

Spot Safety Project Evaluation

Project Information

Order ID: 41000028026

Project ID: 05-07-229

Location: SR 1348 (Trailwood Road) at SR 1355 (Lineberry Drive) / Canine Tech Way

County: Wake

City: Raleigh

Division: 05

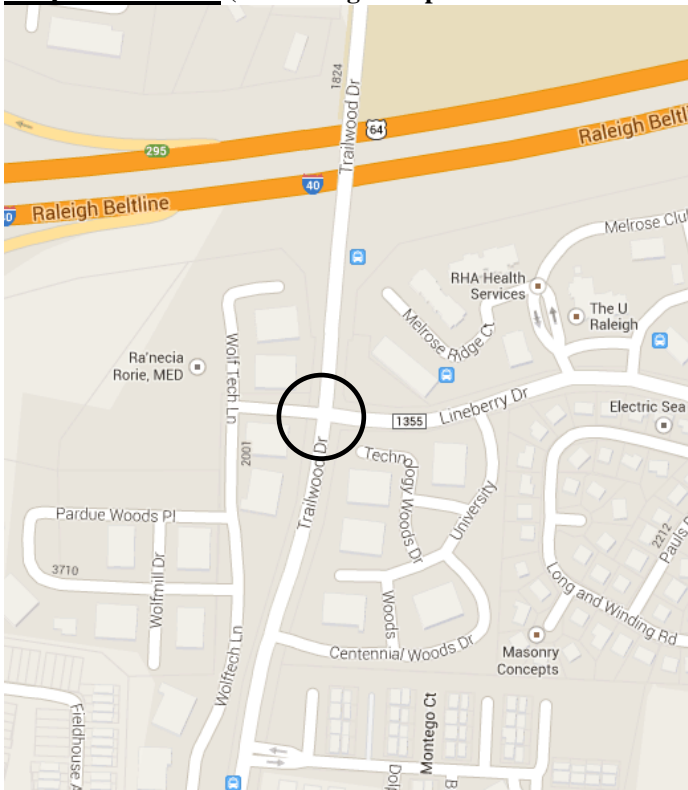
Signal ID: 05-2345

Countermeasure: Install a traffic signal

Project Completion: June 11, 2009

Project Cost: \$55,000

Map and Aerial (from Google Maps - Coordinates are 35.750304,-78.694905)



Naive Before and After Analysis

Before Period: October 1, 2004 through April 30, 2009 (4 years 7 months)

Const. Period: May 1, 2009 through July 31, 2009

After Period: August 1, 2009 through February 28, 2014 (4years 7 months)

Analysis Criteria: Treatment data consisted of all crashes within 150 feet of the subject intersection for the SR 1348 and SR 1355 / Canine Tech Way approaches.

Target Crashes: Frontal Impact Crashes (left-turn, same roadway; left-turn, different roadway; right-turn, same roadway; right-turn, different roadway; head-on; and angle crashes) in the intersection

<u>Treatment Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Total Crashes	37	19	- 48.6 %
Total Severity Index	3.20	2.95	- 7.8 %
Target Crashes	26	14	- 46.2 %
Target Crash Severity Index	3.28	3.11	- 5.2 %
Volume (2007, 2011)	7,500	8,100	+ 8.0 %

<u>Injury Crash Summary</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Fatal injury Crashes	0	0	N/A
Class A injury Crashes	0	0	N/A
Class B injury Crashes	3	3	0.0 %
Class C Injury Crashes	8	2	- 75.0 %
Property Damage Only	26	14	- 46.2 %

<u>Additional Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Left-turn, different roadway	12	5	- 58.3 %
Angle Crashes	7	2	- 71.4 %
Night Crashes	24	10	- 58.3 %

Overall Summary Results

Total Crashes:	- 49 %	(reduction)
Total Crash Severity:	- 8 %	(reduction)
Target Crashes:	- 46 %	(reduction)
Target Crash Severity:	- 5 %	(reduction)
Volume:	+ 8 %	(increase)

Additional Summary Results

Left-turn, different roadway:	- 58 %	(reduction)
Angle Crashes:	- 71 %	(reduction)
Night Crashes:	- 58 %	(reduction)

Items for Discussion/Concerns

The study intersection experienced a 49 % reduction in total crashes (37 to 19 Crashes).

The target crashes (Frontal Impact Crashes) experienced a 46 % reduction (26 to 14 crashes).

The intersection experienced a decrease in Left-turn, different roadway crashes (12 to 5), Angle crashes (7 to 2), and Night Crashes (24 to 10).

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: Austin Bell, EI
Work Group/Consultant: AECOM
Date: May 16, 2014

SS# 05-07-229
 Order# 41000028026
 Wake County
 BEFORE Period
 10/1/04 - 4/30/09

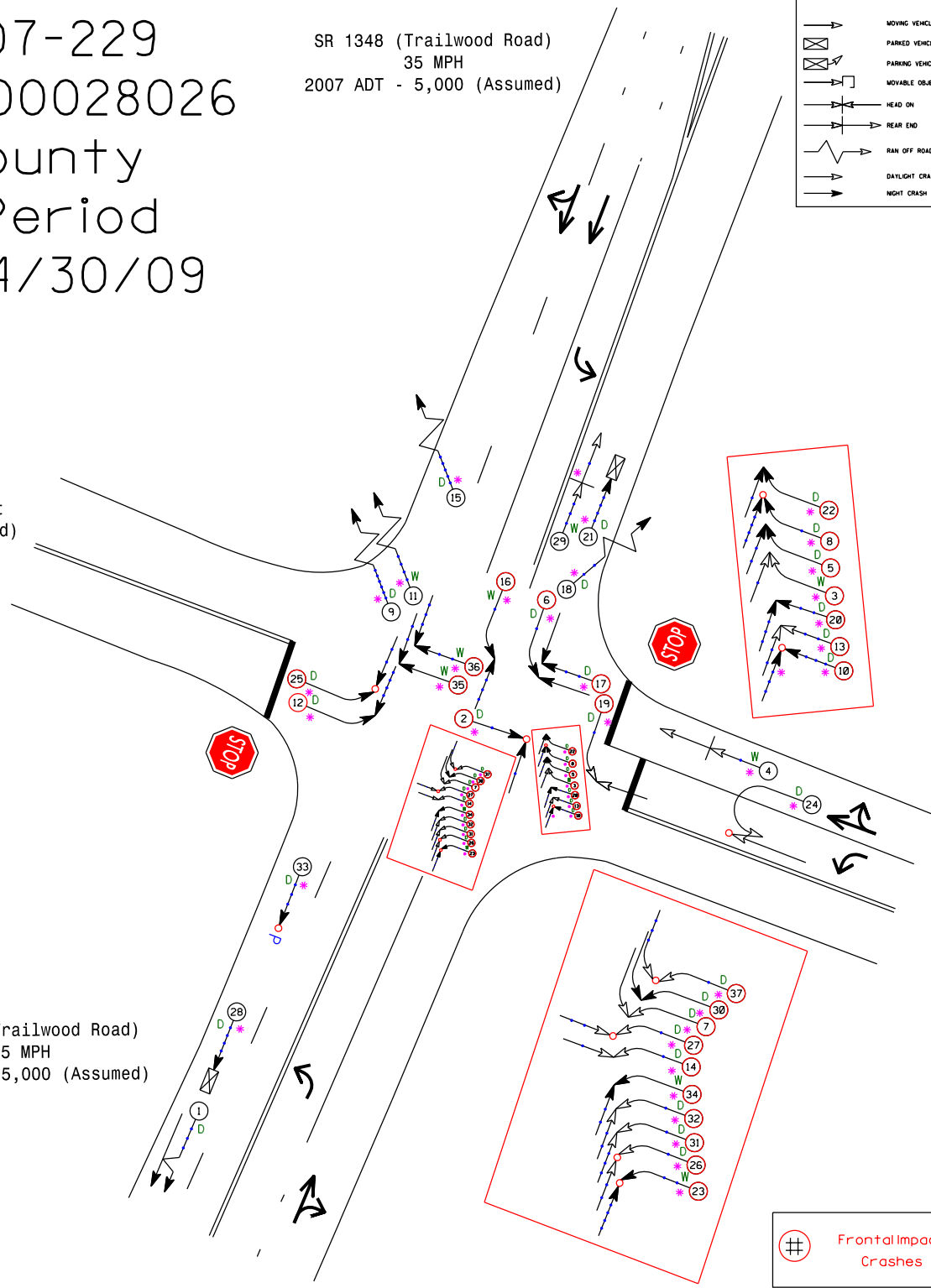
SR 1348 (Trailwood Road)
 35 MPH
 2007 ADT - 5,000 (Assumed)

Canine Tech Way
 No Posted Speed Limit
 2007 ADT - 500 (Assumed)

SR 1348 (Trailwood Road)
 35 MPH
 2007 ADT - 5,000 (Assumed)

SR 1355 (Lineberry Drive)
 35 MPH
 2007 ADT - 4,500 (Assumed)

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 TRUCK
	HEAD ON		INJURY		40 MPH TO 49		* DRIVER AT FAULT
	REAR END		FATALITY		50 MPH TO 59		W WET
	RAN OFF ROAD		70 AND UP		60 MPH TO 69		I ICY OR SNOWY
	DAYLIGHT CRASH		SPEED UNKNOWN		70 AND UP		O OTHER
	NIGHT CRASH				SPEED UNKNOWN		



Frontal Impact Crashes

AECOM

Prepared For:
 N.C. DEPARTMENT of TRANSPORTATION
 DIVISION of HIGHWAYS
 TRANSPORTATION MOBILITY and
 SAFETY DIVISION

TRAFFIC SAFETY UNIT

Date: 5-16-2014	Prepared By: Austin Bell, EI
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SS# 05-07-229
 Order# 41000028026
 Wake County
 AFTER Period
 8/1/09 - 2/28/14

SR 1348 (Trailwood Road)
 35 MPH
 2011 ADT - 5,400 (Assumed)

Canine Tech Way
 No Posted Speed Limit
 2011 ADT - 540 (Assumed)

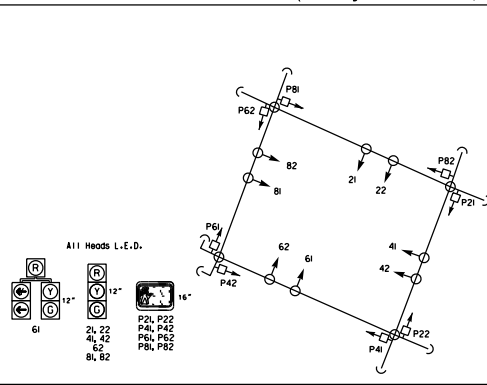
SR 1355 (Lineberry Drive)
 35 MPH
 2011 ADT - 4,900 (Assumed)

SR 1348 (Trailwood Road)
 35 MPH
 2011 ADT - 5,400 (Assumed)

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 TRUCK
	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				SPEED UNKNOWN		O OTHER



SIG ID 05-2345 3 Phase (Fully Actuated)



AECOM

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