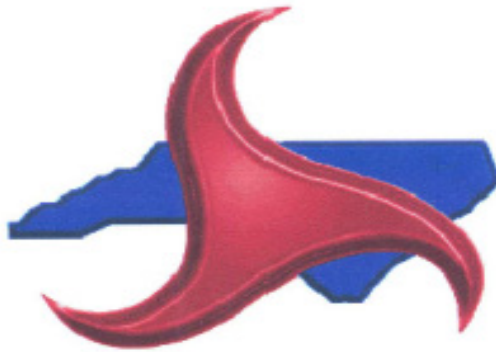


Bridge Design Speed Investigation

Bridge #52 on SR 1105 (Cherry Springs Road) over Little Crooked Creek
McDowell County



Document Prepared By:

Mattern & Craig, Inc.
Consulting Engineers - Surveyors
12 Broad Street
Asheville, NC 28801
(828) 254-2201
FAX: (828) 254-4562

Commission No: 3241

May 15, 2012



Investigating Engineer


James Voso, PE

Bridge and Approach Investigation Checklist

Project 17BP.13.R.50
Description Replace Bridge #52 on SR 1105 (Cherry Springs Road) over Little Crooked Creek
Route SR 1105 (Cherry Springs Road)
Division 13
County McDowell

Existing Speed Limit 55 mph ☐ Posted ☒ Statutory

Reasonable & Comfortable
Passenger Car Speed 40 mph

Speed Data N/A

Ball Bank Speed Study Curve south of Bridge #52 had a ball bank indication of 7 at 45 mph.

Warning Signs at Bridge One Lane Bridge warning sign, Bridge End Delineators both ends, Weight Limit (9 tons - single vehicle, 14 tons - truck tractor semitrailer)

Roadside Development Wooded in northwest quadrant of bridge. Farm land in northeast quadrant and south of bridge.

ADT History No ADT data available

Pedestrian/Bicycle Traffic None

Bridge and Approach
Digital Photos (attached)

Approach Lane Width 9.5'

Approach Shoulder Width: 2.6'
Shoulder Type Grass

Lane Width (existing bridge) 7.2'

Shoulder width (existing bridge) 1'

Strategic Corridor / Thoroughfare
Designation and Recommended
Cross Section Not a Strategic Corridor/Thoroughfare. Two lane cross section at 45 mph based on 3R guidelines.

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

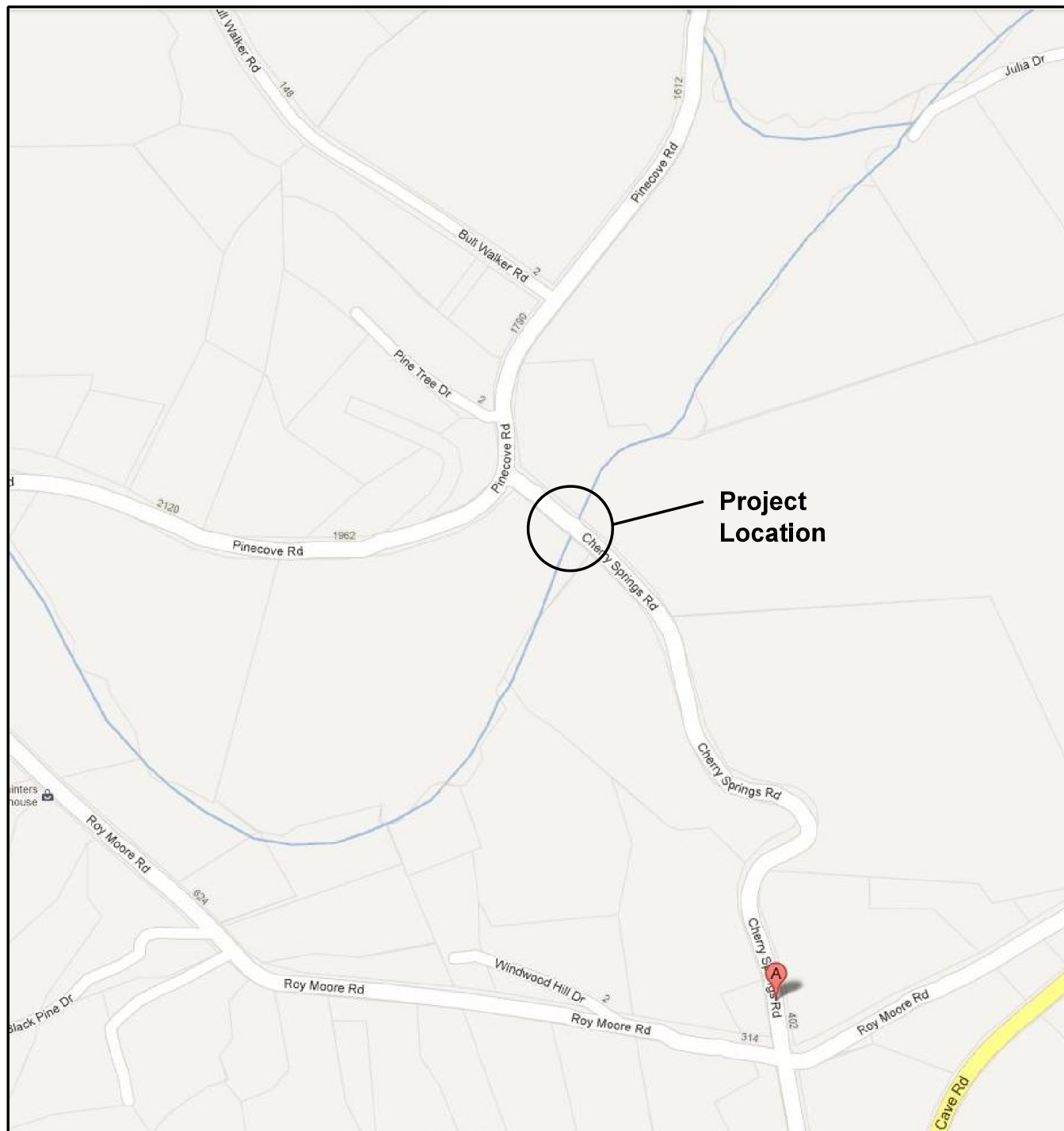
Comments Bridge located approximately 200 feet from a t-intersection. Cherry Springs Rd is stop controlled. There is no road curvature between stop sign and northern terminus of bridge.

Reasonable Bridge Speed 45 mph

Investigated by: Lori Boyer Reviewed by: James Voso

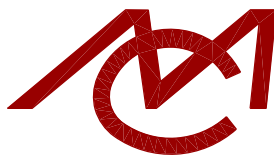


Bridge #52
McDowell County
Division 13



VICINITY MAP

Bridge #52 on SR 1105
(Cherry Springs Road)
over Little Crooked Creek



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Comm. No. 3241

Bridge Approach Speed Crash Analysis Request

Order # 41000018003

Bridge Number 52 on Secondary Route 1105 (Bethel Church Road) over Creek from 500 feet South of Bridge Structure to Secondary Road 1106 (Little Creek Road) in McDowell 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: MCDOWELL **City:** All and Rural
Date: 01/01/2002 **to** 12/31/2011 **Study:** 41000018003
Location: Bridge Number 52 on Secondary Route 1105 (Bethel Church Road) over Creek from 500 feet South of Bridge Structure to Secondary Road 1106 (Little Creek Road)

Report Details

Study Criteria

Study Name	Log No.	PH No.	TIP No.	K/A Cf.	B/C Cf.	ADT	ADT Route
41000018003	41000018003			76.8	8.4	90	40001105

Request Date	Courier Service	Phone No.	Ext.	Fax No.
02/17/2012		(828)650-2700		

County			Municipality					
Name	Code	Div.	Name	Code	Y-Line Ft.	Begin Date	End Date	Years
MCDOWELL	58	13	All and Rural		0	01/01/2002	12/31/2011	10.00

Location Text	Requestor
Bridge Number 52 on Secondary Route 1105 (Bethel Church Road) over Creek from 500 feet South of Bridge Structure to Secondary Road 1106 (Little Creek Road)	D.D. (Bucky) Galloway, PE Blue Ridge Mountains Region Fletcher NC

Fiche Roads	
Name	Code
SR 1105	40001105
BETHEL CH	50002518

Strip Road					
Name	Code	Begin MP	End MP	Miles	Kilometers
SR 1105	40001105	0.557	0.705	0.148	0.238

Bridge #52

McDowell County

Division 13

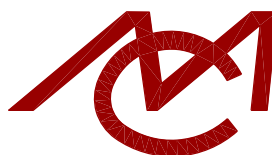


Northbound Approach



Northbound Approach at bridge

Bridge #52 on SR 1105
(Cherry Springs Road)
over Little Crooked Creek



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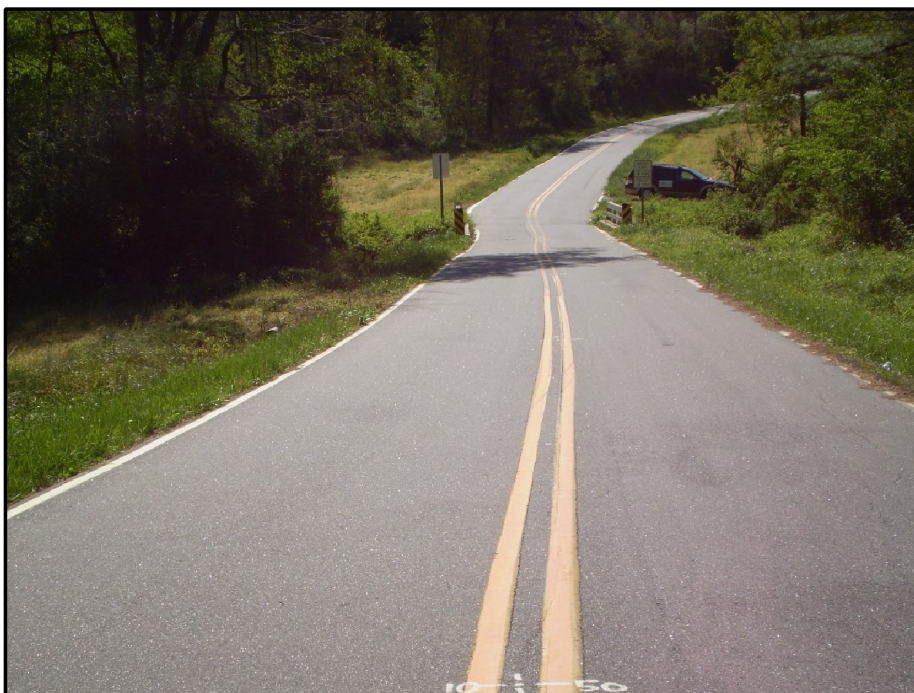
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Bridge #52

McDowell County

Division 13

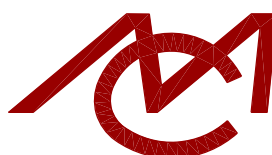


Southbound Approach



Southbound Approach at bridge

Bridge #52 on SR 1105
(Cherry Springs Road)
over Little Crooked Creek



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