



## Naive Before and After Analysis

- Before Period: March 1, 2005 through July 31, 2009 (4.42 years)
- Const. Period: August 1, 2009 through December 31, 2009
- After Period: January 1, 2010 through May 31, 2014 (4.42 years)
- Analysis Criteria: Treatment data consists of all crashes within 150 feet of the subject intersection.
- Target Crashes: Frontal Impact Crashes are the target crashes for the applied countermeasure. The Frontal Impact Crash types considered are as follows: Left turn, same roadway (LTSR); Left turn, different roadways (LTDR); Right turn, same roadway (RTSR); Right turn, different roadways (RTDR); Head on; and Angle.

<u>Treatment Information</u>	<b>Before</b>	<b>After</b>	<b>Percent Reduction (-) Percent Increase (+)</b>
Total Crashes	28	21	- 25.0 %
Total Severity Index	3.91	5.23	+ 33.8 %
Target Crashes	7	10	+ 42.9 %
Target Crash Severity Index	3.11	6.92	+ 122.5 %
Volume (2007, 2012)	22,500	21,100	- 6.2 %

<u>Injury Crash Summary</u>	<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	1	3	+ 200.0 %
Class C Injury Crashes	10	9	- 10.0 %
Property Damage Only	17	9	- 47.1 %

<u>Additional Information</u>	<b>Before</b>	<b>After</b>	<b>Percent Reduction (-) Percent Increase (+)</b>
Angle/LTDR Crashes (Target)	4	3	- 25.0 %
LTSR Crashes (Target)	3	7	+ 133.3 %
Rear End Crashes	20	11	- 45.0 %

### **Overall Summary Results**

Total Crashes:	- 25 %	(reduction)
Total Crash Severity:	+ 34 %	(increase)
Target Crashes:	+ 43 %	(increase)
Target Crash Severity:	+ 123 %	(increase)
Volume:	- 6 %	(reduction)

### **Additional Summary Results**

Angle/LTDR Crashes - Target:	- 25 %	(reduction)
LTSR Crashes - Target:	+ 133 %	(increase)
Rear End Crashes:	- 45 %	(reduction)

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

Total crashes, Angle/LTDR crashes, and Rear End crashes decreased after the signal installation. The increase in Target crashes is linked to the increase in LTSR crashes, which increased by 133% (from 3 to 7 crashes) in the after period.

### **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**

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Work Group/Consultant: NCDOT - Safety Evaluation Group  
Date: December 8, 2014

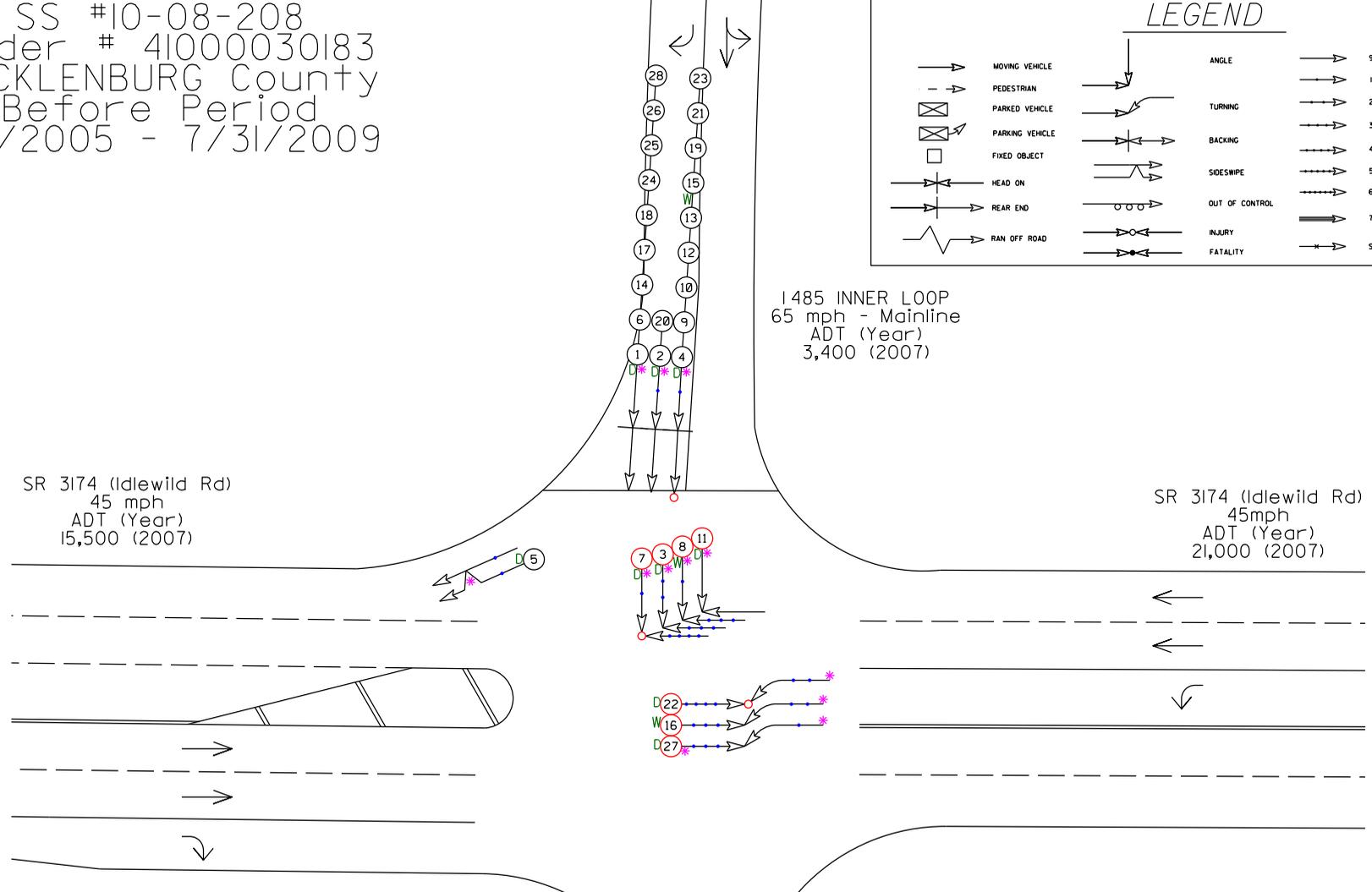
SS #10-08-208  
 Order # 41000030183  
 MECKLENBURG County  
 Before Period  
 3/1/2005 - 7/31/2009

LEGEND							
	MOVING VEHICLE		ANGLE		9 MPH OR LESS		PEDESTRIAN
	PEDESTRIAN		TURNING		10 MPH TO 19		ANIMAL
	PARKED VEHICLE		BACKING		20 MPH TO 29		DRIVER AT FAULT
	PARKING VEHICLE		SIDESWIPE		30 MPH TO 39		DRY
	FIXED OBJECT		OUT OF CONTROL		40 MPH TO 49		WET
	HEAD ON		INJURY		50 MPH TO 59		ICY OR SNOWY
	REAR END		FATALITY		60 MPH TO 69		OILY
	RAN OFF ROAD		SPEED UNKNOWN		70 AND UP		

1485 INNER LOOP  
 65 mph - Mainline  
 ADT (Year)  
 3,400 (2007)

SR 3174 (Idlewild Rd)  
 45 mph  
 ADT (Year)  
 15,500 (2007)

SR 3174 (Idlewild Rd)  
 45mph  
 ADT (Year)  
 21,000 (2007)



Target Crash

1485 INNER LOOP  
 65 mph - Mainline  
 ADT (Year)  
 5,200 (2007)

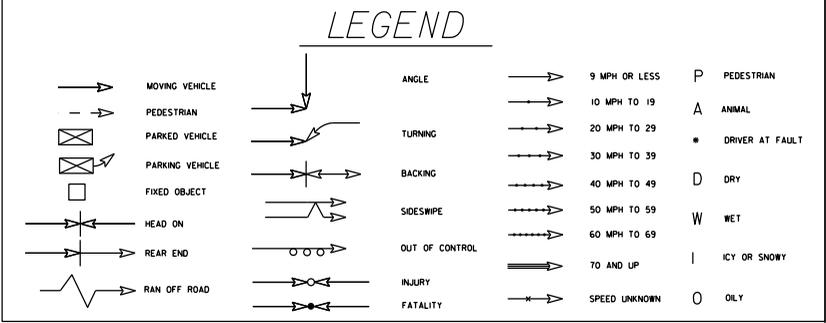
**N.C. DEPARTMENT of TRANSPORTATION**  
**DIVISION of HIGHWAYS**  
**TRANSPORTATION MOBILITY and**  
**SAFETY DIVISION**

**TRAFFIC SAFETY UNIT**

Date: 09-11-2014

Prepared By: Troy S Finn

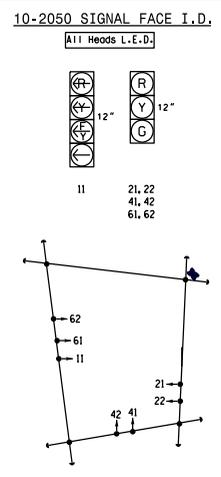
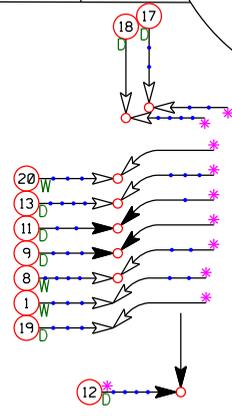
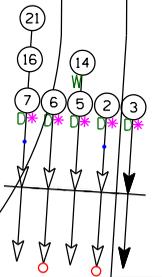
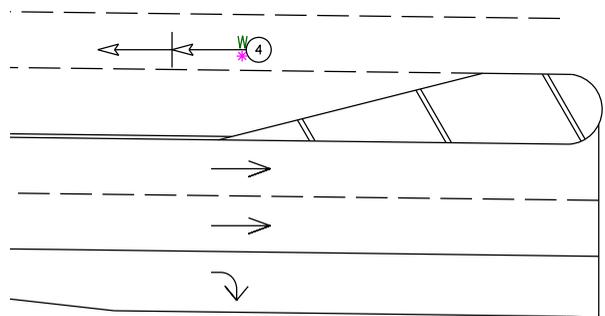
SS #10-08-208  
 Order # 41000030183  
 MECKLENBURG County  
 AFTER Period  
 1/1/2010 - 5/31/2014



1485 INNER LOOP  
 65 mph - Mainline  
 ADT (Year)  
 3,200 (2012)

SR 3174 (Idlewild Rd)  
 45 MPH  
 ADT (Year)  
 14,000 (2012)

SR 3174 (Idlewild Rd)  
 45 mph  
 ADT (Year)  
 20,000 (2012)



Target Crash

1485 INNER LOOP  
 65 mph - Mainline  
 ADT (Year)  
 4,900 (2012)

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

**TRAFFIC SAFETY UNIT**

Date: 09-03-2014

Prepared By: Troy S Finn