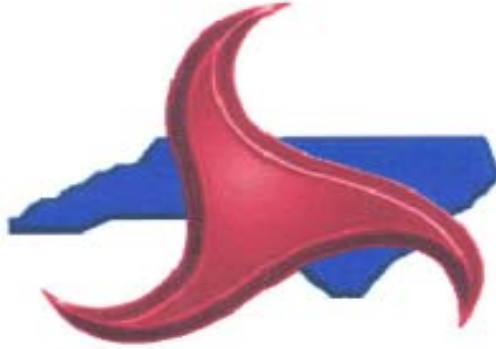


# Bridge Design Speed Investigation

Bridge #169 on SR 1269 (Velvis Hollifield Road) over East Fork Grassy  
Creek  
Mitchell County



Document Prepared By:

Mattern & Craig, Inc.  
Consulting Engineers - Surveyors  
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Commission No: 3241

May 10, 2012



Investigating Engineer

  
James Voso, PE

# Bridge and Approach Investigation Checklist

Project 17BP.13.R.97  
Description Replace Bridge #169 on SR 1269 (Velvis Hollifield Road) over East Fork Grassy Creek  
Route SR 1269 (Velvis Hollifield Road)  
Division 13  
County Mitchell

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Existing Speed Limit 55 mph ☐ Posted ☒ Statutory

Reasonable & Comfortable  
Passenger Car Speed 20 mph

Speed Data N/A

Ball Bank Speed Study Curve north of Bridge #169 had a ball bank indication of 8 at 20 mph.

Warning Signs at Bridge Bridge End Delineators both ends, One Lane Bridge warning sign, Weight Limit (11 tons - single vehicle, 19 tons - truck tractor semitrailer)

Roadside Development Residence in northeast quadrant of bridge. Wooded in all other quadrants of bridge.

ADT History No ADT data available.

Pedestrian/Bicycle Traffic Low

Bridge and Approach  
Digital Photos (attached)

Approach Lane Width 9'

Approach Shoulder Width: 8'  
Shoulder Type Grass

Lane Width (existing bridge) 11' one lane

Shoulder width (existing bridge) 2.5'

Strategic Corridor / Thoroughfare  
Designation and Recommended  
Cross Section Not a Strategic Corridor/Thoroughfare. Two lane cross section at 20 mph based on 3R guidelines.

Crash History and  
Safety Considerations No crashes reported (1/1/2002 - 12/31/2011, 10 years).

Comments Bridge located on gravel road that ends approximately 100 feet north of bridge. Dead end road limits travel speed across bridge.

**Reasonable Bridge Speed** 20 mph

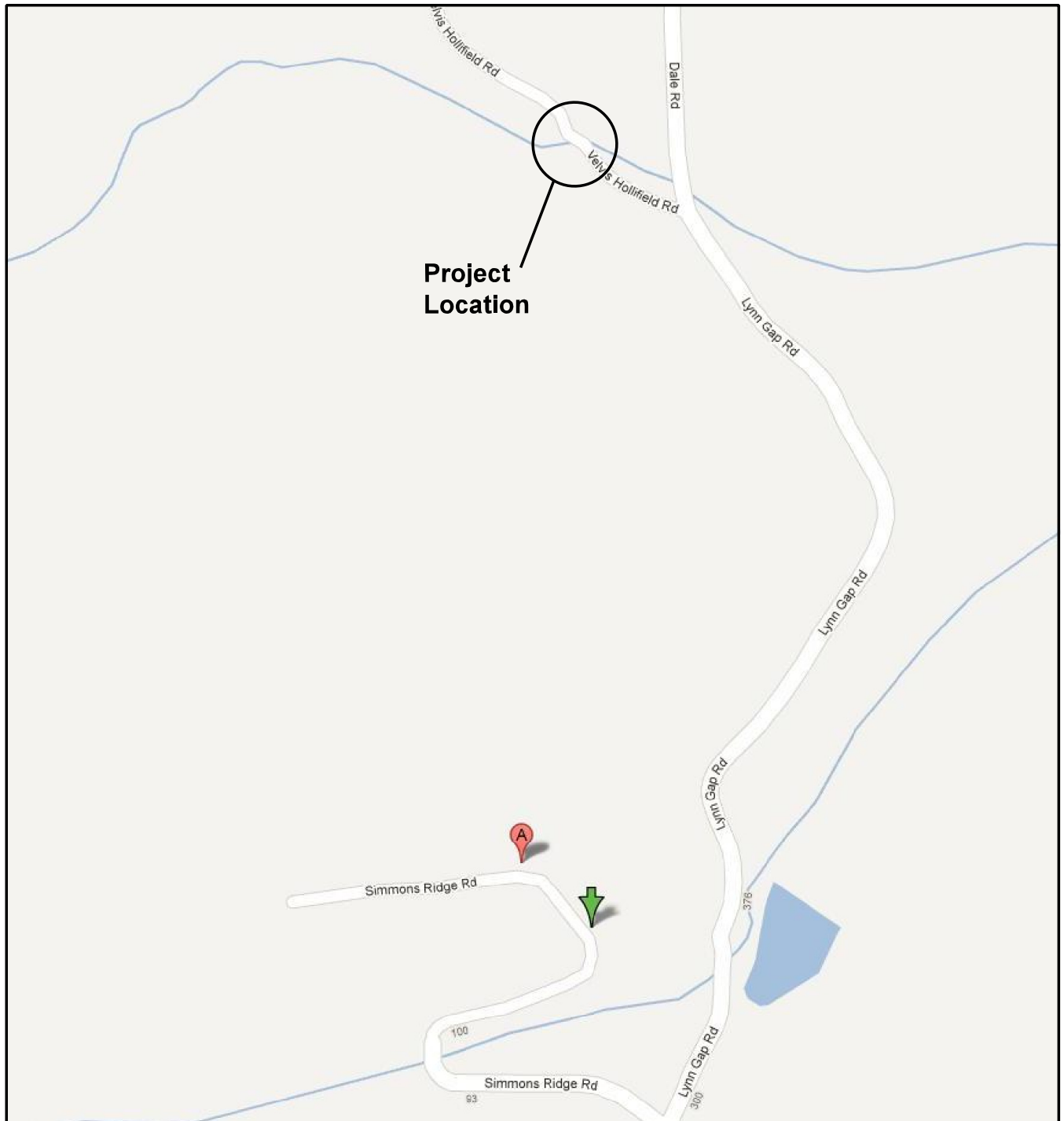
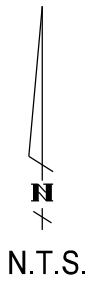
Investigated by: Tom Mulloy

Reviewed by: James Voso

Bridge #169

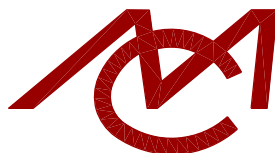
Mitchell County

Division 13



VICINITY MAP

Bridge #169 on SR 1269  
(V Elvis Hollifield Road)  
over East Fork Grassy Creek



**Mattern & Craig**

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Comm. No. 3241

# **Bridge Approach Speed Crash Analysis Request**

Order # 41000018066

**Bridge Number 169 on Secondary Route 1269 (Velvis Hollifield Road) over Branch of Grassy Creek from 500 feet South of Bridge Structure to the Bridge in Mitchell County**

Document Prepared By:

Safety Planning Group  
Traffic Safety Systems Management Unit  
Transportation Mobility and Safety Division  
North Carolina Department of Transportation

**Note:** The crash statistics have been generated and are available through North Carolina's Crash Database. This database provides an inventory of **reported** crashes on record that have occurred at this location. Please note that many traffic crashes go unreported for a variety of reasons, and this report simply provides a listing of all crashes on record that occurred within 0 feet of the section described above.

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

**Study Criteria Summary**

**County:** MITCHELL                      **City:** All and Rural  
**Date:** 01/01/2002    to   12/31/2011    **Study:** 41000018066  
**Location:** Bridge Number 169 on Secondary Route 1269 (Velvis Hollifield Road) over Branch of Grassy Creek  
from 500 feet South of Bridge Structure to the Bridge

**Report Details**

**Study Criteria**

| Study Name  | Log No.     | PH No. | TIP No. | K/A Cf. | B/C Cf. | ADT | ADT Route |
|-------------|-------------|--------|---------|---------|---------|-----|-----------|
| 41000018066 | 41000018066 |        |         | 76.8    | 8.4     | 40  | 40001269  |

| Request Date | Courier Service | Phone No.     | Ext. | Fax No. |
|--------------|-----------------|---------------|------|---------|
| 02/21/2012   |                 | (828)650-2700 |      |         |

| County   |      |      | Municipality  |      |            |            |            |       |
|----------|------|------|---------------|------|------------|------------|------------|-------|
| Name     | Code | Div. | Name          | Code | Y-Line Ft. | Begin Date | End Date   | Years |
| MITCHELL | 60   | 13   | All and Rural |      | 0          | 01/01/2002 | 12/31/2011 | 10.00 |

| Location Text                                                                                                                                        | Requestor                                                               |
|------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| Bridge Number 169 on Secondary Route 1269 (Velvis Hollifield Road) over Branch of Grassy Creek from 500 feet South of Bridge Structure to the Bridge | D.D. (Bucky) Galloway, PE<br>Blue Ridge Mountains Region<br>Fletcher NC |

**Fiche Roads**

| Name    | Code     |
|---------|----------|
| SR 1269 | 40001269 |

**Strip Road**

| Name    | Code     | Begin MP | End MP | Miles | Kilometers |
|---------|----------|----------|--------|-------|------------|
| SR 1269 | 40001269 | 0.154    | 0.250  | 0.096 | 0.154      |

Bridge #169

Mitchell County

Division 13

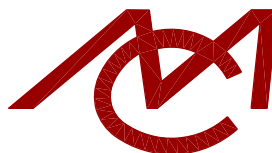


Northbound Approach



Northbound Approach at bridge

Bridge #169 on SR 1269  
(Velvis Hollifield Road)  
over East Fork Grassy Creek



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Bridge #169

Mitchell County

Division 13

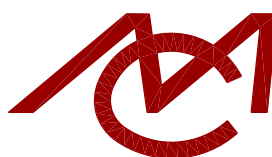


Southbound Approach



Southbound Approach at bridge

Bridge #169 on SR 1269  
(Velvis Hollifield Road)  
over East Fork Grassy Creek



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