

Spot Safety Project Evaluation

Project Information

Order ID: 41000028334

Project ID: 04-06-215

Location: SR 1555 (Barber Mill Rd) in the vicinity of Bridge #145

County: Johnston

City: South of Clayton

Division: 4

Signal ID: N/A

Countermeasure: Installation of electronic “Your Speed” radar sign on Southbound SR 1555 to advise motorists of their speed entering the curve, replace the existing chevron warning signs on southbound SR 1555 with oversized chevron signs and install additional oversized chevrons

Project Completion: November 5, 2008

Project Cost: \$11,000

Map and Aerial (from Google Maps- Coordinates are 35.574997, -78.498559)



Naive Before and After Analysis

Before Period: June 1, 2003 through August 31, 2008 (5 years, 3 Months)

Const. Period: September 1, 2008 through November 30, 2008

After Period: December 1, 2008 through February 28, 2014 (5 years, 3 Months)

Analysis Criteria: Treatment data consisted of all crashes from MP 0.39 to MP 0.79 on SR 1555.

Target Crashes: - Southbound Lane Departure Crashes.

- Northbound Lane Departure Crashes.

<u>Treatment Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Total Crashes	19	9	- 52.6 %
Total Crash Severity Index	3.34	11.89	+ 256.0 %
Volume (2006, 2010)	3,800	4,200	+ 10.5 %

<u>Injury Crash Summary</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Fatal injury Crashes	0	1	+ 100.0 %
Class A injury Crashes	0	0	N/A
Class B injury Crashes	2	1	- 50.0 %
Class C Injury Crashes	4	2	- 50.0 %
Property Damage Only	13	5	- 61.5 %

<u>Additional Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
SB Lane Departure Target Crashes	9	3	- 66.7 %
SB Lane Departure Target Crash Severity Index	4.29	28.73	+ 569.7 %
SB Bridge Guardrail Hits	5	2	- 60.0 %
NB Lane Departure Target Crashes	3	1	- 66.7 %
NB Lane Departure Target Crash Severity Index	3.47	1.00	- 71.2 %
NB Bridge Guardrail Hits	2	1	- 50.0 %

Overall Summary Results

Total Crashes:	- 53 %	(reduction)
Total Crash Severity:	+ 256 %	(increase)
SB Lane Departure Target Crashes:	- 67 %	(reduction)
SB Lane Departure Target Crash Severity:	+ 570 %	(increase)
NB Lane Departure Target Crashes:	- 67 %	(reduction)
NB Lane Departure Target Crash Severity:	- 72 %	(reduction)
Volume:	+ 11 %	(increase)

Items for Discussion/Concerns

- The significant increase in the Total Crash Severity and SB Lane Departure Target Crash Severity Index is due to the fatal crash which occurred in the after period. The Severity Index is greatly impacted by fatal and A-level injury crashes and the total number of crashes in the analysis.
- The electronic “Your Speed” sign was stolen from the site and not replaced one year after implementation of this countermeasure.

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: Justin Green, EI
Work Group/Consultant: NCDOT - Safety Evaluation Group
Date: April 9, 2014

SS# 04-06-215
 Order# 41000028334
 Johnston County
 BEFORE Period
 6/1/2003 - 8/31/2008

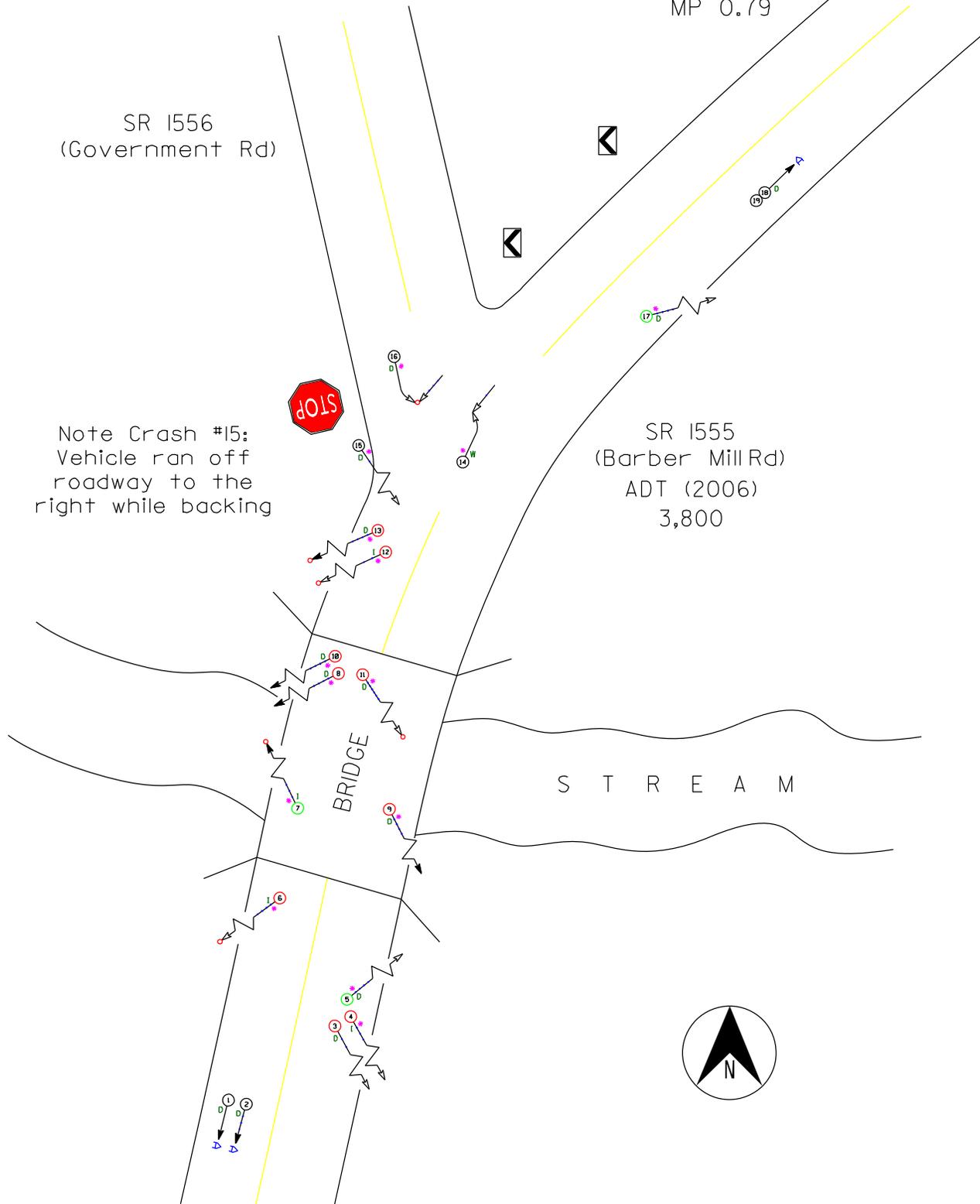
LEGEND			

SR 1556
 (Government Rd)

End
 Study
 MP 0.79

Note Crash #15:
 Vehicle ran off
 roadway to the
 right while backing

SR 1555
 (Barber Mill Rd)
 ADT (2006)
 3,800



S T R E A M

BRIDGE



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

TRAFFIC SAFETY UNIT

Begin
 Study
 MP 0.39

SB Lane Departure
 Target Crashes

NB Lane Departure
 Target Crashes

SS# 04-06-215
 Order# 41000028334
 Johnston County
 AFTER Period
 12/1/2008 - 2/28/2014

LEGEND			

SR 1556
 (Government Rd)

"Your Speed"
 Radar Sign

End Study
 MP 0.79

Oversized
 Chevrons

SR 1555
 (Barber Mill Rd)
 ADT (2011)
 4,200



BRIDGE

S T R E A M



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

TRAFFIC SAFETY UNIT

Date: April 2014

Prepared By: J. Green

Begin Study
 MP 0.39

SB Lane Departure
 Target Crashes

NB Lane Departure
 Target Crashes