



November 17, 2023

Patrick Butler
Upcounty Planning Chief
Montgomery County Planning Department
2425 Reedie Dr 14th Floor,
Wheaton, MD 20902

RE: Revised Supplemental Analysis – Worldshine Assisted Living
Old West Baltimore Avenue, Montgomery County, Maryland

Dear Mr. Butler:

Per the requirements of Zoning Hearing Examiner, Wells + Associates conducted an access analysis for the Worldshine Assisted Living project for you and your staff's review. This updated analysis reflects the change in access and the increase in dwelling units as requested by Staff. Our analysis includes a review of intersection queues, and crash data at the intersections of West Old Baltimore Road/Ruby Drive and MD 355/West Old Baltimore Road.

The subject site is located on the north side of West Old Baltimore Road, west side Ruby Drive and east of Ivy Leaf Drive in the Clarksburg Policy Area of Montgomery County, Maryland. The Applicant has revised the application to increase the number of dwelling unit from 90 beds to 120 beds, and the point of access has been changed from Ruby Drive to West Old Baltimore Road.

The proposed development will generate less than 50 person trips and therefore an LATR study is not required. The attached Table 1 shows the trip generation anticipated for an assisted living facility with up to 120 beds. An exemption letter dated October 3, 2023, was submitted with the application package.

Queue Analysis

Counts were conducted at the Ruby Drive/W. Old Baltimore Road, and MD 355 (Frederick Road)/West Old Baltimore Road intersections on December 13, 2021, from 6:30 to 9:30 AM and 4:00 to 7:00 PM. The peak hours on Ruby Drive/W. Old Baltimore Road occurred from 7:30 to 8:30 AM and from 4:45 to 5:45 PM, and on MD 355 (Frederick Road)/W. Old Baltimore Road occurred from 7:15 to 8:15 AM and from 4:00 to 5:00 PM.

The site trip distribution assumed for this analysis is based on the MNCPPC trip distribution tables for the is as follows: 100 percent of site vehicles headed to/from the east via Ruby Drive to W. Old Baltimore Road, with 10 percent of vehicle trips to the north on MD 355 and 90 percent south on MD 355.

HCM 2000 method in Synchro was used to calculate the queues. The Synchro analysis provides the calculation of queues as well as intersection capacity. Table 2 summarizes the results of the queue analysis. Three queuing scenarios were analyzed: 1) existing conditions, 2) background conditions, and 3) future conditions (with the proposed 120 bed assisted living development).

Under each of the study conditions, both study intersections are well within the MNCPPC capacity standards (51 seconds of delay or less) and no queue exceeds the available storage length. A summary of the intersection results is shown on Table 3.

Copies of the forecast worksheets, queue reports, and intersection capacity analysis for both intersections are attached to this letter in the Attachment A.

Crash Evaluation

The crash history at both study intersections and the roadway link between the intersections was updated to include a period accident dated from January 1, 2019, through the mid-year 2023. There were no additional crashes reported for 2022 or 2023. All reported crashes occurred at or near MD 355 (Frederick Road)/West Old Baltimore Road intersection. A summary of the crashes is shown in Table 4 and the detailed crash report for each is provided in Attachment A.

In 2019, the intersection of W. Old Baltimore Road/MD 355 was under construction to provide turn lanes, channelization, and install a new signal. Most of the crashes (5 of the 7) occurred in 2019-2020 before or during the construction which was completed in 2020. Since the completion of the intersection improvements, the number of accidents has declined and no accidents were reported in 2022 or 2023. Based on the accident data, the intersection improvements have improved the safety at this intersection. No accidents were reported during the study period from 2019 through 2023 at the intersection of W. Old Baltimore Road and Ruby Drive or along W. Old Baltimore Road from the site access to MD 355.

Based on the analysis summarized in this letter and the attached documents, it is our opinion that the proposed development of Worldshine assisted living will not adversely impact the area road network.

If you have any questions regarding this analysis, please call me at (410) 353-7340 or email me at amrandall@wellsandassociates.com.

Sincerely,



Nancy Randall, AICP

Table 1
 Worldshine Ruby Drive
 Site Trip Generation

Land Use	LU Code	Amount	Unit	AM Peak Hour			PM Peak Hour			AM Peak Hour					PM Peak Hour				
				In	Out	Total	In	Out	Total	Auto Driver (Vehicle Trips)	Auto Passenger	Transit Trips	Non-Motorized	Total Person Trips	Auto Driver (Vehicle Trips)	Auto Passenger	Transit Trips	Non-Motorized	Total Person Trips
Assisted Living	254	120	BEDS	13	9	22	11	18	29	22	9	1	1	34	29	12	1	3	45

Note: Trip Generation Rates based ITE 11th Generation, Mode Split is based on 2021 LATR Guidelines (Clarksburg Policy Area)

Table 2
 Worldshine Ruby Drive
 Intersection Queuing Summary ^{(1),(2)}

Intersection	Operating Condition	Street Name	Approach/ Movement	Available Storage (ft)	Existing Condition		Background Future		Total Future	
					AM	PM	AM	PM	AM	PM
1 Frederick Road (Route 355) /W. Old Baltimore Road	Signalized	W. Old Baltimore Road	EBL	209	103	76	107	80	107	81
		W. Old Baltimore Road	EBR	free right	0	0	0	0	0	0
		Frederick Road (Route 335)	NBL	650	92	61	147	80	179	88
		Frederick Road (Route 335)	SBR	415	8	9	9	14	10	14
2 W. Old Baltimore Road/ Site Access	STOP	W. Old Baltimore Road	EBLT	765	Total Future Only Intersection	Total Future Only Intersection	Total Future Only Intersection	Total Future Only Intersection	0	0
		W. Old Baltimore Road	WBTR	440					0	0
		Site Access	SBLR	site interior					2	3

Notes : (1) Queue length in feet is based on the 95th percentile queue as reported by Synchro, Version 11.

(2) Roadway names in bold are considered north/south for purposes of this analysis.

Table 3
 Worldshine Ruby Drive
 Intersection Delay Summary⁽¹⁾

Intersection	Operating Condition	Existing Condition		Background Future		Total Future	
		AM	PM	AM	PM	AM	PM
1 Frederick Road (Route 355) /W. Old Baltimore Road	Signalized	17.2	8.1	20.2	9.5	22.5	9.8
2 W. Old Baltimore Road/ Site Access	STOP	Total Future Only Intersection		Total Future Only Intersection		0.2	0.4

Notes : (1) Roadway names in bold are considered north/south for purposes of this analysis

Table 4
Accident Data Summary

Category	Subcategory	Number of Crashes	Number of Crashes	Number of Crashes	Number of Crashes	Number of Crashes	Number of Crashes
	Year	2019	2020	2021	2022	2023	Total of 4 +1/2 years
Light Condition	Daylight	2	1	1	0	0	4
	Dark Lights On	2	1	0	0	0	3
Surface Condition	Dry	4	1	1	0	0	6
	Wet	0	1	0	0	0	1
Severity	Property Damage	2	1	0	0	0	3
	Injury Crash	2	1	1	0	0	4
Driver Substance Abuse	None Detected	3	2	1	0	0	6
	Alcohol Present	1	0	0	0	0	1
	N/A	0	0	0	0	0	0
Collision Type	Single Vehicle	2	1	0	0	0	3
	Same Direction Rear End	2	1	0	0	0	3
	Head on Left Turn	0	0	1	0	0	1
Intersection Related	Yes	2	2	1	0	0	5
	No	2	0	0	0	0	2
Day of Week	Weekday	3	2	1	0	0	6
	Weekend	1	0	0	0	0	1
Time of Day	AM Peak (6:30-9:30 AM)	1	1	1	0	0	3
	PM Peak (4:00-7:00 PM)	1	0	0	0	0	1
	Other	2	1	0	0	0	3
Direction	NB	4	2	1	0	0	7
	SB	0	0	0	0	0	0

**ATTACHMENT A
HCM REPORTS
FORCASTS,COUNTS,
ACCIDENT DETAILS**

Queues

EX

1: MD 355 & W Old Baltimore Rd/Driveway

AM Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	59	315	130	532	1239	34
v/c Ratio	0.46	0.20	0.56	0.33	0.88	0.03
Control Delay	75.4	0.3	21.3	3.3	25.4	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.4	0.3	21.3	3.3	25.4	1.3
Queue Length 50th (ft)	56	0	17	94	854	0
Queue Length 95th (ft)	103	0	92	159	#1525	8
Internal Link Dist (ft)				511	894	
Turn Bay Length (ft)		155				415
Base Capacity (vph)	423	1583	253	1611	1406	1206
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.20	0.51	0.33	0.88	0.03

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
 1: MD 355 & W Old Baltimore Rd/Driveway

EX
 AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	0	290	0	0	0	120	489	0	0	1140	31
Future Volume (vph)	54	0	290	0	0	0	120	489	0	0	1140	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		4.0				4.5	5.5			5.5	5.5
Lane Util. Factor	1.00		1.00				1.00	1.00			1.00	1.00
Frt	1.00		0.85				1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00				0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770		1583				1770	1863			1863	1583
Flt Permitted	0.76		1.00				0.07	1.00			1.00	1.00
Satd. Flow (perm)	1410		1583				131	1863			1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	59	0	315	0	0	0	130	532	0	0	1239	34
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	9
Lane Group Flow (vph)	59	0	315	0	0	0	130	532	0	0	1239	25
Turn Type	Perm		Free				pm+pt	NA			NA	Perm
Protected Phases					8		5	2			6	
Permitted Phases	4		Free	8			2			6		6
Actuated Green, G (s)	11.9		150.0				127.6	127.6			112.2	112.2
Effective Green, g (s)	11.9		150.0				127.6	127.6			112.2	112.2
Actuated g/C Ratio	0.08		1.00				0.85	0.85			0.75	0.75
Clearance Time (s)	5.0						4.5	5.5			5.5	5.5
Vehicle Extension (s)	5.0						3.0	0.2			0.2	0.2
Lane Grp Cap (vph)	111		1583				230	1584			1393	1184
v/s Ratio Prot							c0.04	0.29			c0.67	
v/s Ratio Perm	c0.04		0.20				0.44					0.02
v/c Ratio	0.53		0.20				0.57	0.34			0.89	0.02
Uniform Delay, d1	66.4		0.0				33.8	2.3			14.2	4.8
Progression Factor	1.00		1.00				1.00	1.00			1.00	1.00
Incremental Delay, d2	8.7		0.3				3.2	0.6			8.8	0.0
Delay (s)	75.0		0.3				36.9	2.9			23.1	4.9
Level of Service	E		A				D	A			C	A
Approach Delay (s)		12.1			0.0			9.6			22.6	
Approach LOS		B			A			A			C	
Intersection Summary												
HCM 2000 Control Delay			17.2				HCM 2000 Level of Service				B	
HCM 2000 Volume to Capacity ratio			0.83									
Actuated Cycle Length (s)			150.0				Sum of lost time (s)			15.0		
Intersection Capacity Utilization			101.6%				ICU Level of Service			G		
Analysis Period (min)			15									

c Critical Lane Group

Queues

1: MD 355 & W Old Baltimore Rd/Driveway

EX

PM Peak Hour






















Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	39	180	274	1141	837	37
v/c Ratio	0.36	0.11	0.53	0.70	0.58	0.03
Control Delay	74.1	0.1	5.6	7.0	11.0	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.1	0.1	5.6	7.0	11.0	1.4
Queue Length 50th (ft)	37	0	34	328	315	0
Queue Length 95th (ft)	76	0	61	558	589	9
Internal Link Dist (ft)				519	899	
Turn Bay Length (ft)		155				415
Base Capacity (vph)	178	1583	647	1634	1434	1230
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.11	0.42	0.70	0.58	0.03

Intersection Summary

HCM Signalized Intersection Capacity Analysis
 1: MD 355 & W Old Baltimore Rd/Driveway

EX
 PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	0	166	0	0	0	252	1050	0	0	770	34
Future Volume (vph)	36	0	166	0	0	0	252	1050	0	0	770	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		4.0				4.5	5.5			5.5	5.5
Lane Util. Factor	1.00		1.00				1.00	1.00			1.00	1.00
Frt	1.00		0.85				1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00				0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770		1583				1770	1863			1863	1583
Flt Permitted	0.76		1.00				0.26	1.00			1.00	1.00
Satd. Flow (perm)	1410		1583				490	1863			1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	39	0	180	0	0	0	274	1141	0	0	837	37
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	9
Lane Group Flow (vph)	39	0	180	0	0	0	274	1141	0	0	837	28
Turn Type	Perm		Free				pm+pt	NA			NA	Perm
Protected Phases					8		5	2			6	
Permitted Phases	4		Free	8			2			6		6
Actuated Green, G (s)	10.0		150.0				129.5	129.5			114.5	114.5
Effective Green, g (s)	10.0		150.0				129.5	129.5			114.5	114.5
Actuated g/C Ratio	0.07		1.00				0.86	0.86			0.76	0.76
Clearance Time (s)	5.0						4.5	5.5			5.5	5.5
Vehicle Extension (s)	5.0						3.0	0.2			0.2	0.2
Lane Grp Cap (vph)	94		1583				512	1608			1422	1208
v/s Ratio Prot							0.04	c0.61			0.45	
v/s Ratio Perm	c0.03		0.11				0.42					0.02
v/c Ratio	0.41		0.11				0.54	0.71			0.59	0.02
Uniform Delay, d1	67.2		0.0				6.8	3.6			7.6	4.3
Progression Factor	1.00		1.00				1.00	1.00			1.00	1.00
Incremental Delay, d2	6.1		0.1				1.1	2.7			1.8	0.0
Delay (s)	73.3		0.1				7.9	6.3			9.4	4.3
Level of Service	E		A				A	A			A	A
Approach Delay (s)		13.2			0.0			6.6			9.2	
Approach LOS		B			A			A			A	
Intersection Summary												
HCM 2000 Control Delay			8.1				HCM 2000 Level of Service				A	
HCM 2000 Volume to Capacity ratio			0.71									
Actuated Cycle Length (s)			150.0				Sum of lost time (s)				15.0	
Intersection Capacity Utilization			111.6%				ICU Level of Service				H	
Analysis Period (min)			15									

c Critical Lane Group



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	62	377	154	532	1239	35
v/c Ratio	0.48	0.24	0.66	0.33	0.90	0.03
Control Delay	75.6	0.4	39.5	3.4	29.3	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.6	0.4	39.5	3.4	29.3	1.5
Queue Length 50th (ft)	59	0	68	95	943	0
Queue Length 95th (ft)	107	0	147	163	#1564	9
Internal Link Dist (ft)				511	894	
Turn Bay Length (ft)		155				415
Base Capacity (vph)	423	1583	246	1607	1371	1177
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.24	0.63	0.33	0.90	0.03

Intersection Summary

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

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
 1: MD 355 & W Old Baltimore Rd/Driveway

BG
 AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	0	347	0	0	0	142	489	0	0	1140	32
Future Volume (vph)	57	0	347	0	0	0	142	489	0	0	1140	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		4.0				4.5	5.5			5.5	5.5
Lane Util. Factor	1.00		1.00				1.00	1.00			1.00	1.00
Frt	1.00		0.85				1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00				0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770		1583				1770	1863			1863	1583
Flt Permitted	0.76		1.00				0.05	1.00			1.00	1.00
Satd. Flow (perm)	1410		1583				99	1863			1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	62	0	377	0	0	0	154	532	0	0	1239	35
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	9
Lane Group Flow (vph)	62	0	377	0	0	0	154	532	0	0	1239	26
Turn Type	Perm		Free				pm+pt	NA			NA	Perm
Protected Phases					8		5	2			6	
Permitted Phases	4		Free	8			2			6		6
Actuated Green, G (s)	12.2		150.0				127.3	127.3			109.4	109.4
Effective Green, g (s)	12.2		150.0				127.3	127.3			109.4	109.4
Actuated g/C Ratio	0.08		1.00				0.85	0.85			0.73	0.73
Clearance Time (s)	5.0						4.5	5.5			5.5	5.5
Vehicle Extension (s)	5.0						3.0	0.2			0.2	0.2
Lane Grp Cap (vph)	114		1583				233	1581			1358	1154
v/s Ratio Prot							c0.06	0.29			c0.67	
v/s Ratio Perm	c0.04		0.24				0.50					0.02
v/c Ratio	0.54		0.24				0.66	0.34			0.91	0.02
Uniform Delay, d1	66.2		0.0				46.2	2.4			16.4	5.6
Progression Factor	1.00		1.00				1.00	1.00			1.00	1.00
Incremental Delay, d2	9.0		0.4				6.9	0.6			10.8	0.0
Delay (s)	75.2		0.4				53.1	3.0			27.2	5.6
Level of Service	E		A				D	A			C	A
Approach Delay (s)		10.9			0.0			14.2			26.7	
Approach LOS		B			A			B			C	
Intersection Summary												
HCM 2000 Control Delay			20.2				HCM 2000 Level of Service				C	
HCM 2000 Volume to Capacity ratio			0.85									
Actuated Cycle Length (s)			150.0				Sum of lost time (s)			15.0		
Intersection Capacity Utilization			101.6%				ICU Level of Service			G		
Analysis Period (min)			15									

c Critical Lane Group

Queues

1: MD 355 & W Old Baltimore Rd/Driveway

BG
PM Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	41	226	347	1141	837	41
v/c Ratio	0.38	0.14	0.65	0.70	0.61	0.03
Control Delay	74.3	0.2	8.1	7.1	14.6	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.3	0.2	8.1	7.1	14.6	2.3
Queue Length 50th (ft)	39	0	46	332	368	0
Queue Length 95th (ft)	80	0	80	567	714	14
Internal Link Dist (ft)				519	899	
Turn Bay Length (ft)		155				415
Base Capacity (vph)	178	1583	627	1632	1376	1182
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.14	0.55	0.70	0.61	0.03

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: MD 355 & W Old Baltimore Rd/Driveway

BG
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖		↗		↔		↖	↗			↖	↗
Traffic Volume (vph)	38	0	208	0	0	0	319	1050	0	0	770	38
Future Volume (vph)	38	0	208	0	0	0	319	1050	0	0	770	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		4.0				4.5	5.5			5.5	5.5
Lane Util. Factor	1.00		1.00				1.00	1.00			1.00	1.00
Frt	1.00		0.85				1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00				0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770		1583				1770	1863			1863	1583
Flt Permitted	0.76		1.00				0.25	1.00			1.00	1.00
Satd. Flow (perm)	1410		1583				460	1863			1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	41	0	226	0	0	0	347	1141	0	0	837	41
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	11
Lane Group Flow (vph)	41	0	226	0	0	0	347	1141	0	0	837	30
Turn Type	Perm		Free				pm+pt	NA			NA	Perm
Protected Phases					8		5	2			6	
Permitted Phases	4		Free	8			2			6		6
Actuated Green, G (s)	10.2		150.0				129.3	129.3			109.8	109.8
Effective Green, g (s)	10.2		150.0				129.3	129.3			109.8	109.8
Actuated g/C Ratio	0.07		1.00				0.86	0.86			0.73	0.73
Clearance Time (s)	5.0						4.5	5.5			5.5	5.5
Vehicle Extension (s)	5.0						3.0	0.2			0.2	0.2
Lane Grp Cap (vph)	95		1583				527	1605			1363	1158
v/s Ratio Prot							0.07	c0.61			0.45	
v/s Ratio Perm	c0.03		0.14				0.50					0.02
v/c Ratio	0.43		0.14				0.66	0.71			0.61	0.03
Uniform Delay, d1	67.1		0.0				10.0	3.7			9.8	5.5
Progression Factor	1.00		1.00				1.00	1.00			1.00	1.00
Incremental Delay, d2	6.5		0.2				3.0	2.7			2.1	0.0
Delay (s)	73.6		0.2				12.9	6.4			11.9	5.5
Level of Service	E		A				B	A			B	A
Approach Delay (s)		11.5			0.0			7.9			11.6	
Approach LOS		B			A			A			B	

Intersection Summary

HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	111.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Queues

TF

1: MD 355 & W Old Baltimore Rd/Driveway

AM Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	63	386	167	532	1239	36
v/c Ratio	0.48	0.24	0.70	0.33	0.92	0.03
Control Delay	75.6	0.4	51.0	3.5	32.1	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.6	0.4	51.0	3.5	32.1	1.8
Queue Length 50th (ft)	60	0	98	96	998	0
Queue Length 95th (ft)	107	0	179	164	#1584	10
Internal Link Dist (ft)				511	894	
Turn Bay Length (ft)		155				415
Base Capacity (vph)	423	1583	245	1606	1348	1159
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.24	0.68	0.33	0.92	0.03

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
 1: MD 355 & W Old Baltimore Rd/Driveway

TF
 AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	0	355	0	0	0	154	489	0	0	1140	33
Future Volume (vph)	58	0	355	0	0	0	154	489	0	0	1140	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		4.0				4.5	5.5			5.5	5.5
Lane Util. Factor	1.00		1.00				1.00	1.00			1.00	1.00
Frt	1.00		0.85				1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00				0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770		1583				1770	1863			1863	1583
Flt Permitted	0.76		1.00				0.04	1.00			1.00	1.00
Satd. Flow (perm)	1410		1583				78	1863			1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	63	0	386	0	0	0	167	532	0	0	1239	36
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	10
Lane Group Flow (vph)	63	0	386	0	0	0	167	532	0	0	1239	26
Turn Type	Perm		Free				pm+pt	NA			NA	Perm
Protected Phases					8		5	2			6	
Permitted Phases	4		Free	8			2			6		6
Actuated Green, G (s)	12.3		150.0				127.2	127.2			107.6	107.6
Effective Green, g (s)	12.3		150.0				127.2	127.2			107.6	107.6
Actuated g/C Ratio	0.08		1.00				0.85	0.85			0.72	0.72
Clearance Time (s)	5.0						4.5	5.5			5.5	5.5
Vehicle Extension (s)	5.0						3.0	0.2			0.2	0.2
Lane Grp Cap (vph)	115		1583				236	1579			1336	1135
v/s Ratio Prot							c0.07	0.29			c0.67	
v/s Ratio Perm	c0.04		0.24				0.53					0.02
v/c Ratio	0.55		0.24				0.71	0.34			0.93	0.02
Uniform Delay, d1	66.2		0.0				51.7	2.4			17.9	6.1
Progression Factor	1.00		1.00				1.00	1.00			1.00	1.00
Incremental Delay, d2	9.1		0.4				9.3	0.6			12.5	0.0
Delay (s)	75.3		0.4				61.0	3.0			30.4	6.1
Level of Service	E		A				E	A			C	A
Approach Delay (s)		10.9			0.0			16.9			29.7	
Approach LOS		B			A			B			C	
Intersection Summary												
HCM 2000 Control Delay			22.5				HCM 2000 Level of Service				C	
HCM 2000 Volume to Capacity ratio			0.87									
Actuated Cycle Length (s)			150.0				Sum of lost time (s)			15.0		
Intersection Capacity Utilization			101.6%				ICU Level of Service			G		
Analysis Period (min)			15									

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis

2: W Old Baltimore Rd & Site Access

TF
AM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	411	162	13	9	0
Future Volume (Veh/h)	0	411	162	13	9	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	447	176	14	10	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	190			630	183	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	190			630	183	
tC, single (s)	4.1			6.4	6.2	
tC, 2 stage (s)						
tF (s)	2.2			3.5	3.3	
p0 queue free %	100			98	100	
cM capacity (veh/h)	1384			446	859	
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	447	190	10			
Volume Left	0	0	10			
Volume Right	0	14	0			
cSH	1384	1700	446			
Volume to Capacity	0.00	0.11	0.02			
Queue Length 95th (ft)	0	0	2			
Control Delay (s)	0.0	0.0	13.3			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	13.3			
Approach LOS			B			
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			31.6%	ICU Level of Service	A	
Analysis Period (min)			15			

Queues

1: MD 355 & W Old Baltimore Rd/Driveway

TF
PM Peak Hour



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	43	243	358	1141	837	42
v/c Ratio	0.39	0.15	0.67	0.70	0.61	0.04
Control Delay	74.5	0.2	9.1	7.3	15.3	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.5	0.2	9.1	7.3	15.3	2.6
Queue Length 50th (ft)	41	0	48	336	382	0
Queue Length 95th (ft)	81	0	88	575	736	14
Internal Link Dist (ft)				519	899	
Turn Bay Length (ft)		155				415
Base Capacity (vph)	178	1583	625	1630	1364	1171
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.15	0.57	0.70	0.61	0.04
Intersection Summary						

HCM Signalized Intersection Capacity Analysis
 1: MD 355 & W Old Baltimore Rd/Driveway

TF
 PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	0	224	0	0	0	329	1050	0	0	770	39
Future Volume (vph)	40	0	224	0	0	0	329	1050	0	0	770	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		4.0				4.5	5.5			5.5	5.5
Lane Util. Factor	1.00		1.00				1.00	1.00			1.00	1.00
Frt	1.00		0.85				1.00	1.00			1.00	0.85
Flt Protected	0.95		1.00				0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770		1583				1770	1863			1863	1583
Flt Permitted	0.76		1.00				0.24	1.00			1.00	1.00
Satd. Flow (perm)	1410		1583				454	1863			1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	0	243	0	0	0	358	1141	0	0	837	42
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	12
Lane Group Flow (vph)	43	0	243	0	0	0	358	1141	0	0	837	30
Turn Type	Perm		Free				pm+pt	NA			NA	Perm
Protected Phases					8		5	2			6	
Permitted Phases	4		Free	8			2			6		6
Actuated Green, G (s)	10.3		150.0				129.2	129.2			108.9	108.9
Effective Green, g (s)	10.3		150.0				129.2	129.2			108.9	108.9
Actuated g/C Ratio	0.07		1.00				0.86	0.86			0.73	0.73
Clearance Time (s)	5.0						4.5	5.5			5.5	5.5
Vehicle Extension (s)	5.0						3.0	0.2			0.2	0.2
Lane Grp Cap (vph)	96		1583				529	1604			1352	1149
v/s Ratio Prot							0.07	c0.61			0.45	
v/s Ratio Perm	c0.03		0.15				0.51					0.02
v/c Ratio	0.45		0.15				0.68	0.71			0.62	0.03
Uniform Delay, d1	67.1		0.0				10.7	3.7			10.2	5.7
Progression Factor	1.00		1.00				1.00	1.00			1.00	1.00
Incremental Delay, d2	6.8		0.2				3.4	2.7			2.1	0.0
Delay (s)	73.9		0.2				14.1	6.4			12.4	5.8
Level of Service	E		A				B	A			B	A
Approach Delay (s)		11.3			0.0			8.3			12.1	
Approach LOS		B			A			A			B	
Intersection Summary												
HCM 2000 Control Delay			9.8				HCM 2000 Level of Service				A	
HCM 2000 Volume to Capacity ratio			0.71									
Actuated Cycle Length (s)			150.0				Sum of lost time (s)				15.0	
Intersection Capacity Utilization			111.6%				ICU Level of Service				H	
Analysis Period (min)			15									

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis

2: W Old Baltimore Rd & Site Access

TF
PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	208	344	11	18	0
Future Volume (Veh/h)	0	208	344	11	18	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	226	374	12	20	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)	1316					
pX, platoon unblocked						
vC, conflicting volume	386			606	380	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	386			606	380	
tC, single (s)	4.1			6.4	6.2	
tC, 2 stage (s)						
tF (s)	2.2			3.5	3.3	
p0 queue free %	100			96	100	
cM capacity (veh/h)	1172			460	667	
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	226	386	20			
Volume Left	0	0	20			
Volume Right	0	12	0			
cSH	1172	1700	460			
Volume to Capacity	0.00	0.23	0.04			
Queue Length 95th (ft)	0	0	3			
Control Delay (s)	0.0	0.0	13.2			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	13.2			
Approach LOS			B			
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			28.8%	ICU Level of Service	A	
Analysis Period (min)			15			

1: Frederick Rd (MD 355)/W. Old Baltimore Rd
AM Peak Hour

Worldshine Ruby Drive

Traffic Component	Southbound Frederick Rd (MD 355)			Westbound Off-Site Driveway			Northbound Frederick Rd (MD 355)			Eastbound W. Old Baltimore Rd			
	Right	Through	Left	Right	Through	Left	Right	Through	Left	Right	Through	Left	
Existing Volume	31	1,140	-	-	-	-	-	489	120	290	-	54	
Growth	-	-	-	-	-	-	-	-	-	-	-	-	
<u>Pipeline Developments</u>	IN	OUT											
Tapestry by Miller & Smith	12	34	-	-	-	-	-	-	-	-	-	-	
Cabin Branch	38	52	-	-	-	-	-	-	-	-	-	-	
Linthicum West	43	122	-	-	-	-	-	-	-	-	-	-	
Ten-Mile Creek	39	119	-	-	-	-	-	-	-	-	-	-	
Subtotal	132	327	1	-	-	-	-	-	22	57	-	3	
Background			32	1,140	-	-	-	-	489	142	347	-	57
Site Trips	13	9	1	-	-	-	-	-	12	8	-	1	
Total Future			33	1,140	-	-	-	-	489	154	355	-	58

1: Frederick Rd (MD 355)/W. Old Baltimore Rd
PM Peak Hour

Traffic Component	Southbound Frederick Rd (MD 355)			Westbound Off-Site Driveway			Northbound Frederick Rd (MD 355)			Eastbound W. Old Baltimore Rd			
	Right	Through	Left	Right	Through	Left	Right	Through	Left	Right	Through	Left	
Existing Volume	34	770	-	-	-	-	-	1,050	252	166	-	36	
Growth													
<u>Pipeline Developments</u>	IN	OUT											
Tapestry by Miller & Smith	39	23	-	-	-	-	-	-	-	-	-	-	
Cabin Branch	89	71	-	-	-	-	-	-	-	-	-	-	
Linthicum West	139	82	-	-	-	-	-	-	-	-	-	-	
Ten-Mile Creek	129	77	-	-	-	-	-	-	-	-	-	-	
Subtotal	396	253	4	-	-	-	-	-	67	42	-	2	
Background			38	770	-	-	-	-	1,050	319	208	-	38
Site Trips	11	18	1	-	-	-	-	-	10	16	-	2	
Total Future			39	770	-	-	-	-	1,050	329	224	-	40

2: Site Entrance (Future)/W. Old Baltimore Rd
AM Peak Hour

Worldshine Ruby Drive

Traffic Component	Southbound <u>Site Entrance (Future)</u>			Westbound <u>W. Old Baltimore Rd</u>			Northbound <u>N/A</u>			Eastbound <u>W. Old Baltimore Rd</u>		
	Right	Through	Left	Right	Through	Left	Right	Through	Left	Right	Through	Left
Existing Volume					151						385	
Growth	-	-	-	-	-	-	-	-	-	-	-	-
<u>Pipeline Developments</u>	IN	OUT										
Tapestry by Miller & Smith	12	34		-	-	-	-	-	-	-	-	-
Cabin Branch	38	52		-	-	-	-	-	-	-	-	-
Linthicum West	43	122		-	-	-	-	-	-	-	-	-
Ten-Mile Creek	39	119		-	-	-	-	-	-	-	-	-
Subtotal	132	327		-	11	-	-	-	-	-	26	-
Background				-	162	-	-	-	-	-	411	-
Site Trips	13	9		-	-	9	13	-	-	-	-	-
Total Future				-	13	162	-	-	-	-	411	-

2: Site Entrance (Future)/W. Old Baltimore Rd
PM Peak Hour

Traffic Component	Southbound <u>Site Entrance (Future)</u>			Westbound <u>W. Old Baltimore Rd</u>			Northbound <u>N/A</u>			Eastbound <u>W. Old Baltimore Rd</u>		
	Right	Through	Left	Right	Through	Left	Right	Through	Left	Right	Through	Left
Existing Volume					312						187	
Growth	-	-	-	-	-	-	-	-	-	-	-	-
<u>Pipeline Developments</u>	IN	OUT										
Tapestry by Miller & Smith	39	23		-	-	-	-	-	-	-	-	-
Cabin Branch	89	71		-	-	-	-	-	-	-	-	-
Linthicum West	139	82		-	-	-	-	-	-	-	-	-
Ten-Mile Creek	129	77		-	-	-	-	-	-	-	-	-
Subtotal	396	253		-	32	-	-	-	-	-	21	-
Background				-	344	-	-	-	-	-	208	-
Site Trips	11	18		-	-	18	11	-	-	-	-	-
Total Future				-	11	344	-	-	-	-	208	-

Wells & Associates, Inc

McLean, Virginia

Existing Traffic Count

PROJECT: Worldshine Ruby Drive		DATE: 12/13/2021				SOUTHBOUND ROAD: Frederick Road - 355															
W & A JOB NO.: 8672		DAY: Tuesday				NORTHBOUND ROAD: Frederick Road - 355															
INTERSECTION: MD Route 355 & West Old Baltimore Rd.		WEATHER: clear				WESTBOUND ROAD: 0															
LOCATION: Montgomery Co., MD		COUNTED BY: Agan				EASTBOUND ROAD: West Old Baltimore Road															
		INPUTED BY: agan																			
Time Period	Turning Movements																Total	PHF	Time Period		
	Southbound				Westbound				Northbound				Eastbound								
	Frederick Road - 355				0				Frederick Road - 355				West Old Baltimore Road							North & South	East & West
	1 Right	2 Thru	3 Left	Total	4 Right	5 Thru	6 Left	Total	7 Right	8 Thru	9 Left	Total	10 Right	11 Thru	12 Left	Total					
AM																					
6:30-6:45	3	152	0	155	0	0	0	0	0	62	9	71	24	0	4	28	226	28	254		6:30-6:45
6:45-7:00	6	199	0	205	0	0	0	0	0	89	20	109	27	0	3	30	314	30	344		6:45-7:00
7:00-7:15	3	223	0	226	0	0	0	0	0	112	23	135	39	0	8	47	361	47	408		7:00-7:15
7:15-7:30	4	306	0	310	0	0	0	0	0	141	22	163	45	0	11	56	473	56	529		7:15-7:30
7:30-7:45	9	282	0	291	0	0	0	0	0	142	25	167	71	0	17	88	458	88	546		7:30-7:45
7:45-8:00	8	279	0	287	0	0	0	0	0	120	28	148	83	0	14	97	435	97	532		7:45-8:00
8:00-8:15	10	273	0	283	0	0	0	0	0	86	45	131	91	0	12	103	414	103	517		8:00-8:15
8:15-8:30	9	312	0	321	0	0	0	0	0	85	28	113	64	0	12	76	434	76	510		8:15-8:30
8:30-8:45	5	273	0	278	0	0	0	0	0	108	28	136	61	0	4	65	414	65	479		8:30-8:45
8:45-9:00	9	283	0	292	0	0	0	0	0	104	46	150	52	0	10	62	442	62	504		8:45-9:00
9:00-9:15	12	268	0	280	0	0	0	0	0	92	35	127	46	0	6	52	407	52	459		9:00-9:15
9:15-9:30	6	174	0	180	0	0	0	0	0	110	20	130	58	0	7	65	310	65	375		9:15-9:30
3 Hour Totals	84	3,024	0	3,108	0	0	0	0	0	1,251	329	1,580	661	0	108	769	4,688	769	5,457		
1 Hour Totals																					
6:30-7:30	16	880	0	896	0	0	0	0	0	404	74	478	135	0	26	161	1,374	161	1,535	0.73	6:30-7:30
6:45-7:45	22	1,010	0	1,032	0	0	0	0	0	484	90	574	182	0	39	221	1,606	221	1,827	0.84	6:45-7:45
7:00-8:00	24	1,090	0	1,114	0	0	0	0	0	515	98	613	238	0	50	288	1,727	288	2,015	0.92	7:00-8:00
7:15-8:15	31	1,140	0	1,171	0	0	0	0	0	489	120	609	290	0	54	344	1,780	344	2,124	0.97	7:15-8:15
7:30-8:30	36	1,146	0	1,182	0	0	0	0	0	433	126	559	309	0	55	364	1,741	364	2,105	0.96	7:30-8:30
7:45-8:45	32	1,137	0	1,169	0	0	0	0	0	399	129	528	299	0	42	341	1,697	341	2,038	0.96	7:45-8:45
8:00-9:00	33	1,141	0	1,174	0	0	0	0	0	383	147	530	268	0	38	306	1,704	306	2,010	0.97	8:00-9:00
8:15-9:15	35	1,136	0	1,171	0	0	0	0	0	389	137	526	223	0	32	255	1,697	255	1,952	0.96	8:15-9:15
8:30-9:30	32	998	0	1,030	0	0	0	0	0	414	129	543	217	0	27	244	1,573	244	1,817	0.90	8:30-9:30
AM Peak 7:15-8:15	31	1,140	0	1,171	0	0	0	0	0	489	120	609	290	0	54	344	1,780	344	2,124	0.97	AM Peak 7:15-8:15
PM																					
4:00-4:15	8	205	0	213	0	0	0	0	0	235	74	309	39	0	9	48	522	48	570		4:00-4:15
4:15-4:30	4	198	0	202	0	0	0	0	0	279	52	331	45	0	12	57	533	57	590		4:15-4:30
4:30-4:45	10	200	0	210	0	0	0	0	0	314	57	371	35	0	9	44	581	44	625		4:30-4:45
4:45-5:00	12	167	0	179	0	0	0	0	0	222	69	291	47	0	6	53	470	53	523		4:45-5:00
5:00-5:15	7	188	0	195	0	0	0	0	0	216	75	291	38	0	11	49	486	49	535		5:00-5:15
5:15-5:30	8	189	0	197	0	0	0	0	0	222	64	286	47	0	8	55	483	55	538		5:15-5:30
5:30-5:45	11	143	0	154	0	0	0	0	0	226	75	301	45	0	9	54	455	54	509		5:30-5:45
5:45-6:00	7	179	0	186	0	0	0	0	0	251	58	309	33	0	12	45	495	45	540		5:45-6:00
6:00-6:15	13	158	0	171	0	0	0	0	0	204	56	260	28	0	12	40	431	40	471		6:00-6:15
6:15-6:30	10	164	0	174	0	0	0	0	0	185	54	239	33	0	9	42	413	42	455		6:15-6:30
6:30-6:45	5	125	0	130	0	0	0	0	0	168	71	239	18	0	8	26	369	26	395		6:30-6:45
6:45-7:00	5	116	0	121	0	0	0	0	0	170	52	222	15	0	8	23	343	23	366		6:45-7:00
3 Hour Totals	100	2,032	0	2,132	0	0	0	0	0	2,692	757	3,449	423	0	113	536	5,581	536	6,117		
1 Hour Totals																					
4:00-5:00	34	770	0	804	0	0	0	0	0	1,050	252	1,302	166	0	36	202	2,106	202	2,308	0.92	4:00-5:00
4:15-5:15	33	753	0	786	0	0	0	0	0	1,031	253	1,284	165	0	38	203	2,070	203	2,273	0.91	4:15-5:15
4:30-5:30	37	744	0	781	0	0	0	0	0	974	265	1,239	167	0	34	201	2,020	201	2,221	0.89	4:30-5:30
4:45-5:45	38	687	0	725	0	0	0	0	0	886	283	1,169	177	0	34	211	1,894	211	2,105	0.98	4:45-5:45
5:00-6:00	33	699	0	732	0	0	0	0	0	915	272	1,187	163	0	40	203	1,919	203	2,122	0.98	5:00-6:00
5:15-6:15	39	669	0	708	0	0	0	0	0	903	253	1,156	153	0	41	194	1,864	194	2,058	0.95	5:15-6:15
5:30-6:30	41	644	0	685	0	0	0	0	0	866	243	1,109	139	0	42	181	1,794	181	1,975	0.91	5:30-6:30
5:45-6:45	35	626	0	661	0	0	0	0	0	808	239	1,047	112	0	41	153	1,708	153	1,861	0.86	5:45-6:45
6:00-7:00	33	563	0	596	0	0	0	0	0	727	233	960	94	0	37	131	1,556	131	1,687	0.90	6:00-7:00
PM Peak 4:00-5:00	34	770	0	804	0	0	0	0	0	1,050	252	1,302	166	0	36	202	2,106	202	2,308	0.92	PM Peak 4:00-5:00

Wells & Associates, Inc

McLean, Virginia

Existing Traffic Count

PROJECT: Worldshine Ruby Drive		DATE: 12/13/2021		SOUTHBOUND ROAD: Ruby Drive																	
W & A JOB NO.: 8672		DAY: Tuesday		NORTHBOUND ROAD: 0																	
INTERSECTION: West Old Baltimore Rd. & Ruby Dr.		WEATHER: clear		WESTBOUND ROAD: West Old Baltimore Road																	
LOCATION: Montgomery Co., MD		COUNTED BY: Agan		EASTBOUND ROAD: West Old Baltimore Road																	
		INPUTED BY: agan																			
Time Period	Turning Movements																Total	PHF	Time Period		
	Southbound Ruby Drive				Westbound West Old Baltimore Road				Northbound 0				Eastbound West Old Baltimore Road							North & South	East & West
	1 Right	2 Thru	3 Left	Total	4 Right	5 Thru	6 Left	Total	7 Right	8 Thru	9 Left	Total	10 Right	11 Thru	12 Left	Total					
AM																					
6:30-6:45	0	0	0	0	0	11	0	11	0	0	0	0	0	31	0	31	0	42	42		6:30-6:45
6:45-7:00	0	0	0	0	0	20	0	20	0	0	0	0	0	33	0	33	0	53	53		6:45-7:00
7:00-7:15	0	0	0	0	0	21	0	21	0	0	0	0	0	49	0	49	0	70	70		7:00-7:15
7:15-7:30	0	0	2	2	0	18	0	18	0	0	0	0	0	46	0	46	2	64	66		7:15-7:30
7:30-7:45	0	0	1	1	0	30	0	30	0	0	0	0	0	88	0	88	1	118	119		7:30-7:45
7:45-8:00	0	0	1	1	0	36	0	36	0	0	0	0	0	89	0	89	1	125	126		7:45-8:00
8:00-8:15	0	0	1	1	0	49	0	49	0	0	0	0	0	106	0	106	1	155	156		8:00-8:15
8:15-8:30	0	0	0	0	0	36	0	36	0	0	0	0	0	75	0	75	0	111	111		8:15-8:30
8:30-8:45	0	0	0	0	0	31	0	31	0	0	0	0	0	61	0	61	0	92	92		8:30-8:45
8:45-9:00	0	0	0	0	0	53	0	53	0	0	0	0	0	72	0	72	0	125	125		8:45-9:00
9:00-9:15	1	0	1	2	0	50	0	50	0	0	0	0	0	49	0	49	2	99	101		9:00-9:15
9:15-9:30	0	0	1	1	1	28	0	29	0	0	0	0	0	68	0	68	1	97	98		9:15-9:30
3 Hour Totals	1	0	7	8	1	383	0	384	0	0	0	0	0	767	0	767	8	1,151	1,159		
1 Hour Totals																					
6:30-7:30	0	0	2	2	0	70	0	70	0	0	0	0	0	159	0	159	2	229	231	0.83	6:30-7:30
6:45-7:45	0	0	3	3	0	89	0	89	0	0	0	0	0	216	0	216	3	305	308	0.65	6:45-7:45
7:00-8:00	0	0	4	4	0	105	0	105	0	0	0	0	0	272	0	272	4	377	381	0.76	7:00-8:00
7:15-8:15	0	0	5	5	0	133	0	133	0	0	0	0	0	329	0	329	5	462	467	0.75	7:15-8:15
7:30-8:30	0	0	3	3	0	151	0	151	0	0	0	0	0	358	0	358	3	509	512	0.82	7:30-8:30
7:45-8:45	0	0	2	2	0	152	0	152	0	0	0	0	0	331	0	331	2	483	485	0.78	7:45-8:45
8:00-9:00	0	0	1	1	0	169	0	169	0	0	0	0	0	314	0	314	1	483	484	0.78	8:00-9:00
8:15-9:15	1	0	1	2	0	170	0	170	0	0	0	0	0	257	0	257	2	427	429	0.86	8:15-9:15
8:30-9:30	1	0	2	3	1	162	0	163	0	0	0	0	0	250	0	250	3	413	416	0.83	8:30-9:30
AM Peak 7:30-8:30																					
7:30-8:30	0	0	3	3	0	151	0	151	0	0	0	0	0	358	0	358	3	509	512	0.82	7:30-8:30
PM																					
4:00-4:15	0	0	0	0	1	78	0	79	0	0	0	0	0	44	0	44	0	123	123		4:00-4:15
4:15-4:30	0	0	1	1	1	47	0	48	0	0	0	0	0	52	0	52	1	100	101		4:15-4:30
4:30-4:45	0	0	0	0	1	67	0	68	0	0	0	0	0	43	0	43	0	111	111		4:30-4:45
4:45-5:00	0	0	0	0	0	74	0	74	0	0	0	0	0	50	0	50	0	124	124		4:45-5:00
5:00-5:15	0	0	0	0	1	81	0	82	0	0	0	0	0	42	0	42	0	124	124		5:00-5:15
5:15-5:30	0	0	0	0	0	73	0	73	0	0	0	0	0	49	0	49	0	122	122		5:15-5:30
5:30-5:45	0	0	2	2	2	84	0	86	0	0	0	0	0	46	0	46	2	132	134		5:30-5:45
5:45-6:00	0	0	0	0	2	62	0	64	0	0	0	0	0	38	0	38	0	102	102		5:45-6:00
6:00-6:15	0	0	1	1	2	66	0	68	0	0	0	0	0	36	0	36	1	104	105		6:00-6:15
6:15-6:30	0	0	2	2	1	59	0	60	0	0	0	0	0	39	0	39	2	99	101		6:15-6:30
6:30-6:45	0	0	0	0	0	78	0	78	0	0	0	0	0	22	0	22	0	100	100		6:30-6:45
6:45-7:00	0	0	0	0	0	57	0	57	0	0	0	0	0	24	0	24	0	81	81		6:45-7:00
3 Hour Totals	0	0	6	6	11	826	0	837	0	0	0	0	0	485	0	485	6	1,322	1,328		
1 Hour Totals																					
4:00-5:00	0	0	1	1	3	266	0	269	0	0	0	0	0	189	0	189	1	458	459	0.93	4:00-5:00
4:15-5:15	0	0	1	1	3	269	0	272	0	0	0	0	0	187	0	187	1	459	460	0.93	4:15-5:15
4:30-5:30	0	0	0	0	2	295	0	297	0	0	0	0	0	184	0	184	0	481	481	0.97	4:30-5:30
4:45-5:45	0	0	2	2	3	312	0	315	0	0	0	0	0	187	0	187	2	502	504	0.94	4:45-5:45
5:00-6:00	0	0	2	2	5	300	0	305	0	0	0	0	0	175	0	175	2	480	482	0.90	5:00-6:00
5:15-6:15	0	0	3	3	6	285	0	291	0	0	0	0	0	169	0	169	3	460	463	0.86	5:15-6:15
5:30-6:30	0	0	5	5	7	271	0	278	0	0	0	0	0	159	0	159	5	437	442	0.82	5:30-6:30
5:45-6:45	0	0	3	3	5	265	0	270	0	0	0	0	0	135	0	135	3	405	408	0.97	5:45-6:45
6:00-7:00	0	0	3	3	3	260	0	263	0	0	0	0	0	121	0	121	3	384	387	0.92	6:00-7:00
PM Peak 4:45-5:45																					
4:45-5:45	0	0	2	2	3	312	0	315	0	0	0	0	0	187	0	187	2	502	504	0.94	4:45-5:45

Report Number	MCP2586004L	MCP11510097	MCP003600B0	MCP2898002Y	MCP3126001X	MCP102200F8	MCP263900D4
Local Case Number	190002579	190009279	190027056	190054218	200007413	200036564	210043056
Agency Name	Montgomery County Police	Montgomery County Police	Montgomery County Police	Montgomery County Police	Montgomery County Police	Montgomery County Police	Montgomery County Police
ACRS Report Type	Injury Crash	Property Damage Crash	Injury Crash	Property Damage Crash	Property Damage Crash	Injury Crash	Injury Crash
Crash Date/Time	1/16/2019 19:18	2/27/2019 8:00	6/6/2019 13:44	11/10/2019 17:30	2/13/2020 19:30	9/18/2020 7:16	10/26/2021 8:55
Hit/Run	No	No	No	No	No	No	No
Route Type	Maryland (State)	Maryland (State)	Maryland (State)	Maryland (State)	Maryland (State)	Maryland (State)	Maryland (State)
Mile Point	20.57	20.57	20.57	20.57	20.57	20.57	20.57
Mile Point Direction	North	North	North	North	North	North	North
Lane Direction	North	South	South	South	North	North	North
Lane Number	1	0	0	1	1	1	0
Lane Type		SHOULDER AREA	OFF ROAD				LEFT TURN LANE
Number of Lanes	1	2	2	2	1	2	3
Direction	South	North	South	North	North	South	North
Distance	500	0	0	40	0	20	0
Distance Unit	FEET	FEET	FEET	FEET	FEET	FEET	FEET
Road Grade	LEVEL	LEVEL	LEVEL	LEVEL	LEVEL	HILL UPHILL	LEVEL
NonTraffic	No	No	No	No	No	No	No
Road Name	FREDERICK RD	FREDERICK RD	FREDERICK RD	FREDERICK RD	FREDERICK RD	FREDERICK RD	FREDERICK RD
Cross-Street Name	WEST OLD BALTIMORE RD	WEST OLD BALTIMORE RD	WEST OLD BALTIMORE RD	WEST OLD BALTIMORE RD	WEST OLD BALTIMORE RD	WEST OLD BALTIMORE RD	WEST OLD BALTIMORE RD
Off-Road Description							
Municipality	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Related Non-Motorist							
At Fault	DRIVER	DRIVER	DRIVER	DRIVER	DRIVER	DRIVER	DRIVER
Weather	CLEAR	CLEAR	CLEAR	CLEAR	N/A	CLEAR	CLOUDY
Surface Condition	DRY	DRY	DRY	DRY	DRY	WET	DRY
Light	DARK LIGHTS ON	DAYLIGHT	DAYLIGHT	DARK LIGHTS ON	DARK LIGHTS ON	DAYLIGHT	DAYLIGHT
Traffic Control	TRAFFIC SIGNAL	TRAFFIC SIGNAL	NO CONTROLS	TRAFFIC SIGNAL	TRAFFIC SIGNAL	TRAFFIC SIGNAL	TRAFFIC SIGNAL
Driver Substance Abuse	NONE DETECTED	NONE DETECTED	NONE DETECTED	ALCOHOL PRESENT, N/A	NONE DETECTED	NONE DETECTED	NONE DETECTED
Non-Motorist Substance Abuse							
First Harmful Event	OTHER VEHICLE	FIXED OBJECT	FIXED OBJECT	OTHER VEHICLE	FIXED OBJECT	OTHER VEHICLE	OTHER VEHICLE
Second Harmful Event	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fixed Object Struck	N/A	DITCH	CONSTRUCTION BARRIER	N/A	GUARDRAIL OR BARRIER	N/A	N/A
Junction	NON INTERSECTION	INTERSECTION	INTERSECTION RELATED	NON INTERSECTION	INTERSECTION	INTERSECTION RELATED	INTERSECTION
Intersection Type	N/A	Y-INTERSECTION	T-INTERSECTION	N/A	T-INTERSECTION	Y-INTERSECTION	T-INTERSECTION
Intersection Area	N/A		N/A	N/A	N/A	N/A	
Road Alignment	STRAIGHT	STRAIGHT	STRAIGHT	STRAIGHT	STRAIGHT	STRAIGHT	STRAIGHT
Road Condition	NO DEFECTS	NO DEFECTS	NO DEFECTS	NO DEFECTS	HOLES RUTS ETC	NO DEFECTS	NO DEFECTS
Road Division	TWO-WAY, NOT DIVIDED	TWO-WAY, NOT DIVIDED	TWO-WAY, NOT DIVIDED	TWO-WAY, NOT DIVIDED	TWO-WAY, DIVIDED, UNPROTECTED	TWO-WAY, NOT DIVIDED	TWO-WAY, NOT DIVIDED
Latitude	39.21521603	39.215527	39.215515	39.21524167	39.21546364	39.21555333	39.21575833
Longitude	-77.25160234	-77.25282233	-77.25256667	-77.25177167	-77.25228169	-77.25214333	-77.252615
Location	(39.21521603, -77.25160234)	(39.215527, -77.25282233)	(39.215515, -77.25256667)	(39.21524167, -77.25177167)	(39.21546364, -77.25228169)	(39.21555333, -77.25214333)	(39.21575833, -77.252615)