

Hazard Elimination Project Evaluation

Project Information

Order ID: 41000038364

Project ID: W-5309

Location: SR 1520 (Indian Trail Fairview Road) and SR 1514 (Rocky River Road)

County: Union

City: Indian Trail

Division: 10

Signal ID: N/A

Countermeasure: Convert the existing intersection into a roundabout

Project Completion: September 20, 2011

Project Cost: \$715,000.00

Map and Aerial (from Google maps – Coordinates are 35.10606,-80.58430)



Naive Before and After Analysis

- Before Period: April 1, 2007 to June 30, 2011 (4 years, 3 months)
- Const. Period: July 1, 2011 to September 30, 2011 (3 months)
- After Period: October 1, 2011 to December 31, 2015 (4 years, 3 months)
- Analysis Criteria: Treatment data consisted of all crashes within 150 feet of the subject intersection for the SR 1514 (Rocky River Road) and SR 1520 (Indian Trail Fairview Road) approaches.
- Target Crashes: All frontal impact crashes including left-turn, different roadways; left-turn, same roadway; right-turn, different roadways; right-turn, same roadway; and all angle type crashes.

<u>Treatment Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Total Crashes	21	10	-52.4%
Total Severity Index	7.1	1.7	-76.1%
<hr/>			
Target Crashes	12	7	-41.7%
Target Crash Severity Index	11.0	2.1	-80.9%
<hr/>			
Volume (2009, 2013)	6,700	8,300	23.9%

<u>Injury Crash Summary</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Fatal Injury Crashes	0	0	N/A
Class A Injury Crashes	1	0	-100.0%
Class B Injury Crashes	0	0	N/A
Class C Injury Crashes	7	1	-85.7%
Property Damage Only	13	9	-30.8%

Overall Summary Results

Total Crashes:	-52.4 %	(Reduction)
Total Crash Severity:	-76.1 %	(Reduction)
Target Crashes:	-41.7 %	(Reduction)
Target Crash Severity:	-80.9 %	(Reduction)
Volume:	23.9 %	(Increase)

Items for Discussion/Concerns

The total crashes experienced a decrease of 52.4 % (21 to 10 crashes) between the before and after periods. The total crash severity experienced a significant decrease of 76.1 % between the before and after periods. The target crashes also saw a decrease of 41.7 % (12 to 7 crashes) between the before and after periods. The target crash severity also decreased significantly by 80.9 %.

Data Prepared For

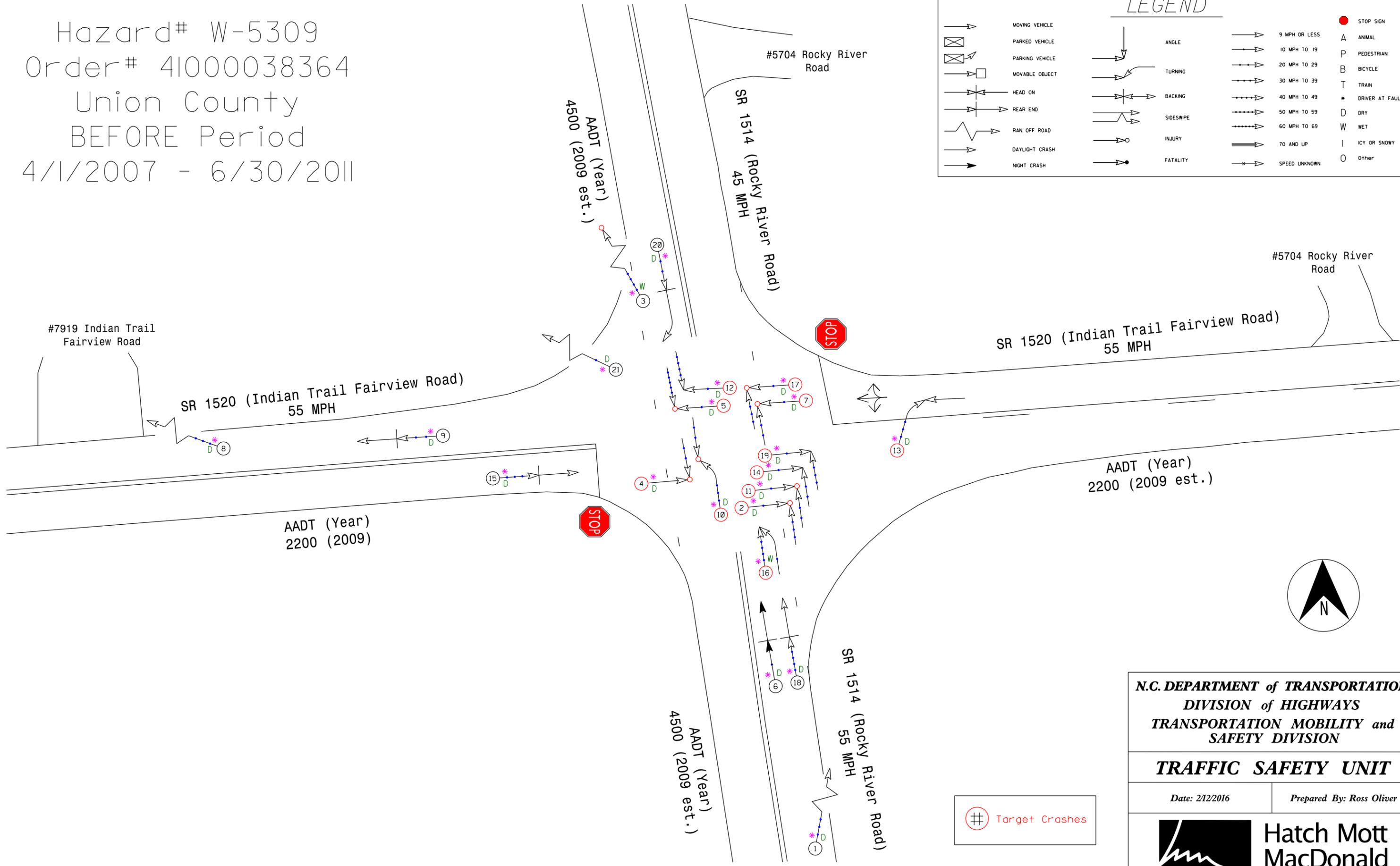
The Traffic Safety Unit of the
Transportation Mobility and Safety Division of the
Division of Highways of the
North Carolina Department of Transportation

Data Prepared By

Principal Investigator:	Ross Oliver
Work Group/Consultant:	Hatch Mott MacDonald
Date:	February 12, 2016

Hazard# W-5309
 Order# 41000038364
 Union County
 BEFORE Period
 4/1/2007 - 6/30/2011

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		ANIMAL
	PEDESTRIAN		BICYCLE
	TRAIN		DRIVER AT FAULT
	DRY		WET
	ICY OR SNOWY		Other



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

TRAFFIC SAFETY UNIT

Date: 2/12/2016

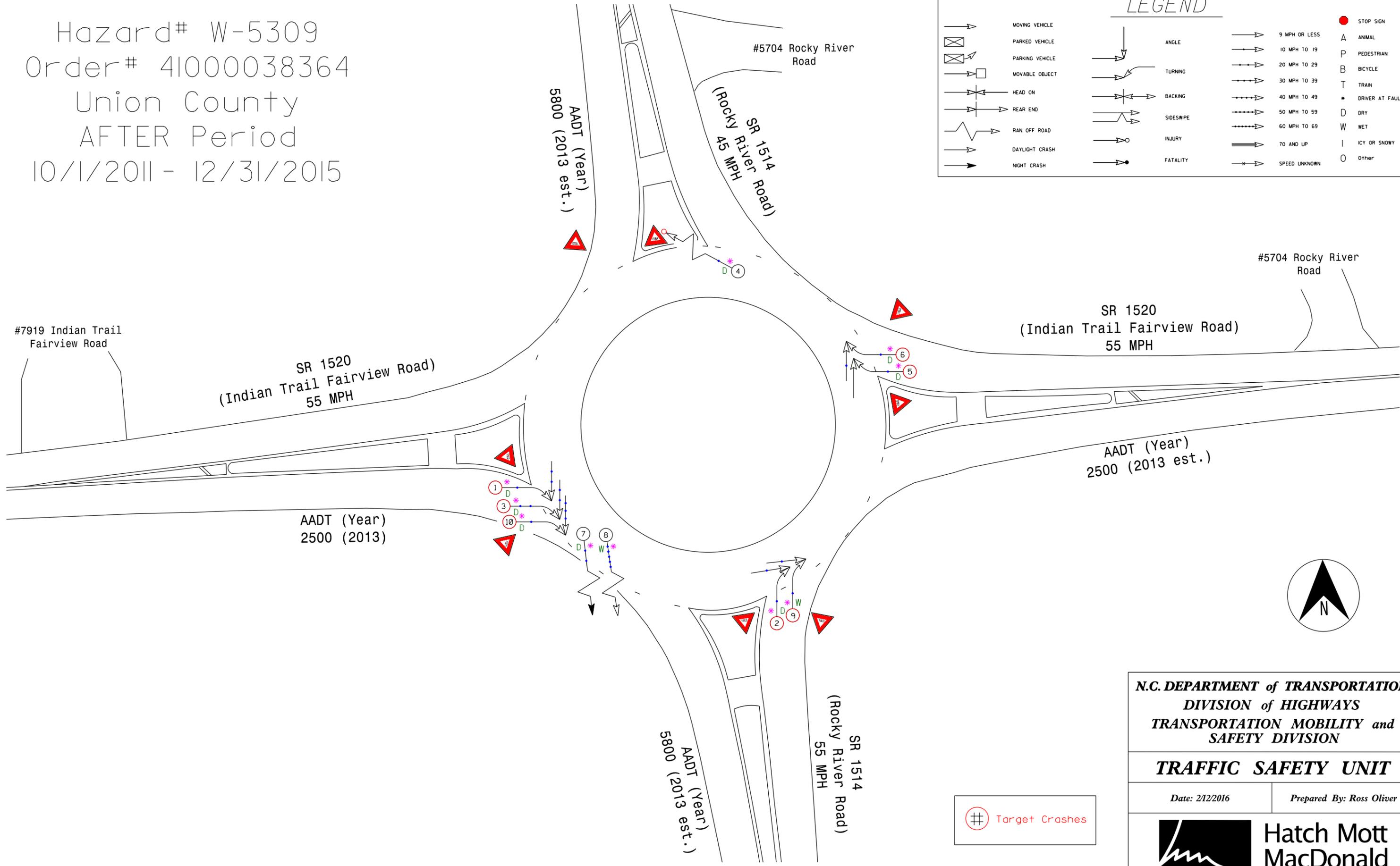
Prepared By: Ross Oliver

Target Crashes



Hazard# W-5309
 Order# 41000038364
 Union County
 AFTER Period
 10/1/2011 - 12/31/2015

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		ANIMAL
	PEDESTRIAN		BICYCLE
	TRAIN		DRIVER AT FAULT
	DRY		WET
	ICY OR SNOWY		Other



Target Crashes

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

TRAFFIC SAFETY UNIT

Date: 2/12/2016 Prepared By: Ross Oliver

