

Spot Safety Project Evaluation

Project Information

Order ID: 41000029254

Project ID: 10-08-201

Location: US-74 (E. Independence Blvd) at the crossover for Matthews Plaza / Courtyard Marriott between I-485 (Exit 51) and Matthews-Mint Hill Road

County: Mecklenburg

City: Matthews

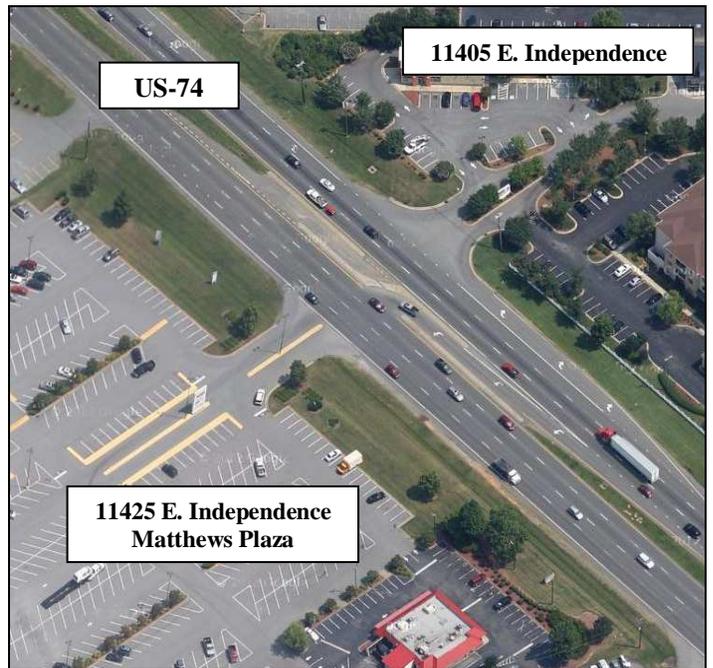
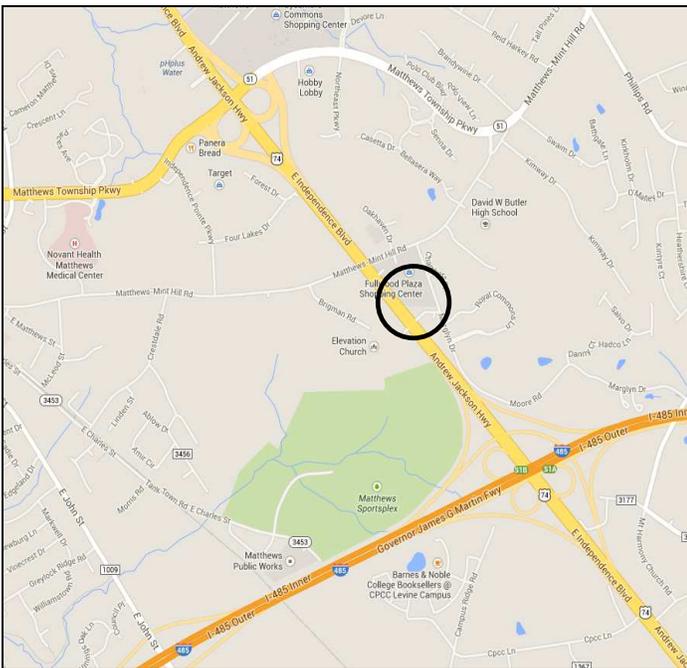
Division: 10

Signal ID: N/A

Countermeasure: Close the eastbound direction of existing directional crossover with delineation

Project Completion: July 10, 2009 Project Cost: \$18,000

Map and Aerial (from Google Maps – Coordinates: 35.116412,-80.695277)



Naive Before and After Analysis

- Before Period: September 1, 2004 through May 31, 2009 (4 years, 9 months)
- Const. Period: June 1, 2009 through July 31, 2009
- After Period: August 1, 2009 through April 30, 2014 (4 years, 9 months)
- Analysis Criteria: Treatment data consisted of all crashes within 150 feet of the subject crossover location.
- Target Crashes: Left Turn Same Roadway (LTSR) Crashes, U-Turn related, and Avoidance of Left Turn Same Roadway Crashes on the Eastbound US-74 Crossover Approach (Closed in the After Period).

<u>Treatment Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Total Crashes	96	30	- 68.8 %
Total Severity Index	4.85	3.71	- 23.5 %
Target Crashes – EB Crossover	63	0	- 100.0 %
Target Crash Severity Index	5.35	0.00	- 100.0 %
Volume (2007, 2011)	58,000	49,000	- 15.5 %

<u>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	13	1	- 92.3 %
Class C Injury Crashes	37	10	- 73.0 %
Property Damage Only	46	19	- 58.7 %

<u>Additional Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Eastbound US-74 LTSR (Target)	61	0	- 100.0 %
Eastbound US-74 U-Turn (Target)	1	0	- 100.0 %
Eastbound US-74 Avoidance (Target)	1	0	- 100.0 %
Westbound US-74 LTSR	5	10	100.0 %
Westbound US-74 U-Turn	1	2	100.0 %

Overall Summary Results

Total Crashes:	- 69 %	(reduction)
Total Crash Severity:	- 24 %	(reduction)
Target Crashes:	- 100 %	(reduction)
Target Crash Severity:	- 100 %	(reduction)
Volume:	- 16 %	(reduction)

Additional Summary Results

Westbound US-74 LTSR:	100 %	(increase)
Westbound US-74 U-Turn:	100 %	(increase)

Items for Discussion/Concerns

The closure of the eastbound US-74 crossover approach yielded a significant reduction in crashes from sixty-one (61) left turn same roadway collisions in the before period to zero (0) in the after period. In addition the eastbound US-74 before period crossover experienced one (1) u-turn related crash and a ran-off roadway collision which was avoiding a left turn same roadway crash.

Westbound US-74 left turn same roadway crashes, accessing the Matthews Plaza, did double throughout the analysis from five (5) collisions to ten (10) collisions.

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

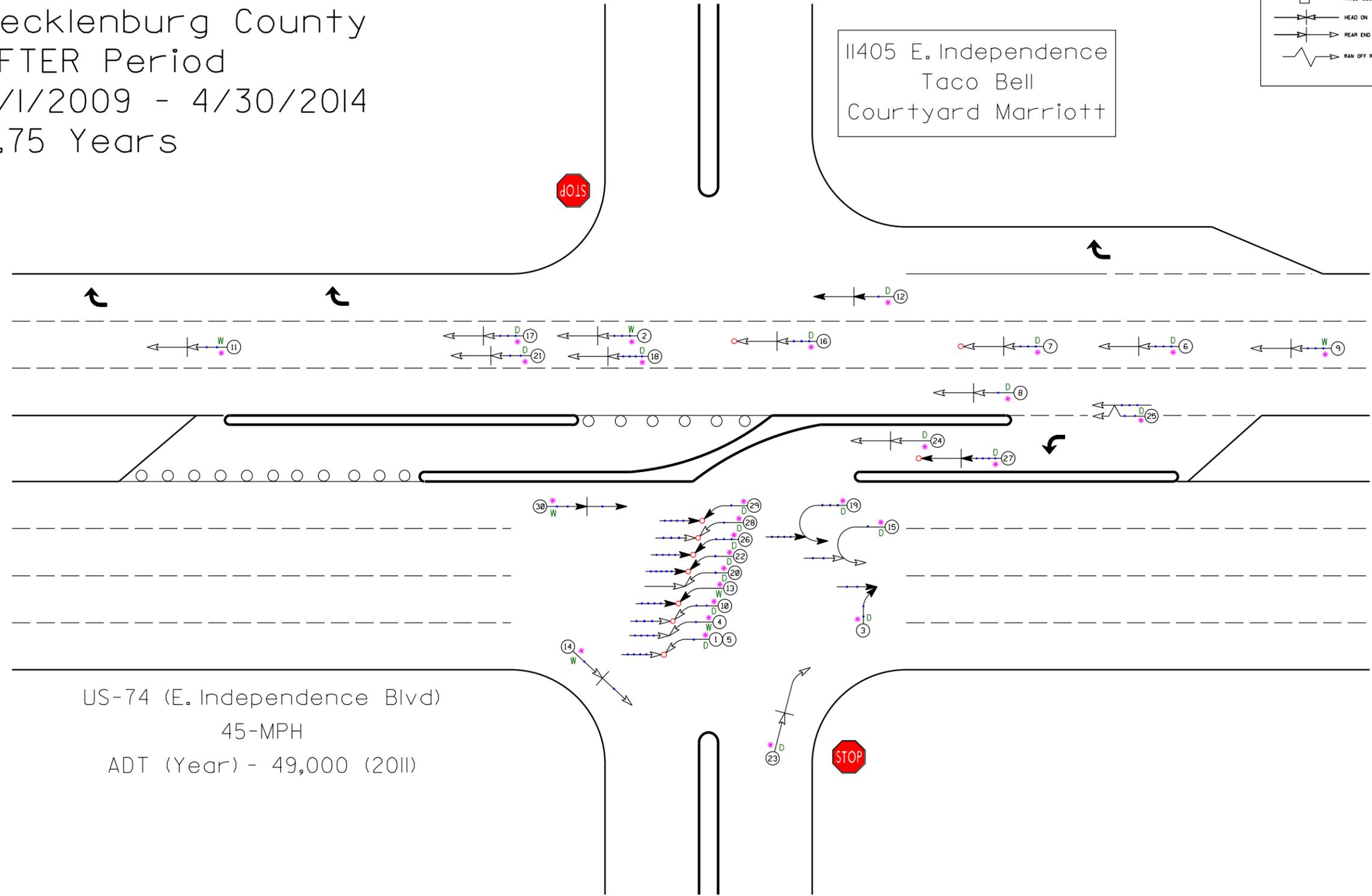
Data Prepared By

Principal Investigator: Jason B. Schronce, EI
Work Group/Consultant: NCDOT - Safety Evaluation Group
Date: June 9, 2014

SS# 10-08-201
 Order# 41000029254
 Mecklenburg County
 AFTER Period
 8/1/2009 - 4/30/2014
 4.75 Years

LEGEND			
	MOVING VEHICLE		ANGLE
	PARKED VEHICLE		TURNING
	PARKING VEHICLE		BACKING
	FIXED OBJECT		SIDESWIPE
	HEAD ON		INJURY
	REAR END		FATALITY
	RAN OFF ROAD		9 MPH OR LESS
			10 MPH TO 19
			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
			P PEDESTRIAN
			T TRAIN
			* DRIVER AT FAULT
			D DRY
			W WET
			I ICY OR SNOWY
			O OTHER

11405 E. Independence
 Taco Bell
 Courtyard Marriott



US-74 (E. Independence Blvd)
 45-MPH
 ADT (Year) - 49,000 (2011)

11425 E. Independence
 Matthews Plaza

EB Crossover
 Target Crashes

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

TRAFFIC SAFETY UNIT

Date: 6-6-2014
 Prepared By: J. Schronce