
Bridge Design Speed Investigation

B-5659

Structure #432 on SR 1738 (Eatmon Road) over Cattail Creek

Johnston County



Document Prepared By:

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Project Manager

Jacob D. Carpenter, PE
Regional Manager

Principal Investigator

Joshua T. Reinke, PE
Transportation Engineer



Bridge and Approach Investigation Checklist

Project B-5659

Description Bridge #432 over Cattail Creek

Route SR 1738 (Eatmon Road)

Division 4

County Johnston

Existing Speed Limit 55 mph ☐ Posted ☒ Statutory

Reasonable & Comfortable
Passenger Car Speed 30 mph

Speed Data Estimated 30-40 mph

Ball Bank Speed Study Curve South of Bridge:

<u>30 mph: NB Approach - 11, SB Approach - 13</u>
<u>35 mph: NB Approach - 14, SB Approach - 14</u>
<u>40 mph: NB Approach - 15, SB Approach - 15</u>

Curve North of Bridge:

<u>35 mph: NB Approach - 10, SB Approach - 8</u>
<u>40 mph: NB Approach - 11, SB Approach - 9</u>

Warning Signs at Bridge 4x Bridge End Delineators, 2x Narrow Bridge Signs

Roadside Development Wooded/Residential

ADT History 130 vpd (From NCDOT TEAAS)
No ADT posted on NCDOT Traffic Volume Map

Pedestrian/Bicycle Traffic Minimal Expected

Bridge and Approach
Digital Photos Attached

Approach Lane Width South of Bridge - 18.75 ft, North of Bridge - 19 ft (total width)

Approach Shoulder Width South of Bridge - <1 ft paved, 5-8 ft grass and ditch
Shoulder Type North of Bridge - <1 ft paved, 4-6 ft grass and ditch

Lane Width (existing bridge) 17 ft (total width)

Shoulder width (existing bridge) 1 ft (~19 ft total width)

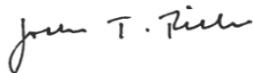
Strategic Corridor / Thoroughfare
Designation and Recommended
Cross Section SR 1738 is classified as a rural local facility in the Statewide Functional
Classification System. 2-lane cross-section is recommended.

Crash History and
Safety Considerations Crash Analysis completed for 01/01/06 to 12/31/15. No collisions were
reported.

Comments Area within the vicinity of the bridge primarily swamp and wooded area.

Reasonable Bridge Speed 30 mph

Investigated by: Joshua T. Reinke, PE

Reviewed by: 

County: Johnston

Route: SR 1738 (Eatmon Road)

Date: 03/16/16

Northbound



Northbound

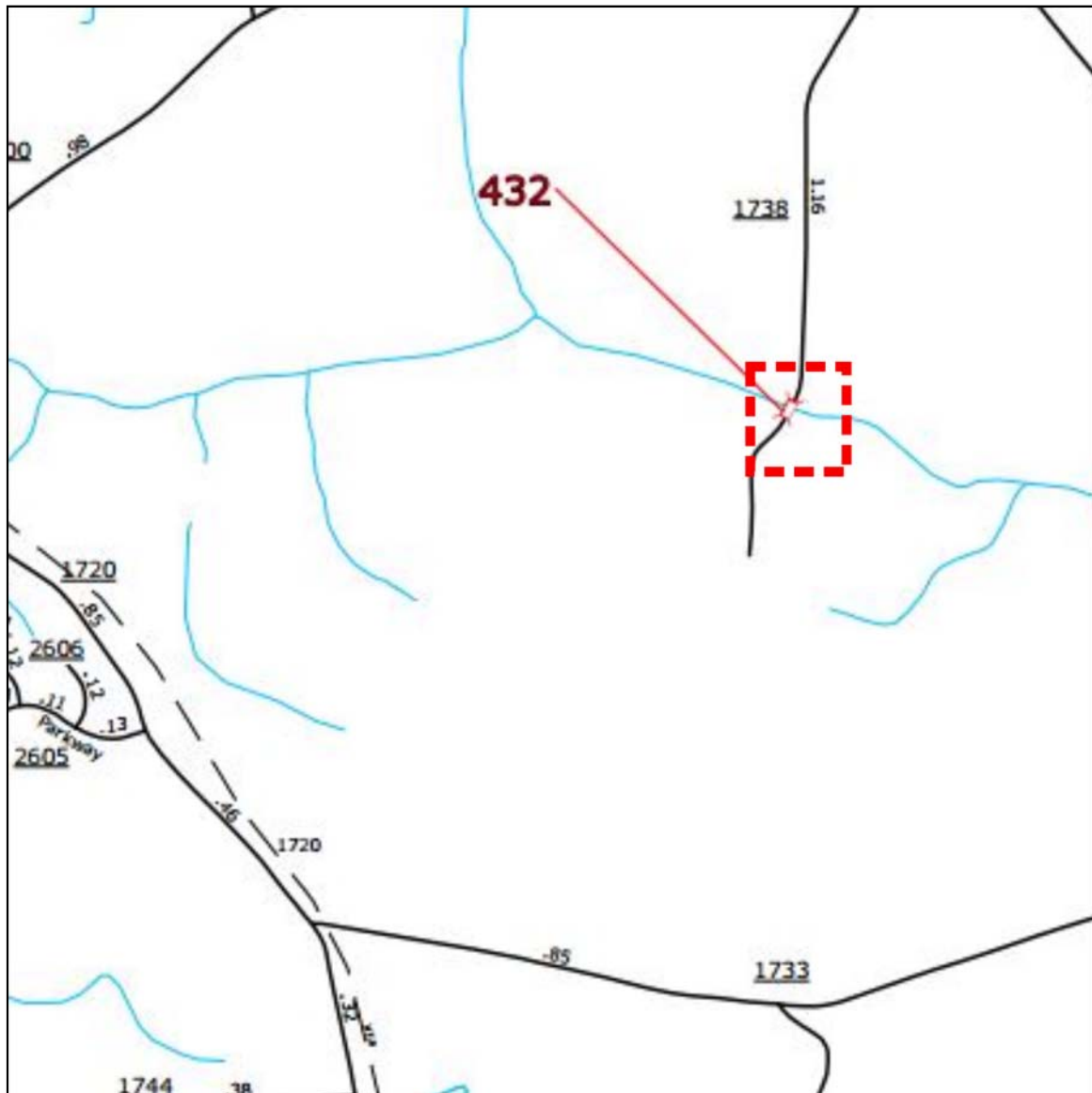


Southbound



Southbound





Bridge Location Map-Bridge #500432

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

Study Criteria Summary

County: JOHNSTON **City:** All and Rural
Date: 1/1/2006 to 12/31/2015 **Study:** JOHNSTONBRIDGE432
Location: 500 feet north and 800 feet south of Bridge 432 on SR 1738 (Eatmon Road) over Cattail Creek
NO CRASHES IN STUDY

Report Details

Study Criteria

Study Name	Log No.	PH No.	TIP No.	K/A Cf.	B/C Cf.	ADT	ADT Route
JOHNSTONBRIDGE432				76.8	8.4	130	40001738

Request Date	Courier Service	Phone No.	Ext.	Fax No.
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County			Municipality					
Name	Code	Div.	Name	Code	Y-Line Ft.	Begin Date	End Date	Years
JOHNSTON	51	4	All and Rural		0	1/1/2006	12/31/2015	10.00

Location Text	Requestor
500 feet north and 800 feet south of Bridge 432 on SR 1738 (Eatmon Road) over Cattail Creek NO CRASHES IN STUDY	

Fiche Roads	
Name	Code
SR 1738	40001738

Strip Road					
Name	Code	Begin MP	End MP	Miles	Kilometers
SR 1738	40001738	0.623	0.876	0.253	0.407