

Spot Safety Project Evaluation

Project Information

Order ID: 41000033797

Project ID: 04-10-4447

Location: NC 111 at SR 1546 (Daw Pate Rd)

County: Wayne

City: North of Goldsboro

Division: 4

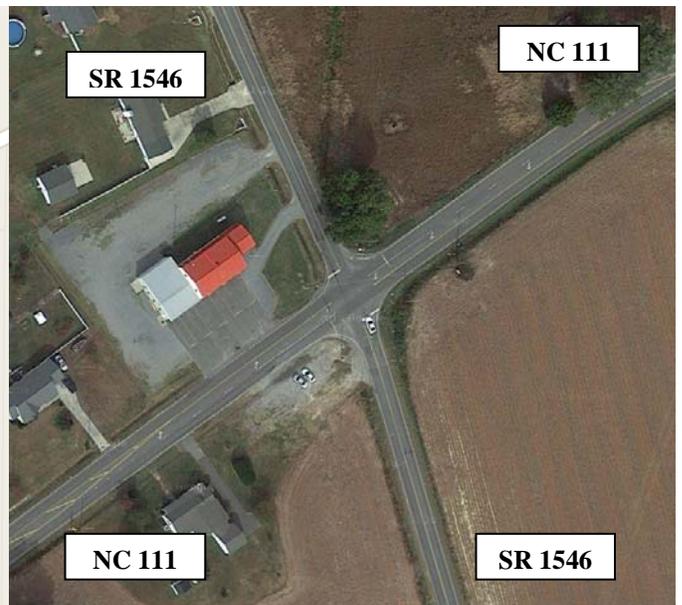
Signal ID: 04-1366

Countermeasure: Install overhead actuated "Vehicle Entering When Flashing" warning system supplemented with advance shoulder mounted sign/flasher assemblies on both approaches of NC 111.

Project Completion: March 28, 2011

Project Cost: \$55,000

Map and Aerial (from Google Maps – Coordinates are 35.456108,-77.933853)



Naive Before and After Analysis

Before Period: March 1, 2007 through January 31, 2011 (3 years 11 months)

Const. Period: February 1, 2011 through April 30, 2011

After Period: May 1, 2011 through March 31, 2015 (3 years 11 months)

Analysis Criteria: Treatment data consisted of all crashes within 150 feet of the subject intersection for the NC 111 and SR 1546 approaches.

Target Crashes: Frontal Impact Crashes (left-turn, same roadway; left-turn, different roadway; right-turn, same roadway; right-turn, different roadway; head-on; and angle crashes) in the intersection

<u>Treatment Information – Countermeasure Actuated Flasher</u>			
<u>Treatment Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Total Crashes	16	7	- 56.3 %
Total Severity Index	15.10	5.23	- 65.4 %
Target Crashes	15	6	- 60.0 %
Target Crash Severity Index	15.55	5.93	-61.9 %
Volume (2009, 2013)	4,300	3,700	- 14.0 %

<u>Injury Crash Summary</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Fatal injury Crashes	1	0	- 100.0 %
Class A injury Crashes	1	0	- 100.0 %
Class B injury Crashes	2	1	- 50.0 %
Class C Injury Crashes	8	3	- 62.5 %
Property Damage Only	4	3	- 25.0 %

<u>Additional Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Frontal Impact Crashes (Target)	15	6	- 60.0 %
Angle Crashes	14	5	- 64.3 %

Table 1 Summary Results

Total Crashes:	- 56 %	(reduction)
Total Crash Severity:	- 65 %	(reduction)
Target Crashes:	- 60 %	(reduction)
Target Crash Severity:	- 62 %	(reduction)
Volume:	- 14 %	(reduction)

Additional Summary Results

Frontal Impact Crashes (Target):	- 60 %	(reduction)
Angle Crashes:	- 64 %	(reduction)

Items for Discussion/Concerns

The study intersection experienced a 56 % reduction in total crashes (16 to 7 crashes).

The target crashes (Frontal Impact Crashes) experienced a 60 % reduction (15 to 6 crashes).

The intersection experienced a reduction in Angle Crashes (14 to 5 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: Andrew Covington, EI

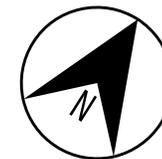
Work Group/Consultant: AECOM

Date: May 1, 2015

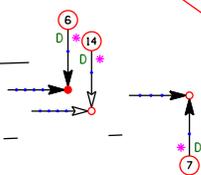
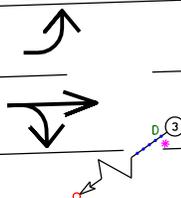
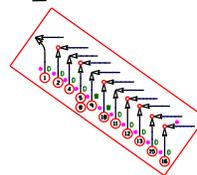
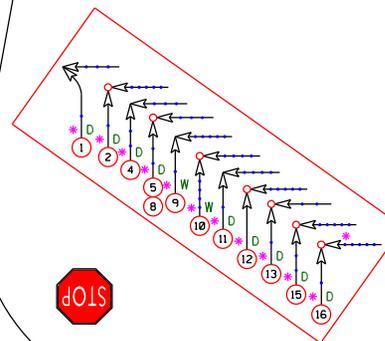
SS# 04-10-4447
 Order # 41000033797
 Wayne County
 Before Period
 3/1/07 - 1/31/11

SR 1546 (Daw Pate Rd)
 55 MPH
 2009 ADT 810

LEGEND							
	MOVING VEHICLE		ANGLE		9 MPH OR LESS		P PEDESTRIAN
	PEDESTRIAN		TURNING		10 MPH TO 19		T TRAIN
	PAKED VEHICLE		BACKING		20 MPH TO 29		DF DRIVER AT FAULT
	FIXED OBJECT		SWERVE		30 MPH TO 39		D DRY
	HEAD ON		OUT OF CONTROL		40 MPH TO 49		W WET
	REAR END		HURRY		50 MPH TO 59		I ICY OR SNOW
	RAN OFF ROAD		FATALITY		60 MPH TO 69		O ONLY
					70 AND UP		
					SPEED UNKNOWN		



Patetown
 Vol. Fire Department



NC 111
 45 MPH
 2009 ADT 3,000

NC 111
 45 MPH
 2009 ADT 3,350

SR 1546 (Daw Pate Rd)
 55 MPH
 2009 ADT 1,500

Frontal Impact Crashes

AECOM

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

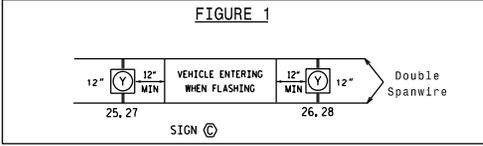
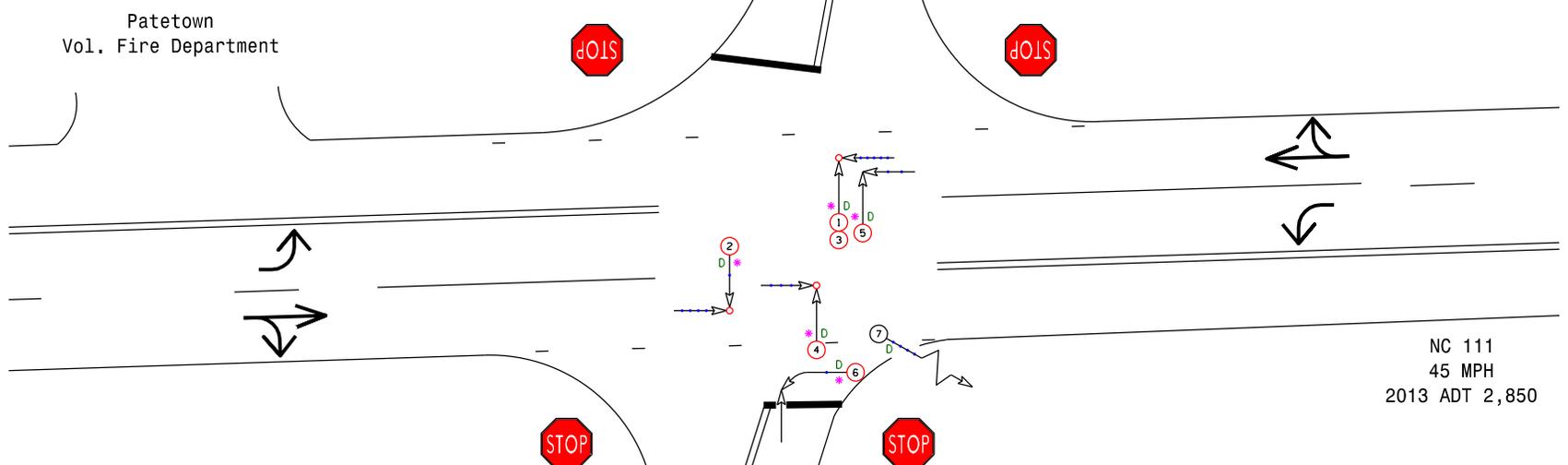
TRAFFIC SAFETY UNIT

Date: 5-1-2015 Prepared By: Andrew Covington, EI

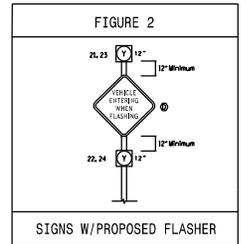
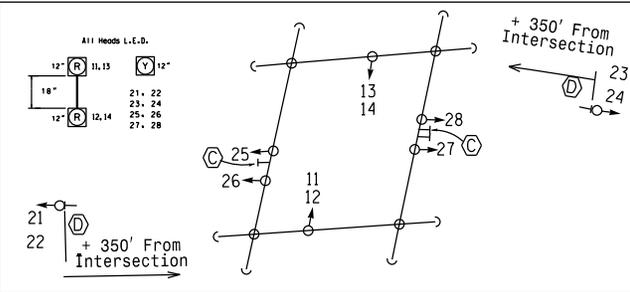
SS# 04-10-4447
 Order # 41000033797
 Wayne County
 After Period
 5/1/11 - 3/31/15

SR 1546 (Daw Pate Rd)
 55 MPH
 2013 ADT 710

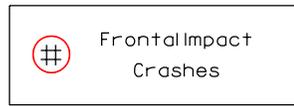
LEGEND							
	MOVING VEHICLE		ANGLE		1 MPH OR LESS		PEDESTRIAN
	PEDESTRIAN		TURNING		10 MPH TO 19		TRAIN
	PARKED VEHICLE		BACKING		20 MPH TO 29		DRIVER AT FAULT
	FIXED OBJECT		SIDESWIPE		30 MPH TO 39		DRY
	HEAD ON		OUT OF CONTROL		40 MPH TO 49		WET
	NEAR END		HURRY		50 MPH TO 59		ICY OR SNOW
	RAN OFF ROAD		FATALITY		60 MPH TO 69		TO AND UP
					SPEED UNKNOWN		ONLY



SIG ID 04-1366 (Actuated Flasher)



SR 1546 (Daw Pate Rd)
 55 MPH
 2013 ADT 1,400



AECOM

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

TRAFFIC SAFETY UNIT

Date: 5-1-2015 Prepared By: Andrew Covington, EI