

Spot Safety Project Evaluation

Project Information

Order ID: 41000029993

Project ID: 12-08-209

Location: NC 27 at NC 18

County: Lincoln

City: Lawndale

Division: 12

Signal ID: 12-1631

Countermeasure: Upgrade flasher to actuated with “Watch for Approaching Vehicles” signs.

Project Completion: February 3, 2010

Project Cost: \$43,000

Map and Aerial (from Google Maps – Coordinates: 35.5364616,-81.5091523)



Naive Before and After Analysis

Before Period: January 1, 2006 through December 31, 2009 (4 years)

Const. Period: January 1, 2010 through February 28, 2010 (4 years)

After Period: March 1, 2010 through February 28, 2014 (4 years)

Analysis Criteria: Treatment data consisted of all crashes within 150 feet of the subject intersection for the NC 27 and NC 18.

Target Crashes: Frontal impact crashes were the target crashes for the applied countermeasure. Frontal impact crash types are: Left turn, same roadway; Left turn different roadways; Right turn, same roadway; Right turn, different roadways; Head on: and Angle.

<u>Treatment Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Total Crashes	11	9	- 18.2 %
Total Severity Index	17.47	5.11	- 70.7 %
Target Crashes	8	8	0.0 %
Target Crash Severity Index	22.73	4.70	- 79.3 %
Volume (2008, 2012)	6,100	5,800	- 3.33 %

<u>Injury Crash Summary</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Fatal injury Crashes	2	0	- 100 %
Class A injury Crashes	0	0	N/A
Class B injury Crashes	2	1	- 50.0 %
Class C Injury Crashes	2	4	+ 100.0 %
Property Damage Only	5	4	- 20.0 %

Overall Summary Results

Total Crashes:	- 18 %	(reduction)
Total Crash Severity:	- 71 %	(reduction)
Target Crashes:	0 %	(no change)
Target Crash Severity:	- 79 %	(reduction)
Volume:	- 3 %	(reduction)

Items for Discussion/Concerns

The intersection experienced a large decrease in the severity index after the implementation of the project.

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

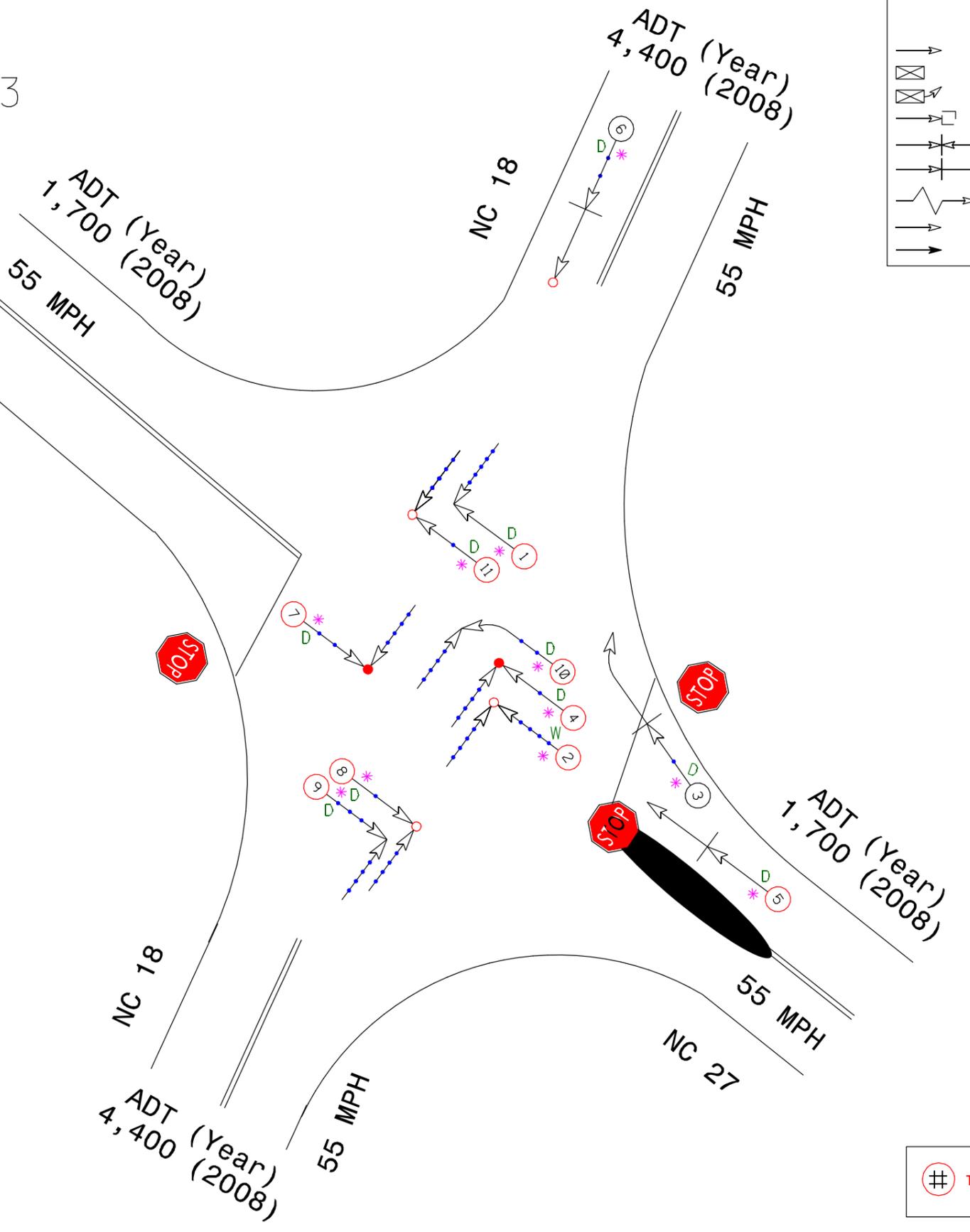
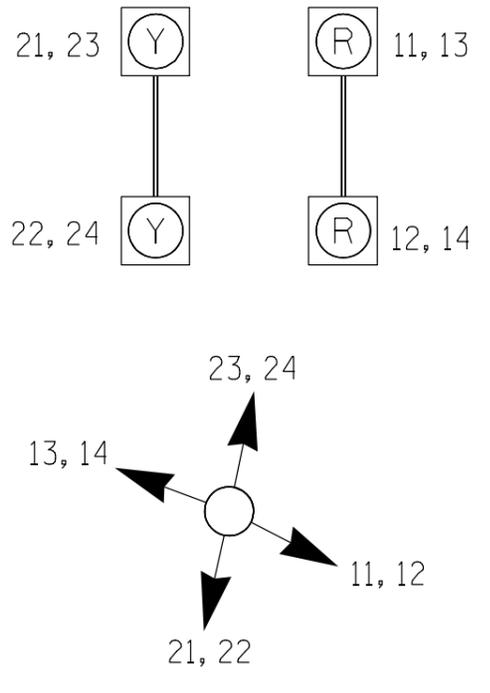
Data Prepared By

Principal Investigator: Marcus Cater, Summer Engineering Assistant
Checked By: Brad Robinson, PE
Work Group/Consultant: NCDOT - Safety Evaluation Group
Date: July 28, 2014

SS# 12-08-209
 Order# 41000029993
 Lincoln County
 BEFORE Period
 1/1/06 - 12/31/09

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

SIGNAL FACE I.D.



Target Crashes

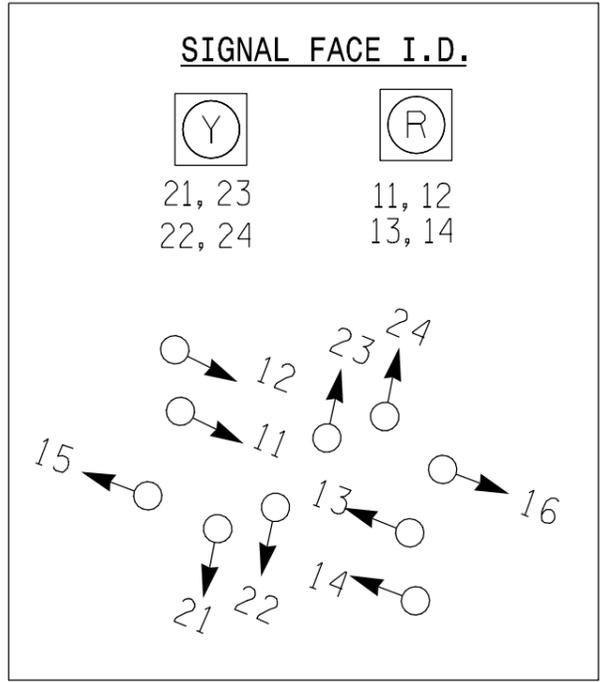
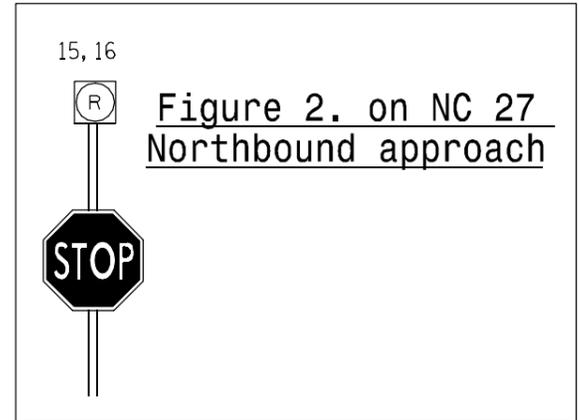
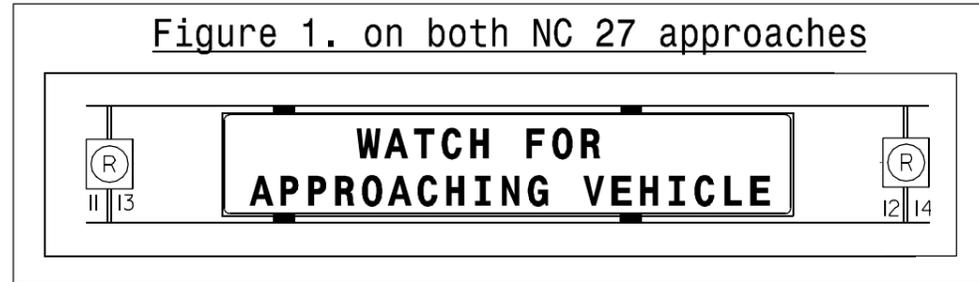
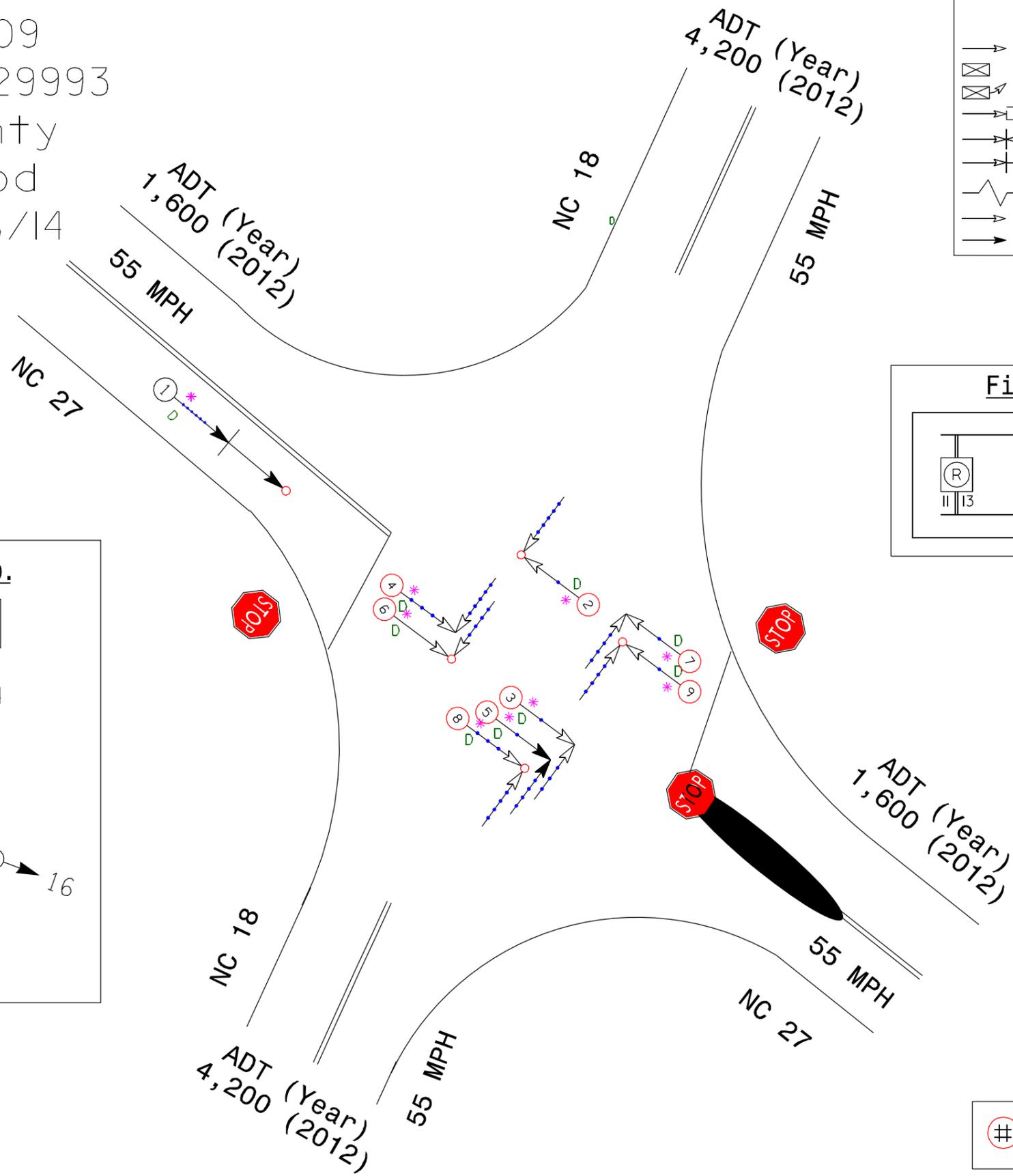
N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
TRANSPORTATION MOBILITY and
SAFETY DIVISION

TRAFFIC SAFETY UNIT

Date: July 2014 Prepared By: Marcus Cater

SS# 12-08-209
 Order# 41000029993
 Lincoln County
 AFTER Period
 3/1/10 - 2/28/14

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



Target Crashes

N.C. DEPARTMENT of TRANSPORTATION
 DIVISION of HIGHWAYS
 TRANSPORTATION MOBILITY and SAFETY DIVISION
TRAFFIC SAFETY UNIT
 Date: July 2014 Prepared By: Marcus Cater