

Spot Safety Project Evaluation

Project Information

Order ID: 41000028059
Project ID: 07-08-204
Location: US 220 and NC 65 near Madison
County: Rockingham
City: Stokesdale
Division: 7
Signal ID: 07-1599
Countermeasure: Install overhead intersection flasher.
Project Completion: January 6, 2009

Project Cost: \$25,000

Map and Aerial (from Google Maps, Coordinates are -- 36.267513,-79.930505)



Naive Before and After Analysis

Before Period: February 1, 2004 through October 31, 2008 (4 years, 9 months)

Const. Period: November 1, 2008 through January 31, 2009

After Period: February 1, 2009 through October 31, 2013 (4 years, 9 months)
Note- Analysis end date selected due to construction of R-2413

Analysis Criteria: Treatment data consisted of all crashes within 150 feet of the subject intersection for the US 220 and NC 65 approaches.

Target Crashes: Frontal Impact Crashes. Please note that Frontal Impact Crashes were the target crashes for the applied countermeasure. Frontal Impact crashes include: 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	10	23	+ 130.0 %
Total Severity Index	12.28	8.16	- 33.6 %
Target Crashes	8	13	+ 62.5 %
Target Crash Severity Index	14.18	11.95	- 15.7 %
Volume (2006, 2011)	9,400	9,900	+ 5.3 %

<u>Injury Crash Summary</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Fatal injury Crashes	1	1	0.0%
Class A injury Crashes	0	0	N/A
Class B injury Crashes	2	5	+ 150.0 %
Class C Injury Crashes	3	7	+ 133.3 %
Property Damage Only	4	10	+ 150.0 %

<u>Additional Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Angle Crashes (Target)	8	12	+ 50.0 %
Southbound-Eastbound Angle (Target)	5	3	- 40.0 %
Northbound-Eastbound Angle (Target)	2	6	+ 200.0 %
Southbound-Westbound Angle (Target)	1	3	+ 200.0 %

Overall Summary Results

Total Crashes:	+ 130 %	(increase)
Total Crash Severity:	- 34 %	(reduction)
Target Crashes:	+ 63 %	(increase)
Target Crash Severity:	- 16 %	(increase)
Volume:	+ 5 %	(increase)

Additional Summary Results

Southbound-Eastbound Angle (Target):	- 40 %	(reduction)
Northbound-Eastbound Angle (Target):	+ 200 %	(increase)

Items for Discussion/Concerns

Within the intersection there was an increase in Angle crashes from the before period to the after period (8 to 12 crashes). In particular, both the Southbound-Westbound and Northbound-Eastbound quadrants had increases in angle crashes.

While both the target and overall crash severity indexes did decrease, the after period had a fatality crash, as well as increased number of Injury B and C crashes as compared to the before period..

Data Prepared For

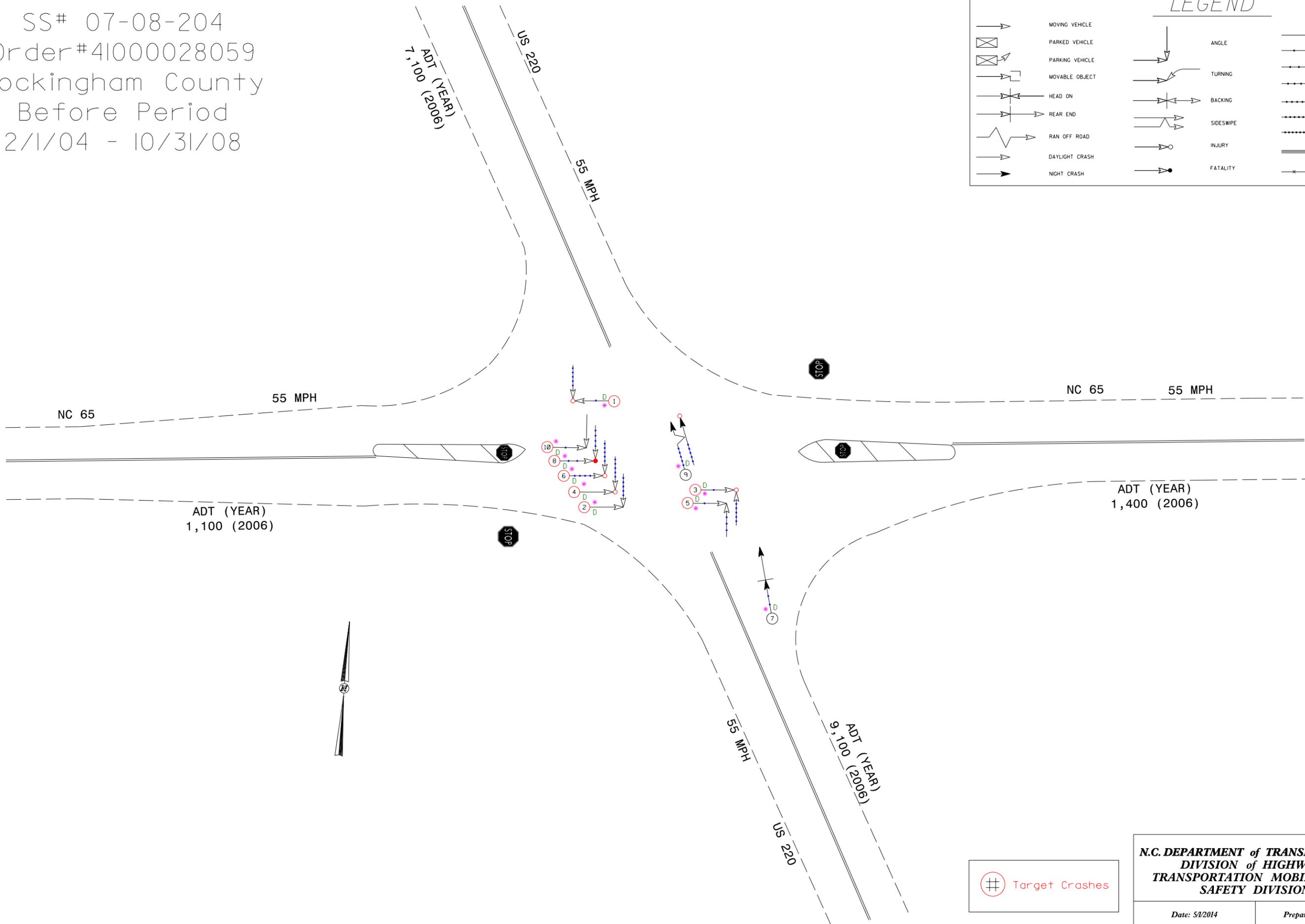
The Traffic Safety Unit *of the*
Transportation Mobility and Safety Division *of the*
Division of Highways *of the*
North Carolina Department of Transportation

Data Prepared By

Principal Investigator: Elizabeth Scott, EI
Work Group/Consultant: Stantec Consulting Service Inc
Date: April 29, 2014

SS# 07-08-204
 Order# 41000028059
 Rockingham County
 Before Period
 2/1/04 - 10/31/08

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



Target Crashes

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

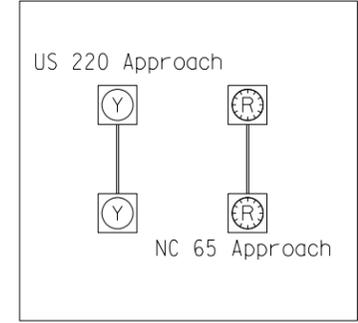
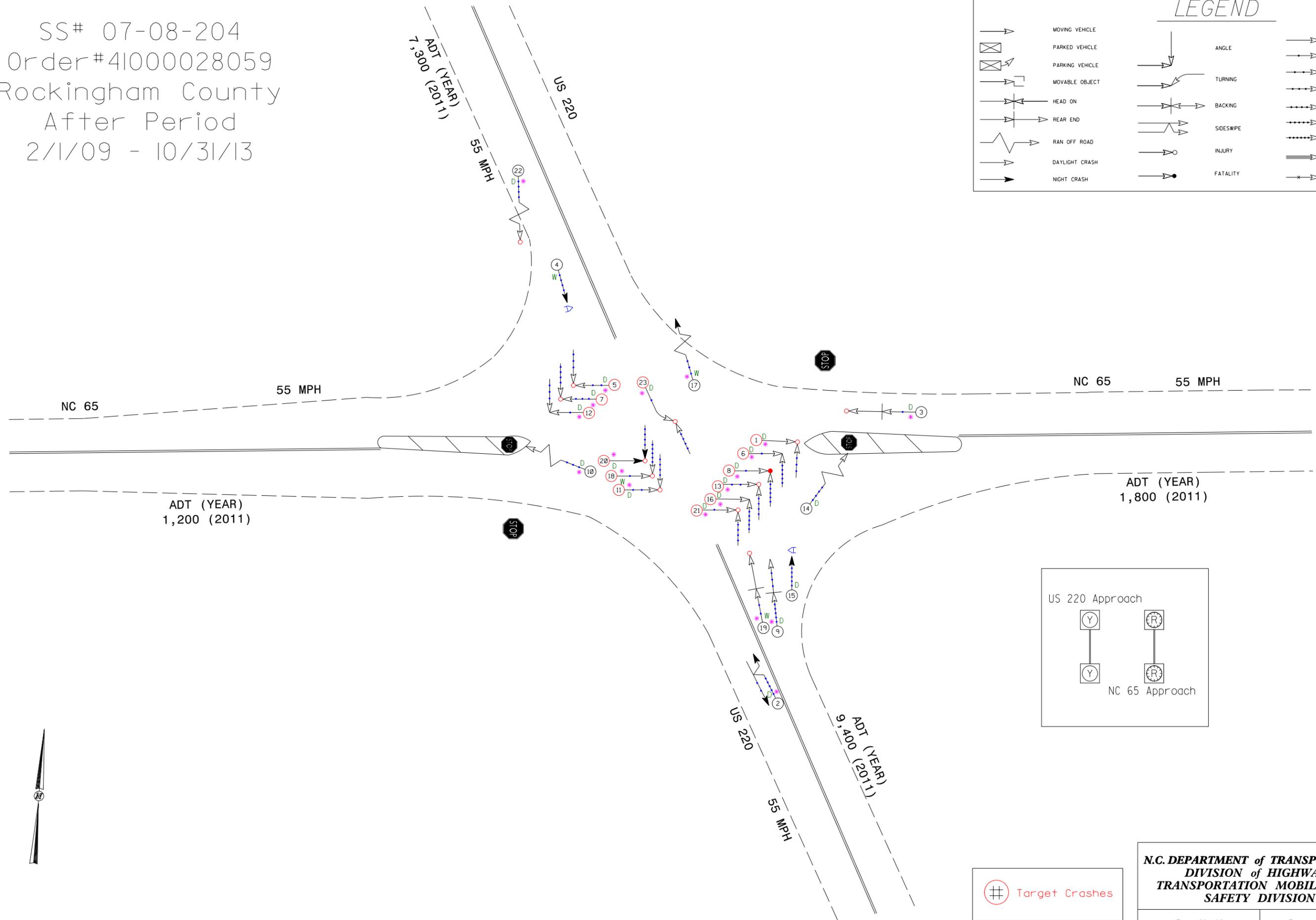
Date: 5/1/2014

Prepared By: ESS

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SS# 07-08-204
 Order# 41000028059
 Rockingham County
 After Period
 2/1/09 - 10/31/13

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		60 MPH TO 69		70 AND UP		W WET
	DAYLIGHT CRASH		SPEED UNKNOWN		I ICY OR SNOWY		O Other
	NIGHT CRASH						



Target Crashes

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

Date: 5/1/2014 Prepared By: ESS

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