



STATE HIGHWAY  
ADMINISTRATION

# 2016 Maryland

## State Highway Mobility Report

Major Corridor Reports and 2016 Capital Projects

DECEMBER, 2016



*Nice Bridge*

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## Appendices

- A. Regionally Significant Freeway Corridors III.A.1
- B. Regionally Significant Arterial Corridors III.B.1
- C. 2015 Capital Project Fact Sheets III.C.1

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## A. Regionally Significant Freeway Corridors



*I-695 @ MD 144*

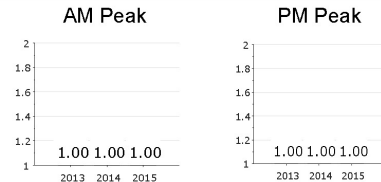
# 2016 MARYLAND STATE HIGHWAY MOBILITY REPORT



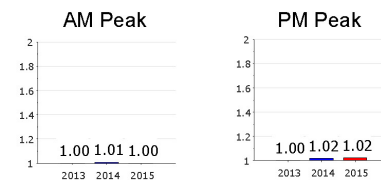
## I-70 (Part 1)

### Trends<sup>a</sup>

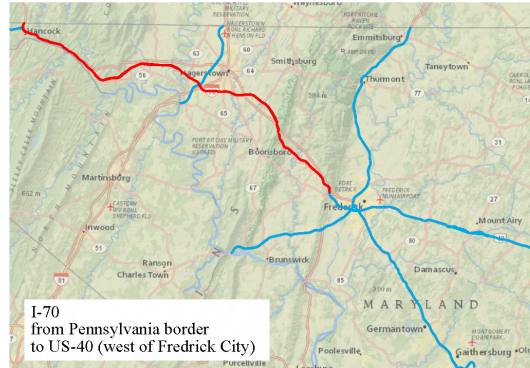
**Travel Time Index<sup>b</sup>**  
measure of  
average delay



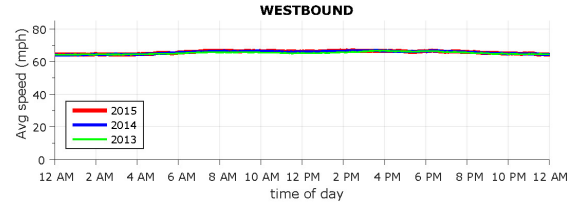
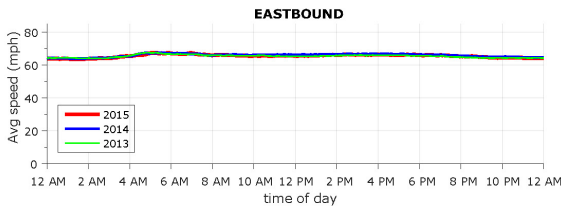
**Planning Time Index<sup>c</sup>**  
measure of  
worst-case delay



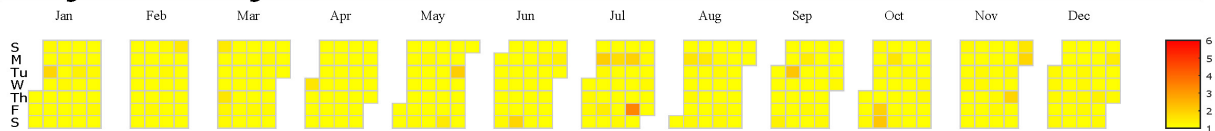
48 center miles carrying 49,000 vehicles every day



### Speed Profiles<sup>d</sup>



### Daily Variability<sup>e</sup>



### Top Bottlenecks<sup>f</sup>

2015 Rank	LOCATION	Direction	Number of Occurrences				Average Duration (minute)	Average Length (mile)	Impact Factor	2014	
			Q1	Q2	Q3	Q4				Rank	Change
106	I-70 W @ MD-632/DOWNSVILLE PIKE/EXIT 28	Westbound	26	19	31	23	94	8.2	0.6	349	↓ -243
161	I-70 W @ MD-66/EXIT 35	Westbound	37	12	21	17	65	10.4	0.4	123	↑ 38
167	I-70 W @ I-81/EXIT 26	Westbound	19	8	18	9	66	14.7	0.4	391	↓ -224
211	I-70 E @ MD-17/EXIT 42	Eastbound	48	22	33	22	66	4.1	0.3	167	↑ 44
234	I-70 W @ MD-17/EXIT 42	Westbound	21	17	16	9	62	7.4	0.3	211	↑ 23
252	I-70 W @ MD-65/EXIT 29	Westbound	22	21	28	21	51	10.8	0.2	458	↓ -206
370	I-70 E @ MD-63/EXIT 24	Eastbound	6	7	7	0	78	8.5	0.1	198	↑ 172
396	I-70 E @ MD-632/DOWNSVILLE PIKE/EXIT 28	Eastbound	17	15	32	12	54	3.0	0.1	353	↑ 43
405	I-70 W @ MD-68/EXIT 18	Westbound	11	13	3	12	62	5.8	0.1	206	↑ 199
458	I-70 W @ US-40 ALT/EXIT 49	Westbound	20	9	9	8	78	3.6	0.1	454	↑ 4

### Notes

- a - Peak Hours are considered as 8-9am and 5-6pm..
- b - Travel Time Index (TTI) is the ratio of the average travel time during the peak hour to the time required under free flow.
- c - Planning Time Index (PTI) is the ratio of the worst-case travel time (95th percentile) during peak hour to the free-flow time.
- d - Typical work day speeds, calculated as the average speed of all weekdays for the entire year and shows it as varies by time-of-day.
- e - Variability of worst-case travel experience along facility for each day of year, shown as plot of PTI by day of week and month, showing seasonal and weekly trends.
- f - Top 10 bottlenecks on the facility, ranked by impact factor.
- Impact factor is multiplication of total annual number of bottleneck occurrences by their average duration and by their average length.
- Bottlenecks are said to occur when speeds drop below 60% of free-flow speed for a period longer than 5 minutes.
- Q1: Jan-Mar Q2: Apr-Jun Q3: Jul-Sep Q4: Oct-Dec

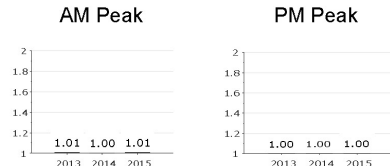
## A. REGIONALLY SIGNIFICANT FREEWAY CORRIDORS



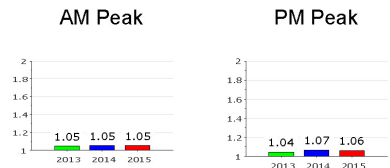
### I-70 (Part 2)

#### Trends<sup>a</sup>

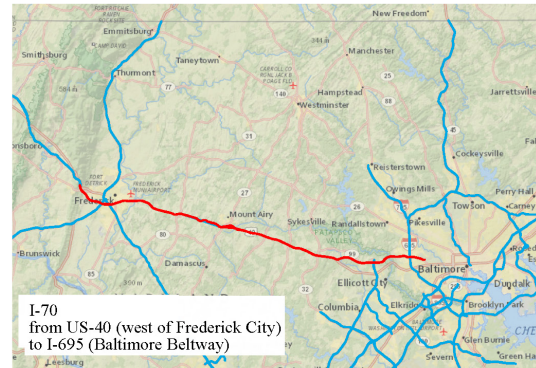
**Travel Time Index<sup>b</sup>**  
measure of  
average delay



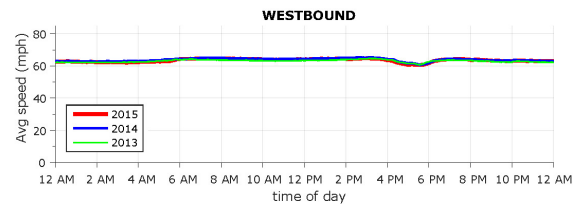
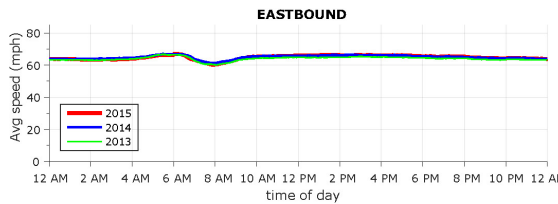
**Planning Time Index<sup>c</sup>**  
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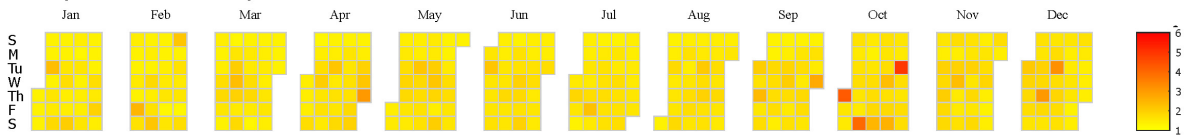
43 center miles carrying 65,000 vehicles every day



#### Speed Profiles<sup>d</sup>



#### Daily Variability<sup>e</sup>



#### Top Bottlenecks<sup>f</sup>

2015 Rank	LOCATION	Direction	Number of Occurrences				Average Duration (minute)	Average Length (mile)	Impact Factor	2014 Rank	Change
			Q1	Q2	Q3	Q4					
63	I-70 E @ US-29/EXIT 87	Eastbound	69	49	41	45	102	5.6	1.0	54	↑ 9
87	I-70 E @ I-695/EXIT 91	Eastbound	199	213	109	113	44	3.4	0.8	50	↓ 37
88	I-70 W @ US-29/EXIT 87	Westbound	97	86	81	65	102	2.7	0.8	107	↑ -19
157	I-70 W @ US-15/US-340/EXIT 52	Westbound	62	66	63	55	95	3.1	0.4	172	↓ -15
207	I-70 E @ MD-27/EXIT 68	Eastbound	64	0	0	0	14	8.7	0.3		↑ 207
237	I-70 E @ BEGINNING OF FREEWAY	Eastbound	87	132	131	154	74	2.4	0.3		↑ 237
287	I-70 W @ MARIOTTSTVILLE RD/EXIT 83	Westbound	20	14	13	11	85	5.5	0.2		↑ 287
293	I-70 E @ US-15/US-340/EXIT 52	Eastbound	33	19	15	20	56	6.3	0.2	237	↑ 56
323	I-70 E @ MARIOTTSTVILLE RD/EXIT 83	Eastbound	44	41	38	37	63	2.0	0.2	275	↑ 48
335	I-70 W @ MD-27/EXIT 68	Westbound	41	0	0	0	15	6.4	0.2		↑ 335

#### Notes

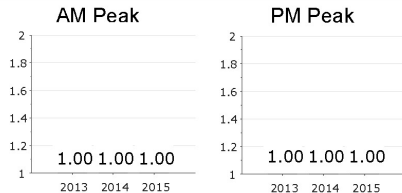
- a - Peak Hours are considered as 8-9am and 5-6pm.  
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d - Typical work day speeds, calculated as the average speed of all weekdays for the entire year and shows it as varies by time-of-day.  
e - Variability of worst-case travel experience along facility for each day of year, shown as plot of PTI by day of week and month, showing seasonal and weekly trends.  
f - Top 10 bottlenecks on the facility, ranked by impact factor.  
Impact factor is multiplication of total annual number of bottleneck occurrences by their average duration and by their average length.  
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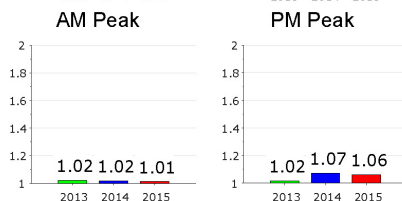


## Trends<sup>a</sup>

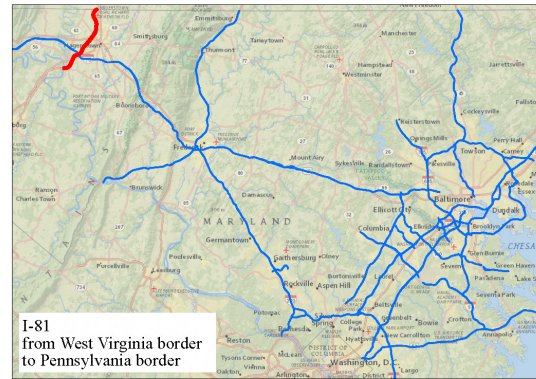
**Travel Time Index<sup>b</sup>**  
measure of  
average delay



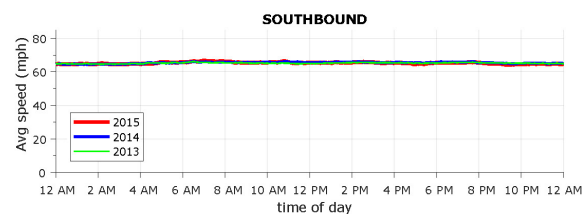
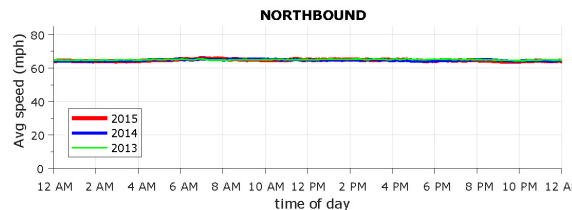
**Planning Time Index<sup>c</sup>**  
measure of  
worst-case delay



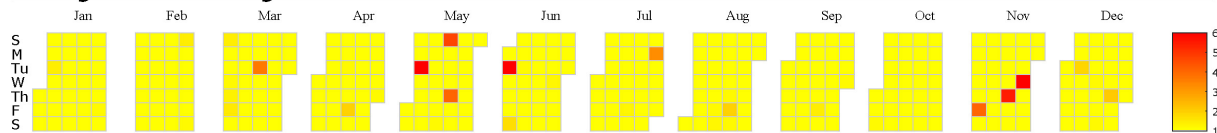
12 center miles carrying 64,000 vehicles every day



## Speed Profiles<sup>d</sup>



## Daily Variability<sup>e</sup>



## Top Bottlenecks<sup>f</sup>

2015 Rank	LOCATION	Direction	Number of Occurrences				Average Duration (minute)	Average Length (mile)	Impact Factor	2014	
			Q1	Q2	Q3	Q4				Rank	Change
445	I-81 S @ VA-651/EXIT 291	Southbound	1	0	0	0	71	34.1	0.1	445	↑ 445
447	I-81 S @ MD--WV STATE BORDER	Southbound	14	14	6	18	57	4.8	0.1	432	↑ 15
514	I-81 N @ US-40/EXIT 6	Northbound	8	0	8	32	33	3.0	0.1	445	↑ 69
535	I-81 N @ PA-16/EXIT 5	Northbound	4	3	0	0	60	10.2	0.1	535	↑ 535
620	I-81 N @ SHOWALTER RD/EXIT 10	Northbound	14	7	8	9	49	3.2	0.0	900	↓ -280
646	I-81 S @ US-17/US-50/US-522/EXIT 313	Southbound	1	0	0	0	43	24.7	0.0	646	↑ 646
679	I-81 S @ HALFWAY BLVD/EXIT 5	Southbound	4	13	0	0	33	3.3	0.0	679	↑ 679
730	I-81 S @ VA-669/EXIT 323	Southbound	2	0	0	0	26	15.4	0.0	730	↑ 730
741	I-81 N @ HALFWAY BLVD/EXIT 5	Northbound	17	14	14	7	42	1.8	0.0	796	↓ -55
780	I-81 S @ US-11/EXIT 2	Southbound	4	0	7	10	37	2.8	0.0	780	↑ 780

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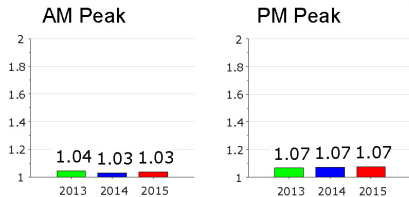
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## A. REGIONALLY SIGNIFICANT FREEWAY CORRIDORS

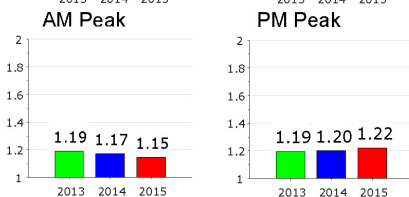


### Trends<sup>a</sup>

**Travel Time Index<sup>b</sup>**  
measure of average delay



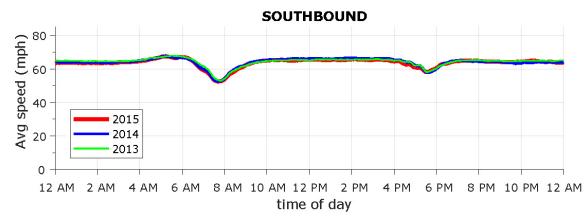
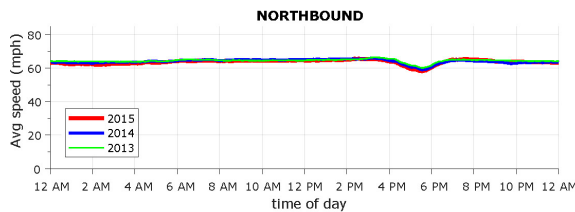
**Planning Time Index<sup>c</sup>**  
measure of worst-case delay



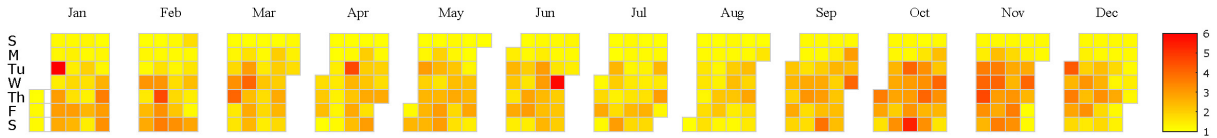
26 center miles carrying 87,000 vehicles every day



### Speed Profiles<sup>d</sup>



### Daily Variability<sup>e</sup>



### Top Bottlenecks<sup>f</sup>

2015 Rank	LOCATION	Direction	Number of Occurrences				Average Duration (minute)	Average Length (mile)	Impact Factor	2014 Rank	Change	
			Q1	Q2	Q3	Q4						
73	I-83 S @ I-695	Southbound	106	100	113	123	84	2.6	0.9	38	↑	35
76	I-83 S @ FAYETTE ST/EXIT 1	Southbound	177	185	180	173	104	2.8	0.9	125	↓	-49
101	I-83 S @ BELFAST RD/EXIT 24	Southbound	65	57	45	65	60	5.7	0.7	73	↑	28
107	I-83 N @ BELFAST RD/EXIT 24	Northbound	60	49	36	45	76	5.2	0.6	138	↓	-31
141	I-83 N @ MIDDLETOWN RD/EXIT 31	Northbound	50	67	54	25	60	4.8	0.5	171	↓	-30
212	I-83 N @ I-695/JONES FALLS EXPY/EXIT 23	Northbound	36	62	33	48	57	3.7	0.3	102	↑	110
214	I-83 S @ MD-25/FALLS RD/EXIT 8	Southbound	57	28	19	62	55	3.5	0.3	236	↓	-22
224	I-83 S @ TIMONIUM RD/EXIT 16	Southbound	69	60	55	40	56	2.4	0.3	184	↑	40
226	I-83 S @ COLD SPRING LN/EXIT 9	Southbound	75	54	37	33	57	2.8	0.3	174	↑	52
229	I-83 S @ MD-137/MOUNT CARMEL RD/EXIT 27	Southbound	41	41	19	30	56	4.4	0.3	117	↑	112

### Notes

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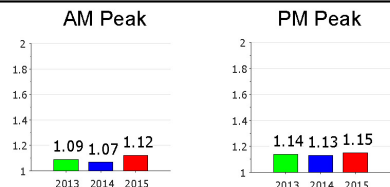
# 2016 MARYLAND STATE HIGHWAY MOBILITY REPORT



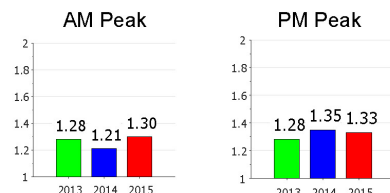
## I-95 (Part 1)

### Trends<sup>a</sup>

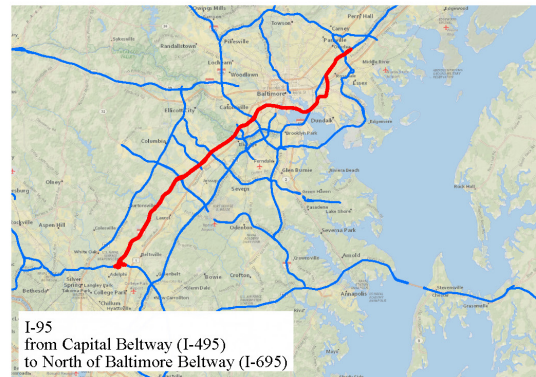
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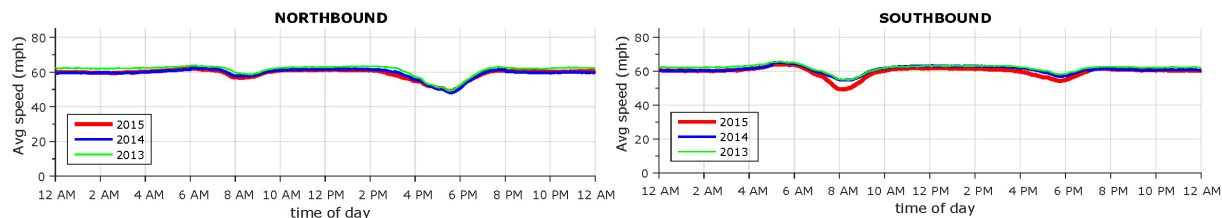
**Planning Time Index<sup>c</sup>**  
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worst-case delay



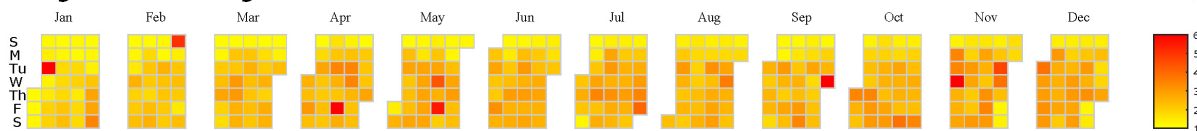
40 center miles carrying 157,000 vehicles every day



### Speed Profiles<sup>d</sup>



### Daily Variability<sup>e</sup>



### Top Bottlenecks<sup>f</sup>

2015 Rank	LOCATION	Direction	Number of Occurrences				Average Duration (minute)	Average Length (mile)	Impact Factor	2014 Rank	Change
			Q1	Q2	Q3	Q4					
3	I-95 N @ MD-100/EXIT 43	Northbound	130	234	177	116	127	8.2	6.2	3	0
18	I-95 S @ I-495/EXIT 27-25	Southbound	231	214	187	213	106	5.2	3.0	14	4
51	I-95 S @ MD-175/EXIT 41	Southbound	61	102	90	94	83	5.0	1.2	82	-31
80	I-95 N @ I-95 (BALTIMORE) (EAST)	Northbound	98	100	58	78	68	4.5	0.9	153	-73
85	I-95 N @ I-895/EXIT 46	Northbound	12	21	21	19	125	9.0	0.8	93	-8
105	I-95 S @ MD-32/EXIT 38	Southbound	37	19	27	46	74	7.7	0.6	203	-98
121	I-95 N @ MCCOMAS ST/EXIT 55 NORTH	Northbound	110	59	10	0	41	5.7	0.6	642	-521
125	I-95 N @ WASHINGTON BLVD/EXIT 51	Northbound	41	78	125	11	71	2.5	0.6	477	-352
126	I-95 N @ KEITH AVE/EXIT 56	Northbound	404	636	640	945	31	0.7	0.6	139	-13
132	I-95 S @ US-1 ALT/CATON AVE/EXIT 50	Southbound	44	161	119	31	68	2.7	0.5	364	-232

### Notes

- a - **Peak Hours** are considered as 8-9am and 5-6pm..
- b - **Travel Time Index (TTI)** is the ratio of the *average* travel time during the peak hour to the time required under free flow.
- c - **Planning Time Index (PTI)** is the ratio of the *worst-case* travel time (95th percentile) during peak hour to the free-flow time.
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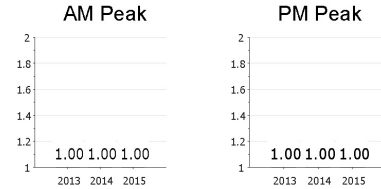
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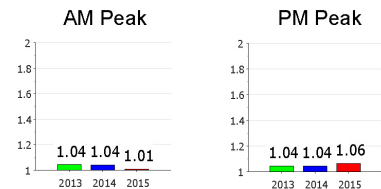
### I-95 (Part 2)

#### Trends<sup>a</sup>

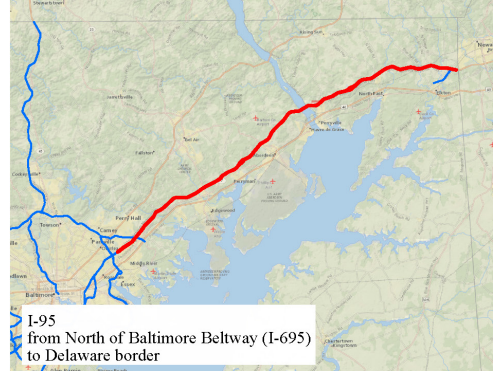
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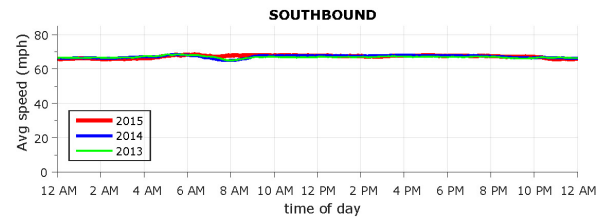
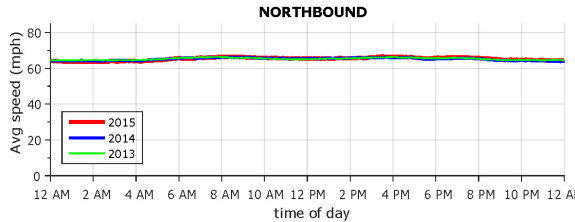
**Planning Time Index<sup>c</sup>**  
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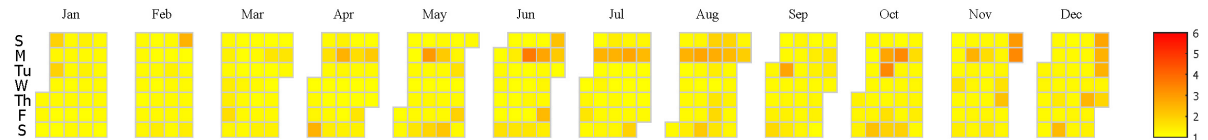
45 center miles carrying 102,000 vehicles every day



#### Speed Profiles<sup>d</sup>



#### Daily Variability<sup>e</sup>



#### Top Bottlenecks<sup>f</sup>

2015 Rank	LOCATION	Direction	Number of Occurrences				Average Duration (minute)	Average Length (mile)	Impact Factor	2014 Rank	Change
			Q1	Q2	Q3	Q4					
92	I-95 N @ MD--DE STATE BORDER	Northbound	24	6	3	5	67	27.2	0.8	173	↓ -81
95	I-95 N @ MD-24/EXIT 77	Northbound	23	64	50	46	100	4.1	0.8	142	↓ -47
98	I-95 S @ MD-43/WHITEMARSH BLVD/EXIT 67	Southbound	22	45	0	13	61	11.0	0.7	108	↓ -10
183	I-95 N @ MD-152/EXIT 74	Northbound	18	14	24	23	66	8.0	0.4	116	↑ 67
197	I-95 N @ MD-22/EXIT 85	Northbound	7	19	27	21	86	5.0	0.3	220	↓ -23
201	I-95 N @ MD-543/EXIT 80	Northbound	20	15	0	0	64	8.6	0.3	208	↓ -7
203	I-95 S @ MD-543/EXIT 80	Southbound	17	38	50	22	67	5.5	0.3	146	↑ 57
235	I-95 S @ MILLARD E TYDINGS MEMORIAL BRIDGE	Southbound	44	16	51	44	65	3.4	0.3		↑ 235
247	I-95 N @ MD-543/EXIT 80	Northbound	0	0	9	11	80	8.8	0.2		↑ 247
253	I-95 N @ TYDINGS MEMORIAL BRIDGE TOLL PLAZA	Northbound	99	133	159	81	29	2.0	0.2	176	↑ 77

#### Notes

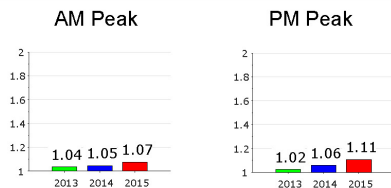
- a - **Peak Hours** are considered as 8-9am and 5-6pm..  
b - **Travel Time Index (TTI)** is the ratio of the *average* travel time during the peak hour to the time required under free flow.  
c - **Planning Time Index (PTI)** is the ratio of the *worst-case* travel time (95th percentile) during peak hour to the free-flow time.  
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f - Top 10 bottlenecks on the facility, ranked by impact factor.  
Impact factor is multiplication of total annual number of bottleneck occurrences by their average duration and by their average length.  
Bottlenecks are said to occur when speeds drop below 60% of free-flow speed for a period longer than 5 minutes.  
Q1: Jan-Mar Q2: Apr-Jun Q3: Jul-Sep Q4: Oct-Dec

# 2016 MARYLAND STATE HIGHWAY MOBILITY REPORT

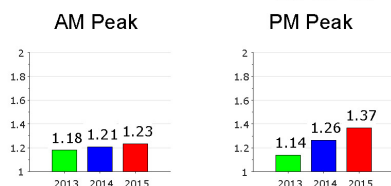


## Trends<sup>a</sup>

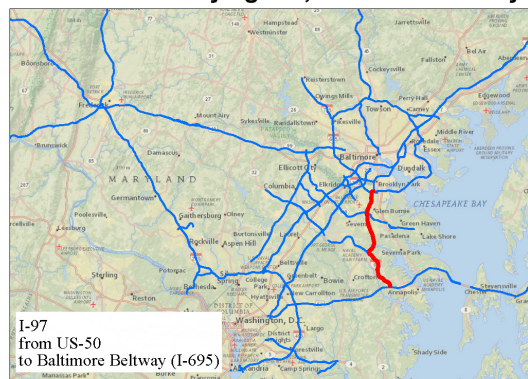
**Travel Time Index<sup>b</sup>**  
measure of average delay



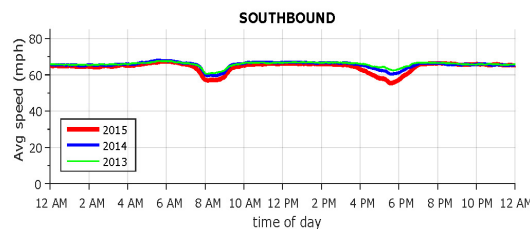
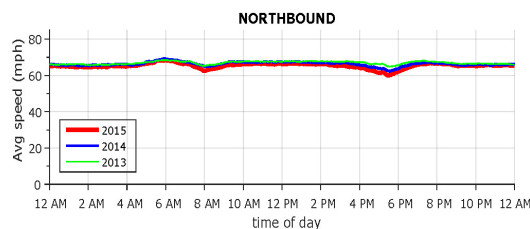
**Planning Time Index<sup>c</sup>**  
measure of worst-case delay



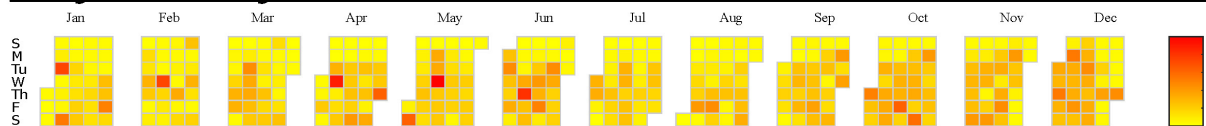
17 center miles carrying 110,000 vehicles every day



## Speed Profiles<sup>d</sup>



## Daily Variability<sup>e</sup>



## Top Bottlenecks<sup>f</sup>

2015 Rank	LOCATION	Direction	Number of Occurrences				Average Duration (minute)	Average Length (mile)	Impact Factor	2014 Rank	Change
			Q1	Q2	Q3	Q4					
38	I-97 S @ US-301/US-50	Southbound	57	36	27	38	115	10.2	1.6	46	-8
62	I-97 S @ MD-178/EXIT 5	Southbound	105	158	160	127	71	3.2	1.0	101	-39
241	I-97 N @ MD-178/EXIT 5	Northbound	28	49	40	27	42	4.6	0.3	291	-50
275	I-97 N @ I-695/EXIT 17	Northbound	51	51	40	71	49	2.4	0.2	204	71
360	I-97 N @ MD-3/EXIT 7	Northbound	32	40	44	25	49	2.2	0.1	565	-205
377	I-97 N @ BENFIELD BLVD/EXIT 10	Northbound	32	0	0	0	19	5.3	0.1		377
425	I-97 N @ BENFIELD BLVD/EXIT 10	Northbound	0	15	12	20	48	3.9	0.1		425
433	I-97 N @ I-895 SPUR	Northbound	28	17	16	18	48	4.2	0.1	194	239
470	I-97 N @ MD-174/QUARTERFIELD RD/EXIT 13	Northbound	33	15	18	24	43	3.0	0.1	621	-151
479	I-97 N @ MD-3 BUS/NEW CUT RD/EXIT 12	Northbound	18	19	16	26	35	3.4	0.1	652	-173

## Notes

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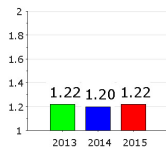
## A. REGIONALLY SIGNIFICANT FREEWAY CORRIDORS



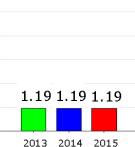
### Trends<sup>a</sup>

**Travel Time Index<sup>b</sup>**  
measure of  
average delay

AM Peak

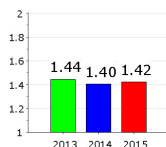


PM Peak

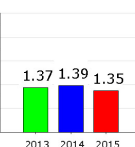


**Planning Time Index<sup>c</sup>**  
measure of  
worst-case delay

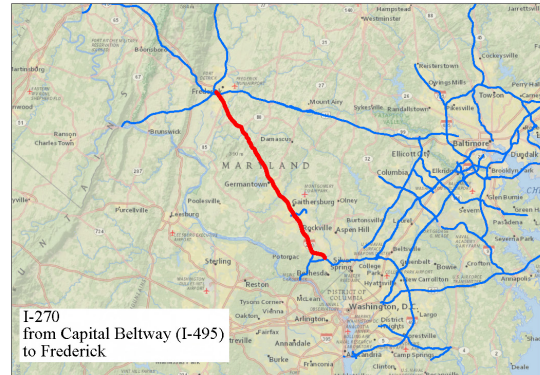
AM Peak



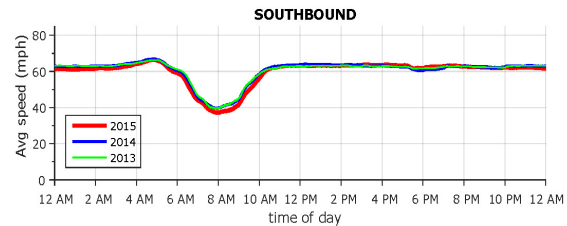
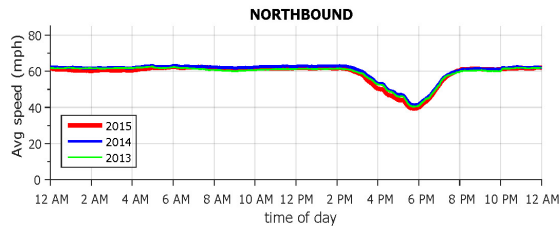
PM Peak



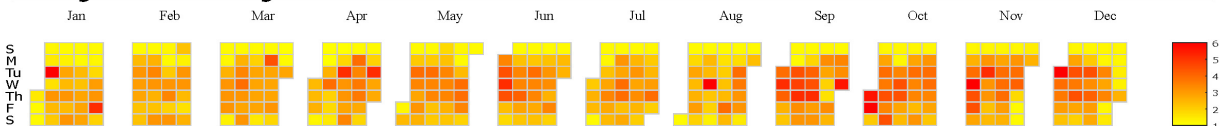
41 center miles carrying 168,000 vehicles every day



### Speed Profiles<sup>d</sup>



### Daily Variability<sup>e</sup>



### Top Bottlenecks<sup>f</sup>

2015 Rank	LOCATION	Direction	Number of Occurrences				Average Duration (minute)	Average Length (mile)	Impact Factor	2014 Rank	Change
			Q1	Q2	Q3	Q4					
2	I-270 S @ I-270 (SPUR)	Southbound	94	122	107	128	130	14.8	7.4	20	↑ 2
13	I-270 N @ MD-80/EXIT 26	Northbound	91	116	113	89	103	10.4	3.6	20	↓ -7
19	I-270 Local N @ I-270 (NORTH)	Northbound	185	154	140	163	123	4.7	3.0	13	↑ 6
21	I-270 N @ MD-109/EXIT 22	Northbound	63	70	72	42	124	9.9	2.7	25	↓ -4
32	I-270 N @ I-70/US-40	Northbound	100	114	97	105	80	7.3	1.9	28	↑ 4
33	I-270 S @ MD-109/EXIT 22	Southbound	125	156	126	109	84	4.8	1.8	24	↑ 9
37	I-270 SPUR S @ I-495	Southbound	175	213	154	157	136	1.8	1.6	40	↓ -3
41	I-270 Local S @ I-270 (SOUTH)	Southbound	111	126	124	139	87	4.6	1.5	29	↑ 12
42	I-270 N @ MD-85/EXIT 31	Northbound	26	28	35	29	102	14.0	1.5	58	↓ -16
53	I-270 SPUR N @ I-270	Northbound	114	89	88	76	169	2.0	1.2	42	↑ 11

### Notes

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f - Top 10 bottlenecks on the facility, ranked by impact factor.

Impact factor is multiplication of total annual number of bottleneck occurrences by their average duration and by their average length.

Bottlenecks are said to occur when speeds drop below 60% of free-flow speed for a period longer than 5 minutes.

Q1: Jan-Mar Q2: Apr-Jun Q3: Jul-Sep Q4: Oct-Dec

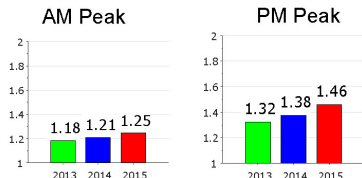
# 2016 MARYLAND STATE HIGHWAY MOBILITY REPORT



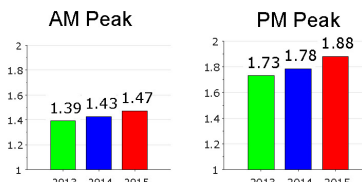
## Capital Beltway

### Trends<sup>a</sup>

**Travel Time Index<sup>b</sup>**  
measure of  
average delay



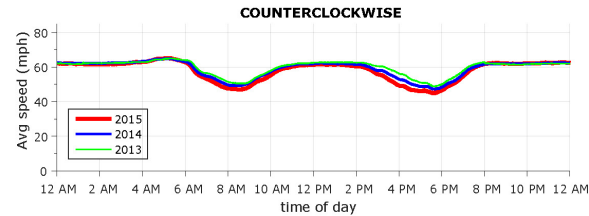
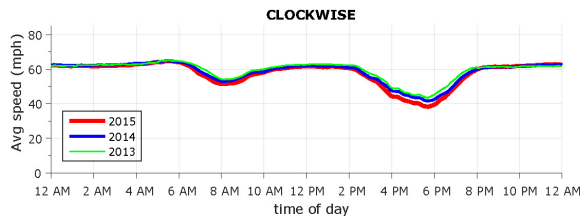
**Planning Time Index<sup>c</sup>**  
measure of  
worst-case delay



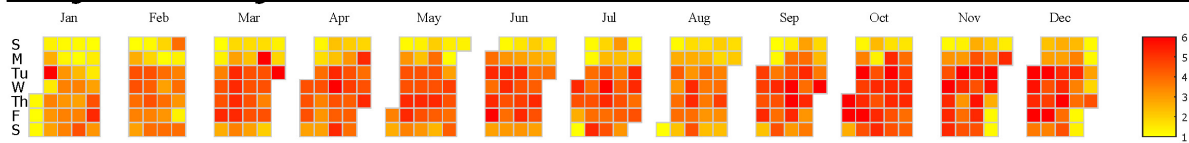
42 center miles carrying 199,000 vehicles every day



### Speed Profiles<sup>d</sup>



### Daily Variability<sup>e</sup>



### Top Bottlenecks<sup>f</sup>

2015 Rank	LOCATION	Direction	Number of Occurrences				Average Duration (minute)	Average Length (mile)	Impact Factor	2014 Rank	Change	
			Q1	Q2	Q3	Q4						
1	I-495 CW @ MD-214/CENTRAL AVE/EXIT 15	Innerloop	125	251	187	151	131	9.9	8.3	15	↓	-14
6	I-495 CCW @ GREENBELT METRO DR/EXIT 24	Outerloop	206	286	188	255	93	6.5	4.4	2	↑	4
11	I-495 CW @ MD-4/PENNSYLVANIA AVE/EXIT 11	Innerloop	65	71	60	70	132	13.6	3.7	21	↓	-10
14	I-495 CW @ I-270/EXIT 35	Innerloop	196	199	176	204	136	4.0	3.4	1	↑	13
16	I-495 CW @ CLARA BARTON PKWY/EXIT 41	Innerloop	71	176	118	106	125	6.3	3.1	62	↓	-46
24	I-495 CW @ I-270 SPUR	Innerloop	61	90	97	94	162	5.4	2.5		↑	24
25	I-495 CCW @ US-50/EXIT 19	Outerloop	94	169	0	0	64	7.6	2.5	12	↑	13
27	I-495 CW @ MD-190/RIVER RD/EXIT 39	Innerloop	175	0	0	0	39	8.2	2.2		↑	27
28	I-495 CCW @ MD-185/CONNECTICUT AVE/EXIT 33	Outerloop	84	76	95	77	129	5.8	2.2	26	↑	2
31	I-495 CCW @ MD-97/GEORGIA AVE/EXIT 31	Outerloop	131	194	139	156	96	3.4	2.0	23	↑	8

### Notes

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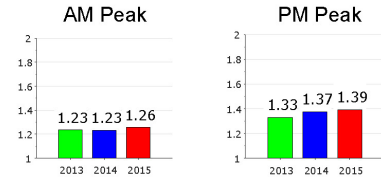
## A. REGIONALLY SIGNIFICANT FREEWAY CORRIDORS



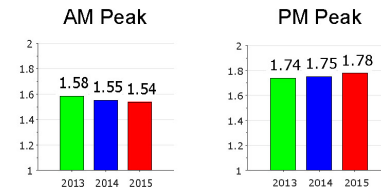
### Baltimore Beltway

#### Trends<sup>a</sup>

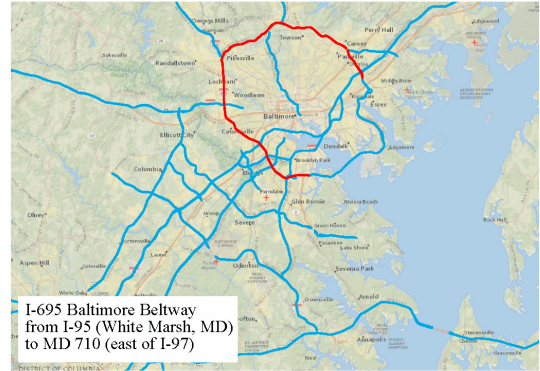
**Travel Time Index<sup>b</sup>**  
measure of  
average delay



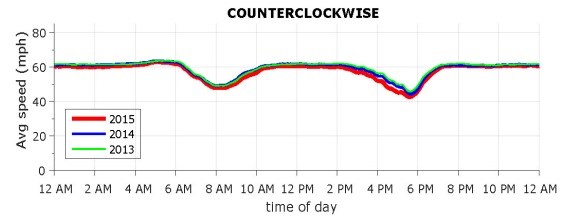
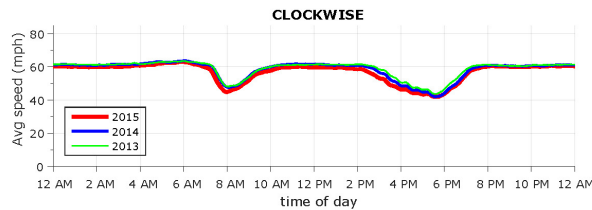
**Planning Time Index<sup>c</sup>**  
measure of  
worst-case delay



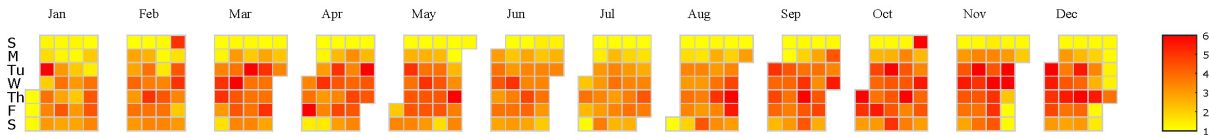
35 center miles carrying 156,000 vehicles every day



#### Speed Profiles<sup>d</sup>



#### Daily Variability<sup>e</sup>



#### Top Bottlenecks<sup>f</sup>

2015 Rank	LOCATION	Direction	Number of Occurrences				Average Duration (minute)	Average Length (mile)	Impact Factor	2014 Rank	Change
			Q1	Q2	Q3	Q4					
5	I-695 CW @ I-795/EXIT 19	Innerloop	184	86	73	77	142	9.2	5.0	8	↓ -3
8	I-695 CCW @ EDMONDSON AVE/EXIT 14	Outerloop	95	103	55	116	140	9.4	4.0	7	↑ 1
10	I-695 CCW @ US-40/EXIT 15	Outerloop	107	184	181	102	90	8.3	3.8	19	↓ -9
12	I-695 CW @ MD-41/PERRING PKWY/EXIT 30	Innerloop	146	174	137	169	106	6.2	3.7	11	↑ 1
20	I-695 CW @ I-83/MD-25/EXIT 23	Innerloop	108	154	149	101	91	6.9	2.9	18	↑ 2
26	I-695 CW @ MD-147/HARFORD RD/EXIT 31	Innerloop	84	33	45	58	147	9.7	2.5	9	↑ 17
29	I-695 CW @ MD-26/EXIT 18	Innerloop	33	98	113	71	101	7.4	2.2	30	↓ -1
39	I-695 CCW @ MD-144/FREDERICK RD/EXIT 13	Outerloop	19	15	19	50	148	11.6	1.6	39	→ 0
43	I-695 CCW @ PROVIDENCE RD/EXIT 28	Outerloop	87	78	91	74	115	4.1	1.4	34	↑ 9
49	I-695 CCW @ MD-170/CAMP MEADE RD/EXIT 6	Outerloop	69	67	77	65	113	4.5	1.2		↑ 49

#### Notes

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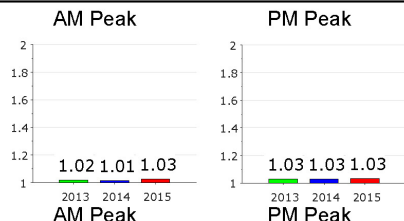
Q1: Jan-Mar Q2: Apr-Jun Q3: Jul-Sep Q4: Oct-Dec

# 2016 MARYLAND STATE HIGHWAY MOBILITY REPORT

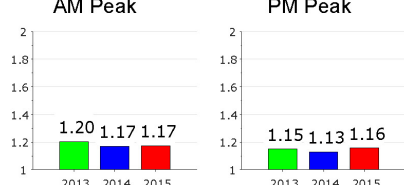


## Trends<sup>a</sup>

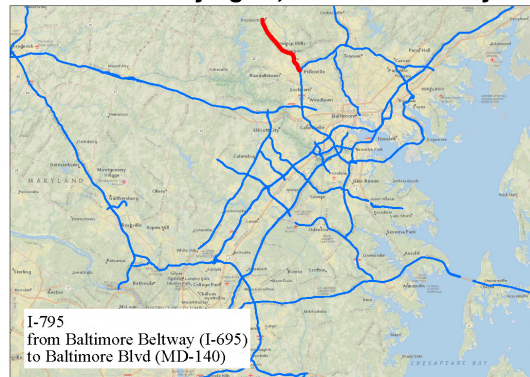
**Travel Time Index<sup>b</sup>**  
measure of  
average delay



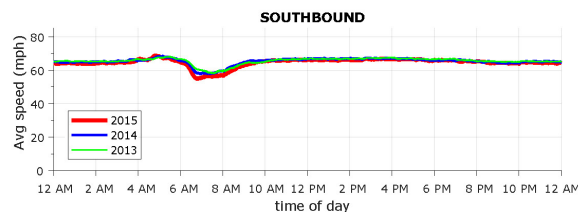
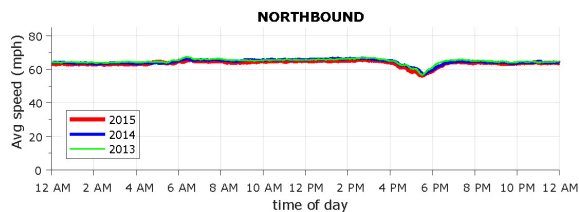
**Planning Time Index<sup>c</sup>**  
measure of  
worst-case delay



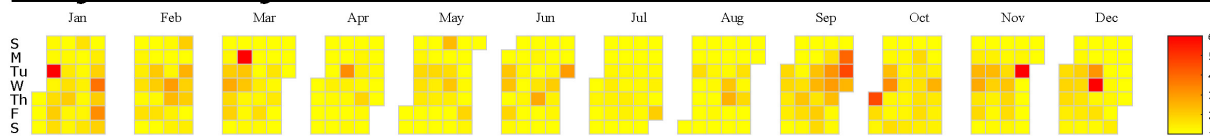
8 center miles carrying 81,000 vehicles every day



## Speed Profiles<sup>d</sup>



## Daily Variability<sup>e</sup>



## Top Bottlenecks<sup>f</sup>

2015 Rank	LOCATION	Direction	Number of Occurrences				Average Duration (minute)	Average Length (mile)	Impact Factor	2014	
			Q1	Q2	Q3	Q4				Rank	Change
112	I-795 S @ I-695	Southbound	69	40	40	50	71	4.5	0.6	100	↑ 12
321	I-795 N @ OWINGS MILLS BLVD/EXIT 4	Northbound	69	50	58	51	42	2.0	0.2	254	↑ 67
348	I-795 N @ FRANKLIN BLVD/EXIT 7	Northbound	35	9	27	11	62	3.3	0.1	334	↑ 14
507	I-795 N @ MD-128/MD-140/MD-30/EXIT 9	Northbound	20	8	6	5	47	3.8	0.1	444	↑ 63
695	I-795 S @ OWINGS MILLS BLVD/EXIT 4	Southbound	32	8	18	7	32	2.1	0.0	542	↑ 153
700	I-795 S @ FRANKLIN BLVD/EXIT 7	Southbound	40	19	27	13	31	1.3	0.0	552	↑ 148

## Notes

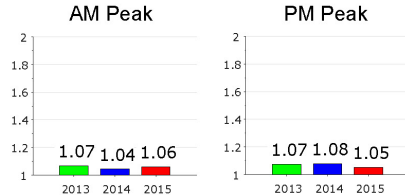
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Q1: Jan-Mar Q2: Apr-Jun Q3: Jul-Sep Q4: Oct-Dec

## A. REGIONALLY SIGNIFICANT FREEWAY CORRIDORS

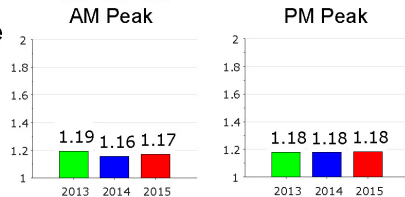


### Trends<sup>a</sup>

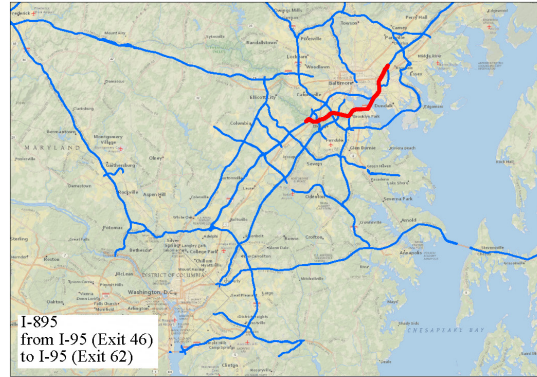
**Travel Time Index<sup>b</sup>**  
measure of average delay



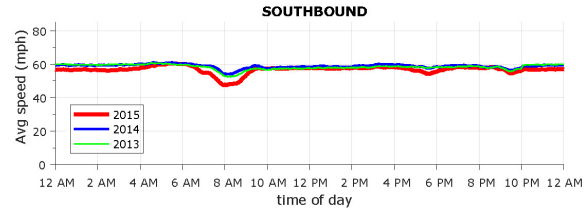
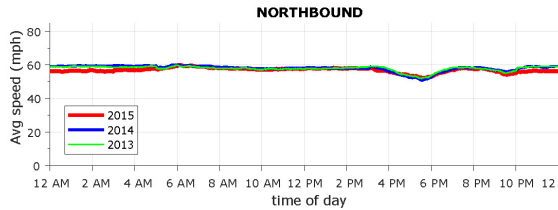
**Planning Time Index<sup>c</sup>**  
measure of worst-case delay



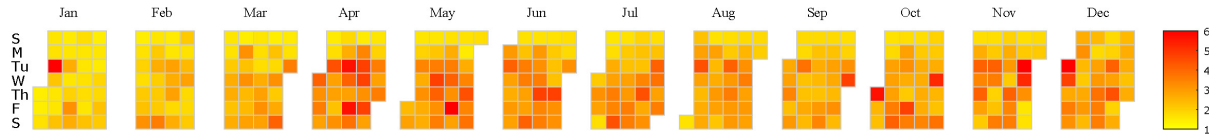
15 center miles carrying 58,000 vehicles every day



### Speed Profiles<sup>d</sup>



### Daily Variability<sup>e</sup>



### Top Bottlenecks<sup>f</sup>

2015 Rank	LOCATION	Direction	Number of Occurrences				Average Duration (minute)	Average Length (mile)	Impact Factor	2014 Rank	Change
			Q1	Q2	Q3	Q4					
30	I-895 N @ HARBOR TUNNEL THWY (NORTH)	Northbound	0	57	102	94	121	5.4	2.1		↑ 30
48	I-895 S @ FRANKFURST AVE/SHELL RD/EXIT 8	Southbound	296	421	440	497	81	1.1	1.2	239	↓ -191
100	I-895 S @ HARBOR TUNNEL THWY (SOUTH)	Southbound	0	68	94	10	62	5.2	0.7		↑ 100
118	I-895 N @ HOLABIRD AVE/EXIT 10	Northbound	71	57	56	42	95	3.8	0.6	441	↓ -323
184	I-895 S @ HARBOR TUNNEL THWY (NORTH)	Southbound	0	84	39	70	56	2.7	0.4		↑ 184
240	I-895 N @ CHILDS ST/EXIT 9	Northbound	661	1088	1063	1266	38	0.2	0.3	132	↑ 108
256	I-895 N @ HARBOR TUNNEL THWY (SOUTH)	Northbound	0	119	54	0	53	1.7	0.2		↑ 256
262	I-895 S @ MD-2/POTEE ST/EXIT 7	Southbound	21	16	9	22	129	3.2	0.2	310	↓ -48
266	I-895 S @ HARBOR TUNNEL THWY (NORTH)	Southbound	159	0	0	0	17	2.2	0.2		↑ 266
278	I-895 N @ HARBOR TUNNEL THWY (SOUTH)	Northbound	310	0	0	61	42	1.3	0.2		↑ 278

### Notes

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Q1: Jan-Mar Q2: Apr-Jun Q3: Jul-Sep Q4: Oct-Dec

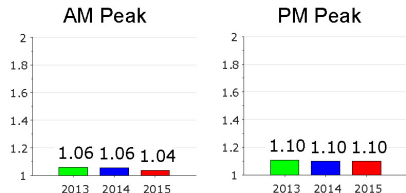
# 2016 MARYLAND STATE HIGHWAY MOBILITY REPORT



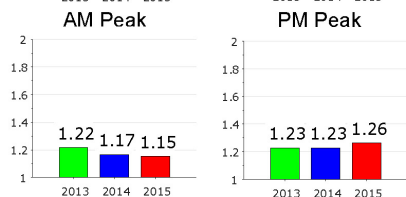
MD-32

## Trends<sup>a</sup>

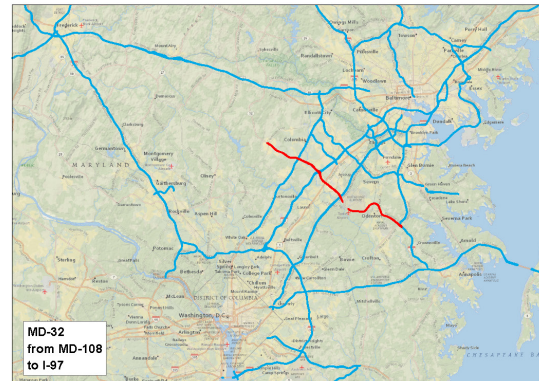
**Travel Time Index<sup>b</sup>**  
measure of  
average delay



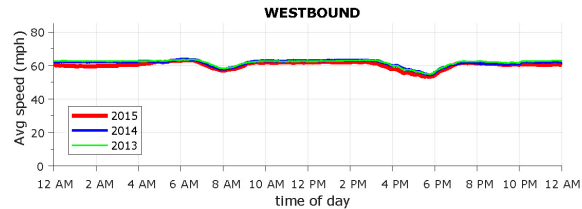
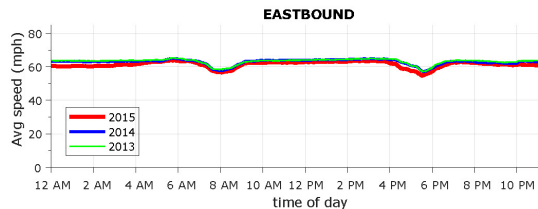
**Planning Time Index<sup>c</sup>**  
measure of  
worst-case delay



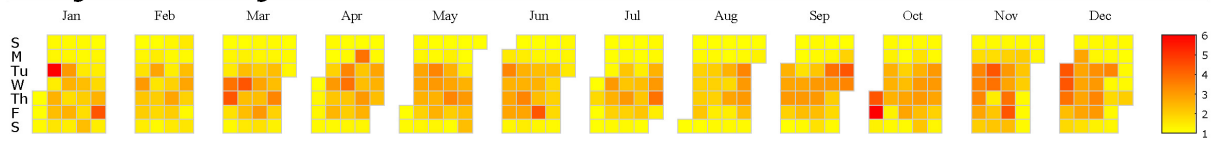
22 center miles carrying 67,000 vehicles every day



## Speed Profiles<sup>d</sup>



## Daily Variability<sup>e</sup>



## Top Bottlenecks<sup>f</sup>

2015 Rank	LOCATION	Direction	Number of Occurrences				Average			2014 Rank	Change
			Q1	Q2	Q3	Q4	Duration (minute)	Length (mile)	Impact Factor		
99	MD-32 W @ I-95	Westbound	81	51	42	44	105	3.2	0.7	121	↓ -22
103	MD-32 E @ MD-198/FORT MEADE RD	Eastbound	69	83	80	69	88	2.7	0.7	99	↑ 4
122	MD-32 W @ TEN OAKS RD	Westbound	13	7	7	6	202	14.1	0.6		↑ 122
180	MD-32 W @ MD-108	Westbound	115	81	85	73	117	1.1	0.4	94	↑ 86
185	MD-32 E @ I-95	Eastbound	89	99	65	96	52	2.2	0.4	156	↑ 29
198	MD-32 W @ MD-175/ANNAPOLIS RD	Westbound	66	55	51	55	77	2.1	0.3	175	↑ 23
228	MD-32 W @ I-70/US-40	Westbound	0	7	7	2	131	10.2	0.3		↑ 228
273	MD-32 W @ US-1	Westbound	52	71	66	59	58	1.7	0.2	283	↓ -10
294	MD-32 E @ I-97	Eastbound	86	155	142	121	36	3.4	0.2	253	↑ 41
298	MD-32 W @ BURNTWOODS RD	Westbound	10	4	0	0	78	11.6	0.2		↑ 298

## Notes

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- Impact factor is multiplication of total annual number of bottleneck occurrences by their average duration and by their average length.
- Bottlenecks are said to occur when speeds drop below 60% of free-flow speed for a period longer than 5 minutes.
- Q1: Jan-Mar Q2: Apr-Jun Q3: Jul-Sep Q4: Oct-Dec

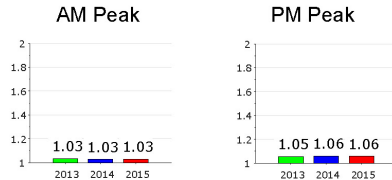
## A. REGIONALLY SIGNIFICANT FREEWAY CORRIDORS



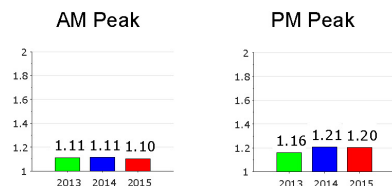
US-50

### Trends<sup>a</sup>

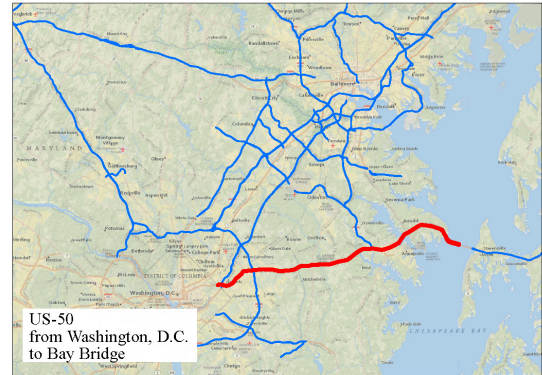
**Travel Time Index<sup>b</sup>**  
measure of average delay



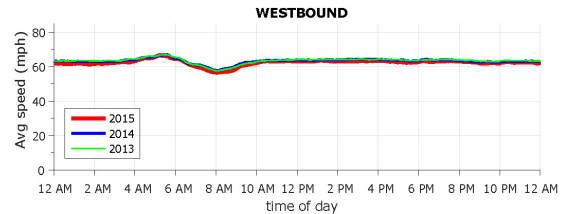
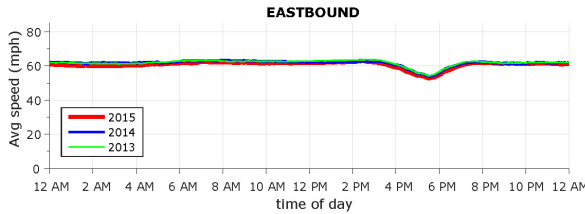
**Planning Time Index<sup>c</sup>**  
measure of worst-case delay



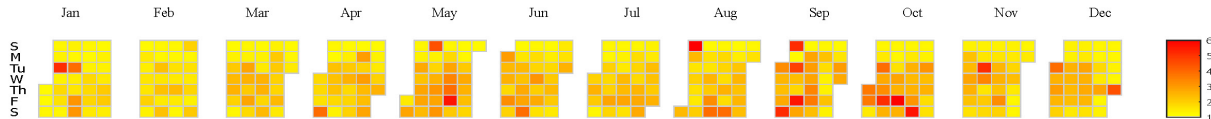
33 center miles carrying 100,000 vehicles every day



### Speed Profiles<sup>d</sup>



### Daily Variability<sup>e</sup>



### Top Bottlenecks<sup>f</sup>

2015 Rank	LOCATION	Direction	Number of Occurrences				Average Duration (minute)	Average Length (mile)	Impact Factor	2014 Rank	Change
			Q1	Q2	Q3	Q4					
72	US-50 W @ MONTANA AVE	Westbound	0	0	0	78	44	6.7	0.9	57	↑ 17
74	US-50 E @ SEVERN RIVER BRIDGE	Eastbound	53	80	89	62	106	3.4	0.9	57	↑ 17
90	US-50 E @ MD-331/DOVER RD	Eastbound	0	8	15	3	169	13.9	0.8	90	↑ 0
102	US-50 E @ MD-202/LANDOVER RD	Eastbound	79	147	87	79	79	2.5	0.7	118	↓ -16
147	US-50 W @ US-13/SALISBURY BYPASS	Westbound	121	159	213	100	47	1.8	0.5	119	↑ 28
164	US-50 W @ MD-213/CENTREVILLE RD	Westbound	67	87	148	67	47	2.6	0.4	63	↑ 101
174	US-50 E @ MD-197/COLLINGTON RD/EXIT 11	Eastbound	30	10	14	43	68	5.6	0.4	276	↓ -102
194	US-50 E @ MD-528/PHILADELPHIA AVE	Eastbound	0	3	9	0	191	6.9	0.3	194	↑ 0
210	US-50 E @ WALSTON SWITCH RD	Eastbound	649	1019	980	672	29	0.4	0.3	90	↑ 120
239	US-50 W @ BLADENSBURG RD	Westbound	0	0	0	64	42	2.4	0.3	239	↑ 0

### Notes

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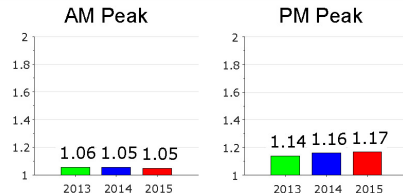
# 2016 MARYLAND STATE HIGHWAY MOBILITY REPORT



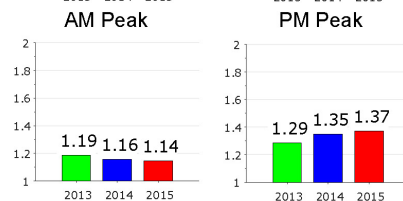
MD-100

## Trends<sup>a</sup>

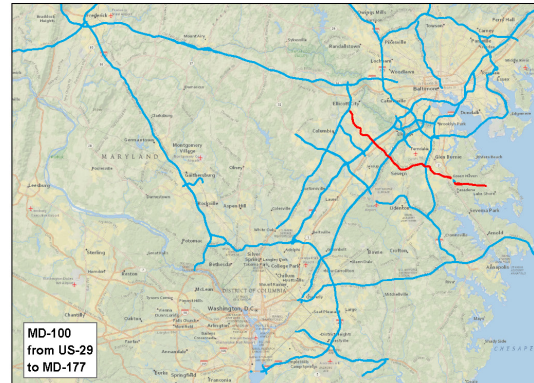
**Travel Time Index<sup>b</sup>**  
measure of average delay



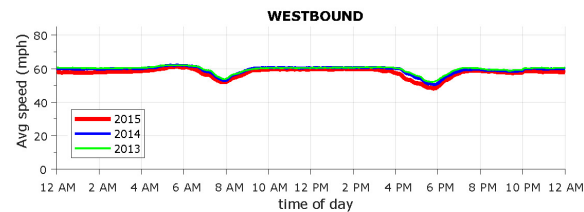
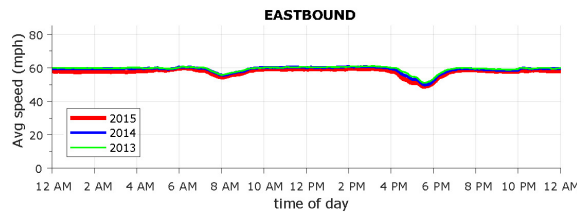
**Planning Time Index<sup>c</sup>**  
measure of worst-case delay



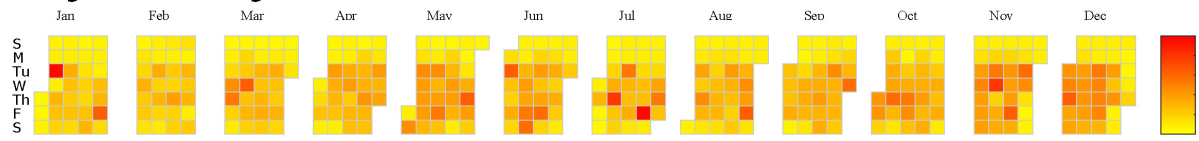
22 center miles carrying 71,000 vehicles every day



## Speed Profiles<sup>d</sup>



## Daily Variability<sup>e</sup>



## Top Bottlenecks<sup>f</sup>

2015 Rank	LOCATION	Direction	Number of Occurrences				Average		Impact Factor	2014 Rank	Change
			Q1	Q2	Q3	Q4	Duration (minute)	Length (mile)			
81	MD-100 E @ MD-170/TELEGRAPH RD/EXIT 11	Eastbound	86	79	67	63	75	4.4	0.9	61	↑ 20
144	MD-100 W @ MD-295/BALTIMORE WASHINGTON PKWY	Westbound	74	70	63	56	57	3.9	0.5	157	↓ -13
150	MD-100 W @ US-29	Westbound	80	72	45	63	72	4.4	0.5	130	↑ 20
153	MD-100 W @ MARC DORSEY STATION ACCESS RD/EXIT 7	Westbound	82	62	67	39	91	2.3	0.4	126	↑ 27
154	MD-100 W @ I-95/EXIT 5	Westbound	109	86	70	143	58	2.1	0.4	193	↓ -39
166	MD-100 E @ MARC DORSEY STATION ACCESS RD/EXIT 7	Eastbound	72	85	70	79	65	2.3	0.4	143	↑ 23
188	MD-100 W @ MD-607/MAGOTHY BRIDGE RD	Westbound	503	695	570	825	37	0.4	0.4	152	↑ 36
216	MD-100 E @ OAKWOOD RD	Eastbound	61	52	79	31	69	2.5	0.3	197	↑ 19
236	MD-100 E @ CATHERINE AVE	Eastbound	40	23	12	11	53	6.5	0.3	↑	236
265	MD-100 W @ MD-174/QUARTERFIELD RD	Westbound	46	35	73	33	59	2.3	0.2	207	↑ 58

## Notes

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## A. REGIONALLY SIGNIFICANT FREEWAY CORRIDORS

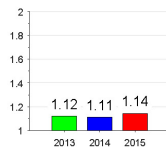


MD-295

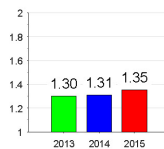
### Trends<sup>a</sup>

**Travel Time Index<sup>b</sup>**  
measure of average delay

AM Peak

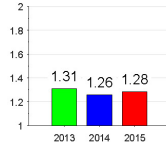


PM Peak

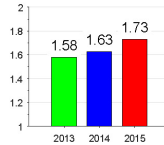


**Planning Time Index<sup>c</sup>**  
measure of worst-case delay

AM Peak



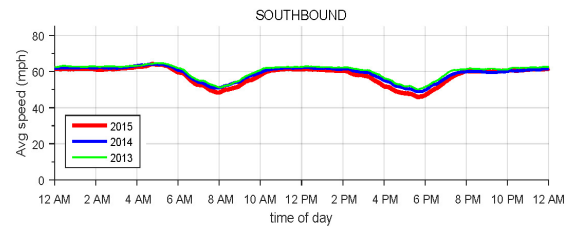
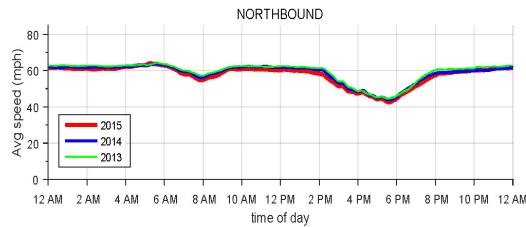
PM Peak



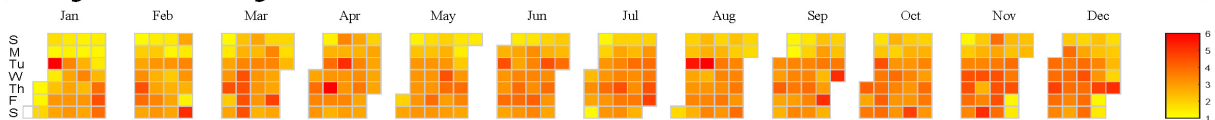
29 center miles carrying 106,000 vehicles every day



### Speed Profiles<sup>d</sup>



### Daily Variability<sup>e</sup>



### Top Bottlenecks<sup>f</sup>

2015 Rank	LOCATION	Direction	Number of Occurrences				Average Duration (minute)	Average Length (mile)	Impact Factor	2014 Rank	Change
			Q1	Q2	Q3	Q4					
4	MD-295 N @ MD-197/EXIT 11	Northbound	101	104	111	70	203	7.1	5.4	10	-6
7	MD-295 S @ MD-193	Southbound	102	104	82	90	129	9.3	4.0	16	-9
9	MD-295 N @ I-195	Northbound	65	90	66	67	142	11.1	3.8	5	4
15	MD-295 N @ MD-175	Northbound	92	83	83	84	140	7.8	3.3	6	9
17	MD-295 S @ POWDER MILL RD	Southbound	112	150	164	114	115	5.4	3.1	17	0
22	MD-295 N @ POWDER MILL RD	Northbound	139	180	173	207	102	3.9	2.6	27	-5
35	MD-295 S @ GODDARD RD	Southbound	59	117	80	78	93	6.0	1.7	60	-25
36	MD-295 S @ EASTERN AVE	Southbound	126	128	120	113	105	6.2	1.7		36
40	MD-295 S @ RIVERDALE RD	Southbound	69	84	84	129	79	5.5	1.6	49	-9
52	MD-295 N @ S MARTIN LUTHER KING BLVD	Northbound	16	0	0	1	87	27.0	1.2		52

### Notes

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Q1: Jan-Mar Q2: Apr-Jun Q3: Jul-Sep Q4: Oct-Dec

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## B. Regionally Significant Arterial Corridors



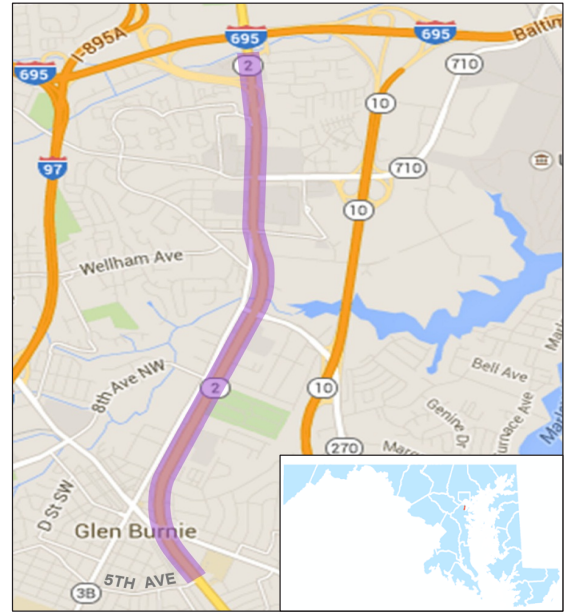
MD 45

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## B. REGIONALLY SIGNIFICANT ARTERIAL CORRIDORS

### MD 2

Limits:	5th Ave to I-695	
Corridor Length:	3.7 miles	
Speed Limit:	35 - 45 MPH	
Travel Lanes:	(2-3) Northbund (2-3) Southbound	
Signal Controlled Intersections:	14	
Grade Separated Interchanges:	2	
Major Cross Streets:	I-695, I-895, E. Ordnance Rd, E. Furnace Branch Rd, MD 648, 5th Ave	
Routes and Ridership	Routes	Avg. Daily Ridership
	MTA 14	3,428



2015 ADT	Trucks	Peak Hour Traffic
24,000 - 41,000 vpd	3% - 6%	7.5% - 8.5%

#### Intersection Operations

Signalized Intersections*:	AM Peak Hour	PM Peak Hour
LOS D or Better	6	6
LOS E	0	0
LOS F	0	0

#### Segment Operations

Level of Service	Northbound AM / PM (Miles of Roadway)	Southbound AM / PM (Miles of Roadway)
LOS D or Better	2.0 / 0.5	3.2 / 0.9
LOS E	1.7 / 2.4	0.5 / 2.3
LOS F	0.0 / 0.8	0.0 / 0.5

LOS 'E' Intersections

LOS 'F' Intersections

#### Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	
No data	

\* Available count data.

Functional Class	Roadway Segment North to South	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			NB	SB	NB	SB	NB	SB	NB	SB
Urban Other Principal Arterial	I-695 - I-895 Ramp	0.5					I			
	I-895 Ramp - Ordinance Rd. (MD-710)	0.5								W
	Ordinance Rd(MD-710)-Furnace Branch Rd(MD-270)	0.8						W		
	Furnace Branch Rd. (MD-270) - 8th Ave.	0.5								
	8th Ave. - Baltimore Annapolis Blvd. (MD-648)	1.0					I			I
	Baltimore Annapolis Blvd. (MD-648) - 5th Ave.	0.4								

I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

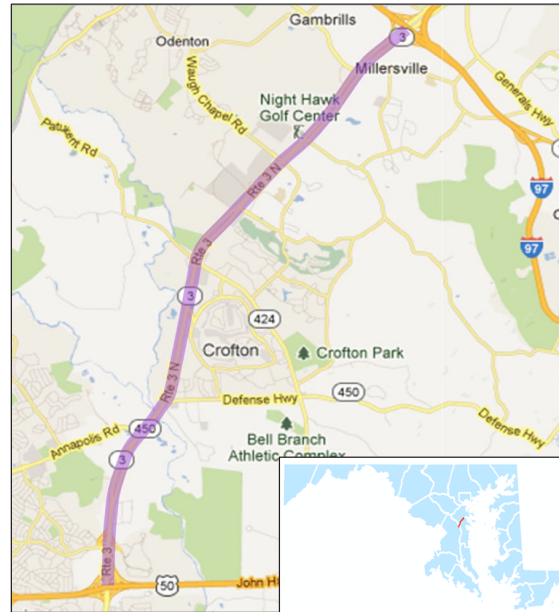
PTI: planning time index (95th percentile travel time / freeflow travel time)

TTI: travel time index (50th percentile travel time / freeflow travel time)

# 2016 MARYLAND STATE HIGHWAY MOBILITY REPORT

## MD 3

Limits:	US 50/301 to I-97	
Corridor Length:	8.8 miles	
Speed Limit:	45 - 50 MPH	
Travel Lanes:	(2 - 4) Northbound (2 - 4) Southbound	
Signal Controlled Intersections:	12	
Grade Separated Interchanges:	3	
Major Cross Streets:	I-97, MD 175, MD 424, Waugh Chapel Rd, Defense Hwy, MD 450, Belair Rd, US 50	
Routes and Ridership	Routes	Avg. Daily Ridership
	METRO B29, 31	235



<b>2015 AADT</b>	<b>Trucks</b>	<b>Peak Hour Traffic</b>
65,000 - 82,000 vpd	5% - 8%	7.5% - 8%

### Intersection Operations

Signalized Intersections*:	AM Peak Hour	PM Peak Hour
LOS D or Better	6	4
LOS E	1	1
LOS F	1	2

### Segment Operations

Level of Service	Northbound AM / PM (Miles of Roadway)	Southbound AM / PM (Miles of Roadway)
LOS D or Better	6.3 / 1.7	2.6 / 1.6
LOS E	0.8 / 1.3	4.0 / 4.9
LOS F	1.7 / 5.8	2.2 / 2.3

### LOS 'E' Intersections

MD 3 at MD 450 (AM)  
MD 3 @ Riedel Rd / Waugh Chapel Rd (PM)

### LOS 'F' Intersections

MD 3 at Millersville Rd (AM)  
MD 3 at MD 424 / Conway Rd (PM)  
MD 3 at Crawford Blvd / Cronson Blvd (PM)

### Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	
No data	

\* Available count data.

Functional Class	Roadway Segment North to South	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			NB	SB	NB	SB	NB	SB	NB	SB
Urban Other Principal Arterial	Patuxent Fwy (MD-32) - Annapolis Rd (MD-175)/Millersville Rd	0.8						W		W
	Annapolis Rd (MD-175)/Millersville Rd - St. Stephens Ch Rd	1.2			W			W	W	W
	St. Stephens Church Rd - Waugh Chapel Rd/Riedel Rd	0.5			W		W		W	
	Waugh Chapel Rd/Riedel Rd - John Hopkins Rd	0.8						W		
	Johns Hopkins Rd - Conway Rd/Davidsonville Rd (MD-424)	0.9								
	Conway Rd/Davidsonville Rd (MD-424) - Crawford Blvd/Cronson Blvd	0.7								
	Crawford Blvd/Cronson Blvd - Defense Hwy (MD-450)	1.3								
	Defense Hwy (MD-450) - Annapolis Rd (MD-450)	0.5					I			
	Annapolis Rd (MD-450) - Belair Drive/Melford Blvd	1.6								
	Belair Drive/Melford Blvd - US-50	0.5							W	W

I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

PTI: planning time index (95th percentile travel time / freeflow travel time)

TTI: travel time index (50th percentile travel time / freeflow travel time)

## B. REGIONALLY SIGNIFICANT ARTERIAL CORRIDORS

### MD 4

Limits:	Washington DC Line to Anne Arundel County Line				
Corridor Length:	14.1 miles				
Speed Limit:	35 - 55 MPH				
Travel Lanes:	(2 - 3) Northbound (2 - 3) Southbound				
Signal Controlled Intersections:	12				
Grade Separated Interchanges:	7				
Major Cross Streets:	MD 458, Forestville Rd, I-95, MD 337, MD 223, US 301, MD 725, Westphalia Rd				
Routes and Ridership	Routes	Avg. Daily Ridership	2015 AADT	Trucks	Peak Hour Traffic
	METRO K12, K13	2,048			
	The Bus Route 20	655	24,000 - 72,000 vpd	4% - 10%	6.5% - 7.5%
	The Bus Route 24	666	Segment Operations		

#### Intersection Operations

Signalized Intersections*:	AM Peak Hour	PM Peak Hour
LOS D or Better	6	6
LOS E	2	2
LOS F	2	2

#### Segment Operations

Level of Service	Northbound AM / PM (Miles of Roadway)	Southbound AM / PM (Miles of Roadway)
LOS D or Better	11.7 / 13.1	12.4 / 10.5
LOS E	0.6 / 0.6	0.8 / 2.7
LOS F	1.8 / 0.4	0.9 / 0.9

#### LOS 'E' Intersections

MD 4 at Forestville Rd (AM,PM)  
MD 4 at Westphalia Rd / Old Marlboro Pike (AM,PM)

#### LOS 'F' Intersections

MD 4 at MD 337 / Presidential Pkwy (AM,PM)  
MD 4 at Dower House Rd (AM,PM)

#### Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	
No data	

\* Available count data.

Functional Class	Roadway Segment North to South	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			NB	SB	NB	SB	NB	SB	NB	SB
Urban Other Principal Arterial	Southern Ave - Alton St/ Shadyside Ave.	0.8								
	Alton St/ Shadyside Ave. - Spaulding Ave./Quarter Ave.	0.5								
	Spaulding Ave./Quarter Ave. - Brooks Dr.	0.4								
	Brooks Dr. - Silver Hill Rd. (MD-458)	0.7								
	Silver Hill Rd. (MD-458) - Parkland Dr.	0.3								
	Parkland Dr. - Walters Ln.	0.8								
	Walters Ln. - Donnell Dr.	0.4								
	Donnell Dr. - Forestville Rd.	0.6								
Urban Freeway Expressway	Forestville Rd. - I95/I495	0.4								
	I95/I495 - Old Marlboro Pike/ Westphalia Rd.	0.3								
	Old Marlboro Pike/ Westphalia Rd. - MD-337	0.6								
	MD-337 - Dowerhouse Rd.	0.8								
	Dowerhouse Rd. - Woodyard Rd. (MD-223)	1.4								
	Woodyard Rd. (MD-223) - Ritchie Marlboro Rd.	2.7								
	Ritchie Marlboro Rd. - Water St (MD-717)	1.4								
	Water St (MD-717) - US-301	0.6								
Rural Other Principal Arterial	US-301 - Marlboro Pike (MD-725)	0.9								
	Marlboro Pike (MD-725) - Anne Arundel County	0.5								

I = Improvement from 2015 W = worsened from 2015 (blank) = No significant change from 2015

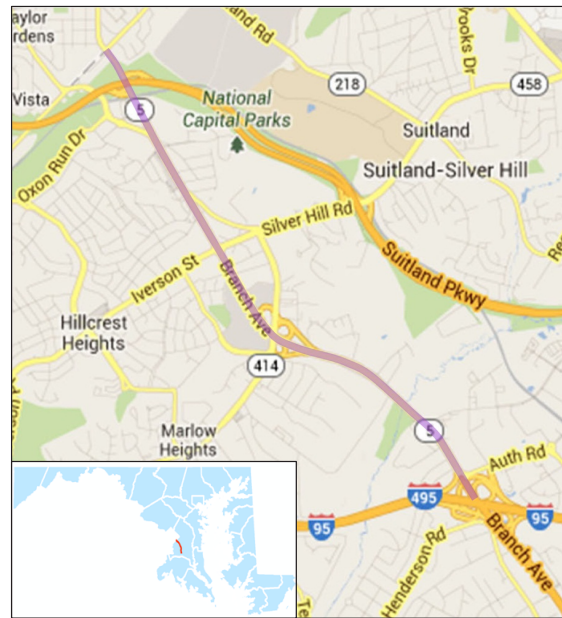
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TTI: travel time index (50th percentile travel time / freeflow travel time)

# 2016 MARYLAND STATE HIGHWAY MOBILITY REPORT

## MD 5

<b>Limits:</b>	I-95 to Washington DC Line	
<b>Corridor Length:</b>	3.1 miles	
<b>Speed Limit:</b>	30 - 35 MPH	
<b>Travel Lanes:</b>	(1 - 4) Northbound (1 - 4) Southbound	
<b>Signal Controlled Intersections:</b>	10	
<b>Grade Separated Interchanges:</b>	3	
<b>Major Cross Streets:</b>	Suitland Pkwy, MD 458, MD 414, I-95	
<b>Routes and Ridership</b>	Routes	Avg. Daily Ridership
	Green Line Naylor Rd	5,493
	Green Line Suitland Rd	10,357
	Green Line Branch Ave	12,004
	METRO C12, C14	791
	METRO H12	1,426
	MTA 715	474
	MTA 725	191
	MTA 735	313



<b>2015 AADT</b>	<b>Trucks</b>	<b>Peak Hour Traffic</b>
28,000 - 69,000 vpd	3%	7.5%

NOTE: The Green Line ridership data represents boardings

### Intersection Operations

Signalized Intersections*:	AM Peak Hour	PM Peak Hour
LOS D or Better	5	5
LOS E	1	1
LOS F	0	0

### Segment Operations

Level of Service	Northbound AM / PM (Miles of Roadway)	Southbound AM / PM (Miles of Roadway)
LOS D or Better	0.0 / 0.6	3.1 / 1.6
LOS E	1.5 / 2.5	0.0 / 1.5
LOS F	1.6 / 0.0	0.0 / 0.0

### LOS 'E' Intersections

MD 5 at MD 458 / Iverson St (AM,PM)

### LOS 'F' Intersections

### Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	
No data	

\* Available count data.

Functional Class	Roadway Segment North to South	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			NB	SB	NB	SB	NB	SB	NB	SB
Urban Freeway Expressway	Suitland Pkwy - Naylor Rd. (MD-637)	0.3								
	Naylor Rd. (MD-637) - Iverson St/Silver Hill Rd (MD-458)	0.7								
	Iverson St/Silver Hill Rd (MD-458) - St. Barnabas Rd. (MD-414)	0.6								
	St. Barnabas Rd. (MD-414) - I-95/I-495	1.5								

I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

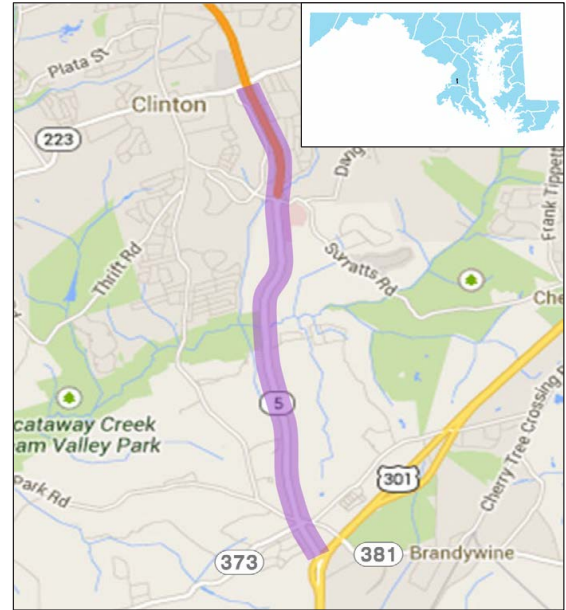
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## B. REGIONALLY SIGNIFICANT ARTERIAL CORRIDORS

### MD 5

<b>Limits:</b>	US 301 to MD 223	
<b>Corridor Length:</b>	5.4 miles	
<b>Speed Limit:</b>	55 MPH	
<b>Travel Lanes:</b>	(2 - 3) Northbound (2 - 3) Southbound	
<b>Signal Controlled Intersections:</b>	3	
<b>Grade Separated Interchanges:</b>	2	
<b>Major Cross Streets:</b>	Surratts Road MD 381, MD 373, US 301	
<b>Routes and Ridership</b>	Routes	Avg. Daily Ridership
	METRO C11, C13	457
	MTA 705	652
	MTA 715	474
	MTA 725	191
	MTA 735	313
The Bus Route 30		
521		



<b>2015 AADT</b>	<b>Trucks</b>	<b>Peak Hour Traffic</b>
58,000 - 83,000 vpd	5% - 7%	6.5% - 8%

#### Intersection Operations

Signalized Intersections*:	AM Peak Hour	PM Peak Hour
LOS D or Better	0	1
LOS E	0	1
LOS F	2	0

#### Segment Operations

Level of Service	Northbound AM / PM (Miles of Roadway)	Southbound AM / PM (Miles of Roadway)
LOS D or Better	1.3 / 4.8	5.4 / 0.0
LOS E	0.0 / 0.6	0.0 / 1.6
LOS F	4.1 / 0.0	0.0 / 3.8

#### LOS 'E' Intersections

MD 5 at Brandywine Rd (MD 381) (PM)

#### LOS 'F' Intersections

MD 5 at Brandywine Rd (MD 381) (AM)  
MD 5 at MD 373 (AM)

#### Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	
No data	

\* Available count data.

Functional Class	Roadway Segment North to South	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			NB	SB	NB	SB	NB	SB	NB	SB
Urban Freeway Expressway	Woodyard Rd. (MD-223) - Surratts Rd.	1.3								W
	Surratts Rd. - Burch Hill Rd/Earnshaw Dr.	1.6								
	Burch Hill Rd/Earnshaw Dr. - Brandywine Rd./ Accpleel Rd (MD-373)	1.9								W
Rural Other Princ. Arterial	Brandywine Rd./ Accokeek Rd (MD-373)-Crain Hwy. (US-301)	0.6	I							

I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

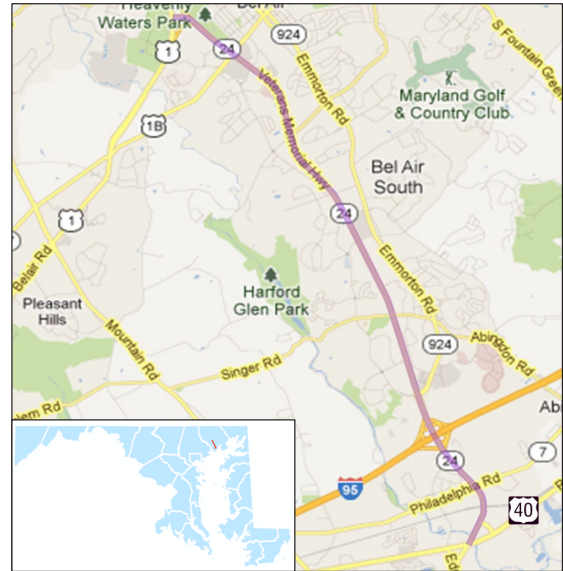
PTI: planning time index (95th percentile travel time / freeflow travel time)

TTI: travel time index (50th percentile travel time/ freeflow travel time)

# 2016 MARYLAND STATE HIGHWAY MOBILITY REPORT

## MD 24

<b>Limits:</b>	US 40 (Pulaski Highway) to US 1 (Bel Air Bypass)	
<b>Corridor Length:</b>	7.9 miles	
<b>Speed Limit:</b>	40 - 55 MPH	
<b>Travel Lanes:</b>	(2 - 3) Northbound (2 - 3) Southbound	
<b>Signal Controlled Intersections:</b>	15	
<b>Grade Separated Interchanges:</b>	3	
<b>Major Cross Streets:</b>	US 40, I-95 MD 7, MD 924, US 1 BU, US 1	
<b>Routes and Ridership</b>	Routes	Avg. Daily Ridership
	MTA 410	176



<b>2015 ADT</b>	<b>Trucks</b>	<b>Peak Hour Traffic</b>
22,000 - 67,000 vpd	2% - 5%	7.5% - 8.5%

### Intersection Operations

Signalized Intersections*:	AM Peak Hour	PM Peak Hour
LOS D or Better	7	5
LOS E	0	1
LOS F	0	1

### Segment Operations

Level of Service	Northbound AM / PM (Miles of Roadway)	Southbound AM / PM (Miles of Roadway)
LOS D or Better	5.0 / 1.2	7.0 / 2.1
LOS E	2.9 / 2.3	0.9 / 1.9
LOS F	0.0 / 4.4	0.0 / 3.9

### LOS 'E' Intersections

MD 24 at Wheel Rd (PM)

### LOS 'F' Intersections

MD 24 at I-95 NB Ramps (PM)

### Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	
No data	

\* Available count data.

Functional Class	Roadway Segment North to South	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			NB	SB	NB	SB	NB	SB	NB	SB
Urban Freeway Expressway	Bel Air Bypass (US-1) - Baltimore Pike (Bus US-1)	0.5				W	W			W
	Baltimore Pike (Bus US-1) - Ring Factory Rd.	1.3				W		W		
	Ring Factory Rd. - Plumtree Rd.	0.9								
	Plumtree Rd. - Bel Air Pkwy	0.4								
	Bel Air Pkwy - Wheel Rd.	0.3								
	Wheel Rd. - Singer Rd.	1.0							W	
	Singer Rd. - Tollgate Rd./Emmorton Rd (MD-924)	1.0			W			W		
	Tollgate Rd./Emmorton Rd (MD-924) - I-95	0.6					I		W	
	I-95 - Edgewood Rd.	0.4					I			W
	Edgewood Rd. - Philadelphia Rd. (MD-7)	0.4			W				W	
	Philadelphia Rd. (MD-7) - Pulaski Hwy (US-40)	0.5							I	
	Pulaski Hwy (US-40) - Edgewood Rd. (MD-755)	0.6								

I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

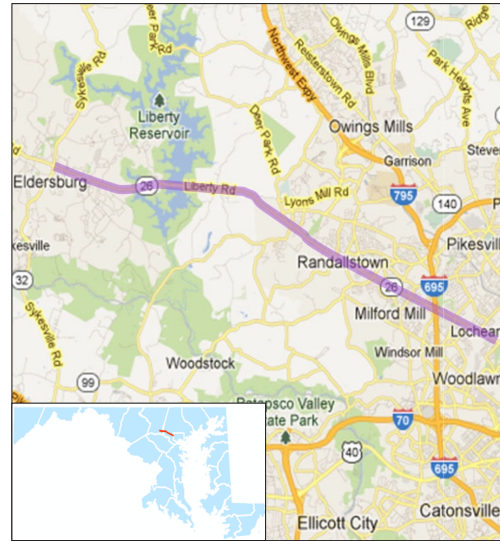
PTI: planning time index (95th percentile travel time / freeflow travel time)

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## B. REGIONALLY SIGNIFICANT ARTERIAL CORRIDORS

### MD 26

<b>Limits:</b>	MD 32 (Sykesville Road) to Baltimore City Line	
<b>Corridor Length:</b>	14.1 miles	
<b>Speed Limit:</b>	35 - 50 MPH	
<b>Travel Lanes:</b>	(1 - 2) Eastbound (1 - 3) Westbound	
<b>Signal Controlled Intersections:</b>	27	
<b>Grade Separated Interchanges:</b>	1	
<b>Major Cross Streets:</b>	MD 32, Marriottsville Rd, Old Court Rd, Courtleigh Dr, Rolling Rd, I-695	
<b>Routes and Ridership</b>	Routes	Avg. Daily Ridership
	MTA 52	4,710
	MTA 54	7,413
	MTA 77	3,590
	MTA 99	467



<b>2015 AADT</b>	<b>Trucks</b>	<b>Peak Hour Traffic</b>
9,000 - 49,000 vpd	4% - 5%	6.5% - 9.5%

#### Segment Operations

Level of Service	Eastbound AM / PM (Miles of Roadway)	Westbound AM / PM (Miles of Roadway)
LOS D or Better	10.9 / 7.9	11.9 / 9.0
LOS E	2.3 / 1.9	1.7 / 1.8
LOS F	0.9 / 4.3	0.5 / 3.3

#### Intersection Operations

Signalized Intersections*	AM Peak Hour	PM Peak Hour
LOS D or Better	18	19
LOS E	1	0
LOS F	0	0

#### LOS 'E' Intersections

MD 26 at I-695 SB Ramps (AM)

#### LOS 'F' Intersections

#### Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	
No data	

\* Available count data.

Functional Class	Roadway Segment West to East	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			EB	WB	EB	WB	EB	WB	EB	WB
Urban Other Principal Arterial	Sykesville Rd. (MD-32) - Georgetown Blvd.	0.3								
	Georgetown Blvd. - Ridge Rd./ Oklahoma Rd	0.7								
	Ridge Rd./ Oklahoma Rd. - Oakland Mills Rd.	2.0								
Rural Minor Arterial	Oakland Mills Rd. - Wards Chapel Rd.	1.7								
	Wards Chapel Rd. - Lyons Mill Rd.	1.2								
Urban Other Principal Arterial	Lyons Mill Rd. - Deer Park Rd.	1.3								
	Deer Park Rd. - Marriottsville Rd.	0.2								
	Marriottsville Rd. - Offutt Rd.	1.5								
	Offutt Rd. - Greens Ln/McDonogh Rd.	0.2								
	Greens Ln/McDonogh Rd. - Brenbrook Dr.	0.6								
	Brenbrook Dr. - Old Court Rd.	0.3								
	Old Court Rd. - Rolling Rd.	0.8								
	Rolling Rd. - Milford Mill Rd.	0.4								
	Milford Mill Rd. - Washington Ave.	0.5								
	Washington Ave. - I-695	0.3								
	I-695 - St. Lukes Lane	1.0								
	St. Lukes Lane - Patterson Ave.	0.3								
	Patterson Ave. - Northern Parkway/Baltimore City	0.8								

I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

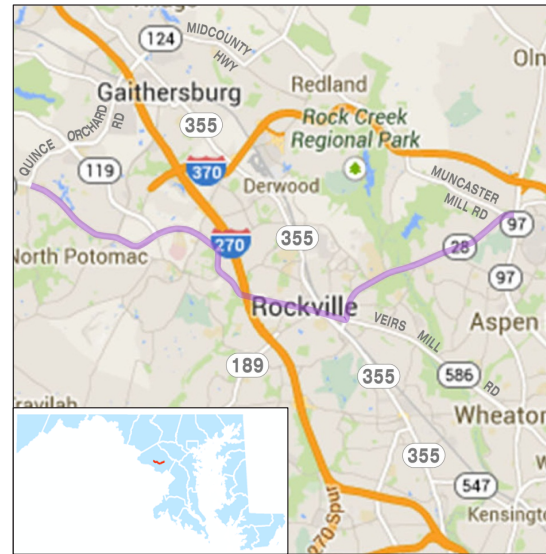
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TTI: travel time index (50th percentile travel time / freeflow travel time)

# 2016 MARYLAND STATE HIGHWAY MOBILITY REPORT

## MD 28

Limits:	MD 124 to MD 97	
Corridor Length:	11.4 miles	
Speed Limit:	40 - 50 MPH	
Travel Lanes:	(1 - 3) Eastbound (1 - 3) Westbound	
Signal Controlled Intersections:	30	
Grade Separated Interchanges:	1	
Major Cross Streets:	MD 124, MD 119, Shady Grove Dr, Gude Dr, I-270, MD 189, MD 355, MD 115, MD 97	
Routes and Ridership	Routes	Avg. Daily Ridership
	Ride On 49, 52, 54, 56, 63	1,970



2015 AADT	Trucks	Peak Hour Traffic
25,000 - 49,000 vpd	3% - 6%	7% - 9%

### Segment Operations

Level of Service	Eastbound AM / PM (Miles of Roadway)	Westbound AM / PM (Miles of Roadway)
LOS D or Better	4.3 / 2.9	5.1 / 4.3
LOS E	2.1 / 6.2	4.7 / 3.8
LOS F	5.0 / 2.3	1.6 / 3.3

### Intersection Operations

Signalized Intersections*:	AM Peak Hour	PM Peak Hour
LOS D or Better	16	17
LOS E	2	2
LOS F	1	0

### LOS 'E' Intersections

MD 28 at Avery Rd (AM)  
MD 28 at MD 97 (PM)  
MD 28 at E. Gude Dr (AM,PM)

### LOS 'F' Intersections

MD 28 at MD 97 (AM)

### Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	
No data	

\* Available count data.

Functional Class	Roadway Segment West to East	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			EB	WB	EB	WB	EB	WB	EB	WB
Urban Other Principal Arterial	Quince Orchard Rd (MD-124) - Muddy Branch Rd.	2.1								
	Muddy Branch Rd. - Great Seneca Hwy (MD-119)	0.8								
	Great Seneca Hwy (MD-119) - Shady Grove Rd.	0.9								
	Shady Grove Rd. - Falls Grove Dr/ Gude St.	0.4								
	Falls Grove Dr/ Gude St. - Darnestown Rd.	0.5								
	Darnestown Rd. - I-270	0.7								
	I-270 - Great Falls Rd. / Van Buren St.	0.9								
	Great Falls Rd. / Van Buren St. - Rockville Pike (MD-355)	0.6								
	Rockville Pike (MD-355)-Veirs Mill Rd (MD-586)/1stSt(MD-911)	0.4				W				
	Veirs Mill Rd (MD-586)/ 1st St (MD-911) - Gude Dr.	0.9								W
	Gude Dr. - Baltimore Rd.	1.0				W				W
	Baltimore Rd. - Bel Pre Rd.	0.7								
	Bel Pre Rd. - Muncaster Mill Rd. (MD-115)	1.3								
	Muncaster Mill Rd. (MD-115)- Georgia Ave. (MD-97)	0.2								

I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

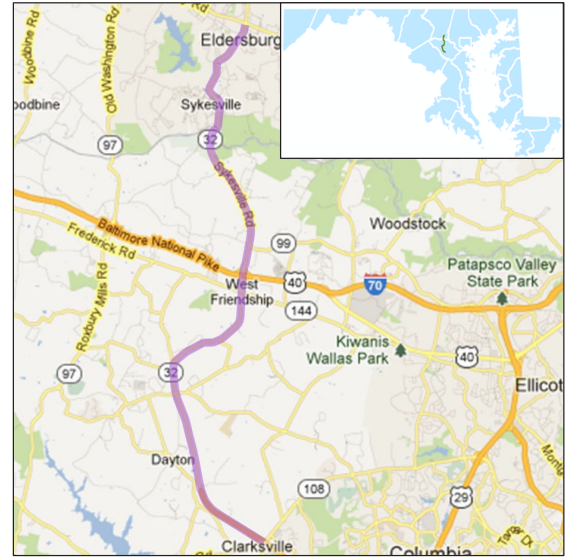
PTI: planning time index (95th percentile travel time / freeway travel time)

TTI: travel time index (50th percentile travel time / freeway travel time)

## B. REGIONALLY SIGNIFICANT ARTERIAL CORRIDORS

### MD 32

<b>Limits:</b>	MD 108 (Clarksville Pike) to MD 26 (Liberty Road)	
<b>Corridor Length:</b>	16.3 miles	
<b>Speed Limit:</b>	40 - 50 MPH	
<b>Travel Lanes:</b>	(1 - 2) Northbound (1 - 2) Southbound	
<b>Signal Controlled Intersections:</b>	11	
<b>Grade Separated Interchanges:</b>	3	
<b>Major Cross Streets:</b>	MD 108, Burntwoods Rd, MD 144, I-70, MD 99, MD 26	
<b>Routes and Ridership</b>	Routes	Avg. Daily Ridership
	N/A	N/A



<b>2015 AADT</b>	<b>Trucks</b>	<b>Peak Hour Traffic</b>
20,000 - 28,000 vpd	8% - 10%	7.5% - 8.5%

#### Segment Operations

Intersection Operations		
Signalized Intersections*:	AM Peak Hour	PM Peak Hour
LOS D or Better	6	6
LOS E	0	0
LOS F	0	0

Level of Service	Northbound AM / PM (Miles of Roadway)	Southbound AM / PM (Miles of Roadway)
LOS D or Better	16.3 / 3.8	7.7 / 16.3
LOS E	0.0 / 9.1	3.2 / 0.0
LOS F	0.0 / 3.4	5.4 / 0.0

LOS 'E' Intersections

LOS 'F' Intersections

#### Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	
No data	

\* Available count data.

Functional Class	Roadway Segment North to South	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			NB	SB	NB	SB	NB	SB	NB	SB
Urban Other Principal Arterial	Liberty Rd. (MD-26) - Springfield Ave. (MD-851)	2.2								
	Springfield Ave. (MD-851) - Sandosky Rd./Raincliffe Rd.	0.7						I		
	Sandosky Rd./Raincliffe Rd. - Friendship Rd. (MD-851)	0.8				I				I
Rural Minor Arterial	Friendship Rd. (MD-851) - River Rd.	1.7						I	I	
	River Rd. - Old Frederick Rd. (MD-99)	1.3								
	Old Frederick Rd. (MD-99) - I-70/US-40	0.8								W
Rural Other Principal Arterial	I-70/US-40 - Frederick Rd. (MD-144)	0.4								
	Frederick Rd. (MD-144) - Burntwoods Rd./ Andrea Dr.	3.0								
	Burntwoods Rd./ Andrea Dr. - Clarksville Pike (MD-108)	5.4		W				W		

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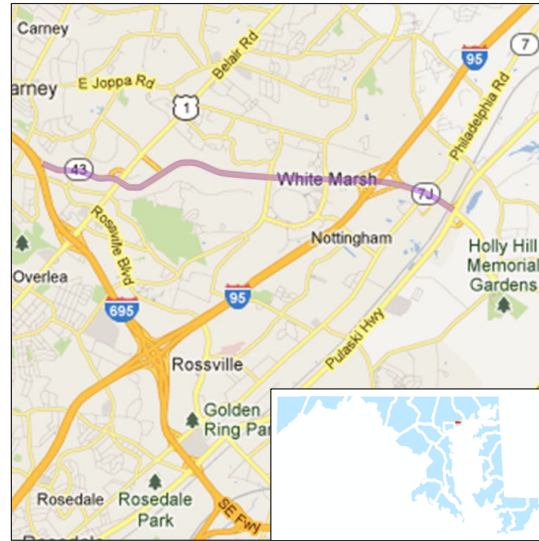
PTI: planning time index (95th percentile travel time / freeflow travel time)

TTI: travel time index (50th percentile travel time/ freeflow travel time)

# 2016 MARYLAND STATE HIGHWAY MOBILITY REPORT

## MD 43

Limits:	I-695 to US 40	
Corridor Length:	6.0 miles	
Speed Limit:	45 - 50 MPH	
Travel Lanes:	2 Eastbound 2 Westbound	
Signal Controlled Intersections:	6	
Grade Separated Interchanges:	5	
Major Cross Streets:	I-695, US 1, Perry Hall Blvd, Honeygo Blvd, I-95, MD 7, US 40	
Routes and Ridership	Routes	Avg. Daily Ridership
	MTA 15	11,527
	MTA 58	1,809
	MTA 120	384
	MTA 420	152



2015 AADT	Trucks	Peak Hour Traffic
27,000 - 54,000 vpd	2% - 8%	7.5% - 8%

### Intersection Operations

Signalized Intersections*:	AM Peak Hour	PM Peak Hour
LOS D or Better	4	4
LOS E	1	1
LOS F	0	0

### Segment Operations

Level of Service	Eastbound AM / PM (Miles of Roadway)	Westbound AM / PM (Miles of Roadway)
LOS D or Better	5.3 / 2.2	2.8 / 2.2
LOS E	0.7 / 2.7	2.2 / 1.9
LOS F	0.0 / 1.1	1.0 / 1.9

### LOS 'E' Intersections

MD 43 at Honeygo Blvd (AM,PM)

### LOS 'F' Intersections

### Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	
No data	

\* Available count data.

Functional Class	Roadway Segment West to East	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			EB	WB	EB	WB	EB	WB	EB	WB
Urban Freeway Expressway	I-695 - Walther Blvd	0.6								
	Walther Blvd - Belair Rd (US-1) SB	0.4		I	I			I	I	
	Belair Rd (US-1) SB - Belair Rd (US-1) NB	0.6		I				I	W	
	Belair Rd (US-1) NB - Perry Hall Blvd	1.8								
	Perry Hall Blvd - Honeygo Blvd	0.7					W			
	Honeygo Blvd - I-95	0.9	I			W	I	I	I	W
	I-95 - Philadelphia Rd	0.6		I			I	I	W	W
	Philadelphia Rd - Pulaski Hwy (US-40)	0.4							W	

I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

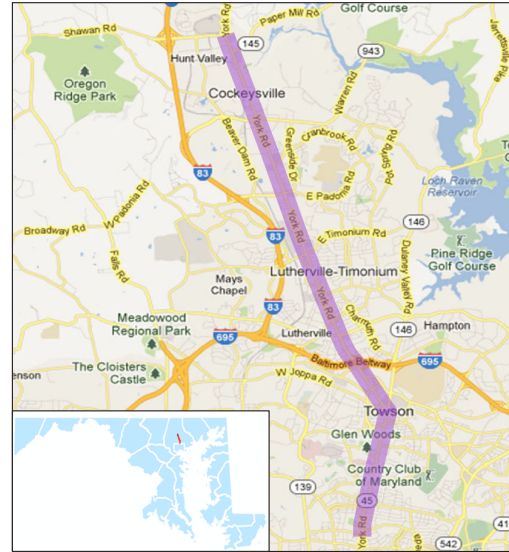
PTI: planning time index (95th percentile travel time / freeflow travel time)

TTI: travel time index (50th percentile travel time / freeflow travel time)

## B. REGIONALLY SIGNIFICANT ARTERIAL CORRIDORS

### MD 45

Limits:	Baltimore City Line to Shawan Road	
Corridor Length:	9.3 miles	
Speed Limit:	35 - 40 MPH	
Travel Lanes:	(1 – 2) Northbound (1 – 2) Southbound	
Signal Controlled Intersections:	31	
Grade Separated Interchanges:	1	
Major Cross Streets:	Stevenson Ln, Towsontown Blvd, Joppa Rd, Fairmount Ave, I-695, MD 131, Timonium Rd, Padonia Rd, Warren Rd, Shawan Rd	
Routes and Ridership	Routes	Avg. Daily Ridership
	Light Rail - Hunt Valley	22
	Light Rail - Pepper Rd	146
	Light Rail - McCormick Rd	399
	Light Rail - Gilroy Rd	205
	Light Rail - Warren Rd	254
	Light Rail - Timonium Rd	884
	Light Rail - Timonium BP	285
	Light Rail - Lutherville	727
	MTA 8	10,198
	MTA 9	1,176
	MTA 12	280



<b>2015 AADT</b>	<b>Trucks</b>	<b>Peak Hour Traffic</b>
20,000 - 40,000 vpd	2% - 6%	6.5% - 9.5%

NOTE: The Green Line ridership data represents boardings

#### Intersection Operations

Signalized Intersections*:	AM Peak Hour	PM Peak Hour
LOS D or Better	18	9
LOS E	0	3
LOS F	1	1

#### Segment Operations

Level of Service	Northbound AM / PM (Miles of Roadway)	Southbound AM / PM (Miles of Roadway)
LOS D or Better	7.4 / 1.1	7.3 / 1.5
LOS E	1.5 / 2.8	1.6 / 2.1
LOS F	0.4 / 5.4	0.4 / 5.7

#### LOS 'E' Intersections

MD 45 at Fairmount Ave/Ent. To Carver Voc Tech Center (PM)  
MD 45 at Shawan Rd (PM)  
MD 45 at Timonium Rd (PM)

#### LOS 'F' Intersections

MD 45 at Shawan Rd (AM)  
MD 45 at MD 131 / Seminary Ave (PM)

#### Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	
No data	

\* Available count data.

Functional Class	Roadway Segment North to South	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			NB	SB	NB	SB	NB	SB	NB	SB
Urban Other Principal Arterial	Shawan Rd. - Paper Mill Rd. (MD-145)	0.3								I
	Paper Mill Rd. (MD-145) - Warren Rd.	1.2								I
	Warren Rd. - Cranbrook Rd.	0.8								I
	Cranbrook Rd. - Padonia Rd.	0.5								I
	Padonia Rd. - Timonium Rd.	1.1								I
	Timonium Rd. - Ridgely Rd.	0.8								I
	Ridgely Rd. - Bellona Ave./Margate Rd.	0.5								I
	Bellona Ave./Margate Rd. - Seminary Ave. (MD-131)	0.2								I
	Seminary Ave. (MD-131) - I-695	0.5							W	W
	I-695 - Fairmount Ave	0.3								
Urban Minor Arterial	Fairmount Ave. - Bosley Ave.	0.2			W	W			W	W
	Bosley Ave. - Dulane Valley Rd. (MD-146) Joppa Rd.	0.4		I				I		
Urban Other Principal Arterial	Dulane Valley Rd. (MD-146) Joppa Rd. - Towsontown Blvd.	0.3		I				I		
	Towsontown Blvd. - Burke Ave.	0.2								I
	Burke Ave. - Stevenson Ln.	0.8								I
	Stevenson Ln. - Register Ave.	0.4								I
	Register Ave. - Lake Ave.	0.8								I

I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

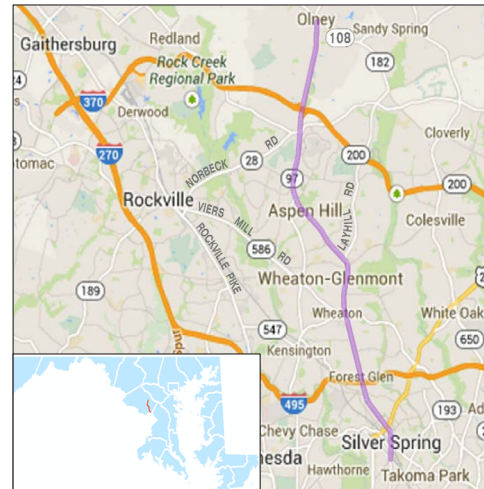
PTI: planning time index (95th percentile travel time / freeflow travel time)

TTI: travel time index (50th percentile travel time / freeflow travel time)

# 2016 MARYLAND STATE HIGHWAY MOBILITY REPORT

## MD 97

<b>Limits:</b>	Washington DC Line to MD 108	
<b>Corridor Length:</b>	12.7 miles	
<b>Speed Limit:</b>	30 - 45 MPH	
<b>Travel Lanes:</b>	(3 - 4) Northbound (3 - 4) Southbound	
<b>Signal Controlled Intersections:</b>	48	
<b>Grade Separated Interchanges:</b>	1	
<b>Major Cross Streets:</b>	US 29, I-495, MD 586, Randolph Rd, MD 193, MD 182, MD 28, MD 200, MD 108	
<b>Routes and Ridership</b>	Routes	Avg. Daily Ridership
	Ride On 33, 41, 51, 52, 53	1,186
	METRO J5	371
	METRO Q1, Q2, Q4, Q5, Q6	8,566
	METRO Y2, Y7, Y8, Y9	8,672



<b>2015 AADT</b>	<b>Trucks</b>	<b>Peak Hour Traffic</b>
28,000 - 62,000 vpd	2% - 6%	6% - 8.5%

Intersection Operations		
Signalized Intersections*:	AM Peak Hour	PM Peak Hour
LOS D or Better	19	22
LOS E	5	2
LOS F	3	1

Segment Operations		
Level of Service	Northbound AM / PM (Miles of Roadway)	Southbound AM / PM (Miles of Roadway)
LOS D or Better	8.8 / 1.8	3.2 / 0.5
LOS E	3.4 / 3.7	5.0 / 10.2
LOS F	0.5 / 7.2	4.5 / 2.0

LOS 'E' Intersections
MD 97 at MD 192 / Forest Glen Rd (AM)
MD 97 at Pliers Mill Rd (AM)
MD 97 at MD 586 (AM)
MD 97 at Seminary Rd / Columbia Blvd (AM,PM)
MD 97 at Seminary PI (AM,PM)

LOS 'F' Intersections
MD 97 at Old Baltimore Rd (AM)
MD 97 at MD 28 (AM)
MD 97 at Ramp 6 from I-495 EB (AM,PM)

Color Key	
TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	
No data	

\* Available count data.

Functional Class	Roadway Segment North to South	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			NB	SB	NB	SB	NB	SB	NB	SB
Urban Other Principal Arterial	Olney Sandy Spring/ Laytonville Rd. (MD-108)-Emroy Lane	1.9								I
	Emroy Lane - Norbeck Rd. (MD-28)	1.2			W	W			W	W
	Norbeck Rd. (MD-28) - Rossmoor Blvd.	0.5								
	Rossmoor Blvd. - Bel Pre Rd.	0.6						W		
	Bel Pre Rd. - Connecticut Ave. (MD-185)	0.7								
	Connecticut Ave. (MD-185) - Hewitt Ave.	0.6								W
	Hewitt Ave. - May St./Rippling Brook Dr.	0.5								
	May St./Rippling Brook Dr. - Layhill Rd.(MD-182)	1.1								
	Layhill Rd.(MD-182) - Randolph Rd.	0.2								
	Randolph Rd. - Shorefield Rd.	0.4								
	Shorefield Rd. - Arcola Ave.	0.4								
	Arcola Ave. - University Blvd. (MD-193)	0.4	I	I	I	I	I	I	I	I
	University Blvd. (MD-193)- Veirs Mill Rd. (MD-586)	0.4	I	I	I	I	I	I	I	I
	Veirs Mill Rd. (MD-586) - Dennis Ave.	0.8								
	Dennis Ave. - I-495	0.8								
	I-495 - 16th St. (MD-390)	0.5	W	I			W	I	W	W
	16th St. (MD-390) - Spring St	0.6								
	Spring St. - Colesville Rd (US-29)	0.3								
	Colesville Rd (US-29) - Silgo Ave.	0.4								
	Silgo Ave. - East-West Hwy/Philadelphia Ave. (MD-410)	0.2		I						
	East-West Hwy/Philadelphia Ave(MD-410) - Eastern Ave./ DC Line	0.2								

I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

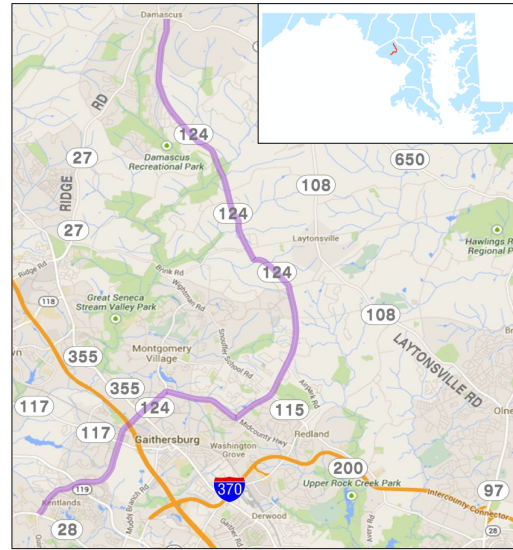
PTI: planning time index (95th percentile travel time / freeflow travel time)

TTI: travel time index (50th percentile travel time/ freeflow travel time)

## B. REGIONALLY SIGNIFICANT ARTERIAL CORRIDORS

### MD 124

<b>Limits:</b>	MD 28 to MD 108	
<b>Corridor Length:</b>	16.7 miles	
<b>Speed Limit:</b>	30 - 50 MPH	
<b>Travel Lanes:</b>	(1 - 4) Northbound (1 - 4) Southbound	
<b>Signal Controlled Intersections:</b>	31	
<b>Grade Separated Interchanges:</b>	1	
<b>Major Cross Streets:</b>	MD 28, MD 119, MD 117, I-270, MD 355, MD 115, MD 108	
<b>Routes and Ridership</b>	<b>Routes</b>	<b>Avg. Daily Ridership</b>
	Ride On 56, 57, 58, 59, 65, 90	4,160



<b>2015 AADT</b>	<b>Trucks</b>	<b>Peak Hour Traffic</b>
11,000 - 73,000 vpd	2% - 8%	7% - 10.5%

#### Intersection Operations

Signalized Intersections*:	AM Peak Hour	PM Peak Hour
LOS D or Better	16	15
LOS E	1	1
LOS F	0	1

#### Segment Operations

	Northbound AM / PM (Miles of Roadway)	Southbound AM / PM (Miles of Roadway)
Level of Service		
LOS D or Better	12.6 / 12.7	12.0 / 13.6
LOS E	2.5 / 1.3	2.5 / 1.5
LOS F	0.5 / 1.6	1.3 / 0.7

#### LOS 'E' Intersections

MD 124 at MD 355 (AM)

MD 124 at Montgomery Village Ave (PM)

#### LOS 'F' Intersections

MD 124 at MD 355 (PM)

#### Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	
No data	

\* Available count data.

Functional Class	Roadway Segment North to South	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			NB	SB	NB	SB	NB	SB	NB	SB
Urban Minor Arterial	Main St. (MD-108) - Hawkins Creamery Rd.	1.0	I		I		I		I	
	Hawkins Creamery Rd. - Log House Rd/ Low Meadow Dr.	1.2	I	I		I	I	I		I
	Log House Rd/ Low Meadow Dr. - Rocky Rd.	2.4								
	Rocky Rd. - Brink Rd.	1.4	I			I	I			I
	Brink Rd. - Warfield Rd.	1.3		W		I		W		I
	Warfield Rd. - Fieldcrest Rd./ Hadley Farms Dr.	0.7			W				W	
	Fieldcrest Rd./ Hadley Farms Dr. - Airpark Rd.	1.1								
	Airpark Rd. - Snouffer School Rd./Muncaster Mill Rd (MD-115)	0.7								
Urban Other Principal Arterial	SnoufferSchlRd/MncterMillRd(MD115) - MdctyHwy/WoodfieldRd.	0.9								
	Midcounty Hwy./Woodfield Rd. - Goshen Rd.	1.1								
	Goshen Rd. - Montgomery Village Dr /Midcounty Hwy	0.6	I		I		I		I	
	MontgomeryVillage/MidcountyHwy - Frederick Rd/Ave(MD-355)	0.7	I			W	I			W
	Frederick Rd/Ave (MD-355) - I-270	0.4			I				I	
	I-270 - Clopper Rd. /Diamond Av (MD-117)	0.5					I			
	Clopper Rd./Diamond Av(MD-117) - Gt Seneca Hwy(MD-119)	1.5								
	Great Seneca Hwy. (MD-119) - Darnestown Rd. (MD-28)	1.2	I	I	I	I	I	I	I	I

I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

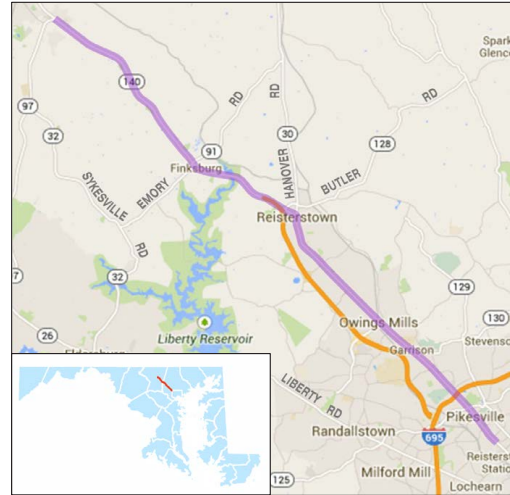
PTI: planning time index (95th percentile travel time / freeflow travel time)

TTI: travel time index (50th percentile travel time / freeflow travel time)

# 2016 MARYLAND STATE HIGHWAY MOBILITY REPORT

## MD 140

<b>Limits:</b>	MD 97 to Baltimore City Line	
<b>Corridor Length:</b>	20.4 miles	
<b>Speed Limit:</b>	30 - 55 MPH	
<b>Travel Lanes:</b>	(1 - 3) Northbound (1 - 2) Southbound	
<b>Signal Controlled Intersections:</b>	51	
<b>Grade Separated Interchanges:</b>	3	
<b>Major Cross Streets:</b>	MD 97, MD 91, I-795, MD 30, MD 940, Painters Mill Rd MD 130, I-695, Old Court Rd	
<b>Routes and Ridership</b>	Routes	Avg. Daily Ridership
	MTA 53	3,745
	MTA 56	1,988
	MTA 59	1,649



<b>2015 AADT</b>	<b>Trucks</b>	<b>Peak Hour Traffic</b>
18,000 - 54,000 vpd	2% - 9%	7% - 8.5%

### Segment Operations

Intersection Operations		
Signalized Intersections*	AM Peak Hour	PM Peak Hour
LOS D or Better	30	30
LOS E	1	2
LOS F	1	0

Level of Service	Northbound AM / PM (Miles of Roadway)	Southbound AM / PM (Miles of Roadway)
LOS D or Better	15.5 / 10.9	16.5 / 13.8
LOS E	3.7 / 5.7	3.9 / 2.2
LOS F	1.2 / 3.8	0.0 / 4.4

<b>LOS 'E' Intersections</b>
MD 140 at MD 91 (AM,PM)
MD 140 at Brian Daniel Ct / Woodfield Ct (PM)

<b>LOS 'F' Intersections</b>
MD 140 at Dede Rd (AM)

Color Key	
TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	
No data	

\* Available count data.

Functional Class	Roadway Segment North to South	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			NB	SB	NB	SB	NB	SB	NB	SB
Urban Other Principal Arterial	New Washington Rd (MD-97) Malcom Dr. - Reese Rd.	2.5								
	Reese Rd. - Green Mill Rd./Suffolk Rd.	2.2							I	
	Green Mill Rd./Suffolk Rd. - Emroy/Gamber Rd (MD-91)	1.9							I	
Urban/Rural Other P. Arterial	Emroy/Gamber Rd (MD-91) - Butler Rd. (MD-795)	3.4								
Urban Other Principal Arterial	Butler Rd. (MD-795) - Hanover Rd. (MD-30)	0.4								
	Hanover Rd. (MD-30) - Glyndon Dr/ Glyndon Trace Dr.	0.7								
	Glyndon Dr/ Glyndon Trace Dr. - Berrymans Ln.	0.4		I				I		I
	Berrymans Ln. - Franklin Blvd./Cherry Hill Rd.	0.7								
	Franklin Blvd./Cherry Hill Rd. - Dolfield Blvd/ Richmar Rd.	1.2								
	Dolfield Blvd/ Richmar Rd. - Pleasant Hill Rd.	0.5								
	Pleasant Hill Rd. - Owings Mills Blvd. (MD-940)	1.0		I			I	I		I
	Owings Mills Blvd. (MD-940) - Painters Mill Rd.	0.4				W	W			W
	Painters Mill Rd. - Greenspring Valley Rd (MD-130)	1.2								
	Greenspring Valley Rd (MD-130) - McDonogh Rd./ Craddock Ln.	0.6								W
	McDonogh Rd./ Craddock Ln. - I-695	1.2					W	I	W	W
	I-695 - Old Court Rd.	0.6							W	
	Old Court Rd. - Sudbrook Ln	0.4				W	W	W	W	W
	Sudbrook Ln. - Slade Ave/ Milford Mill Rd.	0.5								I
	Slade Ave/ Milford Mill Rd. - Baltimore City Line/ Fallstaff Rd	0.6							W	

I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

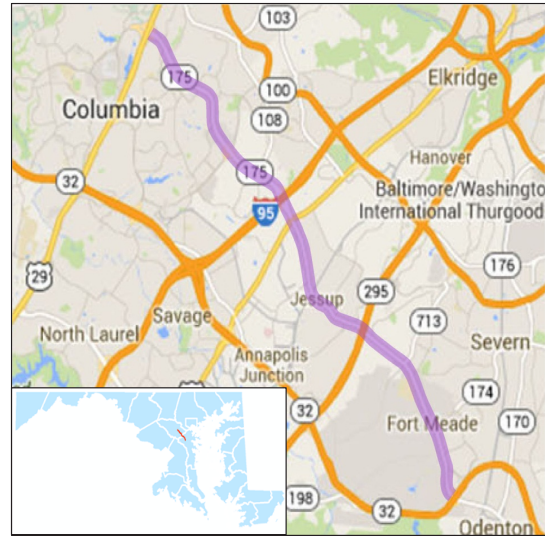
PTI: planning time index (95th percentile travel time / freeflow travel time)

TTI: travel time index (50th percentile travel time / freeflow travel time)

## B. REGIONALLY SIGNIFICANT ARTERIAL CORRIDORS

### MD 175

Limits:	MD 32 (Patuxent Freeway) to US 29 (Columbia Pike)	
Corridor Length:	12.2 miles	
Speed Limit:	35 - 50 MPH	
Travel Lanes:	(1 - 3) Northbound (1 - 4) Southbound	
Signal Controlled Intersections:	19	
Grade Separated Interchanges:	5	
Major Cross Streets:	MD 32, MD 174, MD 713, MD 295, US 1, I-95, Snowden River Pkwy, US 29	
Routes and Ridership	Routes	Avg. Daily Ridership
	MTA 310	202
	MTA 320	165



<b>2015 AADT</b>	<b>Trucks</b>	<b>Peak Hour Traffic</b>
18,000 - 75,000 vpd	2% - 13%	7.5% - 9.5%

#### Segment Operations

Intersection Operations		
Signalized Intersections*:	AM Peak Hour	PM Peak Hour
LOS D or Better	10	6
LOS E	1	3
LOS F	0	2

Level of Service	Eastbound AM / PM (Miles of Roadway)	Westbound AM / PM (Miles of Roadway)
	AM / PM	AM / PM
LOS D or Better	9.2 / 1.7	8.5 / 2.4
LOS E	3.0 / 8.7	3.7 / 3.0
LOS F	0.0 / 1.8	0.0 / 6.8

#### LOS 'E' Intersections

MD 175 at Reece Rd (PM)  
MD 175 at Thunder Hill Rd (PM)  
MD 175 at MD 108 (AM,PM)

#### LOS 'F' Intersections

MD 175 at Llewellyn Ave / Blue Water Blvd (PM)  
MD 175 at Tamar Dr (PM)

#### Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	
No data	

\* Available count data.

Functional Class	Roadway Segment North to South	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			EB	WB	EB	WB	EB	WB	EB	WB
Urban Freeway Expressway	Columbia Pike (US-29) - Thunder Hill Rd.	0.6								
	Thunder Hill Rd. - Tamar Dr	1.1								W
	Tamar Dr - Dobbin Rd.	0.9								W
	Dobbin Rd - Snowden River Pkwy	0.6								
	Snowden River Pkwy - Waterloo Rd (MD-108)	0.8								
	Waterloo Rd (MD-108) - I-95	0.7								
Urban Minor Arterial	I-95 - Washington Blvd (US-1)	0.5								
	Washington Blvd (US-1) - Dorsey Run Rd.	1.3								
	Dorsey Run Rd. - MD-295	1.6								W
	MD-295 - Ridge Rd/Rockenbach Rd (MD-713)	1.1								
	Ridge Rd/Rockenbach Rd. (MD-713) - Reece Rd	1.3								
	Reece Rd - Charter Oaks Blvd.	0.6								
	Charter Oaks Blvd. - MD-32	1.1								

I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

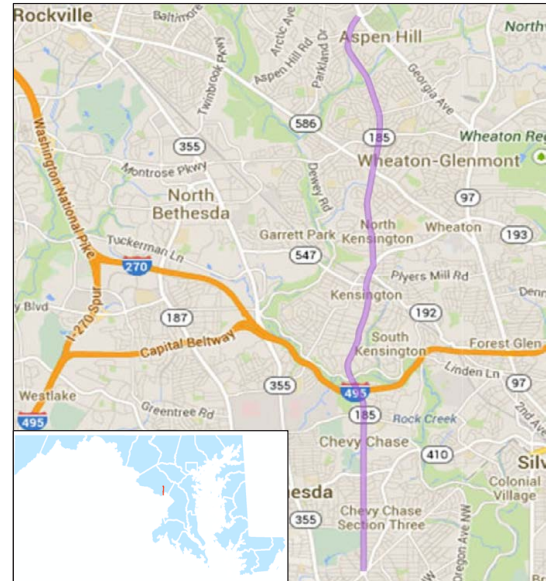
PTI: planning time index (95th percentile travel time / freeflow travel time)

TTI: travel time index (50th percentile travel time / freeflow travel time)

# 2016 MARYLAND STATE HIGHWAY MOBILITY REPORT

## MD 185

<b>Limits:</b>	Washington DC Line to MD 97	
<b>Corridor Length:</b>	8.3 miles	
<b>Speed Limit:</b>	30 - 45 MPH	
<b>Travel Lanes:</b>	(3 - 4) Northbound (3 - 4) Southbound	
<b>Signal Controlled Intersections:</b>	26	
<b>Grade Separated Interchanges:</b>	1	
<b>Major Cross Streets:</b>	MD 410, I-495, MD 547, MD 193, MD 586, Randolph Rd, MD 97	
<b>Routes and Ridership</b>	Routes	Avg. Daily Ridership
	METRO L8	2,489
	Ride On 1, 11, 34, 41	3,960



<b>2015 AADT</b>	<b>Trucks</b>	<b>Peak Hour Traffic</b>
34,000 - 66,000 vpd	4% - 5%	7.5% - 8.5%

### Intersection Operations

Signalized Intersections*:	AM Peak Hour	PM Peak Hour
LOS D or Better	10	9
LOS E	0	1
LOS F	2	4

### Segment Operations

Level of Service	Northbound AM / PM (Miles of Roadway)	Southbound AM / PM (Miles of Roadway)
LOS D or Better	7.5 / 0.9	0.9 / 4.1
LOS E	0.8 / 3.5	4.1 / 2.3
LOS F	0.0 / 3.9	3.3 / 1.9

### LOS 'E' Intersections

MD 185 at MD 410 (PM)

### LOS 'F' Intersections

MD 185 at MD 410 (PM)  
MD 185 at MD 191 / Bradley Ln (PM)  
MD 185 at Jones Bridge Rd/Kensington Pkwy (AM,PM)  
MD 185 at MD 192 (AM,PM)

### Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	> 2.5
No data	

\* Available count data.

Functional Class	Roadway Segment North to South	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			NB	SB	NB	SB	NB	SB	NB	SB
Urban Other Principal Arterial	Georgia Ave. (MD-97) - Aspen Hill Rd.	0.3		I	I	I	I	I	I	I
	Aspen Hill Rd. - Randolph Rd.	0.4								
	Randolph Rd. - Veirs Mill Rd. (MD-586)	1.7								
	Veirs Mill Rd. (MD-586) - University Blvd. (MD-193)	1.4								
	University Blvd (MD-193) - Saul Rd.	1.2								
	Saul Rd. - I-495	0.6								
	I-495-Jones Bridge Rd.	0.5								
	Jones Bridge Rd. - East West Hwy (MD-410)	0.8			W	W			W	W
	East West Hwy (MD-410) - Bradley Ln. (MD-191)	0.8			W	W			W	W
	Bradley Ln. (MD-191) -Western Ave/ DC Line	0.6								

I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

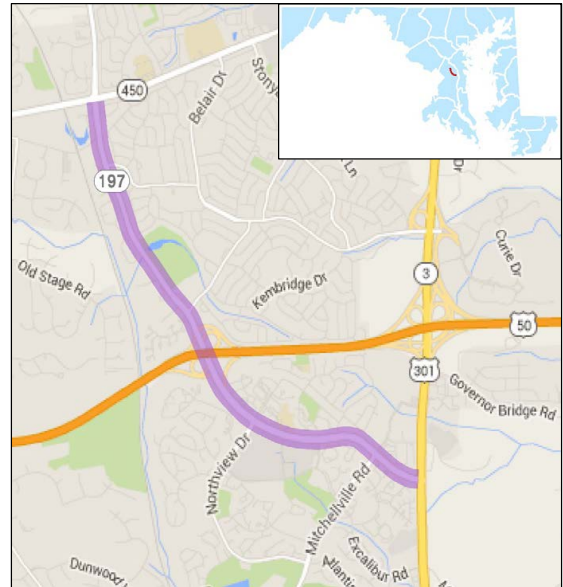
PTI: planning time index (95th percentile travel time / freeflow travel time)

TTI: travel time index (50th percentile travel time / freeflow travel time)

## B. REGIONALLY SIGNIFICANT ARTERIAL CORRIDORS

### MD 197

<b>Limits:</b>	US 301 to MD 450	
<b>Corridor Length:</b>	3.2 miles	
<b>Speed Limit:</b>	40 - 45 MPH	
<b>Travel Lanes:</b>	(1 - 3) Northbound (1 - 3) Southbound	
<b>Signal Controlled Intersections:</b>	11	
<b>Grade Separated Interchanges:</b>	1	
<b>Major Cross Streets:</b>	US 301, Mitchellville Rd, Northview Dr, US 50, Kenhill Dr, MD 450	
<b>Routes and Ridership</b>	Routes	Avg. Daily Ridership
	METRO B21, B22	679
	METRO B24	937
	METRO B29, B31	235



<b>2015 AADT</b>	<b>Trucks</b>	<b>Peak Hour Traffic</b>
19,000 - 34,000 vpd	3%	8%

#### Intersection Operations

Signalized Intersections*:	AM Peak Hour	PM Peak Hour
LOS D or Better	9	8
LOS E	0	1
LOS F	0	0

#### Segment Operations

Level of Service	Northbound AM / PM (Miles of Roadway)	Southbound AM / PM (Miles of Roadway)
LOS D or Better	1.3 / 1.3	3.0 / 1.3
LOS E	0.2 / 0.2	0.2 / 0.0
LOS F	1.7 / 1.7	0.0 / 1.9

#### LOS 'E' Intersections

MD 197 at Ramp 6 (from I-595 EB) (PM)

#### LOS 'F' Intersections

#### Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	> 2.5
No data	

\* Available count data.

Functional Class	Roadway Segment North to South	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			NB	SB	NB	SB	NB	SB	NB	SB
Urban Other Principal Arterial	MD450 - Old Annapolis Rd.	0.2							I	
	Old Annapolis Rd. - US50	1.2			W				W	
	US50 - US301	1.3	I						I	

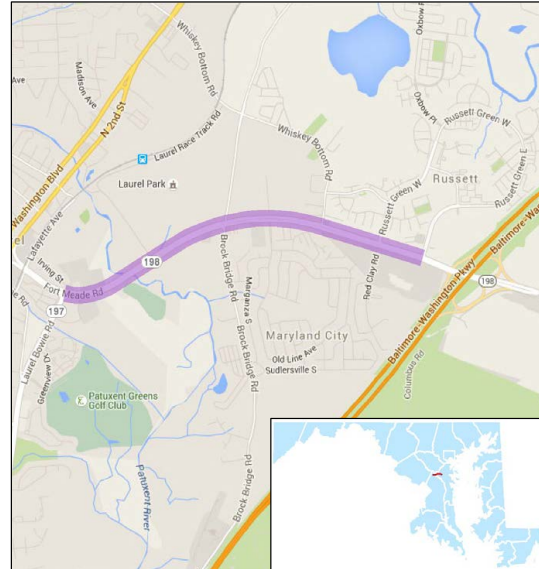
I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

PTI: planning time index (95th percentile travel time / freeflow travel time)

TTI: travel time index (50th percentile travel time / freeflow travel time)

# MD 198

<b>Limits:</b>	MD 197 to Russett Green	
<b>Corridor Length:</b>	2.2 miles	
<b>Speed Limit:</b>	40 MPH	
<b>Travel Lanes:</b>	3 Eastbound 3 Westbound	
<b>Signal Controlled Intersections:</b>	7	
<b>Grade Separated Interchanges:</b>	0	
<b>Major Cross Streets:</b>	MD 197, Brock Bridge Rd, Laurel Race Track Rd, Whiskey Bottom Rd / Old Annapolis Rd, Russett Green / Red Clay Rd	
<b>Routes and Ridership</b>	Routes	Avg. Daily Ridership
	N/A	N/A



<b>2015 AADT</b>	<b>Trucks</b>	<b>Peak Hour Traffic</b>
38,000 vpd	3%	8% - 8.5%

## Segment Operations

Intersection Operations		
Signalized Intersections*:	AM Peak Hour	PM Peak Hour
LOS D or Better	3	1
LOS E	0	2
LOS F	0	0

Level of Service	Eastbound AM / PM (Miles of Roadway)	Westbound AM / PM (Miles of Roadway)
LOS D or Better	2.2 / 1.2	2.2 / 0.0
LOS E	0.0 / 1.0	0.0 / 1.0
LOS F	0.0 / 0.0	0.0 / 1.2

## LOS 'E' Intersections

MD 198 at Russett Green / Corridor Marketplace (PM)  
MD 198 at MD 197 / Irving St (PM)

## LOS 'F' Intersections

## Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	
No data	

\* Available count data.

Functional Class	Roadway Segment West to East	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			EB	WB	EB	WB	EB	WB	EB	WB
Urban Other Principal Arterial	MD197 - Brock Bridge Rd.	1.0								
	Brock Bridge Rd. - Old Line Ave.	0.3								
	Brock Bridge Rd. - Old Annapolis Rd.	0.3								W
	Old Annapolis Rd. - Russett Green W.	0.3								
	Russett Green W. - Russett Green E.	0.3					I			

I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

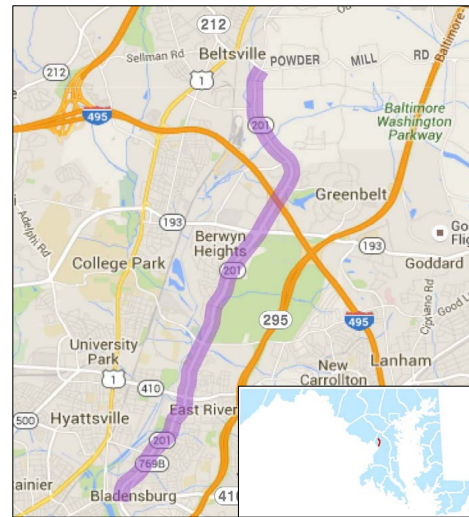
PTI: planning time index (95th percentile travel time / freeflow travel time)

TTI: travel time index (50th percentile travel time / freeflow travel time)

## B. REGIONALLY SIGNIFICANT ARTERIAL CORRIDORS

### MD 201

Limits:	MD 450 to MD 212	
Corridor Length:	7.4 miles	
Speed Limit:	40 - 50 MPH	
Travel Lanes:	(1 - 3) Northbound (1 - 3) Southbound	
Signal Controlled Intersections:	19	
Grade Separated Interchanges:	3	
Major Cross Streets:	MD 450, Decatur St, MD 769B, Riverdale Rd, MD 410, Paint Branch Pkwy, Good Luck Rd, MD 193, I-95 / I-495, Cherrywood Ln, Sunnyside Ave, Beaver Dam Rd, MD 212	
Routes and Ridership	Routes	Avg. Daily Ridership
	METRO 87	844
	METRO R11, R12	1,519
	The Bus 11	265
	The Bus 14	321
	The Bus 16	666



<b>2015 AADT</b>	<b>Trucks</b>	<b>Peak Hour Traffic</b>
25,000 - 49,000 vpd	6% - 13%	6.5% - 10.5%

#### Segment Operations

Signalized Intersections*	Intersection Operations	
	AM Peak Hour	PM Peak Hour
LOS D or Better	4	4
LOS E	0	0
LOS F	0	0

Level of Service	Segment Operations	
	Northbound AM / PM (Miles of Roadway)	Southbound AM / PM (Miles of Roadway)
LOS D or Better	5.9 / 1.4	4.9 / 2.1
LOS E	1.5 / 4.5	1.9 / 2.9
LOS F	0.0 / 1.5	0.6 / 2.4

LOS 'E' Intersections

LOS 'F' Intersections

#### Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	> 2.5
No data	

\* Available count data.

Functional Class	Roadway Segment North to South	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			NB	SB	NB	SB	NB	SB	NB	SB
Urban Minor Arterial	MD 212 - Sunnyside Ave.	0.6		W	W	W		W	W	
	Sunnyside Ave. - Cherrywood Ln.	0.9						W		
	Cherrywood Ln. - Ivy Ln.	0.3								
	Ivy Ln. - Crescent Rd.	0.2								
	Crescent Rd. - I-495/ I-95	0.5								
Urban Other Freeways and Expressways	I-495/I-95 - MD193	0.5		I				I		
	MD193 - Paint Branch Ave./Good Luck Rd.	1.6			W			W	W	
Urban Other Principal Arterial	Paint Branch Ave./Good Luck Rd. - Sarvis Ave.	0.2								
	Sarvis Ave. - River Rd.	0.2								
	River Rd. - Rittenhouse St.	0.3								
	Rittenhouse St. - MD410	0.2								
	MD410 - Riverdale Rd.	0.2								
	Riverdale Rd. - Jefferson St.	0.2								
	Jefferson St. - Edmonston Rd.	0.3								
	Edmonston Rd. - Decatur St.	0.4								
	Decatur St. - Buchanan St.	0.2								
	Buchanan St. - Upshur St./Tilden Rd.	0.3								
	Upshur St./Tilden Rd. - MD450	0.3								

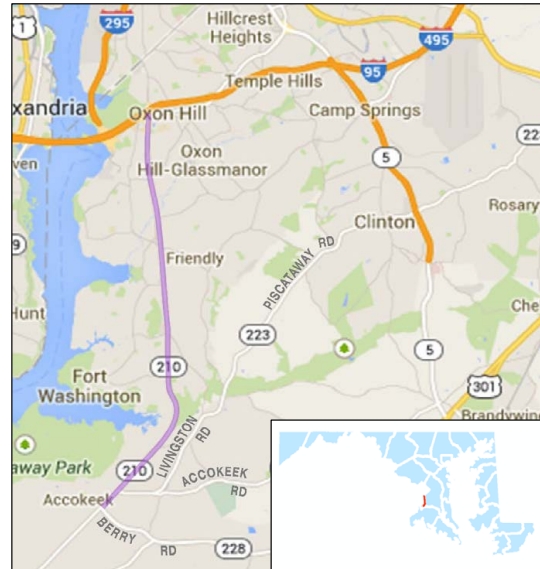
I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

PTI: planning time index (95th percentile travel time / freeflow travel time)

TTI: travel time index (50th percentile travel time / freeflow travel time)

# MD 210

<b>Limits:</b>	MD 228 to I-95			
<b>Corridor Length:</b>	10.3 miles			
<b>Speed Limit:</b>	40 - 45 MPH			
<b>Travel Lanes:</b>	(2 - 3) Northbound (2 - 4) Southbound			
<b>Signal Controlled Intersections:</b>	10			
<b>Grade Separated Interchanges:</b>	1			
<b>Major Cross Streets:</b>	I-95, Livingston Rd, MD 373, MD 228			
<b>Routes and Ridership</b>	METRO Routes	Avg. Daily Ridership	MTA Routes	Avg. Daily Ridership
	METRO D12, D13, D14	4,708	MTA 620	538
	METRO W15	273	MTA 630	302
	METRO W19	296	MTA 650	435



<b>2015 AADT</b>	<b>Trucks</b>	<b>Peak Hour Traffic</b>
28,000 - 74,000 vpd	3% - 7%	6.5% - 8%

## Segment Operations

Intersection Operations		
Signalized Intersections*:	AM Peak Hour	PM Peak Hour
LOS D or Better	7	6
LOS E	2	3
LOS F	4	4

Level of Service	Northbound AM / PM (Miles of Roadway)	Southbound AM / PM (Miles of Roadway)
	6.6 / 5.8	7.4 / 6.8
LOS D or Better	0.0 / 1.9	2.9 / 0.0
LOS E	3.7 / 2.6	0.0 / 3.5
LOS F		

## LOS 'E' Intersections

MD 210 at Farmington Rd (AM)  
MD 210 at Swan Creek/Livingston Rd (AM)  
MD 210 at MD 373/Livingston Rd (PM)  
MD 210 at Old Fort Rd (South) (PM)  
MD 210 at Fort Washington Rd (PM)

## LOS 'F' Intersections

MD 210 at MD 373/Livingston Rd (AM)  
MD 210 at Old Fort Rd (North) (PM)  
MD 210 at Livingston Rd/Palmer Rd (AM,PM)  
MD 210 at Livingston Rd/Kerby Hill Rd (AM,PM)  
MD 210 at Wilson Bridge Dr (AM,PM)

\* Available count data.

## Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	
No data	

Functional Class	Roadway Segment North to South	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			NB	SB	NB	SB	NB	SB	NB	SB
Urban Freeway Expressway	I-495/I-95 - Livingston Rd. /Kerby Hill Rd.	1.8								
	Livingston Rd. /Kerby Hill Rd. - Palmer Rd.	1.0								
	Palmer Rd. - Old Fort Rd.	0.7								
	Old Fort Rd. - Fort Washington Rd.	0.9								
	Fort Washington Rd. - Livingston Rd. /Swan Creek Rd.	1.1								
	Livingston Rd./Swan Creek Rd. - Washington Ln.	0.8								
	Washington Ln. - Farmington Rd.	2.1								
	Farmington Rd. - Livingston Rd. (MD-373)	1.4								
	Livingston Rd. (MD-373)- Berry Rd. (MD-228)	0.5								

I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

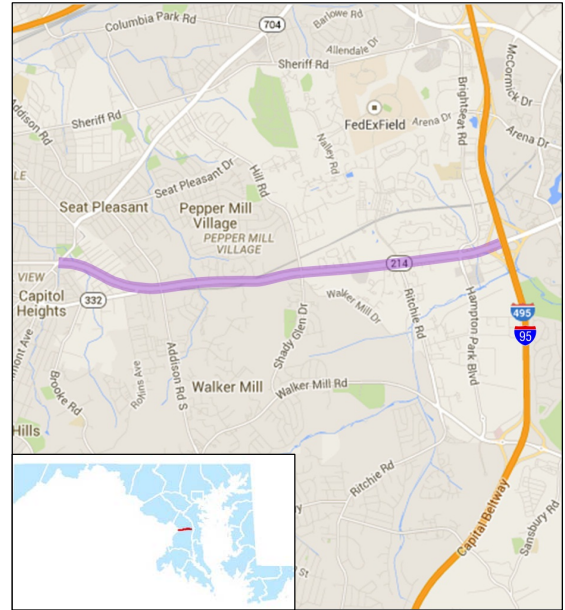
PTI: planning time index (95th percentile travel time / freeflow travel time)

TTI: travel time index (50th percentile travel time/ freeflow travel time)

## B. REGIONALLY SIGNIFICANT ARTERIAL CORRIDORS

### MD 214

<b>Limits:</b>	Washington DC Line to I-95			
<b>Corridor Length:</b>	3.7 miles			
<b>Speed Limit:</b>	30 - 40 MPH			
<b>Travel Lanes:</b>	(2 - 3) Eastbound 3 Westbound			
<b>Signal Controlled Intersections:</b>	9			
<b>Grade Separated Interchanges:</b>	1			
<b>Major Cross Streets:</b>	Addison Rd S, Shady Glen Dr / Hill Rd, Garret A Morgan Blvd / Ritchie Rd, Brightseat Rd / Hampton Park Blvd, I-95			
<b>Routes and Ridership</b>	METRO Routes	Avg. Daily Ridership	The Bus Routes	Avg. Daily Ridership
	A11, A12	2,954	22	223
	C21, C22, C26, C29	2,349	23	359
	C27	19	24	666
	F14	2,324	25	146
	J11, J12	1,148	26	311
	P12	5,951	Silver / Blue Line Routes	Avg. Daily Ridership
	V12	1,762	Morgan Blvd	4,353
		V14, V15	Addison Rd	6,638
			Capitol Heights	3,838



<b>2015 AADT</b>	<b>Trucks</b>	<b>Peak Hour Traffic</b>
22,000 - 53,000 vpd	3% - 5%	7.5% - 8.5%

NOTE: The Green Line ridership data represents boardings

#### Intersection Operations

Signalized Intersections*:	AM Peak Hour	PM Peak Hour
LOS D or Better	8	7
LOS E	0	1
LOS F	0	0

#### Segment Operations

	Eastbound AM / PM (Miles of Roadway)	Westbound AM / PM (Miles of Roadway)
Level of Service		
LOS D or Better	10.9 / 7.1	9.1 / 9.2
LOS E	0.0 / 3.8	1.8 / 1.7
LOS F	0.0 / 0.0	0.0 / 0.0

#### LOS 'E' Intersections

MD 214 at Ent to Kingdom Square Shopping Center (PM)

#### LOS 'F' Intersections

#### Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	
No data	

\* Available count data.

Functional Class	Roadway Segment East to West	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			EB	WB	EB	WB	EB	WB	EB	WB
Urban Other Principal Arterial	Southern Ave. - Addison Rd.	0.9						W		I
	Addison Rd. - Hill Rd./Shady Glen Dr.	1.1					I			
	Hill Rd./Shady Glen Dr. - Ritchie Rd.	0.8							W	
	Ritchie Rd. - I-495/I-95	0.9						I		

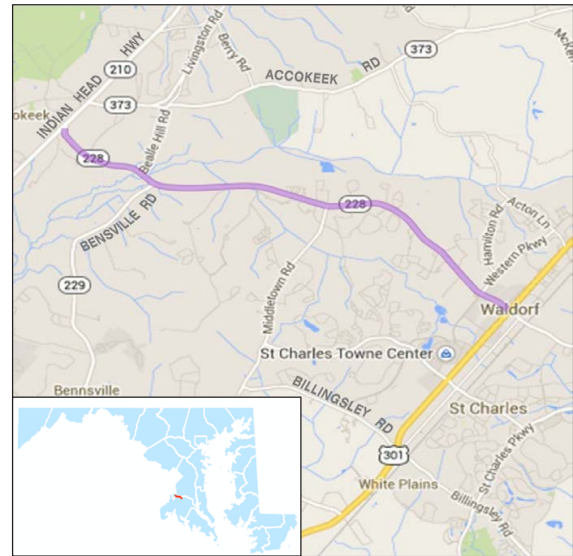
I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

PTI: planning time index (95th percentile travel time / freeflow travel time)

TTI: travel time index (50th percentile travel time / freeflow travel time)

# MD 228

Limits:	MD 210 to US 301	
Corridor Length:	6.8 miles	
Speed Limit:	35 - 50 MPH	
Travel Lanes:	(2 - 3) Eastbound 2 Westbound	
Signal Controlled Intersections:	11	
Grade Separated Interchanges:	0	
Major Cross Streets:	MD 210, MD 229, US 301	
Routes and Ridership	Routes	Avg. Daily Ridership
	N/A	N/A



2015 AADT	Trucks	Peak Hour Traffic
38,000 - 39,000 vpd	3% - 4%	8%

## Intersection Operations

Signalized Intersections*:	AM Peak Hour	PM Peak Hour
LOS D or Better	5	5
LOS E	1	0
LOS F	0	1

## Segment Operations

Level of Service	Eastbound AM / PM (Miles of Roadway)	Westbound AM / PM (Miles of Roadway)
LOS D or Better	6.8 / 2.3	6.8 / 3.8
LOS E	0.0 / 3.0	0.0 / 3.0
LOS F	0.0 / 1.5	0.0 / 0.0

## LOS 'E' Intersections

MD 228 at US 301 (AM)

## LOS 'F' Intersections

MD 228 at US 301 (PM)

## Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	> 2.5
No data	

\* Available count data.

Functional Class	Roadway Segment West to East	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			EB	WB	EB	WB	EB	WB	EB	WB
Urban Other Principal Arterial	Indian Head Hwy (MD-210) - Manning Rd	0.5								
	Manning Rd - Bensville Rd (MD-229)	1.0								
	Bensville Rd (MD-229) - Bunker Hill Rd.	1.3								
	Bunker Hill Rd. - Middletown Rd./Ironwood Dr.	1.0								
	Middletown Rd./Ironwood Dr. - Western Pkwy	2.6								
	Western Pkwy - Crain Highway (US-301)	0.4								

I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

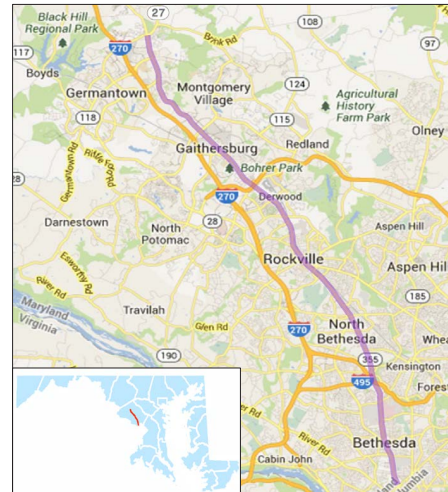
PTI: planning time index (95th percentile travel time / freeflow travel time)

TTI: travel time index (50th percentile travel time / freeflow travel time)

## B. REGIONALLY SIGNIFICANT ARTERIAL CORRIDORS

### MD 355

<b>Limits:</b>	Washington DC Line to MD 27			
<b>Corridor Length:</b>	19.7 miles			
<b>Speed Limit:</b>	25 - 45 MPH			
<b>Travel Lanes:</b>	(2 - 4) Northbound (2 - 4) Southbound			
<b>Signal Controlled Intersections:</b>	80			
<b>Grade Separated Interchanges:</b>	3			
<b>Major Cross Streets:</b>	MD 191, MD 410, MD 547, MD 187, Montrose Pkwy, MD 28, Shady Grove Rd, I-370, MD 117, MD 124, Middlebrook Rd, MD 118, MD 27			
<b>Routes and Ridership</b>	Ride On Routes	Avg. Daily Ridership	METRO Routes	Avg. Daily Ridership
			J1, J2, J3	6,347
			J5	371
	5, 30, 46, 55, 59, 67, 75, 81	4,802	Q1, Q2, Q5	8,566
			Red Line Routes	Avg. Daily Ridership
			Shady Grove	24,464
			Rockville	8,890
			Twinbrook	8,548
			White Flint	7,395
			Grosvenor	10,636
			Medical Center	11,368
			Bethesda	20,947



<b>2015 AADT</b>	<b>Trucks</b>	<b>Peak Hour Traffic</b>
30,000 - 63,000 vpd	2% - 6%	7% - 9%

NOTE: The Red Line ridership data represents boardings

#### Intersection Operations

Signalized Intersections*	AM Peak Hour	PM Peak Hour
LOS D or Better	60	59
LOS E	2	4
LOS F	3	2

#### Segment Operations

Level of Service	Northbound AM / PM (Miles of Roadway)	Southbound AM / PM (Miles of Roadway)
LOS D or Better	10.0 / 3.0	11.0 / 4.1
LOS E	6.4 / 9.5	4.7 / 5.6
LOS F	3.3 / 7.2	4.0 / 10.0

#### LOS 'E' Intersections

MD 355 at Manakee St (AM)  
MD 355 at MD 124 (AM)  
MD 355 at MD 187/Old Georgetown Rd (PM)  
MD 355 at E Middle Ln / Park Rd (PM)  
MD 355 at Shady Grove Rd (PM)  
MD 355 at Middlebrook Rd (PM)

#### LOS 'F' Intersections

MD 355 at E&W Gude Dr (AM)  
MD 355 at Shady Grove Rd (AM)  
MD 355 at MD 124 (PM)  
MD 355 at Cedar Ln (AM,PM)

#### Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	No data

\* Available count data.

Functional Class	Roadway Segment North to South	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			NB	SB	NB	SB	NB	SB	NB	SB
Urban Other Principal Arterial	Ridge Rd. (MD-27) - Germantown Rd. (MD-118)	0.9				W	I			W
	Germantown Rd. (MD-118) - Middlebrook Road	0.8					I			
	Middlebrook Road - Christopher Ave.	2.3								
	Christopher Ave. - Montgomery Village Ave (MD-124)	0.3					W	W	W	W
	Montgomery Village Ave. (MD-124) - Odendhal Ave.	0.4				W	W		W	W
	Odendhal Ave - Summit Ave.	1.0							I	
	Summit Ave. - Shady Grove Rd / I-370	1.2								I
	Shady Grove Rd / I-370 - Redland Blvd.	1.0		I		I				I
	Redland Blvd. - Gude Dr.	0.8						W		
	Gude Dr. - Washington St.	1.0							W	
	Washington St. - Veirs Mill Rd / Jefferson St (MD-28)	0.9								
	Veirs Mill Rd / Jefferson St (MD-28) - Wootton Pkwy (MD-911)	0.4				I		I		I
	Wootton Pkwy (MD-911) - Montrose Pkwy	2.1								
	Montrose Pkwy - Strathmore Ave (MD-547)	1.3								
	Strathmore Ave (MD-547) - Grosvenor Lane	0.9					W			
	Grosvenor Lane - I-495	0.3	I				I			
	I-495 - Cedar Lane	0.9						I		
	Cedar Lane - Jones Bridge Rd.	0.6			W					I
	Jones Bridge Rd - Montgomery Avenue (MD-410)	0.9					I		I	
	Montgomery Avenue (MD-410) - Bradley Blvd / Lane (MD 191)	0.5		I	I	W		I	I	W
	Bradley Blvd / Lane (MD 191) - Dorset Ave	0.7								
	Dorset Ave. - DC Line	0.5		I				I		I

I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

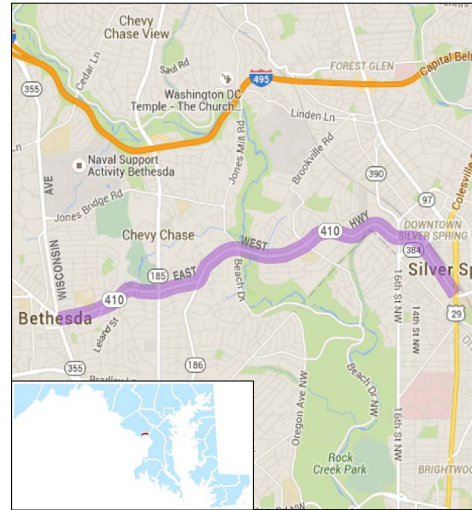
PTI: planning time index (95th percentile travel time / freeflow travel time)

TTI: travel time index (50th percentile travel time / freeflow travel time)

# 2016 MARYLAND STATE HIGHWAY MOBILITY REPORT

## MD 410

<b>Limits:</b>	MD 355 to US 29			
<b>Corridor Length:</b>	3.8 miles			
<b>Speed Limit:</b>	25 - 35 MPH			
<b>Travel Lanes:</b>	(1 - 2) Eastbound (1 - 2) Westbound			
<b>Signal Controlled Intersections:</b>	19			
<b>Grade Separated Interchanges:</b>	0			
<b>Major Cross Streets:</b>	MD 650, Montgomery Ave, MD 185, MD 186, Beach Dr / Jones Mill Dr, Grubb Rd, Sundale Dr / Washington Ave MD 390, MD 384, US 29			
<b>Routes and Ridership</b>	METRO Routes	Avg. Daily Ridership	Ride On Routes	Avg. Daily Ridership
	J1, J2, J3	6,347	1, 2, 11, 28	3,567
	J4	1,246		



<b>2015 AADT</b>	<b>Trucks</b>	<b>Peak Hour Traffic</b>
20,000 - 27,000 vpd	3% - 6%	8% - 9.5%

### Segment Operations

Intersection Operations		
Signalized Intersections*	AM Peak Hour	PM Peak Hour
LOS D or Better	6	6
LOS E	0	1
LOS F	1	0

Level of Service	Eastbound AM / PM (Miles of Roadway)	Westbound AM / PM (Miles of Roadway)
	3.8 / 1.2	0.0 / 2.7
LOS D or Better		
LOS E	0.0 / 2.1	1.7 / 1.1
LOS F	0.0 / 0.5	2.1 / 0.0

<b>LOS 'E' Intersections</b>
MD 185 at MD 410 (PM)

<b>LOS 'F' Intersections</b>
MD 185 at MD 410 (AM)

Color Key	
TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	
No data	

\* Available count data.

Functional Class	Roadway Segment West to East	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			EB	WB	EB	WB	EB	WB	EB	WB
Urban Other Principal Arterial	Montgomery Ave. - MD185	0.5								
	MD185 - Beach Dr.	0.9								
	Beach Dr. - Meadowbrook Ln.	0.2								
	Meadowbrook Ln. - Grubb Rd.	0.5								
	Grubb Rd. - Washington Ave.	0.4								
	Washington Ave. - Rosemary Hill Dr.	0.4								
	Rosemary Hill Dr. - MD390	0.2								
	MD390 - Colesville Rd.	0.2								
	Colesville Rd. - Shopping Center	0.1								
	Shopping Center - Blair Mill Rd.	0.2								
	Blair Mill Rd. - US29	0.2								

I = Improvement from 2015 W = worsened from 2015 (blank) = No significant change from 2015

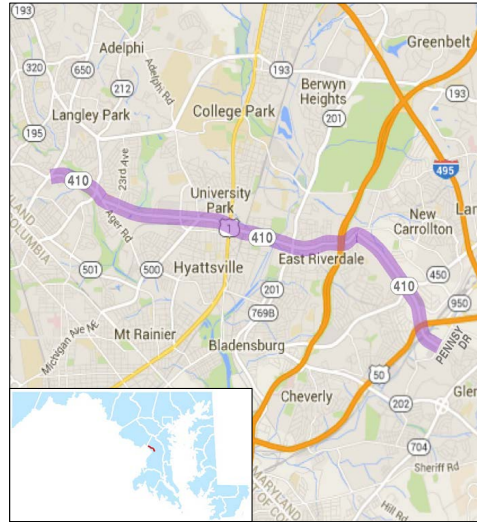
PTI: planning time index (95th percentile travel time / freeflow travel time)

TTI: travel time index (50th percentile travel time / freeflow travel time)

## B. REGIONALLY SIGNIFICANT ARTERIAL CORRIDORS

### MD 410

<b>Limits:</b>	MD 650 to Pennsy Drive	
<b>Corridor Length:</b>	7.7 miles	
<b>Speed Limit:</b>	30 - 45 MPH	
<b>Travel Lanes:</b>	(1 - 3) Eastbound (2 - 3) Westbound	
<b>Signal Controlled Intersections:</b>	20	
<b>Grade Separated Interchanges:</b>	2	
<b>Major Cross Streets:</b>	MD 650, MD 212, Ager Rd, Belcrest Rd, MD 500, US 1, MD 201, MD 295, Riverdale Rd, MD 450, US 50, Pennsy Dr	
<b>Routes and Ridership</b>	<b>Routes</b>	<b>Avg. Daily Ridership</b>
	METRO C4	11,593
	METRO F4	6,970
	METRO 86	4,292
	The Bus 13	263
	The Bus 14	295
		<b>2015 AADT</b>
		22,000 - 49,000 vpd
		<b>Trucks</b>
		3% - 4%
		<b>Peak Hour Traffic</b>
		6.5% - 8.5%



#### Segment Operations

Intersection Operations			Segment Operations		
Signalized Intersections*:	AM Peak Hour	PM Peak Hour	Level of Service	Eastbound AM / PM (Miles of Roadway)	Westbound AM / PM (Miles of Roadway)
LOS D or Better	11	7	LOS D or Better	4.6 / 0.3	1.7 / 0.4
LOS E	0	2	LOS E	2.1 / 3.3	3.9 / 7.3
LOS F	0	2	LOS F	1.0 / 4.1	2.1 / 0.0

#### LOS 'E' Intersections

MD 410 at Riverdale Rd (PM)  
MD 410 at US 50 EB Ramps 3&5 (inc. Ramps 4&6) (PM)

#### LOS 'F' Intersections

MD 410 at MD 212 (PM)  
MD 410 at MD 450 (PM)

#### Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	No data

\* Available count data.

Functional Class	Roadway Segment West to East	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			EB	WB	EB	WB	EB	WB	EB	WB
Urban Other Principal Arterial	MD650 - MD212	0.9								
	MD212 - Ager Rd.	0.2		I				I		
	Ager Rd. - 23rd Ave.	0.3								
	23rd Ave. - Toledo Terrace	0.5								
	Toledo Terrace - Editors Park Dr.	0.1								I
	Editors Park Dr. - Pr. George's Plaza	0.1								
	Pr. George's Plaza - Belcrest Rd.	0.3								
	Belcrest Rd. - MD500/Adelphi Rd.	0.4		I				I		
	MD500/Adelphi Rd. - US1/Baltimore Ave.	0.5						I	W	W
	US1/Baltimore Ave. - Taylord Rd.	0.5								
	Taylord Rd. - Kenilworth Ave./MD201	0.5								
	Kenilworth Ave./MD201 - Mustang Dr.	0.5								
	Mustang Dr. - 64th Ave.	0.2				W				
	64th Ave. - Baltimore-Washington Pkwy.	0.1								
	Baltimore-Washington Pkwy.-Veterans Pkwy.	0.3							W	
	Veterans Pkwy. - Annapolis Rd./MD450	1.1								
	Annapolis Rd./MD450 - Ellin Rd.	0.5								
	Ellin Rd. - US50/John Hanson Hwy.	0.4							W	W
	US50/John Hanson Hwy. - Pennsy Dr.	0.3							W	W

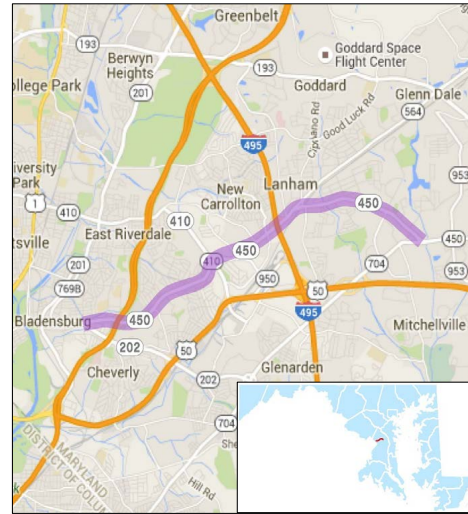
I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

PTI: planning time index (95th percentile travel time / freeflow travel time)

TTI: travel time index (50th percentile travel time / freeflow travel time)

## MD 450

<b>Limits:</b>	MD 202 to MD 704	
<b>Corridor Length:</b>	6.3 miles	
<b>Speed Limit:</b>	35 - 40 MPH	
<b>Travel Lanes:</b>	(2 - 4) Eastbound (2 - 4) Westbound	
<b>Signal Controlled Intersections:</b>	22	
<b>Grade Separated Interchanges:</b>	2	
<b>Major Cross Streets:</b>	MD 202, MD 295, Ardwick Ardmore Rd / Surrey Ln MD 410, Riverdale Rd, 85th Ave, I-95 / I-495, MD 564, Whitfield Chapel Rd, Forbes Blvd, MD 704	
<b>Routes and Ridership</b>	Routes	Avg. Daily Ridership
	METRO B24	937
	METRO B27	238
	METRO F4	6,970
	METRO F13	700
	METRO T18	4,429
	METRO G12, G13, G14, G16	2,910
	The Bus 16	666



<b>2015 AADT</b>	<b>Trucks</b>	<b>Peak Hour Traffic</b>
26,000 - 65,000 vpd	3% - 5%	7.5% - 8%

### Segment Operations

Intersection Operations		
Signalized Intersections*:	AM Peak Hour	PM Peak Hour
LOS D or Better	12	13
LOS E	1	0
LOS F	0	1

Level of Service	Eastbound AM / PM (Miles of Roadway)	Westbound AM / PM (Miles of Roadway)
LOS D or Better	6.3 / 4.6	6.3 / 4.6
LOS E	0.0 / 1.1	0.0 / 1.7
LOS F	0.0 / 0.6	0.0 / 0.0

### LOS 'E' Intersections

MD 450 at MD 410 (AM)

### LOS 'F' Intersections

MD 450 at MD 410 (PM)

### Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	> 2.5
No data	

\* Available count data.

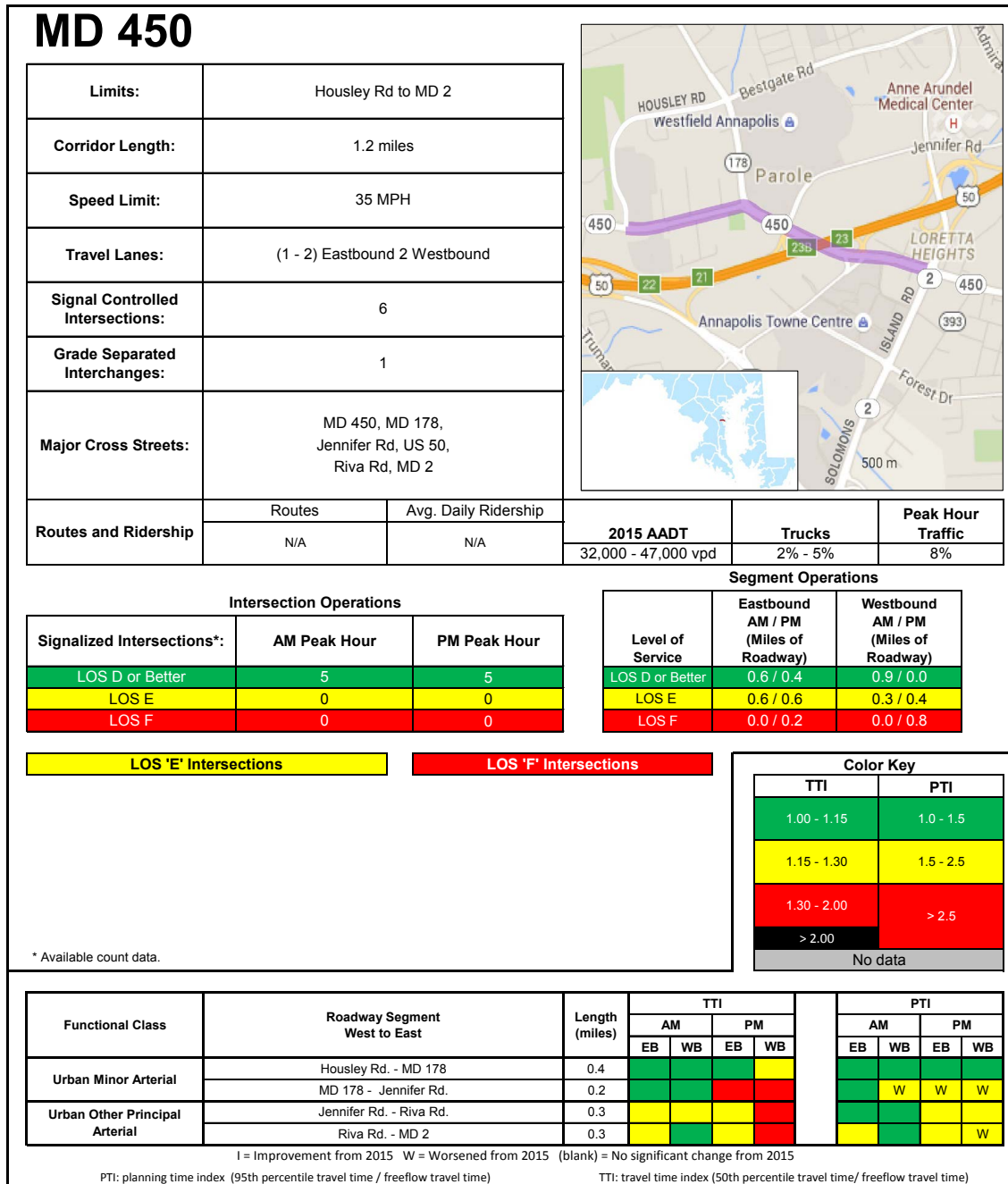
Functional Class	Roadway Segment West to East	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			EB	WB	EB	WB	EB	WB	EB	WB
Urban Minor Arterial	MD202 - 56th Ave.	0.2								
	56th Ave. - 57th Ave.	0.2				I				
	57th Ave. - MD295 (Balt/Wash Pkwy)	0.4					I	W		I
	MD295 - 65th Ave.	0.2								
	65th Ave. - Cooper Ln.	0.3								
	Cooper Ln. - 68th Ave.	0.2				I				
	68th Ave. - 71st Ave.	0.4								
	71st Ave. - Ardwick-Ardmore Rd.	0.3								
	Ardwick-Ardmore Rd. - Gallatin Rd.	0.2								
	Gallatin Rd. - MD410 (Veterans Pkwy)	0.1								
	MD410 (Veterans Pkwy) - Harkins Rd./Finns Ln.	0.4								
	Harkins Rd./Finns Ln. - Riverdale Rd.	0.4								
	Riverdale Rd. - 85th Ave.	0.2								
	85th Ave. - I-495	0.1								
	I-495 - Princess Garden Pkwy	0.3								
	Princess Garden Pkwy - Whitfield Chapel Rd.	0.4								
	Whitfield Chapel Rd. - Carter Ave.	0.6								
	Carter Ave. - Forbes Blvd.	0.7								
	Forbes Blvd. - MD 704	0.7								

I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

PTI: planning time index (95th percentile travel time / freeflow travel time)

TTI: travel time index (50th percentile travel time / freeflow travel time)

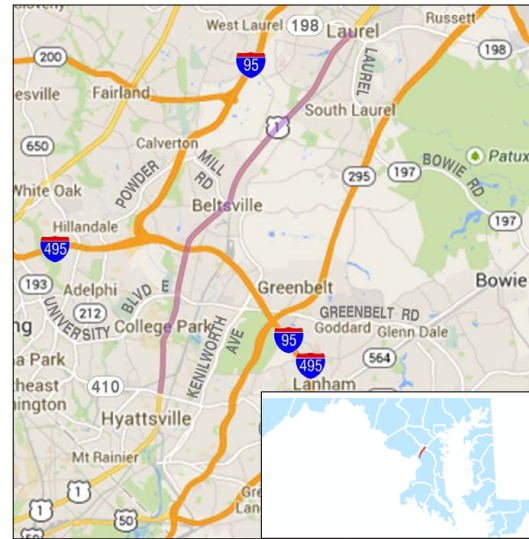
## B. REGIONALLY SIGNIFICANT ARTERIAL CORRIDORS



# 2016 MARYLAND STATE HIGHWAY MOBILITY REPORT

## US 1

<b>Limits:</b>	MD 410 to MD 198	
<b>Corridor Length:</b>	10.7 miles	
<b>Speed Limit:</b>	35 - 50 MPH	
<b>Travel Lanes:</b>	(2 - 4) Northbound (2 - 4) Southbound	
<b>Signal Controlled Intersections:</b>	40	
<b>Grade Separated Interchanges:</b>	3	
<b>Major Cross Streets:</b>	MD 410, MD 193, I-95, Rhode Island Ave, MD 212, Muirkirk Rd, Contee Rd, Cherry Lane, MD 198	
<b>Routes and Ridership</b>	<b>Routes</b>	<b>Avg. Daily Ridership</b>
	Green Line Greenbelt	12,079
	Green Line College Park	8,504
	METRO 81, 83, 86	4,292
	METRO 87, 88	844
	METRO 89, 89M	826
	The Bus Route 17	357



<b>2015 AADT</b>	<b>Trucks</b>	<b>Peak Hour Traffic</b>
19,000 - 45,000 vpd	3% - 6%	6.5% - 8%

NOTE: The Green Line ridership data represents boardings

### Intersection Operations

Signalized Intersections*:	AM Peak Hour	PM Peak Hour
LOS D or Better	17	15
LOS E	0	1
LOS F	0	1

### Segment Operations

	Northbound AM / PM (Miles of Roadway)	Southbound AM / PM (Miles of Roadway)
Level of Service		
LOS D or Better	9.1 / 1.8	6.9 / 0.0
LOS E	1.0 / 3.6	3.8 / 5.9
LOS F	0.6 / 5.3	0.0 / 4.8

### LOS 'E' Intersections

US 1 (NB/L) at MD 198 (Talbot Ave) (PM)

### LOS 'F' Intersections

US 1 at Edgewood Rd (PM)

### Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	
No data	

\* Available count data.

Functional Class	Roadway Segment North to South	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			NB	SB	NB	SB	NB	SB	NB	SB
Urban Other Principal Arterial	Gorman Ave (MD-198) - Cherry Ln.	0.6	I							W
	Cherry Ln. - Cypress St.	0.7						I		
	Cypress St. - Contee Rd.	0.5								
	Contee Rd. - Muirkirk Rd.	1.3							W	
	Muirkirk Rd. - Ritz Way	0.4							W	
	Ritz Way - Powder Mill Rd. (MD-212)	1.8						W		
	Powder Mill Rd. (MD-212) - Rhode Island Ave.	0.6							W	W
	Rhode Island Ave. - I-495/I-95	1.0								
	I-495/I-95 - Cherry Hill Rd.	0.3							W	
	Cherry Hill Rd. - Greenbelt Rd./ Metzgerott Rd.	1.1								
	Greenbelt Rd./ Metzgerott Rd. - Campus Dr./ Painted Branch Pkwy	0.7		I		I	I			I
	Campus Dr./ Painted Branch Pkwy - Guilford Rd/Dr	0.8							I	
	Guilford Rd/Dr - East West Hwy (MD-410)	0.9								

I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

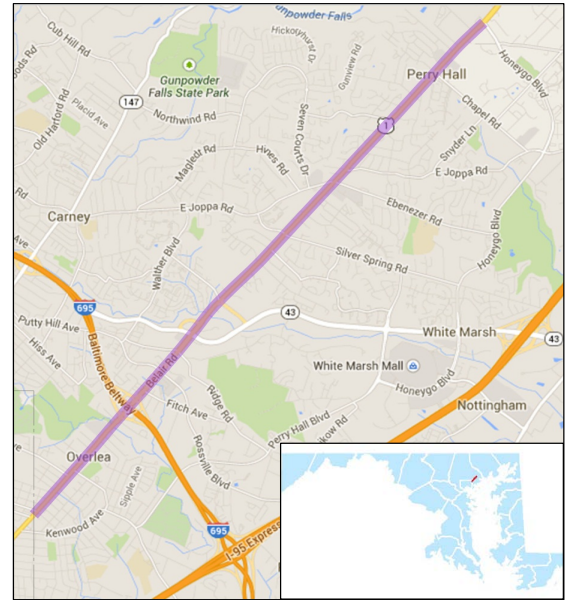
PTI: planning time index (95th percentile travel time / freeflow travel time)

TTI: travel time index (50th percentile travel time / freeflow travel time)

## B. REGIONALLY SIGNIFICANT ARTERIAL CORRIDORS

### US 1

Limits:	Baltimore City Line to Honeygo Blvd	
Corridor Length:	5.6 miles	
Speed Limit:	35 - 40 MPH	
Travel Lanes:	(2 - 3) Northbound (2 - 3) Southbound	
Signal Controlled Intersections:	23	
Grade Separated Interchanges:	2	
Major Cross Streets:	Taylor Ave, Fullerton Ave, I-695, Rossville Blvd, Putty Hill Ave / Ridge Rd, MD 43, Silver Spring Rd, E. Joppa Rd / Ebenezer Rd, Honeygo Blvd	
Routes and Ridership	Routes	Avg. Daily Ridership
	MTA 15	11,527
	MTA 47	947
	MTA 58	1,809



<b>2015 AADT</b>	<b>Trucks</b>	<b>Peak Hour Traffic</b>
28,000 - 48,000 vpd	2% - 3%	7% - 8.5%

#### Intersection Operations

Signalized Intersections*:	AM Peak Hour	PM Peak Hour
LOS D or Better	12	12
LOS E	0	0
LOS F	0	0

#### Segment Operations

Level of Service	Northbound AM / PM (Miles of Roadway)	Southbound AM / PM (Miles of Roadway)
LOS D or Better	5.2 / 0.0	2.4 / 2.6
LOS E	0.4 / 4.0	3.2 / 3.0
LOS F	0.0 / 1.6	0.0 / 0.0

#### LOS 'E' Intersections

#### LOS 'F' Intersections

#### Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	
No data	

\* Available count data.

Functional Class	Roadway Segment North to South	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			NB	SB	NB	SB	NB	SB	NB	SB
Urban Other Principal Arterial	Chapel Rd. - Joppa Rd.	1.3								
	Joppa Rd. - Silver Spring Rd.	0.6							W	
	Silver Spring Rd. - Whitmarsh Blvd. (MD-43)/Dunfield Rd.	1.2								
	Whitmarsh Blvd. (MD-43)/Dunfield Rd. - Rossville Blvd.	0.8		I				I		W
	Rossville Blvd. - I-695	0.4						I	W	W
	I-695 - Fullerton Ave.	0.7		I		I		I	W	
	Fullerton Ave. - Fleetwood Ave.	0.6							W	

I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

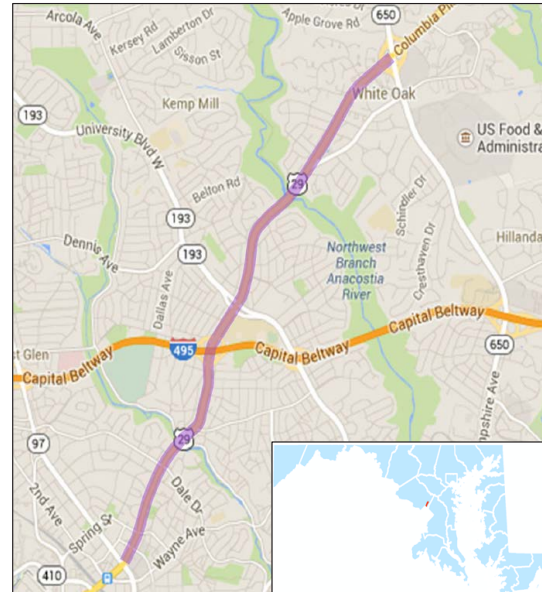
PTI: planning time index (95th percentile travel time / freeflow travel time)

TTI: travel time index (50th percentile travel time / freeflow travel time)

# 2016 MARYLAND STATE HIGHWAY MOBILITY REPORT

## US 29

<b>Limits:</b>	MD 97 to MD 650			
<b>Corridor Length:</b>	3.8 miles			
<b>Speed Limit:</b>	35 - 45 MPH			
<b>Travel Lanes:</b>	(3 - 4) Northbound (2 - 4) Southbound			
<b>Signal Controlled Intersections:</b>	13			
<b>Grade Separated Interchanges:</b>	2			
<b>Major Cross Streets:</b>	MD 97, Spring St / Cedar St, Dale Dr, Sligo Creek Pkwy / St Andrews Way, I-495, MD 193, Lockwood Dr, MD 650			
<b>Routes and Ridership</b>	Ride On Routes	Avg. Daily Ridership	METRO Routes	Avg. Daily Ridership
	8, 9, 13, 14, 21, 22	1,500	Z2	1,243
			Z6	2,620
			Z8	3,278
			Z9, Z29	753
			Z11, Z13	797
	MTA Routes		Avg. Daily Ridership	
	305		455	
	315		375	
	325		200	



<b>2015 AADT</b>	<b>Trucks</b>	<b>Peak Hour Traffic</b>
34,000 - 68,000 vpd	3% - 7%	7.5% - 8.5%

### Intersection Operations

Signalized Intersections*:	AM Peak Hour	PM Peak Hour
LOS D or Better	5	6
LOS E	4	3
LOS F	0	0

### Segment Operations

Level of Service	Northbound AM / PM (Miles of Roadway)	Southbound AM / PM (Miles of Roadway)
LOS D or Better	2.8 / 0.5	0.3 / 0.0
LOS E	0.0 / 2.0	1.5 / 2.8
LOS F	1.0 / 1.3	2.0 / 1.0

### LOS 'E' Intersections

US 29 at MD 193 (EB/L) (AM)  
 US 29 at Dale Dr (AM,PM)  
 US 29 at Southwood Dr (AM,PM)  
 US 29 at Lockwood Dr / Ent to Coice Center (AM,PM)

### LOS 'F' Intersections

### Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	> 2.5
No data	

\* Available count data.

Functional Class	Roadway Segment North to South	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			NB	SB	NB	SB	NB	SB	NB	SB
Urban Other Principal Arterial	New Hampshire Ave. (MD-650) - Lockwood Dr.	0.9		W				W		W
	Lockwood Dr. - University Blvd. (MD-193)	1.1			I	I				
	University Blvd. (MD-193) - I-495	0.3								
	I-495 - Franklin Ave.	0.5								
	Franklin Ave. - Dale Dr.	0.3	W		W	W	W		W	
	Dale Dr. - Cedar St./Spring St.	0.5			W			W		
	Cedar St./Spring St. - Georgia Ave. (MD-97)	0.2								

I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

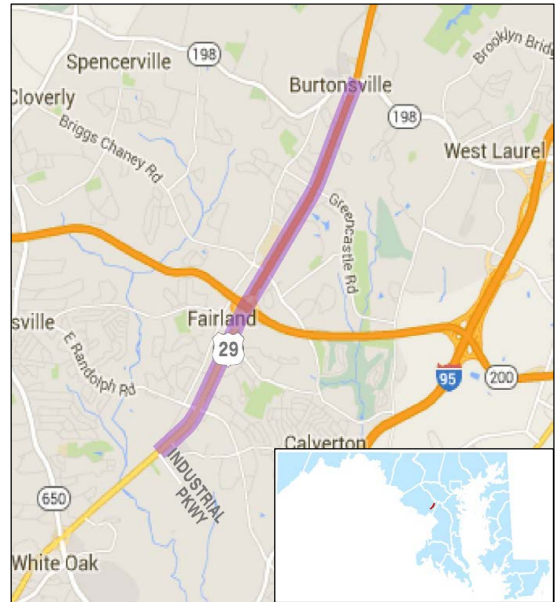
PTI: planning time index (95th percentile travel time / freeway travel time)

TTI: travel time index (50th percentile travel time / freeway travel time)

## B. REGIONALLY SIGNIFICANT ARTERIAL CORRIDORS

### US 29

Limits:	Industrial Pkwy to MD 198	
Corridor Length:	4.4 miles	
Speed Limit:	50 - 55 MPH	
Travel Lanes:	(2 - 4) Northbound (2 - 4) Southbound	
Signal Controlled Intersections:	6	
Grade Separated Interchanges:	4	
Major Cross Streets:	Industrial Parkway, Tech Rd E Randolph Rd / Cherry Hill Rd Musgrove Rd, Fairland Rd, MD 200, Briggs Chaney Rd, Blackburn Rd, MD 198	
Routes and Ridership	Routes	Avg. Daily Ridership
	Ride On Route 10	430
	METRO Z8	3,278
	METRO Z11	797
	METRO Z29	753



<b>2015 AADT</b>	<b>Trucks</b>	<b>Peak Hour Traffic</b>
60,000 - 67,000	3% - 5%	8.5% - 10.5%

#### Intersection Operations

Signalized Intersections*:	AM Peak Hour	PM Peak Hour
LOS D or Better	3	3
LOS E	0	1
LOS F	2	1

#### Segment Operations

Level of Service	Northbound AM / PM (Miles of Roadway)	Southbound AM / PM (Miles of Roadway)
LOS D or Better	3.0 / 0.0	2.4 / 1.2
LOS E	1.4 / 4.2	0.6 / 3.2
LOS F	0.0 / 0.2	1.4 / 0.0

#### LOS 'E' Intersections

US 29 at Blackburn Rd (PM)

#### LOS 'F' Intersections

US 29 at Blackburn Rd (AM)  
US 29 at Greencastle Rd (AM,PM)

#### Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	> 2.5
No data	No data

\* Available count data.

Functional Class	Roadway Segment North to South	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			NB	SB	NB	SB	NB	SB	NB	SB
Urban Freeway Expressway	MD198 - GreenCastle Rd.	1.2								
	GreenCastle Rd. - Fairland Rd.	1.8								
	Fairland Rd. - Musgrove Rd.	0.6			I					
	Musgrove Rd. - Tech Rd./old Columbia Pike	0.6			I					
	Tech Rd./old Columbia Pike - Industrial Pkwy.	0.2								

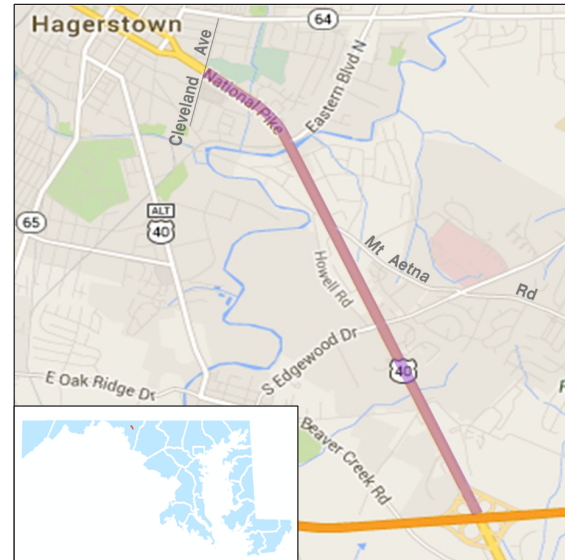
I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

PTI: planning time index (95th percentile travel time / freeflow travel time)

TTI: travel time index (50th percentile travel time / freeflow travel time)

# US 40

Limits:	I-70 to Cleveland Ave	
Corridor Length:	3.4 miles	
Speed Limit:	35 - 45 MPH	
Travel Lanes:	(2 - 3) Eastbound (2 - 3) Westbound	
Signal Controlled Intersections:	6	
Grade Separated Interchanges:	1	
Major Cross Streets:	I-70, Edgewood Dr, Mt. Aetna Rd, Eastern Blvd, Cleveland Ave	
Routes and Ridership	Routes	Avg. Daily Ridership
	N/A	N/A



2015 AADT	Trucks	Peak Hour Traffic
27,000 - 39,000 vpd	3% - 4%	7.5% - 8.5%

## Segment Operations

Intersection Operations		
Signalized Intersections*:	AM Peak Hour	PM Peak Hour
LOS D or Better	4	4
LOS E	0	0
LOS F	0	0

Level of Service	Eastbound AM / PM (Miles of Roadway)	Westbound AM / PM (Miles of Roadway)
LOS D or Better	3.4 / 1.3	2.7 / 0.0
LOS E	0.0 / 2.1	0.7 / 3.1
LOS F	0.0 / 0.0	0.0 / 0.3

LOS 'E' Intersections

LOS 'F' Intersections

## Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	
No data	

\* Available count data.

Functional Class	Roadway Segment West to East	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			EB	WB	EB	WB	EB	WB	EB	WB
Urban Other Principal Arterial	Cannon Ave (MD-64) - Cleveland Ave.	0.3								
	Cleveland Ave. - Eastern Blvd.	0.6								
	Eastern Blvd. - Mt. Aetna Rd./ Birch Knoll Rd.	0.5								
	Mt. Aetna Rd./ Birch Knoll Rd - Edgewood Dr.	0.7								
	Edgewood Dr. - I-70	1.3								

I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

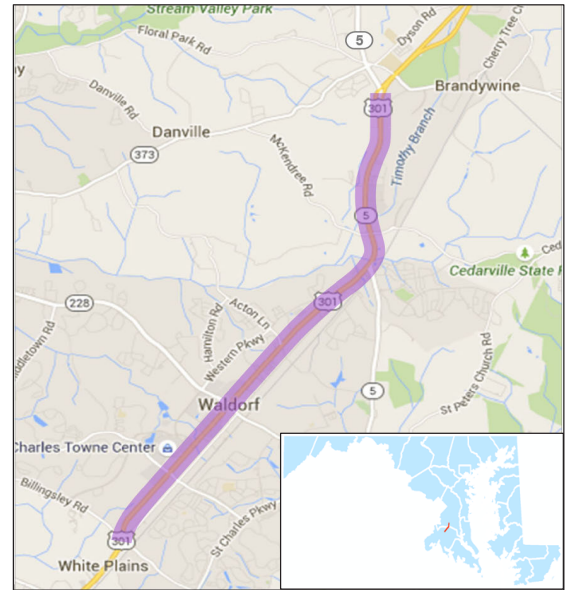
PTI: planning time index (95th percentile travel time / freeflow travel time)

TTI: travel time index (50th percentile travel time / freeflow travel time)

## B. REGIONALLY SIGNIFICANT ARTERIAL CORRIDORS

### US 301

<b>Limits:</b>	Billingsley Rd to MD 5	
<b>Corridor Length:</b>	7.8 miles	
<b>Speed Limit:</b>	45 - 55 MPH	
<b>Travel Lanes:</b>	(2 - 4) Northbound (2 - 4) Southbound	
<b>Signal Controlled Intersections:</b>	16	
<b>Grade Separated Interchanges:</b>	0	
<b>Major Cross Streets:</b>	Billingsley Rd, Smallwood Dr, MD 228, Acton Ln, MD 5, Cedarville Rd/McKendree Rd	
<b>Routes and Ridership</b>	Routes	Avg. Daily Ridership
	MTA 715	474
	MTA 725	191
	MTA 735	313



<b>2015 AADT</b>	<b>Trucks</b>	<b>Peak Hour Traffic</b>
38,000 - 88,000 vpd	6% - 8%	6.5% - 7.5%

#### Segment Operations

Intersection Operations		
Signalized Intersections*:	AM Peak Hour	PM Peak Hour
LOS D or Better	15	10
LOS E	1	2
LOS F	0	4

Level of Service	Northbound AM / PM (Miles of Roadway)	Southbound AM / PM (Miles of Roadway)
LOS D or Better	5.9 / 3.6	1.2 / 5.9
LOS E	0.0 / 2.5	6.6 / 0.0
LOS F	1.9 / 1.7	0.0 / 1.9

#### LOS 'E' Intersections

US 301 at MD 5BU / MD 228 (AM)  
US 301 at Chadds Ford Dr / Timothy Branch Dr (PM)  
US 301 at Smallwood Dr (PM)

#### LOS 'F' Intersections

US 301 at Clymer Dr / Matapeake Business Dr (PM)  
US 301 at Cedarville / McKendree Rd (PM)  
US 301 at MD 5BU / MD 228 (PM)  
US 301 at Harbour Way / Governor Bridge Rd (PM)

#### Color Key

TTI	PTI
1.00 - 1.15	1.0 - 1.5
1.15 - 1.30	1.5 - 2.5
1.30 - 2.00	> 2.5
> 2.00	
No data	

\* Available count data.

Functional Class	Roadway Segment North to South	Length (miles)	TTI				PTI			
			AM		PM		AM		PM	
			NB	SB	NB	SB	NB	SB	NB	SB
Rural Other Principal Arterial	Branch Ave. (MD-5) - Timothy Branch/Chadds Ford Dr.	1.1								
	Timothy Branch/Chadds Ford Dr - Cedarville Rd/McKendree Rd	0.8								
	Cedarville Rd/McKendree Rd - Mattawoman Beantown Rd (MD-5)	0.5								
Urban Other Principal Arterial	Mattawoman Beantown Rd. (MD-5) - Sub-Station Rd.	0.4								
	Sub-Station Rd. - Acton Ln.	1.3								
	Acton Ln. - Berry Rd. (MD-228)/Leonardtown Rd. (Bus-5)	1.2								
	Berry Rd. (MD-228)/Leonardtown Rd. (Bus-5) - St Patricks Dr.	0.7								
	St Patricks Dr. - Smallwood Dr.	0.6								
	Smallwood Dr. - Billingsley Rd.	1.2								

I = Improvement from 2015 W = Worsened from 2015 (blank) = No significant change from 2015

PTI: planning time index (95th percentile travel time / freeflow travel time)

TTI: travel time index (50th percentile travel time / freeflow travel time)

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## C. 2015 Capital Project Fact Sheets



*Md 144 @ MD 910C*

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**BEFORE**



**AFTER**

## US 15 Northbound Between Motter Avenue and MD 26

### LOCATION: FREDERICK, FREDERICK COUNTY

This project provides a 2,200' auxiliary lane along US 15 northbound (Frederick Highway) between Motter Avenue and MD 26 (Liberty Road) in Frederick County. Previously, separate acceleration and deceleration lanes existed along US 15 northbound. The improvement provides additional capacity to the roadway and enhances safety by increasing the acceleration and deceleration distances.

### Freeway Background

- The multilane highway LOS was C during the AM peak hour and E for the PM peak hour.
- There were a total of 108 crashes during the 5 year study period (45 injury and 63 property damage).

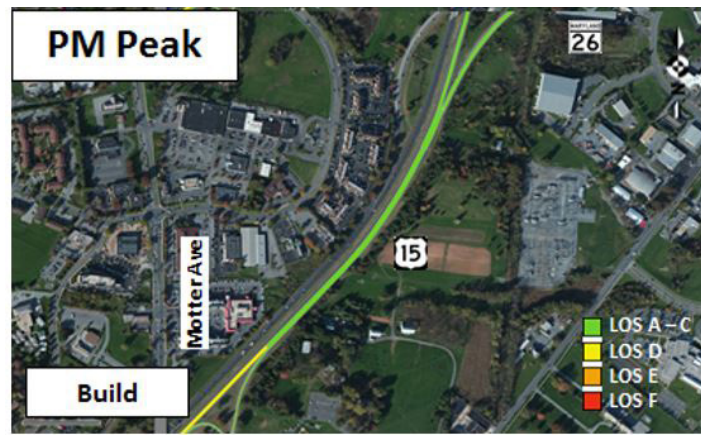
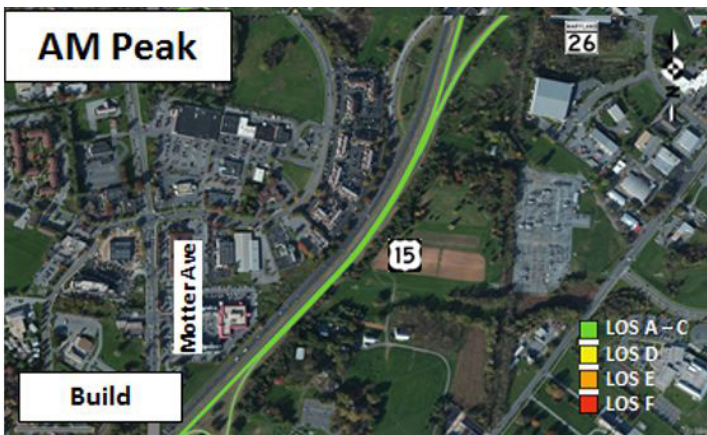
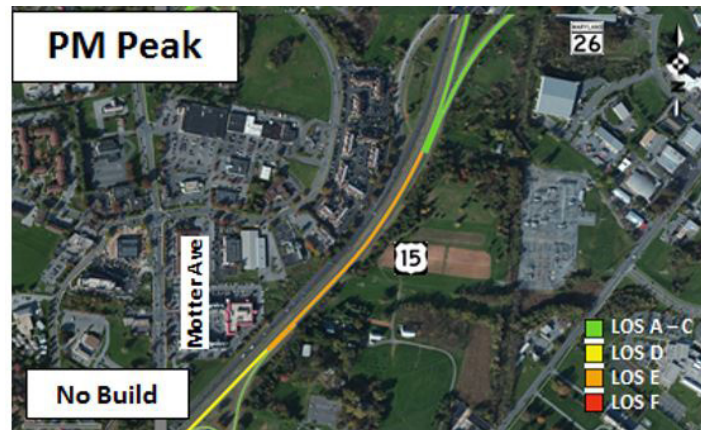
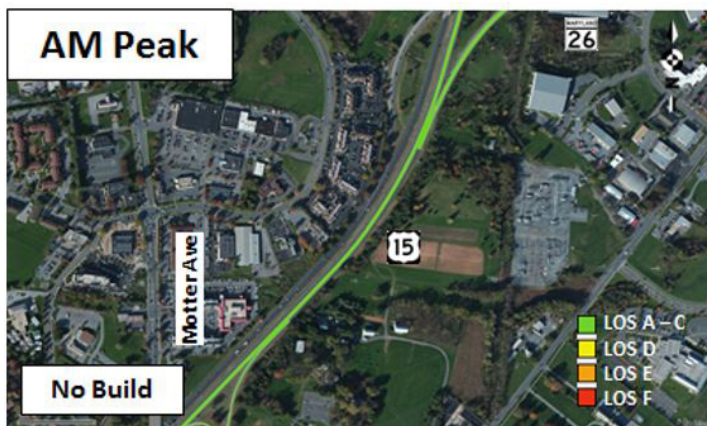
### Project Scope

- Provided a 2,200' auxiliary lane along US 15 northbound between Motter Avenue and MD 26.

### Benefits

- The additional capacity along US 15 northbound between Motter Ave and MD 26 results in improved level of service from C/E during the AM/PM, respectively to B/C.
- The reduction in delay between the “Before” and “After” is expected to be 10% during the PM peak hour.
- The segment of roadway has a crash rate greater than the statewide average. The geometric enhancements reduce the number and increase length of merging and diverging maneuvers, thus increasing safety.
- The projected reduction in crash rates, with the installation of auxiliary lane, is 23%.

Average Annual Savings (Thousands)			Construction Cost Estimate (Millions)	Benefit/Cost (20 Years)
Reduction in Delay	Reduction in Fuel Consumption	Safety		
\$481	\$9	\$217	\$3	5.2



**BEFORE****AFTER**

## MD 20 at MD 291

### LOCATION: CHESTERTOWN, KENT COUNTY

This roundabout is projected to significantly improve safety of all motorists traveling through the intersection. SHA chose a roundabout for this location in lieu of a signalized intersection since a roundabout meets the operational goals of the intersection and has a lower lifetime maintenance cost and a lower crash rate. The roundabout also improved traffic operations.

#### Intersection Background

- All-way stop controlled intersection operated at LOS was E/C for the AM and PM peak hours, respectively.
- There were six crashes recorded during the 5-year study period (3 injury, 3 property damage).

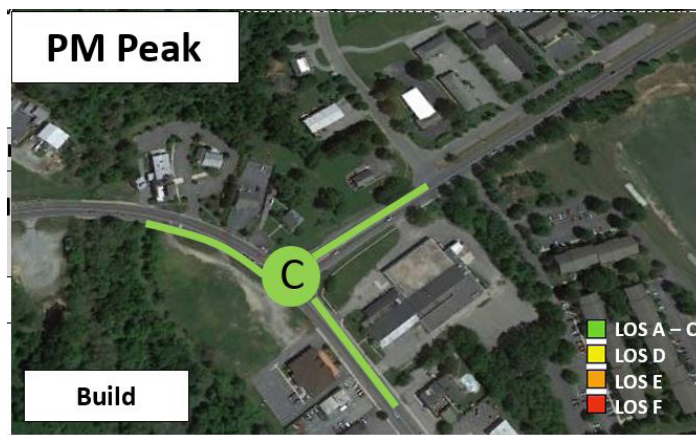
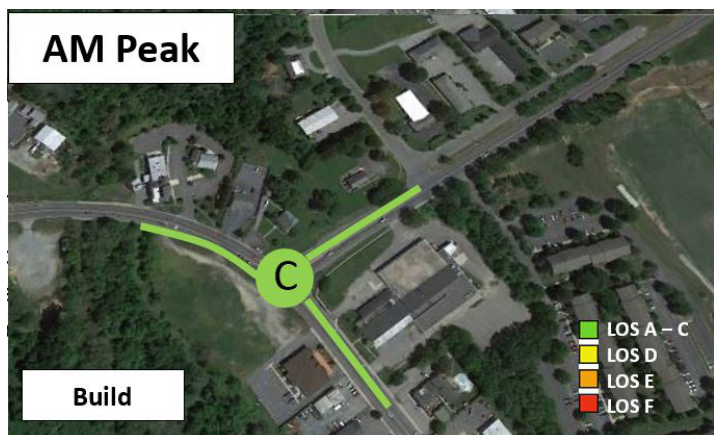
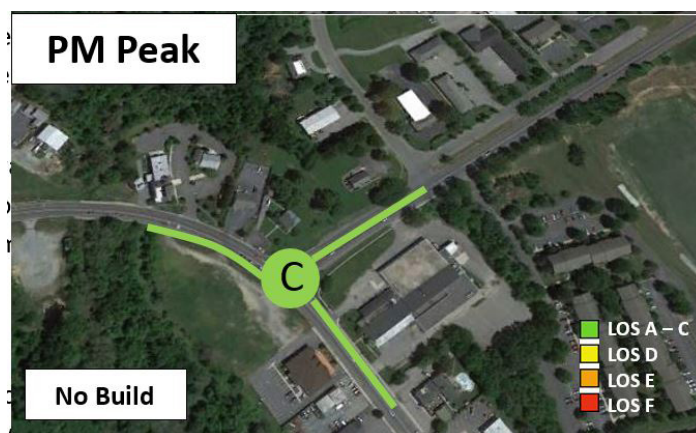
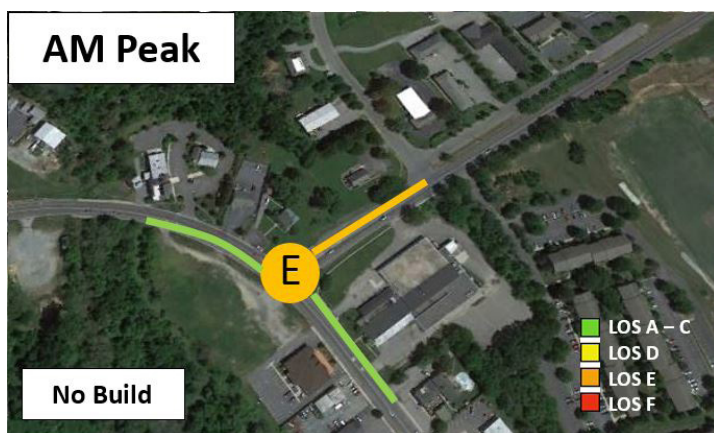
#### Project Scope

- Convert existing all-way stop controlled unsignalized intersection to a three-legged roundabout.
- Resurface MD 291 from Talbot Boulevard to the MD 20 intersection (1,050 feet).
- Resurface MD 20 from south of MD 514 to 500 feet south of the roundabout (500').

#### Benefits

- The total intersection delay improved for the PM peak hour from 2.3 hours to 0.6 hours.
- The AM peak hour LOS improved from LOS E to C.
- Roundabouts have lower crash severities compared to conventional intersections.

Average Annual Savings (Thousands)			Construction Cost Estimate (Millions)	Benefit/Cost (20 Years)
Reduction in Delay	Reduction in Fuel Consumption	Safety		
\$28	\$1	\$27	\$1	1.1



**BEFORE****AFTER**

## MD 185 at Jones Bridge Road

**LOCATION: CHEVY CHASE, MONTGOMERY COUNTY**

The purpose of this project was to increase capacity along this corridor and to accommodate the projected traffic volumes due to BRAC. The southbound channelized right turn was removed and replaced with a continuous right turn lane from I-495 and an additional through lane was constructed along MD 185 northbound.

### Intersection Background

- There were 63 crashes during the five-year study period (17 injury, 46 property damage).
- Prior to the improvement, the LOS was F/F for the AM and PM peak hours, respectively.

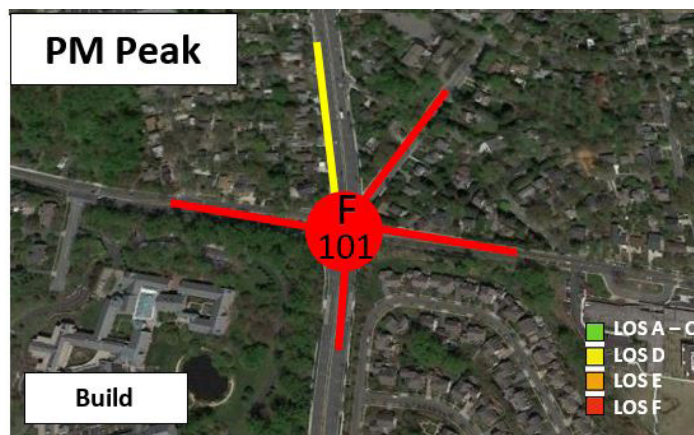
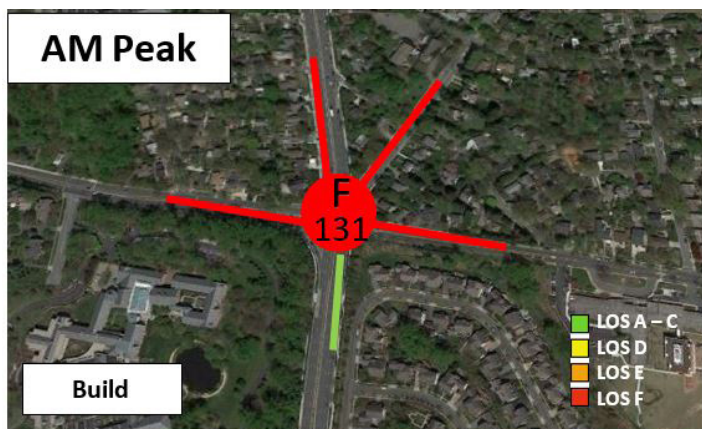
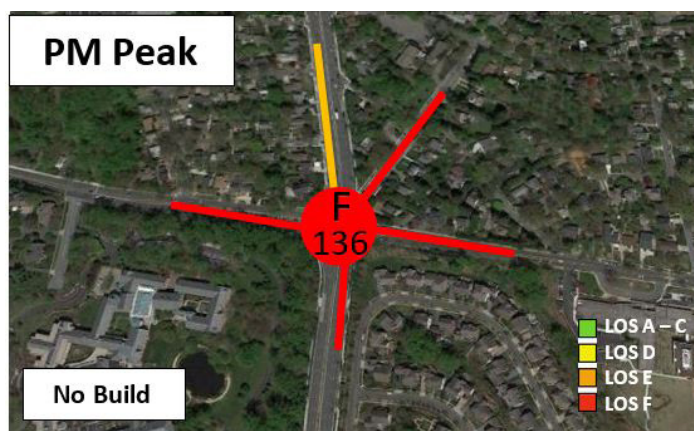
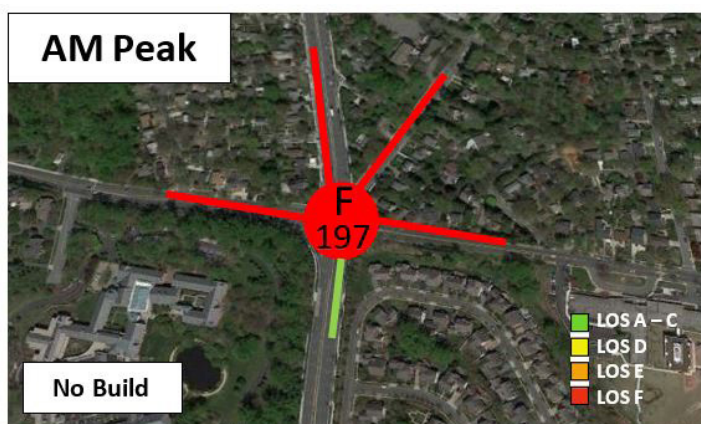
### Project Scope

- Remove channelized right turn lane and replace with a separate continuous right turn lane on MD 185 southbound from the I-495 ramp.
- Add through lane on MD 185 northbound.

### Benefits

- The total delay improved from 197 seconds to 131 during the AM peak hour (33% improvement).
- The total delay improved from 136 seconds to 101 seconds during the PM peak hour (26% improvement).
- The v/c ratio improved from 1.3 to 1.15 during the PM peak hour.
- The 95% southbound through queue improved by 83% during the AM peak hour.
- The 95% northbound queue improved by 76% during the PM peak hour.

Average Annual Savings (Thousands)			Construction Cost Estimate (Millions)	Benefit/Cost (20 Years)
Reduction in Delay	Reduction in Fuel Consumption	Safety		
\$1,930	\$44	\$30	\$4	8.8



Note: Number in circle represents delay per vehicle.

**BEFORE****AFTER**

## MD 586 (Veirs Mills Road) at Ferrara Avenue

**LOCATION: SILVER SPRING, MONTGOMERY COUNTY**

This intersection improvement project was constructed to improve safety by changing the MD 586 westbound left turn movement from permissive/protected phasing to protected phasing only. The change in phasing increases the intersection delays and queues with the benefit of improving safety. As part of this project, the MD 586 westbound left turn storage bay was lengthened.

### Intersection Background

- Prior to the implementation of the improvement, the LOS was A in the AM peak hour and B in the PM peak hour.
- There were 23 crashes during the 5-year study period (1 fatality, 10 injury, 12 property damage, 2 pedestrian).
- Eight (8) of the 23 crashes (35%) involved vehicles on MD 586 making a left turn.
- One pedestrian crash involved motorist traveling eastbound on MD 586 making a U-turn; the second pedestrian crash involved a motorist making a left turn from westbound MD 586.

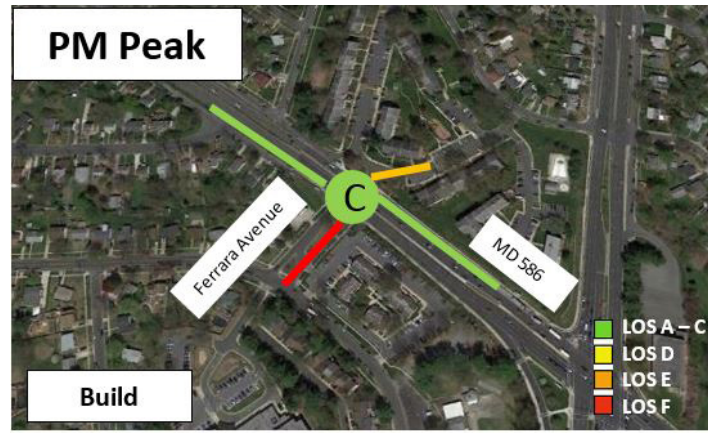
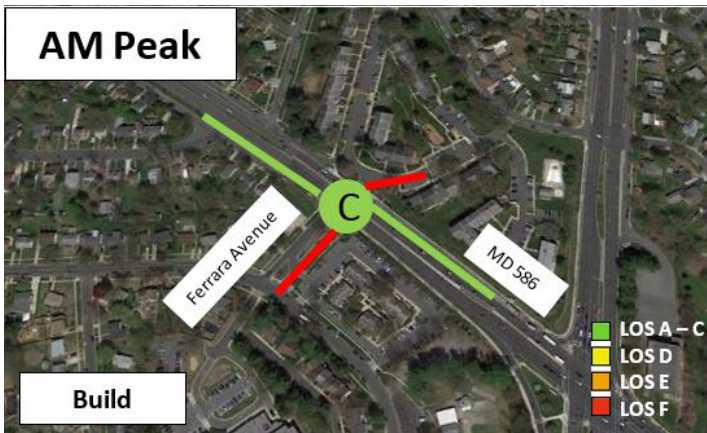
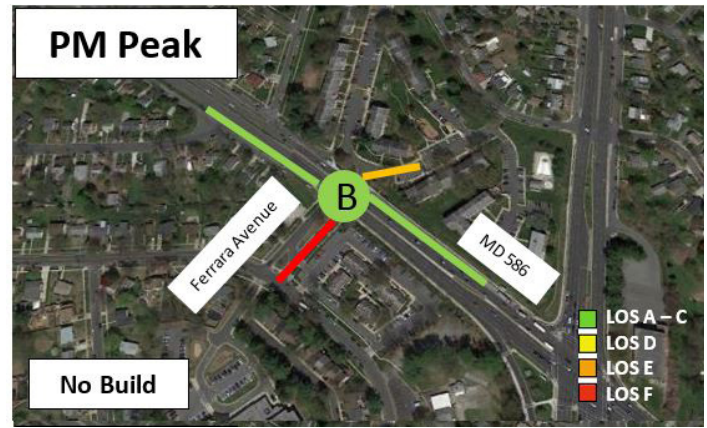
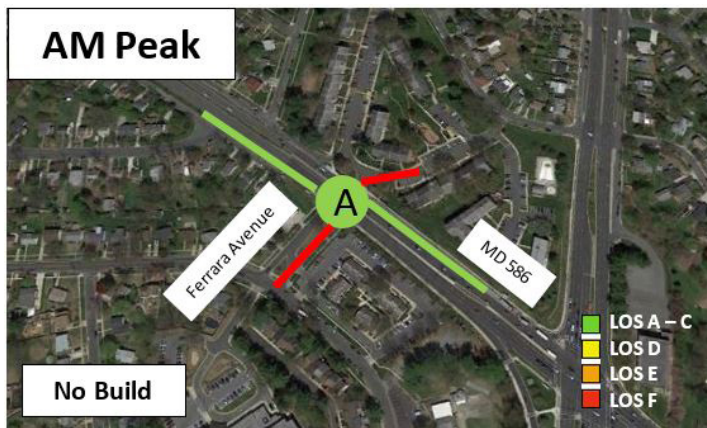
### Project Scope

- Lengthened westbound left turn lane on MD 586.
- Replaced permitted/protected phasing with protected only left turn phasing on MD 586 westbound.

### Benefits

- The protected only left turn phase should decrease the number of crashes at the intersection.
- The additional storage area will improve the flow along MD 586 and may decrease the number of rear end crashes.

Average Annual Savings (Thousands)			Construction Cost Estimate (Millions)	Benefit/Cost (20 Years)
Reduction in Delay	Reduction in Fuel Consumption	Safety		
\$ -156	\$ -4	\$291	\$1	7.3



**BEFORE****AFTER**

## MD 4 from MD 235 to Patuxent Boulevard

**LOCATION: CALIFORNIA, ST. MARY'S COUNTY**

The purpose of this project was to improve capacity at the MD 235/MD 4 intersection by creating downstream gaps along MD 4. Previously, traffic queued from the Thomas Johnson Bridge through the MD 235/MD 4 intersection, resulting in phase failures and intersection blockage due to the lack of downstream gaps. The additional capacity allowed for better queue management and created gaps for turning motorists from the intersection.

### Intersection Background

- The intersection currently operates at LOS F during the morning and evening peak hours.
- There were 74 crashes during the 5 year study period at the MD 235/MD 4 intersection (31 injury, 43 property damage).

### Project Scope

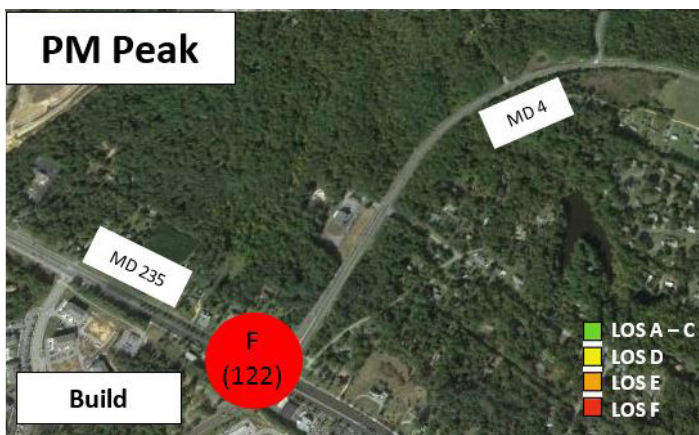
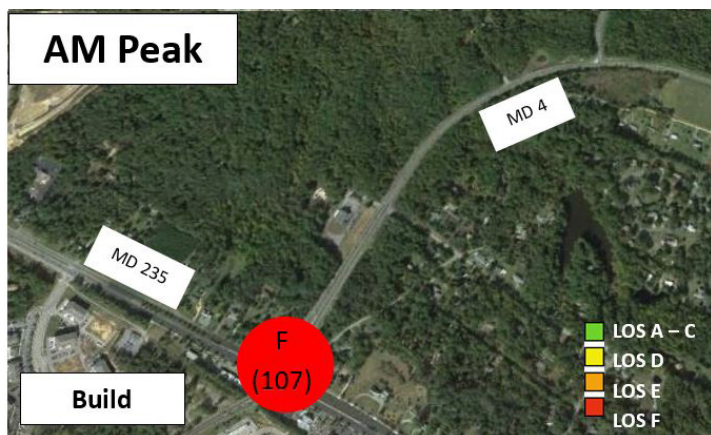
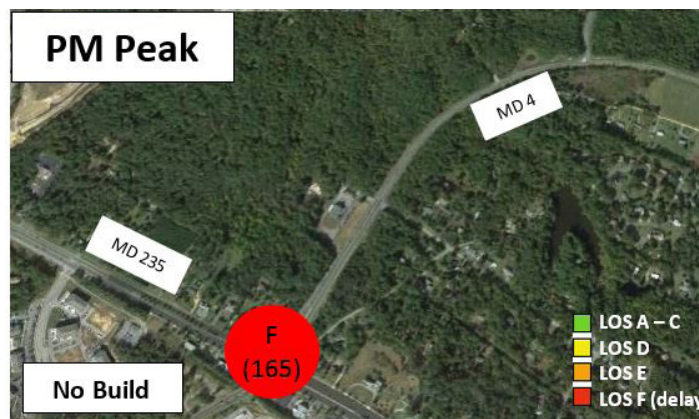
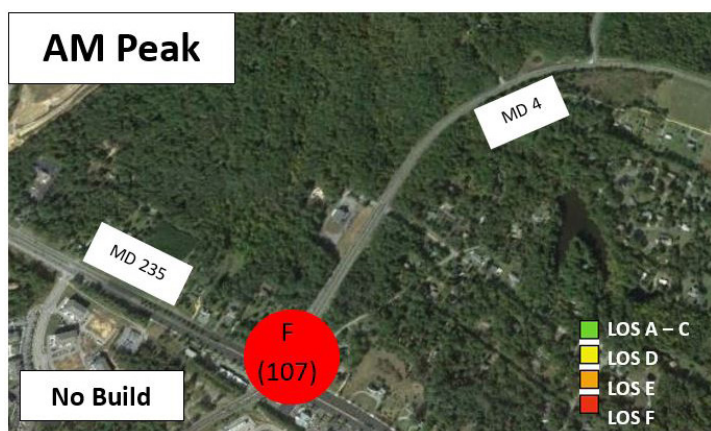
- Extend acceleration lane on MD 4 north from MD 235 to Oak Drive.
- Widen to two lanes on MD 4 north from Oak Drive to south of Patuxent Boulevard.
- Install bike lanes on MD 4.

### Benefits

- The intersection delay decreases by 43 seconds per vehicle since the additional capacity allows more motorists to move through the MD 4/MD 235 intersection than previously.

# 2016 MARYLAND STATE HIGHWAY MOBILITY REPORT

Average Annual Savings (Thousands)			Construction Cost Estimate (Millions)	Benefit/Cost (20 Years)
Reduction in Delay	Reduction in Fuel Consumption	Safety		
\$243	\$5	\$69	\$3	3.6



Note: Number in circle represents delay per vehicle.

**BEFORE****AFTER**

## MD 144 at MD 910C

### LOCATION: HAGERSTOWN, WASHINGTON COUNTY

At the intersection, there has been a significant increase in truck and passenger car volumes on Western Maryland Parkway and MD 144. The roundabout addresses traffic operations and safety concerns by helping move traffic on Western Maryland Parkway through the intersection safely and efficiently while keeping traffic on MD 144 flowing. All four legs of the intersection have similar traffic volumes, which is ideal for a roundabout.

#### Intersection Background

- Two-way stop controlled intersection with approach Level of Service of C/C for the AM and PM peak hours, respectively.
- There were 12 crashes over the five-year study period (5 injury, 7 property damage).

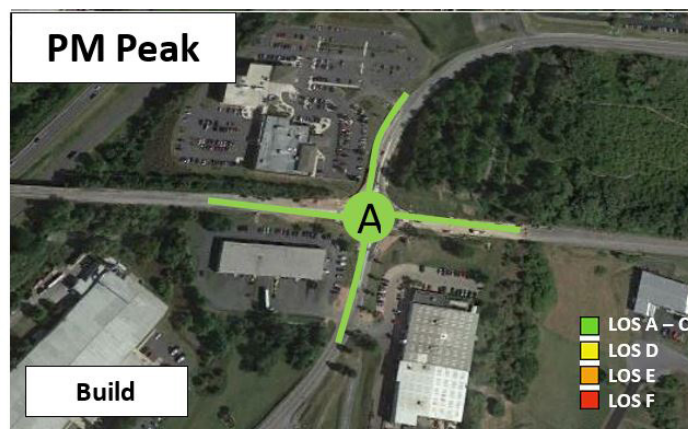
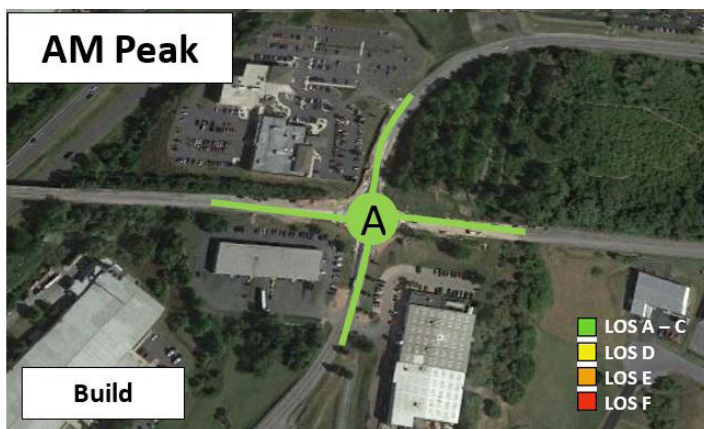
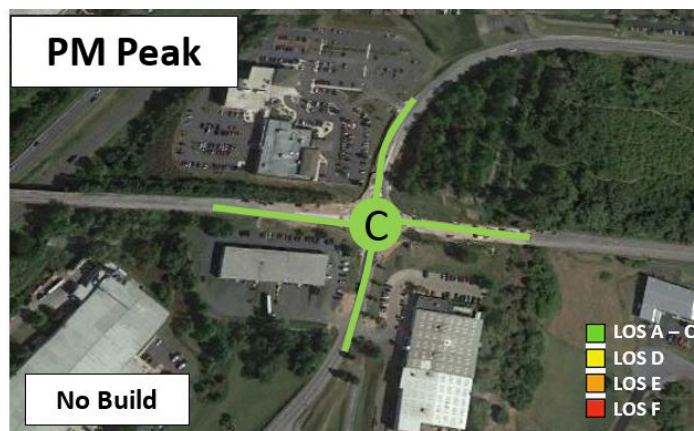
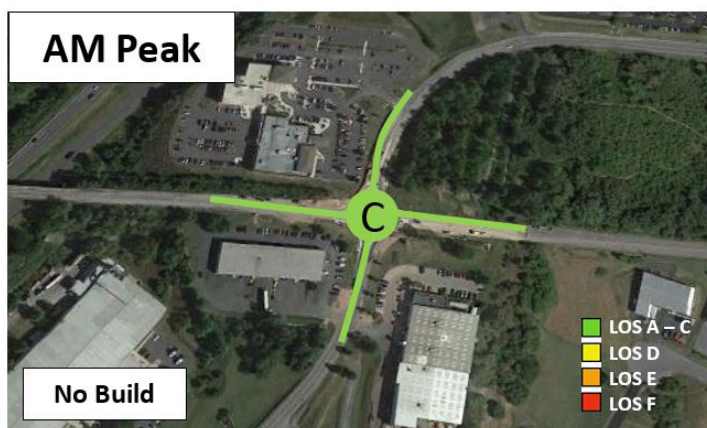
#### Project Scope

- Convert existing two-way stop controlled intersection to a four-legged roundabout.

#### Benefits

- AM and PM Peak hours both improved from LOS C to LOS A.
- Decreased crash severity since roundabout crashes are typically low speed, rear end crashes compared to high-speed angle crashes at a traditional four-leg intersection.

Average Annual Savings (Thousands)			Construction Cost Estimate (Millions)	Benefit/Cost (20 Years)
Reduction in Delay	Reduction in Fuel Consumption	Safety		
\$13	\$0.3	\$44	\$1	0.6





BEFORE



AFTER

## US 13 Business at South Division Street

**LOCATION: SALISBURY, WICOMICO COUNTY**

The US 13 Business at South Division Street improvements were developed to improve safety and increase capacity. Previously, this intersection operated as a two way stop controlled intersection. The median along US 13 Business stored vehicles crossing US 13 Business. By implementing a traffic signal, motorists on South Division Street no longer have to endure delays when crossing US 13 Business. US 13 Business does experience more delay during the peak hours since the movement is now stopped.

### Intersection Background

- There were 15 crashes during the five-year study period (6 injury, 9 property damage).
- Prior to the improvement implementation, the unsignalized LOS was F/F for the AM and PM peak hours, respectively.

### Project Scope

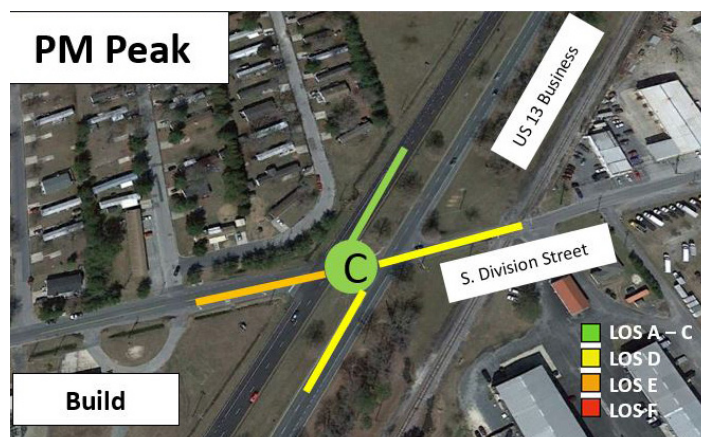
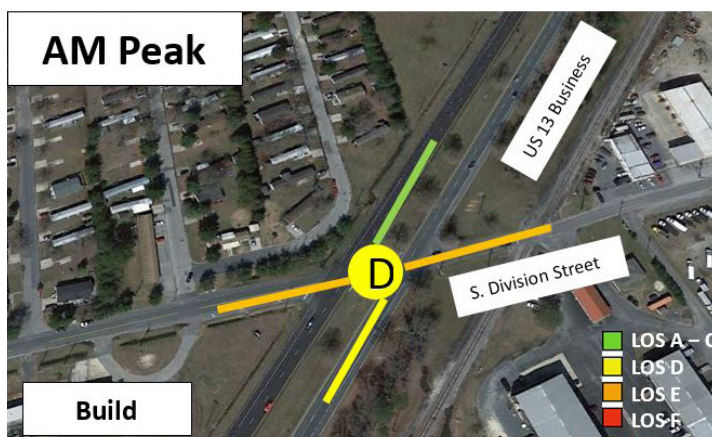
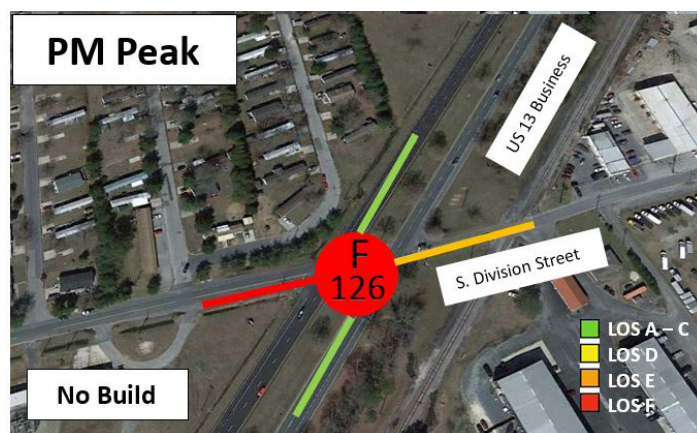
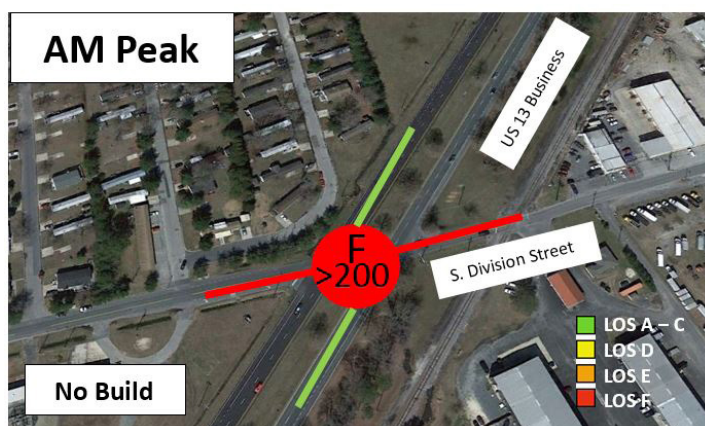
- Signalize the four-legged intersection
- Install a left turn lane on US 13 Business northbound and southbound
- Install bike lanes along US 13 Business

### Benefits

The capacity improvements and installation of a traffic signal had an overall network wide benefit even though mainline delays increased. This signal provided a much needed east/west accessibility and as a result, demand along the side streets significantly increased. Motorists were likely avoiding delays at the intersection and driving longer distances on the local roadway network to find quicker alternative routes.

# 2016 MARYLAND STATE HIGHWAY MOBILITY REPORT

Average Annual Savings (Thousands)			Construction Cost Estimate (Millions)	Benefit/Cost (20 Years)
Reduction in Delay	Reduction in Fuel Consumption	Safety		
\$816	\$18	\$87	\$2	10.1



Note: Number in circle represents delay per vehicle.



BEFORE



AFTER

## MD 349 at Crooked Oak Lane

**LOCATION: SALISBURY, WICOMICO COUNTY**

This project was constructed to improve safety and traffic flow. The new left turn lanes on MD 349 removed stopped turning vehicles from the through lanes, and allowed through traffic to maintain a constant running speed, reducing the potential for rear end collisions. The project also included the installation of bike lanes.

### Intersection Background

- Intersection LOS was E in the AM peak hour and D in the PM peak hour.
- There were five crashes during the 5-year study period (2 injury, 3 property damage).

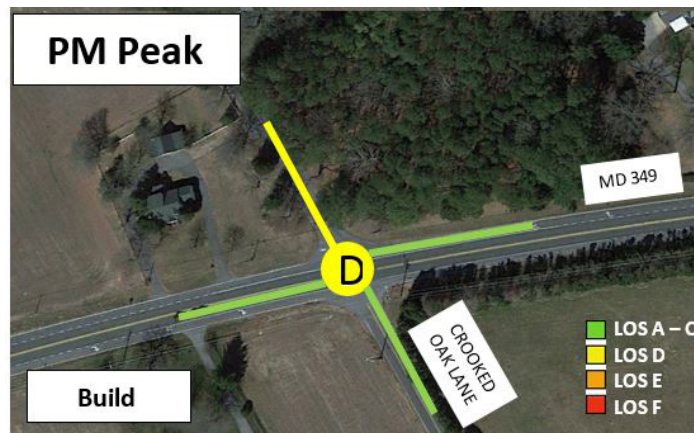
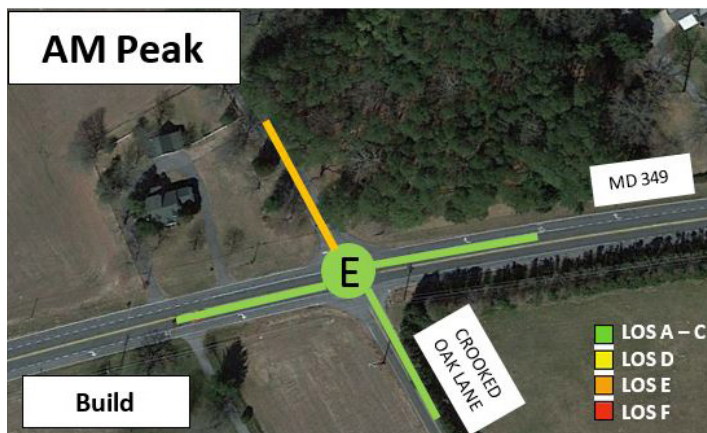
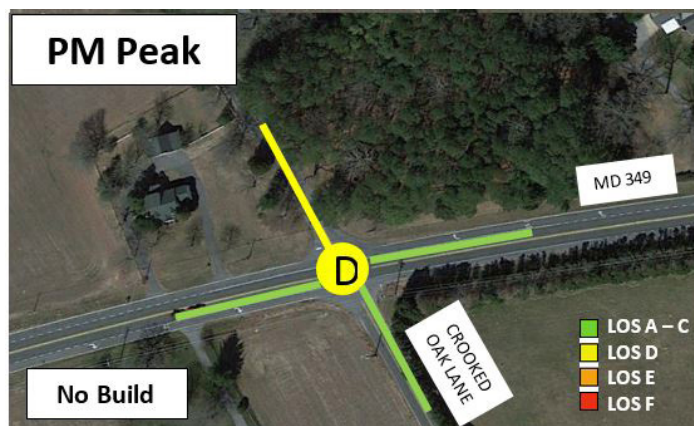
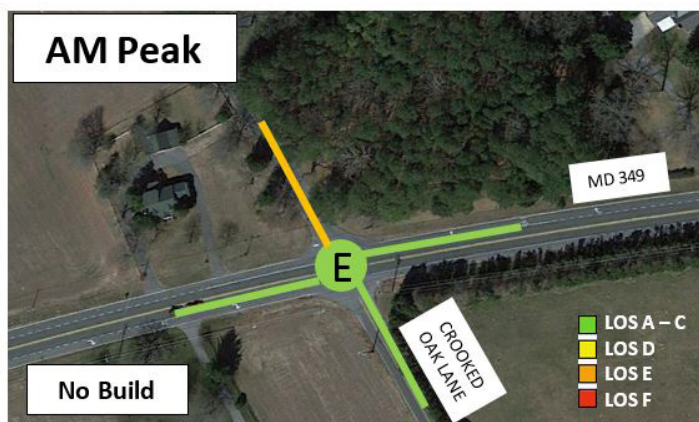
### Project Scope

- Construction of two left turn lanes, including base widening along MD 349
- Construction of a right turn lane on Crooked Oak Lane northbound and a left turn lane on Crooked Oak Lane southbound
- Installation of bike lanes on MD 349
- Resurfacing MD 349 for 1,900 feet
- Resurfacing Crooked Oak Lane for 700 feet

### Benefits

- The delay for southbound MD 349 improved during both the AM and PM peak hours (14 seconds in the AM peak and 12 seconds in the PM peak hour)
- The implementation of left turn lanes are expected to decrease rear end crashes

Average Annual Savings (Thousands)			Construction Cost Estimate (Millions)	Benefit/Cost (20 Years)
Reduction in Delay	Reduction in Fuel Consumption	Safety		
\$9	\$0.2	\$21	\$1	0.5





BEFORE



AFTER

## MD 822 at MD 675

### LOCATION: PRINCESS ANNE, SOMERSET COUNTY

This project improves safety and provides traffic calming near the University of Maryland Eastern Shore Campus. A roundabout eliminates left turn movements thus reducing the number of conflict points within the intersection. The roundabout improves operations at the intersection.

#### Intersection Background

- The intersection operated at LOS B during AM Peak and LOS D during PM peak hour.
- There were 9 crashes at this intersection in the 5 year study period (2 Injury, 7 property damage).

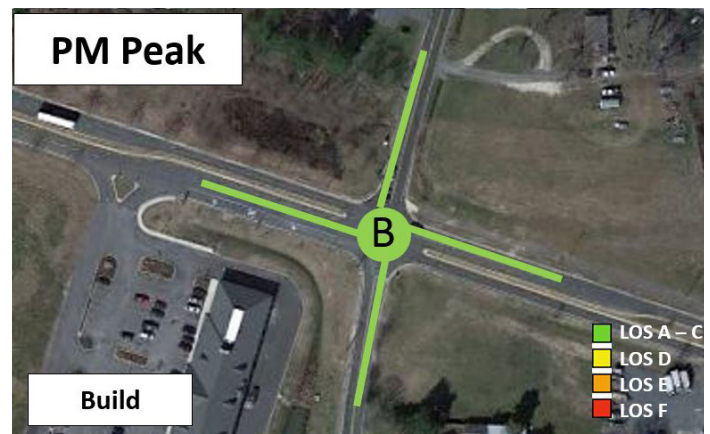
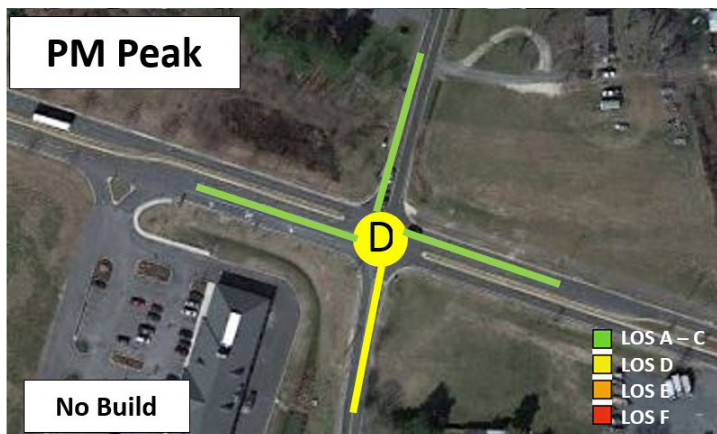
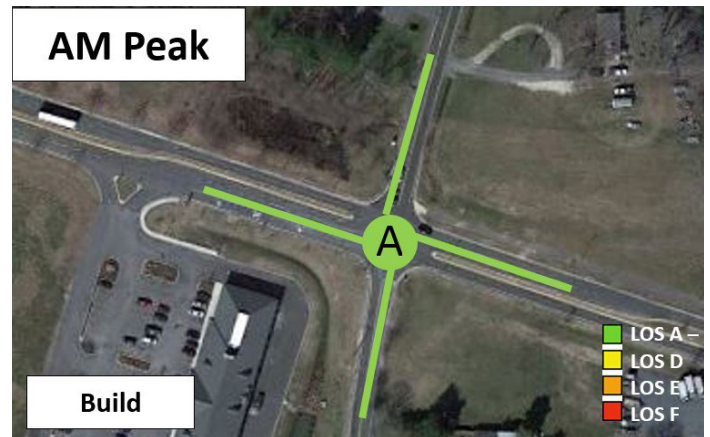
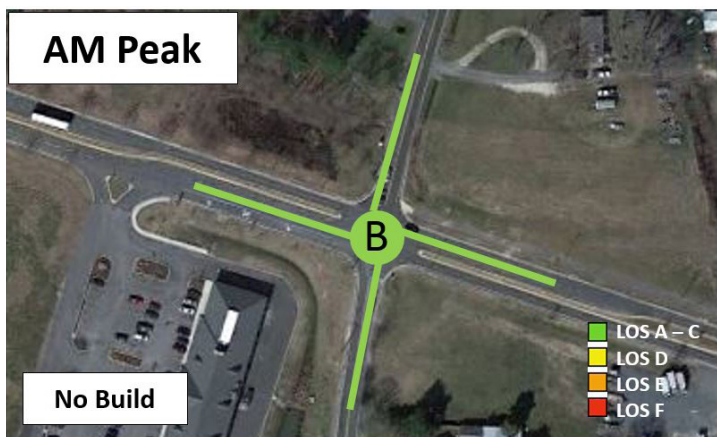
#### Project Scope

- Convert existing two-way stop controlled intersection to a four-legged roundabout.
- Base widening, sidewalks and resurfacing along MD 675 from MD 362 to MD 822.

#### Benefits

- AM Peak hour LOS improves from B to A.
- PM Peak hour LOS improves from D to B.
- The PM northbound 95% queue reduced from approximately 135 feet to 55 feet.
- Potentially decreased crash severity.

Average Annual Savings (Thousands)			Construction Cost Estimate (Millions)	Benefit/Cost (20 Years)
Reduction in Delay	Reduction in Fuel Consumption	Safety		
\$4	\$0.1	\$23	\$3	0.1



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**PETE K. RAHN**  
MDOT Secretary

**GREGORY I. SLATER**  
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