Spot Safety Project Evaluation

Work Order #41000013144

Spot Safety Project # 02-06-208

Spot Safety Project Evaluation of the Sight Distance Improvements at the Intersection of US 264 at NC 32
Beaufort County

Documents Prepared By:

Safety Evaluation Group
Traffic Safety Systems Management Section
Transportation Mobility and Safety Division
North Carolina Department of Transportation

Principal Investigator

Brad Robinson

Brad Robinson, PE

8/5/2011
Date

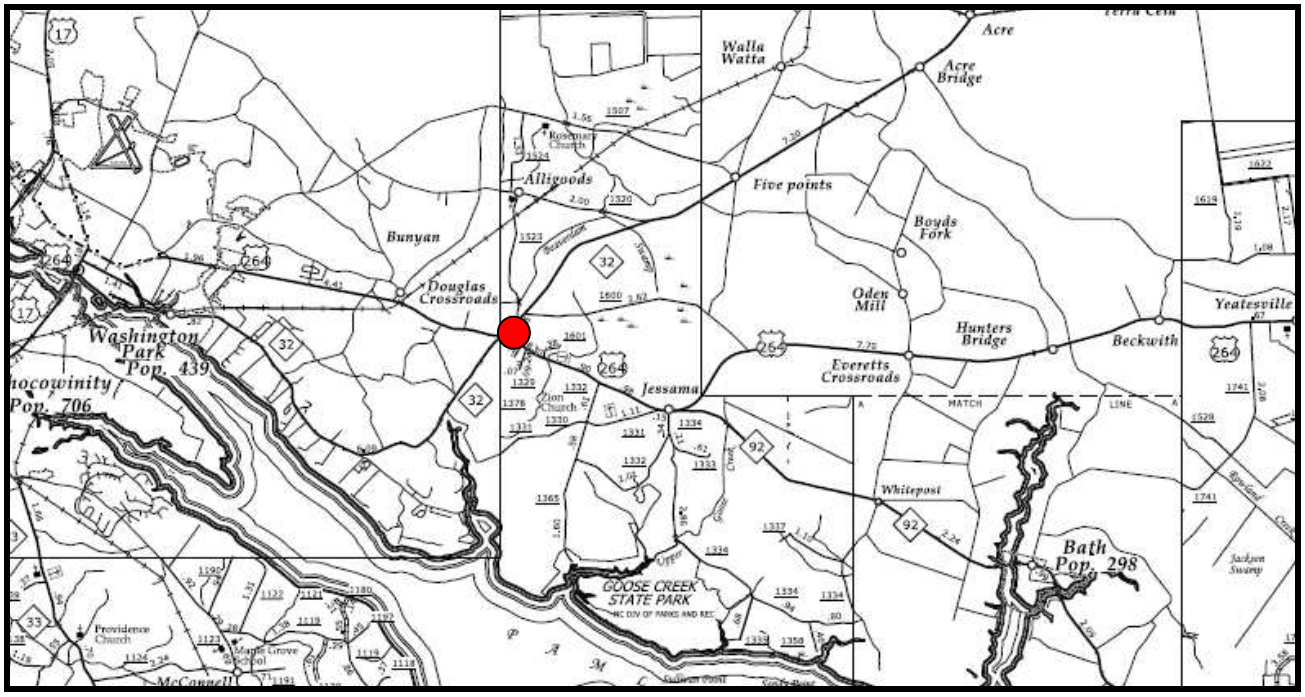
Traffic Safety Project Engineer

Spot Safety Project Evaluation Documentation

Subject Location

Evaluation of Spot Safety Project Number 02-06-208 – The intersection of US 264 and NC 32 in Beaufort County.

Signal ID #02-0524



Project Information and Background from the Project File Folder

The spot safety project improvement countermeasure chosen for the subject location was to relocate traffic signal poles, route markers, and intersection identification signs in both the northwest and the southwest quadrants in order to improve crossing sight distance at the intersection.

The subject location is a four-leg intersection which is controlled by stop signs on NC 32 in addition to a flasher and 'Vehicle Entering When Flashing' signs. All approaches to the intersection have left turn lanes and speed limits of 55 mph. All approaches with the exception of northbound NC 32 also have right turn slip lanes.

The initial crash analysis was conducted from November 1, 2000 to October 31, 2005 with a total of 26 reported crashes. The final completion date for the improvements at the subject intersection was on April 2, 2007 with a total cost of $8,500.00.

Naive Before and After Analysis

After reviewing the spot safety project file folder along with all the crashes at the subject location, the crash data omitted from this analysis to consider for an adequate construction period was from March 1, 2007 to April 30, 2007. The before period consisted of reported crashes from January 1, 2003 through February 28, 2007 (4 years and 2 months) and the after period consisted of reported crashes from May 1, 2007 through June 30, 2011 (4 years and 2 months). The ending date for this analysis was limited by the available crash data at the time the analysis was conducted.

The treatment data consisted of all reported crashes within 150 feet of the subject intersection. The following data table depicts the Naive Before and After Analysis for the treatment location. Please note that Frontal Impact crashes that involved vehicles entering the intersection from NC 32 were the Target Crashes for the applied countermeasure. These crash types are considered as follows: Left Turn, same roadway; Left Turn, different roadway; Right Turn, same roadway; Right Turn, different roadway; Head On and Angle. The target crashes are clearly identified in the before and after period collision diagrams.

Treatment Information			
	Before	**After**	**Percent Reduction (-) Percent Increase (+)**
Total Crashes	24	9	-62.5
Total Severity Index	17.02	12.71	-25.3
Target Crashes	15	4	-73.3
Target Severity Index	19.61	23.65	20.6
Volume	13,000	12,900	-0.8
Target Crash Severity Summary			
Fatal Crashes	1	1	0.0
Class A Crashes	2	0	-100.0
Class B Crashes	3	2	-33.3
Class C Crashes	4	0	-100.0
PDO Crashes	5	1	-80.0

The naive before and after analysis at the treatment location resulted in a 30 percent decrease in Total Crashes, a 20 percent decrease in Target Crashes, and a 1 percent increase in Average Daily Traffic (ADT). The before period ADT year was 2003 and the after period ADT year was 2008.

Results and Discussion

The naive before and after analysis at the treatment location resulted in a 63 percent decrease in Total Crashes, a 25 percent decrease in Target Crashes, and a 1 percent decrease in Average Daily Traffic (ADT). The before period ADT year was 2005 and the after period ADT year was 2009.

The calculated benefit to cost ratio for this project is 389.30 considering total crashes. The benefit to cost ratio considering only target crashes is 261.34. The benefits are calculated using the change in annual crash costs from the before to the after period. Operational and other benefits related to the project are not considered in this analysis. The costs of the project include the actual construction costs as well as the increase in annual maintenance and utility costs.

All existing target crash patterns at the intersection were reduced from the before to the after period. The largest pattern in the before period, between northbound NC 32 vehicles and eastbound US 264 vehicles, was reduced by 75 percent (from 8 to 2).

In the before period there were two fatal crashes, only one of which was a target crash. The non-target fatal crash involved a passenger jumping out of a moving vehicle. The fatal target crash was an angle crash and involved a southbound NC 32 vehicle failing to stop at the stop sign.

There was also a fatal target crash in the after period. It involved a northbound vehicle on NC 32 failing to yield prior to attempting to cross the intersection.

Please see the attached *Treatment Site Photos*. As the Safety Evaluation Group completes additional spot safety reviews for this type of countermeasure, we will be able to provide objective and definite information regarding actual crash reduction factors for this type of intersection.

Treatment Site Photos Taken June 15, 2011

Looking west on US 264

Looking east on US 264

Looking north on NC 32

Looking left (toward southwest quadrant of intersection) from the southern leg of NC 32

Looking south on NC 32

Looking right (toward northwest quadrant of intersection) on the northern leg of NC 32

BENEFIT-COST ANALYSIS WORKSHEET - TOTAL

LOCATION: US 264 at NC 32
COUNTY: Beaufort
FILE NO.: SS 02-06-208

BY: bdr
DATE: 8/1/2011

DETAILED COST: TYPE IMPROVEMENT - Sight Distance-Relocation of poles and markers

ITEMS	TOTAL	SERVICE	CRF	ANNUAL COST
Construction	$0	0	0.000	$0
	$8,500	10	0.149	$1,267
Right-of-Way	$0	0	0.000	$0
TOTALS	$8,500	10	0.149	$1,267

ESTIMATED INCREASE IN ANNUAL MAINT. COST = $0
ESTIMATED INCREASE IN ANNUAL UTILITY COST = $0

TOTAL ANNUAL COST= $1,267
TOTAL COST OF PROJECT= $8,500

COMPREHENSIVE COST REDUCTION:

ESTIMATED NUMBER OF ANNUAL ACCIDENT DECREASES

TIME PERIOD	YEARS	K & A CRASHES	K & A CRASHES PER YR	B & C CRASHES	B & C CRASHES PER YR	PDO CRASHES	PDO CRASHES PER YR	ANNUAL COSTS
BEFORE	4.16	4	0.96	11	2.64	9	2.16	$667,957
AFTER	4.16	1	0.24	4	0.96	4	0.96	$174,808

Annual Benefits from Crash Cost Savings $493,149

NET AVG. ANNUAL BENEFITS = AVG. ANNUAL BENEFITS - TOTAL ANNUAL COST = $491,882

BENEFIT-COST RATIO = AVG ANNUAL BENEFITS/TOTAL ANNUAL COST = 389.30

TOTAL COST OF PROJECT - $8,500 COMPREHENSIVE B/C RATIO - 389.30

BENEFIT-COST ANALYSIS WORKSHEET - TARGET

LOCATION: US 264 at NC 32
COUNTY: Beaufort
FILE NO.: SS 02-06-208

BY: bdr
DATE: 8/1/2011

DETAILED COST: TYPE IMPROVEMENT - Sight Distance-Relocation of poles and markers

ITEMS	TOTAL	SERVICE	CRF	ANNUAL COST
Construction	$0	0	0.000	$0
	$8,500	10	0.149	$1,267
Right-of-Way	$0	0	0.000	$0
TOTALS	$8,500	10	0.149	$1,267

ESTIMATED INCREASE IN ANNUAL MAINT. COST = $0
ESTIMATED INCREASE IN ANNUAL UTILITY COST = $0

TOTAL ANNUAL COST= $1,267
TOTAL COST OF PROJECT= $8,500

COMPREHENSIVE COST REDUCTION:

ESTIMATED NUMBER OF ANNUAL ACCIDENT DECREASES

TIME PERIOD	YEARS	K & A CRASHES	K & A CRASHES PER YR	B & C CRASHES	B & C CRASHES PER YR	PDO CRASHES	PDO CRASHES PER YR	ANNUAL COSTS
BEFORE	4.16	3	0.72	7	1.68	5	1.20	$493,149
AFTER	4.16	1	0.24	2	0.48	1	0.24	$162,091

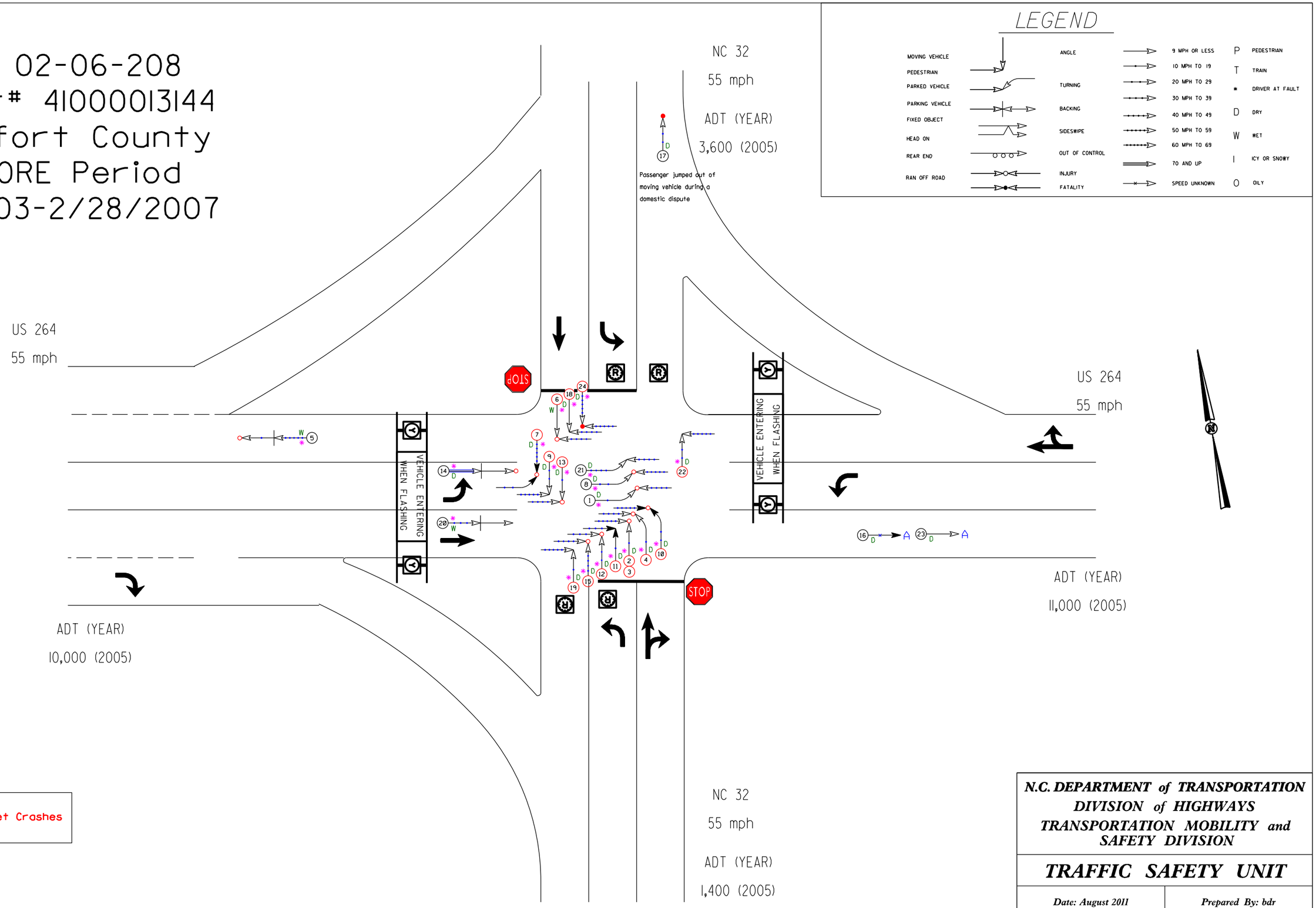
Annual Benefits from Crash Cost Savings $331,058

NET AVG. ANNUAL BENEFITS = AVG. ANNUAL BENEFITS - TOTAL ANNUAL COST = $329,791

BENEFIT-COST RATIO = AVG ANNUAL BENEFITS/TOTAL ANNUAL COST = 261.34

TOTAL COST OF PROJECT - $8,500 COMPREHENSIVE B/C RATIO - 261.34

SS# 02-06-208
Order# 41000013144
Beaufort County
BEFORE Period
1/1/2003-2/28/2007

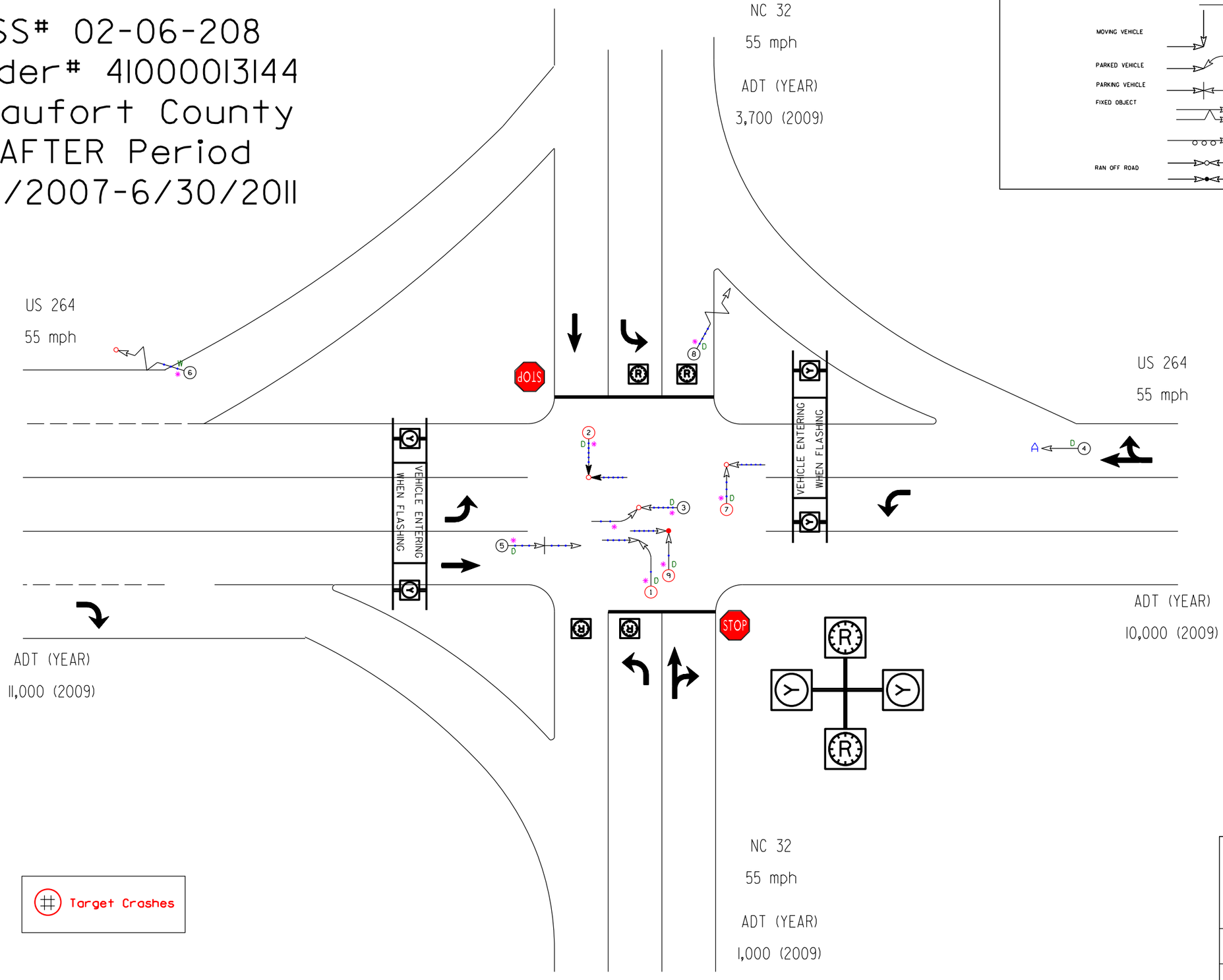


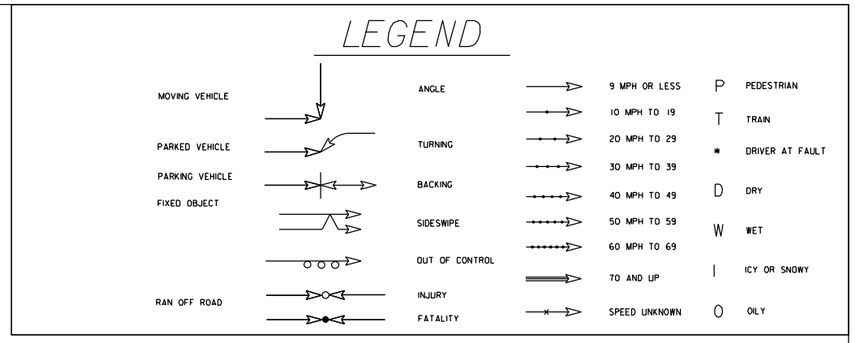
N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
TRANSPORTATION MOBILITY and SAFETY DIVISION

TRAFFIC SAFETY UNIT

Date: August 2011	Prepared By: bdr

SS# 02-06-208
Order# 41000013144
Beaufort County
AFTER Period
5/1/2007-6/30/2011





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

TRAFFIC SAFETY UNIT

Date: August 2011	Prepared By: bdr

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report

Study Criteria Summary

County: BEAUFORT **City:** All and Rural
Date: 1/1/2003 **to** 2/28/2007 **Study:** 41000013144BEFORE
Location: US 264 and NC 32

Report Details

Acc No	Crash ID	Date	Accident Type	Total Damage	Injuries F	Injuries A	Injuries B	Injuries C	Condition R	Condition L	Condition W	Road Ch	Road Ci	Trfc Ctl Dv	Trfc Ctl Op
1	**100846994**	03/10/2003 07:10	LEFT TURN, SAME ROADWAY	$ 15000	0	0	0	2	1	1	1	1	0	1	1
Unit 1 : 14	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** W	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:**										
Unit 2 : 2	**Alchl/Drgs:** 0	**Speed:** 5 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:** 8	**Obj Strk:**										
Unit 3 : 1	**Alchl/Drgs:** 0	**Speed:** 60 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:**										
2	**101048197**	11/20/2003 15:30	ANGLE	$ 2400	0	0	0	1	1	1	1	1	0	4	1
Unit 1 : 5	**Alchl/Drgs:** 0	**Speed:** 10 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:**										
Unit 2 : 1	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:**										
3	**101071351**	12/16/2003 12:30	ANGLE	$ 3600	0	0	0	2	1	1	1	1	0	1	1
Unit 1 : 1	**Alchl/Drgs:** 0	**Speed:** 15 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:**										
Unit 2 : 1	**Alchl/Drgs:** 0	**Speed:** 50 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:**										
4	**101073487**	12/18/2003 17:15	LEFT TURN, DIFFERENT ROADWAYS	$ 18000	0	0	3	1	1	2	1	1	0	5	1
Unit 1 : 5	**Alchl/Drgs:** 0	**Speed:** 15 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:** 8	**Obj Strk:**										
Unit 2 : 2	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:**										
5	**101212550**	06/16/2004 18:10	REAR END, SLOW OR STOP	$ 13500	0	0	1	2	2	1	2	1	0	0	
Unit 1 : 1	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** W	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:**										
Unit 2 : 4	**Alchl/Drgs:** 0	**Speed:** 10 MPH	**Dir:** W	**Veh Mnvr / Ped Actn:** 11	**Obj Strk:**										
6	**101212577**	06/16/2004 18:12	ANGLE	$ 4500	0	0	3	0	2	1	2	1	0	4	1
Unit 1 : 1	**Alchl/Drgs:** 0	**Speed:** 45 MPH	**Dir:** W	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:**										
Unit 2 : 1	**Alchl/Drgs:** 0	**Speed:** 5 MPH	**Dir:** S	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:**										
7	**101259654**	08/16/2004 05:20	LEFT TURN, DIFFERENT ROADWAYS	$ 13000	0	0	1	1	1	5	5	1	0	4	1
Unit 1 : 14	**Alchl/Drgs:** 0	**Speed:** 20 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:** 8	**Obj Strk:**										
Unit 2 : 2	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** S	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:**										
8	**101296196**	09/29/2004 07:50	LEFT TURN, SAME ROADWAY	$ 6000	0	0	0	3	1	1	1	1	0	0	
Unit 1 : 1	**Alchl/Drgs:** 0	**Speed:** 20 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:** 8	**Obj Strk:**										

Acc No	Crash ID	Date	Accident Type	Total Damage	Injuries F	A	B	C	Condition R	L	W	Road Ch	Ci	Trfc Ctl Dv	Op
Unit	**2 :** 2	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** W	**Veh Mnvr / Ped Actn:**				4		**Obj Strk:**				
9	**101297482**	10/01/2004 10:50	ANGLE	$ 2350	0	0	0	0	1	1	1	1	0	1	1
Unit	**1 :** 1	**Alchl/Drgs:** 0	**Speed:** 20 MPH	**Dir:** S	**Veh Mnvr / Ped Actn:**				4		**Obj Strk:**				
Unit	**2 :** 5	**Alchl/Drgs:** 0	**Speed:** 50 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:**				4		**Obj Strk:**				
10	**101334933**	11/13/2004 18:10	LEFT TURN, DIFFERENT ROADWAYS	$ 32000	0	1	2	2	1	5	1	1	0	4	1
Unit	**1 :** 4	**Alchl/Drgs:** 0	**Speed:** 25 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:**				2		**Obj Strk:**				
Unit	**2 :** 4	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:**				8		**Obj Strk:**				
11	**101346240**	11/26/2004 18:13	ANGLE	$ 5000	0	0	0	0	1	5	1	1	0	1	1
Unit	**1 :** 1	**Alchl/Drgs:** 0	**Speed:** 10 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:**				4		**Obj Strk:**				
Unit	**2 :** 1	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:**				4		**Obj Strk:**				
12	**101450270**	04/08/2005 12:10	ANGLE	$ 5300	0	0	0	1	1	1	2	1	0	4	1
Unit	**1 :** 2	**Alchl/Drgs:** 0	**Speed:** 20 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:**				4		**Obj Strk:**				
Unit	**2 :** 1	**Alchl/Drgs:** 0	**Speed:** 50 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:**				4		**Obj Strk:**				
13	**101485963**	05/27/2005 19:05	ANGLE	$ 15000	0	1	1	0	1	1	1	1	0	4	1
Unit	**1 :** 4	**Alchl/Drgs:** 0	**Speed:** 20 MPH	**Dir:** S	**Veh Mnvr / Ped Actn:**				4		**Obj Strk:**				
Unit	**2 :** 20	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:**				4		**Obj Strk:**				
Unit	**3 :** 20	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:**				4		**Obj Strk:**				
14	**101502945**	06/21/2005 07:27	REAR END, SLOW OR STOP	$ 12000	0	0	0	1	1	1	1	1	0	5	1
Unit	**1 :** 1	**Alchl/Drgs:** 1	**Speed:** 80 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:**				4		**Obj Strk:**				
Unit	**2 :** 2	**Alchl/Drgs:** 0	**Speed:** 0 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:**				1		**Obj Strk:**				
15	**101558603**	09/09/2005 19:30	ANGLE	$ 15000	0	0	0	3	1	2	1	1	0	1	1
Unit	**1 :** 2	**Alchl/Drgs:** 0	**Speed:** 45 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:**				4		**Obj Strk:**				
Unit	**2 :** 4	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:**				4		**Obj Strk:**				
16	**101610643**	11/17/2005 19:00	ANIMAL	$ 3500	0	0	0	0	1	5	1		0		
Unit	**1 :** 1	**Alchl/Drgs:** 0	**Speed:** 0 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:**				16		**Obj Strk:**		17		
17	**101802203**	01/14/2006 07:40	OTHER NON-COLLISION	$ 0	1	0	0	0	1	1	1	1	0	13	1
Unit	**1 :** 4	**Alchl/Drgs:** 0	**Speed:** 20 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:**				4		**Obj Strk:**				

Acc No	Crash ID	Date	Accident Type	Total Damage	Injuries F	A	B	C	Condition R	L	W	Road Ch	Ci	Trfc Ctl Dv	Op
18	**101697019**	03/17/2006 17:40	ANGLE	$ 3500	0	0	0	0	1	1	1	1	0	4	1
Unit	**1 :** 1	**Alchl/Drgs:** 0	**Speed:** 10 MPH	**Dir:** S	**Veh Mnvr / Ped Actn:** 12				**Obj Strk:**						
Unit	**2 :** 1	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** W	**Veh Mnvr / Ped Actn:** 4				**Obj Strk:**						
19	**101706853**	04/04/2006 08:00	ANGLE	$ 5500	0	0	0	0	1	1	1	1	0	4	1
Unit	**1 :** 1	**Alchl/Drgs:** 0	**Speed:** 15 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:** 4				**Obj Strk:**						
Unit	**2 :** 1	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:** 4				**Obj Strk:**						
20	**101756180**	06/05/2006 07:27	REAR END, SLOW OR STOP	$ 7000	0	0	0	0	2	1	2	1	0	5	1
Unit	**1 :** 2	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:** 4				**Obj Strk:**						
Unit	**2 :** 1	**Alchl/Drgs:** 0	**Speed:** 0 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:** 1				**Obj Strk:**						
21	**101781443**	07/10/2006 18:00	HEAD ON	$ 11000	0	0	0	0	1	1	1	1	0	4	1
Unit	**1 :** 4	**Alchl/Drgs:** 0	**Speed:** 45 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:** 8				**Obj Strk:**						
Unit	**2 :** 1	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** W	**Veh Mnvr / Ped Actn:** 4				**Obj Strk:**						
22	**101829527**	09/12/2006 17:00	ANGLE	$ 11000	0	0	0	0	1	1	1	1	0	4	1
Unit	**1 :** 14	**Alchl/Drgs:** 0	**Speed:** 50 MPH	**Dir:** W	**Veh Mnvr / Ped Actn:** 4				**Obj Strk:**						
Unit	**2 :** 2	**Alchl/Drgs:** 0	**Speed:** 20 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:** 4				**Obj Strk:**						
23	**101875395**	10/09/2006 15:00	ANIMAL	$ 2500	0	0	0	0	1	1	1		0		
Unit	**1 :** 5	**Alchl/Drgs:** 0	**Speed:** 0 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:** 16				**Obj Strk:** 17						
24	**101969665**	02/25/2007 14:59	ANGLE	$ 21500	1	1	0	1	1	1	2	1	0	4	1
Unit	**1 :** 1	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** S	**Veh Mnvr / Ped Actn:** 4				**Obj Strk:** 37						
Unit	**2 :** 4	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** W	**Veh Mnvr / Ped Actn:** 4				**Obj Strk:**						

Legend for Report Details:

Acc No - Accident Number
Injuries: F - Fatal, A - Class A, B - Class B, C - Class C
Condition: R - Road Surface, L - Ambient Light, W - Weather
Rd Ch - Road Character
Rd Ci - Roadway Contributing Circumstances
Trfc Ctl - Traffic Control: Dv - Device, Op - Operating
Alchl/Drgs - Alcohol Drugs Suspected
Veh Mnvr/Ped Actn - Vehicle Maneuver/Pedestrian Action
Obj Strk - Object Struck

Summary Statistics

High Level Crash Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	24	100.00
Fatal Crashes	2	8.33
Non-Fatal Injury Crashes	13	54.17
Total Injury Crashes	15	62.50
Property Damage Only Crashes	9	37.50
Night Crashes	4	16.67
Wet Crashes	3	12.50
Alcohol/Drugs Involvement Crashes	1	4.17

Crash Severity Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	24	100.00
Fatal Crashes	2	8.33
Class A Crashes	2	8.33
Class B Crashes	4	16.67
Class C Crashes	7	29.17
Property Damage Only Crashes	9	37.50

Vehicle Exposure Statistics

Annual ADT = 13000

Total Vehicle Exposure = 19.76 (MEV)

Crash Rate	Crashes Per 100 Million Vehicles Entered
Total Crash Rate	121.46
Fatal Crash Rate	10.12
Non Fatal Crash Rate	65.79
Night Crash Rate	20.24
Wet Crash Rate	15.18
EPDO Rate	2067.81

Miscellaneous Statistics

Severity Index =	17.02
EPDO Crash Index =	408.60
Estimated Property Damage Total = $	228150.00

Accident Type Summary

Accident Type	Number of Crashes	Percent of Total
ANGLE	12	50.00
ANIMAL	2	8.33
HEAD ON	1	4.17
LEFT TURN, DIFFERENT ROADWAYS	3	12.50
LEFT TURN, SAME ROADWAY	2	8.33
OTHER NON-COLLISION	1	4.17
REAR END, SLOW OR STOP	3	12.50

Injury Summary

Injury Type	Number of Injuries	Percent of Total
Fatal Injuries	2	5.56
Class A Injuries	3	8.33
Class B Injuries	11	30.56
Class C Injuries	20	55.56
Total Non-Fatal Injuries	34	94.44
Total Injuries	36	100.00

Monthly Summary

Month	Number of Crashes	Percent of Total
Jan	1	4.17
Feb	1	4.17
Mar	2	8.33
Apr	2	8.33
May	1	4.17
Jun	4	16.67
Jul	1	4.17
Aug	1	4.17
Sep	3	12.50
Oct	2	8.33
Nov	4	16.67
Dec	2	8.33

Daily Summary

Day	Number of Crashes	Percent of Total
Mon	5	20.83
Tue	4	16.67
Wed	3	12.50
Thu	3	12.50
Fri	6	25.00
Sat	2	8.33
Sun	1	4.17

Hourly Summary

Hour	Number of Crashes	Percent of Total
0000-0059	0	0.00
0100-0159	0	0.00
0200-0259	0	0.00
0300-0359	0	0.00
0400-0459	0	0.00
0500-0559	1	4.17
0600-0659	0	0.00
0700-0759	5	20.83
0800-0859	1	4.17
0900-0959	0	0.00
1000-1059	1	4.17
1100-1159	0	0.00
1200-1259	2	8.33
1300-1359	0	0.00
1400-1459	1	4.17
1500-1559	2	8.33
1600-1659	0	0.00
1700-1759	3	12.50
1800-1859	5	20.83
1900-1959	3	12.50
2000-2059	0	0.00
2100-2159	0	0.00
2200-2259	0	0.00
2300-2359	0	0.00

Light and Road Conditions Summary

Condition	Dry	Wet	Other	Total
Day	15	3	0	18
Dark	4	0	0	4
Other	2	0	0	2
Total	21	3	0	24

Object Struck Summary

Object Type	Times Struck	Percent of Total
ANIMAL	2	66.67
OFFICIAL HIGHWAY SIGN NON-BREAKAWAY	1	33.33

Vehicle Type Summary

Vehicle Type	Number Involved	Percent of Total
MOTORCYCLE	2	4.26
PASSENGER CAR	21	44.68
PICKUP	9	19.15
SPORT UTILITY	8	17.02
TRACTOR/SEMI-TRAILER	3	6.38
VAN	4	8.51

Yearly Totals Summary

Accident Totals

Year	Total Accidents	Fatal Accidents	Injury Accidents	Property Damage Only Accidents
2003	4	0	4	0
2004	7	0	5	2
2005	5	0	4	1
2006	7	1	0	6
2007	1	1	0	0
Total	24	2	13	9

Injury Totals

Year	Fatal Injuries	Class A, B, or C Injuries
2003	0	9
2004	0	16
2005	0	7
2006	1	0
2007	1	2
Total	2	34

Miscellaneous Totals

Year	Property Damage	EPDO Index
2003	$ 39000	33.60
2004	$ 76350	112.40
2005	$ 50800	103.00
2006	$ 40500	82.80
2007	$ 21500	76.80
Total	$ 228150	408.60

Type of Accident Totals

Year	Left Turn	Right Turn	Rear End	Run Off Road & Fixed Object	Angle	Side Swipe	Other
2003	2	0	0	0	2	0	0
2004	3	0	1	0	3	0	0
2005	0	0	1	0	3	0	1
2006	0	0	1	0	3	0	3
2007	0	0	0	0	1	0	0
Total	5	0	3	0	12	0	4

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Intersection Analysis Report

Study Criteria Summary

County: BEAUFORT **City:** All and Rural
Date: 5/1/2007 **to** 6/30/2011 **Study:** 41000013144AFTER
Location: US 264 and NC 32

Report Details

Acc No	Crash ID	Date	Accident Type	Total Damage	Injuries F	Injuries A	Injuries B	Injuries C	Condition R	Condition L	Condition W	Road Ch	Road Ci	Trfc Ctl Dv	Trfc Ctl Op
1	**102095318**	07/21/2007 12:54	LEFT TURN, DIFFERENT ROADWAYS	$ 4500	0	0	0	0	1	1	1	1	0	4	1
Unit 1 : 5	**Alchl/Drgs:** 0	**Speed:** 10 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:** 8	**Obj Strk:**										
Unit 2 : 1	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** W	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:**										
2	**102234683**	01/07/2008 19:22	ANGLE	$ 17000	0	0	1	6	1	5	1	1	0	1	1
Unit 1 : 3	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** S	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:**										
Unit 2 : 4	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** W	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:**										
3	**102306006**	04/16/2008 19:28	LEFT TURN, SAME ROADWAY	$ 1400	0	0	0	1	1	2	1	1	0	1	1
Unit 1 : 1	**Alchl/Drgs:** 0	**Speed:** 25 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:** 8	**Obj Strk:**										
Unit 2 : 2	**Alchl/Drgs:** 1	**Speed:** 50 MPH	**Dir:** W	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:**										
4	**102422445**	10/15/2008 07:03	ANIMAL	$ 3000	0	0	0	0	10	3	1		0		
Unit 1 : 2	**Alchl/Drgs:** 0	**Speed:** 0 MPH	**Dir:** W	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:** 17										
5	**102557738**	03/25/2009 11:42	REAR END, SLOW OR STOP	$ 250	0	0	0	0	1	1	2	1	0	1	1
Unit 1 : 2	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:**										
Unit 2 : 1	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** E	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:**										
6	**102695410**	10/14/2009 08:35	FIXED OBJECT	$ 2650	0	0	0	1	2	1	2	5	0	2	1
Unit 1 : 1	**Alchl/Drgs:** 0	**Speed:** 50 MPH	**Dir:** S	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:** 33										
7	**103071712**	01/19/2011 17:04	ANGLE	$ 11100	0	0	1	1	1	1	1	1	0	4	1
Unit 1 : 4	**Alchl/Drgs:** 0	**Speed:** 35 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:**										
Unit 2 : 2	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** W	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:** 37										
8	**103114364**	03/16/2011 17:40	FIXED OBJECT	$ 900	0	0	0	0	1	1	1	1	0	4	1
Unit 1 : 1	**Alchl/Drgs:** 0	**Speed:** 55 MPH	**Dir:** NE	**Veh Mnvr / Ped Actn:** 8	**Obj Strk:** 58										
9	**103182470**	06/20/2011 16:55	ANGLE	$ 10000	1	0	3	0	1	1	1	1	0	4	1
Unit 1 : 1	**Alchl/Drgs:** 0	**Speed:** 15 MPH	**Dir:** N	**Veh Mnvr / Ped Actn:** 4	**Obj Strk:**										

Acc No	Crash ID	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
					F	A	B	C	R	L	W	Ch	Ci	Dv	Op

Unit **2 :** 4 **Alchl/Drgs:** 0 **Speed:** 55 MPH **Dir:** E **Veh Mnvr / Ped Actn:** 4 **Obj Strk:**

Legend for Report Details:

Acc No - Accident Number
Injuries: F - Fatal, A - Class A, B - Class B, C - Class C
Condition: R - Road Surface, L - Ambient Light, W - Weather
Rd Ch - Road Character
Rd Ci - Roadway Contributing Circumstances
Trfc Ctl - Traffic Control: Dv - Device, Op - Operating
Alchl/Drgs - Alcohol Drugs Suspected
Veh Mnvr/Ped Actn - Vehicle Maneuver/Pedestrian Action
Obj Strk - Object Struck

Summary Statistics

High Level Crash Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	9	100.00
Fatal Crashes	1	11.11
Non-Fatal Injury Crashes	4	44.44
Total Injury Crashes	5	55.56
Property Damage Only Crashes	4	44.44
Night Crashes	1	11.11
Wet Crashes	1	11.11
Alcohol/Drugs Involvement Crashes	1	11.11

Crash Severity Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	9	100.00
Fatal Crashes	1	11.11
Class A Crashes	0	0.00
Class B Crashes	2	22.22
Class C Crashes	2	22.22
Property Damage Only Crashes	4	44.44

Vehicle Exposure Statistics

Annual ADT = 12900

Total Vehicle Exposure = 19.63 (MEV)

Crash Rate	Crashes Per 100 Million Vehicles Entered
Total Crash Rate	45.84
Fatal Crash Rate	5.09
Non Fatal Crash Rate	20.37
Night Crash Rate	5.09
Wet Crash Rate	5.09
EPDO Rate	582.67

Miscellaneous Statistics

Severity Index =	12.71
EPDO Crash Index =	114.40
Estimated Property Damage Total = $	50800.00

Accident Type Summary

Accident Type	Number of Crashes	Percent of Total
ANGLE	3	33.33
ANIMAL	1	11.11
FIXED OBJECT	2	22.22
LEFT TURN, DIFFERENT ROADWAYS	1	11.11
LEFT TURN, SAME ROADWAY	1	11.11
REAR END, SLOW OR STOP	1	11.11

Injury Summary

Injury Type	Number of Injuries	Percent of Total
Fatal Injuries	1	6.67
Class A Injuries	0	0.00
Class B Injuries	5	33.33
Class C Injuries	9	60.00
Total Non-Fatal Injuries	14	93.33
Total Injuries	15	100.00

Monthly Summary

Month	Number of Crashes	Percent of Total
Jan	2	22.22
Feb	0	0.00
Mar	2	22.22
Apr	1	11.11
May	0	0.00
Jun	1	11.11
Jul	1	11.11
Aug	0	0.00
Sep	0	0.00
Oct	2	22.22
Nov	0	0.00
Dec	0	0.00

Daily Summary

Day	Number of Crashes	Percent of Total
Mon	2	22.22
Tue	0	0.00
Wed	6	66.67
Thu	0	0.00
Fri	0	0.00
Sat	1	11.11
Sun	0	0.00

Hourly Summary

Hour	Number of Crashes	Percent of Total
0000-0059	0	0.00
0100-0159	0	0.00
0200-0259	0	0.00
0300-0359	0	0.00
0400-0459	0	0.00
0500-0559	0	0.00
0600-0659	0	0.00
0700-0759	1	11.11
0800-0859	1	11.11
0900-0959	0	0.00
1000-1059	0	0.00
1100-1159	1	11.11
1200-1259	1	11.11
1300-1359	0	0.00
1400-1459	0	0.00
1500-1559	0	0.00
1600-1659	1	11.11
1700-1759	2	22.22
1800-1859	0	0.00
1900-1959	2	22.22
2000-2059	0	0.00
2100-2159	0	0.00
2200-2259	0	0.00
2300-2359	0	0.00

Light and Road Conditions Summary

Condition	Dry	Wet	Other	Total
Day	5	1	0	6
Dark	1	0	0	1
Other	1	0	1	2
Total	7	1	1	9

Object Struck Summary

Object Type	Times Struck	Percent of Total
ANIMAL	1	25.00
DITCH	1	25.00
OFFICIAL HIGHWAY SIGN NON-BREAKAWAY	1	25.00
TREE	1	25.00

Vehicle Type Summary

Vehicle Type	Number Involved	Percent of Total
LIGHT TRUCK (MINI-VAN, PANEL)	1	6.67
PASSENGER CAR	6	40.00
PICKUP	4	26.67
SPORT UTILITY	3	20.00
VAN	1	6.67

Yearly Totals Summary

Accident Totals

Year	Total Accidents	Fatal Accidents	Injury Accidents	Property Damage Only Accidents
2007	1	0	0	1
2008	3	0	2	1
2009	2	0	1	1
2010	0	0	0	0
2011	3	1	1	1
Total	9	1	4	4

Injury Totals

Year	Fatal Injuries	Class A, B, or C Injuries
2007	0	0
2008	0	8
2009	0	1
2010	0	0
2011	1	5
Total	1	14

Miscellaneous Totals

Year	Property Damage	EPDO Index
2007	$ 4500	1.00
2008	$ 21400	17.80
2009	$ 2900	9.40
2010	$ 0	0.00
2011	$ 22000	86.20
Total	$ 50800	114.40

Type of Accident Totals

Year	Left Turn	Right Turn	Rear End	Run Off Road & Fixed Object	Angle	Side Swipe	Other
2007	1	0	0	0	0	0	0
2008	1	0	0	0	1	0	1
2009	0	0	1	1	0	0	0
2010	0	0	0	0	0	0	0
2011	0	0	0	1	2	0	0
Total	2	0	1	2	3	0	1