

REVISED
ACCESS STUDY

1750 FOREST DRIVE
Redevelopment Project
City of Annapolis, Maryland

Revised
February, 2017

Prepared For:
Manekin Investment Services

Prepared By:
TRAFFIC CONCEPTS, INC.
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Introduction

This Access Study has been revised to address comments received from the City of Annapolis dated February 6, 2017.

Traffic Concepts, Inc. has been requested to analyze the vehicle access for the existing office building at the northwest quadrant of the Forest Drive at South Cherry Grove Avenue intersection. The property is improved with an office building which in the past has been occupied by MAIF, a quasi government office offering insurance to high risk drivers. The MAIF use has moved out and a new owner is looking at reoccupying the building with general office space. The new owner would like to improve vehicle access by providing a connection to South Cherry Grove Avenue in order for the site-generated vehicles to utilize the signalized intersection at Forest Drive and South Cherry Grove Avenue. We have studied this change in access and the traffic safety and capacity impacts to the Forest Drive corridor. We will detail the analysis we have prepared.

Previous Use vs. Proposed Use

As mentioned previously this building was occupied by a government type use and will be replaced by a general office use with some medical office uses as well. The chart below compares the vehicle trip generation rates for the previous and now proposed uses.

	<u>AM</u>		<u>PM</u>		<u>ADT</u>
	<u>IN</u>	<u>OUT</u>	<u>IN</u>	<u>OUT</u>	
<u>Previous Use</u>					
Office Gov. Complex ITS Land Use Code 733 125,139gsf	247	30	111	246	3494
<u>Proposed Use</u>					
General Office ITE Land Use Code 710 87,597gsf	151	21	30	147	966
Medical Office ITE Land Use Code 720 37,542gsf	71	19	38	96	1356
Total	222	40	68	243	2322

As can be seen, the past use would have generated more daily and peak hour vehicle trips than the proposed reuse of the building.

Existing Vehicle Access

The existing building has two direct accesses to Forest Drive. The western most access provides for right-in/right-out movements. The eastern most access provides for left-in/right-in/right-out access but does not allow for left turn out movements to eastbound Forest Drive. This movement currently requires right-out and U-turn movements at the adjacent signalized intersection of Forest Drive and Bywater Road. The left-in movement into the office building is currently unsignalized and the County has indicated to the developer in preliminary meetings that in the future, this left-in movement would likely be taken away as traffic flows along westbound Forest Drive increase.

Future Access

The future owners of the building see a need to improve the current vehicle access in order to succeed with the planned development. The owners conclude that an access to South Cherry Grove Avenue will improve the safety of the ingress and egress for certain movements. It is also realized that in the future, the unsignalized inbound left turn median break may be closed leaving the property with even more restricted movements.

The community has shown concerns with this type of access due to fears of increased congestion along South Cherry Grove Avenue and intrusion of non-related vehicles into the neighborhood. In order to combat this issue the access will be designed to allow only left-in access from South Cherry Grove Avenue and right out access towards Forest Drive. A concept plan for this access design is attached.

We have also prepared an analysis of traffic conditions along the South Cherry Grove Avenue approach to Forest Drive. The analysis has been completed by utilizing a previous SYNCHRO/SIMTRAFFIC analysis prepared by our firm to examine traffic flow conditions along the Forest Drive corridor for the City of Annapolis. As requested, we have conducted a turning movement count at the intersection of Forest Drive @ South Cherry Grove Avenue in order to obtain current traffic operating conditions. We have added the impact of the proposed development to this intersection as well as to the site access intersections. Detailed exhibits are attached.

The results indicate that the change in access will not result in significant differences to the current operation of the Forest Drive at South Cherry Grove Avenue intersection. The concept plan for South Cherry Grove Avenue shows extending the existing right turn lane to approximately 150'. This will increase the stacking area from 2 vehicles to six vehicles to insure right turn movements to westbound Forest Drive are not blocked by queuing left and thru vehicles waiting for the traffic light to change to green. Our field observations indicate that this is currently an issue during peak travel times. Also, we are suggesting that the County consider making a minor change to the side road signal timing at the Forest Drive @ South Cherry Grove Avenue intersection during the evening peak period only. Currently, the southbound approach of South Cherry Grove Avenue has a signal phase consisting of 12 seconds while the

northbound approach has a signal phase consisting of 31 seconds. We would suggest that these splits be modified to provide 20 seconds for the southbound approach and 23 seconds for the northbound approach. This will provide for adequate levels of service on both approaches and eliminate any double-cycling for vehicles exiting the side roads. We conclude, with the extension of the existing right turn lane; the additional access will not overburden the existing Forest Drive and South Cherry Grove Avenue intersection.

Cut Through Traffic Concern

During previous discussions with the local community, they expressed fears of the new access creating new vehicle trips using community residential roads. This fear was mainly for vehicles to and from the building to Hilltop Lane and into the Eastport area to the east. The residents stated this as a problem that already exists. To investigate this our office conducted travel time surveys for the various cut through routes to determine if travel routes are shorter through the local community roads or using the Hilltop Lane/Forest Drive corridor. We also tracked vehicles to determine if any of this cut through type traffic is occurring today.

The results of that study indicated that no cut through traffic is currently occurring and travel times would be longer if the local community roads were used in lieu of Hilltop Lane and Forest Drive. We have prepared the attached exhibit to present the results of our travel time analysis. Details of the study and a summary of actions are attached to this report.

Conclusions

Based on the results of our analysis, the new secondary access to South Cherry Grove Avenue will improve overall access to the property with minor impacts to the area road network and local community streets. The following changes are recommended:

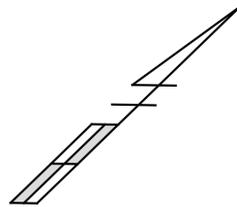
- Lengthen the existing right turn lane on South Cherry Grove Avenue from 50' to 150'.
- Request that the County consider modifying the signal timing at the Forest Drive @ South Cherry Grove Avenue intersection during the evening peak period. Currently, during the evening peak period, the side road timing provides 12 seconds for the southbound approach and 31 seconds for the northbound approach. These splits should be modified to provide 20 seconds for the southbound approach and 23 seconds for the northbound approach.
- Construct the access to the property from South Cherry Grove Avenue to restrict inbound movements from the community and direct all outbound movements towards Forest Drive.
- Weaving and U-turn movements that currently exist to travel east on Forest Drive will be eliminated thus improving safety along the Forest Drive corridor.

SYNCHRO RESULTS

	AM	PM
	<u>Delay(LOS)</u>	<u>Delay(LOS)</u>
<u>Forest Drive @ South Cherry Grove Avenue</u>		
Eastbound	8.4 (A)	16.5 (B)
Westbound	12.5 (B)	17.9 (B)
Northbound	51.8 (D)	51.6 (D)
Southbound	21.9 (C)	57.9 (E)
Overall Intersection	13.1 (B)	19.7 (B)

SIMTRAFFIC QUEUING RESULTS

Intersection	Movement	Length of Turn Bay	AM PEAK Projected 95th Queue	PM PEAK Projected 95th Queue
Forest Drive @ S. Cherry Grove Avenue	SB Right	150'	55'	50'
S. Cherry Grove Avenue @ Site Access "C"	NB Left/Thru	Continuous	21'	0'
Forest Drive @ Site Access "B"	EB Left	270'	141'	107'



FOREST DRIVE

EBT
EBT
EBT
EBL

NBL
NBT
NBR

WBL
WBT
WBT
WBT

SBR
SBT

RIGHT-OF-WAY LINE

EXISTING GEOMETRICS

PROPOSED GEOMETRICS

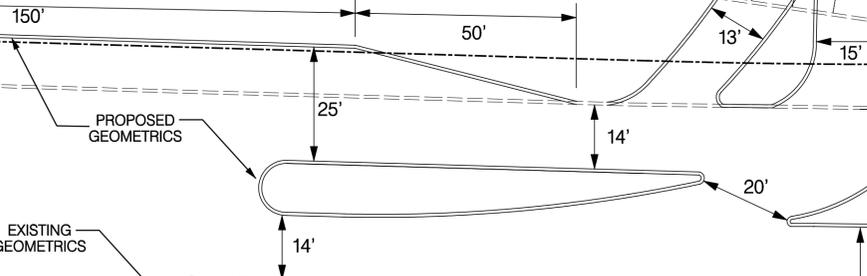
EXISTING GEOMETRICS

PROPOSED GEOMETRICS

PROPOSED GEOMETRICS

RIGHT-OF-WAY LINE

SOUTH CHERRY GROVE AVENUE



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Concept Plan		
Forest Drive at South Cherry Grove Avenue Anne Arundel County		
DRAWN BY: C. ZAYDEL	DESIGNED BY: K. SCHMID	CHECKED BY: J. K. SCHMID
DATE: 7-20-2016	SHEET NO: 1 OF 1	SCALE: 1" = 20'

PLOTTED: Monday, February 20, 2017 AT 10:20 PM
 FILE: M:\2016\2016\concept - South Cherry Grove Road\South Cherry Road 3-23-2016.dgn

PEAK HOUR TURNING MOVEMENT COUNT

INTERSECTION: FOREST DRIVE @ SOUTH CHERRY GROVE

CITY: ANNAPOLIS

COUNT BY: B. PAGE / A. NEUSE

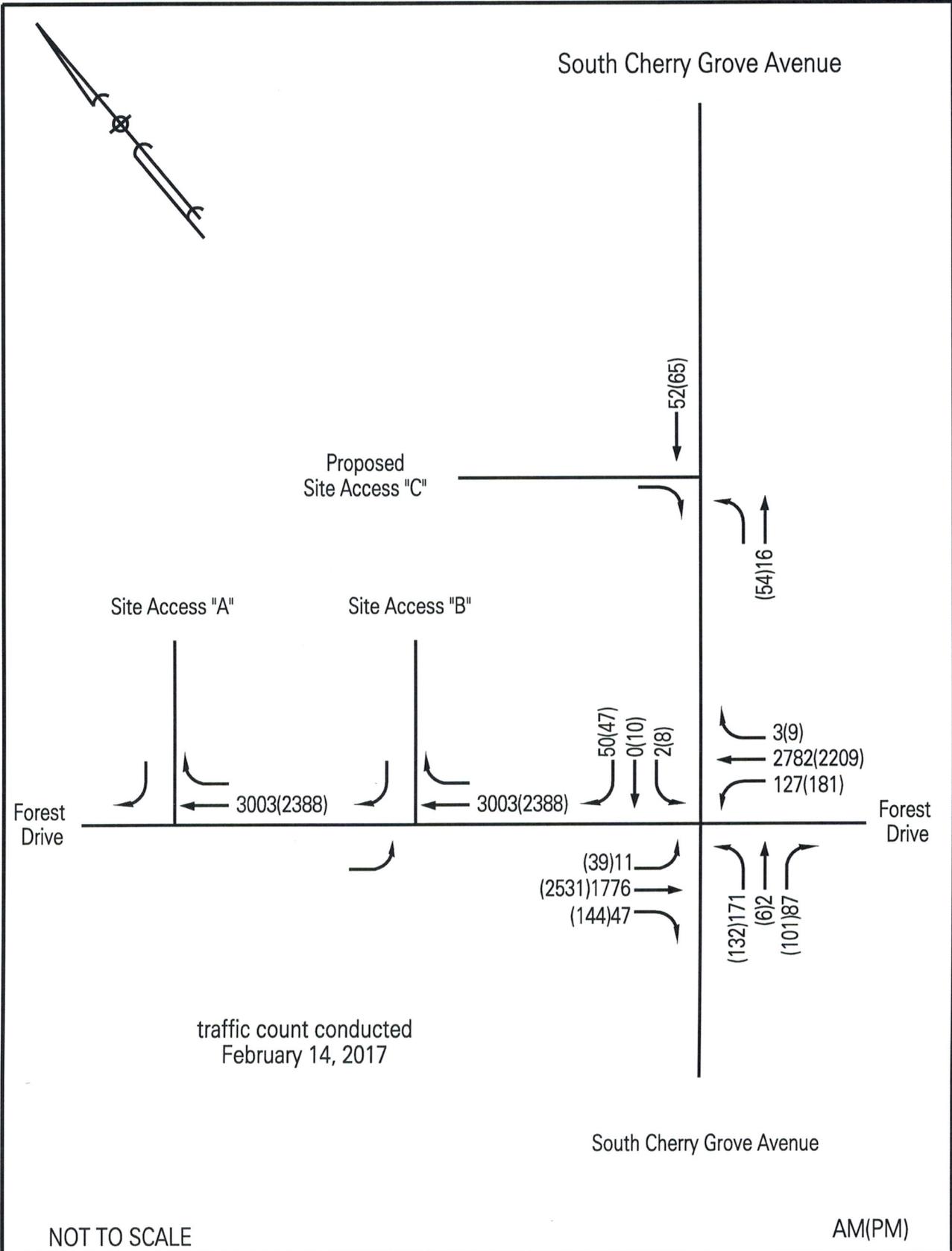
DATE: FEBRUARY 14, 2017

WEATHER: OVERCAST

DAY: TUESDAY

TIME	S. CHERRY GROVE NORTHBOUND			S. CHERRY GROVE SOUTHBOUND			FOREST DRIVE EASTBOUND			FOREST DRIVE WESTBOUND				TOTAL	
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	U-TURN		
AM															
7:00-7:15	43	1	10	1	1	8	4	244	11	21	690	0	0	1034	
7:15-7:30	51	0	22	1	1	18	3	329	10	19	584	0	0	1038	
7:30-7:45	33	0	23	1	0	11	3	435	12	28	624	0	1	1171	
7:45-8:00	47	0	21	0	0	16	2	498	12	23	689	3	1	1312	
8:00-8:15	48	2	23	0	0	8	4	450	14	43	711	0	0	1303	
8:15-8:30	43	0	20	1	0	15	2	393	9	30	758	0	1	1272	
8:30-8:45	45	1	18	1	2	17	9	379	12	35	588	7	0	1114	
8:45-9:00	35	3	17	0	1	12	22	434	20	30	637	16	1	1228	
PEAK HR 7:30-8:30 TOTALS	171	2	87	2	0	50	11	1776	47	124	2782	3	3	PHF 0.96	
PM															
4:00-4:15	35	4	16	3	1	12	13	610	26	25	520	2	2	1269	
4:15-4:30	26	0	22	1	1	17	3	639	33	47	577	3	1	1370	
4:30-4:45	30	1	23	3	3	12	8	634	32	34	524	3	1	1308	
4:45-5:00	41	3	31	3	3	11	12	632	41	51	540	2	3	1373	
5:00-5:15	35	2	25	1	3	7	16	626	38	43	568	1	1	1366	
5:15-5:30	50	2	37	3	2	4	9	622	31	40	514	4	3	1321	
5:30-5:45	42	4	33	0	3	9	8	627	40	47	521	3	0	1337	
5:45-6:00	37	1	32	4	3	17	15	650	24	31	469	1	0	1284	
PEAK HR 4:15-5:15 TOTALS	132	6	101	8	10	47	39	2531	144	175	2209	9	6	PHF 0.99	

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Existing Traffic Volumes

Trip Generation Summary

Alternative: Alternative 1

Phase: Existing

Project: 1750 Forest Drive

Open Date: 2/8/2016

Analysis Date: 2/8/2016

ITE	Land Use	Weekday Average Daily Trips			Weekday AM Peak Hour of Adjacent Street Traffic			Weekday PM Peak Hour of Adjacent Street Traffic					
		*	Enter	Exit	Total	*	Enter	Exit	Total	*	Enter	Exit	Total
733	OFFICEGOVCOMPLEX 1 125.1 Gross Floor Area 1000 SF		1747	1747	3494		247	30	277		111	246	357
Unadjusted Volume			1747	1747	3494		247	30	277		111	246	357
Internal Capture Trips			0	0	0		0	0	0		0	0	0
Pass-By Trips			0	0	0		0	0	0		0	0	0
Volume Added to Adjacent Streets			1747	1747	3494		247	30	277		111	246	357

Total Weekday Average Daily Trips Internal Capture = 0 Percent

Total Weekday AM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent

Total Weekday PM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent

* - Custom rate used for selected time period.

Trip Generation Summary

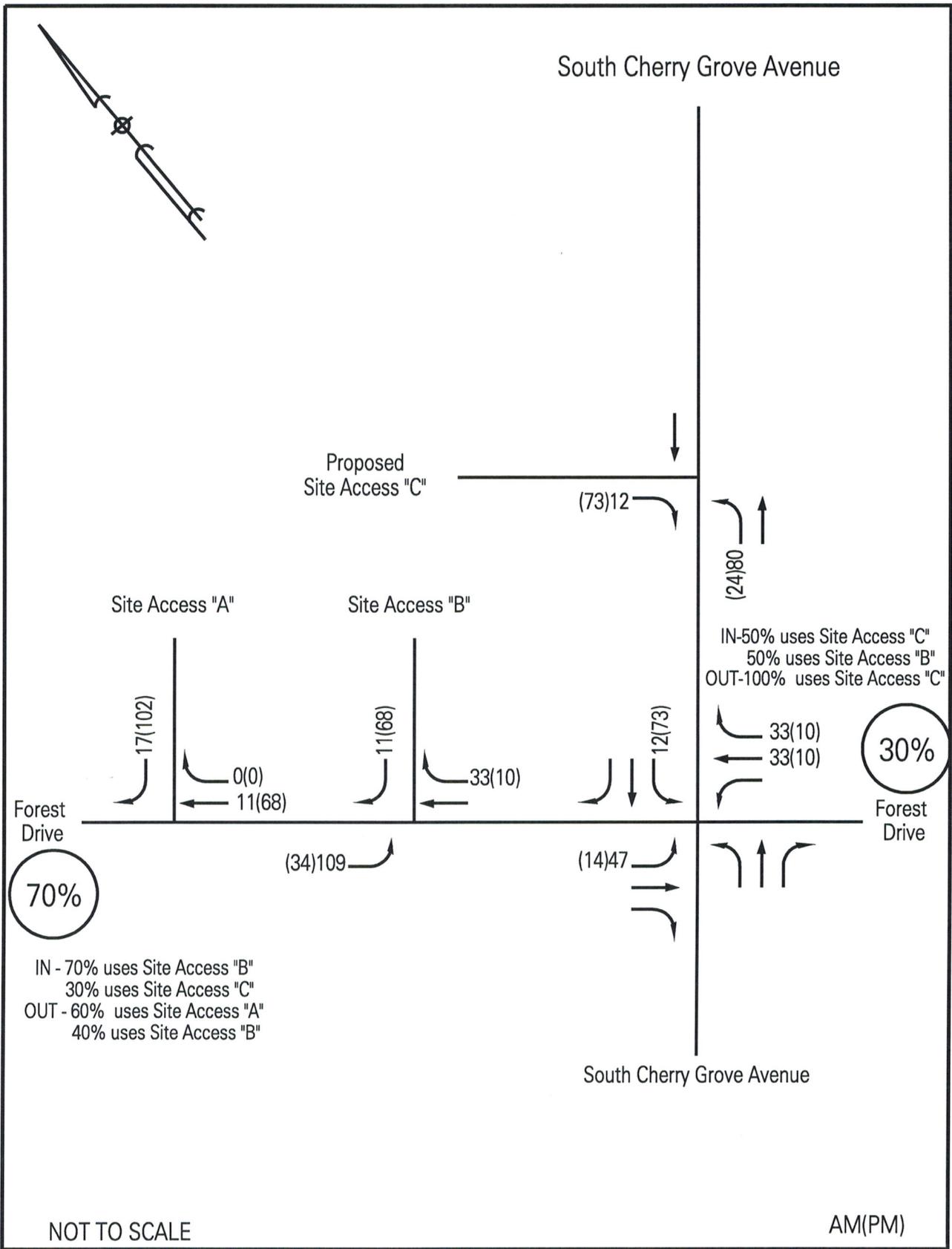
Alternative: Alternative 1
 Phase: Proposed
 Project: 1750 Forest Drive

Open Date: 2/8/2016
 Analysis Date: 2/8/2016

ITE	Land Use	Weekday Average Daily Trips			Weekday AM Peak Hour of Adjacent Street Traffic			Weekday PM Peak Hour of Adjacent Street Traffic					
		*	Enter	Exit	Total	*	Enter	Exit	Total	*	Enter	Exit	Total
710	OFFICEGENERAL 1 87.6 Gross Floor Area 1000 SF		483	483	966		151	21	172		30	147	177
720	OFFICEMEDICAL 1 37.54 Gross Floor Area 1000 SF		678	678	1356		71	19	90		38	96	134
Unadjusted Volume			1161	1161	2322		222	40	262		68	243	311
Internal Capture Trips			0	0	0		0	0	0		0	0	0
Pass-By Trips			0	0	0		0	0	0		0	0	0
Volume Added to Adjacent Streets			1161	1161	2322		222	40	262		68	243	311

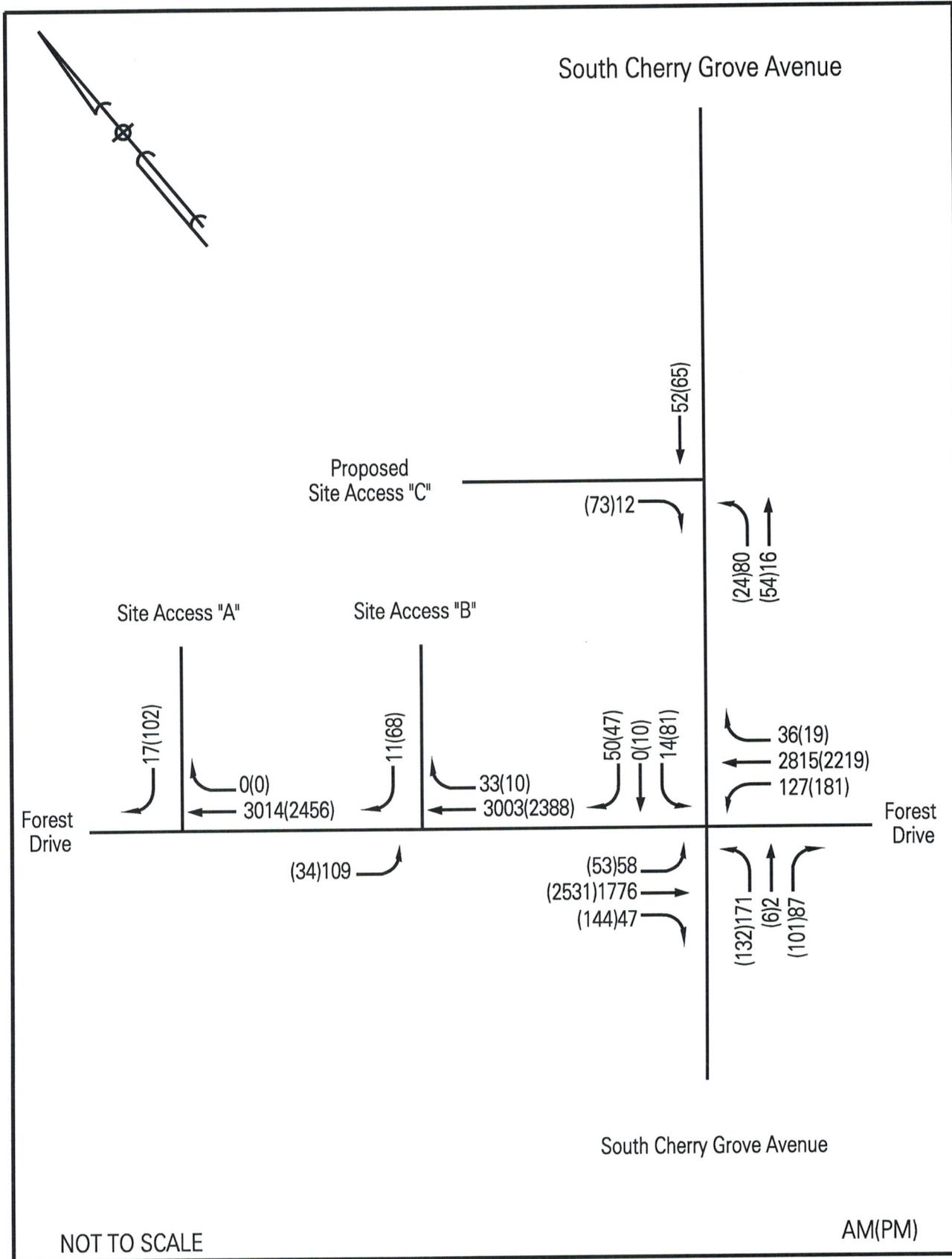
Total Weekday Average Daily Trips Internal Capture = 0 Percent
 Total Weekday AM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent
 Total Weekday PM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent

* - Custom rate used for selected time period.



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Site Generated Traffic
 (87,597 gsf general office
 37,542 gsf medical office)



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Total Future Traffic Volumes

10: South Cherry Grove & Forest Drive
Existing - PM

02/20/2017



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	2531	144	181	2219	19	132	6	101	81	10	47
Future Volume (vph)	53	2531	144	181	2219	19	132	6	101	81	10	47
Satd. Flow (prot)	1805	5045	0	1770	5081	0	1681	1697	1583	0	1818	1615
Flt Permitted	0.046			0.044			0.950	0.957			0.957	
Satd. Flow (perm)	87	5045	0	82	5081	0	1681	1697	1583	0	1818	1615
Satd. Flow (RTOR)		10			1				110			70
Lane Group Flow (vph)	58	2908	0	197	2433	0	74	76	110	0	99	51
Turn Type	pm+pt	NA		pm+pt	NA		Split	NA	Perm	Split	NA	Perm
Protected Phases	1	6		5	2		8	8		7	7	
Permitted Phases	6			2					8			7
Total Split (s)	16.0	79.0		18.0	81.0		23.0	23.0	23.0	20.0	20.0	20.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Act Effct Green (s)	93.4	87.8		105.5	97.6		11.1	11.1	11.1		11.5	11.5
Actuated g/C Ratio	0.67	0.63		0.75	0.70		0.08	0.08	0.08		0.08	0.08
v/c Ratio	0.46	0.92		0.87	0.69		0.56	0.57	0.49		0.67	0.26
Control Delay	28.7	16.2		75.2	13.2		76.6	77.2	17.1		83.1	9.1
Queue Delay	0.0	0.0		0.0	0.1		0.0	0.0	0.0		0.0	0.0
Total Delay	28.7	16.2		75.2	13.3		76.6	77.2	17.1		83.1	9.1
LOS	C	B		E	B		E	E	B		F	A
Approach Delay		16.5			17.9			51.6			57.9	
Approach LOS		B			B			D			E	

Intersection Summary

Cycle Length: 140

Actuated Cycle Length: 140

Offset: 126 (90%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 19.7

Intersection LOS: B

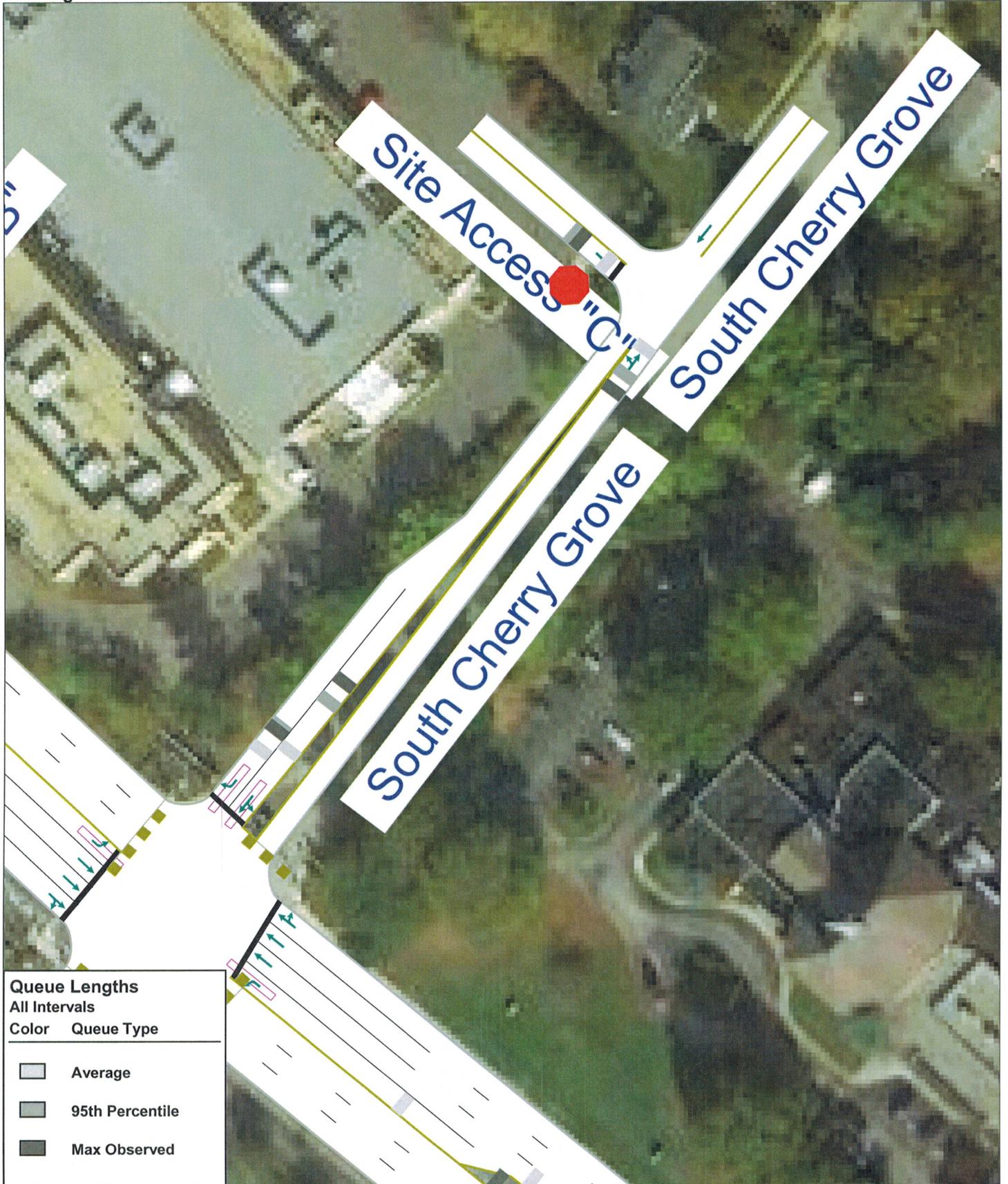
Intersection Capacity Utilization 83.8%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 10: South Cherry Grove & Forest Drive

Ø1	Ø2 (R)	Ø7	Ø8
16 s	81 s	20 s	23 s
Ø5	Ø6 (R)		
18 s	79 s		



Intersection: 10: South Cherry Grove & Forest Drive

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	TR	L	T	T	TR	L	LT	R	LT
Maximum Queue (ft)	124	179	196	172	174	302	310	329	145	200	97	94
Average Queue (ft)	88	123	131	116	110	188	236	280	51	121	49	48
95th Queue (ft)	126	196	199	173	212	293	349	347	152	177	96	81
Link Distance (ft)		273	273	273		936	936	936		620	620	328
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	100				150				150			
Storage Blk Time (%)	2	13			6	8			0	5		
Queuing Penalty (veh)	14	8			54	11			0	5		

Intersection: 10: South Cherry Grove & Forest Drive

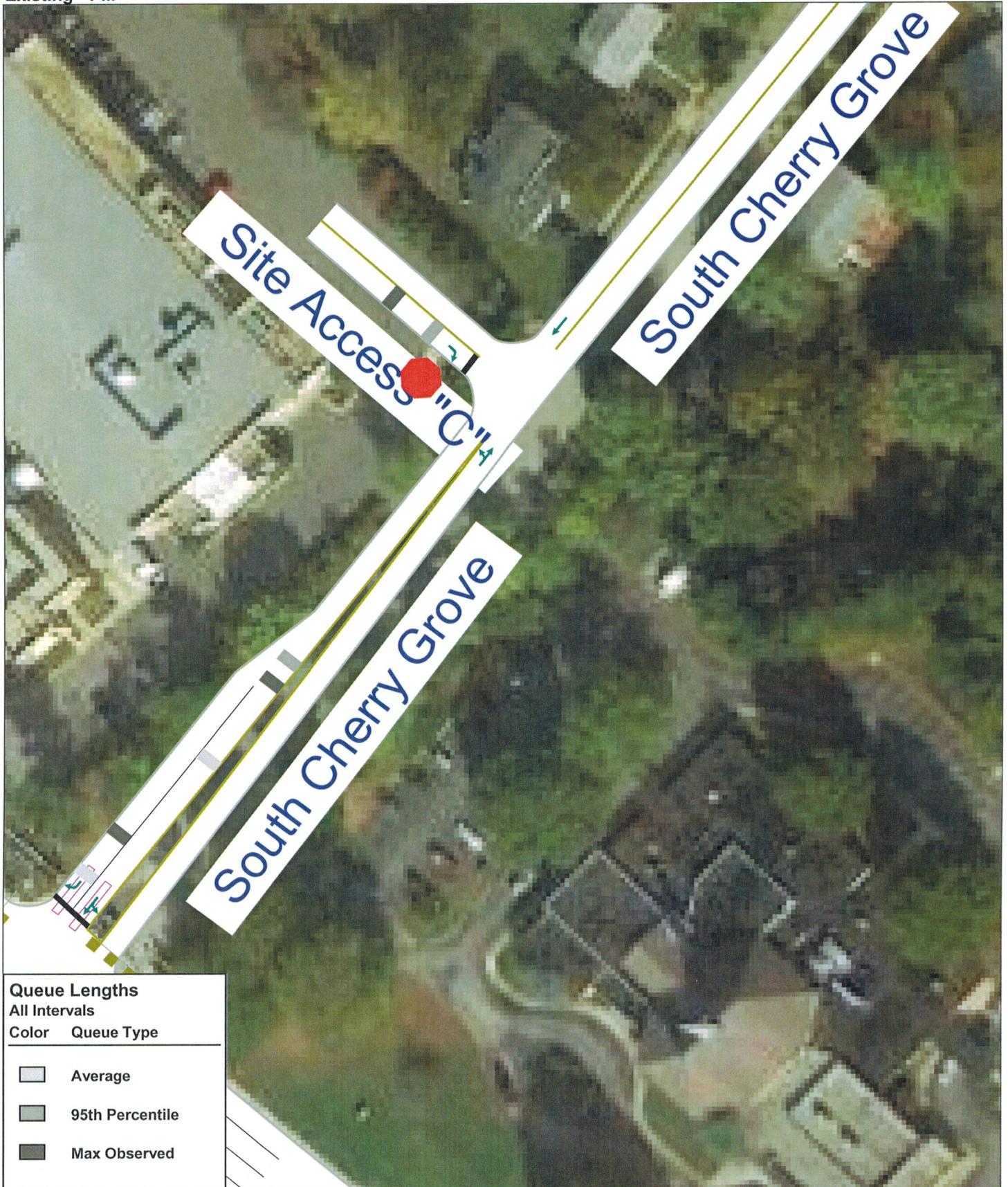
Movement	SB
Directions Served	R
Maximum Queue (ft)	53
Average Queue (ft)	39
95th Queue (ft)	55
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	150
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 26: South Cherry Grove & Site Access "C"

Movement	SE	NE
Directions Served	R	LT
Maximum Queue (ft)	29	31
Average Queue (ft)	11	4
95th Queue (ft)	33	21
Link Distance (ft)	106	328
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 23: Forest Drive & Site Access "B"

Movement	SE	NW	SW
Directions Served	L	TR	R
Maximum Queue (ft)	137	56	30
Average Queue (ft)	86	3	11
95th Queue (ft)	141	15	34
Link Distance (ft)		273	152
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	270		
Storage Blk Time (%)			
Queuing Penalty (veh)			



Intersection: 10: South Cherry Grove & Forest Drive

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	TR	L	T	T	TR	L	LT	R	LT
Maximum Queue (ft)	123	306	309	315	174	255	308	299	120	140	114	161
Average Queue (ft)	41	240	242	247	143	168	167	204	23	96	85	109
95th Queue (ft)	101	392	398	413	194	272	309	353	87	158	124	175
Link Distance (ft)		273	273	273		936	936	936		749	749	328
Upstream Blk Time (%)		9	8	8								
Queuing Penalty (veh)		83	72	70								
Storage Bay Dist (ft)	100				150				150			
Storage Blk Time (%)	0	35			12	9				0		12
Queuing Penalty (veh)	1	23			88	18				0		6

Intersection: 10: South Cherry Grove & Forest Drive

Movement	SB
Directions Served	R
Maximum Queue (ft)	50
Average Queue (ft)	24
95th Queue (ft)	50
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	150
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 26: South Cherry Grove & Site Access "C"

Movement	SE
Directions Served	R
Maximum Queue (ft)	55
Average Queue (ft)	29
95th Queue (ft)	29
Link Distance (ft)	106
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 23: Forest Drive & Site Access "B"

Movement	SE	SW
Directions Served	L	R
Maximum Queue (ft)	94	73
Average Queue (ft)	50	42
95th Queue (ft)	107	81
Link Distance (ft)	152	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	270	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Field Observations

Notes for Heritage Baptist Church Property and Access at Merryman Road
School Phone 410-263-5153

The church sponsors a pre-school for 2 to 5 year old children with 2 sessions, 9-11:30 AM and 12:30 PM to 3 PM.

AM Session Observations 3/3/16

7:15 AM - Positioned to observe traffic exiting Hilltop Lane at Merryman Road in effort to track motorists cutting thru via Merryman Road.

I tracked 3 motorists that entered Merryman Road from Hilltop Lane that were not cut thru motorists, all turned beyond the church entrance but away from Forest Drive, so there were no cut thru motorists between 7:15 and 8:47 hours.

There is a Day Care located at the intersection of Hilltop Lane and Merryman Road that generated at least 35 motorists turning from Hilltop Lane. They all exited left to re-enter Hilltop Lane.

8:23 AM - Repositioned to church entrance along Merryman Road to observe pre-school activities at the church. There were 5 vehicles on the church lot that entered from S. Cherry Grove Avenue (2 access points).

8:47 AM to 9:12 AM - motorists lined-up to drop-off children at the church/school. Most entered from S. Cherry Grove Avenue with 13 motorists entering via Merryman Road. The access from Merryman can store approximately 15 vehicles between Merryman Road and the staging area at the church parking lot. The school did not begin to accept children until 8:55.

8:55 - School patrons began to discharge children with the help of school staffers so the driver did not have to exit the vehicle. All motorists exited the school property via S. Cherry Grove Avenue. The last drop-off vehicle arrived at 9:12 AM.

Morning departure and PM Drop-off Observations

11:20 - Motorists staged to pick-up children the same as morning drop-off session. Children escorted as soon as the parent arrived and staff assisted children into vehicles. All were gone by 11:30 AM.

12:20 - Motorists arrived to drop-off children for afternoon session and staff took children right into the building. There were less than 6 for the afternoon session, and I assume some children stayed for both morning and afternoon sessions.

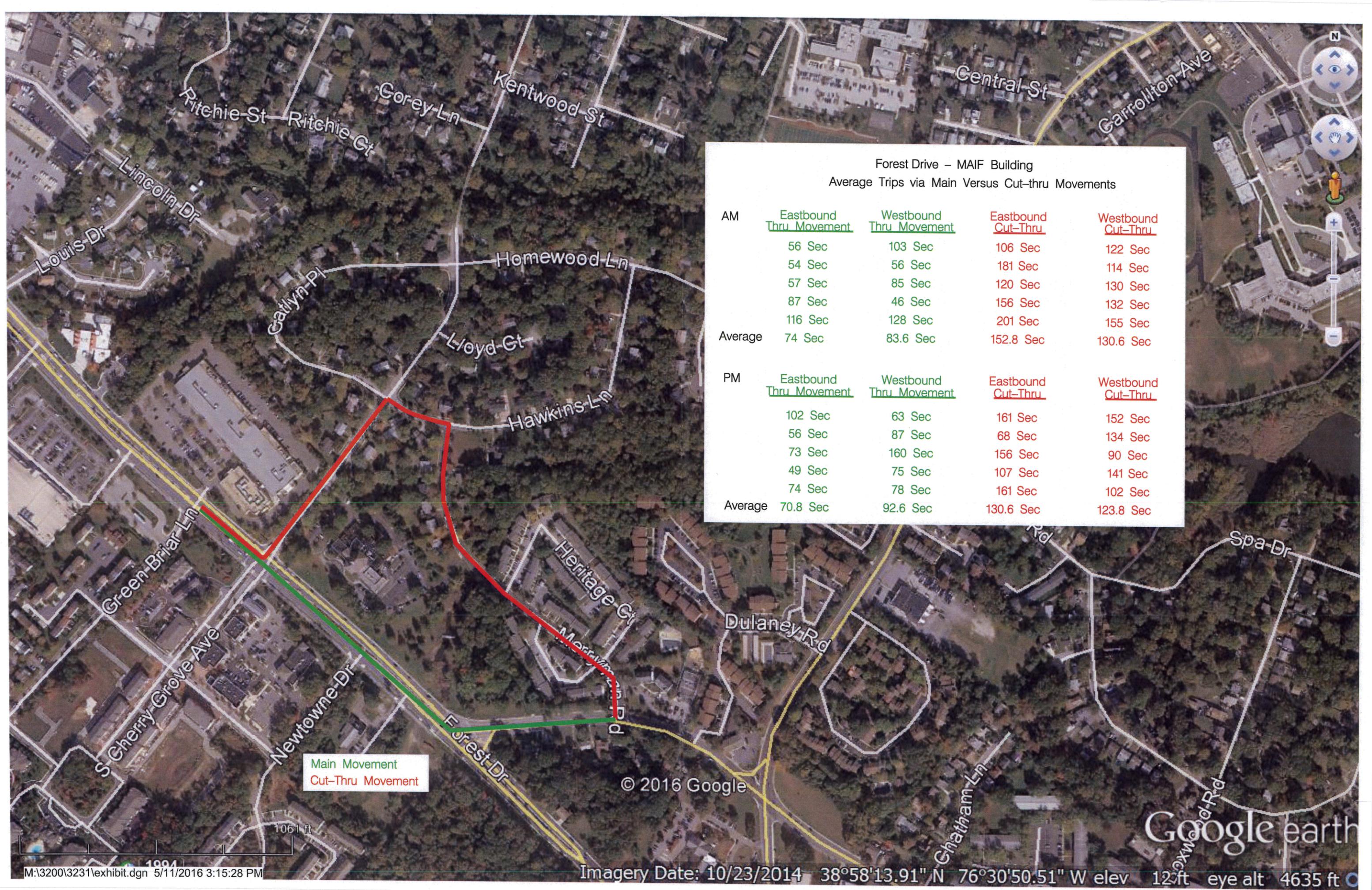
Delay Study

- The AM study was performed between 0700 and 0800 hours on Tuesday, March 29, and the PM study was performed between 1645 and 1745 hours the same day.
- The study was performed in both directions along Forest Drive to Hilltop, and thru the community via Forest S. Cherry Grove Road, Hawkins Lane Merryman Road to Hilltop Lane and the reverse movements. Five (5) trips of each movement in each direction were made in the AM and PM. The trips were averaged and summarized as shown below.
- Trips via Forest Drive and Hilltop Lane were by far the quickest way to go, especially with 2 Stop intersections and left turns for the cut-thru maneuver. Merryman Road is narrow with parking on both sides of the street making it tight to by-pass opposing traffic. There is a school bus stop in the middle of the section as well.
- There were no cut-thru maneuvers observed during the peak periods, with all motorists turning local or away from the cut-thru directions EB or WB.
- The traffic signals are coordinated eastbound for the left-turn at Hilltop, and westbound for the right-turn at Hilltop Lane and S. Cherry Grove Road, making the mainline travel better than the cut-thru.

Forest Drive - MAIF Building

Average Trips via Main Versus Cut-thru Movements

AM	Eastbound	Westbound	Eastbound	Westbound
	Thru Movement	Thru Movement	Cut-Thru	Cut-Thru
	56 Sec	103 Sec	106 Sec	122 Sec
	54 Sec	56 Sec	181 Sec	114 Sec
	57 Sec	85 Sec	120 Sec	130 Sec
	87 Sec	46 Sec	156 Sec	132 Sec
	116 Sec	128 Sec	201 Sec	155 Sec
	74 Sec Ave	83.6 Sec Ave	152.8 Sec Ave	130.6 Sec Ave
PM	Eastbound	Westbound	Eastbound	Westbound
	Thru Movement	Thru Movement	Cut-Thru	Cut-Thru
	102 Sec	63 Sec	161 Sec	152 Sec
	56 Sec	87 Sec	68 Sec	134 Sec
	73 Sec	160 Sec	156 Sec	90 Sec
	49 Sec	75 Sec	107 Sec	141 Sec
	74 Sec	78 Sec	161 Sec	102 Sec
	70.8 Sec Ave	92.6 Sec Ave	130.6 Sec Ave	123.8 Sec Ave



Forest Drive – MAIF Building
Average Trips via Main Versus Cut-thru Movements

AM	<u>Eastbound Thru Movement</u>	<u>Westbound Thru Movement</u>	<u>Eastbound Cut-Thru</u>	<u>Westbound Cut-Thru</u>
	56 Sec	103 Sec	106 Sec	122 Sec
	54 Sec	56 Sec	181 Sec	114 Sec
	57 Sec	85 Sec	120 Sec	130 Sec
	87 Sec	46 Sec	156 Sec	132 Sec
	116 Sec	128 Sec	201 Sec	155 Sec
Average	74 Sec	83.6 Sec	152.8 Sec	130.6 Sec
PM	<u>Eastbound Thru Movement</u>	<u>Westbound Thru Movement</u>	<u>Eastbound Cut-Thru</u>	<u>Westbound Cut-Thru</u>
	102 Sec	63 Sec	161 Sec	152 Sec
	56 Sec	87 Sec	68 Sec	134 Sec
	73 Sec	160 Sec	156 Sec	90 Sec
	49 Sec	75 Sec	107 Sec	141 Sec
	74 Sec	78 Sec	161 Sec	102 Sec
Average	70.8 Sec	92.6 Sec	130.6 Sec	123.8 Sec

Main Movement
Cut-Thru Movement

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