

# Hazard Elimination Project Evaluation

## Project Information

Order ID: 41000030100

Project ID: W-4704

Location: US 74 at SR 2210 (Old Kingsdale Rd)

County: Robeson

City: Lumberton

Division: 6

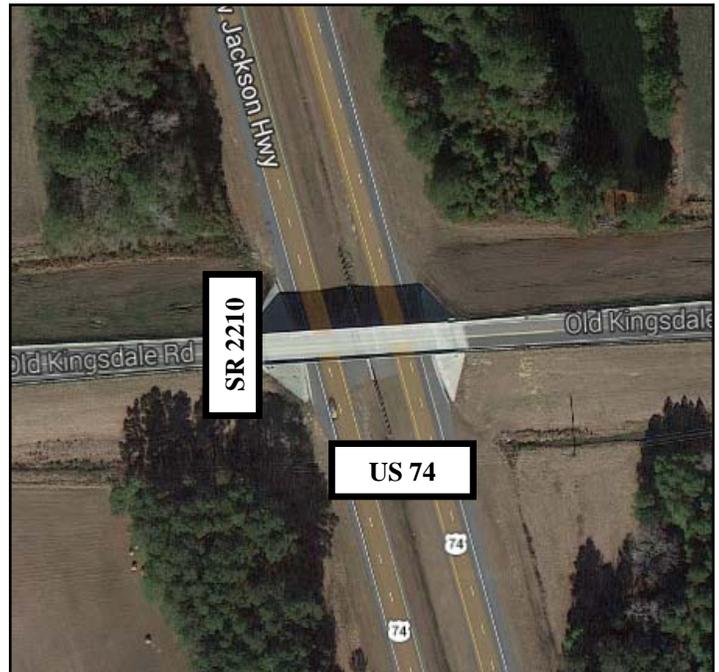
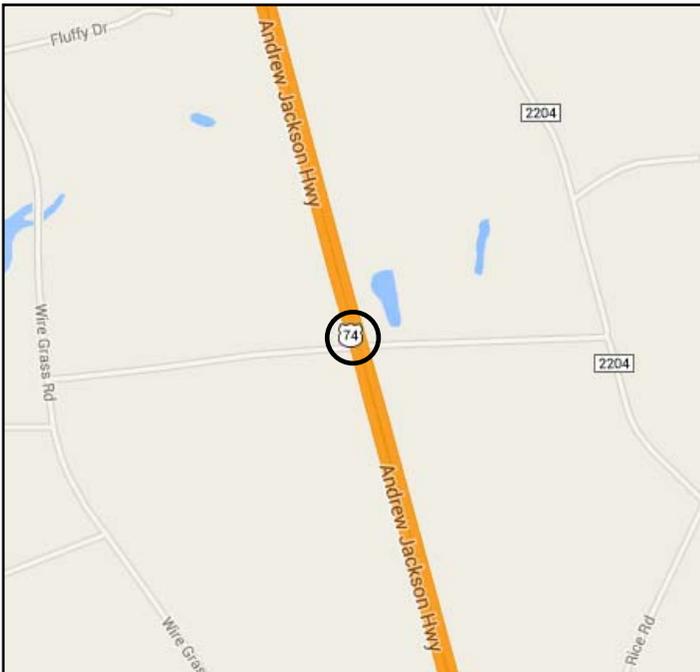
Signal ID: n/a

Countermeasure: Convert existing at grade intersection to a grade separation.

Project Completion: May 15, 2010

Project Cost: \$1,320,000

## Map and Aerial (from Google Maps – Coordinates are 34.544583, -79.021469)



## Naive Before and After Analysis

Before Period: June 1, 2005 through April 30, 2009 (3.92 years)

Const. Period: May 1, 2009 through June 30, 2010

After Period: July 1, 2010 through May 31, 2014 (3.92 years)

Analysis Criteria: Treatment data consisted of all crashes within 150 feet of the subject intersection.

Target Crashes: Frontal Impact Crashes were the target crashes for the applied countermeasure. Frontal Impact Crash types include: Left turn, same roadway; Left turn, different roadways; Right turn, same roadway; Right turn, different roadways; and Angle.

<u>Treatment Information</u>	<b>Before</b>	<b>After</b>	<b>Percent Reduction (-) Percent Increase (+)</b>
Total Crashes	18	1	- 94.4 %
Total Severity Index	6.76	1.00	- 85.2 %
Target Crashes	18	0	- 100.0 %
Target Crash Severity Index	6.76	0.00	- 100.0 %
Volume (2007, 2012)	11,000	10,200	- 7.2 %

<u>Injury Crash Summary</u>	<b>Before</b>	<b>After</b>	<b>Percent Reduction (-) Percent Increase (+)</b>
Fatal injury Crashes	0	0	N/A
Class A injury Crashes	0	0	N/A
Class B injury Crashes	7	0	- 100.0 %
Class C Injury Crashes	7	0	- 100.0 %
Property Damage Only	4	1	- 75.0 %

### **Overall Summary Results**

Total Crashes:	- 94 %	(reduction)
Total Crash Severity:	- 85 %	(reduction)
Target Crashes:	- 100 %	(reduction)
Target Crash Severity:	- 100 %	(reduction)
Volume:	- 7 %	(reduction)

### **Items for Discussion/Concerns**

None.

### **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, Summer Engineering Assistant  
Checked by: Brad Robinson, PE  
Work Group/Consultant: NCDOT - Safety Evaluation Group  
Date: July 23, 2014

W-4704

Order #410000030100

Robeson County

BEFORE Period

6/1/05 - 4/30/09

ADT (Year)

1100 (2007)

LEGEND							
	MOVING VEHICLE		ANGLE		9 MPH OR LESS	A	ANIMAL
	PARKED VEHICLE		TURNING		10 MPH TO 19	P	PEDESTRIAN
	PARKING VEHICLE		BACKING		20 MPH TO 29	B	BICYCLE
	MOVABLE OBJECT		SIDESWIPE		30 MPH TO 39	T	TRAIN
	HEAD ON		INJURY		40 MPH TO 49	*	DRIVER AT FAULT
	REAR END		FATALITY		50 MPH TO 59	D	DEP.
	RAIN OF ROAD		70 AND UP		60 MPH TO 69	W	WET
	DAYLIGHT CRASH		SPEED UNKNOWN		70 MPH TO 79	I	ICY OR SNOWY
	NIGHT CRASH				80 MPH TO 89	O	OTHER

Note: #18 is still considered a target crash due to swerving to avoid a frontal impact crash with another vehicle.

US 74

55 MPH

ADT (Year)

9900 (2007)

SR 2210 (Old Kingsdale Rd)

55 MPH

ADT (Year)

9900 (2007)

55 MPH

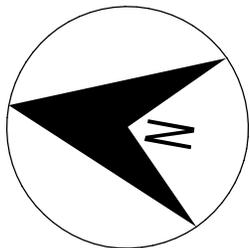
US 74

55 MPH

SR 2210 (Old Kingsdale Rd)

ADT (Year)

1000 (2007)



Frontal Impact Target Crashes

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

TRAFFIC SAFETY UNIT

Date: 7-23-2014

Prepared By: Ian Pike

W-4704

Order #410000030100

Robeson County

AFTER Period

7/1/10 - 5/31/14

LEGEND							
	MOVING VEHICLE		ANGLE		9 MPH OR LESS		A ANIMAL
	PARKED VEHICLE		TURNING		10 MPH TO 19		P PEDESTRIAN
	PARKING VEHICLE		BACKING		20 MPH TO 29		B BICYCLE
	MOVABLE OBJECT		SIDESWIPE		30 MPH TO 39		T TRAIN
	HEAD ON		INJURY		40 MPH TO 49		D DRY
	REAR END		FATALITY		50 MPH TO 59		W WET
	RAN OFF ROAD		70 AND UP		60 MPH TO 69		I ICY OR SHYTY
	DAYLIGHT CRASH		SPEED UNKNOWN		70 AND UP		O OTHER
	NIGHT CRASH						

US 74

70 MPH

ADT (Year)  
9300 (2012)

SR 2210 (Old  
Kingsdale Rd)

55 MPH

ADT (Year)  
900 (2012)

ADT (Year)  
9300 (2012)

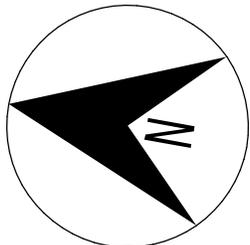
70 MPH

US 74

ADT (Year)  
900 (2012)

55 MPH

SR 2210 (Old  
Kingsdale Rd)



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

**TRAFFIC SAFETY UNIT**

Date: 7-23-2014

Prepared By: Ian Pike