

# Spot Safety Project Evaluation

## Project Information

Order ID: 41000033906

Project ID: 06-07-215

Location: NC 87 at SR 2238 (Sand Hill Road) and Upton Tyson Road

County: Cumberland

City: Fayetteville

Division: 6

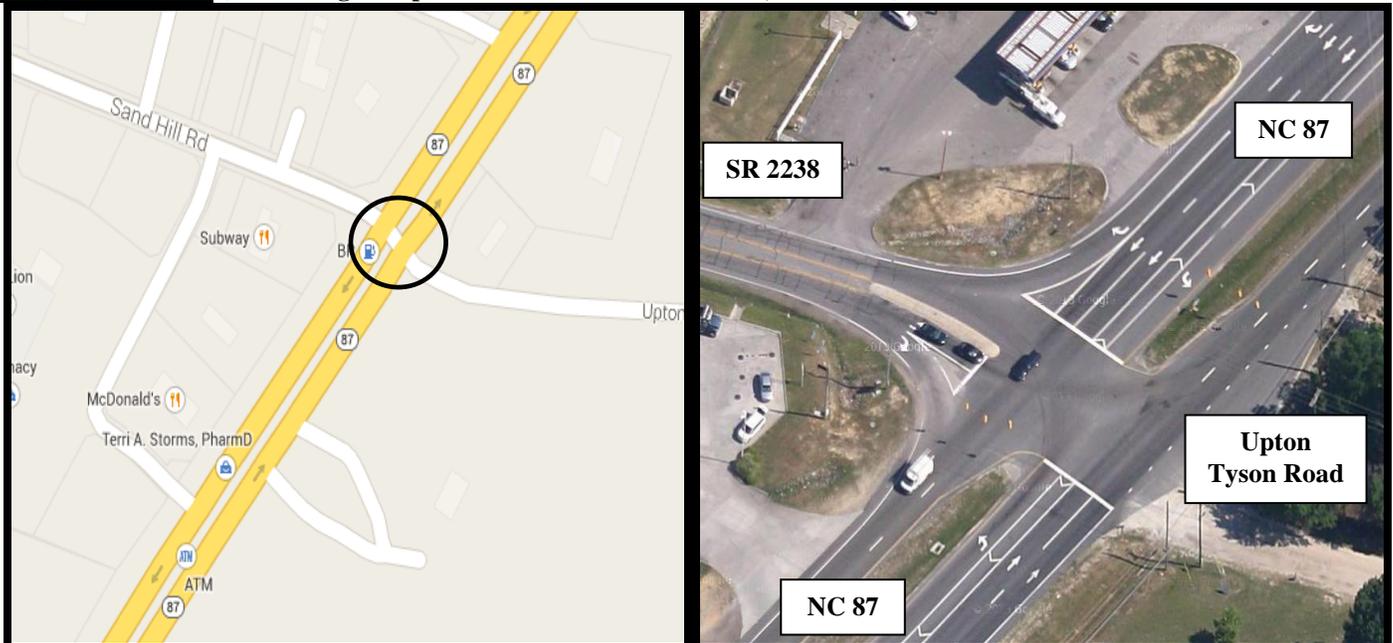
Signal ID: 06-0728

Countermeasure: Modify the existing left turn lanes on NC 87 to better define the offset lefts and revise signal to provide flashing yellow arrow display on both of the NC 87 approaches.

Project Completion: Between November 1, 2010 and May 31, 2011

Project Cost: \$168,000.00

## Map and Aerial (from Google maps – Coordinates are 34.930057,-78.853544)



## Naive Before and After Analysis

- Before Period: December 01, 2006 to October 31, 2010 (3 years, 11 months)
- Const. Period: November 01, 2010 to May 31, 2011 (7 months)
- After Period: June 01, 2011 to April 30, 2015 (3 years, 11 months)
- Analysis Criteria: Treatment data consisted of all crashes within 150 feet of the subject intersection for the NC 87 and SR 2238 (Sand Hill Road) and Upton Tyson Road approaches.
- Target Crashes: Target crashes were considered to be left-turn, same roadway crashes on NC 87, including u-turn crashes.

<u>Treatment Information</u>	<b>Before</b>	<b>After</b>	<b>Percent Reduction (-) Percent Increase (+)</b>
Total Crashes	50	30	-40.0%
Total Severity Index	7.44	5.44	-26.9%
Target Crashes	37	12	-67.6%
Target Crash Severity Index	7.05	6.55	-7.1%
Volume (2008, 2013)	16,800	18,000	+7.1%

<u>Injury Crash Summary</u>	<b>Before</b>	<b>After</b>	<b>Percent Reduction (-) Percent Increase (+)</b>
Fatal injury Crashes	2	0	-100.0%
Class A injury Crashes	0	0	n/a
Class B injury Crashes	7	4	-42.9%
Class C Injury Crashes	16	14	-12.5%
Property Damage Only	25	12	-52.0%

### **Overall Summary Results**

Total Crashes:	-40.0 %	(Reduction)
Total Crash Severity:	-26.9 %	(Reduction)
Target Crashes:	-67.6 %	(Reduction)
Target Crash Severity:	-7.1 %	(Reduction)
Volume:	+7.1 %	(Increase)

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

The total crashes experienced a decrease of 40.0% (50 to 30 crashes) between the before and after periods. The target crashes experienced a decrease of 67.6% (37 to 12 crashes) between the before and after periods. The total crash severity experienced a decrease of 26.9% while the target crash severity experienced a decrease of 7.1% 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

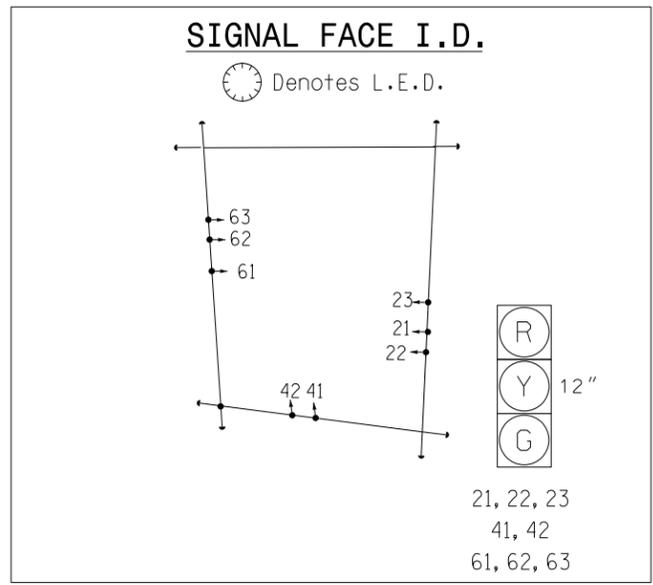
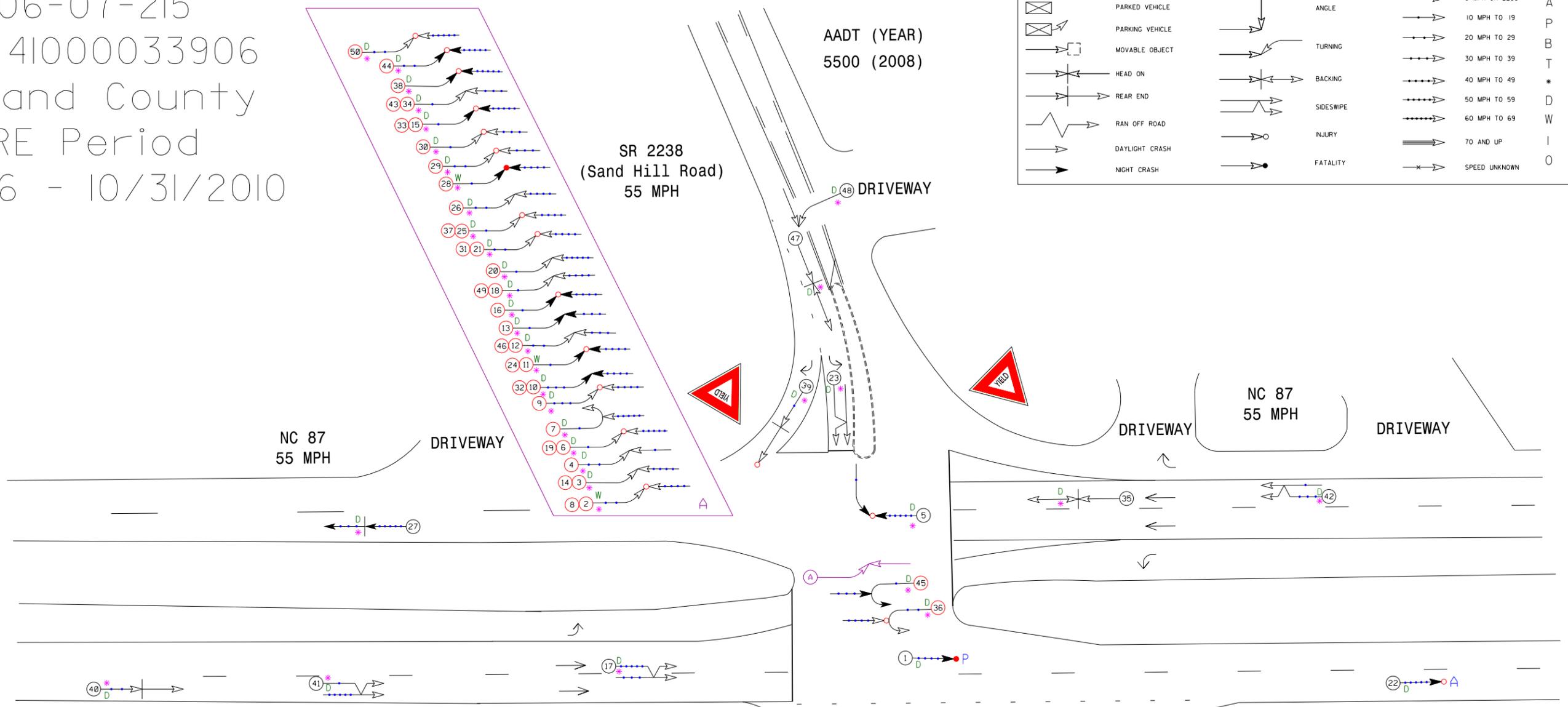
### **Data Prepared By**

Principal Investigator: Celeste M. Harvey  
Work Group/Consultant: Hatch Mott MacDonald  
Date: June 22, 2015

SS# 06-07-215  
 Order# 41000033906  
 Cumberland County  
 BEFORE Period  
 12/01/2006 - 10/31/2010

### LEGEND

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



Target Crashes



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

**TRAFFIC SAFETY UNIT**

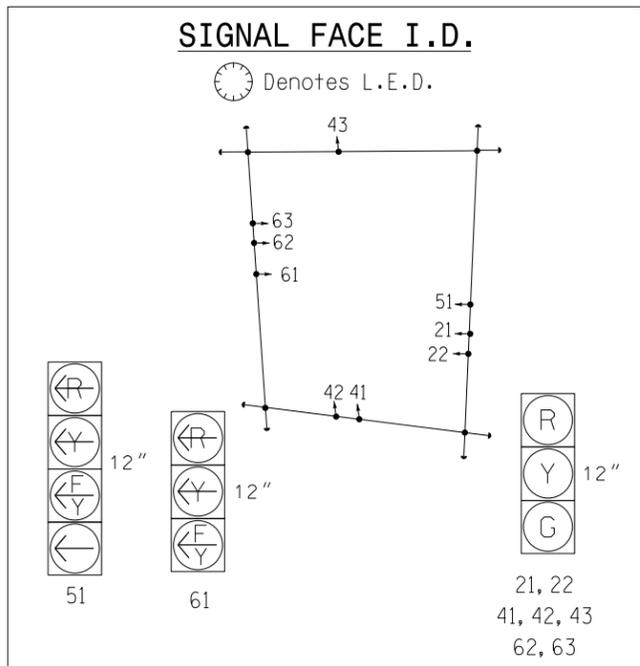
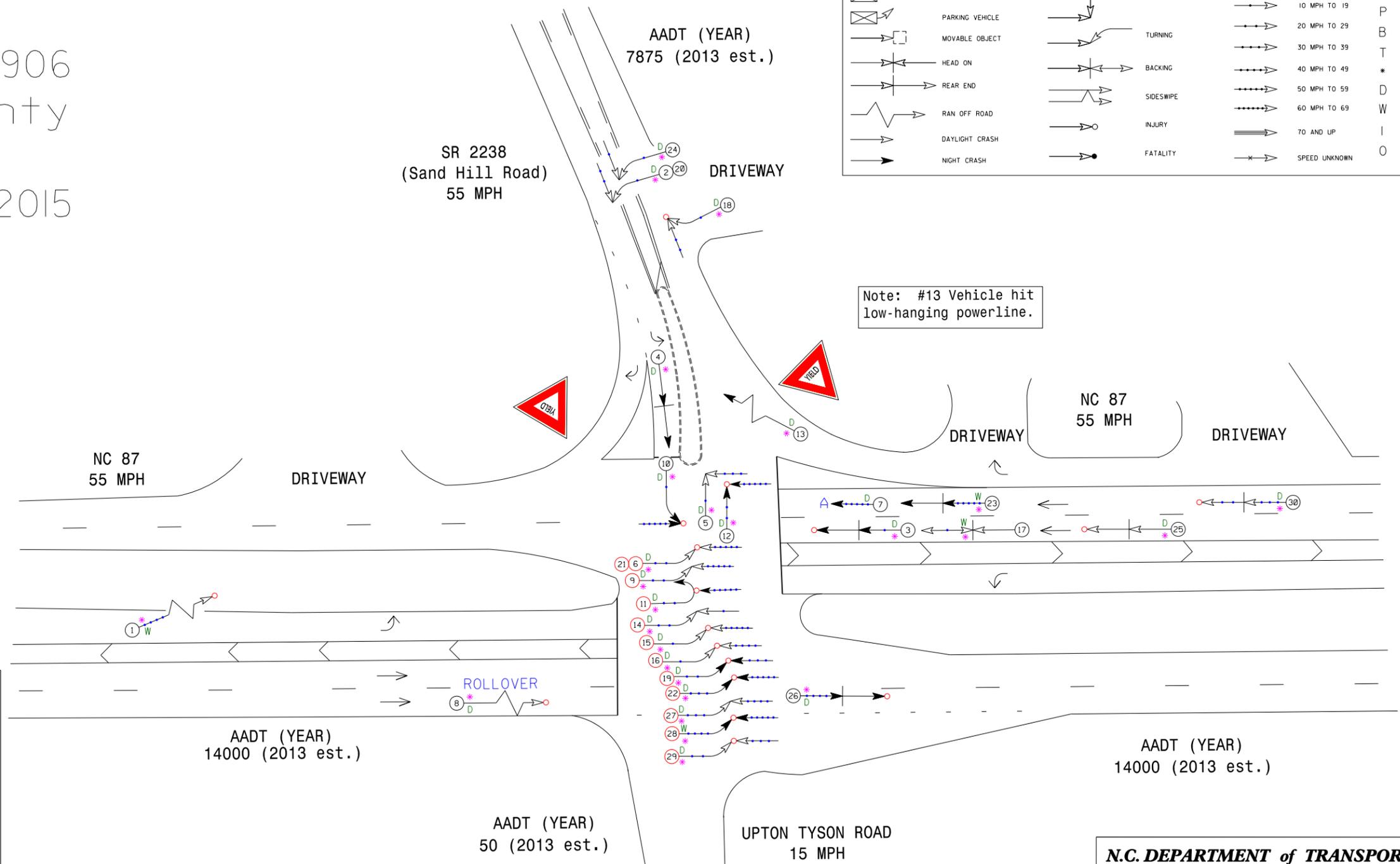
Date: 6/11/2015 Prepared By: Celeste Harvey



SS# 06-07-215  
 Order# 41000033906  
 Cumberland County  
 AFTER Period  
 6/01/2011 - 4/30/2015

**LEGEND**

	MOVING VEHICLE		ANGLE		9 MPH OR LESS		YIELD
	PARKED VEHICLE		TURNING		10 MPH TO 19		ANIMAL
	PARKING VEHICLE		BACKING		20 MPH TO 29		PEDESTRIAN
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			70 AND UP		SPEED UNKNOWN		Other



Target Crashes



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

**TRAFFIC SAFETY UNIT**

Date: 6/11/2015

Prepared By: Celeste Harvey

