

# Spot Safety Project Evaluation

## Project Information

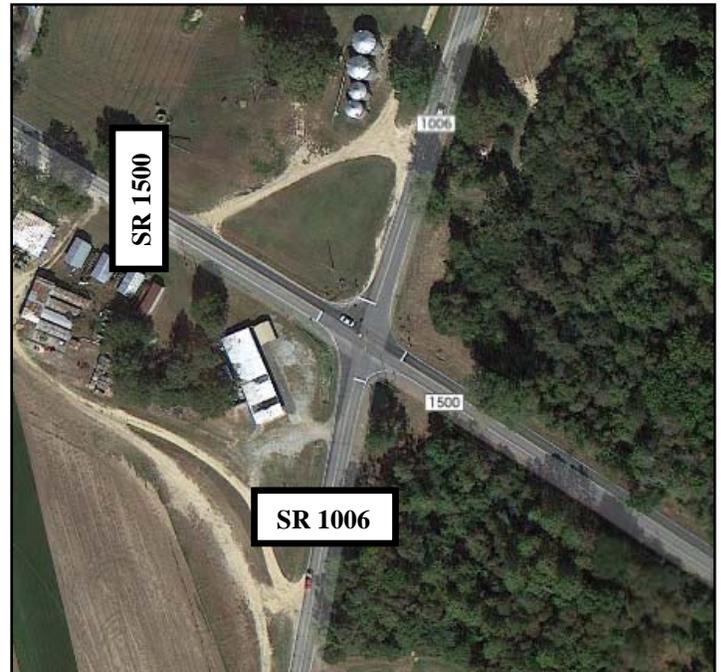
Order ID: 41000029984  
Project ID: 06-09-201  
Location: SR 1006 (Old Stage Rd) at SR 1500 (Benson Rd)  
County: Harnett  
Division: 6  
Signal ID: 06-1234  
Countermeasure: Convert to a 4-way stop.

Project Completion: March 16, 2010\*

Project Cost: \$7,500

\*After reviewing the crash reports for the study, it was noted that a crash that occurred on 12/31/2009 showed a 4-way stop in the diagram, so the time periods were adjusted accordingly.

## Map and Aerial (from Google Maps – Coordinates are 35.4943035,-78.699581)



**Naive Before and After Analysis**

- Before Period: September 1, 2005 through November 30, 2009 (4.25 years)
- Const. Period: December 1, 2009 through January 31, 2010
- After Period: February 1, 2010 through April 30, 2014 (4.25 years)
- Analysis Criteria: Treatment data consisted of all crashes within 150 feet of the subject intersection.
- Target Crashes: Frontal Impact Crashes were the target crashes for the applied countermeasure. Frontal Impact Crash types include: Left turn, same roadway; Left turn, different roadways; Right turn, same roadway; Right turn, different roadways; and Angle.

<b><u>Treatment Information</u></b>	<b>Before</b>	<b>After</b>	<b>Percent Reduction (-) Percent Increase (+)</b>
Total Crashes	18	2	- 88.9 %
Total Severity Index	5.93	1.00	- 83.1 %
Target Crashes	17	1	- 94.1 %
Target Crash Severity Index	5.79	1.00	- 82.7 %
Volume (2007, 2012)	4100	3200	- 22.0 %

<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	6	0	- 100.0 %
Class C Injury Crashes	6	0	- 100.0 %
Property Damage Only	6	2	- 66.7 %

### **Overall Summary Results**

Total Crashes:	- 89 %	(reduction)
Total Crash Severity:	- 83 %	(reduction)
Target Crashes:	- 94 %	(reduction)
Target Crash Severity:	- 83 %	(reduction)
Volume:	-22 %	(reduction)

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

This intersection experienced almost a complete reduction in total crashes and target crashes, as well as a large reduction in their respective severities.

### **Data Prepared For**

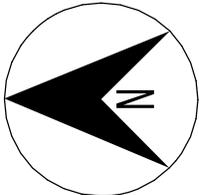
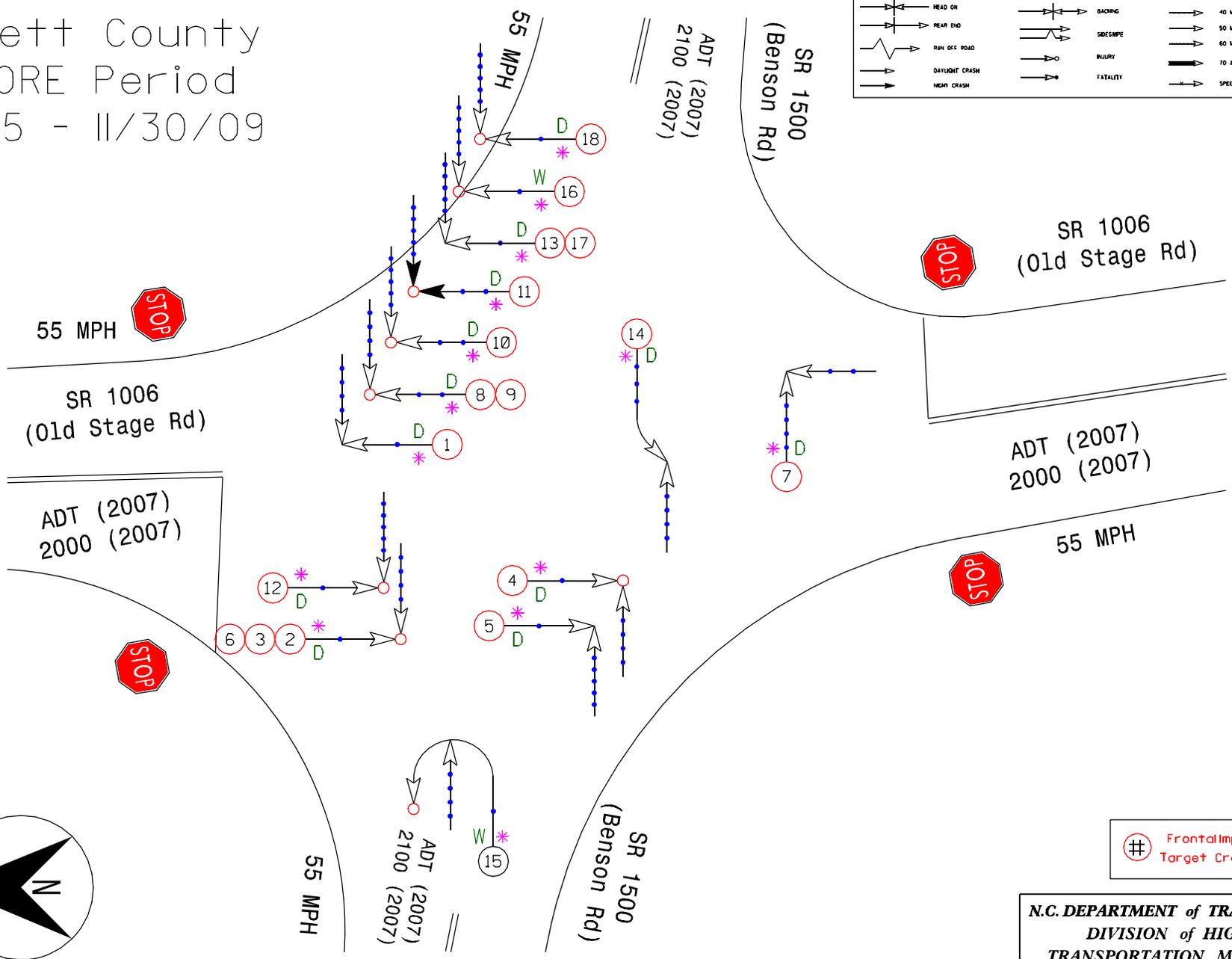
The Traffic Safety Unit *of the*  
Transportation Mobility and Safety Division *of the*  
Division of Highways *of the*  
North Carolina Department of Transportation

### **Data Prepared By**

Principal Investigator: Ian Pike, Summer Engineering Assistant  
Checked by: Brad Robinson, PE  
Work Group/Consultant: NCDOT - Safety Evaluation Group  
Date: July 9, 2014

SS# 06-09-201  
 Order# 41000029984  
 Harnett County  
 BEFORE Period  
 9/1/05 - 11/30/09

LEGEND							
	MOVING VEHICLE		ANGLE		10 MPH OR LESS		A ANIMAL
	PAKED VEHICLE		TURNING		20 MPH TO 29		P PEDESTRIAN
	PARKING VEHICLE		BACKING		30 MPH TO 39		B BICYCLE
	MOVABLE OBJECT		SIDESWIPE		40 MPH TO 49		T TRAIN
	HEAD ON		INJURY		50 MPH TO 59		* DRIVER AT FAULT
	REAR END		FATALITY		60 MPH TO 69		D DEER
	RAN OFF ROAD		70 AND UP		SPEED UNKNOWN		C CAR
	DAYLIGHT CRASH						KY OR SHORT
	NIGHT CRASH						O OTHER

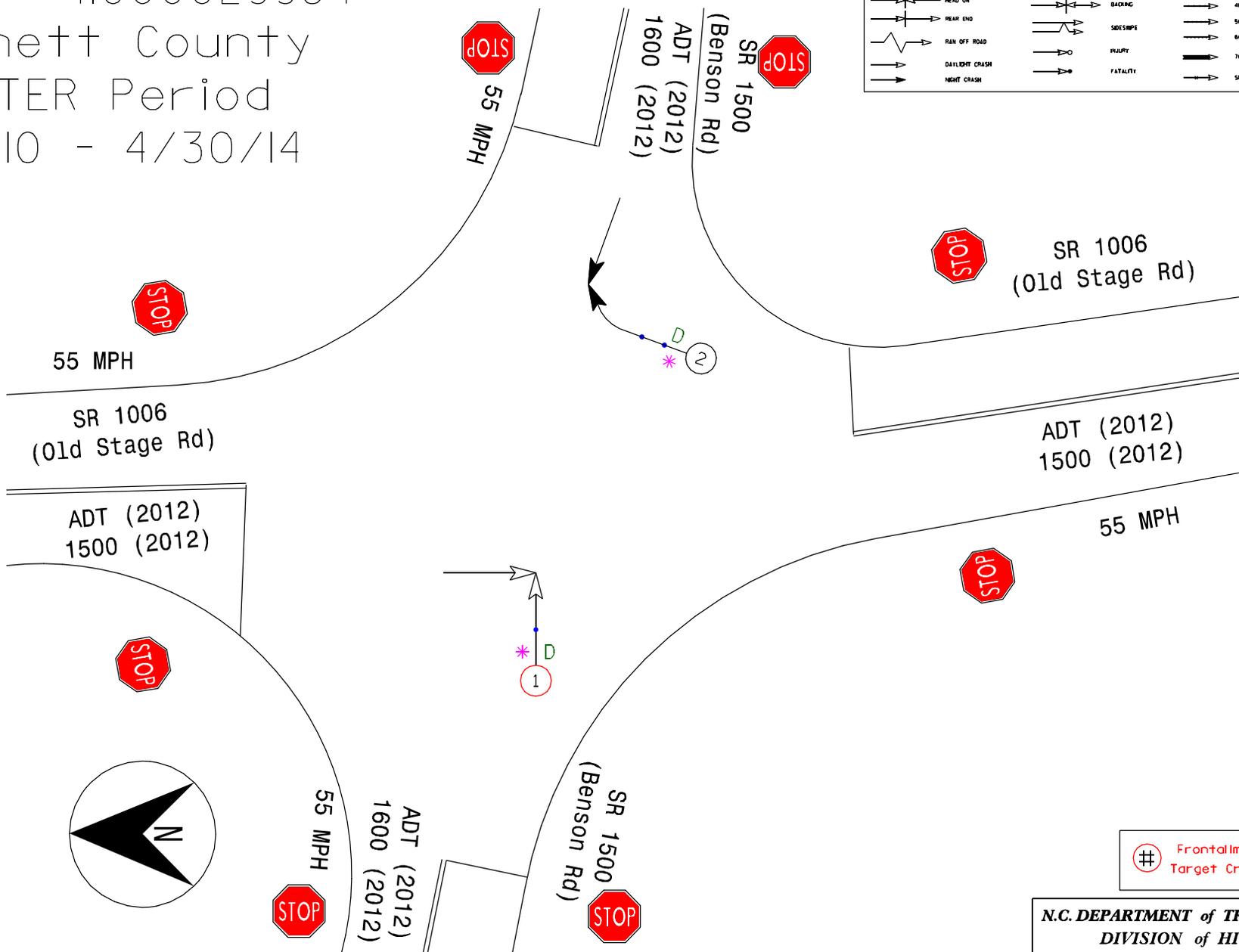


Frontal Impact  
 Target Crashes

N.C. DEPARTMENT of TRANSPORTATION  
 DIVISION of HIGHWAYS  
 TRANSPORTATION MOBILITY and SAFETY DIVISION  
**TRAFFIC SAFETY UNIT**  
 Date: 7-11-2014 Prepared By: Ian Pike

SS# 06-09-201  
 Order# 41000029984  
 Harnett County  
 AFTER Period  
 2/1/10 - 4/30/14

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		SIDE-SWIPE		30 MPH TO 39		TRAIN
	HEAD ON		REAR END		40 MPH TO 49		DRIVER AT FAULT
	REAR END		RAN OFF ROAD		50 MPH TO 59		DRY
	RAN OFF ROAD		DAYLIGHT CRASH		60 MPH TO 69		WET
	NIGHT CRASH		INJURY		70 AND UP		ICY OR SNOWY
			FATALITY		SPEED UNKNOWN		OTHER



# Frontal Impact  
 Target Crashes

N.C. DEPARTMENT of TRANSPORTATION  
 DIVISION of HIGHWAYS  
 TRANSPORTATION MOBILITY and  
 SAFETY DIVISION

**TRAFFIC SAFETY UNIT**

Date: 7-11-2014      Prepared By: Ian Pike