

# Hazard Elimination Project Evaluation

## Project Information

Order ID: 41000038291

Project ID: W-5140

Location: SR 1515 (St Anna Rd) at SR 1540 (Sally's Rd)

County: Robeson

City: Pembroke

Division: 6

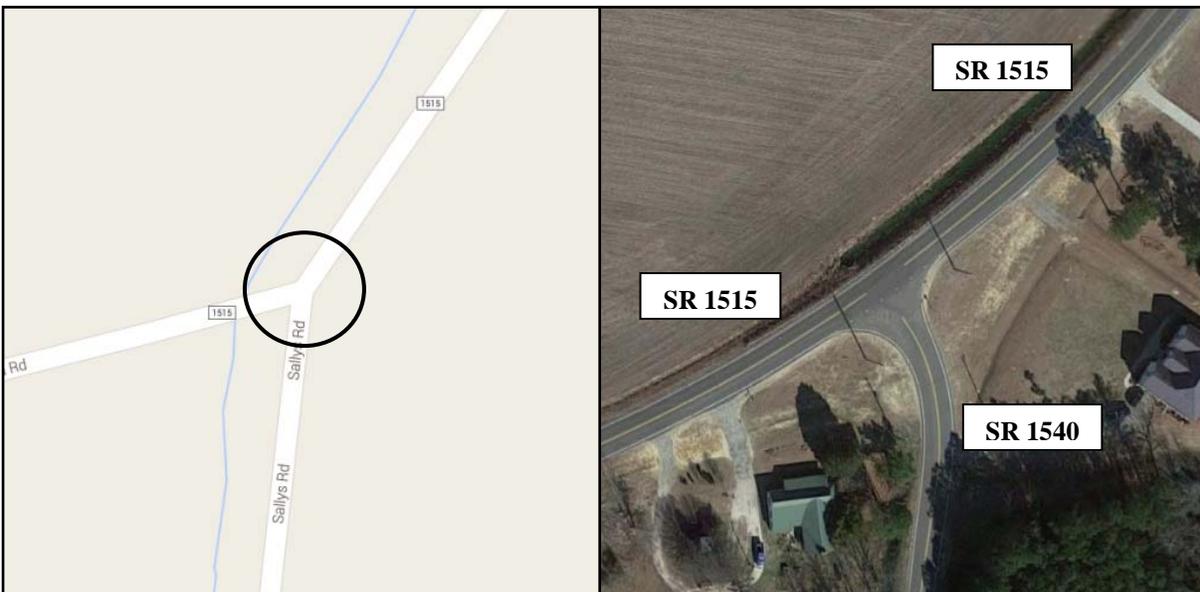
Signal ID: N/A

Countermeasure: Realign SR 1515 to provide a continuous movement and realign SR 1540 to tie into SR 1515 with SR 1540 being under stop sign control.

Project Completion: April 2012

Project Cost: \$429,000

## Map and Aerial (from Google Maps – Coordinates are 34.695048, -79.214507)



**Naive Before and After Analysis**

Before Period: July 1, 2008 through February 29, 2012 (3 years 8 months)

Const. Period: March 1, 2012 through May 31, 2012

After Period: June 1, 2012 through January 31, 2016 (3 years 8 months)

Analysis Criteria: Treatment data consisted of all crashes within 150 feet of the subject intersection for the SR 1515 and SR 1540 approaches.

Target Crashes: Lane Departure Crashes - Run-Off Road (Left, Right, Straight), Fixed Object, Head-On, and Sideswipe (Opposite Direction).

<b><u>Treatment Information – Countermeasure Intersection Realignment</u></b>			
<b><u>Treatment Information</u></b>	<b>Before</b>	<b>After</b>	<b>Percent Reduction (-) Percent Increase (+)</b>
Total Crashes	13	0	- 100.0 %
Total Severity Index	4.42	0.00	- 100.0 %
Target Crashes	13	0	- 100.0 %
Target Crash Severity Index	4.42	0.00	- 100.0 %
Volume (2010, 2014)	1,400	1,300	- 7.1 %

<b><u>Injury Crash Summary</u></b>	<b>Before</b>	<b>After</b>	<b>Percent Reduction (-) Percent Increase (+)</b>
Fatal injury Crashes	0	0	N/A
Class A injury Crashes	0	0	N/A
Class B injury Crashes	2	0	- 100.0 %
Class C Injury Crashes	4	0	- 100.0 %
Property Damage Only	7	0	- 100.0 %

<b><u>Additional Information</u></b>	<b>Before</b>	<b>After</b>	<b>Percent Reduction (-) Percent Increase (+)</b>
Lane Departure Crashes (Target)	13	0	- 100.0 %
Night Crashes	12	0	- 100.0 %

### **Overall Summary Results**

Total Crashes:	- 100 %	(reduction)
Total Crash Severity:	- 100 %	(reduction)
Target Crashes:	- 100 %	(reduction)
Target Crash Severity:	- 100 %	(reduction)
Volume:	- 7 %	(reduction)

### **Additional Summary Results**

Lane Departure Crashes (Target):	- 100 %	(reduction)
Night Crashes:	- 100 %	(reduction)

### **Items for Discussion/Concerns**

The study intersection experienced a 100 % reduction in total crashes (13 to 0 crashes).

The target crashes (Lane Departure Crashes) experienced a 100 % reduction (13 to 0 crashes).

The study intersection experienced a 100 % reduction in night crashes (12 to 0 crashes).

### **Data Prepared For**

The Traffic Safety Unit *of the*  
Transportation Mobility and Safety Division *of the*  
Division of Highways *of the*  
North Carolina Department of Transportation

### **Data Prepared By**

Principal Investigator: Austin Bell, EI

Work Group/Consultant: AECOM

Date: April 8, 2016

W-5140  
 Order # 41000038291  
 Robeson County  
 BEFORE Period  
 7/1/08 - 2/29/12

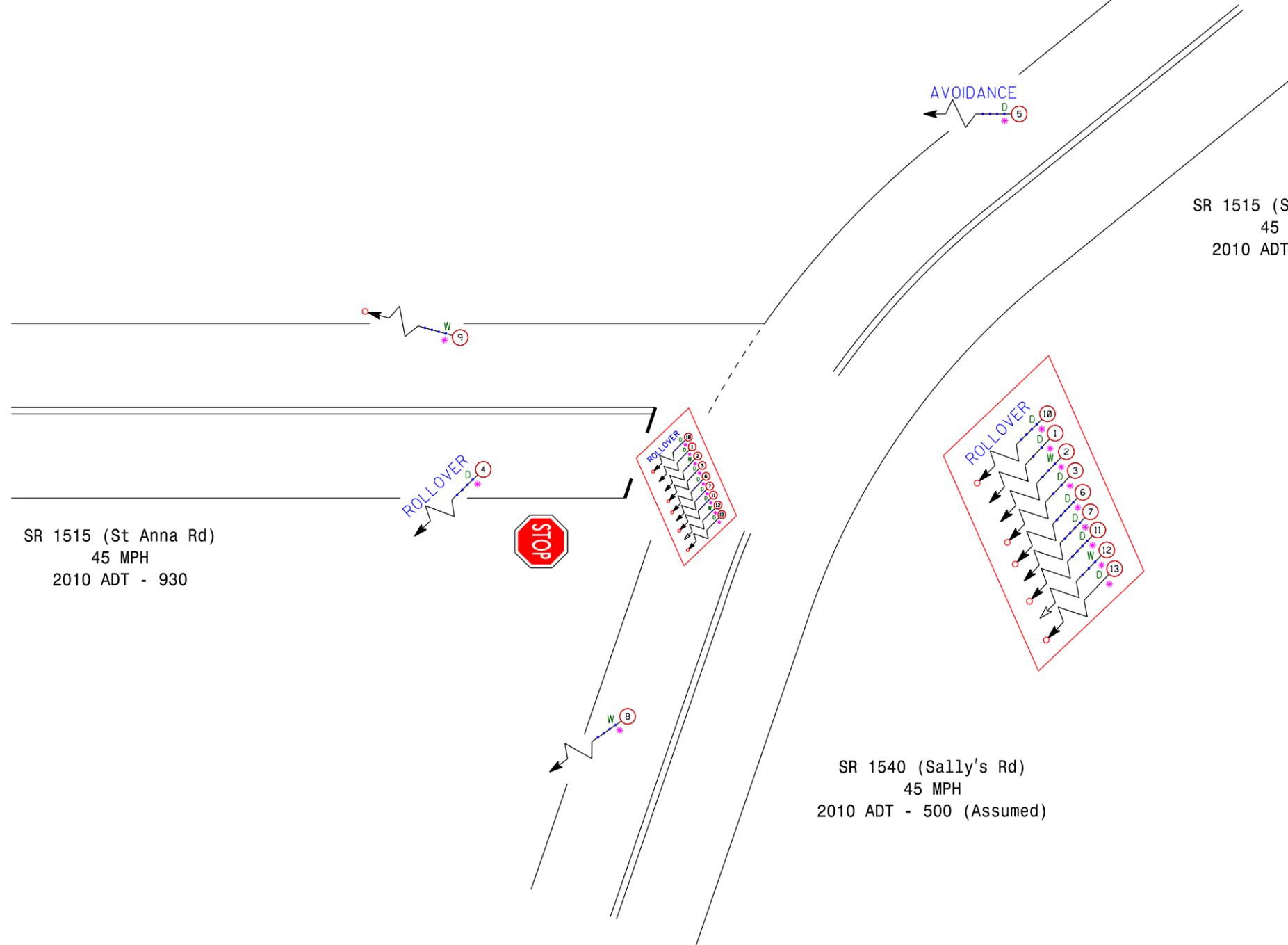


LEGEND							
	MOVING VEHICLE		ANGLE		9 MPH OR LESS		ANIMAL
	PARKED VEHICLE		TURNING		10 MPH TO 19		PEDESTRIAN
	PARKING VEHICLE		BACKING		20 MPH TO 29		BICYCLE
	MOVABLE OBJECT		SIDESWIPE		30 MPH TO 39		TRAIN
	HEAD ON		INJURY		40 MPH TO 49		DRIVER AT FAULT
	REAR END		FATALITY		50 MPH TO 59		DRY
	RAN OFF ROAD		60 MPH TO 69		WET		ICY OR SNOWY
	DAYLIGHT CRASH		70 AND UP		Other		
	NIGHT CRASH		SPEED UNKNOWN				

SR 1515 (St Anna Rd)  
 45 MPH  
 2010 ADT - 1,280

SR 1515 (St Anna Rd)  
 45 MPH  
 2010 ADT - 930

SR 1540 (Sally's Rd)  
 45 MPH  
 2010 ADT - 500 (Assumed)



Lane Departure  
 Target Crashes

**AECOM**

Prepared For:  
 N.C. DEPARTMENT of TRANSPORTATION  
 DIVISION of HIGHWAYS  
 TRANSPORTATION MOBILITY and  
 SAFETY DIVISION

**TRAFFIC SAFETY UNIT**

Date: 4-8-2016      Prepared By: Austin Bell, EI

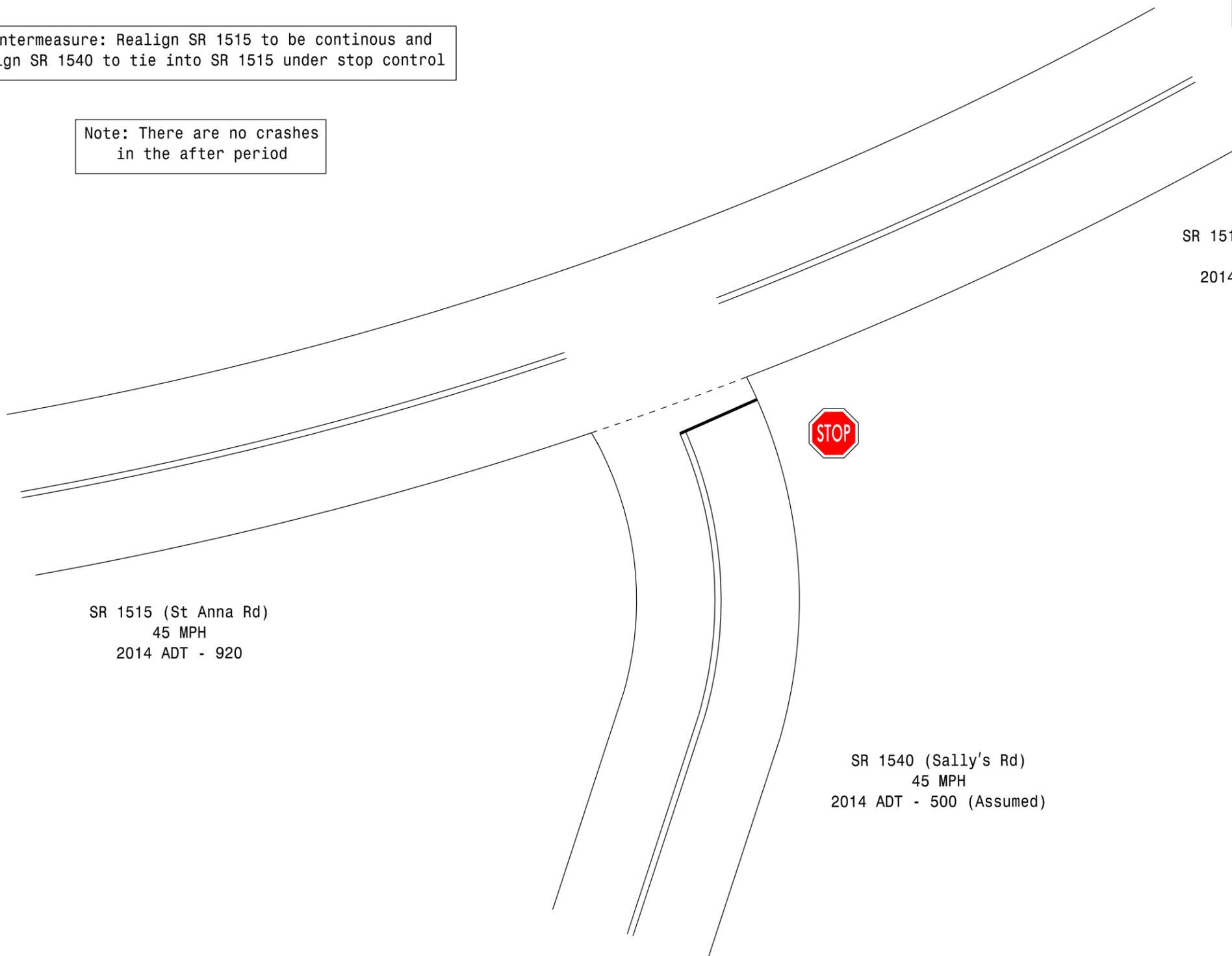
W-5140  
 Order # 41000038291  
 Robeson County  
 AFTER Period  
 6/1/12 - 1/31/16



Countermeasure: Realign SR 1515 to be continuous and realign SR 1540 to tie into SR 1515 under stop control

Note: There are no crashes in the after period

LEGEND							
	MOVING VEHICLE		ANGLE		9 MPH OR LESS		ANIMAL
	PARKED VEHICLE		TURNING		10 MPH TO 19		PEDESTRIAN
	PARKING VEHICLE		BACKING		20 MPH TO 29		BICYCLE
	MOVABLE OBJECT		SIDESWIPE		30 MPH TO 39		TRAIN
	HEAD ON		INJURY		40 MPH TO 49		DRIVER AT FAULT
	REAR END		FATALITY		50 MPH TO 59		DRY
	RAN OFF ROAD				60 MPH TO 69		WET
	DAYLIGHT CRASH				70 AND UP		ICY OR SNOWY
	NIGHT CRASH				SPEED UNKNOWN		Other



SR 1515 (St Anna Rd)  
 45 MPH  
 2014 ADT - 1,200

SR 1515 (St Anna Rd)  
 45 MPH  
 2014 ADT - 920

SR 1540 (Sally's Rd)  
 45 MPH  
 2014 ADT - 500 (Assumed)

Lane Departure  
 Target Crashes

**AECOM**

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**TRAFFIC SAFETY UNIT**

Date: 4-8-2016      Prepared By: Austin Bell, EI