


Traffic Signal Study

<i>County:</i>	Prince William
<i>Intersection:</i>	Blackburn Road (Rte 638) & Rippon Boulevard (Rte 1392)
<i>Date:</i>	July 11, 2014
<i>Origin and nature of request:</i>	Requested by Prince William County Dept. of Transportation


VDOT - Traffic Engineering Fairfax, VA Traffic Engineer

This traffic signal warrant study was conducted under the direction of **Thomas Folse, P.E.**

An engineering study is required to determine the need for a traffic control signal at a particular location. The *Manual of Uniform Traffic Control Devices (MUTCD)* is published by the Federal Highway Administration and is nationally recognized and adopted by all fifty states as the standard for conducting these engineering studies. Traffic volumes, crash history, operating conditions and physical characteristics are collected and compared to the warrants or “conditions” found in the *MUTCD*. If one or more of the *MUTCD* warrants are met, an operational analysis should be performed to evaluate the intersection function, both signalized and unsignalized. Traffic signal control should not be installed unless an engineering study indicates that installing a traffic control signal will improve the overall safety and/or operations of the intersection. This document provides a summary of the findings of the traffic signal warrant study conducted for the above-noted intersection.

Study Results and Recommendations: A recent traffic signal warrant study evaluated the intersection volumes, geometry and crash history at the intersection of Blackburn Road & Rippon Boulevard. The manual turning movement counts did show that traffic volumes and delays at the intersection were high enough to meet Warrant 2 - 4-Hour Vehicular Volume and Warrant 3A - Peak Hour Delay. A check of the crash history showed that Warrant 7 - Crash experience was also met suggesting that vehicles cannot safely enter and exit the intersection without the assistance of a traffic signal. Therefore, based on the updated information, we have determined that traffic signal warrants listed in the *MUTCD* are satisfied.

- A signal is recommended for this location.**
 A signal is not recommended for this location.

List of Attachments:

- Warrant Analysis Summary
- PC-Warrants Traffic Signal Warrant Evaluation
- Crash History
- TMC Count Request
- Directional Turning Movement Counts
- Side Street Queuing Analysis
- Intersection Sketch
- Aerial Photo

VIRGINIA DEPARTMENT OF TRANSPORTATION
Northern Operations Region
Traffic Signal Warrant Analysis Summary

Name of Analyst: **MAC**
Intersection:
Major Road: **Rippon Boulevard**
Minor Road: **Blackburn Road**
County: **Prince William**

Date of Analysis: **7/10/2014**
Route Number: **1392**
Route Number: **638**
Count Date: **5/22/2014**

Warrants

Any Warrants Met? **Yes** If yes, check appropriate warrants below.

- | | | | |
|--|---------------------------------|---------------------------------------|---|
| <input type="checkbox"/> 1A | 8-Hour Minimum Vehicular Volume | <input type="checkbox"/> 1B | 8-Hour Interruption of Continuous Traffic |
| <input type="checkbox"/> 1C | 8-Hour Combination of Warrants | <input checked="" type="checkbox"/> 2 | 4-Hour Vehicular Volume |
| <input checked="" type="checkbox"/> 3A | Peak Hour Delay | <input type="checkbox"/> 3B | Peak Hour Volume |
| <input type="checkbox"/> 4 | Pedestrian Volume | <input type="checkbox"/> 5 | School Crossing |
| <input type="checkbox"/> 6 | Coordinated Signal System | <input checked="" type="checkbox"/> 7 | Crash Experience |
| <input type="checkbox"/> 8 | Roadway Network | <input type="checkbox"/> 9 | Intersection Near a Grade Crossing |
| <input type="checkbox"/> | Other/Special Conditions | | |

Right Turn Adjustment Factors for Minor Road

Northbound Right Turn Volumes Reduced By: 0% 25% 50% 75% 100% Varies
Southbound Right Turn Volumes Reduced By: 0% 25% 50% 75% 100% Varies

Speed Information

High Speed Approach: Yes No (If speed limit greater than 40 mph – check yes) Posted Speed Limit **35**

Road Geometry

Intersection – Number of Legs **4** Existing Multi-Way Stop **Yes**
Total Through Lanes for Each Road (Both Directions) (ex: Alliance Drive is 4 lanes divided)
Major Road **4** Lanes Divided Undivided
Minor Road **2** Lanes Divided Undivided

Turn Lane Information:

Major Road	Approach:	EB	RT Lane:	No	Length:		ft	LT Lane:	No	Length:		ft
Major Road	Approach:	WB	RT Lane:	No	Length:		ft	LT Lane:	No	Length:		ft
Minor Road	Approach:	NB	RT Lane:	Yes	Length:	200	ft	LT Lane:	No	Length:		ft
Minor Road	Approach:	SB	RT Lane:	Yes	Length:	500	ft	LT Lane:	No	Length:		ft

Sight Distance: Satisfactory Limited (Specify):

Functional Classification

Major Road: Principal Arterial Minor Arterial Collector Local Street
Minor Road: Principal Arterial Minor Arterial Collector Local Street

Land Use in Area (check all that apply)

Office Retail Residential School Hospital Park Other (Specify)

Delay

Longest Minor Leg
Stop Sign Delay: **2.4** Veh/Hrs Longest Average Stopped Time: **PM 37.8** Sec/Veh Maximum Stopped Time: **AM 109** Sec/Veh

Maximum Queue **10** Vehicles

Three Year Crash History Summary:

Highest 12 month period: From: Month **1** Year **2013** To: Month **12** Year **2013** Number of Correctable Crashes **5**
Avg. # of Correctable Crashes per Year **3** For the 3 year period: From: Month **1** Year **2011** To: Month **12** Year **2013**

Operational Study Needed: **No** if yes, attach summary. Pedestrian/Capacity Improvements Needed: **No** if yes, attach plan

Northern Operations Region Program Manager Recommendation (Circle One):

Approve Deny Date: **7/11/14**

Northern Operations Region Program Manager Signature: *T. Tolpe*

Comments:



Virginia Department of Transportation

Northern Region Operations

Traffic Engineering Section (MAC)

Study Name : 638 & 1392_SWA-75-100% RT Reduct

Study Date : 07/09/14

Page No. : 1

Signal Warrants - Summary

Major Street Approaches

Eastbound: Rippon Blvd (Rte 1392)

Number of Lanes: 2

85% Speed < 40 MPH.

Total Approach Volume: 4,056

Westbound: Rippon Blvd (Rte 1392)

Number of Lanes: 2

85% Speed < 40 MPH.

Total Approach Volume: 4,641

Minor Street Approaches

Northbound: Blackburn Road (Rte 638)

Number of Lanes: 1

Total Approach Volume: 1,881

Southbound: Blackburn Road (Rte 638)

Number of Lanes: 1

Total Approach Volume: 2,516

Warrant Summary (Urban values apply.)

Warrant 1 - Eight Hour Vehicular Volumes	Not Satisfied
Warrant 1A - Minimum Vehicular Volume Not Satisfied	
Required volumes reached for 7 hours, 8 are needed	
Warrant 1B - Interruption of Continuous Traffic Not Satisfied	
Required volumes reached for 0 hours, 8 are needed	
Warrant 1 A&B - Combination of Warrants Not Satisfied	
Required volumes reached for 5 hours, 8 are needed	
Warrant 2 - Four Hour Volumes	Satisfied
Number of hours (5) volumes exceed minimum >= minimum required (4).	
Warrant 3 - Peak Hour	Satisfied
Warrant 3A - Peak Hour Delay Satisfied	
Number of hours (10) volumes and delays exceed minimum >= minimum required (1).	
Warrant 3B - Peak Hour Volumes Not Satisfied	
Volumes do not exceed minimums for any hour.	
Warrant 4 - Pedestrian Volumes	Not Satisfied
Required 4 Hr pedestrian volume reached for 0 hour(s) and the single hour volume for 0 hour(s)	
Warrant 5 - School Crossing	Not Evaluated
Warrant 6 - Coordinated Signal System	Not Satisfied
No adjacent coordinated signals are present	
Warrant 7 - Crash Experience	Satisfied
Number of accidents (5) is more than minimum (5) and volume requirements are met.	
Warrant 8 - Roadway Network	Not Satisfied
Major Route conditions not met. One or more volume requirement met.	
Warrant 9 - Intersection Near a Grade Crossing	Not Evaluated



Virginia Department of Transportation

Northern Region Operations

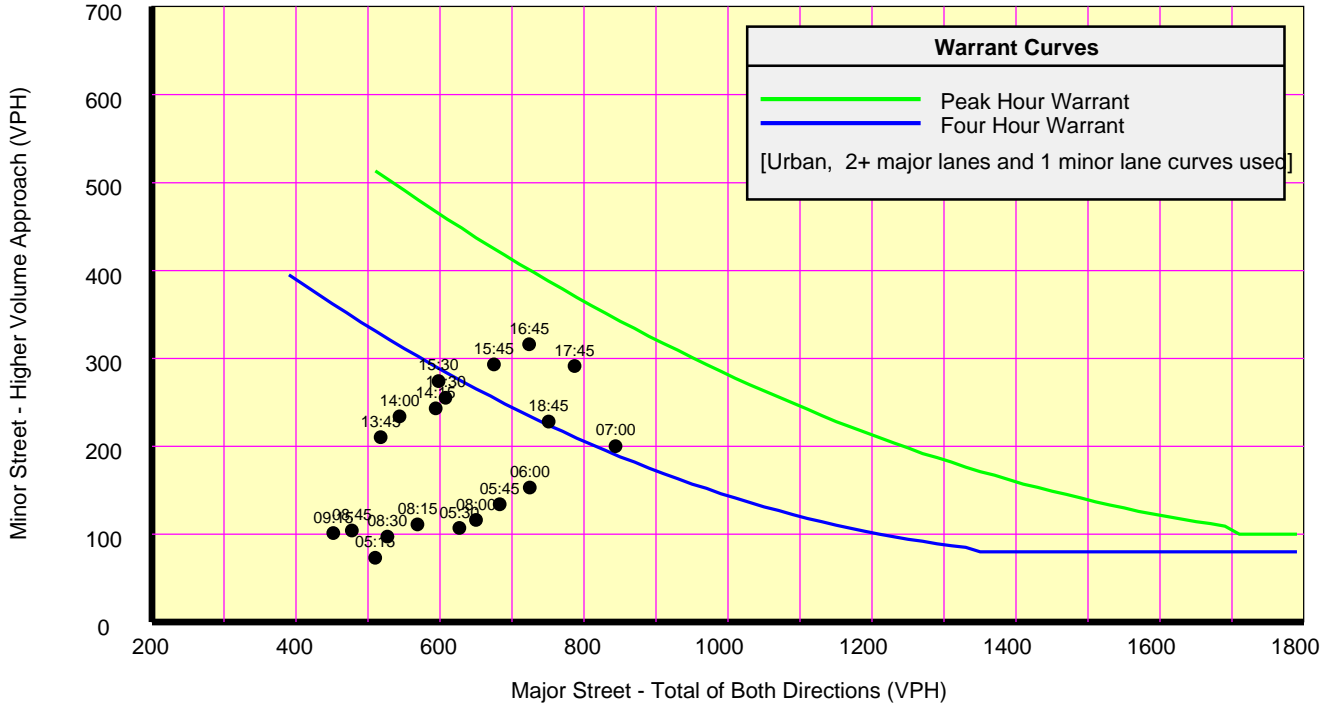
Traffic Engineering Section (MAC)

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Signal Warrants - Summary



Analysis of 8-Hour Volume Warrants:

War 1A-Minimum Volume

War 1B-Interruption of Traffic

War 1C-Combination of Warrants

Hour Begin	Major		Minor		Maj 600	Min 150	Hour Begin	Major		Minor		Maj 900	Min 75	Hour Begin	Major		Minor		Maj 720	Min 120			
	Total	Vol	Dir	Vol				Dir	Total	Vol	Dir				Total	Vol	Dir	Total			Vol	Dir	
07:00	844	200	NB	Yes	Yes	07:00	844	200	NB	No	Yes	07:00	844	200	NB	Yes	Yes	07:00	844	200	NB	Yes	Yes
17:45	787	291	SB	Yes	Yes	17:30	818	304	SB	No	Yes	17:30	818	304	SB	Yes	Yes	17:30	818	304	SB	Yes	Yes
18:45	751	228	SB	Yes	Yes	07:15	814	197	NB	No	Yes	16:30	762	297	SB	Yes	Yes	16:30	762	297	SB	Yes	Yes
06:00	725	153	NB	Yes	Yes	06:45	805	180	NB	No	Yes	18:45	751	228	SB	Yes	Yes	18:45	751	228	SB	Yes	Yes
16:45	724	316	SB	Yes	Yes	17:00	797	329	SB	No	Yes	06:00	725	153	NB	Yes	Yes	06:00	725	153	NB	Yes	Yes
15:45	675	293	SB	Yes	Yes	17:15	793	309	SB	No	Yes	18:30	706	262	SB	No	Yes	18:30	706	262	SB	No	Yes
14:30	608	255	SB	Yes	Yes	06:15	788	157	NB	No	Yes	16:00	697	283	SB	No	Yes	16:00	697	283	SB	No	Yes
05:45	683	134	NB	Yes	No	17:45	787	291	SB	No	Yes	16:15	693	303	SB	No	Yes	16:15	693	303	SB	No	Yes
08:00	650	116	SB	Yes	No	18:15	781	276	SB	No	Yes	05:45	683	134	NB	No	Yes	05:45	683	134	NB	No	Yes
05:30	627	107	NB	Yes	No	07:30	780	178	NB	No	Yes	15:45	675	293	SB	No	Yes	15:45	675	293	SB	No	Yes
15:30	598	274	SB	No	Yes	06:30	777	163	NB	No	Yes	08:00	650	116	SB	No	No	08:00	650	116	SB	No	No
14:15	594	243	SB	No	Yes	16:30	762	297	SB	No	Yes	05:30	627	107	NB	No	No	05:30	627	107	NB	No	No
08:15	569	111	SB	No	No	18:45	751	228	SB	No	Yes	14:30	608	255	SB	No	Yes	14:30	608	255	SB	No	Yes
14:00	544	234	SB	No	Yes	19:00	741	222	SB	No	Yes	15:30	598	274	SB	No	Yes	15:30	598	274	SB	No	Yes
08:30	527	97	SB	No	No	06:00	725	153	NB	No	Yes	14:15	594	243	SB	No	Yes	14:15	594	243	SB	No	Yes
13:45	518	210	SB	No	Yes	18:00	724	273	SB	No	Yes	14:45	587	258	SB	No	Yes	14:45	587	258	SB	No	Yes
05:15	510	73	NB	No	No	16:45	724	316	SB	No	Yes	15:15	586	266	SB	No	Yes	15:15	586	266	SB	No	Yes
08:45	478	104	NB	No	No	07:45	723	149	NB	No	Yes	15:00	585	266	SB	No	Yes	15:00	585	266	SB	No	Yes
09:15	452	101	NB	No	No	18:30	706	262	SB	No	Yes	08:15	569	111	SB	No	No	08:15	569	111	SB	No	No
09:00	450	101	NB	No	No	16:00	697	283	SB	No	Yes	14:00	544	234	SB	No	Yes	14:00	544	234	SB	No	Yes
09:30	445	99	NB	No	No	16:15	693	303	SB	No	Yes	08:30	527	97	SB	No	No	08:30	527	97	SB	No	No
13:30	436	200	SB	No	Yes	05:45	683	134	NB	No	Yes	13:45	518	210	SB	No	Yes	13:45	518	210	SB	No	Yes
13:15	423	191	SB	No	Yes	15:45	675	293	SB	No	Yes	05:15	510	73	NB	No	No	05:15	510	73	NB	No	No
09:45	417	95	SB	No	No	08:00	650	116	SB	No	Yes	08:45	478	104	NB	No	No	08:45	478	104	NB	No	No

CRASH HISTORY
1/2011 - 12/2013
Blackburn Road & Rippon Boulevard

Document Number	Crash Date	Crash Time	Day Of Week	Collision Type	Crash Description	Secondary Location	At Intersection ?	Route Name	Route Number	TREDS Jurisdiction	Route Or Street Name	Crash Severity	Pedestrian Fatality Count	Non Pedestrian Fatality Count	Pedestrian Injury Cnt	Non Pedestrian Injury Count	Work Zone Related	Light Condition	Roadway Surface Cond Type	Weather Condition Type
111930141	7/3/2011	22:18	Sun	2. Angle		638 BLACKBURN RD	Yes	SC-1392W (Prince William County)	1392	Prince William County	1392 RIPPON BLVD	injury crash	0	0	0	1	2. No	4. Darkness - Road Lighted	2. Wet	5. Rain
112570101	9/6/2011	6:30	Tue	1. Rear End		GPS	No	SC-638E (Prince William County)	638	Prince William County	blackburn rd rt 638	property damage crash	0	0	0	0	2. No	1. Dawn	2. Wet	4. Mist
113190406	10/23/2011	11:04	Sun	2. Angle	VEH 2 STOPPED AT THE STOP SIGN BEFORE ENTERING THE INTERSECTION. VEH 1 DIDN'T SEE THE STOP SIGN ON HER SIDE AND ENTERED THE INTERSECTION HITTING VEH 2 ON HIS PASSENGER SIDE REAR. THERE IS A STOP SIGN PRESENT IN THE CENTER OF THE INTERSECTION ON VI SIDE. THE R/S STOP SIGN IS NOT PRESENT DUE TO CONSTRUCTION WORKERS TAKING DOWN THE SIGN. REFER TO DRAWING.	BLACKBURN RD / RT 0638	Yes	SC-1392W (Prince William County)	1392	Prince William County	RIPPON BLVD / RT 1392	property damage crash	0	0	0	0	2. No	2. Daylight	1. Dry	1. No Adverse Condition (Clear/ Cloudy)
113540049	11/23/2011	21:30	Wed	1. Rear End		RIPPON BLVD/1392	Yes	SC-638E (Prince William County)	638	Prince William County	BLACKBURN RD/0638	injury crash	0	0	0	1	1. Yes	4. Darkness - Road Lighted	1. Dry	1. No Adverse Condition (Clear/ Cloudy)
130110113	11/20/2012	18:30	Tue	2. Angle	V-1 WAS TRAVELING SOUTH ON BLACKBURN RD AND STOPPED AT THE 4 WAY INTERSECTION AT RIPPON BLVD. V-2 WAS TRAVELING WEST ON RIPPON BLVD AND ALSO WAS STOPPED AT A STOP SIGN AT THE SAME INTERSECTION. V-1 PROCEEDED TO GO STRAIGHT ON BLACKBURN RD AND V-2 TURNED LEFT ONTO BLACKBURN RD. THE FRONT DRIVER SIDE OF V.-1 COLLIDED WITH THE FRONT PASSENGER SIDE OF V-2.	RIPPON blvd	Yes	SC-638E (Prince William County)	638	Prince William County	blackburn rd	property damage crash	0	0	0	0	2. No	4. Darkness - Road Lighted	1. Dry	1. No Adverse Condition (Clear/ Cloudy)
131510048	1/18/2013	10:45	Fri	2. Angle	V1 WAS TRAVELING W ON RIPPON BLVD, APPROACHING THE INT OF BLACKBURN RD. V2 MADE A LEGAL STOP AT THE 4 WAY STOP SIGN, THEN PROCEEDED INTO THE INT. TRAVELING N ON BLACKBURN RD. VEH DID NOT STOP AT THE STOP SIGN, ENTERING INT AT APPROX 30 - 35 MPH, AND STRIKING V2. V2 CONTINUED N, SPINNING 180 DEGREES BEFORE COMING TO REST 30 FT FROM INT.	BLACKBURN RD	Yes	SC-1392W (Prince William County)	1392	Prince William County	RIPPON BLVD	property damage crash	0	0	0	0	2. No	2. Daylight	1. Dry	1. No Adverse Condition (Clear/ Cloudy)
132050029	3/30/2013	13:03	Sat	2. Angle	B-11 RD 2052 V/1 WAS OPERATING IN THE LEFT TRAVEL LANE OF RIPPON BLVD APPROACHING BLACKBURN ROAD. V/2 WAS STOPPED IN THE LEFT TURN LANE FROM RIPPON BLVD E/B TO BLACKBURN ROAD. V/2 ENTERED THE INTERSECTION MAKING A LEFT TURN AND V/1 COLLIDED WITH V/2 IN AN ANGULAR COLLISION. MULTIPLE WITNESSES CONFIRMED THAT V/2 HAD THE RIGHT OF WAY OVER V/1.	RT 638/BLACKBURN ROAD	Yes	SC-1392W (Prince William County)	1392	Prince William County	RT 1392 RIPPON BOULEVARD	injury crash	0	0	0	2	2. No	2. Daylight	1. Dry	1. No Adverse Condition (Clear/ Cloudy)

CRASH HISTORY
1/2011 - 12/2013
Blackburn Road & Rippon Boulevard

Document Number	Crash Date	Crash Time	Day Of Week	Collision Type	Crash Description	Secondary Location	At Intersection ?	Route Name	Route Number	TREDS Jurisdiction	Route Or Street Name	Crash Severity	Pedestrian Fatality Count	Non Pedestrian Fatality Count	Pedestrian Injury Cnt	Non Pedestrian Injury Count	Work Zone Related	Light Condition	Roadway Surface Cond Type	Weather Condition Type
132200045	4/25/2013	21:51	Thu	2. Angle	VEHICLE 1 WAS TRAVELING EASTBOUND ON RIPPON BLVD. STATED THAT SHE CAME TO THE 4 WAY STOP SIGN STOPPED AND PROCEEDED THROUGH AND WAS STRUCK BY VEHICLE 2. VEHICLE 2 WAS TRAVELING SOUTHBOUND ON BLACKBURN RD. STATED THAT SHE CAME TO THE STOP SIGN, STOPPED AND PROCEEDED INTO THE INTERSECTION AND WAS STRUCK BY VEHICLE 1. TOTAL AMOUNT OF DAMAGE ESTIMATED AT \$5000.00.	BLACKBURN RD 0638	Yes	SC-1392E (Prince William County)	1392	Prince William County	RIPPON BLVD 1392	injury crash	0	0	0	1	2. No	5. Darkness - Road Not Lighted	1. Dry	1. No Adverse Condition (Clear/ Cloudy)
133050029	6/29/2013	11:50	Sat	2. Angle	VEHICLE #2 WAS TRAVELING SOUTHBOUND ON BLACKBURN RD APPROACHING RIPPON BLVD. VEHICLE #1 WAS TRAVELING EASTBOUND ON RIPPON BLVD APPROACHING BLACKBURN RD. VEHICLE #2 STOPPED AT THE INTERSECTION DUE TO A STOP SIGN AND CONTINUE CROSSING THE INTERSECTION. VEHICLE #1 DISREGARD THE STOP SIGN AND COLLIDED WITH VEHICLE #2 ON AN ANGLE.	RT 638BLACKBURN RD	Yes	SC-1392E (Prince William County)	1392	Prince William County	RT 1392 RIPPON BLVD	property damage crash	0	0	0	0	2. No	2. Daylight	1. Dry	1. No Adverse Condition (Clear/ Cloudy)
133555101	12/20/2013	12:18	Fri	2. Angle	B11, RD: 2052 VEHICLE ONE WAS TRAVELLING WEST ON RIPPON BOULEVARD AND RAN THE STOP SIGN AT BLACKBURN ROAD, AND STRUCK VEHICLE TWO THAT WAS TRAVELLING SOUTH ON BLACKBURN ROAD.	0638 BLACKBURN ROAD	Yes	SC-1392E (Prince William County)	1392	Prince William County	1392 RIPPON BOULEVARD	property damage crash	0	0	0	0	2. No	2. Daylight	1. Dry	1. No Adverse Condition (Clear/ Cloudy)

Please use a separate form for each count request. For best service, attach a map highlighting the location.

CHARGE CODE

Request date	4/25/14
Requested by	Marc Cioffi
County	Prince William
ADC map ref.	6110, F-1

UPC	
ORG	
Activity	

TYPE OF COUNT REQUESTED

Manual intersection turning movement count
(and stop-sign delay study if stop-controlled)

Duration:

6:00 a.m. to 6:00 p.m.
 7:00 a.m. to 7:00 p.m.
 5:00 a.m. to 8:00 p.m.

	Route no.	Street name
	638	Blackburn Rd
	1392	Rippon Blvd

Warrants (.dfl) file needed

Automatic traffic count
(using road tubes or Nu-Metrics counters)

Duration:

24 hr.
 48 hr.
 7-day

Collect:

Speed
 Volume
 Classification

Route no.	Street name

Segment to be counted:

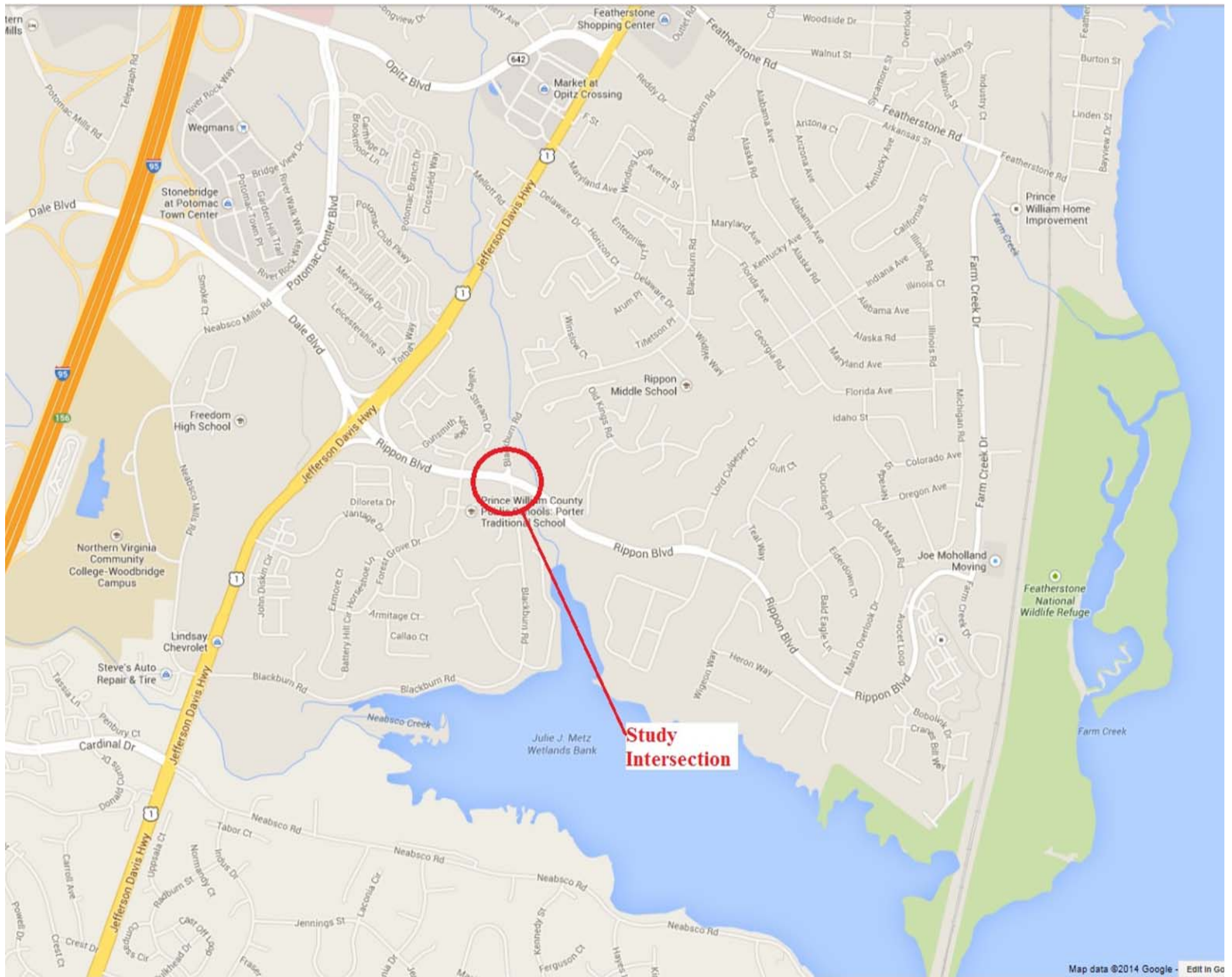
Note: Any costs for repair or replacement of count equipment will be assessed to the charge code above.

SPECIAL INSTRUCTIONS

Intersecting streets: Also need Petra Pro file

FOR COUNT STAFF USE ONLY

Assigned	Key	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Completed	Appr.																
Processed	Mvmt.																
Returned																	
Team no.	Equip. problems, emergency activity, crashes, comments													<i>Weather:</i> <input type="checkbox"/> Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> Rain <input type="checkbox"/> Snow <input type="checkbox"/>			
Names:																	



VEHICLE TURNING MOVEMENT COUNT - SUMMARY

Intersection of: Blackburn Road
and: Rippon Blvd
Location: Prince William County, Virginia

Counted by: VCU
Date: May 22, 2014
Weather: Sunny/Warm
Entered by: SN



TIME	TRAFFIC FROM NORTH on: Blackburn Road					TRAFFIC FROM SOUTH on: Blackburn Road					TRAFFIC FROM EAST on: Rippon Blvd					TRAFFIC FROM WEST on: Rippon Blvd					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
AM																					
5:00 - 5:15	10	4	1	0	15	3	3	0	0	6	3	36	2	0	41	0	11	1	0	12	74
5:15 - 5:30	7	5	0	0	12	6	4	0	0	10	6	44	2	1	53	0	17	7	0	24	99
5:30 - 5:45	11	6	2	0	19	22	3	0	0	25	5	67	2	0	74	1	54	8	0	63	181
5:45 - 6:00	18	9	3	0	30	15	19	0	0	34	9	61	4	0	74	3	45	19	0	67	205
6:00 - 6:15	22	11	1	0	34	28	29	0	0	57	14	63	2	0	79	1	51	25	0	77	247
6:15 - 6:30	23	11	3	0	37	35	30	1	0	66	23	75	3	0	101	1	59	32	0	92	296
6:30 - 6:45	21	17	7	0	45	33	27	1	0	61	30	71	7	0	108	5	55	25	0	85	299
6:45 - 7:00	27	19	9	0	55	33	27	6	0	66	23	60	6	0	89	2	67	25	0	94	304
7:00 - 7:15	28	18	5	0	51	9	38	0	0	47	17	95	13	0	125	2	49	43	0	94	317
7:15 - 7:30	31	15	4	0	50	23	40	0	0	63	19	72	7	0	98	10	47	27	2	86	297
7:30 - 7:45	18	14	5	0	37	47	37	4	0	88	14	73	14	0	101	7	60	53	0	120	346
7:45 - 8:00	40	18	14	0	72	25	53	2	0	80	32	72	11	0	115	5	53	49	0	107	374
8:00 - 8:15	31	25	7	0	63	23	30	1	0	54	18	58	12	0	88	10	62	29	0	101	306
8:15 - 8:30	19	20	12	0	51	13	21	3	0	37	21	78	12	1	112	1	16	20	0	37	237
8:30 - 8:45	22	22	5	0	49	7	20	2	0	29	15	82	14	0	111	14	20	19	4	57	246
8:45 - 9:00	23	19	6	0	48	19	17	4	0	40	7	68	11	0	86	12	35	16	2	65	239
9:00 - 9:15	19	15	12	0	46	19	19	3	0	41	7	49	8	0	64	4	21	19	0	44	195
9:15 - 9:30	13	11	7	0	31	10	14	4	0	28	13	57	6	0	76	5	14	11	1	31	166
9:30 - 9:45	21	11	5	0	37	11	24	4	0	39	7	52	10	0	69	7	21	18	0	46	191
9:45 - 10:00	16	28	5	0	49	3	17	5	0	25	8	58	13	0	79	6	22	14	0	42	195
10:00 - 10:15	12	13	10	0	35	7	22	3	0	32	8	51	10	0	69	5	24	12	0	41	177
10:15 - 10:30	11	8	7	0	26	6	15	1	0	22	11	46	4	0	61	3	28	7	0	38	147
10:30 - 10:45	12	17	7	0	36	12	14	1	0	27	7	38	5	0	50	4	29	4	0	37	150
10:45 - 11:00	16	11	6	0	33	8	12	4	0	24	3	42	9	0	54	2	21	7	0	30	141
11:00 - 11:15	15	15	9	0	39	12	13	0	0	25	10	29	3	0	42	2	39	13	0	54	160
11:15 - 11:30	15	12	8	0	35	7	14	5	0	26	9	48	6	0	63	6	21	8	0	35	159
11:30 - 11:45	19	13	5	0	37	3	13	2	0	18	5	37	11	0	53	6	29	11	0	46	154
11:45 - 12:00	26	19	14	0	59	6	10	4	0	20	7	40	11	0	58	3	19	8	0	30	167
12:00 - 12:15	17	24	8	0	49	10	17	1	0	28	4	37	11	0	52	5	19	11	0	35	164
12:15 - 12:30	19	28	13	0	60	19	26	2	0	47	3	43	8	0	54	8	25	9	0	42	203
12:30 - 12:45	26	36	8	0	70	6	19	7	0	32	7	40	12	0	59	5	27	10	0	42	203
12:45 - 1:00	15	24	8	0	47	15	32	4	0	51	5	37	8	1	51	6	20	8	0	34	183
1:00 - 1:15	19	19	16	0	54	9	26	3	0	38	3	30	10	0	43	2	32	15	0	49	184
1:15 - 1:30	12	38	14	0	64	9	15	1	0	25	6	47	9	0	62	6	26	13	0	45	196
1:30 - 1:45	25	36	10	0	71	10	20	5	0	35	9	33	10	0	52	5	22	8	0	35	193
1:45 - 2:00	22	29	13	0	64	18	17	1	0	36	6	41	20	0	67	2	33	16	0	51	218
2:00 - 2:15	14	38	13	0	65	7	19	3	0	29	11	37	8	0	56	10	32	13	0	55	205
2:15 - 2:30	19	48	13	0	80	6	23	3	0	32	6	36	3	0	45	13	33	29	0	75	232
2:30 - 2:45	24	43	13	0	80	11	33	4	0	48	8	48	24	0	80	31	42	16	0	89	297
2:45 - 3:00	17	46	20	0	83	12	31	4	0	47	9	37	8	0	54	23	40	27	1	91	275
3:00 - 3:15	25	50	10	0	85	11	18	3	0	32	13	60	11	0	84	19	42	16	0	77	278
3:15 - 3:30	45	55	18	0	118	7	19	2	0	28	6	42	9	0	57	28	43	6	0	77	280
3:30 - 3:45	51	43	16	0	110	19	18	6	0	43	9	39	11	0	59	35	40	14	1	90	302
3:45 - 4:00	35	49	25	0	109	21	37	23	0	81	4	36	9	0	49	26	57	10	1	94	333
4:00 - 4:15	45	44	16	0	105	21	26	23	0	70	6	52	15	0	73	26	45	18	0	89	337
4:15 - 4:30	41	46	35	0	122	16	36	24	0	76	7	50	9	0	66	23	47	10	0	80	344
4:30 - 4:45	62	50	28	0	140	10	27	30	0	67	14	101	26	0	141	15	47	22	3	87	435
4:45 - 5:00	29	48	16	0	93	12	31	26	0	69	13	43	13	0	69	14	67	14	3	98	329
5:00 - 5:15	55	49	31	0	135	10	29	19	0	58	12	54	19	0	85	10	44	19	0	73	351
5:15 - 5:30	51	40	35	0	126	13	26	24	0	63	10	103	28	0	141	9	48	17	0	74	404
5:30 - 5:45	41	63	34	0	138	19	20	11	0	50	12	72	11	0	95	13	53	26	0	92	375
5:45 - 6:00	60	38	39	0	137	14	25	21	0	60	8	114	35	0	157	11	58	11	1	81	435
6:00 - 6:15	47	25	35	0	107	13	23	7	0	43	12	49	9	0	70	15	60	9	1	85	305
6:15 - 6:30	50	39	31	0	120	14	28	16	0	58	11	109	26	0	146	11	65	18	2	96	420
6:30 - 6:45	44	44	40	0	128	10	16	6	0	32	7	50	19	0	76	13	59	8	0	80	316
6:45 - 7:00	30	35	24	0	89	15	14	4	0	33	9	49	8	0	66	13	81	14	0	108	296
7:00 - 7:15	33	42	21	0	96	18	17	1	0	36	14	85	19	0	118	24	56	13	0	93	343
7:15 - 7:30	29	34	22	0	85	16	15	7	0	38	11	52	11	0	74	14	70	7	0	91	288
7:30 - 7:45	20	29	21	0	70	6	13	2	0	21	14	65	14	0	93	18	71	19	0	108	292
7:45 - 8:00	15	33	20	0	68	9	12	2	0	23	9	40	8	0	57	35	61	11	0	107	255
15 Hr Totals	1583	1671	845	0	4099	851	1313	355	0	2519	629	3353	659	3	4644	615	2454	987	22	4078	15340

VEHICLE TURNING MOVEMENT COUNT - SUMMARY

Intersection of: Blackburn Road
and: Rippon Blvd
Location: Prince William County, Virginia

Counted by: VCU
Date: May 22, 2014
Weather: Sunny/Warm
Entered by: SN



TIME	TRAFFIC FROM NORTH on: Blackburn Road					TRAFFIC FROM SOUTH on: Blackburn Road					TRAFFIC FROM EAST on: Rippon Blvd					TRAFFIC FROM WEST on: Rippon Blvd					TOTAL N + S + E + W
	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	RIGHT	THRU	LEFT	U-TN	TOTAL	
1 Hr Totals																					
5:00 - 6:00	46	24	6	0	76	46	29	0	0	75	23	208	10	1	242	4	127	35	0	166	559
5:15 - 6:15	58	31	6	0	95	71	55	0	0	126	34	235	10	1	280	5	167	59	0	231	732
5:30 - 6:30	74	37	9	0	120	100	81	1	0	182	51	266	11	0	328	6	209	84	0	299	929
5:45 - 6:45	84	48	14	0	146	111	105	2	0	218	76	270	16	0	362	10	210	101	0	321	1047
6:00 - 7:00	93	58	20	0	171	129	113	8	0	250	90	269	18	0	377	9	232	107	0	348	1146
6:15 - 7:15	99	65	24	0	188	110	122	8	0	240	93	301	29	0	423	10	230	125	0	365	1216
6:30 - 7:30	107	69	25	0	201	98	132	7	0	237	89	298	33	0	420	19	218	120	2	359	1217
6:45 - 7:45	104	66	23	0	193	112	142	10	0	264	73	300	40	0	413	21	223	148	2	394	1264
7:00 - 8:00	117	65	28	0	210	104	168	6	0	278	82	312	45	0	439	24	209	172	2	407	1334
7:15 - 8:15	120	72	30	0	222	118	160	7	0	285	83	275	44	0	402	32	222	158	2	414	1323
7:30 - 8:30	108	77	38	0	223	108	141	10	0	259	85	281	49	1	416	23	191	151	0	365	1263
7:45 - 8:45	112	85	38	0	235	68	124	8	0	200	86	290	49	1	426	30	151	117	4	302	1163
8:00 - 9:00	95	86	30	0	211	62	88	10	0	160	61	286	49	1	397	37	133	84	6	260	1028
8:15 - 9:15	83	76	35	0	194	58	77	12	0	147	50	277	45	1	373	31	92	74	6	203	917
8:30 - 9:30	77	67	30	0	174	55	70	13	0	138	42	256	39	0	337	35	90	65	7	197	846
8:45 - 9:45	76	56	30	0	162	59	74	15	0	148	34	226	35	0	295	28	91	64	3	186	791
9:00 - 10:00	69	65	29	0	163	43	74	16	0	133	35	216	37	0	288	22	78	62	1	163	747
9:15 - 10:15	62	63	27	0	152	31	77	16	0	124	36	218	39	0	293	23	81	55	1	160	729
9:30 - 10:30	60	60	27	0	147	27	78	13	0	118	34	207	37	0	278	21	95	51	0	167	710
9:45 - 10:45	51	66	29	0	146	28	68	10	0	106	34	193	32	0	259	18	103	37	0	158	669
10:00 - 11:00	51	49	30	0	130	33	63	9	0	105	29	177	28	0	234	14	102	30	0	146	615
10:15 - 11:15	54	51	29	0	134	38	54	6	0	98	31	155	21	0	207	11	117	31	0	159	598
10:30 - 11:30	58	55	30	0	143	39	53	10	0	102	29	157	23	0	209	14	110	32	0	156	610
10:45 - 11:45	65	51	28	0	144	30	52	11	0	93	27	156	29	0	212	16	110	39	0	165	614
11:00 - 12:00	75	59	36	0	170	28	50	11	0	89	31	154	31	0	216	17	108	40	0	165	640
11:15 - 12:15	77	68	35	0	180	26	54	12	0	92	25	162	39	0	226	20	88	38	0	146	644
11:30 - 12:30	81	84	40	0	205	38	66	9	0	113	19	157	41	0	217	22	92	39	0	153	688
11:45 - 12:45	88	107	43	0	238	41	72	14	0	127	21	160	42	0	223	21	90	38	0	149	737
12:00 - 1:00	77	112	37	0	226	50	94	14	0	158	19	157	39	1	216	24	91	38	0	153	753
12:15 - 1:15	79	107	45	0	231	49	103	16	0	168	18	150	38	1	207	21	104	42	0	167	773
12:30 - 1:30	72	117	46	0	235	39	92	15	0	146	21	154	39	1	215	19	105	46	0	170	766
12:45 - 1:45	71	117	48	0	236	43	93	13	0	149	23	147	37	1	208	19	100	44	0	163	756
1:00 - 2:00	78	122	53	0	253	46	78	10	0	134	24	151	49	0	224	15	113	52	0	180	791
1:15 - 2:15	73	141	50	0	264	44	71	10	0	125	32	158	47	0	237	23	113	50	0	186	812
1:30 - 2:30	80	151	49	0	280	41	79	12	0	132	32	147	41	0	220	30	120	66	0	216	848
1:45 - 2:45	79	158	52	0	289	42	92	11	0	145	31	162	55	0	248	56	140	74	0	270	952
2:00 - 3:00	74	175	59	0	308	36	106	14	0	156	34	158	43	0	235	77	147	85	1	310	1009
2:15 - 3:15	85	187	56	0	328	40	105	14	0	159	36	181	46	0	263	86	157	88	1	332	1082
2:30 - 3:30	111	194	61	0	366	41	101	13	0	155	36	187	52	0	275	101	167	65	1	334	1130
2:45 - 3:45	138	194	64	0	396	49	86	15	0	150	37	178	39	0	254	105	165	63	2	335	1135
3:00 - 4:00	156	197	69	0	422	58	92	34	0	184	32	177	40	0	249	108	182	46	2	338	1193
3:15 - 4:15	176	191	75	0	442	68	100	54	0	222	25	169	44	0	238	115	185	48	2	350	1252
3:30 - 4:30	172	182	92	0	446	77	117	76	0	270	26	177	44	0	247	110	189	52	2	353	1316
3:45 - 4:45	183	189	104	0	476	68	126	100	0	294	31	239	59	0	329	90	196	60	4	350	1449
4:00 - 5:00	177	188	95	0	460	59	120	103	0	282	40	246	63	0	349	78	206	64	6	354	1445
4:15 - 5:15	187	193	110	0	490	48	123	99	0	270	46	248	67	0	361	62	205	65	6	338	1459
4:30 - 5:30	197	187	110	0	494	45	113	99	0	257	49	301	86	0	436	48	206	72	6	332	1519
4:45 - 5:45	176	200	116	0	492	54	106	80	0	240	47	272	71	0	390	46	212	76	3	337	1459
5:00 - 6:00	207	190	139	0	536	56	100	75	0	231	42	343	93	0	478	43	203	73	1	320	1565
5:15 - 6:15	199	166	143	0	508	59	94	63	0	216	42	338	83	0	463	48	219	63	2	332	1519
5:30 - 6:30	198	165	139	0	502	60	96	55	0	211	43	344	81	0	468	50	236	64	4	354	1535
5:45 - 6:45	201	146	145	0	492	51	92	50	0	193	38	322	89	0	449	50	242	46	4	342	1476
6:00 - 7:00	171	143	130	0	444	52	81	33	0	166	39	257	62	0	358	52	265	49	3	369	1337
6:15 - 7:15	157	160	116	0	433	57	75	27	0	159	41	293	72	0	406	61	261	53	2	377	1375
6:30 - 7:30	136	155	107	0	398	59	62	18	0	139	41	236	57	0	334	64	266	42	0	372	1243
6:45 - 7:45	112	140	88	0	340	55	59	14	0	128	48	251	52	0	351	69	278	53	0	400	1219
7:00 - 8:00	97	138	84	0	319	49	57	12	0	118	48	242	52	0	342	91	258	50	0	399	1178
PEAK HOUR																					
7:00 - 8:00	117	65	28	0	210	104	168	6	0	278	82	312	45	0	439	24	209	172	2	407	1334
5:00 - 6:00	207	190	139	0	536	56	100	75	0	231	42	343	93	0	478	43	203	73	1	320	1565

PEDESTRIAN OBSERVATIONS - SUMMARY

Intersection of: Blackburn Road
and: Rippon Blvd
Location: Prince William County, Virginia

Counted by: VCU
Date: May 22, 2014
Weather: Sunny/Warm
Entered by: SN

Thursday



TIME	NORTH LEG	SOUTH LEG	EAST LEG	WEST LEG
	Blackburn Road	Blackburn Road	Rippon Blvd	Rippon Blvd
AM				
5:00 - 5:15	0	1	0	0
5:15 - 5:30	0	0	0	0
5:30 - 5:45	0	0	0	0
5:45 - 6:00	0	0	0	0
6:00 - 6:15	0	0	0	0
6:15 - 6:30	0	0	0	0
6:30 - 6:45	0	0	0	0
6:45 - 7:00	0	0	0	0
7:00 - 7:15	0	0	0	0
7:15 - 7:30	0	1	0	0
7:30 - 7:45	0	2	0	0
7:45 - 8:00	0	0	0	0
8:00 - 8:15	0	2	0	0
8:15 - 8:30	0	2	0	0
8:30 - 8:45	0	2	0	0
8:45 - 9:00	0	1	0	0
9:00 - 9:15	0	2	0	0
9:15 - 9:30	0	1	0	0
9:30 - 9:45	0	2	0	0
9:45 - 10:00	0	1	0	0
10:00 - 10:15	0	2	0	0
10:15 - 10:30	0	0	0	0
10:30 - 10:45	1	3	0	0
10:45 - 11:00	0	2	0	0
11:00 - 11:15	0	0	0	0
11:15 - 11:30	0	1	1	0
11:30 - 11:45	0	0	0	0
11:45 - 12:00	0	0	0	0
12:00 - 12:15	0	0	0	0
12:15 - 12:30	0	0	0	0
12:30 - 12:45	0	0	0	0
12:45 - 1:00	1	0	0	0
1:00 - 1:15	0	0	0	0
1:15 - 1:30	0	1	0	0
1:30 - 1:45	0	1	0	0
1:45 - 2:00	0	1	0	0
2:00 - 2:15	0	0	0	0
2:15 - 2:30	0	0	0	0
2:30 - 2:45	0	0	0	0
2:45 - 3:00	0	3	0	0
3:00 - 3:15	0	0	0	0
3:15 - 3:30	0	0	0	0
3:30 - 3:45	0	0	0	0
3:45 - 4:00	0	1	0	0
4:00 - 4:15	0	2	0	0
4:15 - 4:30	0	2	0	0
4:30 - 4:45	1	0	0	0
4:45 - 5:00	0	0	0	0
5:00 - 5:15	0	3	0	0
5:15 - 5:30	1	2	0	0
5:30 - 5:45	0	0	0	0
5:45 - 6:00	0	0	0	0
6:00 - 6:15	0	0	0	0
6:15 - 6:30	0	0	1	0
6:30 - 6:45	0	3	0	0
6:45 - 7:00	0	2	2	0
7:00 - 7:15	1	2	0	0
7:15 - 7:30	0	2	0	0
7:30 - 7:45	0	2	2	0
7:45 - 8:00	1	1	0	2
TOTALS	6	53	6	2

The Traffic Group, Inc.
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 "Merging Innovation and Excellence"
 (800) 583-8411

Intersection of SR 638 (Blackburn Road)
 and SR 1392 (Rippon Blvd)
 Prince William County, Virginia
 North Leg
 Start Date: 5/22/2014

Summary Information:

6:00:00 AM - 6:59:00 AM	Lane 1
Total Vehicle Count:	75
Delayed Vehicle Count:	75
Through Vehicle Count:	0
Average Stopped Time:	7.75
Maximum Stopped Time:	48
Min. Secs. for Delay:	0
Average Queue:	0.19
Queue Density:	1.16
Maximum Queue:	4
Delay in Vehicle Hour:	0.16
Total Delay:	581

Summary Information:

7:00:00 AM - 8:00:00 AM	Lane 1
Total Vehicle Count:	94
Delayed Vehicle Count:	94
Through Vehicle Count:	0
Average Stopped Time:	10.29
Maximum Stopped Time:	52
Min. Secs. for Delay:	0
Average Queue:	0.27
Queue Density:	1.19
Maximum Queue:	3
Delay in Vehicle Hour:	0.27
Total Delay:	967

Summary Information:

8:00:00 AM - 8:59:00 AM	Lane 1
Total Vehicle Count:	117
Delayed Vehicle Count:	117
Through Vehicle Count:	0
Average Stopped Time:	9.68
Maximum Stopped Time:	30
Min. Secs. for Delay:	0
Average Queue:	0.32
Queue Density:	1.34
Maximum Queue:	4
Delay in Vehicle Hour:	0.32
Total Delay:	1132

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Intersection of SR 638 (Blackburn Road)
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 Prince William County, Virginia
 North Leg
 Start Date: 5/22/2014

Summary Information:

4:00:00 PM - 5:00:00 PM	Lane 1
Total Vehicle Count:	288
Delayed Vehicle Count:	288
Through Vehicle Count:	0
Average Stopped Time:	22.67
Maximum Stopped Time:	80
Min. Secs. for Delay:	0
Average Queue:	1.82
Queue Density:	2.57
Maximum Queue:	7
Delay in Vehicle Hour:	1.82
Total Delay:	6530

Summary Information:

5:00:00 PM - 6:00:00 PM	Lane 1
Total Vehicle Count:	332
Delayed Vehicle Count:	332
Through Vehicle Count:	0
Average Stopped Time:	25.95
Maximum Stopped Time:	97
Min. Secs. for Delay:	0
Average Queue:	2.40
Queue Density:	2.91
Maximum Queue:	9
Delay in Vehicle Hour:	2.40
Total Delay:	8617

Summary Information:

6:00:00 PM - 7:00:00 PM	Lane 1
Total Vehicle Count:	276
Delayed Vehicle Count:	276
Through Vehicle Count:	0
Average Stopped Time:	13.57
Maximum Stopped Time:	63
Min. Secs. for Delay:	0
Average Queue:	1.04
Queue Density:	1.78
Maximum Queue:	7
Delay in Vehicle Hour:	1.04
Total Delay:	3745

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Intersection of SR 638 (Blackburn Road)
 and SR 1392 (Rippon Blvd)
 Prince William County, Virginia
 South Leg
 Start Date: 5/22/2014

Summary Information:

6:00:00 AM - 7:00:00 AM	Lane 1	Lane 2
Total Vehicle Count:	92	116
Delayed Vehicle Count:	92	116
Through Vehicle Count:	0	0
Average Stopped Time:	8.14	9.293
Maximum Stopped Time:	28	57
Min. Secs. for Delay:	0	0
Average Queue:	0.25	0.302
Queue Density:	1.48	1.321
Maximum Queue:	7	4
Delay in Vehicle Hour:	0.21	0.30
Total Delay:	749	1078

Summary Information:

7:00:00 AM - 8:00:00 AM	Lane 1	Lane 2
Total Vehicle Count:	80	182
Delayed Vehicle Count:	80	182
Through Vehicle Count:	0	0
Average Stopped Time:	6.70	12.68
Maximum Stopped Time:	19	44
Min. Secs. for Delay:	0	0
Average Queue:	0.17	0.673
Queue Density:	1.26	1.611
Maximum Queue:	3	5
Delay in Vehicle Hour:	0.15	0.64
Total Delay:	513	2307

Summary Information:

8:00:00 AM - 9:00:00 AM	Lane 1	Lane 2
Total Vehicle Count:	56	96
Delayed Vehicle Count:	56	96
Through Vehicle Count:	0	0
Average Stopped Time:	6.57	9.729
Maximum Stopped Time:	27	49
Min. Secs. for Delay:	0	0
Average Queue:	0.12	0.265
Queue Density:	1.36	1.246
Maximum Queue:	6	3
Delay in Vehicle Hour:	0.10	0.27
Total Delay:	366	934

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Intersection of SR 638 (Blackburn Road)
 and SR 1392 (Rippon Blvd)
 Prince William County, Virginia
 South Leg
 Start Date: 5/22/2014

Summary Information:

4:00:00 PM - 5:00:00 PM	Lane 1	Lane 2
Total Vehicle Count:	43	228
Delayed Vehicle Count:	43	228
Through Vehicle Count:	0	0
Average Stopped Time:	8.28	17.965
Maximum Stopped Time:	37	64
Min. Secs. for Delay:	0	0
Average Queue:	0.10	1.154
Queue Density:	1.22	2.179
Maximum Queue:	3	6
Delay in Vehicle Hour:	0.10	1.15
Total Delay:	356	4096

Summary Information:

5:00:00 PM - 6:00:00 PM	Lane 1	Lane 2
Total Vehicle Count:	54	179
Delayed Vehicle Count:	54	179
Through Vehicle Count:	0	0
Average Stopped Time:	4.33	12.631
Maximum Stopped Time:	13	39
Min. Secs. for Delay:	0	0
Average Queue:	0.06	0.645
Queue Density:	1.01	1.530
Maximum Queue:	2	5
Delay in Vehicle Hour:	0.07	0.65
Total Delay:	234	2261

Summary Information:

6:00:00 PM - 7:00:00 PM	Lane 1	Lane 2
Total Vehicle Count:	53	115
Delayed Vehicle Count:	53	115
Through Vehicle Count:	0	0
Average Stopped Time:	5.49	12.383
Maximum Stopped Time:	18	86
Min. Secs. for Delay:	0	0
Average Queue:	0.08	0.398
Queue Density:	1.05	1.439
Maximum Queue:	2	4
Delay in Vehicle Hour:	0.08	0.40
Total Delay:	291	1424

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Intersection of SR 638 (Blackburn Road)
 and SR 1392 (Rippon Blvd)
 Prince William County, Virginia
 East Leg
 Start Date: 5/22/2014

Summary Information:

6:00:00 AM - 7:00:00 AM	Lane 1	Lane 2
Total Vehicle Count:	239	142
Delayed Vehicle Count:	239	142
Through Vehicle Count:	0	0
Average Stopped Time:	7.35	7.113
Maximum Stopped Time:	91	71
Min. Secs. for Delay:	0	0
Average Queue:	0.49	0.286
Queue Density:	1.33	1.232
Maximum Queue:	8	3
Delay in Vehicle Hour:	0.49	0.29
Total Delay:	1757	1010

Summary Information:

7:00:00 AM - 8:00:00 AM	Lane 1	Lane 2
Total Vehicle Count:	230	211
Delayed Vehicle Count:	230	211
Through Vehicle Count:	0	0
Average Stopped Time:	10.80	8.900
Maximum Stopped Time:	56	50
Min. Secs. for Delay:	0	0
Average Queue:	0.69	0.524
Queue Density:	1.54	1.268
Maximum Queue:	7	3
Delay in Vehicle Hour:	0.69	0.52
Total Delay:	2483	1878

Summary Information:

8:00:00 AM - 9:00:00 AM	Lane 1	Lane 2
Total Vehicle Count:	201	189
Delayed Vehicle Count:	201	189
Through Vehicle Count:	0	0
Average Stopped Time:	7.94	8.291
Maximum Stopped Time:	23	38
Min. Secs. for Delay:	0	0
Average Queue:	0.45	0.442
Queue Density:	1.29	1.327
Maximum Queue:	6	6
Delay in Vehicle Hour:	0.45	0.44
Total Delay:	1596	1567

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 East Leg
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Summary Information:

4:01:00 PM - 5:00:00 PM	Lane 1	Lane 2
Total Vehicle Count:	183	181
Delayed Vehicle Count:	183	181
Through Vehicle Count:	0	0
Average Stopped Time:	17.43	27.801
Maximum Stopped Time:	51	88
Min. Secs. for Delay:	0	0
Average Queue:	0.92	1.433
Queue Density:	1.92	2.993
Maximum Queue:	6	9
Delay in Vehicle Hour:	0.92	1.43
Total Delay:	3189	5032

Summary Information:

5:00:00 PM - 6:00:00 PM	Lane 1	Lane 2
Total Vehicle Count:	254	246
Delayed Vehicle Count:	254	246
Through Vehicle Count:	0	0
Average Stopped Time:	25.07	37.768
Maximum Stopped Time:	83	95
Min. Secs. for Delay:	0	0
Average Queue:	1.77	2.586
Queue Density:	2.73	4.399
Maximum Queue:	7	10
Delay in Vehicle Hour:	1.77	2.59
Total Delay:	6368	9291

Summary Information:

6:00:00 PM - 7:00:00 PM	Lane 1	Lane 2
Total Vehicle Count:	195	178
Delayed Vehicle Count:	195	178
Through Vehicle Count:	0	0
Average Stopped Time:	14.61	23.225
Maximum Stopped Time:	65	101
Min. Secs. for Delay:	0	0
Average Queue:	0.79	1.153
Queue Density:	1.98	3.087
Maximum Queue:	8	10
Delay in Vehicle Hour:	0.80	1.15
Total Delay:	2848	4134

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 Prince William County, Virginia
 West Leg
 Start Date: 5/22/2014

Summary Information:

6:00:00 AM - 7:00:00 AM	Lane 1	Lane 2
Total Vehicle Count:	198	154
Delayed Vehicle Count:	198	154
Through Vehicle Count:	0	0
Average Stopped Time:	11.18	8.825
Maximum Stopped Time:	57	27
Min. Secs. for Delay:	0	0
Average Queue:	0.62	0.384
Queue Density:	1.89	1.449
Maximum Queue:	7	4
Delay in Vehicle Hour:	0.62	0.38
Total Delay:	2214	1359

Summary Information:

7:00:00 AM - 8:01:00 AM	Lane 1	Lane 2
Total Vehicle Count:	189	221
Delayed Vehicle Count:	189	221
Through Vehicle Count:	0	0
Average Stopped Time:	14.84	20.765
Maximum Stopped Time:	61	109
Min. Secs. for Delay:	0	0
Average Queue:	0.78	1.273
Queue Density:	2.02	2.710
Maximum Queue:	7	8
Delay in Vehicle Hour:	0.78	1.27
Total Delay:	2805	4589

Summary Information:

8:00:00 AM - 9:01:00 AM	Lane 1	Lane 2
Total Vehicle Count:	127	127
Delayed Vehicle Count:	127	127
Through Vehicle Count:	0	0
Average Stopped Time:	9.62	11.961
Maximum Stopped Time:	46	49
Min. Secs. for Delay:	0	0
Average Queue:	0.34	0.421
Queue Density:	1.52	1.650
Maximum Queue:	5	6
Delay in Vehicle Hour:	0.34	0.42
Total Delay:	1222	1519

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 Prince William County, Virginia
 West Leg
 Start Date: 5/22/2014

Summary Information:

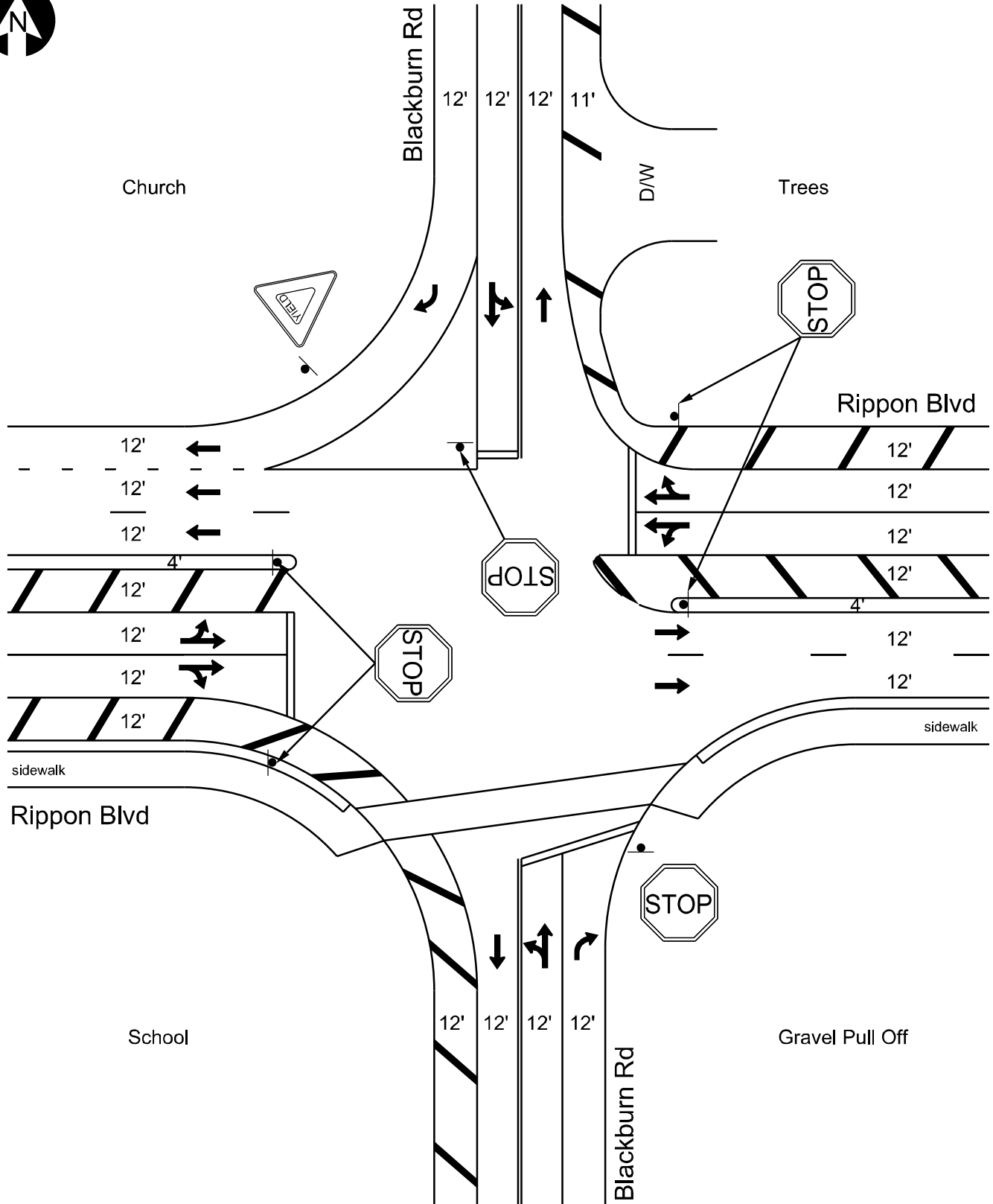
4:00:00 PM - 5:00:00 PM	Lane 1	Lane 2
Total Vehicle Count:	200	155
Delayed Vehicle Count:	200	155
Through Vehicle Count:	0	0
Average Stopped Time:	17.30	18.026
Maximum Stopped Time:	64	63
Min. Secs. for Delay:	0	0
Average Queue:	0.96	0.779
Queue Density:	2.27	2.051
Maximum Queue:	7	8
Delay in Vehicle Hour:	0.96	0.78
Total Delay:	3459	2794

Summary Information:

5:00:00 PM - 6:01:00 PM	Lane 1	Lane 2
Total Vehicle Count:	168	162
Delayed Vehicle Count:	168	162
Through Vehicle Count:	0	0
Average Stopped Time:	20.79	23.488
Maximum Stopped Time:	72	71
Min. Secs. for Delay:	0	0
Average Queue:	0.97	1.090
Queue Density:	2.58	2.518
Maximum Queue:	7	8
Delay in Vehicle Hour:	0.97	1.09
Total Delay:	3492	3805

Summary Information:

6:00:00 PM - 7:00:00 PM	Lane 1	Lane 2
Total Vehicle Count:	214	168
Delayed Vehicle Count:	214	168
Through Vehicle Count:	0	0
Average Stopped Time:	19.17	15.030
Maximum Stopped Time:	63	69
Min. Secs. for Delay:	0	0
Average Queue:	1.14	0.704
Queue Density:	2.58	2.035
Maximum Queue:	8	7
Delay in Vehicle Hour:	1.14	0.70
Total Delay:	4103	2525



VDOT Nova Short Term
 Blackburn Rd
 at
 Rippon Blvd

FIELD WORK BY: S.N.
 DRAWN BY: J.W.
 DATE: May 22, 2014
 SCALE: N/A

JOB NO.: 2012-1203
 DGN NAME: Blackburn Rd & Rippon Blvd
 LOCATION: Prince William Co., VA
 SHEET NO.: 1 OF 1



To see all the details that are visible on the screen, use the "Print" link next to the map.



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