

Spot Safety Project Evaluation

Project Information

Order ID: 41000028047

Project ID: 10-05-200

Location: SR 3143 (Idlewild Road) and Rice Road / Dan Hood Road

County: Mecklenburg

City: Matthews

Division: 10

Signal ID: 10-1061

Countermeasure: Construct left turn lane on both approaches of Idlewild Road. Install fully actuated traffic signal.

Project Completion: Between May 1, 2009 and June 30, 2009

Project Cost: \$220,000.00

Map and Aerial (from Google Maps – Coordinates are 35.924019,-79.843354)



Naive Before and After Analysis

Before Period: July 1, 2004 through April 30, 2009 (4 years, 10 months)

Const. Period: May 1, 2009 through June 30, 2009 (2 months)

After Period: July 1, 2009 through April 30, 2014 (4 years 10 months)

Analysis Criteria: Treatment data consisted of all crashes within 150 feet of the subject intersection for the SR 3143 and Rice Road and Dan Hood Road approaches.

- Target Crashes: Frontal Impact Crashes including:
- Angle
 - Left-turn same roadway
 - Left-turn different roadway
 - Right-turn same roadway
 - Right-turn different roadway
 - Head-on

<u>Treatment Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Total Crashes	19	10	-47.4%
Total Severity Index	4.89	1.74	-64.4%
Target Crashes	14	5	-64.3%
Target Crash Severity Index	5.76	2.48	-56.9
Volume (2006, 2010)	13,400	12,500	-6.7%

<u>Injury Crash Summary</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Fatal injury Crashes	0.0	0.0	N/A
Class A injury Crashes	0.0	0.0	N/A
Class B injury Crashes	2.0	0.0	-100.0%
Class C Injury Crashes	8.0	1.0	-87.5%
Property Damage Only	9.0	9.0	0.0%

Overall Summary Results

Total Crashes:	-47.4 %	(reduction)
Total Crash Severity:	-64.4 %	(reduction)
Target Crashes:	-64.3%	(reduction)
Target Crash Severity:	-56.9 %	(reduction)
Volume:	-6.7 %	(reduction)

Items for Discussion/Concerns

The installation of a fully actuated signal and two left-turn lanes on SR 3143 (Idlewild Road) resulted in a reduction of both total crashes and target crashes between the before and after periods. Also, the total crash severity experienced a reduction of 64.4% and the target crash severity experienced a reduction of 56.9% between the before and after periods.

Data Prepared For

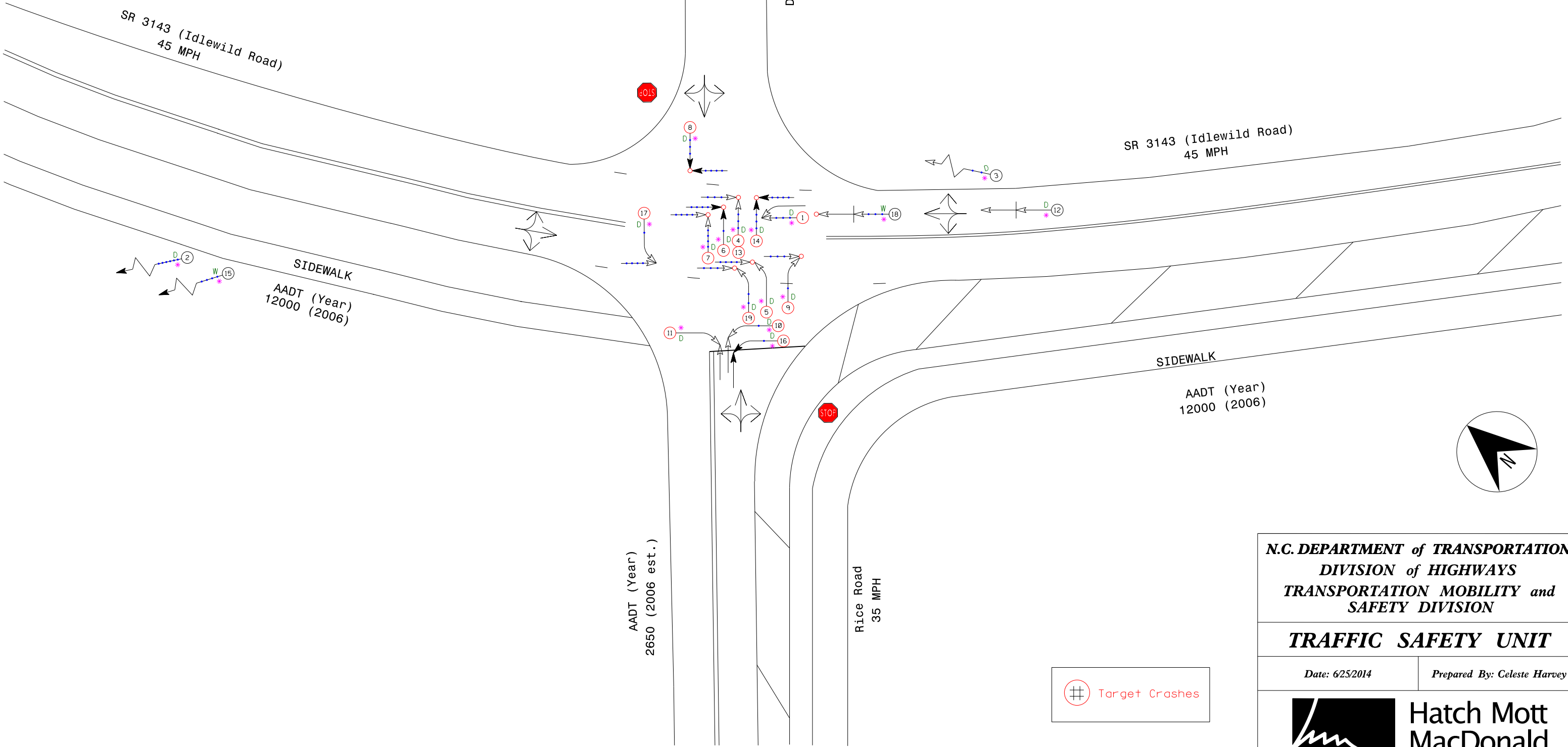
The Traffic Safety Unit *of the*
Transportation Mobility and Safety Division *of the*
Division of Highways *of the*
North Carolina Department of Transportation

Data Prepared By

Principal Investigator: Celeste Harvey
Work Group/Consultant: Hatch Mott MacDonald
Date: June 25, 2014

SS# 10-05-200
 Order # 41000028047
 Mecklenburg County
 BEFORE Period
 7/1/2004 - 4/30/2009

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
	PEDESTRIAN		B BICYCLE
	TRAIN		* DRIVER AT FAULT
	DRY		W WET
	ICY OR SNOWY		O Other



Target Crashes

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

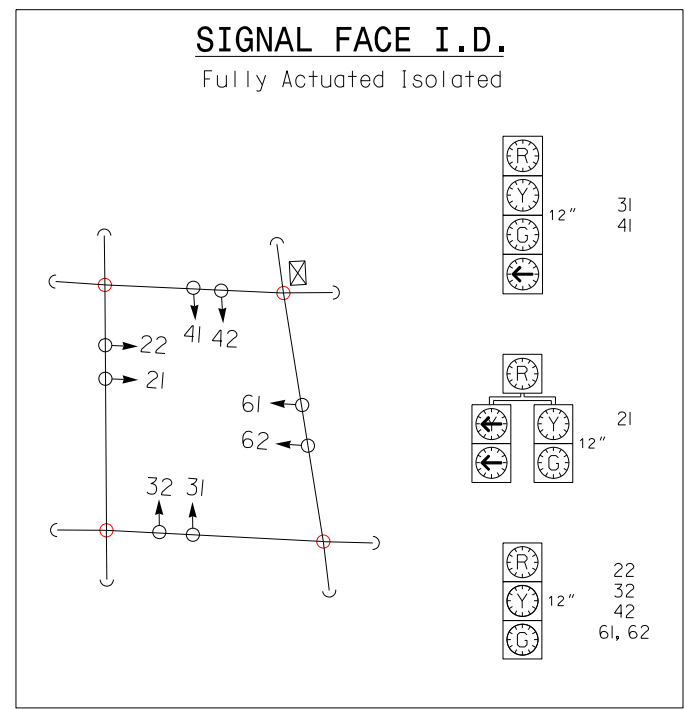
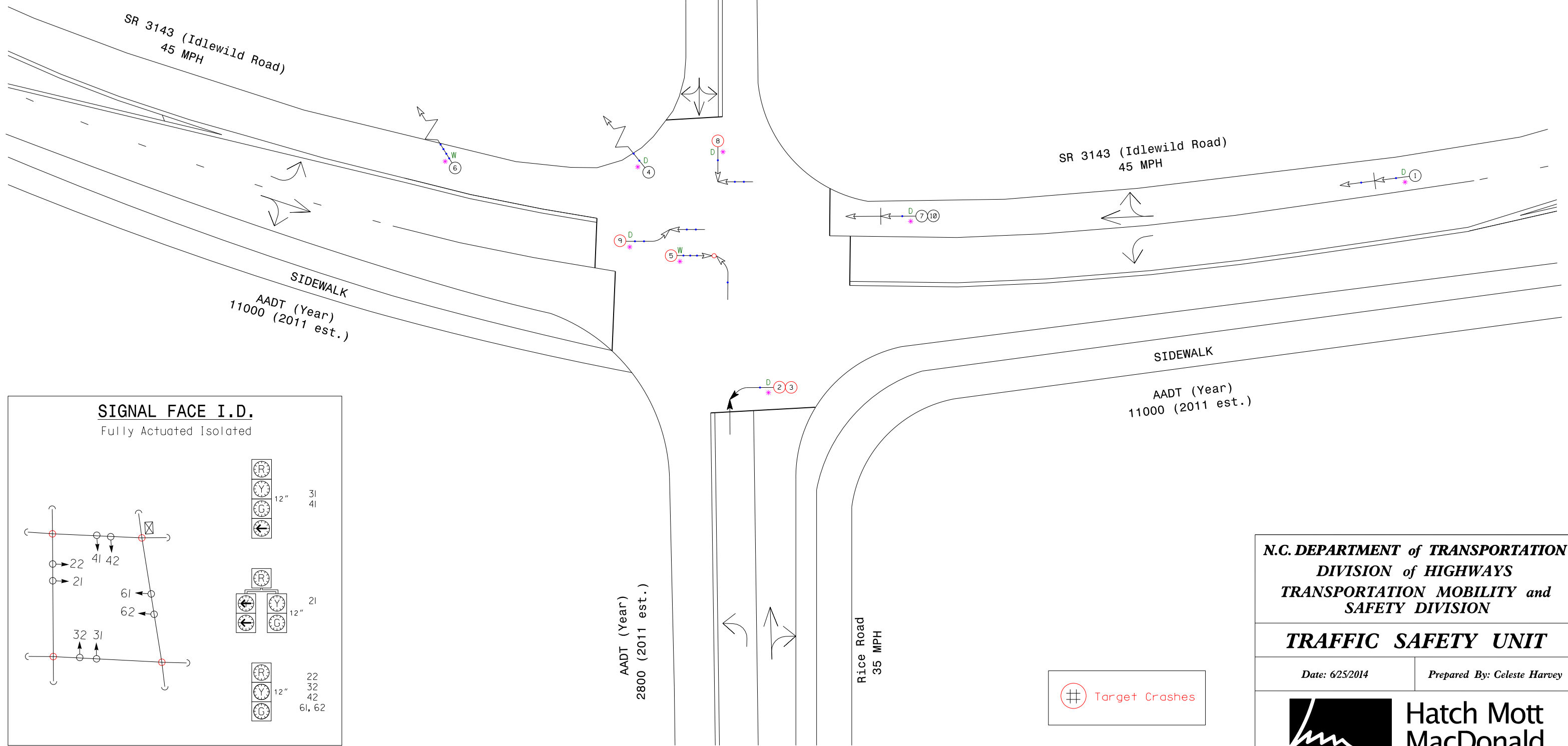
TRAFFIC SAFETY UNIT

Date: 6/25/2014 Prepared By: Celeste Harvey



SS# 10-05-200
 Order # 41000028047
 Mecklenburg County
 AFTER Period
 7/1/2009 - 4/30/2014

LEGEND			
	MOVING VEHICLE		ANGLE
	PARKED VEHICLE		TURNING
	PARKING VEHICLE		BACKING
	MOVABLE OBJECT		SIDESWIPE
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	REAR END		FATALITY
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Target Crashes

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

TRAFFIC SAFETY UNIT

Date: 6/25/2014 Prepared By: Celeste Harvey

