

# Spot Safety Project Evaluation

## Project Information

Order ID: 41000033903

Project ID: 05-07-209

Location: US 158 Bypass at SR 1126 (Poplar Creek Road)

County: Vance

City: Henderson

Division: 5

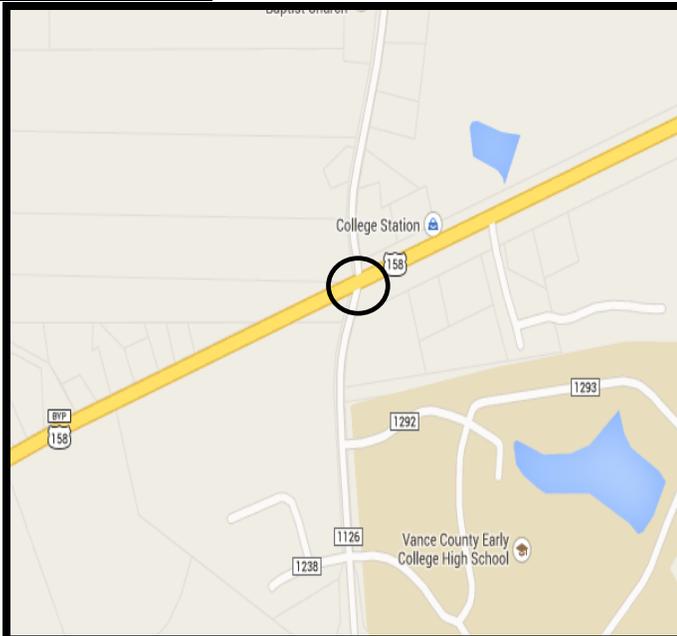
Signal ID: 05-2384

Countermeasure: Install vehicle-actuated flashers with “Vehicle Entering when Flashing” signs on the northbound and southbound approaches on US 158 Bypass.

Project Completion: March 2, 2011

Project Cost: \$12,500.00

## Map and Aerial (from Google maps – Coordinates are 36.326484,-78.490598)



## Naive Before and After Analysis

Before Period: November 1, 2006 to November 30, 2010 (4 years, 1 month)

Const. Period: December 1, 2010 to February 28, 2011 (3 months)

After Period: March 1, 2011 to March 31, 2015 (4 years, 1 month)

Analysis Criteria: Treatment data consisted of all crashes within 150 feet of the subject intersection for the US 158 Bypass and SR 1126 approaches.

Target Crashes: Frontal impact crashes between a vehicle entering from SR 1126 and a vehicle on US 158 Bypass, including left-turn, different roadways; right-turn, different roadways; and angle crashes.

<u>Treatment Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Total Crashes	21	16	-23.8%
Total Severity Index	4.2	6.6	57.1%
Target Crashes	13	8	-38.5%
Target Crash Severity Index	4.4	7.5	70.5%
Volume (2008, 2013)	6,900	5,500	-20.3%

<u>Injury Crash Summary</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Fatal injury Crashes	0	0	-
Class A injury Crashes	0	0	-
Class B injury Crashes	3	4	33.3%
Class C Injury Crashes	6	8	33.3%
Property Damage Only	12	4	-66.7%

<u>Additional Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
NB Frontal Impact Crashes (Target)	9	5	-44.4%
NB Target Crash Total Severity Index	4.3	6.9	60.5%
SB Frontal Impact Crashes (Target)	4	3	-25.0%
SB Target Crash Total Severity Index	4.7	8.4	78.7%

## **Overall Summary Results**

Total Crashes:	-23.8 %	(Reduction)
Total Crash Severity:	57.1 %	(Increase)
Target Crashes:	-38.5 %	(Reduction)
Target Crash Severity:	70.5 %	(Increase)
Volume:	-20.3 %	(Reduction)

## **Items for Discussion/Concerns**

The total crashes saw a decrease of 23.8% (21 to 16 crashes) between the before and after periods. The total crash severity increased by 57.1% over the same time periods. Similarly, the amount of target crashes decreased by 35.7%, while the severity of the target crashes increased by 61.7%. As seen in the collision diagrams, two of the crashes in the after period were rear end collisions due to another vehicle that was parked in the roadway following a previous accident. It should be noted that the results of the analysis show that following the installation of the vehicle actuated flashers, the number of crashes at this intersection have decreased.

Additionally, the target crashes were analyzed by the northbound and southbound approaches on SR 1126. The number of crashes went down between the before and after periods for both approaches. The severity of the crashes increased for both approaches.

## **Data Prepared For**

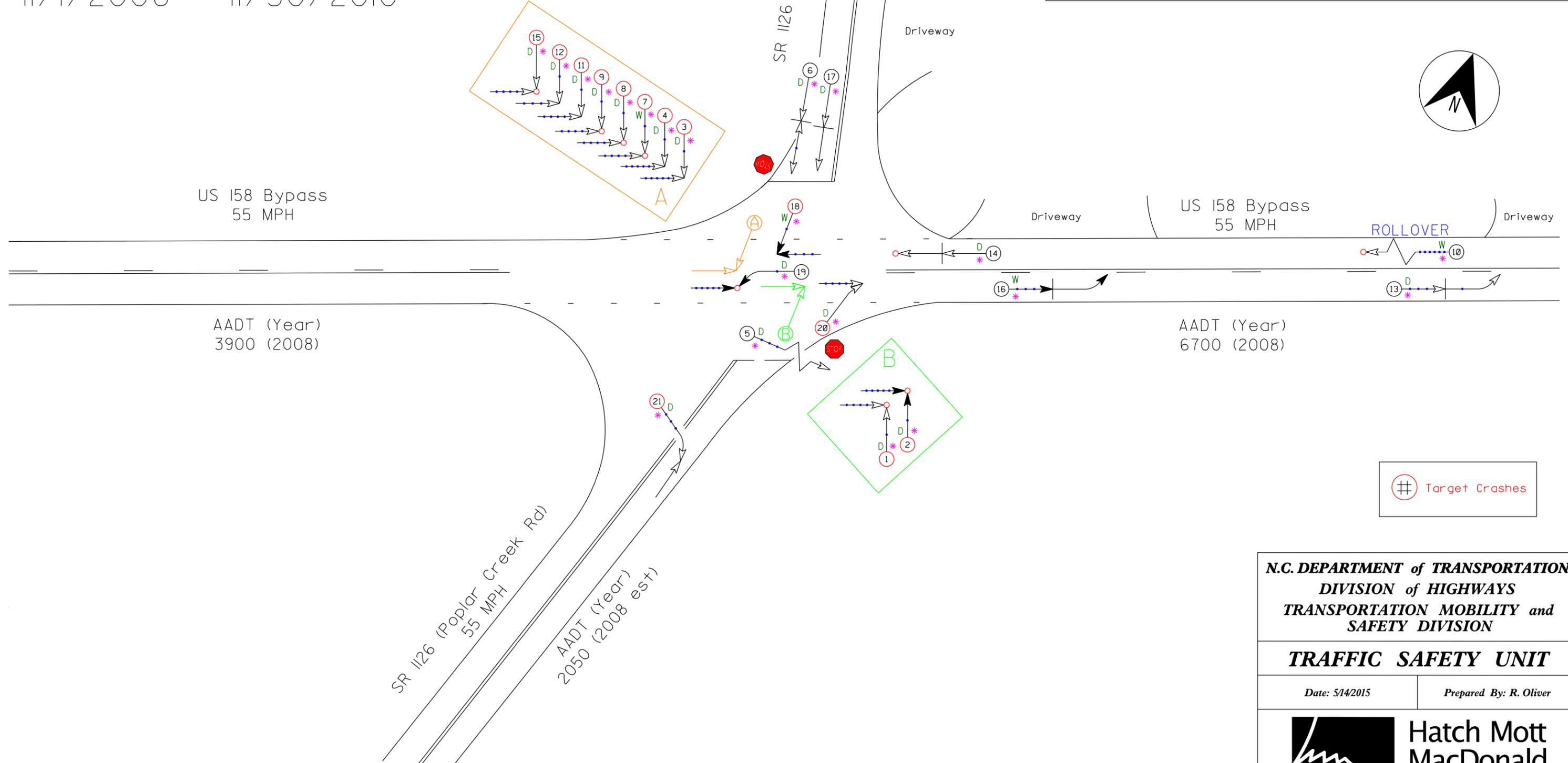
The Traffic Safety Unit *of the*  
Transportation Mobility and Safety Division *of the*  
Division of Highways *of the*  
North Carolina Department of Transportation

## **Data Prepared By**

Principal Investigator: Ross Oliver  
Work Group/Consultant: Hatch Mott MacDonald  
Date: May 18, 2015

SS# 05-07-209  
 Order# 41000033903  
 Vance County  
 BEFORE Period  
 11/1/2006 - 11/30/2010

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
	STOP SIGN		A ANIMAL
	P PEDESTRIAN		B BICYCLE
	T TRAIN		* DRIVER AT FAULT
	D DRY		W WET
	I ICY OR SNOWY		O Other



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

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**TRAFFIC SAFETY UNIT**

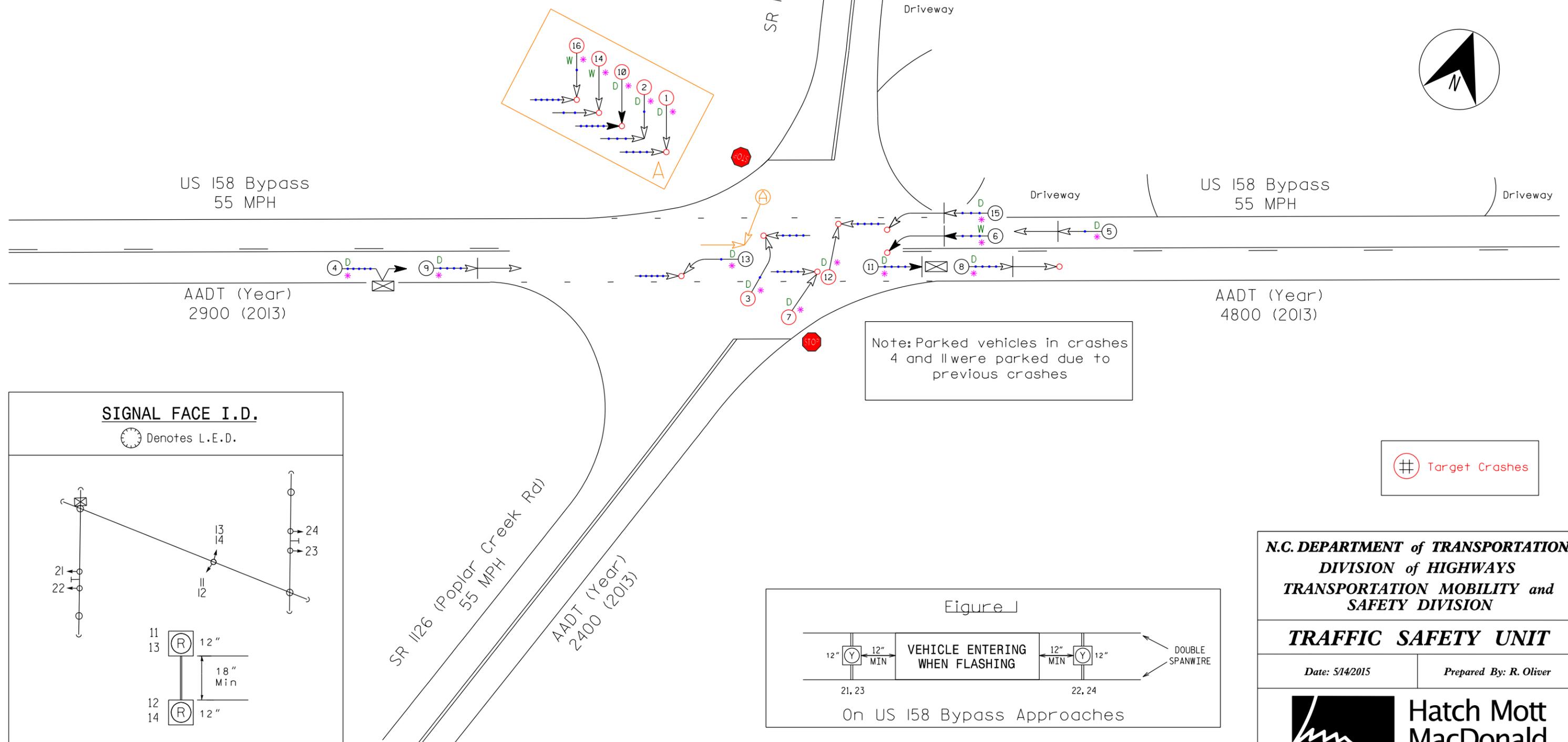
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Date: 5/14/2015      Prepared By: R. Oliver

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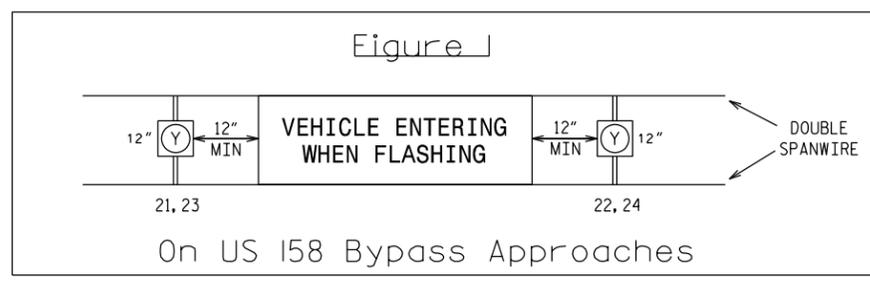
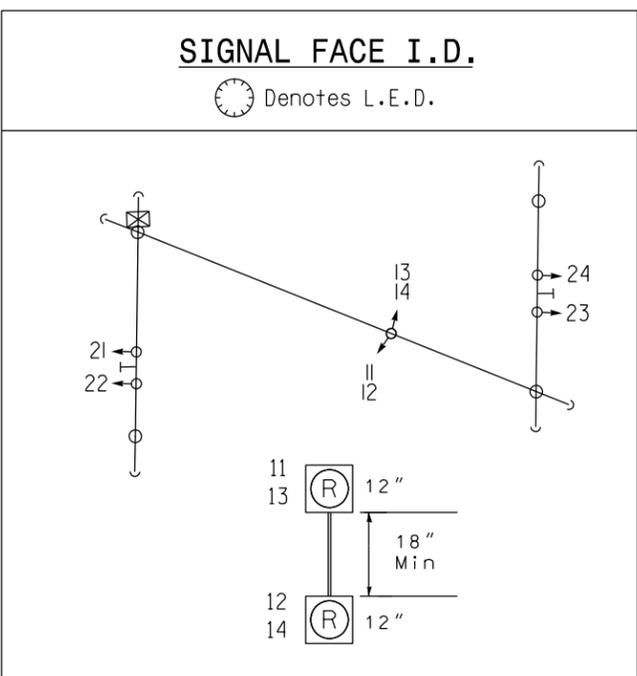
SS# 05-07-209  
 Order# 41000033903  
 Vance County  
 AFTER Period  
 3/1/2011 - 3/31/2015

LEGEND	
	MOVING VEHICLE
	PARKED VEHICLE
	PARKING VEHICLE
	MOVABLE OBJECT
	HEAD ON
	REAR END
	RAN OFF ROAD
	DAYLIGHT CRASH
	NIGHT CRASH
	ANGLE
	TURNING
	BACKING
	SIDESWIPE
	INJURY
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	STOP SIGN
	ANIMAL
	PEDESTRIAN
	BICYCLE
	TRAIN
	DRIVER AT FAULT
	DRY
	WET
	ICY OR SNOWY
	Other



Note: Parked vehicles in crashes 4 and 11 were parked due to previous crashes

# Target Crashes



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Date: 5/14/2015 Prepared By: R. Oliver

