

Hazard Elimination Project Evaluation

Project Information

Order ID: 41000032558

Project ID: W-5126

Location: SR 1437 (I-85 Connector) from US 158 to I-85

County: Vance

City: Henderson

Division: 5

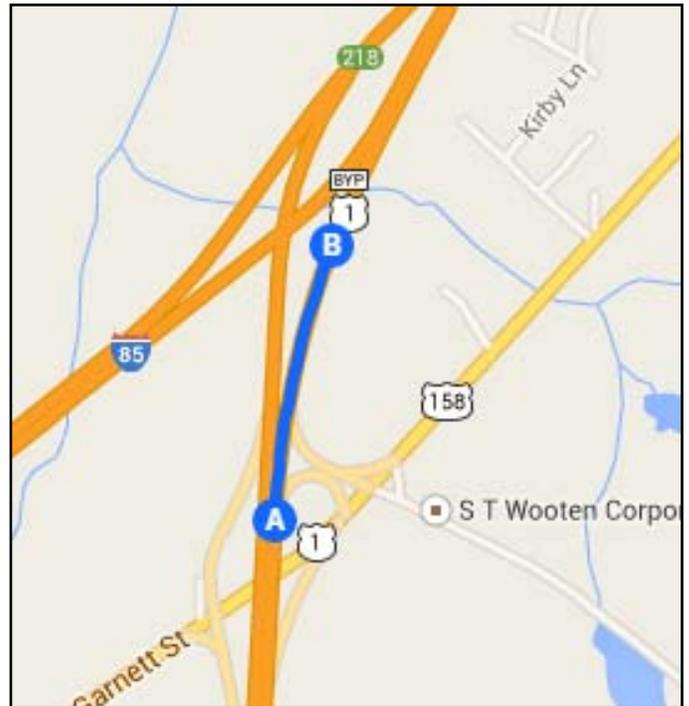
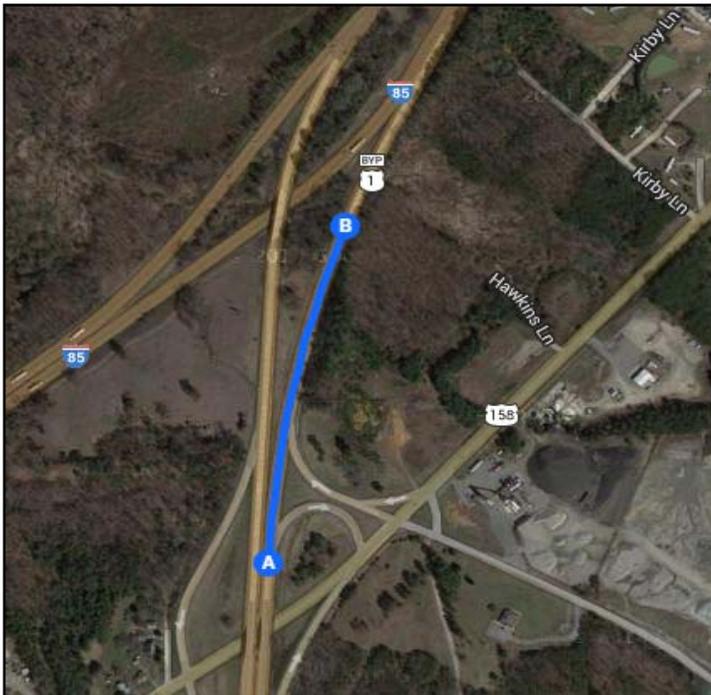
Signal ID: N/A

Countermeasure: Install median guardrail.

Project Completion: August 13, 2010

Project Cost: \$117,300

Map and Aerial (from Google Maps – Coordinates are 36.367518, -78.361739)



Naive Before and After Analysis

Before Period:	December 1, 2006 through July 30, 2010 (3.66 yrs)
Construction Period:	August 1, 2010 through October 31, 2010
After Period:	November 1, 2010 through June 30, 2014 (3.66 yrs)
Analysis Criteria:	Treatment data consisted of all crashes along SR 1437 (I-85 Connector) from MP 0.22 to MP 0.49 (length of road that had guardrail installed).
Target Crashes:	The target crashes for this project are Lane Departure Crashes, including Ran Off Road – Left, Ran Off Road - Right, Ran Off Road – Straight, Fixed Object, Head-on, Parked Motor Vehicle, and Overturn/Rollover. Median Guardrail Hit Crashes are also noted in the following table.

<u>Treatment Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Total Crashes	3	3	0.0 %
Total Severity Index	3.47	1.00	- 71.2 %
Lane Departure Crashes	2	3	50.0 %
Lane Departure Severity Index	4.70	1.00	- 78.7 %
Cross Median Crashes	0	0	N/A
Cross Median Severity Index	0	0	N/A
Median Barrier Hit Crashes	1	1	0.0 %
Median Barrier Hit Severity Index	1.00	1.00	0.0 %
Volume (2008, 2012)	2400	2000	- 16.7 %

<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	0	0	N/A
Class C Injury Crashes	1	0	- 100.0 %
Property Damage Only	2	3	50.0 %

Overall Summary Results

Total Crashes:	0 %	(no change)
Total Crash Severity:	- 71 %	(reduction)
Lane Departure Crashes:	50 %	(increase)
Lane Departure Crash Severity:	0 %	(no change)
Median Guardrail Hit Crashes:	0 %	(no change)
Median Guardrail Hit Crash Severity:	0 %	(no change)
Volume:	- 17 %	(decrease)

Items for Discussion/Concerns

There was median barrier present in the Before period along the Southbound lane from the bridge over I-85 and along both lanes from the bridge over US 158. Also, all of the Lane Departure crashes from both the Before and After period occurred under wet or icy road conditions.

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: Ian Pike, Engineering Assistant
Checked by: Brad Robinson, PE

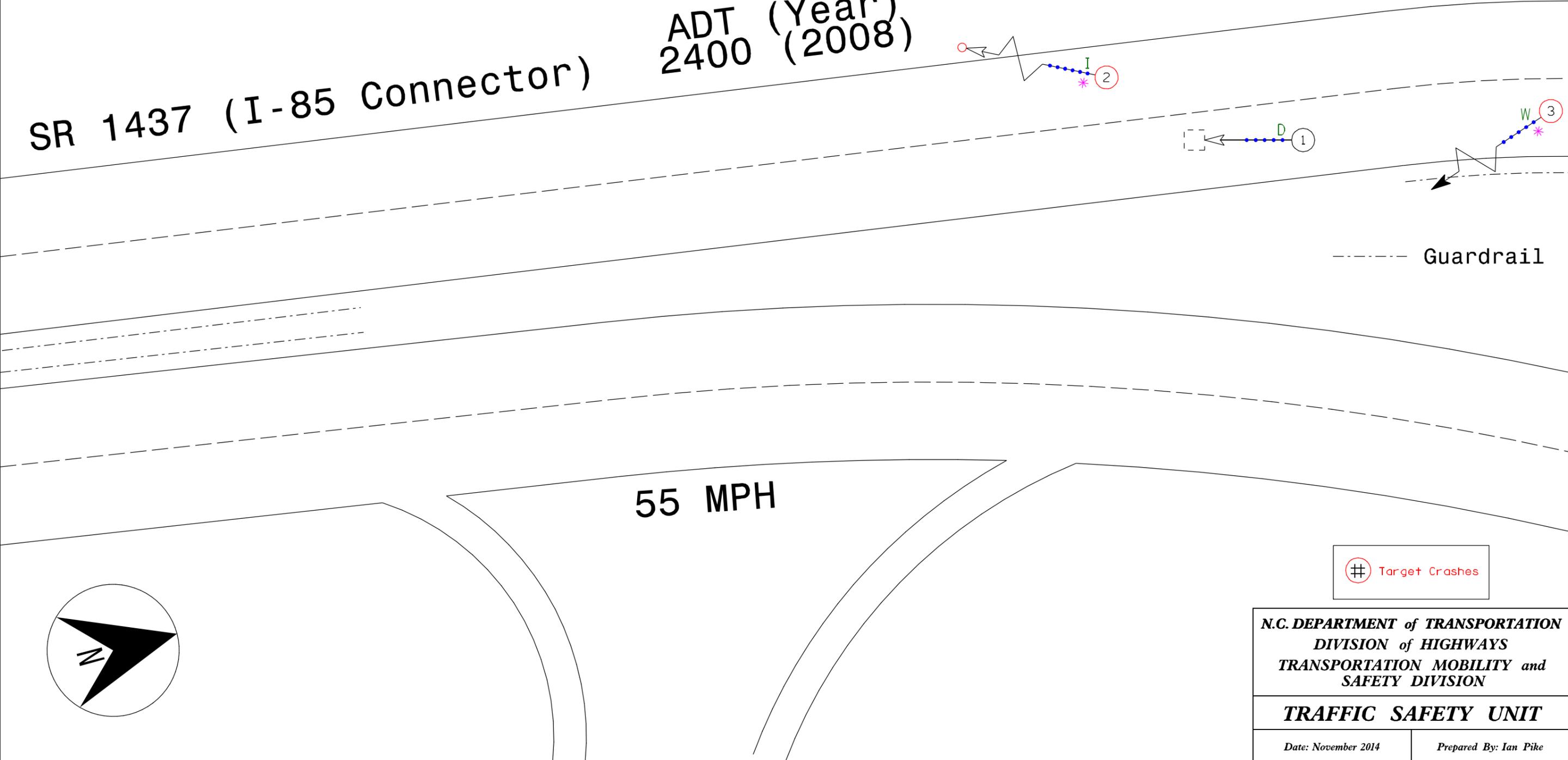
Work Group/Consultant: NCDOT - Safety Evaluation Group

Date: November 21, 2014

W-5126
 Order# 41000032558
 Vance County
 BEFORE Period
 12/1/06 - 7/31/10

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

SR 1437 (I-85 Connector) ADT (Year)
 2400 (2008)



Target Crashes

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

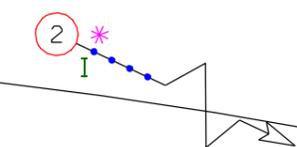
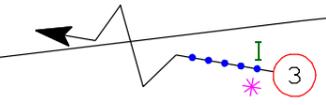
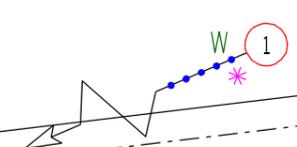
TRAFFIC SAFETY UNIT

Date: November 2014 Prepared By: Ian Pike

W-5126
 Order# 41000032558
 Vance County
 AFTER Period
 11/1/10 - 6/30/14

SR 1437 (I-85 Connector) ADT (Year)
 2000 (2012)

LEGEND			
	MOVING VEHICLE		ANGLE
	PARKED VEHICLE		TURNING
	PARKING VEHICLE		BACKING
	MOVABLE OBJECT		SIDESWIPE
	HEAD ON		INJURY
	REAR END		FATALITY
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--- Guardrail
 Cable

55 MPH

⊕ Target Crashes



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TRAFFIC SAFETY UNIT

Date: November 2014

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