

# Spot Safety Project Evaluation

## Project Information

Order ID: 41000029906

Project ID: 04-11-1314

Location: SR 1706 (Loop Road) – Entire Route of 2.72 miles

County: Johnston

City: near Clayton

Division: 4

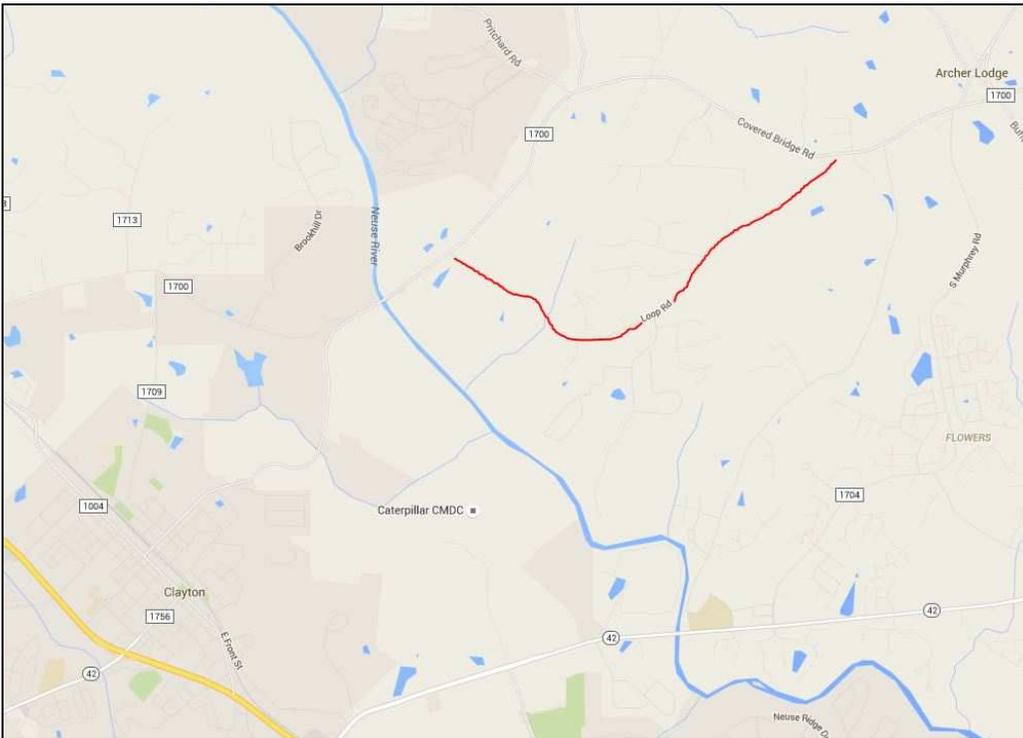
Signal ID: N/A

Countermeasure: Widen for 2-Foot Paved Shoulders on both sides of roadway

Project Completion: October 5, 2011

Project Cost: \$250,000

## Map and Aerial (from Google Maps) – Coordinates 35.673367, -78.409593



## Naive Before and After Analysis

- Before Period: January 1, 2008 through July 31, 2011 (3 years, 7 months)
- Const. Period: August 1, 2011 through October 31, 2011
- After Period: November 1, 2011 through May 31, 2015 (3 years, 7 months)
- Analysis Criteria: Treatment data consisted of all crashes on SR 1706 (Loop Road) from 150-feet of both SR 1700 (Covered Bridge Road) intersections (MP 0.028 to 2.823).
- Target Crashes: Lane Departure Crashes were the selected Target Crashes, which includes the following: Ran-Off Road (Right, Left, Straight); Head-On; and Sideswipe (Opposite Direction). Each lane departure crash was individually verified.

<u>Treatment Information</u>	<b>Before</b>	<b>After</b>	<b>Percent Reduction (-) Percent Increase (+)</b>
Total Crashes	12	12	0.0 %
Total Severity Index	9.17	2.85	- 68.9 %
Target Crashes – Lane Departure	8	3	- 62.5%
LD-Target Crash Severity Index	13.25	5.93	- 55.2 %
Volume (2009, 2012)	900	1,200	33.3 %
Total Crash Rate (100 MVMT)	364.71	273.53	- 25.0 %

<u>Injury Crash Summary</u>	<b>Before</b>	<b>After</b>	<b>Percent Reduction (-) Percent Increase (+)</b>
Fatal injury Crashes	1	0	- 100.0 %
Class A injury Crashes	0	0	0.0 %
Class B injury Crashes	1	2	100.0 %
Class C Injury Crashes	2	1	- 50.0 %
Property Damage Only	8	9	12.5 %

<u>Additional Information</u>	<b>Before</b>	<b>After</b>	<b>Percent Reduction (-) Percent Increase (+)</b>
Night Crashes	5	7	40.0 %
Wet Roadway Crashes	2	2	0.0 %
Alcohol / Drugs Involvement Crashes	2	1	- 50.0 %
Animal Crashes	2	4	100.0 %

### **Overall Summary Results**

Total Crashes:	0 %	(no change)
Total Crash Severity:	- 69 %	(reduction)
Target Crashes:	- 63 %	(reduction)
Target Crash Severity:	- 55 %	(reduction)
Volume:	33 %	(increase)

### **Additional Summary Results**

Animal Crashes:	100 %	(increase)
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### **Items for Discussion/Concerns**

None – Lane Departure crashes have reduced in frequency and severity during the after period.

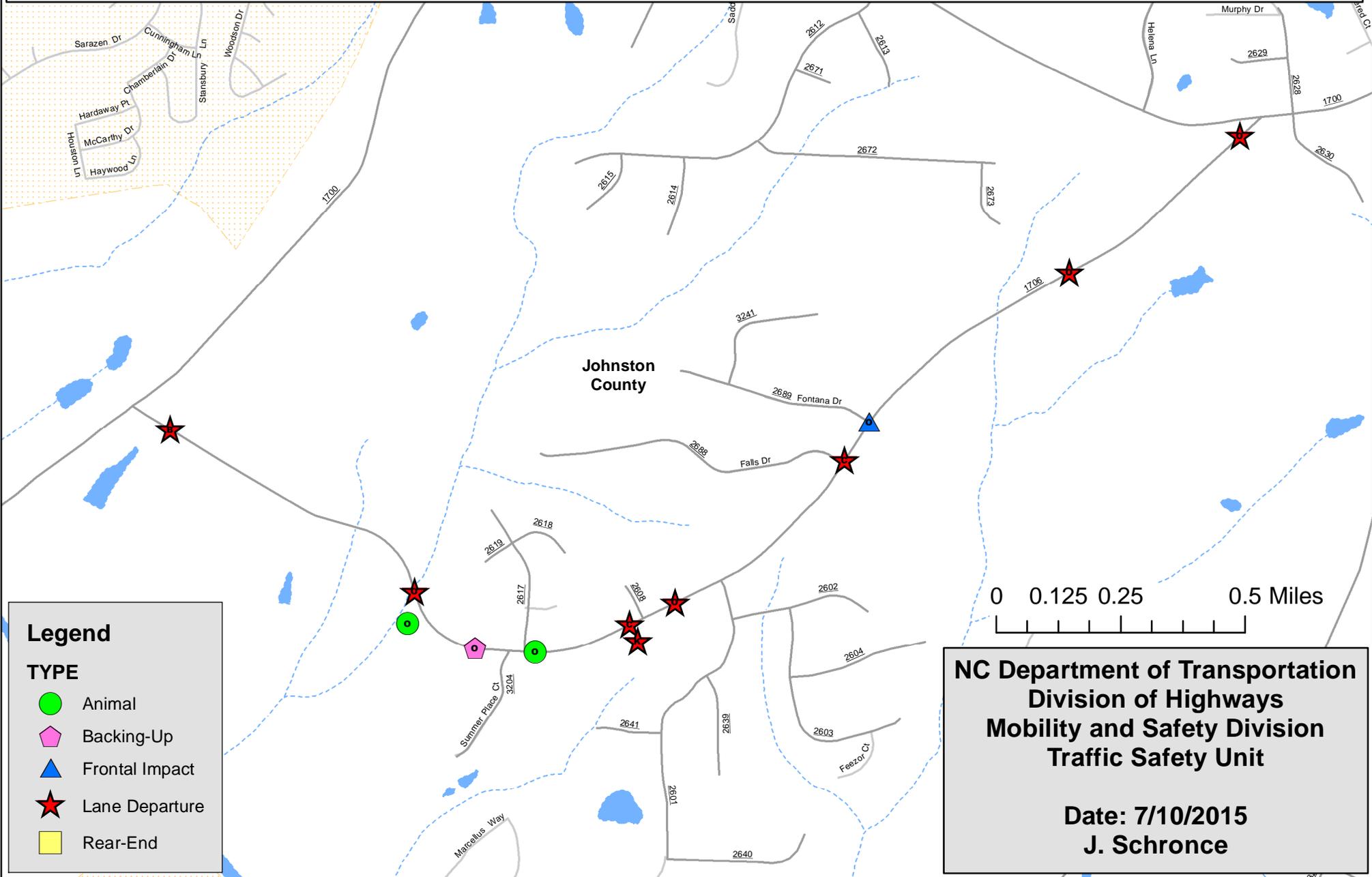
### **Data Prepared For**

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: Jason B. Schronce, P.E.  
Work Group/Consultant: NCDOT - Safety Evaluation Group  
Date: July 30, 2015

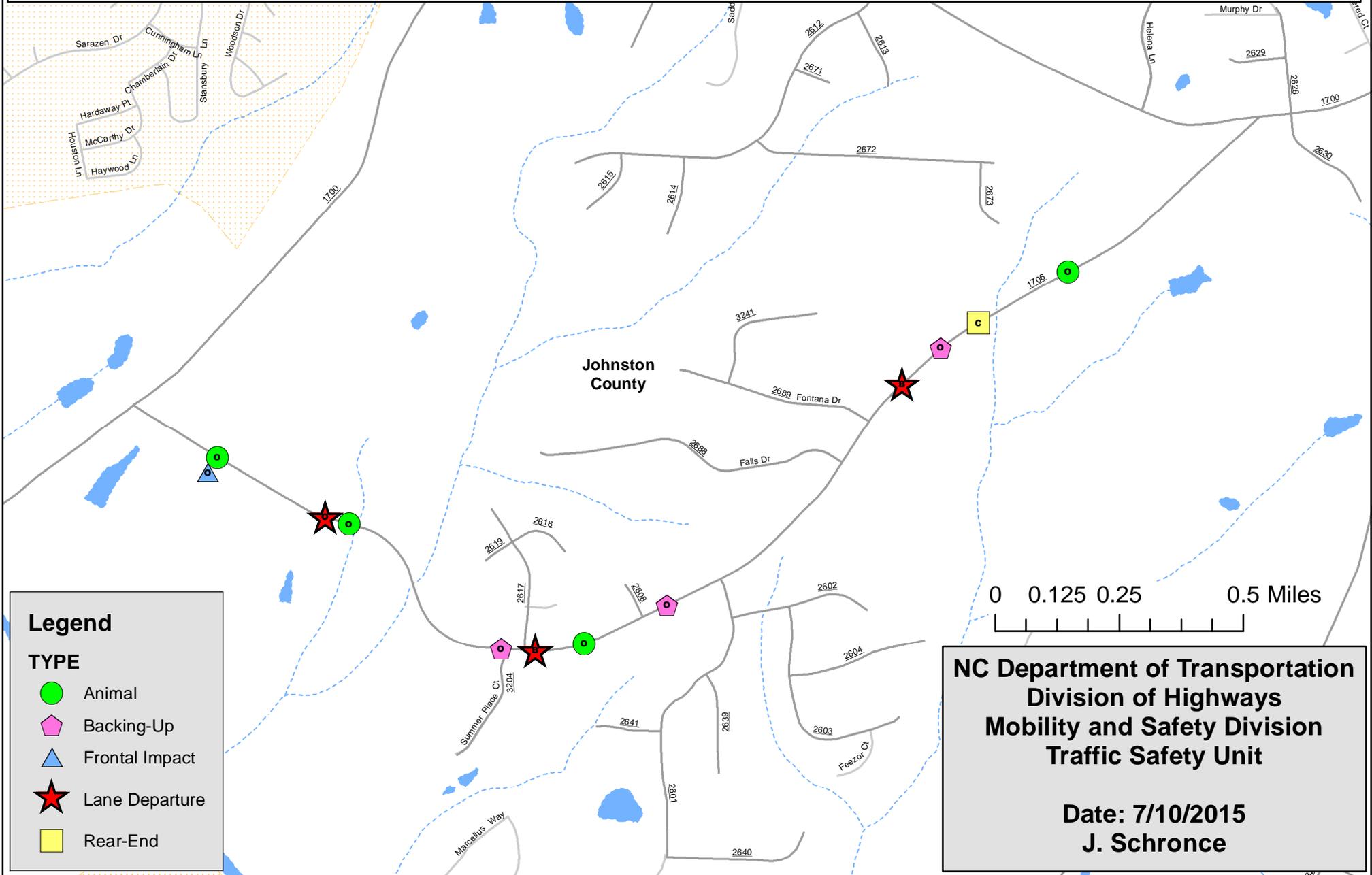
**SS# 04-11-1314 - JOHNSTON COUNTY**  
**SR 1706 (Loop Rd) from 150' east of SR-1700 to 150' west of SR 1700**  
**Study Milepost Range 0.028 to 2.823**  
**BEFORE PERIOD - 1/1/2008 to 7/31/2011 (3.58 Yrs)**



**NC Department of Transportation**  
**Division of Highways**  
**Mobility and Safety Division**  
**Traffic Safety Unit**

**Date: 7/10/2015**  
**J. Schronce**

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**Legend**

**TYPE**

-  Animal
-  Backing-Up
-  Frontal Impact
-  Lane Departure
-  Rear-End

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**Date: 7/10/2015**  
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