

Spot Safety Project Evaluation

Project Information

Order ID: 41000028249

Project ID: 04-05-218

Location: NC 42 at SR 1705 (Castleberry Rd)

County: Johnston

City: East of Clayton

Division: 4

Signal ID: 04-1241

Countermeasure: Installation of Dual Actuated Flashers with “Be Prepared to Stop” Signs

Project Completion: June 17, 2008

Project Cost: \$53,000

Map and Aerial (from Google Maps)



Naive Before and After Analysis

Before Period: September 1, 2002 through March 31, 2008 (5 years, 7 Months)

Const. Period: April 1, 2008 through June 30, 2008

After Period: July 1, 2008 through January 1, 2014 (5 years, 7 Months)

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

Target Crashes: Rear-End crashes on mainline approaching intersection.

<u>Treatment Information</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Total Crashes	17	23	+ 35.3 %
Total Crash Severity Index	6.76	6.55	- 3.1 %
Target Crashes	7	10	+ 42.9 %
Target Crash Severity Index	3.11	3.22	+ 3.5 %
Volume (2005, 2011)	18,700	20,000	+ 7.0 %

<u>Injury Crash Summary</u>	Before	After	Percent Reduction (-) Percent Increase (+)
Fatal injury Crashes	1	1	N/A
Class A injury Crashes	0	0	N/A
Class B injury Crashes	0	1	+ 100.0 %
Class C Injury Crashes	3	6	+ 100.0 %
Property Damage Only	13	15	+ 15.4 %

Overall Summary Results

Total Crashes:	+ 35 %	(increase)
Total Crash Severity:	- 3 %	(reduction)
Target Crashes:	+ 43 %	(increase)
Target Crash Severity:	+ 4 %	(increase)
Volume:	+ 7 %	(increase)

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

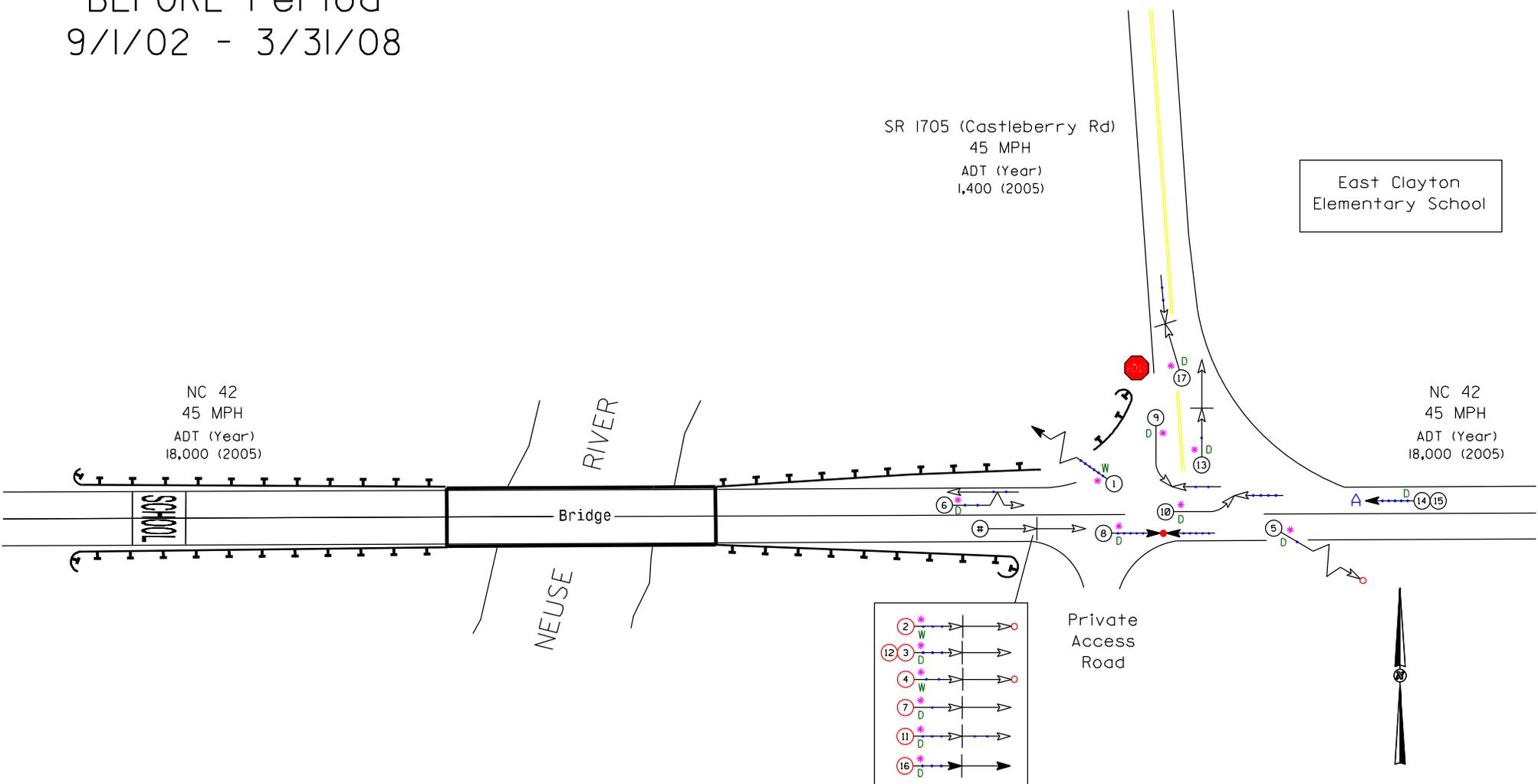
Data Prepared By

Principal Investigator: Justin Green, EI
Work Group/Consultant: NCDOT - Safety Evaluation Group
Date: March 26, 2014

SS# 04-05-218
 Order# 41000028249
 Johnston County
 BEFORE Period
 9/1/02 - 3/31/08

LEGEND

	MOVING VEHICLE		ANGLE		5 MPH OR LESS		PEDESTRIAN
	PEDESTRIAN		TURNING		40 MPH TO 75		TRAIN
	PAKED VEHICLE		BACKING		30 MPH TO 35		DRIVER AT FAULT
	PAKED VEHICLE		SUBSRIPPE		40 MPH TO 45		DRY
	FIXED OBJECT		OUT OF CONTROL		30 MPH TO 35		WET
	HEAD ON		REAR END		60 MPH TO 65		KEY OR SNOWY
	REAR END		REAR END		TO AND UP		KEY OR SNOWY
	RAN OFF ROAD		REAR END		SPEED ENHANCE		KEY OR SNOWY
			FATALITY				KEY OR SNOWY
							KEY OR SNOWY



2	*	W	→
12	3	*	D
4	*	W	→
7	*	D	→
11	*	D	→
16	*	D	→

⊕ Rear-End Target Crashes

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

TRAFFIC SAFETY UNIT

Date: March 2014
 Prepared By: J. Green

SS# 04-05-218
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 AFTER Period
 7/1/08 - 1/31/14

LEGEND

	MOVING VEHICLE		ANGLE		5 MPH OR LESS		PEDESTRIAN
	PEDESTRIAN		TURNING		10 MPH TO 19		TRAIN
	PARKED VEHICLE		BACKING		20 MPH TO 29		DRIVER AT FAULT
	PARKING VEHICLE		SUBSLOPE		30 MPH TO 39		D
	FIXED OBJECT		OUT OF CONTROL		40 MPH TO 49		W
	HEAD ON		HARRY		50 MPH TO 59		I
	REAR END		FATALITY		60 MPH TO 69		O
	RAN OFF ROAD		TO AND UP		70 MPH TO 79		
			SPEED ENHANCER		80 MPH TO 89		

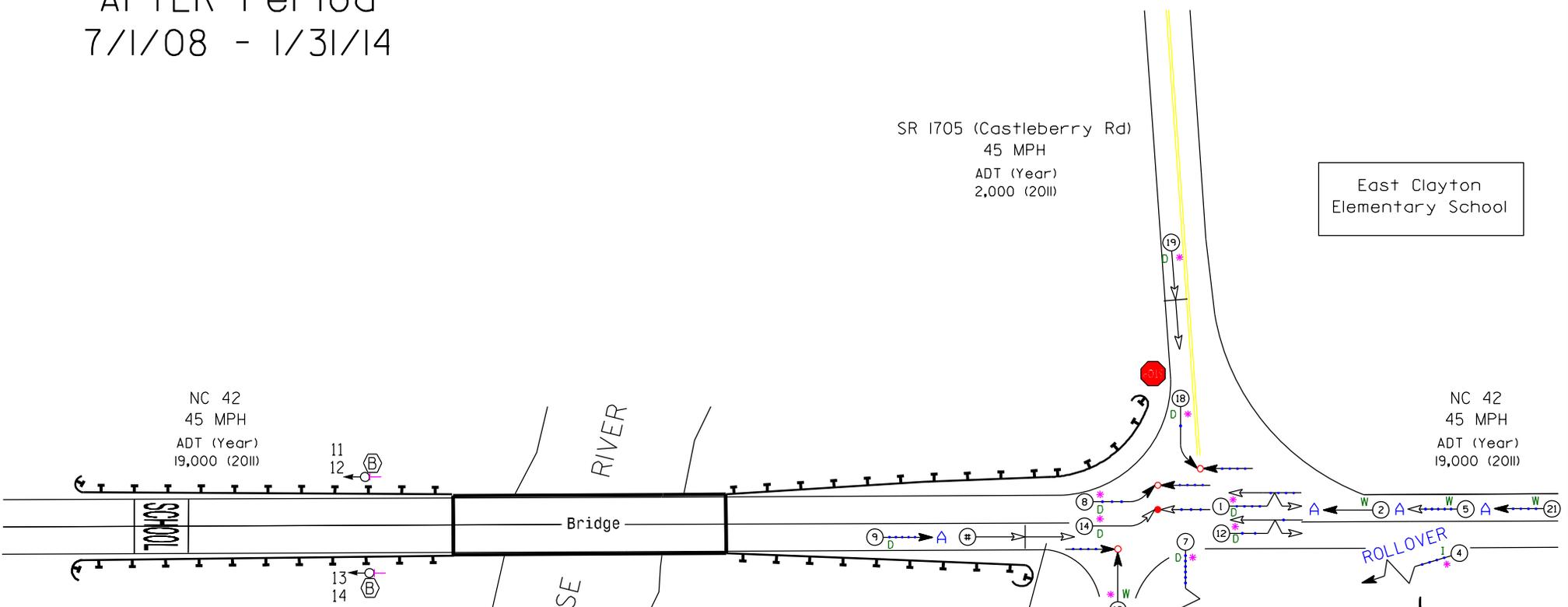
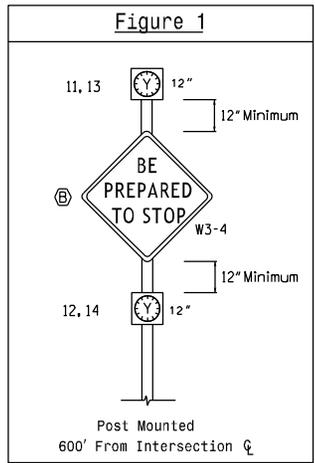


TABLE OF OPERATION

SIGNAL FACE	INTERVAL	
	1	2
11,13	ON	OFF
12,14	OFF	ON

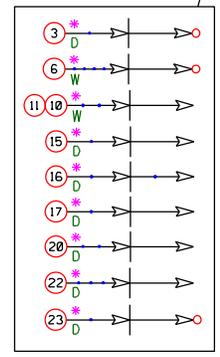


SIGNAL FACE I.D.

Denotes L.E.D.

12"

11
 12
 13
 14



Rear-End Target Crashes

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