

Spot Safety Project Evaluation

Project Information

Order ID: 41000029986

Project ID: 12-08-210

Location: SR 1149 & SR 1155 (Old Conover/Startown Rd & W 7th St)

County: Catawba

City: Newton

Division: 12

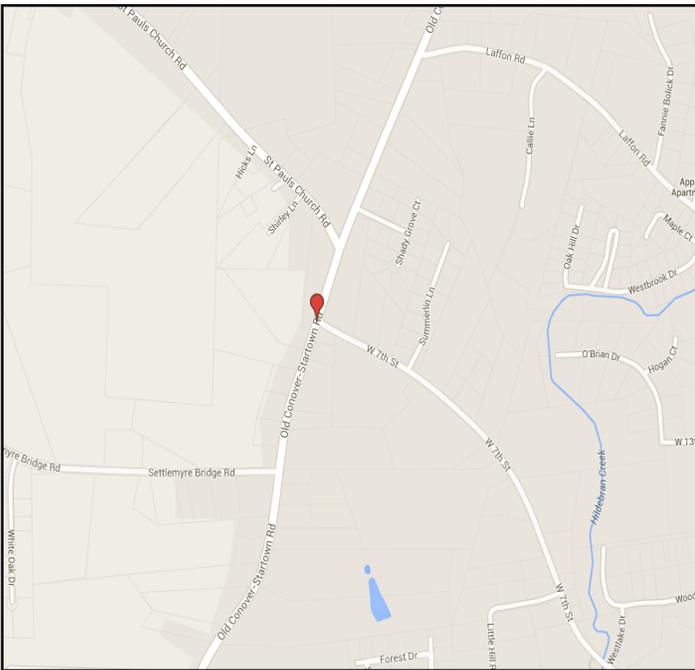
Signal ID: N/A

Countermeasure: Remove right turn slip lane on SR 1155, converting yield control to stop control and rework the center island.

Project Completion: January 11th, 2010

Project Cost: \$14,000

Map and Aerial (from Google Maps – Coordinates: 35.677309,-81.243607)



Naive Before and After Analysis

Before Period: December 11th, 2005 - December 10th, 2009 (4 years)

Const. Period: December 11th, 2009 - February 11th, 2010 (2 months)

After Period: February 12th, 2010 - February 11th, 2014 (4 years)

Analysis Criteria: Treatment data consisted of all crashes within 150 feet of the subject intersection for SR 1149 & SR 1155.

Target Crashes: Rear-End collisions

| <u>Treatment Information</u> | Before | After | Percent Reduction (-) Percent Increase (+) |
|------------------------------|---------------|--------------|---|
| Total Crashes | 13 | 6 | - 53.9 % |
| Total Severity Index | 1.57 | 2.23 | + 42.0 % |
| | | | |
| Target Crashes | 7 | 1 | - 85.7 % |
| Target Crash Severity Index | 2.06 | 1 | - 51.5% |
| | | | |
| Volume (2008, 2012) | 10,500 | 8,750 | - 16.7 % |

| <u>Target Injury Crash Summary</u> | Before | After | Percent Reduction (-) Percent Increase (+) |
|--|---------------|--------------|---|
| Fatal injury Crashes | 0 | 0 | N/A |
| Class A injury Crashes | 0 | 0 | N/A |
| Class B injury Crashes | 0 | 0 | N/A |
| Class C Injury Crashes | 1 | 1 | 0 % |
| Property Damage Only | 12 | 5 | - 58.3 % |

Overall Summary Results

| | | |
|------------------------|--------|-------------|
| Total Crashes: | - 54 % | (reduction) |
| Total Crash Severity: | + 42 % | (increase) |
| Target Crashes: | - 86 % | (reduction) |
| Target Crash Severity: | - 52 % | (reduction) |
| Volume: | - 17 % | (reduction) |

Items for Discussion/Concerns

Countermeasures proved to be effective. Total crashes as well as target crashes were reduced significantly.

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

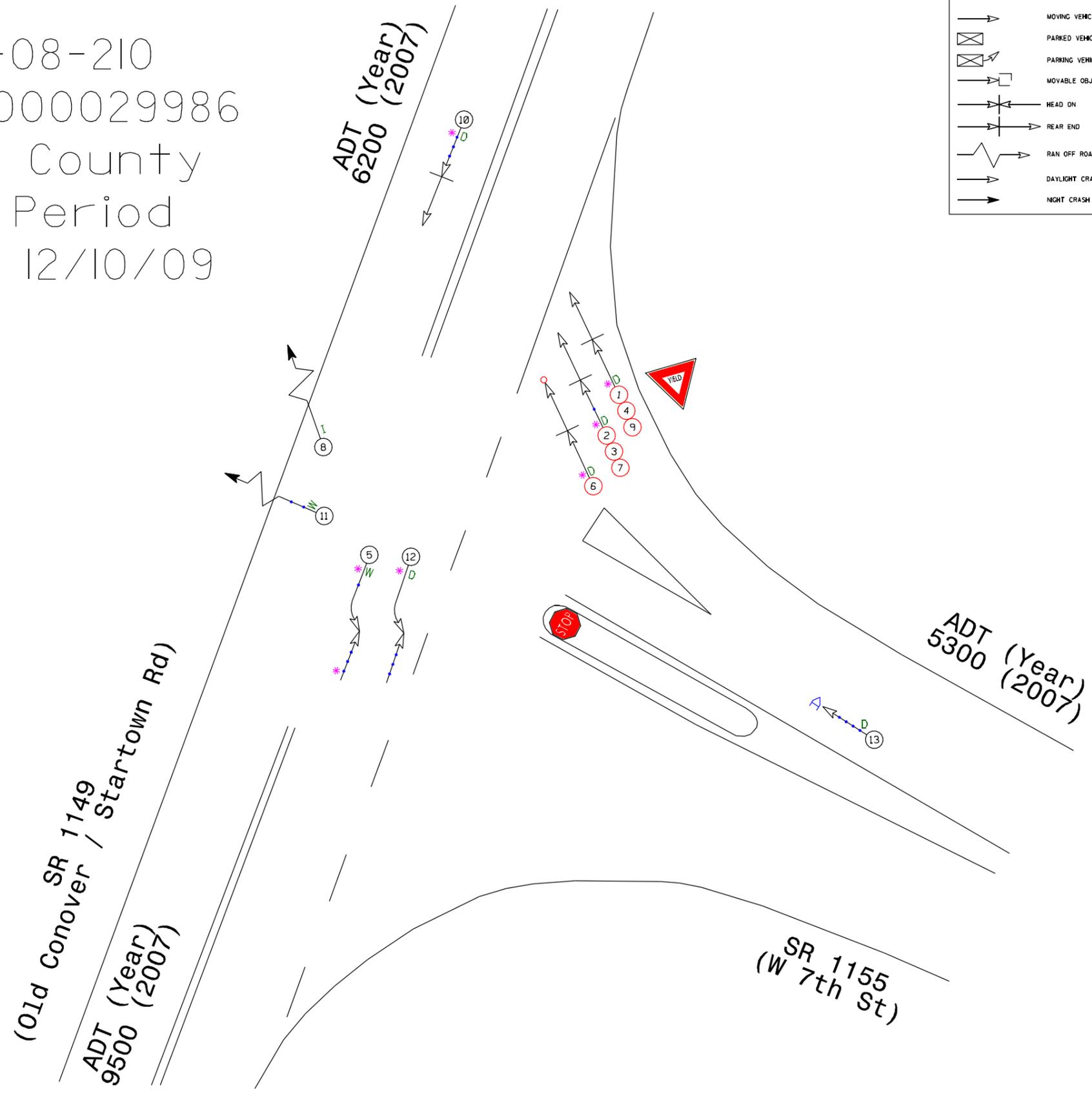
Principal Investigator: Tanner Oar, Summer Engineering Assistant
Checked by: Brad Robinson, P.E.

Work Group/Consultant: NCDOT - Safety Evaluation Group

Date: July 22nd, 2014

SS# 12-08-210
 Order# 410000029986
 Catawba County
 BEFORE Period
 12/11/05 - 12/10/09

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



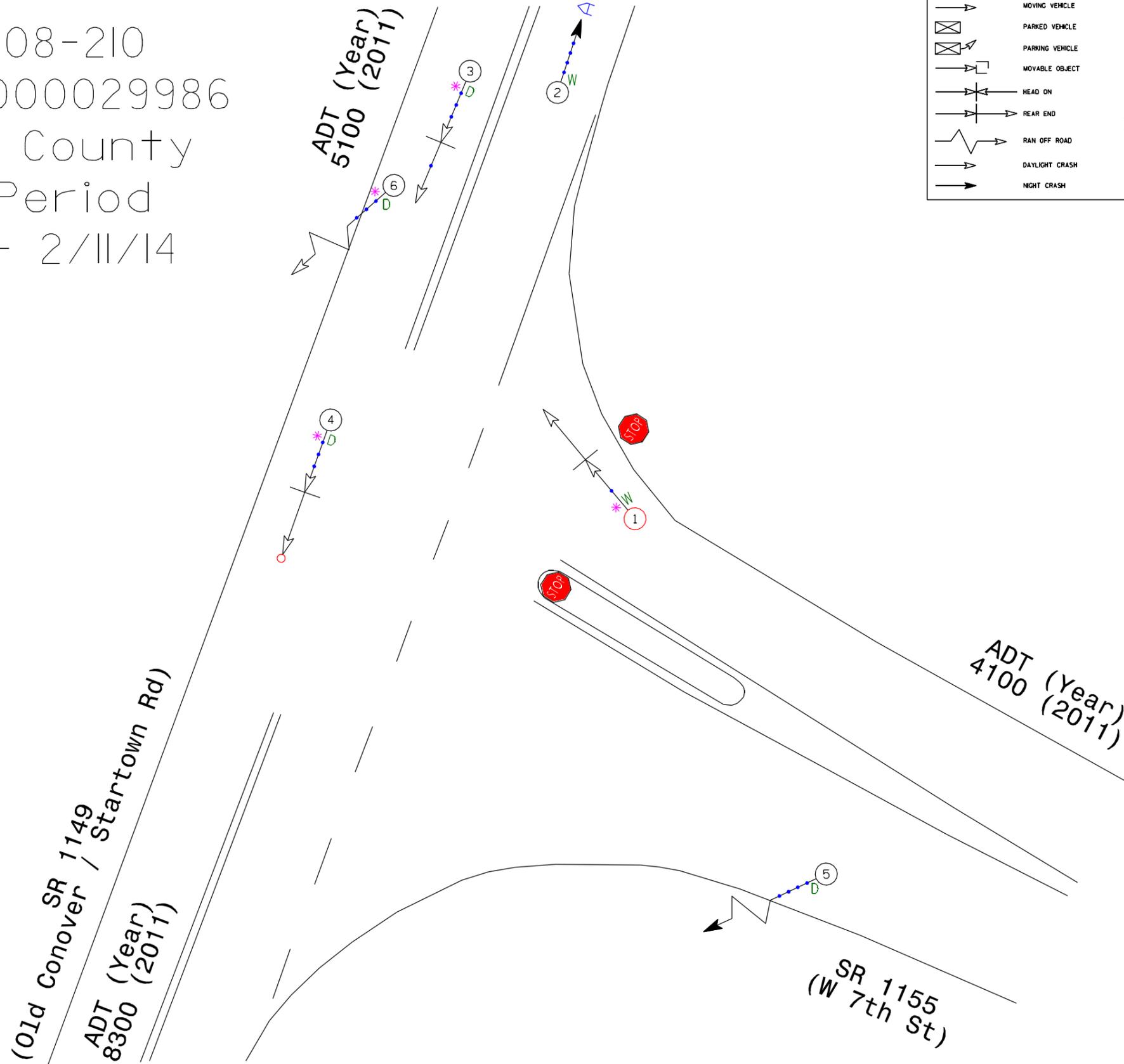
Target Crashes

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

TRAFFIC SAFETY UNIT

Date: July 22nd, 2014 Prepared By: Tanner Oar

SS# 12-08-210
 Order# 41000029986
 Catawba County
 AFTER Period
 2/12/10 - 2/11/14



| LEGEND | | | | | | | |
|--------|-----------------|--|-----------|--|---------------|--|-----------------|
| | MOVING VEHICLE | | ANGLE | | 9 MPH OR LESS | | ANIMAL |
| | PARKED VEHICLE | | TURNING | | 10 MPH TO 19 | | PEDESTRIAN |
| | PARKING VEHICLE | | BACKING | | 20 MPH TO 29 | | BICYCLE |
| | MOVABLE OBJECT | | SIDESWIPE | | 30 MPH TO 39 | | TRAIN |
| | HEAD ON | | INJURY | | 40 MPH TO 49 | | DRIVER AT FAULT |
| | REAR END | | FATALITY | | 50 MPH TO 59 | | DRY |
| | RAN OFF ROAD | | | | 60 MPH TO 69 | | WET |
| | DAYLIGHT CRASH | | | | 70 AND UP | | ICY OR SNOWY |
| | NIGHT CRASH | | | | SPEED UNKNOWN | | Other |

Target Crashes

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DIVISION of HIGHWAYS
TRANSPORTATION MOBILITY and
SAFETY DIVISION

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Date: July 22nd, 2014 Prepared By: Tanner Oar