

Spot Safety Project Evaluation

Project Information

Order ID: 41000028052
Project ID: 05-07-224
Location: SR 1966 (Lumley Road) at SR 1973 (Page Road)
County: Durham
City: Durham
Division: 5
Signal ID: 05-2365
Countermeasure: Signal Revision– Install Three-Phase Fully Actuated Traffic Signal
Project Completion: February 1, 2009 Project Cost: \$43,750

Map and Aerial (from Google Maps -- Coordinates are 35.926035,-78.81286)



Naive Before and After Analysis

- Before Period: February 1, 2004 through November 30, 2008 (4 years, 10 months)
- Const. Period: December 1, 2008 through March 31, 2009
- After Period: April 1, 2009 through January 31, 2014 (4 years, 10 months)
- Analysis Criteria: Treatment data consisted of all crashes within 150 feet of the subject intersection for the SR 1973 and SR 1966 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	13	6	- 53.8 %
Total Severity Index	21.34	1.00	- 95.3 %
Target Crashes	12	2	- 83.3 %
Target Crash Severity Index	23.03	1.00	- 95.7 %
Volume (2006, 2011)	11,100	11,600	+ 4.5 %

<u>Injury Crash Summary</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Fatal injury Crashes	1	0	- 100.0 %
Class A injury Crashes	2	0	- 100.0 %
Class B injury Crashes	1	0	- 100.0 %
Class C injury Crashes	4	0	- 100.0 %
Property Damage Only	5	6	+ 20.0 %

<u>Additional Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Left Turn, Same Roadway (Target)	2	0	- 100.0 %
Angle (Target)	9	1	- 88.8 %
Left Turn Different Roadway (Target)	1	1	0.0 %

Overall Summary Results

Total Crashes:	- 54 %	(reduction)
Total Crash Severity:	- 95 %	(reduction)
Target Crashes:	- 83 %	(reduction)
Target Crash Severity:	- 96 %	(reduction)
Volume:	+ 5 %	(increase)

Additional Summary Results

Left Turn, Same Roadway (Target):	- 100 %	(reduction)
Angle Crashes (Target):	- 89 %	(reduction)

Items for Discussion/Concerns

The intersection experienced an 89 percent reduction in angle crashes (9 to 1 crashes).

The intersection experienced an elimination of injury crashes both overall and in target crashes in the after period (8 to 0 overall crashes).

Data Prepared For

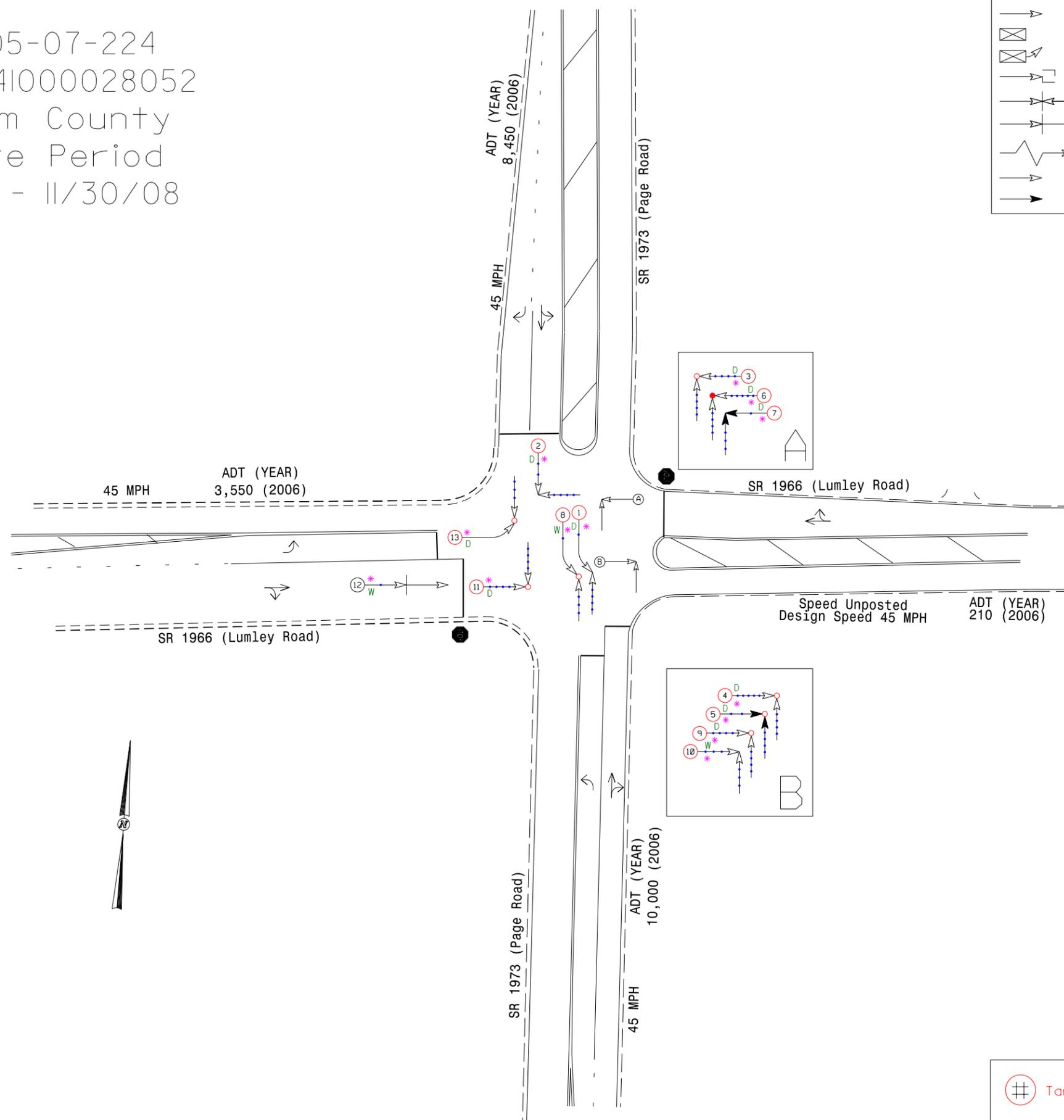
The Traffic Safety Unit *of the*
Transportation Mobility and Safety Division *of the*
Division of Highways *of the*
North Carolina Department of Transportation

Data Prepared By

Principal Investigator: Elizabeth Scott, EI
Work Group/Consultant: Stantec Consulting Services Inc.
Date: March, 31, 2014

SS# 05-07-224
 Order#41000028052
 Durham County
 Before Period
 2/1/04 - 11/30/08

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: 3/25/2014

Prepared By: ESS

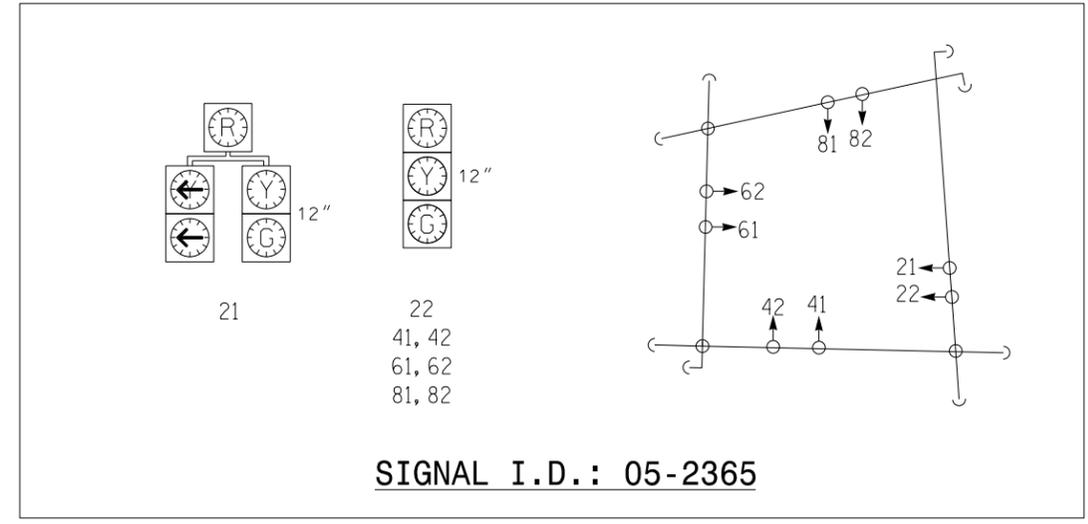
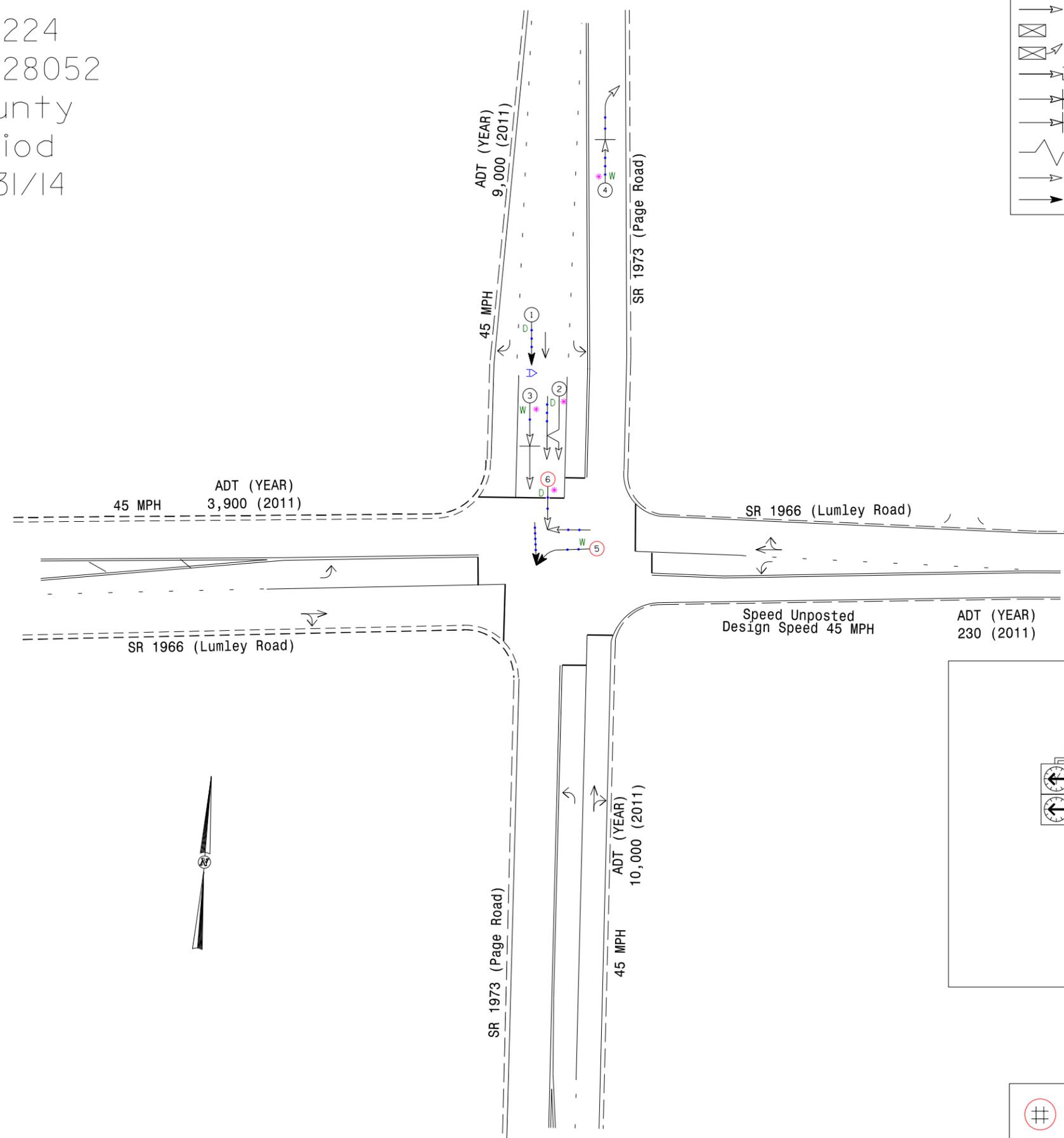


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SS# 05-07-224
 Order# 41000028052
 Durham County
 After Period
 4/1/09 - 1/31/14

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



Target Crashes

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

Date: 3/25/2014
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