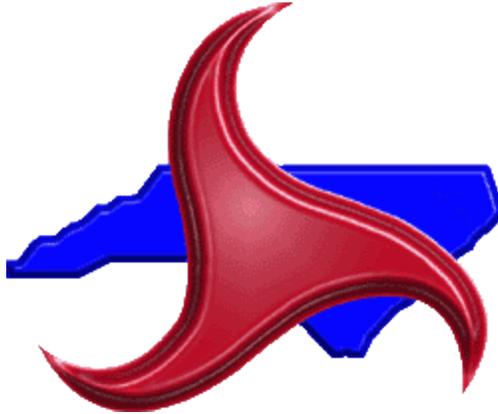


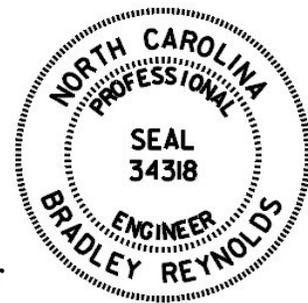
Bridge Approach Speed Investigation

Bridge # 130262 over Gunpowder Creek on SR 1107 (Falls Ave)
Caldwell County
Project Number 17BP.11.R.135



Document Prepared By:

HNTB North Carolina, P.C.
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Principal Investigator

DocuSigned by:
Sheena Green 1/5/2017
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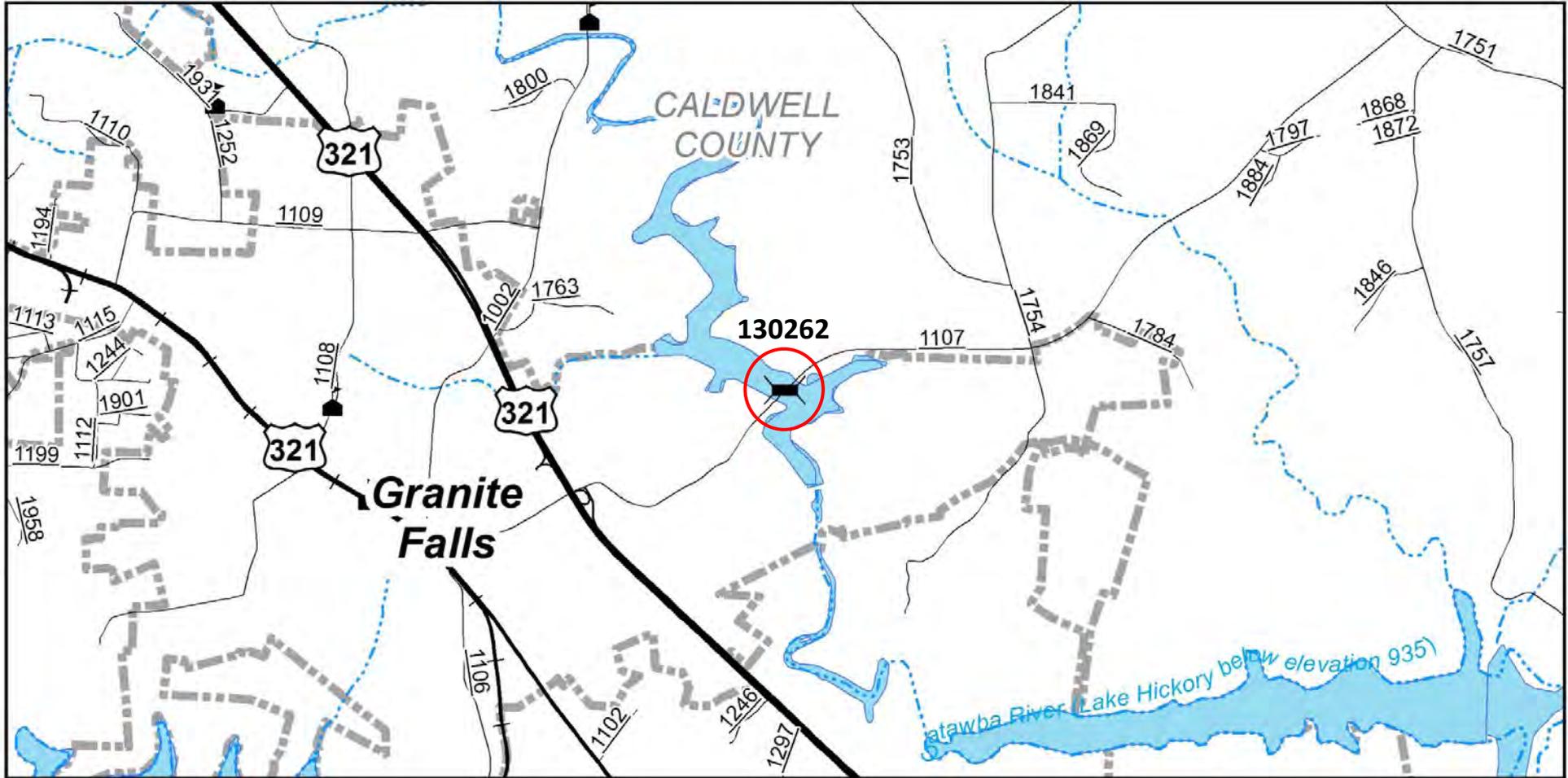
Sheena Green
Traffic Engineer

Project Manager

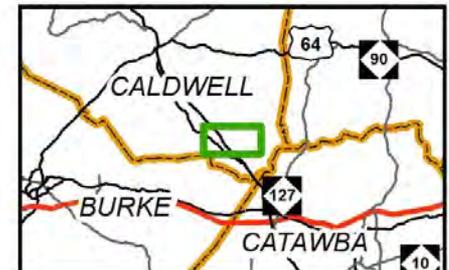
DocuSigned by:
Bradley Reynolds 1/5/2017
61F83373E9F2436...

Bradley Reynolds, PE
Project Manager

Division 11 - Caldwell County Design Build Year 6/7 Bridge Program



Structure Number	Division	County	Structure Description	Latitude	Longitude
130262	11	Caldwell	Bridge #130262 over Old Millpond	35.80477	-81.41281



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1 in = 2,500 ft
SCALE

Bridge and Approach Investigation Checklist

Project 17BP.11.R.135

Description Bridge #130262 over Old Millpond (Gunpowder Creek)

Route SR 1107 (Falls Ave.)

Division 11

County Caldwell

Existing Speed Limit 35/55 Posted Statutory

Reasonable & Comfortable Passenger Car Speed N/A - No bridge data could be obtained due to bridge closure

Speed Data N/A - No bridge data could be obtained due to bridge closure

Ball Bank Speed Study N/A - No bridge data could be obtained due to bridge closure

Warning Signs at Bridge N/A - No bridge data could be obtained due to bridge closure
As per Google Maps, no object makers appear to be present, guardrail connected to ends of bridge with reflective tape at end caps, no bridge weight limit signs appear to present

Roadside Development Rural/Residential/Agricultural

ADT History 4800 vpd from Crash Analysis
4600 vpd from 2015 AADT Map, Caldwell County

Pedestrian/Bicycle Traffic N/A

Bridge and Approach Digital Photos Attached - Bridge Closed

Approach Lane Width N/A - No bridge data could be obtained due to bridge closure

Approach Shoulder Width: N/A - No bridge data could be obtained due to bridge closure
 Shoulder Type _____

Lane Width (existing bridge) N/A - No bridge data could be obtained due to bridge closure

Shoulder width (existing bridge) N/A - No bridge data could be obtained due to bridge closure

Strategic Corridor / Thoroughfare Designation and Recommended Cross Section Local, Rural

Crash History and Safety Considerations Two (2) crashes have been reported in the vicinity of the bridge from 11/1/2011 to 10/31/2016 (5 years).
Neither incidents involved the actual bridge.

Comments Bridge closed due to bridge deck failure, no bridge data could be obtained

Reasonable Bridge Speed 55 mph

Investigated by: Sheena Green, 12/07/2016 Reviewed by: Bradley Reynolds, PE

SR 1107 (Falls Ave) Bridge #262 Advance Warning Sign

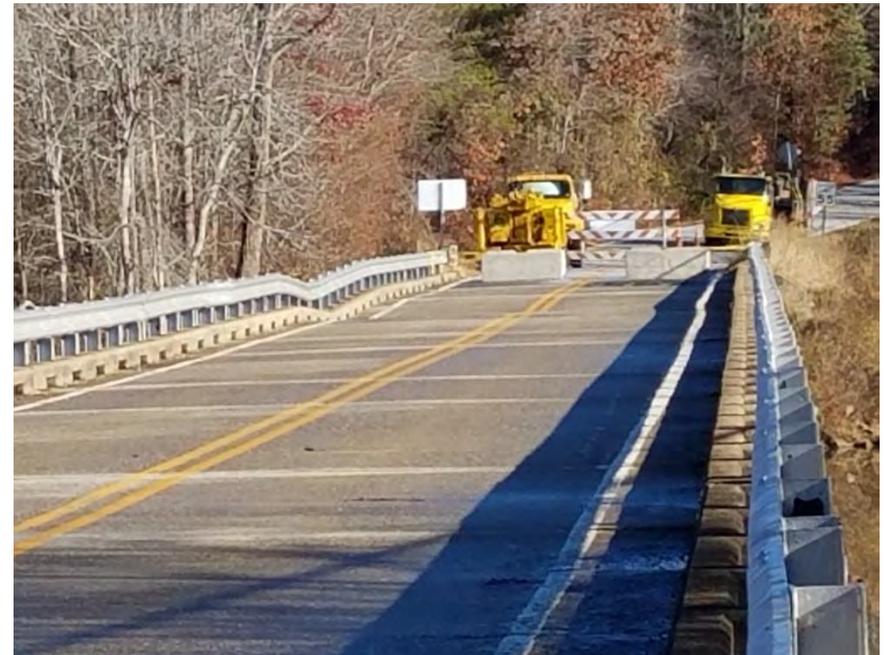


SR 1107 (Falls Ave) Bridge #262 Closed

SR 1107 (Falls Ave) Bridge #262 Road Closed



SR 1107 (Falls Ave) Bridge #262 Closed



SR 1107 (Falls Ave) Posted Speed Limit Southwest of bridge



SR 1107 (Falls Ave) Posted Speed Limit Northeast of bridge



**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	2	100.00
Fatal Crashes	0	0.00
Non-Fatal Injury Crashes	0	0.00
Total Injury Crashes	0	0.00
Property Damage Only Crashes	2	100.00
Night Crashes	0	0.00
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	2	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	2	100.00

Vehicle Exposure Statistics

Annual ADT = 4800

Total Length = 0.379 (Miles)

0.61 (Kilometers)

Total Vehicle Exposure = 3.32 (MVMT)

5.35 (MVKMT)

Crash Rate	Crashes Per 100 Million Vehicle Miles	Crashes Per 100 Million Vehicle Kilometers
Total Crash Rate	60.17	37.39
Fatal Crash Rate	0.00	0.00
Non Fatal Crash Rate	0.00	0.00
Night Crash Rate	0.00	0.00
Wet Crash Rate	0.00	0.00
EPDO Rate	60.17	37.39

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

Miscellaneous Statistics

Severity Index =	1.00
EPDO Crash Index =	2.00
Estimated Property Damage Total = \$	21200.00

Accident Type Summary

Accident Type	Number of Crashes	Percent of Total
ANGLE	1	50.00
SIDESWIPE, OPPOSITE DIRECTION	1	50.00

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	0	0.00
Jun	1	50.00
Jul	0	0.00
Aug	1	50.00
Sep	0	0.00
Oct	0	0.00
Nov	0	0.00
Dec	0	0.00

Daily Summary

Day	Number of Crashes	Percent of Total
Mon	0	0.00
Tue	0	0.00
Wed	0	0.00
Thu	1	50.00
Fri	1	50.00
Sat	0	0.00
Sun	0	0.00

**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	1	50.00
0900-0959	0	0.00
1000-1059	0	0.00
1100-1159	1	50.00
1200-1259	0	0.00
1300-1359	0	0.00
1400-1459	0	0.00
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	0	0.00
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	2	0	0	2
Dark	0	0	0	0
Other	0	0	0	0
Total	2	0	0	2

Vehicle Type Summary

Vehicle Type	Number Involved	Percent of Total
PICKUP	2	50.00
SPORT UTILITY	2	50.00

**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
2011	0	0	0	0
2012	0	0	0	0
2013	1	0	0	1
2014	0	0	0	0
2015	0	0	0	0
2016	1	0	0	1
Total	2	0	0	2

Injury Totals

Year	Fatal Injuries	Class A, B, or C Injuries
2011	0	0
2012	0	0
2013	0	0
2014	0	0
2015	0	0
2016	0	0
Total	0	0

Miscellaneous Totals

Year	Property Damage	EPDO Index
2011	\$ 0	0.00
2012	\$ 0	0.00
2013	\$ 12200	1.00
2014	\$ 0	0.00
2015	\$ 0	0.00
2016	\$ 9000	1.00
Total	\$ 21200	2.00

Type of Accident Totals

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

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

Year	Left Turn	Right Turn	Rear End	Run Off Road &		Side Swipe	Other
				Fixed Object	Angle		
2013	0	0	0	0	0	1	0
2014	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0
2016	0	0	0	0	1	0	0
Total	0	0	0	0	1	1	0

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

Strip Diagram

Features	Milepost	Crash IDs
	1.15	
	1.16	
	1.17	
	1.18	
	1.19	
PINE	1.20	
	1.21	
	1.22	
	1.23	
	1.24	
	1.25	
	1.26	
	1.27	
Structure:130262	1.28	
	1.29	
	1.30	
	1.31	
DAM ML-GRANITE FALLS	1.32	
	1.33	
	1.34	
	1.35	
	1.36	
	1.37	
	1.38	
	1.39	
	1.40	
	1.41	
	1.42	
	1.43	
	1.44	
	1.45	
	1.46	
	1.47	
	1.48	
	1.49	
	1.50	
	1.51	103826561 104754864
	1.52	
	1.53	

**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
CALDWELLBRIDGE262				76.8	8.4	4800	40001107

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

County			Municipality			Name	Code	Div.	Name	Code	Y-Line Ft.	Begin Date	End Date	Years
						CALDWELL	14	11	All and Rural		0	11/01/2011	10/31/2016	5.00

Location Text	Requestor
SR 1107 (Falls Ave) from 500 feet southwest of Bridge 262 to 1100 feet northeast of the bridge	

Included Accidents	Old MP	New MP	Type
103826561		1.51	I
104754864		1.51	I

Fiche Roads

Name	Code
SR 1107	40001107
FALL	50010161

Strip Road

Name	Code	Begin MP	End MP	Miles	Kilometers
SR 1107	40001107	1.153	1.532	0.379	0.610