

Hazard Elimination Project Evaluation

Project Information

Order ID: 41000033016

Project ID: W-5111

Location: US 401 at SR 1101 (Sid Eaves/Darius Pearce)

County: Franklin

Division: 5

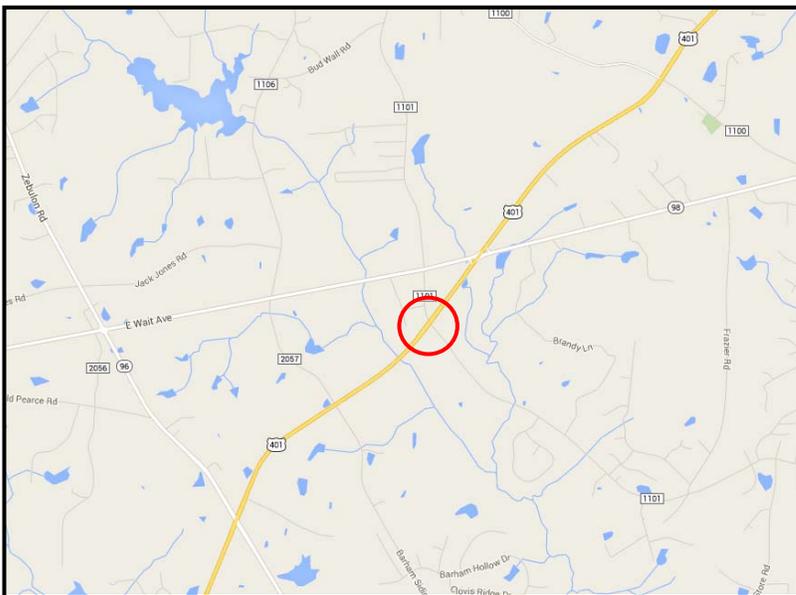
Signal ID: 05-2360

Countermeasure: Install traffic signal and left turn lanes on US 401

Project Completion: December 31, 2009

Project Cost: \$503,000

Map and Image (from Google Maps – Coordinates are 35.963584,-78.404383)



Naive Before and After Analysis

- Before Period: November 1, 2004 through August 31, 2009 (4.83 years)
- Const. Period: September 1, 2009 through January 31, 2010
- After Period: February 1, 2010 through November 30, 2014 (4.83 years)
- Analysis Criteria: Treatment data consists of all crashes within 150 feet of the subject intersection.
- Target Crashes: There were two types of Target Crashes for the chosen countermeasure.
 1) Frontal Impact Crashes, which are considered as follows: Left turn, same roadway; Left turn, different roadways; Right turn, same roadway; Right turn, different roadways; Head on; and Angle.
 2) Rear End Crashes on the US 401 approaches to the intersection

<u>Treatment Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Total Crashes	22	8	-63.6
Total Severity Index	12.6	3.77	-70.1
Frontal Impact Crashes	13	4	-69.2
Frontal Impact Crash Severity Index	12.52	4.7	-62.5
Rear End Target Crashes	7*	2	-71.4
Rear End Target Crash Severity Index	15.0	4.7	-68.7
Volume (2007, 2012)	12,400	10,200	-17.7

*One Head-On Crash and one Ran Off Crash counted as Rear-Ends. In both crashes a vehicle swerved to avoid a Rear End Crash.

<u>Injury Crash Summary</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Fatal injury Crashes	1	0	-100.0
Class A injury Crashes	1	0	-100.0
Class B injury Crashes	6	2	-66.7
Class C Injury Crashes	8	1	-87.5
Property Damage Only	6	5	-16.7

Overall Summary Results

Total Crashes:	- 64 %	(reduction)
Total Crash Severity:	- 70 %	(reduction)
Frontal Impact Target Crashes:	- 69 %	(reduction)
Frontal Impact Crash Severity:	- 63 %	(reduction)
Rear End Target Crashes:	-71 %	(reduction)
Rear End Crash Severity:	-69 %	(reduction)
Volume:	- 18 %	(reduction)

Items for Discussion/Concerns

none

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: Brad Robinson, PE
Work Group/Consultant: NCDOT - Safety Evaluation Group
Date: February 5, 2015

W-5III
 Order# 41000033016
 Franklin County
 BEFORE Period
 11/1/04 - 8/31/09

ADT (YEAR)
 1,100 (2007)
 SR 1101
 (Sid Eaves Rd)
 55 mph

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

US 401
 55 mph

ADT (YEAR)
 10,600 (2007)

ADT (YEAR)
 11,000 (2007)

US 401
 55 mph

SR 1101
 (Darius Pearce Rd)
 45 mph

ADT (YEAR)
 2,000 (2007)

Note: In Crash #s 1&16 the southbound vehicles swerved to avoid rear-ending a left turning vehicle

Frontal Impact
 Target Crashes

Rear-End
 Target Crashes

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

TRAFFIC SAFETY UNIT

Date: December 2014

Prepared By: BDR

W-5III
 Order# 41000033016
 Franklin County
 AFTER Period
 2/1/10 - 11/30/14

ADT (YEAR)
 900 (2013)
 SR 1101
 (Sid Eaves Rd)
 55 mph

US 401
 55 mph

ADT (YEAR)
 8,700 (2013)

ADT (YEAR)
 9,000 (2013)

US 401
 55 mph

ADT (YEAR)
 1,800 (2013)
 SR 1101
 (Darius Pearce Rd)
 45 mph

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
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Frontal Impact
 Target Crashes

Rear-End
 Target Crashes



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