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TECHNICAL MEMORANDUM

To: Mark Tudor, DelDOT

cc: James Burnett, RK&K

From: Nancy Bergeron, RK&K
Jeff Kuttesch, RK&K

Date: February 19, 2007

RE: **Churchmans Crossing Traffic Monitoring**
Fall 2006 Counts

This memo summarizes the latest updates to the Churchmans Crossing traffic monitoring program. Traffic data for the study was collected during the third and fourth weeks of October 2006 and the second week of November 2006. This represents the eighth time the intersections have been counted since the annual traffic monitoring program began in 2000. The number of intersections studied in 2006 was nine; the same nine locations were studied in 2005.

The intersections studied in 2006 are listed below. The number in parentheses behind the intersection name is the identification number that the intersection has been referenced by in previous years.

- SR 2 / Harmony Road (1)
- SR 7 / SR 4 (Stanton Split) (4)
- SR 4 / SR 7 / J.P. Morgan (5)
- SR 4 / Harmony Road (8)
- SR 273 / Harmony Road (14)
- SR 273 / Chapman Road / Eagle Run Road (15)
- SR 273 / Old Baltimore Pike (16)
- SR 7 / SR 273 (17)
- SR 2 / Red Mill Road / Polly Drummond Hill Road (22)

Key Findings from 2006

- In 2006, five intersections operated at a worse level of service in the AM peak than in 2005, and two intersections operated at a worse level of service in the PM peak than in 2005.
- The most significant change in the level of service from 2005 to 2006 was observed at the SR 2 / Red Mill Road / Polly Drummond Hill Road intersection; the level of service declined in 2006 from LOS D to LOS F.
- The level of service at the SR 4 / SR 7 / J.P. Morgan intersection improved for the second consecutive year during the PM peak. In 2004, this intersection operated at LOS F; in 2005, it operated at LOS E; this year, the intersection operated at LOS D.
- Traffic on SR 2 and Old Baltimore Pike increased over 2005 levels. Some of this increase may be attributable to the ongoing lane closures on I-95 at South Chapel Street, as motorists may have selected alternative parallel routes.

AM Peak Summary

Attached to this memo are turning movement count data tables by intersection with the respective Level of Service (LOS) and volume to capacity ratio computed using the Critical Lane Volume (CLV) analysis method; also included are intersection LOS and delay in seconds computed using the Highway Capacity Software (HCS) 2000 and SYNCHRO Version 5. A comparison between the AM peak hour Levels of Service (LOS) computed using the three analysis methods for the 2005 and 2006 counts indicate that:

- One intersection operated at a better LOS for at least one analysis method
- Three intersections operated at the same LOS as the previous year for all analysis methods:
  - SR 4 / SR 7 / J.P. Morgan (5)
  - SR 4 / Harmony Road (8)
  - SR 273 / Harmony Road (14)
- Five intersections operated at a worse LOS for at least one analysis method

Table 1 shows the Level of Service (LOS) for the October 2006 counts for each of the six intersections that experienced a change in LOS during the AM peak; the change in LOS from 2005 to 2006 is also shown.

Churchmans Crossing
2006 Traffic Monitoring

February 2007
RK&K Engineers, LLP

Table 1
AM Peak Hour
Intersection Level of Service (LOS) Comparison
For All Intersections Experiencing a Change in AM Peak LOS

	Fall 2006 LOS (Change in LOS from 2005 to 2006)		
	CLV	HCS	SYNCHRO
SR 2 / Harmony Road (1)	D (-)	C ( )	B ( )
SR 4 / SR 7 (Stanton Split) (4)	D (-)	C ( )	D ( )
SR 273 / Chapman Road (15)	E ( )	F (-)	E (-)
SR 273 / Old Baltimore Pike (16)	E (-)	E (-)	D ( )
SR 7 / SR 273 (17)	C (++)	F ( )*	F ( )*
SR 2 / Red Mill Road / Polly Drummond Hill Road (22)	F (--)	E (-)	E (-)

( ) No change in LOS (+) Improved by 1 LOS (++) Improved by 2 LOS (-) Declined by 1 LOS (--) Decline by 2 LOS

* The SR 7 / SR 273 intersection was operating at LOS F in 2005, however, HCS and SYNCHRO showed reduced delay in 2006 (improved LOS F).

The results indicate some slight variation in the level of service calculated using each of the three methods. These slight differences are reasonably expected when comparing multiple analysis methods due to the different approaches and assumptions about capacity found in these methods. The trends and comparisons with prior counts that follow are based primarily on the CLV results:

Traffic trends during the AM peak indicate that both eastbound and westbound traffic on SR 2 were higher than in 2005. This increase in traffic on SR 2, coupled with increased traffic on southbound Polly Drummond Hill Road and northbound Harmony Road, caused the level of service at the SR 2 / Red Mill Road / Polly Drummond Hill Road and SR 2 / Harmony Road

intersections to worsen from LOS D to LOS F and LOS C to LOS D, respectively. The increase in traffic on SR 2 may have resulted from the ongoing northbound and southbound lane closures on I-95, at the bridge over SR 72 (South Chapel Street); these lane closures were in effect for three months ending in late November 2006. Due to these lane closures, some traffic may have diverted to alternate parallel routes, including SR 2. Additionally, northbound traffic on Old Baltimore Pike, another route which runs parallel to I-95, at the intersection with SR 273 increased 26 percent over 2005 levels. This additional traffic on the northbound approach resulted in the intersection level of service declining from LOS D to LOS E.

An increase in southbound SR 7 traffic and an increase in westbound SR 4 traffic combined to result in a decline in the level of service from LOS C to LOS D at the SR 4 / SR 7 (Stanton Split).

Traffic trends on SR 273 varied throughout the corridor. Westbound SR 273 traffic increased at the SR 273 / Chapman Road intersection but decreased at both the SR 273 / Old Baltimore Pike and SR 273 / SR 7 intersections. Eastbound SR 273 traffic was slightly lower at all three of the intersections east of I-95, but was slightly higher at the SR 273 / Harmony Road intersection, west of I-95. At the SR 273 / SR 7 intersection, there was a significant decrease (-20%) in the northbound right turning traffic from SR 7. This resulted in an increase in the level of service from LOS E to LOS C.

PM Peak Summary

A comparison between the PM peak hour Levels of Service (LOS) for the October 2005 and the October / November 2006 counts indicates that:

- Four intersections operated at a better LOS for at least one analysis method
- Two intersections operated at the same LOS as previous year for all three analysis methods:
  - SR 273 / Old Baltimore Pike (16)
  - SR 7 / SR 273 (17)
- One intersection (SR 2 / Harmony Road) operated at a worse LOS for the CLV method, but operated at a better LOS for the HCS and SYNCHRO methods.
- Two intersections operated at a worse LOS for at least one analysis method

Table 2 shows the Level of Service (LOS) computed by each analysis method for the October 2006 counts for the seven intersections that experienced a change in LOS during the PM peak; the change in LOS from 2005 to 2006 is also shown. The following trends and comparisons with prior counts are based primarily on the CLV results:

Traffic trends during the PM peak indicate that westbound SR 2 traffic increased over 2005 levels while eastbound SR 2 traffic declined slightly. At the SR 2 / Harmony Road intersection, a significant increase in the number of westbound lefts resulted in a reduction in the level of service from LOS D to LOS E, despite the decrease in conflicting eastbound SR 2 through traffic. Northbound Red Mill Road traffic increased by 12% over 2005 levels, resulting in a reduction in level of service from LOS E to LOS F at the SR 2 / Red Mill Road / Polly Drummond Hill Road intersection.

A decrease in traffic was observed in both eastbound and westbound SR 4 / SR 7 traffic. These decreases resulted in an improvement in the level of service at both the SR 4 / SR 7 / J.P. Morgan and the SR 4 / SR 7 (Stanton Split) intersections. The level of service at the SR 4 / SR 7 / J.P. Morgan intersection improved from LOS E to LOS D; this is the first time since the spring of 2001 that this intersection has operated at LOS D. The level of service at the SR 4 / SR 7 (Stanton Split) intersection improved from LOS F to LOS E.

SR 273 traffic increased in both the eastbound and westbound directions at the SR 273 / Chapman Road intersection, resulting in a decline in the level of service from LOS E to LOS F. Westbound SR 273 traffic also increased throughout the rest of the corridor at the SR 273 /

Harmony Road, SR 273 / Old Baltimore Pike, and SR 273 / SR 7 intersections. A slight decrease in the number of southbound left turns from Harmony Road, combined with the increase in westbound SR 273 traffic, resulted in an improvement in the level of service from LOS F to LOS E at the SR 273 / Harmony Road intersection. However, the V/C-ratio at this intersection only improved from 1.00 to 0.98 at this location.

Churchmans Crossing
2006 Traffic Monitoring

February 2007
RK&K Engineers, LLP

Table 2
PM Peak Hour
Intersection Level of Service (LOS) Comparison
For All Intersections Experiencing a Change in PM Peak LOS

	Fall 2006 LOS (Change in LOS from 2005 to 2006)		
	CLV	HCS	SYNCHRO
SR 2 / Harmony Road (1)	E (-)	C (+)	B (+)
SR 4 / SR 7 (Stanton Split) (4)	E (+)	E (+)	E ( )
SR 4 / SR 7 / J.P. Morgan (5)	D (+)	E (+)	C ( )
SR 4 / Harmony Road (8)	E ( )	E (+)	D ( )
SR 273 / Harmony Road (14)	E (+)	E ( )	E ( )
SR 273 / Chapman Road (15)	F (-)	F (-)	E (-)
SR 2 / Red Mill Road / Polly Drummond Hill Road (22)	F (-)	E ( )	D ( )

( ) No change in LOS (+) Improved by 1 LOS (-) Declined by 1 LOS

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Churchmans Crossing Volume and Level of Service Comparison - AM Peak Hour

NOTE: Volumes shown in the following table represent the peak hour volumes at each intersection (e.g., they are not the peak volumes of an entire corridor). Therefore, the peak hours may vary among intersections, even between adjacent intersections. For example, the peak hour at SR 2 / Harmony Road was found to occur between 7:00 and 8:00 AM. However, the nearby intersection at SR 4 / Harmony Road was found to occur between 7:15 and 8:15 AM. As a result, the volumes in the following table may not balance between intersections.

SR 2 / HARMONY ROAD

1

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004(Oct) Count	2005(Oct) Count	2006(Oct) Count	Notes
NB Harmony	L	341	518	253	262	220	279	244	259	230	234	
	T											
	R	310	607	419	321	417	545	456	547	448	524	
SB	L											
	T											
	R											
EB SR 2	U			14	16	8	18	21	11	9	9	
	T	1077	1673	1105	963	1,010	1,155	1,125	1,063	1,081	1,186	
	R	689	587	507	462	355	682	426	432	355	417	
WB SR 2	L	506	536	723	604	537	651	618	616	548	572	
	T	863	985	956	902	929	883	930	981	778	897	
	R											
CLV LOS		D	F	E	C	C	D	D	D	C	D	
v/c		0.99	1.11	0.93	0.81	0.77	0.90	0.86	0.85	0.80	0.85	
HCS LOS		N/A	D	C	C	B	D	C	B	C	C	
Delay		N/A	47	34	26	18	38	24	20	21	24	
Synchro LOS		N/A	D	C	B	B	B	B	B	B	B	
Delay		N/A	40	21	15	14	19	15	15	15	14	

*SR 2 intersections analyzed as prelimed in SYNCHRO due to large distance between signals.

SR 2 / DELAWARE PARK BOULEVARD

2

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB Del Park	L	-	230	223	190	229	227	230	197			Right Turns into gas station were not counted Fall 2002. Shared NBL was added before 10/02 and NB/SB approaches are split phased. Intersection not counted in Fall 2005.
	T	-	6	9	30	5	3	7	11			
	R	-	59	90	80	55	88	72	59			
SB Gas	L	-	15	23	13	7	12	24	16			
	T	-	7	9	11	6	9	3	9			
	R	-	29	40	36	21	32	30	43			
EB SR 2	L	-	16	18	48	13	25	33	14			
	T	-	1563	1731	1631	1,599	1,543	1,621	1,641			
	R	-	118	145	191	257	210	195	195			
WB SR 2	L	-	79	93	123	130	163	170	129			
	T	-	1073	1130	1165	1,201	1,201	1,134	1,323			
	R	-	26	16	27	13	--	25	47			
CLV LOS		N/A	B	C	C	C	C	C	C			
v/c		N/A	0.69	0.76	0.77	0.78	0.73	0.76	0.73			
HCS LOS		N/A	B	B	C	B	C	C	C			
Delay		N/A	18	18	21	17	21	20	21			
Synchro LOS		N/A	B	B	B	B	B	B	B			
Delay		N/A	16	16	18	15	18	16	16			

SR 7 / SR 2

3

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB SR 7	L	175	193	181	157	212	164	291	150			Before 10/02, all free rights, except for the WBR were removed to accommodate 2nd EB & WB left turn lanes on SR 2. Intersection not counted in Fall 2005.
	T	540	551	687	690	707	711	602	656			
	R	308	347	427	396	396	381	518	418			
SB SR 7	L	754	622	700	527	617	644	597	568			
	T	1838	1070	1137	1122	1,049	1,158	1,156	1,097			
	R	48	57	49	65	70	43	54	47			
EB SR 2	L	115	98	154	133	138	129	112	122			
	T	1341	1402	1601	1268	1,384	1,508	1,571	1,355			
	R	198	191	153	189	187	139	180	147			
WB SR 2	L	297	290	312	290	403	298	374	393			
	T	1289	721	832	656	812	863	835	749			
	R	207	251	266	265	285	239	264	255			
CLV LOS		F	E	F	E	F	E	F	E			
v/c		1.21	0.97	1.10	0.93	1.07	0.98	1.04	0.93			
HCS LOS		N/A	E	E	E	E	E	E	E			
Delay		N/A	55	78	56	77	56	69	66			
Synchro LOS		N/A	D	E	D	E	D	E	D			
Delay		N/A	48	69	45	66	47	58	53			

Churchmans Crossing Volume and Level of Service Comparison - AM Peak Hour

SR 7 / SR 4 (Stanton Split) — # 4

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB Mill Road	L	-										
	T	-										
	R	-		5		5	4	5	6	3	4	
SB SR 7	L	-	407	397	355	359	256	348	361	310	314	
	T	-		1		1		1	2	0	0	
	R	-	1091	1057	1178	1,154	1,123	1,213	1,247	1,218	1,326	
EB SR 4/SR 7	L	-	835	956	915	932	912	1,015	966	1,006	991	
	T	-	948	1001	1085	1,158	1,164	1,339	1,148	1,287	1,256	
	R	-		4		2	2	0	2	1	2	
WB SR 4	L	-										
	T	-	822	751	810	887	997	848	916	891	1,002	
	R	-	243	302	282	349	239	259	238	245	271	
CLV LOS		N/A	C	C	C	C	C	C	C	C	D	
v/c		N/A	0.72	0.74	0.73	0.78	0.78	0.80	0.81	0.79	0.84	
HCS LOS		N/A	C	C	C	C	D	C	C	C	C	
Delay		N/A	27	28	27	29	36	31	32	30	34	
Synchro LOS		N/A	C	C	C	D	D	D	D	D	D	
Delay		N/A	38	34	34	36	39	38	38	37	40	

SR 4 / SR 7 / J.P. MORGAN — # 5

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB SR 7	L	19	41	78	114	156	170	279	271	186	227	Only two lanes per direction open on NB and SB SR 7 during February 2000 count. NB and EB left turn lanes added prior to 2004 counts.
	T	1421	1492	1395	1672	1,728	1,671	2,380	1,935	1,716	1,742	
	R	119	125	70	137	167	177	105	227	226	275	
SB SR 7	L	126	174	213	174	201	202	159	192	212	183	
	T	1563	1473	1242	1261	1,512	1,450	1,538	1,550	1,400	1,444	
	R	441	595	693	708	754	690	782	887	777	561	
EB SR 4	L	323	369	437	424	402	535	537	507	550	575	
	T	57	113	145	92	117	121	92	127	183	135	
	R	28	46	53	26	31	38	51	43	53	64	
WB J.P. Morgan	L	23	32	15	9	11	8	6	11	9	11	
	T	8	7	6	11	11	7	10	20	13	16	
	R	8	8	5	6	14	5	10	14	9	9	
CLV LOS		A	B	C	B	B	C	D	C	C	C	
v/c		0.58	0.63	0.78	0.69	0.71	0.75	0.90	0.75	0.72	0.72	
HCS LOS		N/A	C	C	C	C	C	D	C	D	D	
Delay		N/A	23	26	26	25	35	42	30	38	38	
Synchro LOS		N/A	C	C	C	C	C	D	C	C	C	
Delay		N/A	24	26	24	25	30	37	24	25	23	

SR 4 / CHURCHMANS ROAD / DELAWARE PARK — # 6

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB Churchmans	L	-	550	543	546	706	736	800	840			Intersection not counted in Fall 2005.
	T	-	47	23	41	35	18	45	49			
	R	-	14	38	34	46	42	51	52			
SB Del Park	L	-	5	5	7	19	4	4	6			
	T	-	11	7	18	16	15	18	22			
	R	-	6	8	16	4	24	10	16			
EB SR 4	L	-	37	30	51	35	73	51	61			
	T	-	440	575	505	552	845	688	725			
	R	-	595	704	613	613	871	715	661			
WB SR 4	L	-	71	97	100	97	88	92	83			
	T	-	451	467	529	563	649	707	747			
	R	-	4	10	10	7	10	18	16			
CLV LOS		N/A	A	A	A	A	A	A	A			
v/c		N/A	0.43	0.48	0.47	0.52	0.62	0.60	0.62			
HCS LOS		N/A	C	C	C	C	C	C	C			
Delay		N/A	22	22	23	24	25	29	33			
Synchro LOS		N/A	C	C	C	C	C	C	C			
Delay		N/A	22	21	24	23	21	25	26			

SR 4 / CHRISTIANA HOSPITAL / HYGEIA DRIVE — # 7

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB Hospital	L	-	-	75	73	75	77	95	148			Intersection not counted in Fall 2005.
	T	-	-	3	10	12	7	17	17			
	R	-	-	32	25	33	35	53	58			
SB Hygeia	L	-	-	28	33	47	45	50	44			
	T	-	-	5	4	9	11	12	2			
	R	-	-	18	22	25	38	35	28			
EB SR 4	L	-	-	183	125	197	215	229	203			
	T	-	-	1249	836	1,140	1,376	1,213	1,301			
	R	-	-	336	219	344	474	488	411			
WB SR 4	L	-	-	110	191	154	157	165	136			
	T	-	-	706	1098	944	1,009	994	1,198			
	R	-	-	202	369	239	244	248	264			
CLV LOS		N/A	N/A	A	A	A	B	A	B			
v/c		N/A	N/A	0.55	0.50	0.54	0.63	0.59	0.63			
HCS LOS		N/A	N/A	N/A	N/A	N/A	N/A	B	B			
Delay		N/A	N/A	N/A	N/A	N/A	N/A	11	14			
Synchro LOS		N/A	N/A	N/A	N/A	N/A	N/A	A	B			
Delay		N/A	N/A	N/A	N/A	N/A	N/A	10	14			

Churchmans Crossing Volume and Level of Service Comparison - AM Peak Hour

SR 4 / HARMONY ROAD

8

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB Harmony	L	-	145	118	112	114	90	135	112	99	123	
	T	-	315	310	275	235	261	270	277	262	290	
	R	-	377	384	316	282	302	433	374	279	371	
SB Harmony	L	-	654	668	684	705	774	785	704	775	755	
	T	-	553	382	346	250	305	279	274	337	295	
	R	-	158	162	174	223	219	191	154	156	139	
EB SR 4	L	-	148	168	121	186	231	220	214	233	220	
	T	-	731	1171	1128	1,099	1,225	1,252	1,330	1,214	1,375	
	R	-	110	97	96	66	66	50	83	67	62	
WB SR 4	L	-	64	81	95	52	78	83	79	73	84	
	T	-	332	391	531	550	587	527	638	588	582	
	R	-	301	215	197	272	290	231	351	284	282	
CLV LOS		N/A	C	D	D	D	E	E	E	E	E	
v/c		N/A	0.73	0.90	0.88	0.82	0.93	0.95	0.94	0.92	0.99	
HCS LOS		N/A	D	E	D	D	E	E	E	E	E	
Delay		N/A	54	61	55	51	66	68	72	61	80	
Synchro LOS		N/A	D	D	D	D	D	D	D	D	D	
Delay		N/A	37	47	42	41	51	44	45	42	53	

CHURCHMANS ROAD / CONTINENTAL DRIVE

9

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB Continental	L	-	-	16	29	31	28					Churchmans Road under construction in 2000; finished by 2001 count. Before the 10/02 count, left turn lanes were added to NB & SB Continental Dr. Churchman's Place. Intersection was not counted in 10/03, 10/04, or 10/05.
	T	-	-	14	6	10	4					
	R	-	-	159	128	161	68					
SB Churchmans Place	L	-	-	44	41	31	38					
	T	-	-	31	103	86	68					
	R	-	-	10	0	8	8					
EB Churchmans	L	-	-	37	5	7	6					
	T	-	-	566	650	662	556					
	R	-	-	60	146	107	95					
WB Churchmans	L	-	-	510	595	611	467					
	T	-	-	996	1277	1,319	1,402					
	R	-	-	66	41	31	46					
CLV LOS		N/A	N/A	A	A	A	A					
v/c		N/A	N/A	0.42	0.50	0.51	0.42					

SR 7 / CHURCHMANS ROAD (Ramp A)

10

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB SR 7	L	-	581									Churchmans Road under construction in 2000; finished by 2001 count. Intersection was not counted in 10/03, 10/04, or 10/05.
	T	-	1441									
	R	-	192									
SB SR 7	L	-	371	149	230	169	180					
	T	-	1084	379	406	414	522					
	R	-	103	95	69	113	96					
EB Churchmans	L	-	130									
	T	-	392	332	382	285	344					
	R	-	573	437	540	442	446					
WB Churchmans	L	-	326	231	232	294	252					
	T	-	1170	1572	1856	1,942	1,839					
	R	-	653									
CLV LOS		N/A	F	D	B	B	B					
v/c		N/A	1.09	0.85	0.72	0.63	0.64					

SR 7 / CHURCHMANS ROAD (Ramp B/C)

11

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB SR 7	L	-	581									Churchmans Road under construction in 2000; finished by 2001 count. Intersection was not counted in 10/03, 10/04, or 10/05.
	T	-	1441									
	R	-	192									
SB SR 7	L	-	371	147	178	163	153					
	T	-	1084	11	16	24	18					
	R	-	103	509	658	669	609					
EB Churchmans	L	-	130	24	34	44	29					
	T	-	392	456	548	462	448					
	R	-	573	14	18	26	18					
WB Churchmans	L	-	326	33	26	31	32					
	T	-	1170	1654	1489	1,492	1,510					
	R	-	653	153	316	368	331					
CLV LOS		N/A	F	D	C	C	C					
v/c		N/A	1.09	0.89	0.78	0.79	0.76					

Churchmans Crossing Volume and Level of Service Comparison - AM Peak Hour

CHURCHMANS ROAD / DEL TECH

12

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB Driveway	L	-	-	64	73	109	75					Churchmans Road under construction in 2000; finished by 2001 count. Intersection was not counted in 10/03, 10/04, or 10/05.
	T	-	-	6	12	11	46					
	R	-	-	28	20	21	23					
SB Del Tech	L	-	-	112	77	65	26					
	T	-	-									
	R	-	-	22	21	6	31					
EB Churchmans	L	-	-	98	159	80	150					
	T	-	-	494	512	458	430					
	R	-	-	11	24	10	27					
WB Churchmans	L	-	-									
	T	-	-	1700	1687	1,732	1,769					
	R	-	-	469	593	379	435					
CLV LOS		N/A	N/A	C	A	A	A					
v/c		N/A	N/A	0.74	0.60	0.57	0.59					

CHURCHMANS ROAD / COUNTRY CLUB DRIVE

13

		1993 Count	1998 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB C.C.	L	-	-	190	220	223	190					Intersection was not counted in 10/03, 10/04, or 10/05.
	T	-	-									
	R	-	-	108	78	67	75					
SB	L	-	-									
	T	-	-									
	R	-	-									
EB Churchmans	L	-	-									
	T	-	-	662	704	600	554					
	R	-	-	44	40	48	52					
WB Churchmans	L	-	-	22	20	14	17					
	T	-	-	405	492	489	530					
	R	-	-									
CLV LOS		N/A	N/A	A	A	A	A					
v/c		N/A	N/A	0.55	0.59	0.52	0.48					

SR 273 / HARMONY ROAD

14

		1993 Count	1998 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB Gerald Drive	L	-	18	24	21	27	23	22		19	21	Before 10/02, an exclusive WB right turn lane was added. Intersection was not counted in 10/04.
	T	-	30	23	18	18	17	18		22	26	
	R	-	160	157	102	166	132	160		142	118	
SB Harmony	L	-	682	665	547	392	450	400		455	461	
	T	-	6	17	15	7	9	14		9	13	
	R	-	18	15	38	18	17	13		21	26	
EB SR 273	L	-	26	30	22	9	62	69		40	42	
	T	-	1530	1675	1598	1,889	1,695	1,898		1,945	2,063	
	R	-	14	30	30	22	26	31		66	41	
WB SR 273	L	-	34	27	30	29	27	38		31	21	
	T	-	1624	1905	1899	2,007	1,912	2,048		1,945	1,892	
	R	-	925	786	637	575	622	700		661	555	
CLV LOS		N/A	E	F	E	E	E	F		E	E	
v/c		N/A	0.95	1.04	0.95	0.95	0.96	1.00		0.96	0.98	
HCS LOS		N/A	E	E	D	E	D	E		E	E	
Delay		N/A	56	71	49	58	50	72		67	65	
Synchro LOS		N/A	D	E	D	D	D	E		E	E	
Delay		N/A	45	61	43	52	45	65		62	63	

SR 273 / CHAPMAN ROAD / EAGLE RUN ROAD

15

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB Chapman	L	-	10	490	563	498	578	566		543	591	NBL in 1997 was affected by something unknown. No count performed in 2004 due to ongoing construction at I-95 / SR 273 interchange. Intersection was not counted in 10/04.
	T	-	2	21	22	16	42	36		28	41	
	R	-	160	187	206	218	188	179		180	220	
SB Eagle Run	L	-	26	34	29	51	38	43		35	39	
	T	-	23	16	20	35	28	22		11	18	
	R	-	83	61	81	56	81	86		75	65	
EB SR 273	L	-	232	195	267	147	242	261		182	166	
	T	-	775	893	898	1,260	1,002	1,212		948	929	
	R	-	859	773	910	711	701	555		735	594	
WB SR 273	L	-	358	344	326	302	326	283		295	247	
	T	-	1655	1878	1862	1,688	1,763	1,916		1,887	2,026	
	R	-	91	92	108	89	121	109		96	122	
CLV LOS		N/A	N/A	E	E	D	E	E		E	E	
v/c		N/A	N/A	0.91	0.96	0.84	0.93	0.98		0.93	0.99	
HCS LOS		N/A	C	E	F	D	E	F		E	F	
Delay		N/A	33	70	118	46	75	87		69	82	
Synchro LOS		N/A	B	D	D	D	D	E		D	E	
Delay		N/A	20	44	53	36	46	59		55	65	

SR 273 / OLD BALTIMORE PIKE

16

		1993 Count	1998 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB Old Balt	L	-	788	875	868	638	802	780	699	746	939	Main Street was closed 10/01. Intersection operates as split phased in the northboundsouthbound directions during the 2002 counts.
	T	-	127	123	142	187	169	142	160	157	173	
	R	-	441	442	614	358	476	460	530	438	386	
SB Old Balt	L	-	9	13	52	14	12	13	18	14	12	
	T	-	35	21	22	43	36	35	34	43	43	
	R	-	63	55	10	156	39	65	53	43	67	
EB SR 273	L	-	25	16	8	282	30	42	47	34	58	
	T	-	1380	842	882	1,056	848	918	951	850	792	
	R	-	168	155	219	192	199	213	181	182	199	
WB SR 273	L	-	173	192	215	157	230	171	239	164	155	
	T	-	1333	1351	835	1,215	1,331	1,464	1,481	1,476	1,422	
	R	-	8	25	55	23	15	15	11	13	20	
CLV LOS		N/A	D	D	D	E	D	D	D	D	E	
v/c		N/A	0.90	0.82	0.88	0.96	0.82	0.88	0.86	0.86	0.95	
HCS LOS		N/A	D	D	E	E	E	E	E	D	E	
Delay		N/A	47	48	67	73	55	59	65	50	62	
Synchro LOS		N/A	D	D	D	D	D	D	D	D	D	
Delay		N/A	43	48	39	52	51	43	40	42	47	

SR 7 / SR 273

17

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB SR 7	L	500	736	558	790	586	659	657	637	661	609	An additional WBL was added to the intersection prior to the 200 count.
	T	48	66	47	126	146	111	130	106	161	180	
	R	698	885	1064	1112	830	859	718	575	895	718	
SB SR 7	L	39	47	43	52	78	37	57	36	57	51	
	T	20	22	19	29	43	20	29	18	21	25	
	R	3	7	13	9	14	8	11	10	4	5	
EB SR 273	L	12	15	11	8	16	7	12	10	7	6	
	T	822	747	1309	1320	1,120	1,068	1,112	1,194	1,090	971	
	R	190	200	268	188	211	241	229	163	184	183	
WB SR 273	L	157	221	204	229	175	239	247	214	251	204	
	T	499	767	961	853	836	908	979	1,018	1,005	892	
	R	38	58	45	92	92	25	58	58	74	70	
CLV LOS		C	D	F	F	E	E	D	C	E	C	
v/c		0.73	0.83	1.13	1.19	0.93	0.92	0.85	0.78	0.95	0.80	
HCS LOS		N/A	F	F	F	F	F	F	F	F	F	
Delay		N/A	180	130	237	117	144	118	92	165	121	
Synchro LOS		N/A	F	F	F	F	F	F	F	F	F	
Delay		N/A	170	138	162	126	139	122	103	138	124	

SR 273 / SB SR 1 RAMP

18

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB	L	-	-					-	-			Intersection was not counted in 10/05.
	T	-	-					-	-			
	R	-	-					-	-			
SB SR 1	L	-	-	119	129	180	146	153	165			
	T	-	-	1				-	-			
	R	-	-	116	157	156	170	170	199			
EB SR 273	L	-	-					-	-			
	T	-	-	2259	1132	1,811	1,699	1,774	1,988			
	R	-	-	157	130	153	179	157	237			
WB SR 273	L	-	-	76	67	92	64	71	84			
	T	-	-	1134	1279	1,013	1,066	1,075	1,105			
	R	-	-					-	-			
CLV LOS		N/A	N/A	D	A	C	C	C	D			
v/c		N/A	N/A	0.90	0.54	0.79	0.73	0.76	0.86			
HCS LOS		N/A	N/A	N/A	N/A	N/A	N/A	B	B			
Delay		N/A	N/A	N/A	N/A	N/A	N/A	12	14			
Synchro LOS		N/A	N/A	N/A	N/A	N/A	N/A	A	A			
Delay		N/A	N/A	N/A	N/A	N/A	N/A	9	9			

SR 273 / NB SR 1 RAMP

19

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB SR 1	L	-	-	294	351	388	368	372	373			Intersection was not counted in 10/05.
	T	-	-					-	-			
	R	-	-	280	390	353	362	345	370			
SB	L	-	-					-	-			
	T	-	-					-	-			
	R	-	-					-	-			
EB SR 273	L	-	-	615	542	570	597	546	524			
	T	-	-	1763	1306	1,351	1,279	1,403	1,633			
	R	-	-					-	-			
WB SR 273	L	-	-					-	-			
	T	-	-	916	758	780	813	781	779			
	R	-	-	340	397	375	341	340	370			
CLV LOS		N/A	N/A	D	D	D	D	D	D			
v/c		N/A	N/A	0.88	0.84	0.87	0.88	0.84	0.83			
HCS LOS		N/A	N/A	N/A	N/A	N/A	N/A	D	C			
Delay		N/A	N/A	N/A	N/A	N/A	N/A	37	33			
Synchro LOS		N/A	N/A	N/A	N/A	N/A	N/A	C	C			
Delay		N/A	N/A	N/A	N/A	N/A	N/A	29	27			

Churchmans Crossing Volume and Level of Service Comparison - AM Peak Hour

SB SR 1 RAMPS / ROAD A

20

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB	L	-	153	104	68	58	70					Intersection was not counted in 10/03, 10/04, or 10/05.
	T	-										
	R	-	2	12	6	12	19					
SB SR 1	L	-										
	T	-										
	R	-										
EB Road A	L	-										
	T	-	178	192	342	277	213					
	R	-	23	26	7	14	15					
WB Road A	L	-	13	26	25	28	31					
	T	-	76	81	36	37	28					
	R	-										
CLV LOS		N/A	A	A	A	A	A					
v/c		N/A	0.22	0.20	0.27	0.23	0.20					

NB SR 1 RAMPS / ROAD A

21

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB SR 1	L	-	59	45	34	25	14					Intersection was not counted in 10/03, 10/04, or 10/05.
	T	-	97	334	624	770	540					
	R	-										
SB Mall	L	-										
	T	-	9	13	16	21	17					
	R	-	34	27	29	29	29					
EB Road A	L	-	45	99	181	159	134					
	T	-										
	R	-	124	108	167	137	122					
WB	L	-										
	T	-										
	R	-										
CLV LOS		N/A	A	A	A	A	A					
v/c		N/A	0.11	0.27	0.50	0.58	0.43					

SR 2 / RED MILL ROAD / POLLY DRUMMOND HILL ROAD

22

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB Red Mill	L	-	-	335	384	323	357	496	412	335	343	
	T	-	-	308	357	319	309	298	319	289	309	
	R	-	-	139	161	107	104	144	117	135	126	
SB Polly	L	-	-	278	328	233	297	364	250	214	266	
	T	-	-	481	514	579	409	480	479	443	577	
	R	-	-	376	333	247	269	264	281	266	263	
EB SR 2	L	-	-	283	250	491	239	337	291	232	301	
	T	-	-	1115	931	1,253	1,020	1,095	1,109	1,012	1,223	
	R	-	-	396	417	436	406	358	424	367	306	
WB SR 2	L	-	-	199	173	204	136	180	157	115	158	
	T	-	-	951	906	944	865	1,066	967	840	861	
	R	-	-	42	83	147	79	131	122	56	91	
CLV LOS		N/A	N/A	E	E	F	D	F	E	D	F	
v/c		N/A	N/A	0.93	0.93	1.11	0.84	1.06	0.97	0.84	1.01	
HCS LOS		N/A	N/A	E	E	F	D	E	E	D	E	
Delay		N/A	N/A	66	66	87	55	79	63	52	69	
Synchro LOS		N/A	N/A	D	D	E	D	E	D	D	E	
Delay		N/A	N/A	47	49	70	42	63	49	40	57	

SR 7 / SCHOOL BELL ROAD

24

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB SR 7	L	-	-		-	-						Intersection was not counted in 10/03, 10/04, or 10/05.
	T	-	-	1,349	-	-	1,361					
	R	-	-	69	-	-	71					
SB SR 7	L	-	-	60	-	-	79					
	T	-	-	379	-	-	403					
	R	-	-		-	-						
EB -	L	-	-		-	-						
	T	-	-		-	-						
	R	-	-		-	-						
WB School	L	-	-	31	-	-	31					
	T	-	-		-	-						
	R	-	-	181	-	-	223					
CLV LOS		N/A	N/A	E	N/A	N/A	E					
v/c		N/A	N/A	0.96	N/A	N/A	0.99					

SR 4 / TELEGRAPH ROAD

25

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB Happy Harry's	L	-	-	-	-	-	-	-	5			Intersection was not counted in 10/05.
	T	-	-	-	-	-	-	-				
	R	-	-	-	-	-	-	-	1			
SB Telegraph	L	-	-	-	-	-	-	-	204			
	T	-	-	-	-	-	-	-				
	R	-	-	-	-	-	-	-	556			
EB SR 4	L	-	-	-	-	-	-	-	239			
	T	-	-	-	-	-	-	-	1,911			
	R	-	-	-	-	-	-	-	9			
WB SR 4	L	-	-	-	-	-	-	-	4			
	T	-	-	-	-	-	-	-	1,997			
	R	-	-	-	-	-	-	-	162			
CLV LOS		N/A	N/A	N/A	N/A	N/A	N/A	N/A	C			
v/c		N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.72			
HCS LOS		N/A	N/A	N/A	N/A	N/A	N/A	N/A	C			
Delay		N/A	N/A	N/A	N/A	N/A	N/A	N/A	32			
Synchro LOS		N/A	N/A	N/A	N/A	N/A	N/A	N/A	B			
Delay		N/A	N/A	N/A	N/A	N/A	N/A	N/A	16			

SR 2 / ST. JAMES CHURCH ROAD

26

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB St. James Church	L	-	-	-	-	-	-	-	80			Intersection was not counted in 10/05.
	T	-	-	-	-	-	-	-	31			
	R	-	-	-	-	-	-	-	85			
SB Griffin Drive	L	-	-	-	-	-	-	-	54			
	T	-	-	-	-	-	-	-	60			
	R	-	-	-	-	-	-	-	37			
EB SR 2	L	-	-	-	-	-	-	-	59			
	T	-	-	-	-	-	-	-	1,698			
	R	-	-	-	-	-	-	-	150			
WB SR 2	L	-	-	-	-	-	-	-	16			
	T	-	-	-	-	-	-	-	899			
	R	-	-	-	-	-	-	-	114			
CLV LOS		N/A	N/A	N/A	N/A	N/A	N/A	N/A	A			
v/c		N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.61			
HCS LOS		N/A	N/A	N/A	N/A	N/A	N/A	N/A	C			
Delay		N/A	N/A	N/A	N/A	N/A	N/A	N/A	30			
Synchro LOS		N/A	N/A	N/A	N/A	N/A	N/A	N/A	C			
Delay		N/A	N/A	N/A	N/A	N/A	N/A	N/A	28			

Churchmans Crossing Volume and Level of Service Comparison - PM Peak Hour

NOTE: Volumes shown in the following table represent the peak hour volumes at each intersection (e.g., they are not the peak volumes of an entire corridor). Therefore, the peak hours may vary among intersections, even between adjacent intersections. For example, the peak hour at SR 2 / Harmony Road was found to occur between 7:00 and 8:00 AM. However, the nearby intersection at SR 4 / Harmony Road was found to occur between 7:15 and 8:15 AM. As a result, the volumes in the following table may not balance between intersections.

SR 2 / HARMONY ROAD

1

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB Harmony	L	647	433	544	475	447	586	454	545	417	430	
	T											
	R	542	662	632	655	673	944	792	754	703	672	
SB	L											
	T											
	R											
EB SR 2	U	13		28	17	5	28	14	16	19	19	
	T	1157	1258	1063	1078	1,126	1,314	1,103	1,093	1,190	1,040	
	R	361	345	276	305	306	467	283	354	243	281	
WB SR 2	L	507	503	626	500	607	548	598	651	501	623	
	T	1409	1367	1441	1340	1,313	1,205	1,382	1,301	1,265	1,265	
	R											
CLV LOS		F	E	E	D	E	E	E	E	D	E	
v/c		1.12	0.94	0.96	0.86	0.93	1.00	0.92	0.99	0.88	0.91	
HCS LOS		N/A	C	C	C	C	D	C	D	D	C	
Delay		N/A	30	33	30	28	38	29	38	37	29	
Synchro LOS		N/A	C	C	B	C	C	C	C	C	B	
Delay		N/A	21	23	19	20	26	20	31	29	19	

SR 2 / DELAWARE PARK BOULEVARD

2

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB Del Park	L	149	277	292	289	329	326	349	331			Right Turns into gas station were not counted Fall 2002. Shared NB L was added before 10/02 and NB/SB approaches are split phased. Intersection was not counted in Fall 2005.
	T	15	10	7	12	0	8	9	10			
	R	311	122	129	121	90	154	150	149			
SB Gas Station	L	20	14	30	20	8	16	19	24			
	T	15	15	11	11	8	12	7	18			
	R	50	50	59	66	37	47	56	70			
EB SR 2	L	50	19	55	41	32	52	69	46			
	T	1628	1297	1389	1356	1,670	1,494	1,468	1,505			
	R	100	156	162	178	192	232	213	185			
WB SR 2	L	354	176	184	154	205	188	187	176			
	T	1922	2084	1981	1874	1,883	1,972	1,892	1,955			
	R	50	46	8	1	30	--	67	74			
CLV LOS		D	D	D	D	E	D	D	D			
v/c		0.86	0.89	0.85	0.87	0.92	0.85	0.83	0.84			
HCS LOS		N/A	C	B	B	B	B	B	C			
Delay		N/A	25	17	17	19	16	16	31			
Synchro LOS		N/A	B	B	B	B	B	B	C			
Delay		N/A	20	16	15	17	16	15	29			

SR 7 / SR 2

3

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB SR 7	L	372	266	272	276	338	248	392	237			Before 10/02, all free rights, except for the WBR were removed to accommodate 2nd EB & WB left turn lanes on SR 2. Intersection was not counted in Fall 2005.
	T	1047	802	914	969	941	958	904	977			
	R	423	451	452	404	458	365	538	587			
SB SR 7	L	436	403	539	358	502	409	427	399			
	T	785	743	768	727	802	805	815	864			
	R	118	88	113	93	113	124	101	83			
EB SR 2	L	220	224	259	217	237	285	321	312			
	T	1044	1059	1073	996	1,097	1,097	1,197	1,054			
	R	273	187	143	144	166	187	228	207			
WB SR 2	L	426	417	458	490	471	572	634	696			
	T	1554	1898	2060	1648	1,542	1,832	1,620	1,650			
	R	1017	622	478	540	518	535	661	596			
CLV LOS		F	F	F	F	F	F	F	F			
v/c		1.05	1.04	1.20	1.02	1.08	1.05	1.01	1.01			
HCS LOS		N/A	E	F	E	E	E	E	F			
Delay		N/A	65	98	69	78	66	63	84			
Synchro LOS		N/A	E	F	E	E	E	E	E			
Delay		N/A	59	87	64	70	60	59	62			

Churchmans Crossing Volume and Level of Service Comparison - PM Peak Hour

SR 7 / SR 4 (Stanton Split) # 4

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB	L	BAD						-	-	-	-	
	T	DATA						-	-	-	-	
Mill Road	R			8		6	8	2	6	6	4	
SB	L	923?	311	311	340	279	272	295	254	231	218	
	T			3		2	5	3	9	3	4	
SR 7	R	431?	1028	972	1128	1,002	1,159	1,266	1,426	1,356	1,272	
EB	L	351?	1261	1226	1274	1,078	1,341	1,213	1,259	1,260	1,101	
	T	955?	1044	990	1213	1,213	1,266	1,271	1,204	1,173	1,182	
SR 4/SR 7	R			6	2	1	4	0	2	1	3	
WB	L							-	-	-	-	
	T	1316?	1033	1031	1044	1,024	1,254	1,163	1,288	1,299	1,292	
SR 4	R	0?	342	316	384	294	291	306	241	232	198	
CLV LOS		N/A	D	D	E	D	F	E	F	F	E	
v/c		N/A	0.91	0.89	0.92	0.86	1.03	0.96	1.01	1.00	0.94	
HCS LOS		N/A	E	E	E	D	F	E	F	F	E	
Delay		N/A	76	72	75	50	100	74	95	95	75	
Synchro LOS		N/A	D	D	E	D	E	D	E	E	E	
Delay		N/A	54	48	58	41	67	51	68	65	58	

SR 4 / SR 7 / J.P. MORGAN # 5

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB	L	35	28	57	55	61	65	87	68	93	82	Only two lanes per direction open on NB and SB SR 7 during February 2000 count. New EB and NB left turn lanes added prior to 2004 counts.
	T	1693	1581	1360	1501	1,464	1,572	1,660	1,527	1,473	1,361	
SR 7	R	3	15	3	5	6	5	3	6	7	6	
SB	L	7	11	14	21	18	16	19	11	12	21	
	T	1552	1653	1435	1670	1,896	1,959	2,238	2,762	2,253	1,922	
SR 7	R	476	690	500	532	511	542	631	677	716	562	
EB	L	607	655	690	807	828	879	950	903	811	824	
	T	6	11	35	12	17	16	7	22	22	14	
SR 4	R	47	87	82	241	358	478	554	571	501	461	
WB	L	244	307	147	171	214	177	138	202	214	200	
	T	49	88	87	95	108	94	97	126	121	131	
J.P. Morgan	R	103	244	167	218	174	166	147	162	215	103	
CLV LOS		E	D	D	D	E	E	F	F	E	D	
v/c		0.92	0.82	0.88	0.88	0.92	0.93	1.03	1.05	0.91	0.83	
HCS LOS		N/A	D	D	E	E	F	F	F	F	E	
Delay		N/A	48	40	59	79	90	127	134	85	63	
Synchro LOS		N/A	C	C	D	D	D	E	E	C	C	
Delay		N/A	30	31	39	45	48	62	67	32	22	

SR 4 / CHURCHMANS ROAD / DELAWARE PARK # 6

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB	L	1009	809	808	709	793	1016	814	782			Intersection not counted in Fall 2005.
	T	3	22	56	70	69	90	41	73			
Churchmans	R	69	66	115	130	158	238	156	142			
SB	L	0	4	4	18	19	45	42	54			
	T	38	57	87	85	81	117	157	136			
Del Park	R	2	44	66	73	69	120	118	130			
EB	L	4	20	35	47	70	71	67	79			
	T	536	522	542	730	775	1023	917	1,054			
SR 4	R	688	655	747	630	532	836	767	749			
WB	L	17	8	79	37	40	38	35	40			
	T	523	383	551	513	563	521	614	619			
SR 4	R	0	1	8	12	15	13	14	19			
CLV LOS		A	A	A	B	B	D	C	C			
v/c		0.59	0.62	0.60	0.67	0.65	0.86	0.76	0.80			
HCS LOS		N/A	C	C	C	C	D	C	D			
Delay		N/A	24	25	27	29	44	33	35			
Synchro LOS		N/A	B	C	C	C	C	C	C			
Delay		N/A	19	22	21	23	30	29	32			

SR 4 / CHRISTIANA HOSPITAL / HYGEIA DRIVE # 7

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB	L	-	-	393	395	376	447	353	377			Intersection not counted in Fall 2005.
	T	-	-	12	18	17	12	17	21			
Hospital	R	-	-	133	173	138	239	214	168			
SB	L	-	-	229	252	213	229	238	246			
	T	-	-	10	13	16	10	13	28			
Hygeia	R	-	-	202	232	183	182	227	211			
EB	L	-	-	96	70	63	78	113	117			
	T	-	-	763	905	1,021	1,242	1,213	1,328			
SR 4	R	-	-	102	140	110	116	102	85			
WB	L	-	-	36	47	48	63	52	36			
	T	-	-	1174	1190	1,165	1,453	1,308	1,457			
SR 4	R	-	-	133	94	73	116	110	97			
CLV LOS		N/A	N/A	B	B	C	D	C	D			
v/c		N/A	N/A	0.72	0.71	0.75	0.83	0.75	0.83			
HCS LOS		N/A	N/A	N/A	N/A	N/A	N/A	B	C			
Delay		N/A	N/A	N/A	N/A	N/A	N/A	19	22			
Synchro LOS		N/A	N/A	N/A	N/A	N/A	N/A	B	C			
Delay		N/A	N/A	N/A	N/A	N/A	N/A	17	23			

Churchmans Crossing Volume and Level of Service Comparison - PM Peak Hour

SR 4 / HARMONY ROAD

8

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB Harmony	L	118	98	108	112	131	173	139	130	99	111	
	T	673	489	425	395	397	303	333	333	317	311	
	R	124	123	109	104	97	131	107	132	135	103	
SB Harmony	L	453	406	360	424	325	454	436	359	411	388	
	T	651	496	348	354	261	308	260	302	215	263	
	R	96	143	208	186	254	220	211	260	219	243	
EB SR 4	L	190	253	287	287	302	294	321	331	305	280	
	T	624	715	683	760	775	1,068	800	832	824	803	
	R	289	282	113	121	100	188	94	113	82	91	
WB SR 4	L	250	267	223	233	182	178	200	196	164	179	
	T	759	899	1087	1020	1,199	1,192	1,322	1,329	1,383	1,436	
	R	731	742	662	530	505	613	672	712	794	698	
CLV LOS		E	D	D	E	D	D	E	E	E	E	
v/c		0.96	0.87	0.88	0.92	0.90	0.88	0.95	0.92	0.94	0.94	
HCS LOS		N/A	F	E	E	E	D	E	E	F	E	
Delay		N/A	94	62	60	56	52	58	66	84	77	
Synchro LOS		N/A	D	D	D	D	D	D	D	D	D	
Delay		N/A	52	44	43	43	39	45	44	46	46	

CHURCHMANS ROAD / CONTINENTAL DRIVE

9

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB Continental	L	-	-	61	179	184	163					Churchmans Road under construction in 2000; finished by 2001 count. Before the 10/02 count, left turn lanes were added to NB & SB Continental Dr. / Churchman's Place. Intersection was not counted in 10/03, 10/04, or 10/05
	T	-	-	69	71	87	80					
	R	-	-	491	500	540	324					
SB Churchmans Pl.	L	-	-	185	73	91	92					
	T	-	-	10	11	9	11					
	R	-	-	45	1	7	13					
EB Churchmans	L	-	-	127	22	22	50					
	T	-	-	1032	1212	1,407	1,344					
	R	-	-	17	45	38	31					
WB Churchmans	L	-	-	214	120	150	130					
	T	-	-	619	1005	990	985					
	R	-	-	201	50	26	59					
CLV LOS		N/A	N/A	C	B	C	A					
v/c		N/A	N/A	0.78	0.67	0.75	0.60					

SR 7 / CHURCHMANS ROAD (Ramp A)

10

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB SR 7	L	317	429									Churchmans Road under construction in 2000; finished by 2001 count. Intersection was not counted in 10/03, 10/04, or 10/05.
	T	1057	1057									
	R	222	335									
SB SR 7	L	270	290	90	128	190	180					
	T	1455	1956	429	678	677	789					
	R	98	12	70	78	154	88					
EB Churchmans	L	182	317									
	T	459	693	511	652	960	745					
	R	1161	1335	1277	871	734	1,037					
WB Churchmans	L	430	405	484	560	1,046	483					
	T	854	975	958	1194	1,209	1,150					
	R	500	641									
CLV LOS		F	F	E	E	E	E					
v/c		1.39	1.66	0.98	0.96	0.97	0.91					

During the October 2001 PM period count, several eastbound right-turns were made from the eastbound right-most through lane. The volumes are shown below. These vehicles have been included in the eastbound right-turn volume above.

4:00 PM	7
4:15 PM	13
4:30 PM	9
4:45 PM	10

5:00 PM	19
5:15 PM	14
5:30 PM	13
5:45 PM	6

SR 7 / CHURCHMANS ROAD (Ramp B/C)

11

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB SR 7	L	317	429									Churchmans Road under construction in 2000; finished by 2001 count. Intersection was not counted in 10/03, 10/04, or 10/05.
	T	1057	1057									
	R	222	335									
SB SR 7	L	270	290	117	186	167	152					
	T	1455	1956	72	69	97	74					
	R	98	12	276	300	326	326					
EB Churchmans	L	182	317	67	97	111	138					
	T	459	693	455	595	576	663					
	R	1161	1335	62	77	129	100					
WB Churchmans	L	430	405	134	141	116	127					
	T	854	975	1355	1266	1,289	1,274					
	R	500	641	286	340	363	378					
CLV LOS		F	F	B	A	A	A					
v/c		1.39	1.66	0.64	0.50	0.53	0.52					

CHURCHMANS ROAD / DEL TECH

12

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB Driveway	L	-	-	217	251	396	247					Churchmans Road under construction in 2000, finished by 2001 count. Intersection was not counted in 10/03, 10/04, or 10/05.
	T	-	-	23	18	17	17					
	R	-	-	44	55	80	47					
SB Del Tech	L	-	-	131	128	102	106					
	T	-	-									
	R	-	-	108	78	140	73					
EB Churchmans	L	-	-	29	125	58	112					
	T	-	-	489	613	762	620					
	R	-	-	54	76	69	62					
WB Churchmans	L	-	-									
	T	-	-	1600	1486	1,515	1,399					
	R	-	-	133	192	143	209					
CLV LOS		N/A	N/A	C	A	A	A					
v/c		N/A	N/A	0.74	0.62	0.62	0.58					

CHURCHMANS ROAD / COUNTRY CLUB DRIVE

13

		1993 Count	1998 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB C.C.	L	-	96	90	80	106	96					Intersection was not counted in 10/03,10/04, or 10/05.
	T	-										
	R	-	56	47	39	40	36					
SB	L	-										
	T	-										
	R	-										
EB Churchmans	L	-										
	T	-	564	586	683	716	729					
	R	-	179	172	155	186	199					
WB Churchmans	L	-	67	78	59	50	72					
	T	-	710	771	844	785	780					
	R	-										
CLV LOS		N/A	A	A	A	A	A					
v/c		N/A	0.50	0.54	0.58	0.56	0.56					

SR 273 / HARMONY ROAD

14

		1993 Count	1998 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB Gerald Drive	L	-	18	7	12	10	10	11		14	22	Before 10/02, an exclusive WB right turn lane was added. No count performed in 2004 due to ongoing construction at I-95 / SR 273 interchange. Intersection was not counted in 10/04.
	T	-	17	19	10	6	20	27		34	14	
	R	-	89	99	72	94	80	57		63	66	
SB Harmony	L	-	829	675	701	478	504	501		498	465	
	T	-	21	31	21	20	14	17		18	13	
	R	-	17	10	14	16	5	25		14	13	
EB SR 273	L	-	36	20	27	27	30	44		15	31	
	T	-	1612	1653	1925	2,156	1,613	2,157		2,099	2,082	
	R	-	15	14	19	25	27	23		28	25	
WB SR 273	L	-	55	75	65	79	66	113		70	74	
	T	-	1700	1873	1647	1,972	1,816	1,919		1,877	2,022	
	R	-	767	574	602	513	495	620		555	547	
CLV LOS		N/A	E	E	F	F	D	F		F	E	
v/c		N/A	0.99	1.00	1.02	1.03	0.89	1.04		1.00	0.98	
HCS LOS		N/A	E	E	E	F	D	E		E	E	
Delay		N/A	67	62	61	82	45	67		76	72	
Synchro LOS		N/A	D	D	E	E	D	F		E	E	
Delay		N/A	54	52	55	75	41	83		74	72	

SR 273 / CHAPMAN ROAD / EAGLE RUN ROAD

15

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB Chapman	L	626	753	755	722	890	792	718		766	706	No counts performed in 2004 due to ongoing construction on I-95 / SR 273 interchange. Intersection was not counted in 10/04.
	T	31	6	21	27	9	29	18		30	18	
	R	332	384	407	370	375	466	405		435	428	
SB Eagle Run	L	142	42	68	61	60	66	59		56	50	
	T	59	22	22	18	12	20	25		14	16	
	R	347	73	132	149	119	150	114		147	100	
EB SR 273	L	58	51	69	92	41	96	66		49	47	
	T	1400	1643	1614	1590	1,709	1,626	1,817		1,691	1,898	
	R	717	892	393	728	653	640	610		539	615	
WB SR 273	L	154	230	197	161	228	233	249		214	244	
	T	841	902	1219	1121	1,578	1,240	1,297		1,387	1,566	
	R	21	18	18	16	6	31	30		40	24	
CLV LOS		D	E	E	D	F	E	F		E	F	
v/c		0.85	0.95	0.93	0.89	1.07	1.00	1.03		0.96	1.02	
HCS LOS		N/A	F	E	E	F	F	F		E	F	
Delay		N/A	99	66	66	86	77	86		74	94	
Synchro LOS		N/A	E	D	D	E	D	E		D	E	
Delay		N/A	57	48	43	65	52	64		54	70	

*Assume SB count in 1997 was affected by something unknown.

Churchmans Crossing Volume and Level of Service Comparison - PM Peak Hour

SR 273 / OLD BALTIMORE PIKE

16

		1993 Count	1998 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB Old Balt	L	-	280	259	297	294	318	318	312	300	361	Main Street was closed 10/01. Intersection operates as split phased in the northbound/southbound directions during the 2002 counts.
	T	-	104	97	67	131	188	171	150	142	138	
	R	-	293	302	368	297	528	358	574	385	367	
SB Old Balt	L	-	35	22	68	26	43	24	11	18	23	
	T	-	143	135	95	155	249	163	158	200	189	
	R	-	51	32	13	259	125	80	175	149	191	
EB SR 273	L	-	23	15	2	220	91	135	105	116	127	
	T	-	1323	1341	920	1,240	1,269	1,385	1,324	1,335	1,322	
	R	-	662	551	654	681	747	698	740	718	793	
WB SR 273	L	-	418	346	669	362	479	380	555	414	422	
	T	-	1046	1042	1088	1,089	1,144	1,293	1,154	1,076	1,225	
	R	-	26	46	74	8	14	31	8	21	77	
CLV LOS		N/A	D	C	C	E	F	D	F	E	E	
v/c		N/A	0.84	0.79	0.75	0.93	1.00	0.89	1.02	0.94	0.99	
HCS LOS		N/A	D	D	E	F	F	E	F	F	F	
Delay		N/A	41	53	79	89	105	56	102	83	86	
Synchro LOS		N/A	B	C	D	D	D	C	E	D	D	
Delay		N/A	20	21	47	42	55	26	60	37	40	

SR 7 / SR 273

17

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB SR 7	L	313	410	345	393	350	472	340	460	352	321	An additional WBL was added to the intersection prior to the 200 count.
	T	64	57	49	76	74	70	64	83	52	86	
	R	318	511	416	715	459	501	480	301	465	433	
SB SR 7	L	67	62	112	71	119	113	116	99	113	124	
	T	156	111	165	120	136	197	102	111	123	153	
	R	3	27	24	6	56	5	36	39	20	23	
EB SR 273	L	5	3	7	13	10	6	12	10	11	12	
	T	777	1190	1530	1114	959	1,036	1,157	1,300	1,154	1,140	
	R	592	365	871	859	643	771	665	565	644	558	
WB SR 273	L	580	650	562	647	695	606	826	646	710	708	
	T	635	1083	1153	1161	1,026	1,110	1,528	1,297	1,200	1,300	
	R	70	90	84	85	89	66	58	112	85	102	
CLV LOS		B	F	F	D	C	D	D	E	D	D	
v/c		0.65	1.01	1.06	0.87	0.79	0.84	0.89	0.91	0.85	0.85	
HCS LOS		N/A	F	F	F	E	E	F	E	F	F	
Delay		N/A	138	124	82	64	79	91	71	115	103	
Synchro LOS		N/A	F	E	F	E	E	E	D	E	E	
Delay		N/A	100	77	92	68	73	73	52	66	63	

SR 273 / SB SR 1 RAMP

18

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB	L	-						-	-			Intersection was not counted in 10/03, 10/04, or 10/05.
	T	-						-	-			
	R	-						-	-			
SB SR 1	L	-	266	324	303	315	271	371	338			
	T	-		11	4			-	-			
	R	-	204	331	446	502	438	434	468			
EB SR 273	L	-						-	-			
	T	-	1353	1864	1581	1,264	1,242	1,410	1,452			
	R	-	191	194	218	283	312	293	375			
WB SR 273	L	-	152	214	182	203	181	195	228			
	T	-	1601	1585	980	1,474	1,520	1,538	1,671			
	R	-						-	-			
CLV LOS		N/A	C	E	E	D	D	D	E			
v/c		N/A	0.73	0.98	0.94	0.88	0.81	0.88	0.93			
HCS LOS		N/A	N/A	N/A	N/A	N/A	N/A	C	D			
Delay		N/A	N/A	N/A	N/A	N/A	N/A	27	39			
Synchro LOS		N/A	N/A	N/A	N/A	N/A	N/A	C	C			
Delay		N/A	N/A	N/A	N/A	N/A	N/A	22	30			

SR 273 / NB SR 1 RAMP

19

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB SR 1	L	-	130	141	162	181	203	209	208			Intersection was not counted in 10/03, 10/04, or 10/05.
	T	-						-	-			
	R	-	106	114	139	147	171	189	178			
SB	L	-						-	-			
	T	-						-	-			
	R	-						-	-			
EB SR 273	L	-	260	315	297	376	305	385	313			
	T	-	1358	1873	1204	1,172	1,288	1,428	1,406			
	R	-						-	-			
WB SR 273	L	-						-	-			
	T	-	1623	1658	1456	1,518	1,512	1,532	1,668			
	R	-	229	286	330	353	365	335	315			
CLV LOS		N/A	C	D	C	D	D	D	D			
v/c		N/A	0.80	0.86	0.79	0.87	0.84	0.90	0.90			
HCS LOS		N/A	N/A	N/A	N/A	N/A	N/A	C	D			
Delay		N/A	N/A	N/A	N/A	N/A	N/A	30	46			
Synchro LOS		N/A	N/A	N/A	N/A	N/A	N/A	C	D			
Delay		N/A	N/A	N/A	N/A	N/A	N/A	25	41			

Churchmans Crossing Volume and Level of Service Comparison - PM Peak Hour

SB SR 1 RAMPS / ROAD A

20

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB SR 1	L	126	149	144	94	104	136					Intersection was not counted in 10/03, 10/04, or 10/05.
	T											
	R	11	6	29	49	70	66					
SB	L											
	T											
	R											
EB Road A	L	263	256	283	337	491	353					
	T	30	47	70	49	84	65					
WB Road A	L	196	199	236	280	456	326					
	T	120	108	199	227	336	200					
	R											
CLV LOS		A	A	A	A	B	A					
v/c		0.37	0.38	0.41	0.44	0.66	0.51					

NB SR 1 RAMPS / ROAD A

21

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB SR 1	L	10	20	20	12	16	11					Intersection was not counted in 10/03,10/04, or 10/05.
	T	187	214	269	297	344	358					
	R											
SB Mall	L											
	T	94	100	163	194	236	264					
	R	212	278	416	484	557	518					
EB Road A	L	81	136	200	253	262	314					
	T											
	R	120	174	114	124	149	106					
WB	L											
	T											
	R											
CLV LOS		A	A	A	A	A	A					
v/c		0.17	0.23	0.29	0.34	0.38	0.43					

SR 2 / RED MILL ROAD / POLLY DRUMMOND HILL ROAD

22

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB Red Mill	L	-	-	218	238	254	194	296	199	208	274	
	T	-	-	374	426	412	434	421	312	359	401	
	R	-	-	72	102	108	90	97	69	119	92	
SB Polly	L	-	-	233	171	312	177	200	209	189	201	
	T	-	-	375	380	453	288	319	301	323	366	
	R	-	-	245	253	298	246	246	241	251	281	
EB SR 2	L	-	-	411	346	368	352	381	282	358	353	
	T	-	-	1091	1024	1,169	1,172	1,142	1,164	997	993	
	R	-	-	344	415	476	407	369	427	367	316	
WB SR 2	L	-	-	210	202	254	214	260	196	180	204	
	T	-	-	1259	1207	1,305	1,107	1,326	1,305	1,270	1,326	
	R	-	-	241	270	350	293	408	365	239	200	
CLV LOS		N/A	N/A	F	E	F	E	F	D	E	F	
v/c		N/A	N/A	1.01	0.96	1.06	0.95	1.03	0.90	0.96	1.01	
HCS LOS		N/A	N/A	E	E	E	E	E	D	E	E	
Delay		N/A	N/A	67	63	79	56	67	52	58	71	
Synchro LOS		N/A	N/A	D	D	E	D	D	D	D	D	
Delay		N/A	N/A	54	47	61	42	53	39	44	54	

SR 7 / SCHOOL BELL ROAD

24

		1993 Count	1997 Count	2000 Count	2001 (Feb) Count	2001 (Oct) Count	2002 (Oct) Count	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB SR 7	L	-	-		-	-						Intersection was not counted in 10/03, 10/04, or 10/05.
	T	-	-	752	-	-	787					
	R	-	-	42	-	-	66					
SB SR 7	L	-	-	117	-	-	216					
	T	-	-	1,198	-	-	1,345					
	R	-	-		-	-						
EB -	L	-	-		-	-						
	T	-	-		-	-						
	R	-	-		-	-						
WB School	L	-	-	58	-	-	68					
	T	-	-		-	-						
	R	-	-	58	-	-	184					
CLV LOS		N/A	N/A	C	N/A	N/A	D					
v/c		N/A	N/A	0.79	N/A	N/A	0.88					

Churchmans Crossing Volume and Level of Service Comparison - PM Peak Hour

SR 4 / TELEGRAPH ROAD

25

		Count 118	Count 98	Count 108	Count 112	Count 131	Count 173	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB Happy Harry's	L	-	-	-	-	-	-	-	14			Intersection was not counted in Fall 2005.
	T	-	-	-	-	-	-	-				
	R	-	-	-	-	-	-	-	27			
SB Telegraph	L	-	-	-	-	-	-	-	129			
	T	-	-	-	-	-	-	-				
	R	-	-	-	-	-	-	-	299			
EB SR 4	L	-	-	-	-	-	-	-	508			
	T	-	-	-	-	-	-	-	2,309			
	R	-	-	-	-	-	-	-	54			
WB SR 4	L	-	-	-	-	-	-	-	11			
	T	-	-	-	-	-	-	-	2,470			
	R	-	-	-	-	-	-	-	233			
CLV LOS		N/A	N/A	N/A	N/A	N/A	N/A	N/A	E			
v/c		N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.00			
HCS LOS		N/A	N/A	N/A	N/A	N/A	N/A	N/A	D			
Delay		N/A	N/A	N/A	N/A	N/A	N/A	N/A	49			
Synchro LOS		N/A	N/A	N/A	N/A	N/A	N/A	N/A	C			
Delay		N/A	N/A	N/A	N/A	N/A	N/A	N/A	34			

*HCS results based on pretimed signal (not actuated-coordinated) and do not account for upstream signal impacts. SYNCHRO results based on actuated-coordinated signal system

SR 2 / ST. JAMES CHURCH ROAD

26

		Count 118	Count 98	Count 108	Count 112	Count 131	Count 173	2003 (Oct) Count	2004 (Oct) Count	2005 (Oct) Count	2006 (Oct) Count	Notes
NB St. James	L	-	-	-	-	-	-	-	204			Intersection was not counted in Fall 2005.
	T	-	-	-	-	-	-	-	53			
	R	-	-	-	-	-	-	-	152			
SB Griffin Drive	L	-	-	-	-	-	-	-	111			
	T	-	-	-	-	-	-	-	70			
	R	-	-	-	-	-	-	-	98			
EB SR 2	L	-	-	-	-	-	-	-	120			
	T	-	-	-	-	-	-	-	1,436			
	R	-	-	-	-	-	-	-	84			
WB SR 2	L	-	-	-	-	-	-	-	237			
	T	-	-	-	-	-	-	-	1,700			
	R	-	-	-	-	-	-	-	32			
CLV LOS		N/A	N/A	N/A	N/A	N/A	N/A	N/A	B			
v/c		N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.68			
HCS LOS		N/A	N/A	N/A	N/A	N/A	N/A	N/A	D			
Delay		N/A	N/A	N/A	N/A	N/A	N/A	N/A	38			
Synchro LOS		N/A	N/A	N/A	N/A	N/A	N/A	N/A	C			
Delay		N/A	N/A	N/A	N/A	N/A	N/A	N/A	29			

Fall 2006 Traffic Summary

NOTE: LOS comparisons based on Critical Lane Volume (CLV) analyses

1. **SR 2 / Harmony Road**

AM: Level of service worsens from LOS C to LOS D. Intersection also operated at LOS D in 2002 - 2004. Increased traffic on all three approaches (+11% WB, +12% EB, +12% NB). Northbound rights increased by 17%, and eastbound rights increased by 18%.

PM: Level of service worsens from LOS D to LOS E. This intersection also operated at LOS E from 2001 - 2004. Increased traffic on westbound SR 2 approach (+7%). Westbound lefts increased 24% over 2005 volumes. Eastbound SR 2 approach traffic decreased by 8%, and northbound Harmony Road volumes are consistent with 2005 data.

4. **SR 7 / SR 4 (Stanton Split)**

AM: Level of service worsens from LOS C to LOS D. This is the first year this intersection has operated at LOS D. Southbound SR 7 traffic increased 7%. Westbound SR 4 traffic increased 12%.

PM: Level of service improves from LOS F to LOS E. This intersection operated at LOS E in 2003. Eastbound lefts decreased by 13% (-159 veh.). Other movements are generally consistent with 2005 volumes.

5. **SR 4 / SR 7 / J.P. Morgan**

AM: Level of service remained the same. Southbound right turn traffic decreased by 28%.

PM: Level of service improves from LOS E to LOS D (first time since Spring 2001 intersection has operated at LOS D). The V/C ratio observed at this intersection is the lowest since the 1997 monitoring period. Improved LOS is due primarily to a significant decrease in southbound SR 7 traffic (-16%).

8. **SR 4 / Harmony Road**

AM: Level of service remained constant at LOS E. Eastbound traffic on SR 4 increased by 9% from 2005 levels. Southbound Harmony Road traffic increased by 23%.

PM: Level of service remained constant at LOS E. Intersection has operated at LOS E each of the past four years. Traffic on all four approaches is generally consistent with 2005 volumes.

14. **SR 273 / Harmony Road**

AM: Level of service remains unchanged at LOS E. Traffic on westbound SR 273 decreased by 6%. Intersection has operated at LOS E or LOS F in every year it has been monitored.

PM: Level of service improves from LOS F (V/C = 1.00) to LOS E (V/C = 0.98). The intersection last operated at LOS E in 2000. Slight improvement in level of service due to decrease in southbound lefts.

15. **SR 273 / Chapman Road / Eagle Run Road**

AM: Level of service remained constant at LOS E. A 19% decrease was observed in right turning traffic from eastbound SR 273 to Chapman Road. Westbound SR 273 through traffic increased by 7%.

PM: Level of service worsened from LOS E to LOS F due to increased eastbound SR 273 traffic (+12%) and westbound SR 273 traffic (+12%). Intersection also operated at LOS F in 2003.

16. <u>SR 273 / Old Baltimore Pike</u>

AM: Level of service worsens from LOS D to LOS E. Northbound left from Old Baltimore Pike increased by 26% (+193 veh). SR 273 traffic consistent with 2005 levels.

PM: Level of service remains LOS E; the V/C ratio at this intersection did worsen from 0.94 to 0.99. Westbound through traffic increased 14%, and northbound left-turning traffic increased 20%.

17. <u>SR 273 / SR 7</u>

AM: Level of service improved from LOS E to LOS C. Intersection also operated at LOS C in 2004. The improvement in the level of service was mainly due to a significant decrease (-20%, -177 veh) in northbound right turning traffic from SR 7. Eastbound and westbound SR 273 traffic also decreased from 2005 levels.

PM: The level of service remains unchanged at LOS D. No comments.

22. <u>SR 2 / Red Mill Road / Polly Drummond Hill Road</u>

AM: Level of Service worsens from LOS D to LOS F. The intersection also operated at LOS F in 2003. Southbound traffic on Polly Drummond Hill Road increased by 20%. Eastbound through traffic on SR 2 increased by 21%.

PM: Level of service worsens from LOS E to LOS F. This reduction was due mainly to an 12% increase in northbound traffic on Red Mill Road.