Number of Lanes Configuration Volume (veh/h)	10	L 1 0	T 2 1 LTR	3	4U	1 L	7 5 1 LTR	6	U	L 7 0 14	8 1 LTR 4	9 0 4	U	10 0 57	11 1 LTR 3	1 (
Movement Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles	10	L 1 0 28 7	T 2 1 LTR	3	4U	1 0	7 5 1 LTR	6	U	L 7 0 14 7	8 1 LTR 4	9 0 4	U	10 0 57 2	11 1 LTR 3	1 (
Movement Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles Proportion Time Blocked	10	L 1 0 28 7	T 2 1 LTR 953	3	4U	1 0	5 1 LTR 636	6		L 7 0 14 7	T 8 1 LTR 4 3	9 0 4	U	10 0 57 2	T 11 1 LTR 3 0	5 C
Movement Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles Proportion Time Blocked Right Turn Channelized	10	L 1 0 28 7	T 2 1 LTR 953	3	4U	1 0	5 1 LTR 636	6 0 42		L 7 0 14 7	T 8 1 LTR 4 3	9 0 4	U	10 0 57 2	T 11 1 LTR 3 0	5
Movement Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles Proportion Time Blocked Right Turn Channelized Median Type Median Storage	10	L 1 0 0 28 7	T 2 1 LTR 953	3	4U	1 0	5 1 LTR 636	6 0 42		L 7 0 14 7	T 8 1 LTR 4 3	9 0 4	U	10 0 57 2	T 11 1 LTR 3 0	5
Movement Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles Proportion Time Blocked Right Turn Channelized Median Type Median Storage Delay, Queue Length, a	10	L 1 0 0 28 7	T 2 1 LTR 953	3	4U	1 0	5 1 LTR 636	6 0 42		L 7 0 14 7	T 8 1 LTR 4 3	9 0 4	U	10 0 57 2	T 11 1 LTR 3 0	5
Movement Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles Proportion Time Blocked Right Turn Channelized Median Type Median Storage Delay, Queue Length, a Flow Rate (veh/h)	10	28 7 N	T 2 1 LTR 953	3	4U	1 0 N	5 1 LTR 636	6 0 42		L 7 0 14 7	T 8 1 LTR 4 3	9 0 4		10 0 57 2	T 11 1 LTR 3 0	1
Movement Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles Proportion Time Blocked Right Turn Channelized Median Type Median Storage Delay, Queue Length, a Flow Rate (veh/h) Capacity	10	28 7 of Se	T 2 1 LTR 953	3	4U	1 0 N	5 1 LTR 636	6 0 42		L 7 0 14 7	T 8 1 LTR 4 3	9 0 4	U	10 0 57 2	T 11 1 LTR 3 0	1
Movement Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles Proportion Time Blocked Right Turn Channelized Median Type Median Storage Delay, Queue Length, a Flow Rate (veh/h) Capacity v/c Ratio	10	28 7 N N S S S S S S S S S S S S S S S S S	T 2 1 LTR 953	3	4U	1 699	5 1 LTR 636	6 0 42		L 7 0 14 7	T 8 1 LTR 4 3 3 No 22 72	9 0 4		10 0 57 2	T 11 1 1 LTR 3 0 No	1
Movement Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles Proportion Time Blocked Right Turn Channelized Median Type Median Storage Delay, Queue Length, a Flow Rate (veh/h) Capacity v/c Ratio 95% Queue Length	10	1 0 28 7 N N Of See 28 887 0.03	T 2 1 LTR 953	3	4U	1 699 0.00	5 1 LTR 636	6 0 42		L 7 0 14 7	T 8 1 LTR 4 3 3 No 22 72 0.30	9 0 4		10 0 57 2	T 11 1 1 LTR 3 0 0 113 111 1.02	1
Movement Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles Proportion Time Blocked Right Turn Channelized Median Type Median Storage Delay, Queue Length, a	10	1 0 0 28 7 N N Of See 887 0.03 0.1	T 2 1 LTR 953	3	4U	1 699 0.00	5 1 LTR 636	6 0 42		L 7 0 14 7	T 8 1 LTR 4 3 3 So 22 72 0.30 1.1	9 0 4		10 0 57 2	113 111 1 LTR 3 0	5
Movement Priority Number of Lanes Configuration Volume (veh/h) Percent Heavy Vehicles Proportion Time Blocked Right Turn Channelized Median Type Median Storage Delay, Queue Length, a Flow Rate (veh/h) Capacity v/c Ratio 95% Queue Length Control Delay (s/veh)	10	28 7 0 of Se 28 887 0.03 0.1	1 LTR 953	3	4U	1 699 0.00 0.0 10.2	5 1 LTR 636	6 0 42		14 7 N	22 72 0.30 1.1 75.2	9 0 4		10 0 0 57 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	113 113 111 102 6.6 163.6	5

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	UC2 5010 1M0-M	ay Stop Control Summary F	Report
General Information		Site Information	
Analyst	DBZ	Intersection	Taylorsville at entrance
Agency/Co.	CDM Smith	Jurisdiction	
Date Performed	6/23/2016	East/West Street	Taylorsville Rd
Analysis Year	2018	North/South Street	Entrance/Hatmaker Tr
Time Analyzed	AM Peak	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Pope Lick Station		



#### Vehicle Volumes and Adjustments

Approach		Easti	bound			West	tbound			North	bound			South	bound	
Movement	U	L	T	R	U	L	T	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	1	1	1		0	1	0		0	1	1
Configuration		L	-	TR		L	Т	R			LTR			LT		R
Volume (veh/h)		41	354	5		5	1369	41		5	0	5		37	0	37
Percent Heavy Vehicles		3				3				3	3	3		3	3	3
Proportion Time Blocked																
Right Turn Channelized		V	10			1	No			1	No			N	No	
Median Type								Left	Only							
Median Storage									1	-	-			-		-

#### Delay, Queue Length, and Level of Service

Flow Rate (veh/h)	43	5		10	39	39
Capacity	450	1174		121	126	162
v/c Ratio	0.10	0.00		0.08	0.31	0.24
95% Queue Length	0.3	0.0	CA PER COR	0.3	1.2	0.9
Control Delay (s/veh)	13.8	8.1		37.4	45.7	34.2
Level of Service (LOS)	В	A		E	E	D
Approach Delay (s/veh)	1.4	0.0	3	17.4	40.0	
Approach LOS				E	E	

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General Information							Site	Infor	matio	n						
Analyst	DBZ						Inter	section			Taylo	rsville a	entrand	ce		-
Agency/Co.	CDM	Smith					Juriso	diction	Louis In							
Date Performed	6/23,	/2016					East/	West Str	reet		Taylo	rsville R	d			
Analysis Year	2018		(A) 53				Norti	h/South	Street		Entra	nce/Hat	maker T	r		
Time Analyzed	PM P	eak					Peak	Hour Fa	ctor		0.99					
Intersection Orientation	East-	West					Analy	ysis Time	Period	(hrs)	0.25			-		
Project Description	Pope	Lick Sta	tion					di dindamini karabupat N								mod bein
					0 4	11	4 b L									
				0744		ا ل			<u>.</u>							
				1 4 4 4 4 4 6	n H	4	1 8 6		· · · · · · · · · · · · · · · · · · ·							
	Adjustme		ngund	01447140	n H	↓↓ ↑ ↑ • Street E	↑ <b>↑</b> C			North	bound			South	baund	
	Adjustme		pound		n H	↓↓ ↑ ↑ • Street E	1 8 6			North	bound	R	U	South	bound	
Approach Movement		Eastl		R 3	N di Majo	↓↓ † Y w Street E	† † C				bound T 8	R	U		bound T	
Approach Movement Priority	U	Easth	Т	R	n d Majo	West L	to pound	R		L	T		U	L	T	
Vehicle Volumes and A Approach Movement Priority Number of Lanes Configuration	U 1U	Eastl L 1	T 2	R 3	n f Majo	West L 4	ast-West	R 6		L 7	T 8	9	U	L 10	T 11	

Right Turn Channelized	No	No		No	No		
Median Type Left Only							
Median Storage	1						
Delay, Queue Length, and	d Level of Service						
Flow Rate (veh/h)	49	5	T	10	93	37	
Capacity	901	700		136	111	475	
v/c Ratio	0.05	0.01		0.07	0.84	0.08	
95% Queue Length	0.2	0.0		0.2	4.9	0.3	
Control Delay (s/veh)	9.2	10.2		33.6	117.7	13.2	
Level of Service (LOS)	A	В		D	F	В	
Approach Delay (s/veh)	0.4	0.1		33.6	88.0	88.0	
Approach LOS				D	F		

Percent Heavy Vehicles
Proportion Time Blocked

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