

# Spot Safety Project Evaluation

## Project Information

Order ID: 41000028037

Project ID: 04-08-212

Location: US 301 at NC 581

County: Wilson

City: Lucama

Division: 4

Signal ID: 04-0164

Countermeasure: Upgraded existing overhead flasher to include shoulder mounted “Vehicle Entering” signs and flashers on both approaches of US 301. Existing yellow beacons on US 301 were coordinated with shoulder mounted flashers.

Project Completion: December 15, 2009

Project Cost: \$100,000.00

## Map and Aerial (from Google Maps – Coordinates are 35.613,-78.08979)



## Naive Before and After Analysis

- Before Period: September 1, 2005 through October 31, 2009 (4 years, 2 months)
- Const. Period: November 1, 2009 through December 31, 2009 (2 months)
- After Period: January 1, 2010 through February 28, 2014 (4 years, 2 months)
- Analysis Criteria: Treatment data consisted of all crashes within 150 feet of the subject intersection for the US 301 and NC 581 approaches.
- Target Crashes: Frontal Impact crashes between a vehicle entering from NC 581 and a vehicle on US 301

<u>Treatment Information</u>	<b>Before</b>	<b>After</b>	<b>Percent Reduction (-) Percent Increase (+)</b>
Total Crashes	9	7	-22.2%
Total Severity Index	14.4	5.2	-63.6%
Target Crashes	8	5	-37.5%
Target Crash Severity Index	15.1	5.4	-64.0%
Volume (2006, 2010)	10,500	7,800	-25.7%

<u>Injury Crash Summary</u>	<b>Before</b>	<b>After</b>	<b>Percent Reduction (-) Percent Increase (+)</b>
Fatal injury Crashes	1	0	-100.0%
Class A injury Crashes	0	1	N/A
Class B injury Crashes	4	1	-75.0%
Class C Injury Crashes	2	2	0.0%
Property Damage Only	2	3	+50.0%

## **Overall Summary Results**

Total Crashes:	-22.2 %	(reduction)
Total Crash Severity:	-63.6 %	(reduction)
Target Crashes:	-37.5 %	(reduction)
Target Crash Severity:	-64.0 %	(reduction)
Volume:	-25.7 %	(reduction)

## **Items for Discussion/Concerns**

The installation of the “Vehicle Entering when Flashing” signs and flashers created a reduction in both total crashes and target crashes between the before and after periods. Also, the severity of both total crashes and target crashes experienced a reduction of over 60 percent between the before and after periods.

## **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: Hillary Millen  
Work Group/Consultant: Hatch Mott MacDonald  
Date: April 16, 2014

SS# 04-08-212  
 Order# 41000028037  
 WILSON County  
 BEFORE Period  
 9/1/2005 - 10/31/2009

NC 581  
 55 MPH

AADT (Year)  
 1100 (2007)

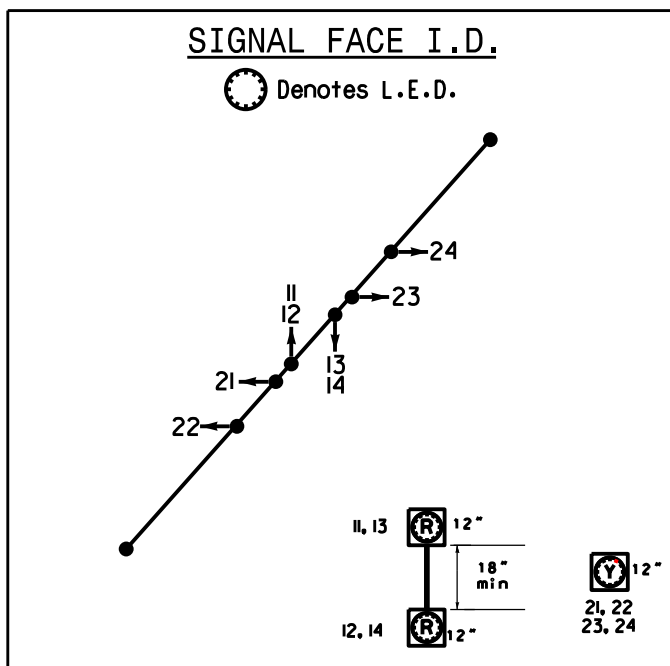
LEGEND	
	MOVING VEHICLE
	PARKED VEHICLE
	PARKING VEHICLE
	MOVABLE OBJECT
	HEAD ON
	REAR END
	RAN OFF ROAD
	DAYLIGHT CRASH
	NIGHT CRASH
	ANGLE
	TURNING
	BACKING
	SIDESWIPE
	INJURY
	FATALITY
	YIELD SIGN
	9 MPH OR LESS
	10 MPH TO 19
	20 MPH TO 29
	30 MPH TO 39
	40 MPH TO 49
	50 MPH TO 59
	60 MPH TO 69
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

US 301  
 55 MPH

AADT (Year)  
 8800 (2007)

AADT (Year)  
 9700 (2007)

US 301  
 55 MPH



AADT (Year)  
 1300 (2007)

NC 581  
 55 MPH

Target Crashes

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

**TRAFFIC SAFETY UNIT**

Date: 4/15/2014

Prepared By: Hillary Millen



SS# 04-08-212  
 Order# 41000028037  
 WILSON County  
 AFTER Period  
 1/1/2010 - 2/28/2014

NC 581  
 55 MPH

AADT (Year)  
 990 (2012)

LEGEND

	MOVING VEHICLE		YIELD SIGN		STOP SIGN
	PARKED VEHICLE		ANGLE		ANIMAL
	PARKING VEHICLE		TURNING		PEDESTRIAN
	MOVABLE OBJECT		BACKING		BICYCLE
	HEAD ON		REAR END		TRAIN
	RAN OFF ROAD		SIDESWIPE		DRIVER AT FAULT
	DAYLIGHT CRASH		INJURY		DRY
	NIGHT CRASH		FATALITY		WET
			70 AND UP		ICY OR SNOWY
			SPEED UNKNOWN		Other

US 301  
 55 MPH

AADT (Year)  
 6400 (2012)

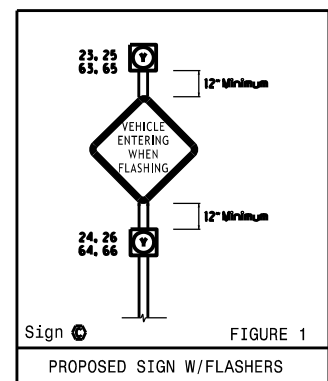
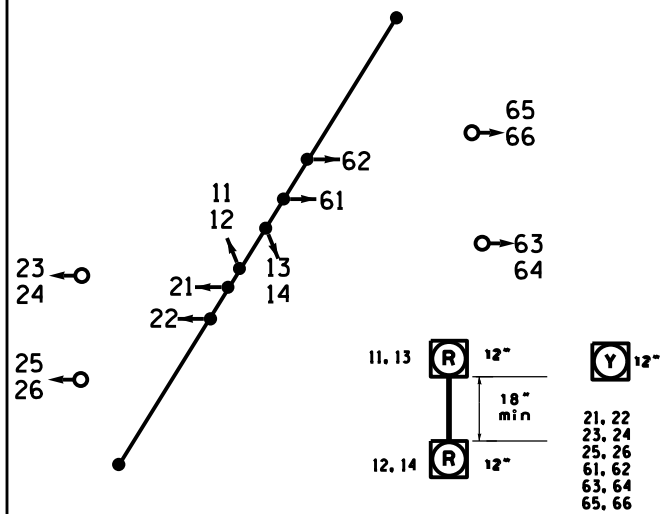
Sign "C" +975' From Intersection

AADT (Year)  
 7200 (2012)

US 301  
 55 MPH

SIGNAL FACE I.D.

Denotes L.E.D.



Target Crashes

AADT (Year)  
 1000 (2012)

NC 581  
 55 MPH

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

TRAFFIC SAFETY UNIT

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