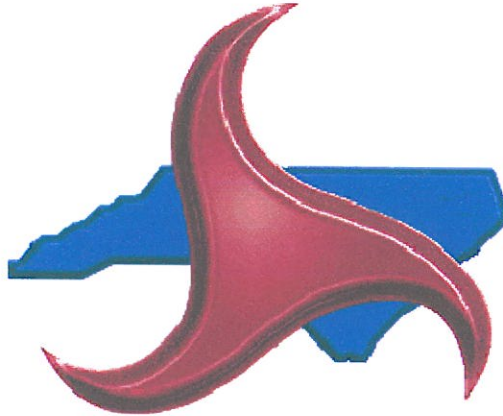


17BP.7.R.86 Bridge Design Speed Study

Bridge #400207 on SR 2808 (Sedalia Road)

Guilford County

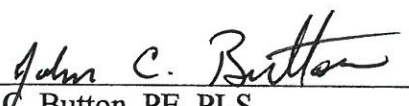


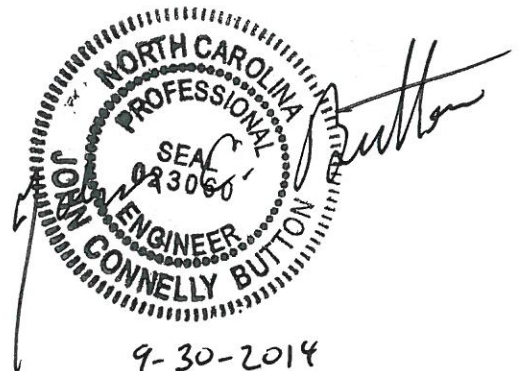
Document Prepared By:

Regional Traffic Office – Triad Region
Traffic Safety Unit
Transportation Mobility and Safety Division
North Carolina Department of Transportation

September 30, 2014

Principal Investigator:


John C. Button, PE, PLS
Triad Regional Traffic Safety Engineer



Bridge and Approach Investigation Checklist

Project 17BP.7.R.86
Description Bridge # 400207 over Unnamed Tributary of Rock Creek
Route SR 2808 (Sedalia Road)
Division 7
County Guilford

Existing Speed Limit 45 mph ☒ Posted ☐ Statutory

Reasonable & Comfortable Passenger Car Speed 55 mph

Speed Data 21 Speed Data Points Obtained.
Range from 45 mph to 57 mph.
Mean = 51 mph.
85th percentile = 54 mph
Mode = 51, 54 mph

Ball Bank Speed Study No ball bank study performed. Bridge is in tangent section.

Warning Signs at Bridge W23-10 object markers, one at each corner of bridge.
Regulatory 21 ton/28 ton weight limit sign on each approach.

Roadside Development Residential

ADT History 2001 AADT = 1000 vpd per NCDOT Traffic Map.
2013 AADT = 1500 vpd per NCDOT Traffic Map.

Pedestrian/Bicycle Traffic No bike or pedestrian traffic observed during site visit.
The Greensboro Urban Area Comprehensive Transportation Plan
Bicycle Map shows SR 2808 as a bicycle route that needs improvement.

Bridge and Approach Digital Photos See attached photos.

Approach Lane Width 20'-1" overall pavement width with 8'-7"/8'-7" lane widths.

Approach Shoulder Width: 6' +/-
Shoulder Type Grass

Lane Width (existing bridge) 23'-7" overall pavement width with 8'-5"/8'-0" lane widths.

Shoulder width (existing bridge) 23"/38"

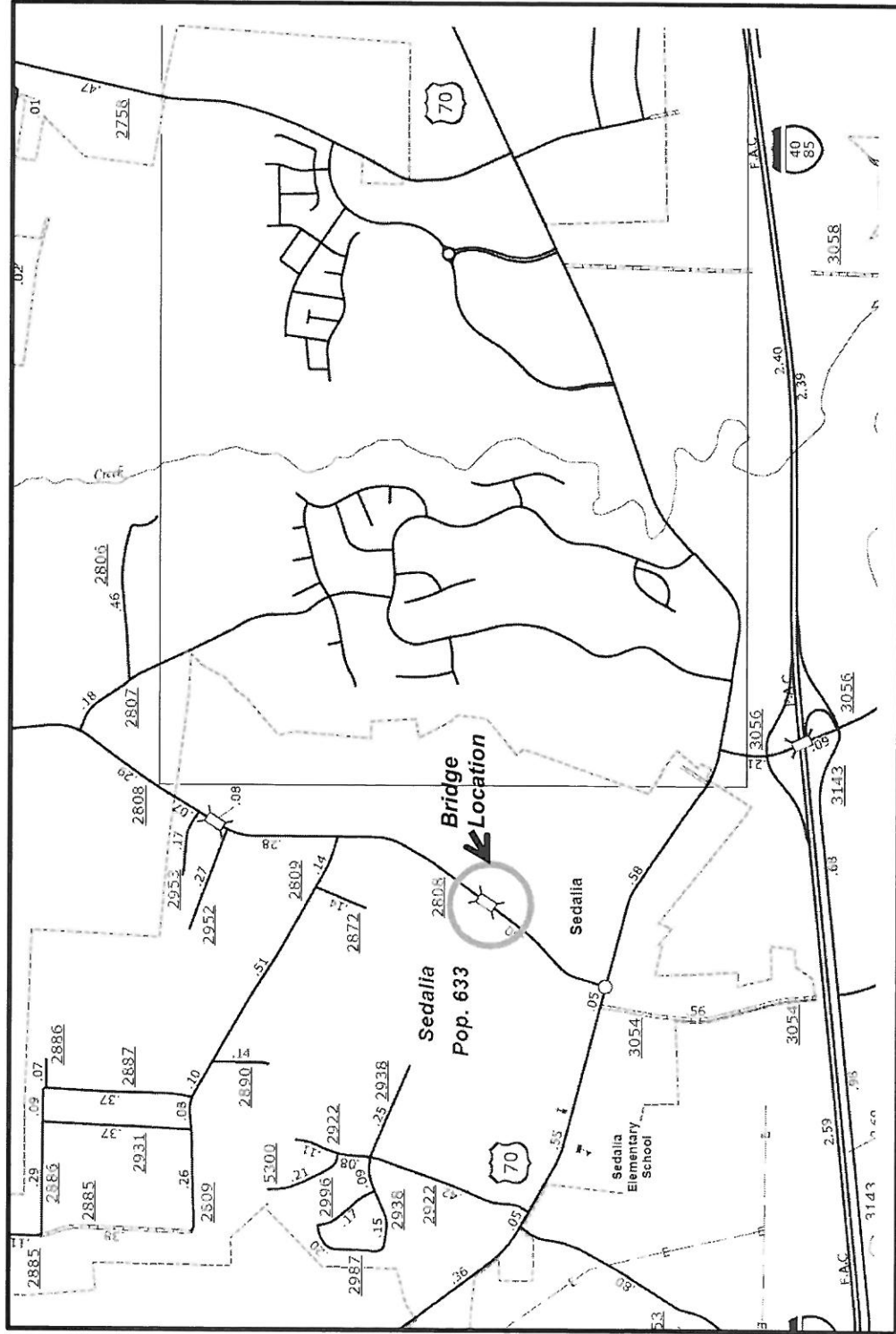
Strategic Corridor / Thoroughfare Designation and Recommended Cross Section This section of SR 2719 is designated as a local route
on the NCDOT Functional Classification Route Map.
The NCDOT "R-R-R Guide" recommends a minimum of 11 foot lane
widths and 3 foot shoulder widths (6 foot shoulder widths where
guardrail is to be installed) on local routes.

Crash History and Safety Considerations 5 crashes occurred in vicinity of bridge from 07/01/2004 to 06/30/2014.

Comments _____

Reasonable Bridge Speed 60 mph

Bridge # 400207 on SR 2808 (Sedalia Road) in Guilford County



Guilford County



SR 2808 (Sedalia Road) southbound $\pm$ 0 feet north of Bridge # 4000207

Guilford County



SR 2808 (Sedaelai Road) southbound $\pm$ 50 feet north of Bridge # 4000207

Guilford County



SR 2808 (Sedaelai Road) southbound ± 100 feet north of Bridge # 4000207

Guilford County



SR 2808 (Sedaelai Road) southbound $\pm$ 150 feet north of Bridge # 4000207

Guilford County



SR 2808 (Sedaelai Road) southbound $\pm$ 200 feet north of Bridge # 4000207

Guilford County



SR 2808 (Sedaelai Road) northbound ± 0 feet south of Bridge # 4000207

Guilford County



SR 2808 (Sedaelai Road) northbound ± 50 feet south of Bridge # 4000207

Guilford County



SR 2808 (Sedalai Road) northbound $\pm$ 100 feet south of Bridge # 4000207

Guilford County



SR 2808 (Sedaelai Road) northbound $\pm$ 150 feet south of Bridge # 4000207

Guilford County



SR 2808 (Sedaelai Road) northbound ± 200 feet south of Bridge # 4000207

Guilford County



SR 2808 (Sedaelai Road) northbound $\pm$ 250 feet south of Bridge # 4000207

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Study Criteria Summary

County: GUILFORD City: All and Rural
Date: 7/1/2009 to 06/30/2014 Study: GUILFORDBRIDGE400207
Location: 500 feet on either side of bridge 400207 on SR 2808 (Sedalia Rd)

Report Details

Acc No	Crash ID	Milepost	Date	Accident Type	Total Damage	Injuries				Condition			Road		Trfc Ctl	
						F	A	B	C	R	L	W	Ch	Ci	Dv	Op
1	103043218	0.290	12/16/2010 12:53	FIXED OBJECT	\$ 5750	0	0	0	0	6	1	2	3	0	13	1
Unit	1 : 1	Alchl/Drugs: 0	Speed: 25 MPH Dir: N	Veh Mnvr/Ped Actn: 4				Obj Strk: 56								
2	102640518	0.300	07/26/2009 13:55	ANIMAL	\$ 1500	0	0	0	0	1	1	1	3	0	13	1
Unit	1 : 1	Alchl/Drugs: 0	Speed: 45 MPH Dir: S	Veh Mnvr/Ped Actn: 4				Obj Strk: 17								
3	103764691	0.300	06/02/2013 11:53	REAR END, SLOW OR STOP	\$ 3000	0	0	0	0	1	1	1	4	0	13	1
Unit	1 : 1	Alchl/Drugs: 0	Speed: 45 MPH Dir: N	Veh Mnvr/Ped Actn: 4				Obj Strk:								
Unit	2 : 1	Alchl/Drugs: 0	Speed: 45 MPH Dir: N	Veh Mnvr/Ped Actn: 1				Obj Strk:								
4	103897155	0.300	11/10/2013 14:21	FIXED OBJECT	\$ 1700	0	0	0	0	1	1	1	3	0	13	1
Unit	1 : 2	Alchl/Drugs: 0	Speed: 55 MPH Dir: N	Veh Mnvr/Ped Actn: 4				Obj Strk: 58								
5	102872636	0.399	05/22/2010 21:53	FIXED OBJECT	\$ 5500	0	0	0	0	1	4	1	1	0	13	1
Unit	1 : 4	Alchl/Drugs: 7	Speed: 55 MPH Dir: S	Veh Mnvr/Ped Actn: 4				Obj Strk: 58								

Legend for Report Details:
 Acc No - Accident Number
 Injuries: F - Fatal, A - Class A, B - Class B, C - Class C
 Condition: R - Road Surface, L - Ambient Light, W - Weather
 Rd Ch - Road Character
 Rd Ci - Roadway Contributing Circumstances
 Trfc Ctl - Traffic Control: Dv - Device, Op - Operating
 Alchl/Drugs - Alcohol Drugs Suspected
 Veh Mnvr/Ped Actn - Vehicle Maneuver/Pedestrian Action
 Obj Strk - Object Struck

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Summary Statistics

High Level Crash Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	5	100.00
Fatal Crashes	0	0.00
Non-Fatal Injury Crashes	0	0.00
Total Injury Crashes	0	0.00
Property Damage Only Crashes	5	100.00
Night Crashes	1	20.00
Wet Crashes	0	0.00
Alcohol/Drugs Involvement Crashes	0	0.00

Crash Severity Summary

Crash Type	Number of Crashes	Percent of Total
Total Crashes	5	100.00
Fatal Crashes	0	0.00
Class A Crashes	0	0.00
Class B Crashes	0	0.00
Class C Crashes	0	0.00
Property Damage Only Crashes	5	100.00

Vehicle Exposure Statistics

Annual ADT = 1600

Total Length = 0.196 (Miles) 0.315 (Kilometers)

Total Vehicle Exposure = 0.57 (MVMT) 0.92 (MVKMT)

Crash Rate	Crashes Per 100 Million Vehicle Miles	Crashes Per 100 Million Vehicle Kilometers
Total Crash Rate	873.16	542.56
Fatal Crash Rate	0.00	0.00
Non Fatal Crash Rate	0.00	0.00
Night Crash Rate	174.63	108.51
Wet Crash Rate	0.00	0.00
EPDO Rate	873.16	542.56

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Miscellaneous Statistics

Severity Index =	1.00
EPDO Crash Index =	5.00
Estimated Property Damage Total = \$	17450.00

Accident Type Summary

Accident Type	Number of Crashes	Percent of Total
ANIMAL	1	20.00
FIXED OBJECT	3	60.00
REAR END, SLOW OR STOP	1	20.00

Injury Summary

Injury Type	Number of Injuries	Percent of Total
Fatal Injuries	0	0.00
Class A Injuries	0	0.00
Class B Injuries	0	0.00
Class C Injuries	0	0.00
Total Non-Fatal Injuries	0	0.00
Total Injuries	0	0.00

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Monthly Summary

Month	Number of Crashes	Percent of Total
Jan	0	0.00
Feb	0	0.00
Mar	0	0.00
Apr	0	0.00
May	1	20.00
Jun	1	20.00
Jul	1	20.00
Aug	0	0.00
Sep	0	0.00
Oct	0	0.00
Nov	1	20.00
Dec	1	20.00

Daily Summary

Day	Number of Crashes	Percent of Total
Mon	0	0.00
Tue	0	0.00
Wed	0	0.00
Thu	1	20.00
Fri	0	0.00
Sat	1	20.00
Sun	3	60.00

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Hourly Summary

Hour	Number of Crashes	Percent of Total
0000-0059	0	0.00
0100-0159	0	0.00
0200-0259	0	0.00
0300-0359	0	0.00
0400-0459	0	0.00
0500-0559	0	0.00
0600-0659	0	0.00
0700-0759	0	0.00
0800-0859	0	0.00
0900-0959	0	0.00
1000-1059	0	0.00
1100-1159	1	20.00
1200-1259	1	20.00
1300-1359	1	20.00
1400-1459	1	20.00
1500-1559	0	0.00
1600-1659	0	0.00
1700-1759	0	0.00
1800-1859	0	0.00
1900-1959	0	0.00
2000-2059	0	0.00
2100-2159	1	20.00
2200-2259	0	0.00
2300-2359	0	0.00

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Light and Road Conditions Summary

Condition	Dry	Wet	Other	Total
Day	3	0	1	4
Dark	1	0	0	1
Other	0	0	0	0
Total	4	0	1	5

Object Struck Summary

Object Type	Times Struck	Percent of Total
ANIMAL	1	25.00
CATCH BASIN OR CULVERT ON SHOULDER	1	25.00
DITCH	2	50.00

Vehicle Type Summary

Vehicle Type	Number Involved	Percent of Total
PASSENGER CAR	4	66.67
PICKUP	1	16.67
SPORT UTILITY	1	16.67

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Yearly Totals Summary

Accident Totals

Year	Total Accidents	Fatal Accidents	Injury Accidents	Property Damage Only Accidents
2009	1	0	0	1
2010	2	0	0	2
2011	0	0	0	0
2012	0	0	0	0
2013	2	0	0	2
2014	0	0	0	0
Total	5	0	0	5

Injury Totals

Year	Fatal Injuries	Class A, B, or C Injuries
2009	0	0
2010	0	0
2011	0	0
2012	0	0
2013	0	0
2014	0	0
Total	0	0

Miscellaneous Totals

Year	Property Damage	EPDO Index
2009	\$ 1500	1.00
2010	\$ 11250	2.00
2011	\$ 0	0.00
2012	\$ 0	0.00
2013	\$ 4700	2.00
2014	\$ 0	0.00
Total	\$ 17450	5.00

Type of Accident Totals

Year	Left Turn	Right Turn	Rear End	Run Off Road & Fixed Object	Angle	Side Swipe	Other
2009	0	0	0	0	0	0	1
2010	0	0	0	2	0	0	0

09/10/2014

All data presented in this report comes explicitly from the Traffic Engineering Accident Analysis System based upon vi criteria provided by the report's creator. The onus is strictly upon the user of this report to exercise due diligence in in and further representing this data.

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North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Year	Left Turn	Right Turn	Rear End	Run Off Road & Fixed Object	Angle	Side Swipe	Other
2011	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0
2013	0	0	1	1	0	0	0
2014	0	0	0	0	0	0	0
Total	0	0	1	3	0	0	1

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Strip Diagram

Features	Milepost	Crash IDs
Structure:400207	0.28	
	0.29	103043218
	0.30	102640518 103764691 103897155
	0.31	
	0.32	
	0.33	
	0.34	
	0.35	
	0.36	
	0.37	
	0.38	
	0.39	
	0.40	102872636
	0.41	
	0.42	
	0.43	
	0.44	
	0.45	
	0.46	
	0.47	
	0.48	

North Carolina Department of Transportation
Traffic Engineering Accident Analysis System
Strip Analysis Report

Study Criteria

Study Name	Log No.	PH No.	TIP No.	K/A Cf.	B/C Cf.	ADT	ADT Route
GUILFORDBRIDGE400207				76.8	8.4	1600	40002808

Request Date	Courier Service	Phone No.	Ext.	Fax No.
--------------	-----------------	-----------	------	---------

County			Municipality						
Name	Code	Div.	Name	Code	Y-Line Ft.	Begin Date	End Date	Years	
GUILFORD	40	7	All and Rural		0	7/1/2009	06/30/2014	5.00	

Location Text	Requestor
500 feet on either side of bridge 400207 on SR 2808 (Sedalia Rd)	

Included Accidents	Old MP	New MP	Type
102872636		0.399	I

Fiche Roads

Name	Code
SR 2808	40002808
SEDALIA	50027485

Strip Road

Name	Code	Begin MP	End MP	Miles	Kilometers
SR 2808	40002808	0.282	0.478	0.196	0.315