

Spot Safety Project Evaluation

Project Information

Order ID: 41000033902

Project ID: 05-08-229

Location: SR 2768 (Judd Parkway) at SR 2770 (Angier Road)

County: Wake

City: Raleigh

Division: 5

Signal ID: 05-2375

Countermeasure: Install a two-phase traffic signal and interconnect with existing signal at Judd Parkway and SR 2767 (Holland Road).

Project Completion: Between April 01, 2010 and June 30, 2010

Project Cost: \$79,200.00

Map and Aerial (from Google maps – Coordinates are 35.573319, -78.790292)



Naive Before and After Analysis

Before Period: August 01, 2005 to March 31, 2010 (4 years, 8 months)

Const. Period: April 01, 2010 to June 30, 2010 (3 months)

After Period: July 01, 2010 to February 28, 2015 (4 years, 8 months)

Analysis Criteria: Treatment data consisted of all crashes within 150 feet of the subject intersection for the SR 2768 and SR 2770 approaches.

Target Crashes: Target crashes were considered to be all Frontal Impact crashes including angle; left-turn, same roadway; left-turn, different roadways; right-turn, different roadways; right-turn, same roadway; and head-on.

<u>Treatment Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Total Crashes	23	15	-34.8%
Total Severity Index	7.83	2.97	-62.1%
Target Crashes	20	7	-65.0%
Target Crash Severity Index	8.86	4.17	-52.9%
Volume (2007, 2012)	11,500	10,200	-11.3%

<u>Injury Crash Summary</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Fatal injury Crashes	0	0	0.00%
Class A injury Crashes	1	0	-100.0%
Class B injury Crashes	1	1	0.00%
Class C Injury Crashes	10	3	-70.0%
Property Damage Only	11	11	-0.0%

<u>Additional Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Total Angle Crashes (target crashes)	19	6	-68.4%
Rear-end crashes on WB Judd Parkway	0	4	+400.0%
Rear-end crashes on EB Judd Parkway	0	2	+200.0%

Overall Summary Results

Total Crashes:	-34.8 %	(Reduction)
Total Crash Severity:	-62.1 %	(Reduction)
Target Crashes:	-65.0 %	(Reduction)
Target Crash Severity:	-52.9 %	(Reduction)
Volume:	-11.3 %	(Reduction)

Additional Summary Results

Angle Crashes (target crashes):	-68.4 %	(Reduction)
Rear End Crashes on WB Judd Parkway:	600.0 %	(Increase)
Rear End Crashes on EB Judd Parkway:	200.0 %	(Increase)

Items for Discussion/Concerns

The total crashes experienced a decrease of 34.8 % (23 to 15 crashes) between the before and after periods. The frontal impact target crashes experienced a decrease of 65.0% (20 to 7 crashes) between the before and after periods. The total crash severity experienced a decrease of 62.1% between the before and after periods. The frontal impact target crash severity experienced a decrease of 52.9% between the before and after periods.

Additionally, angle target crashes experienced a decrease of 68.4% (19 to 6 crashes) between the before and after periods. Rear-end crashes on Judd Parkway going Westbound experienced an increase of 400% (0 to 4 crashes) and Rear-end crashes on Judd Parkway going Eastbound experienced an increase of 200% (0 to 2 crashes) between the before and after periods.

Data Prepared For

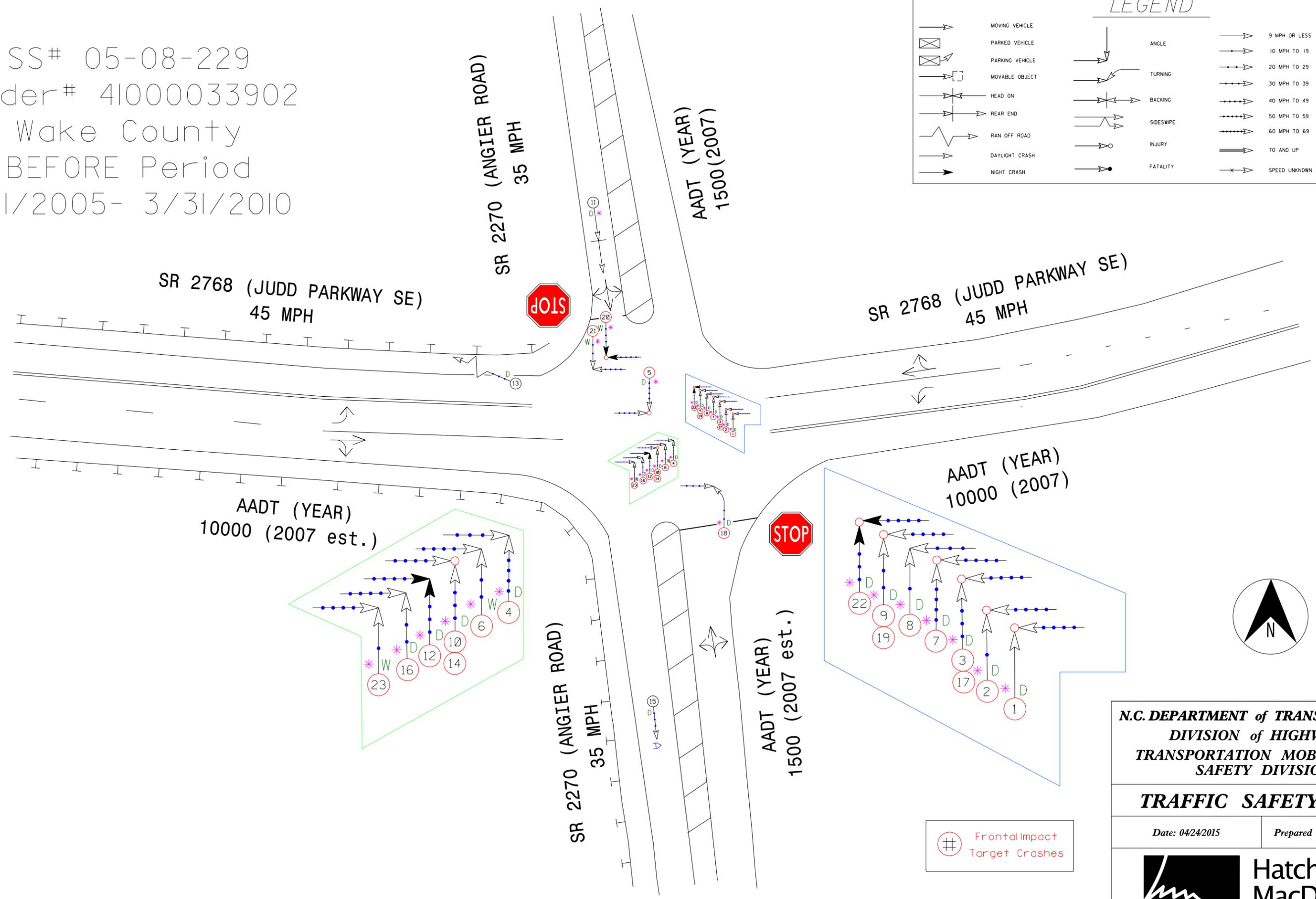
The Traffic Safety Unit *of the*
Transportation Mobility and Safety Division *of the*
Division of Highways *of the*
North Carolina Department of Transportation

Data Prepared By

Principal Investigator: Celeste M. Harvey
Work Group/Consultant: Hatch Mott MacDonald
Date: May 5, 2015

SS# 05-08-229
 Order# 41000033902
 Wake County
 BEFORE Period
 8/1/2005- 3/31/2010

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



Frontal Impact
 Target Crashes

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

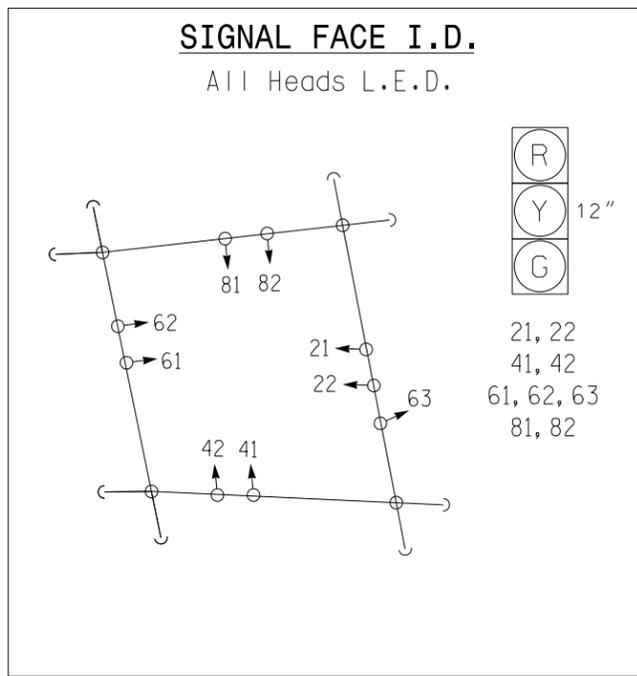
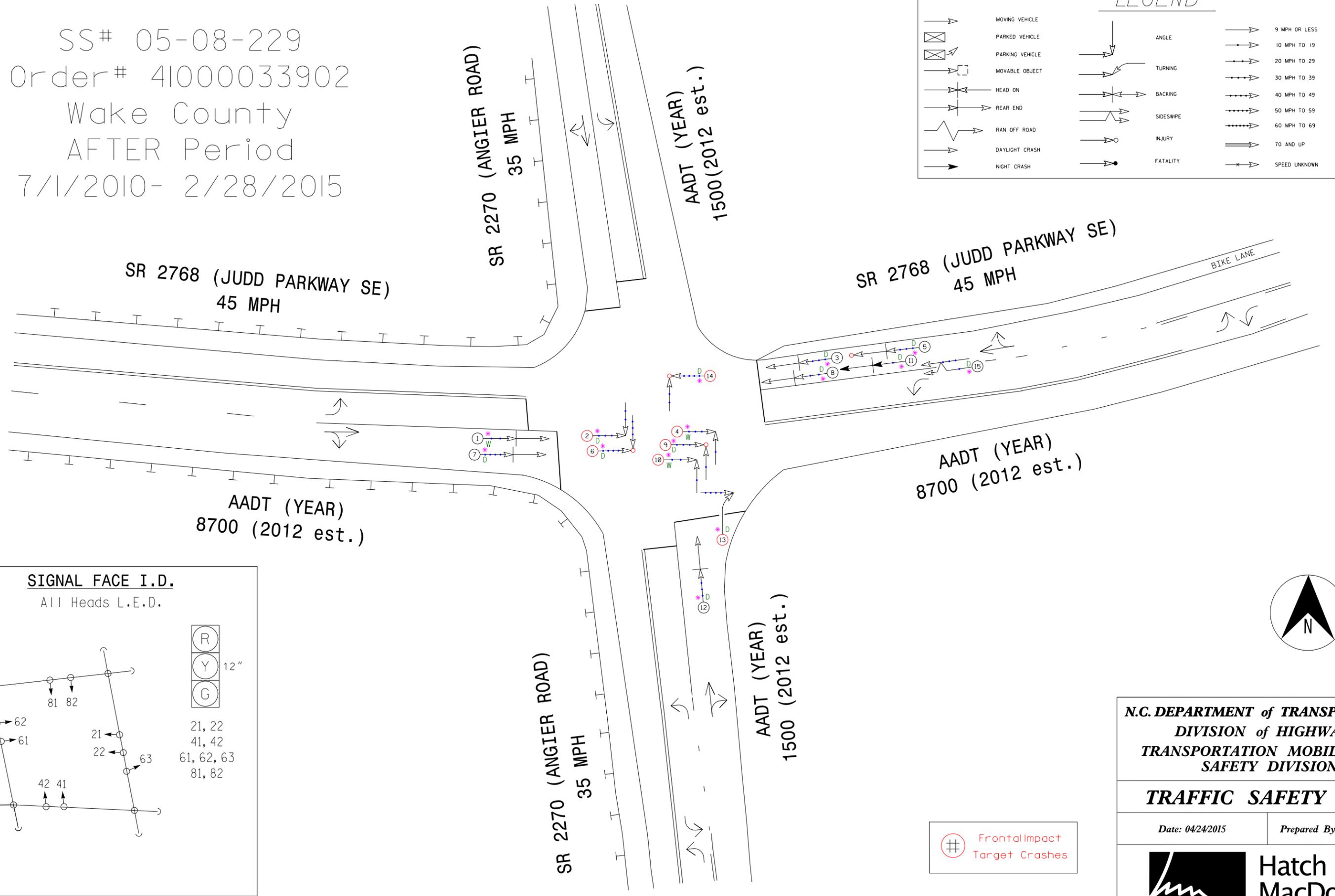
TRAFFIC SAFETY UNIT

Date: 04/24/2015 Prepared By: Celeste Harvey

Hatch Mott MacDonald

SS# 05-08-229
 Order# 41000033902
 Wake County
 AFTER Period
 7/1/2010- 2/28/2015

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				Other		O Other



Frontal Impact
 Target Crashes



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

TRAFFIC SAFETY UNIT

Date: 04/24/2015

Prepared By: Celeste Harvey

