

TRANSPORTATION PLANNING REPORT

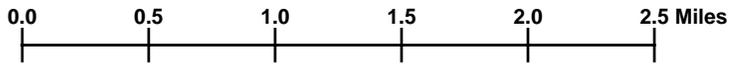
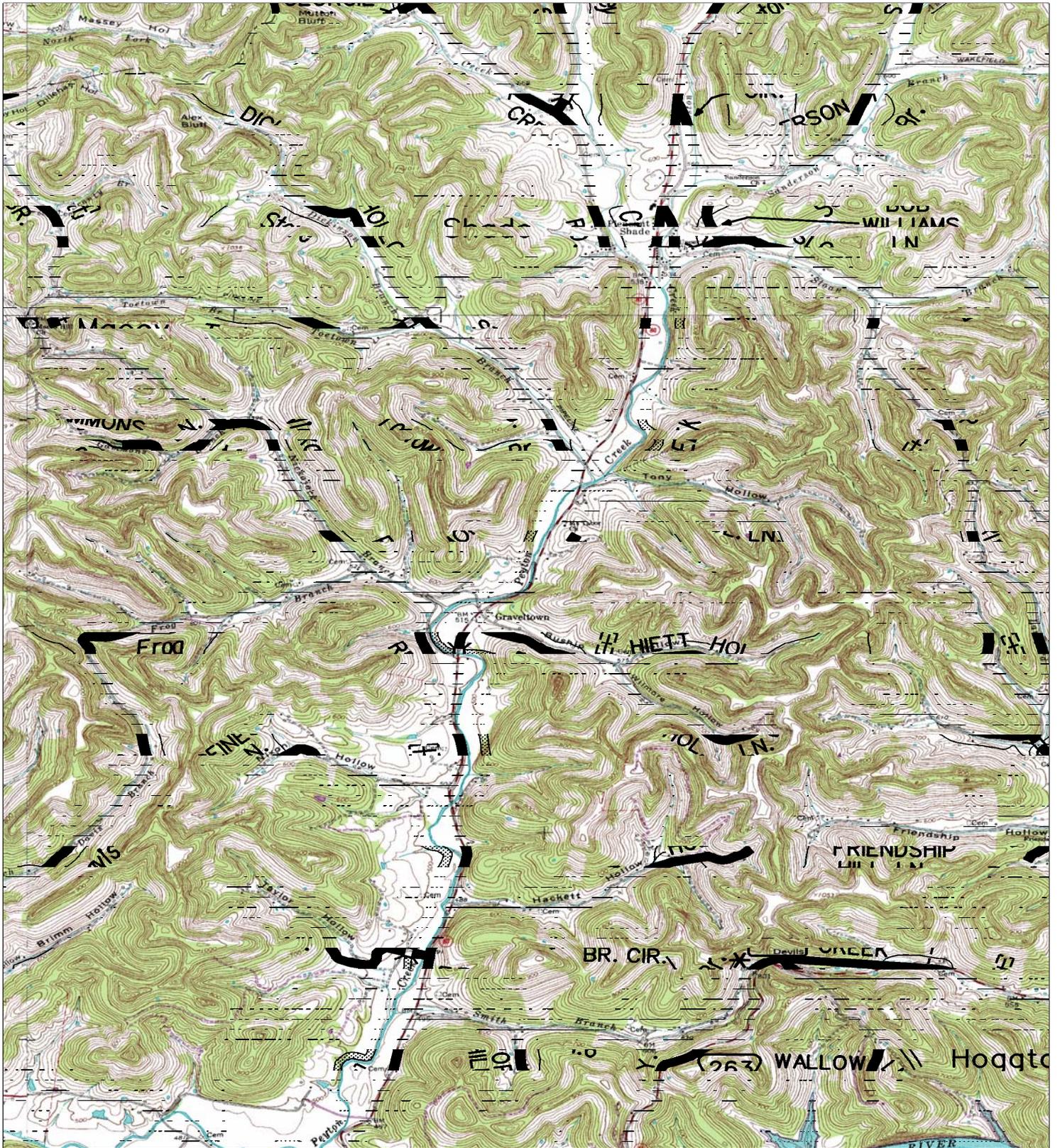
State Route 80
SPOT IMPROVEMENT
FROM LOG MILE 5.0 TO LOG MILE 5.5
SMITH COUNTY
PIN# 107370.00



PREPARED BY
TENNESSEE DEPARTMENT OF TRANSPORTATION
PROJECT PLANNING DIVISION

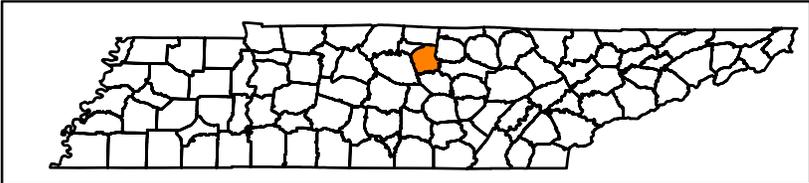
Recommended by:	Signature	DATE
CHIEF OF ENVIRONMENT AND PLANNING		5/3/07
TRANSPORTATION DIRECTOR PROJECT PLANNING DIVISION		5-3-07
TRANSPORTATION MANAGER 2 PROJECT PLANNING DIVISION		5/2/07

This document is covered by 23 USC § 409 and its production pursuant to fulfilling public planning requirements does not waive the provisions of § 409.

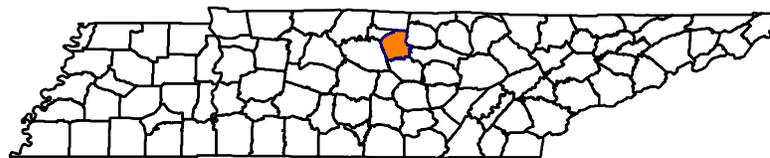
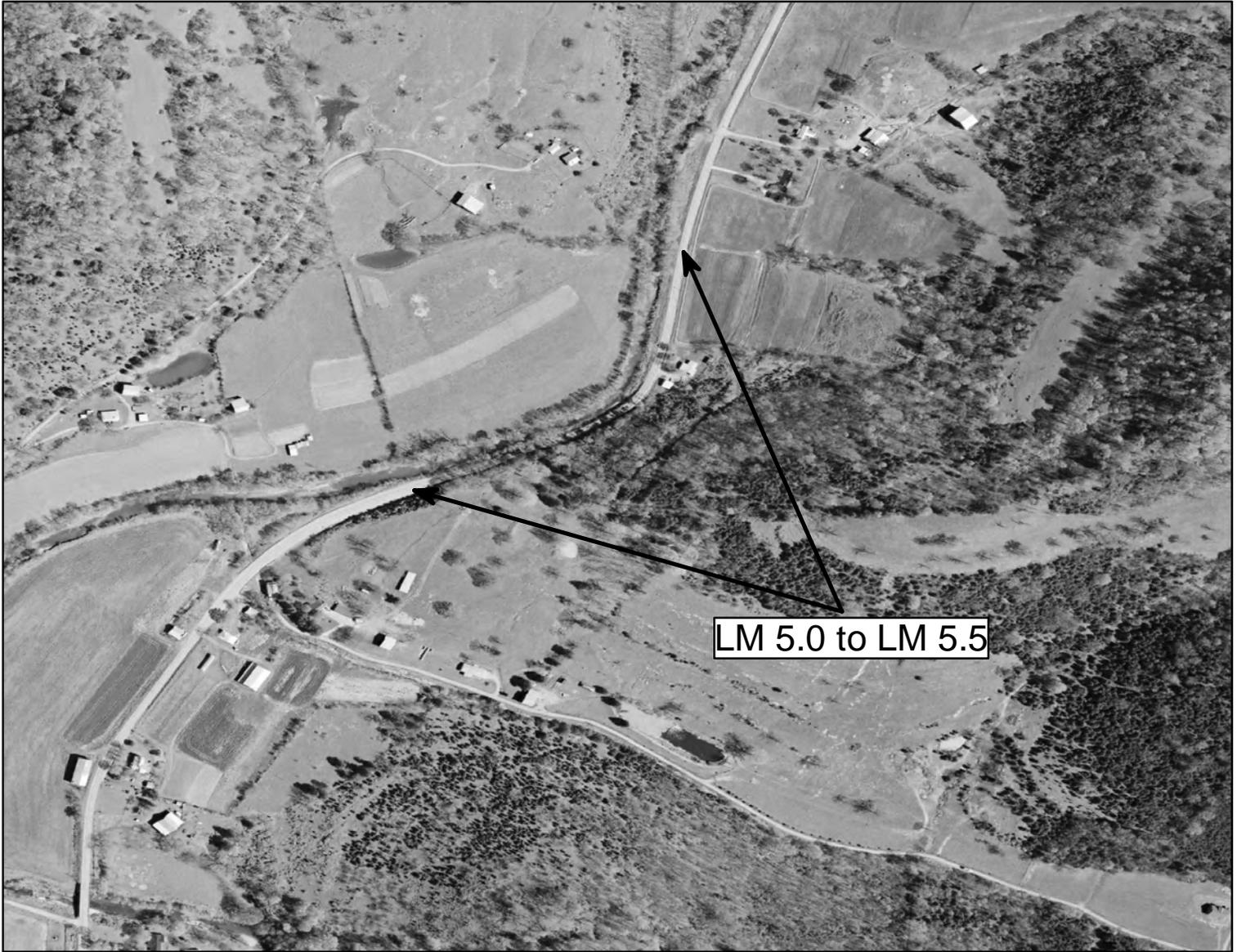


Legend

●●●● Study Area
LM 5.0 to 5.5



State Route 80



Smith County

**DATA TABLE
State Route 80
Smith County**

No Build

**From: Near Bishop Hollow Lane
To: South of Tony Hollow Lane**

EXISTING CONDITIONS

Item

Functional Class	Rural Minor Arterial
System Class	STP
Length - Miles	.50 ±
Cross Section Feet	20 / 24 / 60-120
Present AADT (2011)	2,290
Projected Future AADT (2031)	3,070
Percent Trucks	6 %
Estimated Right-of-Way Acquisition (Acres)	N/A
Estimated Right-of-Way Tracts Affected	N/A
Estimated Business Displacements	\$ N/A
Estimated Right-of-Way Cost	\$ N/A
Estimated Utility Cost Reimbursable	\$ N/A
Estimated Utility Cost Non-Reimbursable	\$ N/A
Estimated Construction Cost	\$ N/A
Estimated Preliminary Engineering Cost	\$ N/A
Total Estimated Cost	\$ N/A

**DATA TABLE
State Route 80
Smith County**

OPTION 1

**From: Near Bishop Hollow Lane
To: South of Tony Hollow Lane**

PROPOSED

Item

Functional Class	Rural Minor Arterial
System Class	STP
Length - Miles	.50 ±
Cross Section Feet	24 / 44 / 150
Present AADT (2011)	2,290
Projected Future AADT (2031)	3,070
Percent Trucks	6 %
Estimated Right-of-Way Acquisition (Acres)	3.51 ±
Estimated Right-of-Way Tracts Affected	2
Estimated Business Displacements	\$ N/A
Estimated Right-of-Way Cost	\$ 215,000
Estimated Utility Cost Reimbursable	\$ N/A
Estimated Utility Cost Non-Reimbursable	\$ 187,000
Estimated Construction Cost	\$ 1,385,000
Estimated Preliminary Engineering Cost	\$ 103,000
Total Estimated Cost	\$ 1,890,000

PROJECT DATA TABLE

STATE ROUTE 80

	APPROXIMATE	PROPOSED	2011 AADT	2031 AADT	PERCENT	2031 LEVEL	R.O.W	UTILITY	CONSTRUCTION	PRELIMINARY	TOTAL
	LENGTH	IMPROVEMENT			TRUCKS	OF SERVICE	COST	RELOCATION COST	COST	ENGINEERING COST	COST
SECTION 1											
OPTION 1	0.50±	IMPROVED TWO-LANE	2,290	3,070	6%	N/A	\$215,000	\$187,000	\$1,385,000	\$103,000	\$1,890,000
NO-BUILD	0.50±	EXISTING TWO-LANE	2,290	3,070	6%	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL											
OPTION 1	0.50±						\$215,000	\$187,000	\$1,385,000	\$103,000	\$1,890,000

EXISTING CONDITONS

State Route 80 in Smith County begins at State Route 25 (Dixon Springs Highway) terminating at the Macon County line, a total distance of approximately 10.69 miles. The project area is from near Bishop Hollow Lane to south of Tony Hollow Lane is approximately .50 mile in length. The existing route consists of two ten foot lanes with two foot shoulders.

The base year (2011) annual average daily traffic (AADT) along this route is 2,290. This traffic is based on 2005 cycle counts. Nashville and Eastern Railway currently provides freight service for area industry. Trucking is also a dominant means for moving goods to and from local businesses and industry. Currently, trucks account for 6% of the traffic on State Route 80 in the project area.

Using the base years 2003 through 2005 crash data, a crash rate of 17.96 crashes per million vehicle miles was calculated for the area within this section with the highest crash history. Although this rate is substantially above the statewide average of 1.70, it does not meet the criteria established for Highway Safety Improvement Program (HSIP) funding.

This section has not experienced a large number of severe crashes; but with the substandard geometrics and unprotected roadside environment, there is a potential for fatal and/or severe injury crashes. Although safety funding will not be used, this section of roadway will be improved with other resources with the intent to reduce the crash rate and potential for severe crashes and to address the concerns of local citizens and officials.



SR-80: Start of Project Area at LM 5.0 heading north

COMMUNITY PROFILE

The city of Carthage, Tennessee is an urban community of 2,268 residents according to a 2005 estimate. The unemployment rate in Carthage is 5.9%, which is slightly higher than the statewide average of 5.2% for Tennessee. The city is located approximately fifty miles east of Nashville, and just north of a major interstate (I-40) corridor between Nashville and Cookeville. State Route 24 (US 70N), State Route 80, State Route 25, and State Route 85 provide Carthage with access to Interstate 40 to the south and around Smith County.



SR-80: End of Project Area at LM 5.5 heading north

Carthage has over 18 industries that comprise distribution, warehousing, and manufacturing involving a wide range of products. Some of the larger companies are Bon L. Manufacturing, Inc., Overstreet & Hughes, Inc., Moss Service and Supply, Inc., Smith County Tobacco Warehouse, and Cumberland Supply Co., Inc.

PURPOSE OF STUDY

The purpose of this study is to examine existing geometric deficiencies and review crash history to validate the need of making a section improvement to State Route 80 from near Bishop Hollow Lane to south of Tony Hollow Lane that will address the high crash rate at this location. The proposed widening of State Route 80 from near Bishop Hollow Lane to south of Tony Hollow Lane was initiated due to safety concerns expressed by Smith County Mayor Michael F. Nesbitt.

The objective of this report is to develop safety recommendations for improvement and estimate the cost of project implementation. This study was initiated due to the safety concerns associated with the narrow shoulders and lack of guardrails, and the number of crashes in the project area. This proposed project will

increase the safety along the route to residential and commercial areas, and the interstate.

PURPOSE AND NEED

The purpose and need this project on State Route 80 in Smith County is to improve hazardous travel conditions caused by substandard travel lanes, shoulder widths, horizontal alignments, and lack of guardrails.

PROPOSED IMPROVEMENT

Description

This report will focus on a spot improvement option to improve State Route 80 from approximately Bishop Hollow Lane to south of Tony Hollow Lane. Option 1 begins at log mile 5.0 to log mile 5.5 along existing State Route 80, a total distance of approximately .50 miles.

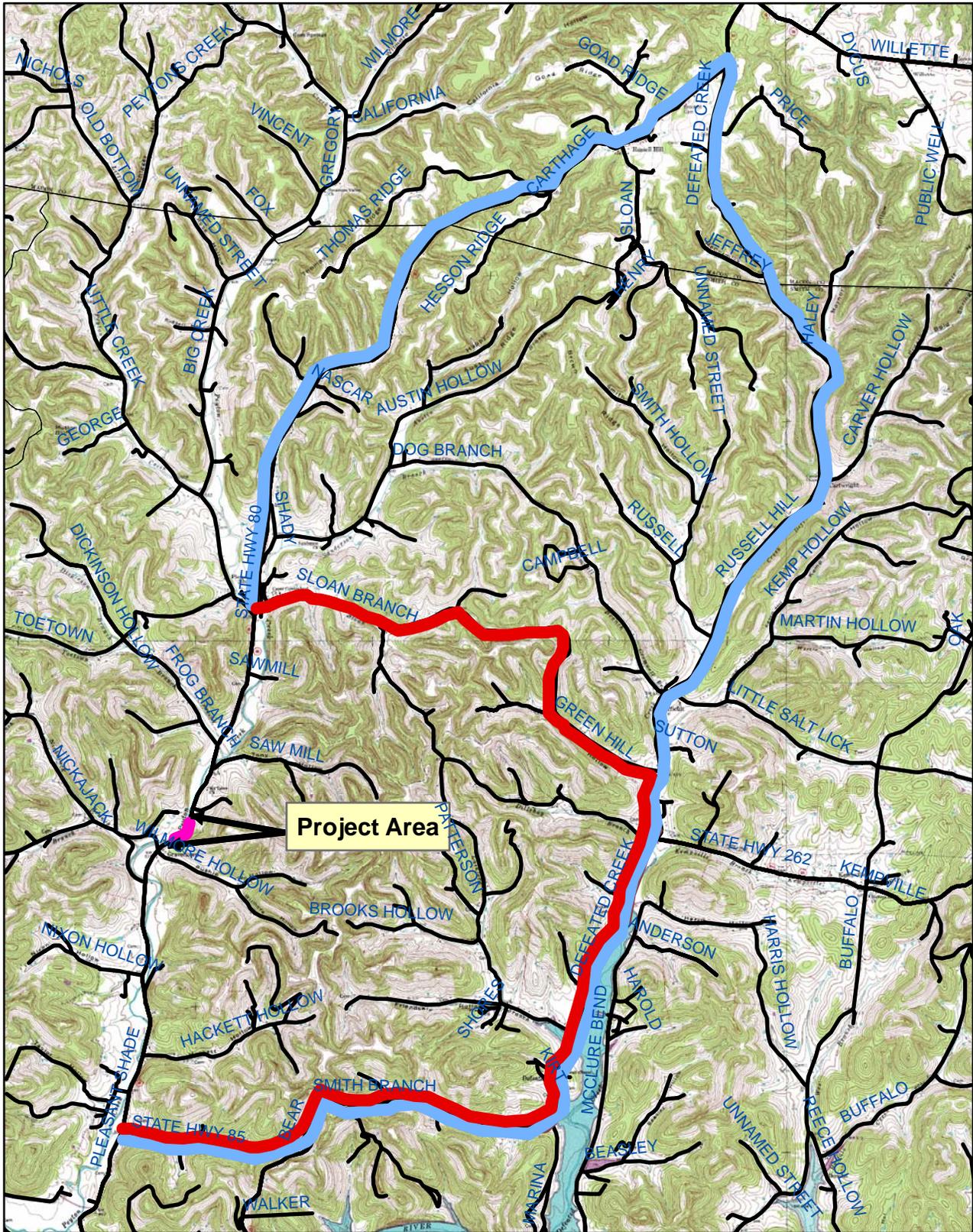
The proposed project is to widen the existing roadway to the east (cut side) and maintain the existing slopes to the west (fill side). Four feet of the existing pavement on the west (fill side) will be utilized for the placement of a guardrail.



SR-80: Peyton Creek visible on the right at LM 5.14 heading south

The proposed typical section will consist of two 12' traffic lanes, two 10' shoulders (8' are stabilized), one 21' foot ditch on the east (cut side), and 0.25 : 1 rock cut slopes with a 10 foot bench with variable right-of-way to be determined by the slopes. The 21' foot ditch on the east (cut side) was the minimum distance required by TDOT's Geotechnical Engineering Section recommendation for the rock cut in the project area. Their recommendations are reflected in the proposed typical section and project costs. These recommendations are attached in an appendix at the end of this report. A 35 M.P.H. design speed is proposed throughout the project limits. It will be

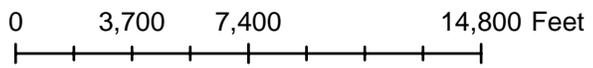
State Route 80 Detour Map



Project Area

Legend

-  Car Detour Route
-  Truck Detour Route
-  SR-80 Spot Improvement



necessary to close the roadway during construction and detour the traffic as appropriate.

Two detour routes have been developed for this report; one for cars and a second route for semi-trucks. The car detour route will use State Route 85 (located south of the project area) and Green Hill/Sloan Branch road. The distance of this detour route is approximately 15 miles. The semi-truck detour route will also use State Route 85, but the trucks will use Defeated Creek Road until it ties back into State Route 80 in Macon County. The distance of this detour route is approximately 25 miles.



SR-80: End of bluff in project area at LM 5.14 heading north

The necessary right-of-way to build the project will vary depending on the terrain and land use. A no-build option was also analyzed for this report. The no-build option, as the name implies, denotes that only minor improvements (such as normal maintenance) would be made to the existing road and/or intersection areas.

ASSESSMENT OF OPTIONS

This project was prepared to address safety concerns because of the high crash rate in the project area, originally brought to TDOT's attention by the Mayor of Smith County, Michael F. Nesbitt. Because of this, the report may not fully address the seven guiding principles used in evaluating transportation projects.

The Tennessee Department of Transportation (TDOT) has adopted seven guiding principles against which all transportation projects are to be evaluated. These guiding principles address concerns for system management, mobility, economic growth, safety, community, environmental stewardship, and fiscal responsibility. These guiding principles are discussed in the following paragraphs as they relate to the option for improving State Route 80 in Smith County.

Guiding Principle 1: Preserve and Manage the Existing Transportation System

When construction was completed on State Route 80 it provided a facility for regional mobility through Smith County. That function has degraded in recent decades due to deficient roadway width and vertical alignment, and an increase in commuter and commercial traffic along the route.

The widening of existing State Route 80 is consistent with TDOT's goal of preserving the existing transportation system. The widening of existing State Route 80 through this section of the county would not necessitate acquisition of very expensive right-of-way or utility relocations.

Guiding Principle 2: Move a Growing, Diverse, and Active Population

The option considered in this report will address safety concerns on this section of State Route 80. The route currently has substandard travel lanes, shoulder widths, horizontal alignment, and lacks guardrails. Widening the existing roadway will allow for 12' travel lanes, 10' shoulders, correct the horizontal alignment of the roadway, and allow for the placement of guardrails on the west side (facing Peyton Creek). This project will provide a safer route that will meet future travel demands of the local population.

Guiding Principle 3: Support the State's Economy

State Route 80 provides access to population centers in Smith County. The population in nearby Carthage has increased approximately 1% since the 2000 census. The unemployment rate in Carthage is 5.9%. The development of the proposed State Route 80 spot improvement project will create safer access to residential, agricultural, and commercial areas along the route.

Guiding Principle 4: Maximize Safety and Security

Traffic crash rate on existing State Route 80 is 17.96, calculated from crash data for the years 2003 through 2005. A total of nine traffic crashes were reported during that period, of which 4 (44%) involved an injury. There were no fatalities during this time period. The statewide average crash rate for the existing rural minor arterial two lane road is 1.70.

This project will provide safer driving conditions by widening the substandard travel lanes, shoulder widths, and horizontal alignments. The addition of guardrails in the project area will also help provide safer traveling conditions.

Guiding Principle 5: Build Partnerships for Livable Communities

TDOT staff has coordinated with local officials to identify their concerns and objectives. This public involvement process will continue as mandated by the provisions of the National Environmental Policy Act (NEPA).

Guiding Principle 6: Promote Stewardship of the Environment

A detailed environmental study is needed to fully address the impacts of each considered option. It should be noted that items listed on the Preliminary Environmental Evaluation form are located within the identified study area, but may not necessarily be impacted.

Guiding Principle 7: Promote Financial Responsibility

Preliminary construction cost estimates were prepared for each considered option upon typical per mile costs. Table 1 summarizes the construction cost estimates for Option 1.

**Table 1
Comparison of Construction Cost Estimates**

OPTION	NUMBER OF NEW LANES	CONSTRUCTION COST	LENGTH	
No Build	n/a	\$0	n/a	
Option 1	Improved two lane	\$1,890,000	0.50	

PRELIMINARY ENVIRONMENTAL ANALYSES

TDOT's Environmental Division has conducted a preliminary investigation into this project's possible environment impacts within the Area of Potential Effects (APE). The APE is the geographic area in which an undertaking may directly or indirectly impact the environment. A more comprehensive analysis of the impacts will be completed at a later date to comply with the National Environmental Policy Act (NEPA). This analysis will require the consideration of environmental values in the decision making processes by taking into account the environmental impacts of proposed actions and reasonable alternatives to those actions. Additional environmental disciplines such as social, economic, farmland, displacements, and land use impacts will be evaluated in the NEPA document after a Conceptual Stage Relocation Plan is completed by TDOT's Right-of-Way Division.

Historic

TDOT historians have conducted a records search at the Tennessee State Historic Preservation Office (TN-SHPO) and a reconnaissance level field survey of this project in Smith County. According to the TN-SHPO records, there are no National Register listed properties in the general project area.

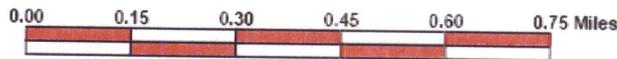
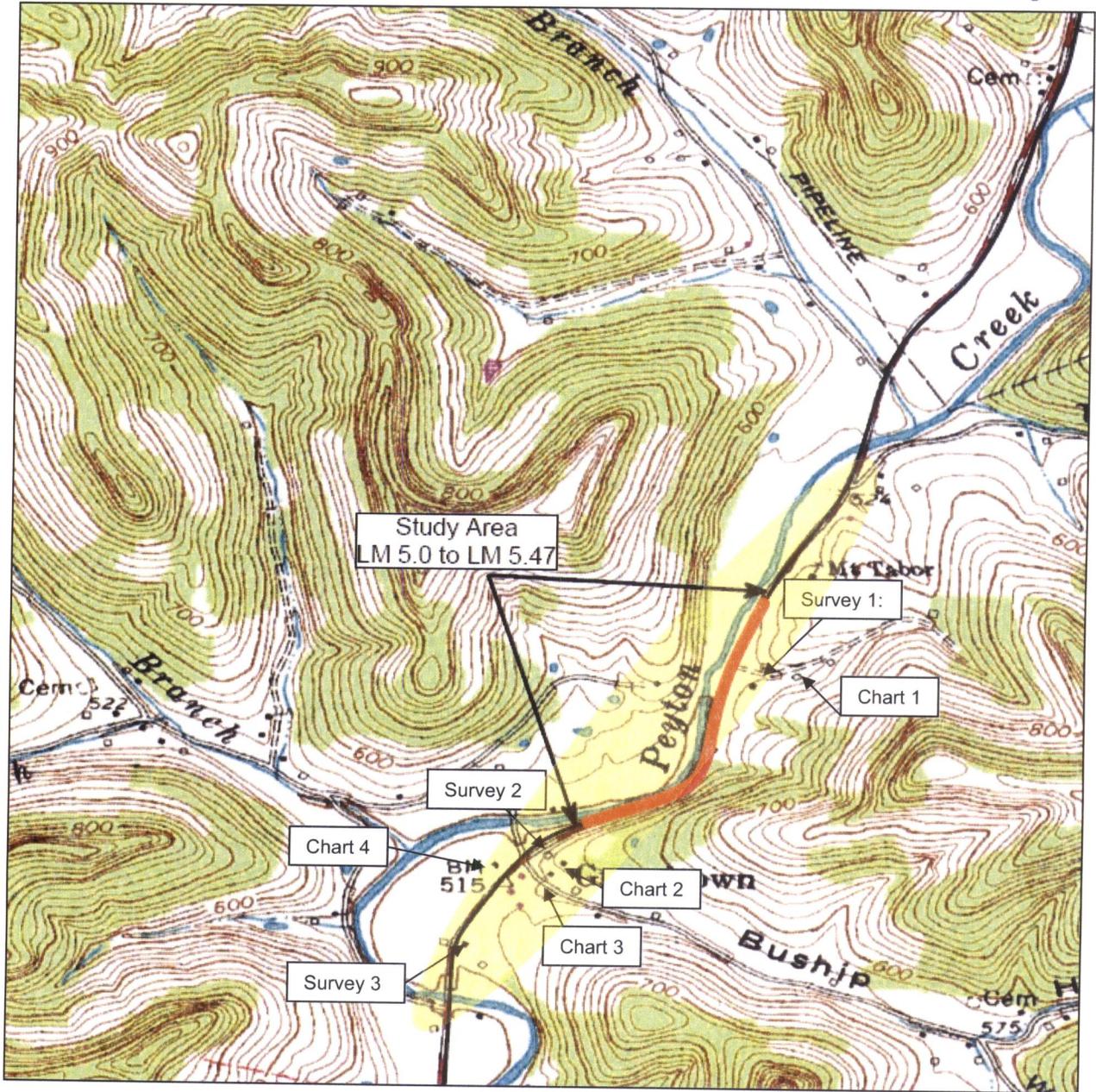
The reconnaissance survey identified several properties that will require additional survey and research. Further research may indicate that any (or none) of the properties are National Register eligible. The reconnaissance level survey identified three properties that will require additional survey work and research in

Preliminary Environmental Evaluation

If preliminary field reviews indicate the presence of any of the following facilities or Economic, Social and Environmental categories (ESE), place the number of facilities in the blank opposite the item. Where more than one location option is to be considered, place its letter designation in the blank.

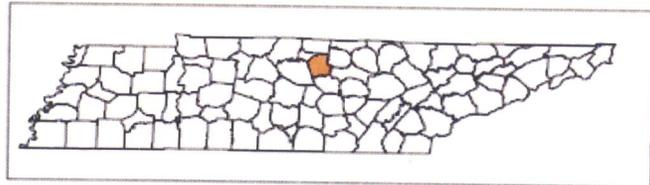
	<u>Option</u>
1.) Hazardous Material Site or Underground Storage Tanks.....	_____
2.) Floodplains.....	_____
3.) Historical, archaeological, cultural, or natural landmark, or cemeteries.....	X _____
4.) Airport.....	_____
5.) Residential establishment.....	X _____
6.) Urban area, city, town, or community..... (Carthage, Pop. 2,268)	X _____
7.) Commercial area, shopping center.....	_____
8.) Institutional usages:	
a. School or other educational institution.....	_____
b. Hospital or other medical facility.....	_____
c. Church or other religious institution.....	X _____
d. Public Building, e.g., fire station.....	_____
e. Defense installation.....	_____
9.) Agricultural land usage.....	X _____
10.) Forested land.....	X _____
11.) Industrial park, factory.....	_____
12.) Recreational usages:	
a. Park or recreational area, State Natural Area.....	_____
b. Wildlife refuge or wildlife management area.....	_____
13.) Waterway:	
a. Lake.....	_____
b. Pond.....	_____
c. River.....	_____
d. Stream.....	X _____
e. Spring.....	_____
14.) Railroad Crossings.....	_____
15.) Location coordinated with local officials.....	X _____
16.) Other.....	_____

State Route 80 (Spot Improvement) in Smith County



Legend

 Study Area



order to determine eligibility, these are indicated on the enclosed field map marked Survey 1, 2, and 3. There is a medium to high probability that Survey Properties 1 and 2 are eligible; however, we will need historic research and interior information before that is official. The properties identified with a “Chart” will need to be recorded but have a low probability of National Register eligibility. The area highlighted in yellow indicates what was driven by TDOT historians during the field review.

Measures should be taken in the design process to avoid the National Register properties and minimize the project in order to prevent adverse effects or potential 4(f) takes. If properties are identified later as being eligible for the National Register, they will also need to be avoided to prevent adverse effects or potential 4(f) takes.

Summary

The proposed widening of State Route 80 from near Bishop Hollow Lane to south of Tony Hollow Lane was initiated due to safety concerns expressed by Smith County Mayor Michael F. Nesbitt in a letter to Commissioner Gerald F. Nicely received on March 8, 2004. The safety issue was identified and two options were prepared for this report; Option 1 and a no build option. The proposed project area is approximately .50 mile in length.

Option 1 will improve sight distance and improve the deficient horizontal alignments throughout the project area. The primary beneficial effect is improved safety and operating conditions through the project area. The primary adverse effects of the proposed build option include: (1) the loss of land for right-of-way; (2) the possible displacement of residences and businesses; and (3) temporary construction impacts (dust, siltation, equipment noise, etc.) during the construction period; (4) traffic noise; (5) the roadway will be closed during construction and traffic will have to be detoured.

As depicted on the Project Data Table, Option 1 design year level of service is “B” throughout the project area. The comparable level of service for the no-build option is a deficient “E.” In addition, the disadvantages of the no-build option include continued safety issues related to substandard geometric conditions, especially shoulder widths and deficient horizontal alignments. Some advantages of the no-build option include preserving the existing land use patterns and no disruption of the area due to construction. Also, measures to mitigate environmental impacts would not be necessary.

Improvements of State Route 80 are needed to address the following needs:

1. Improved travel lane width, shoulder width, and horizontal alignment will provide the motorist with increased maneuverability and run-off correction area.

2. The addition of guardrails will help prevent motorists from leaving the roadway on the west side (fill side).

In conclusion, this report identifies the option to address the purpose and need. Option 1 does meet the purpose and need, while the no build option does not meet the purpose and need of the project. No other options are feasible or prudent to address the purpose and need for the project area; therefore, the safety spot improvement option should be advanced as a solution for further development under the NEPA planning process.

APPENDIX

Crash Summary Report

Date: 02/26/2007

County: SMITH

Route: SR080

Spcl Cse: 0-NONE

Cnty Seq: 1

Begin LogMile: 4.98

End LogMile: 5.25

Begin Date: 01/01/2003

End Date: 12/31/2005

Statistics

Fatal Crashes:	0
Total Killed:	0
Incap Injury Crashes:	1
Total Incap Injuries:	0
Other Injury Crashes:	3
Total Other Injuries:	0
Prop Damage Crashes:	5
Total Crashes:	9

Weather Conditions

No Adverse Conditions:	4	Sleet and Fog:	0
Rain:	5	Smog, Smoke:	0
Sleet and Hail:	0	Severe Crosswind:	0
Snow:	0	Other:	0
Foggy:	0	Unknown:	0
Rain and Fog:	0	Blowing Sand, Soil, Dirt, or Snow:	0

Crashes Involving

Pedestrians:	0
Hazardous Cargo:	0
Construction Zones:	0
Fixed Objects:	7
Heavy Trucks:	0
Bicycles:	0

Manner of Collision

Rear End:	0
Head On:	0
Rear-to-Rear:	0
Angle:	0
Sideswipe Same Dir:	0
Sideswipe Opp. Dir:	0
Unknown:	0

Road Conditions

Ice:	0
Snow or Slush:	0
Sand, Mud, Dirt or Oil:	0
Wet:	1
Dry:	0
Other:	0
Unknown:	0

Crash Location

Along Roadway:	9
At Intersection:	0
Railroad Crossing:	0
Bridge:	0
Underpass:	0
Ramp:	0
Private Property:	0
Other:	0

First Harmful Event

Pedestrian:	0
Pedalcycle:	0
Railway Train:	0
Deer (Animal):	0
Other Animal:	0
Motor Vehicle in Transport:	0
Motor Vehicle in Transport in Other Rdway:	0
Parked Motor Vehicle:	0
Other Type Non-Motorist:	0
Fixed Object:	7
Other Object (not fixed):	0
Non Collision:	1

Lighting Conditions

Dawn:	1
Daylight:	5
Dusk:	0
Dark/Lighted:	0
Dark/Not Lighted:	3
Not Indicated:	0



STATE OF TENNESSEE
TENNESSEE DEPARTMENT OF TRANSPORTATION

6601 CENTENNIAL BOULEVARD
NASHVILLE, TENNESSEE 37243-0360

August 22, 2006

PROJECT MEMORANDUM

TO: Dudley Daniel, Transportation Manager 1
Conceptual Planning Office

FROM: *LO* M. Leonard Oliver, Civil Engineering Manager 2
Geotechnical Engineering Section

PROJECT: Project No. 80006-1236-14, PIN 1073700.00
State Route 80 from L.M. 5.0 to L.M. 5.25
Smith County

SUBJECT: Recommendations for Rock Cut

Discussion:

The Geotechnical Engineering Section (GES) was requested to provide recommendations for a rock cut to the right of centerline along State Route 80 between L.M. 5.0 and 5.25. It is the understanding of the GES that this request was made in order to improve the alignment of State Route 80 in this interval.

The current situation on site includes is a rock cut located to the right of centerline that is less than 3 feet from the edge of the paved shoulder and a steep drop on the left side of the roadway leading down to Peyton Creek. This site has been identified as an area with a high potential for rockfall of smaller boulders (generally 1 foot or less). However, because of site distance and lack of catchment any rocks shed from the existing cut will land in the traveled way and may give drivers very short time to react.

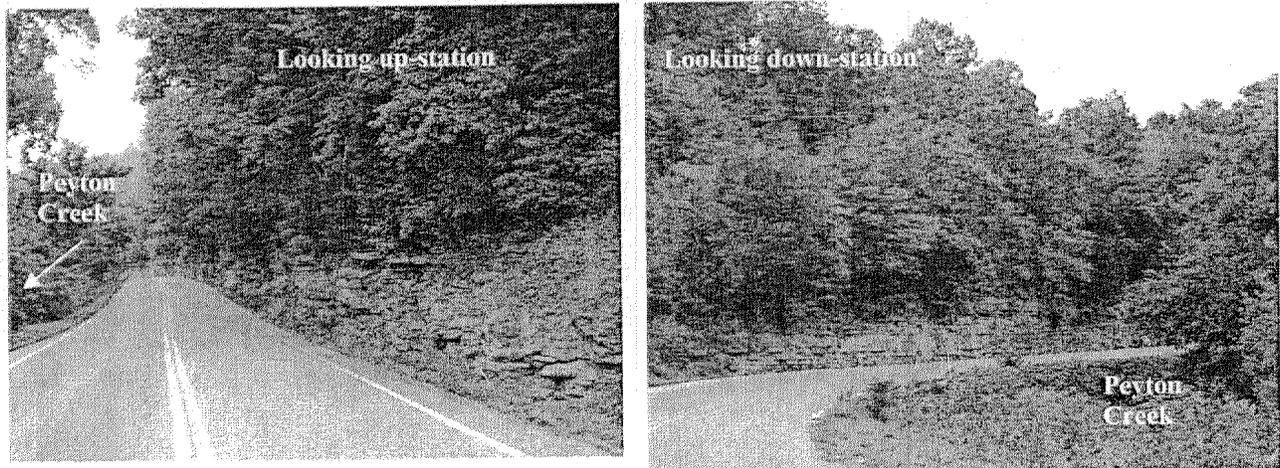


Figure 1: Views of State Route 80 between L.M 5.0 and 5.25

The rock, limestone of the Leipers-Cathys formation, is approximately 15-20 feet in height at its' peak and is part of a larger hillside that continues up from the cut. There is a small, natural bench above this existing rock cut. The site was examined at the surface on August 15, 2006. Published geological maps and a previous rockfall hazard assessment were also reviewed to develop recommendations.

In order to bring the design more into line with current standards, the GES recommends that the rock located to the right of centerline be cut back at least 21 feet from the edge of the paved shoulder. A vertical cut or a 0.25:1 cut may be used on the rock face. A bench should be located at the top of the rock cut and tied back into the remaining hillside on no more than a 2:1 slope above the cut. Depending upon the final location of the rock cut, this bench may or may not be needed due to the natural bench already existent above the current rock cut.

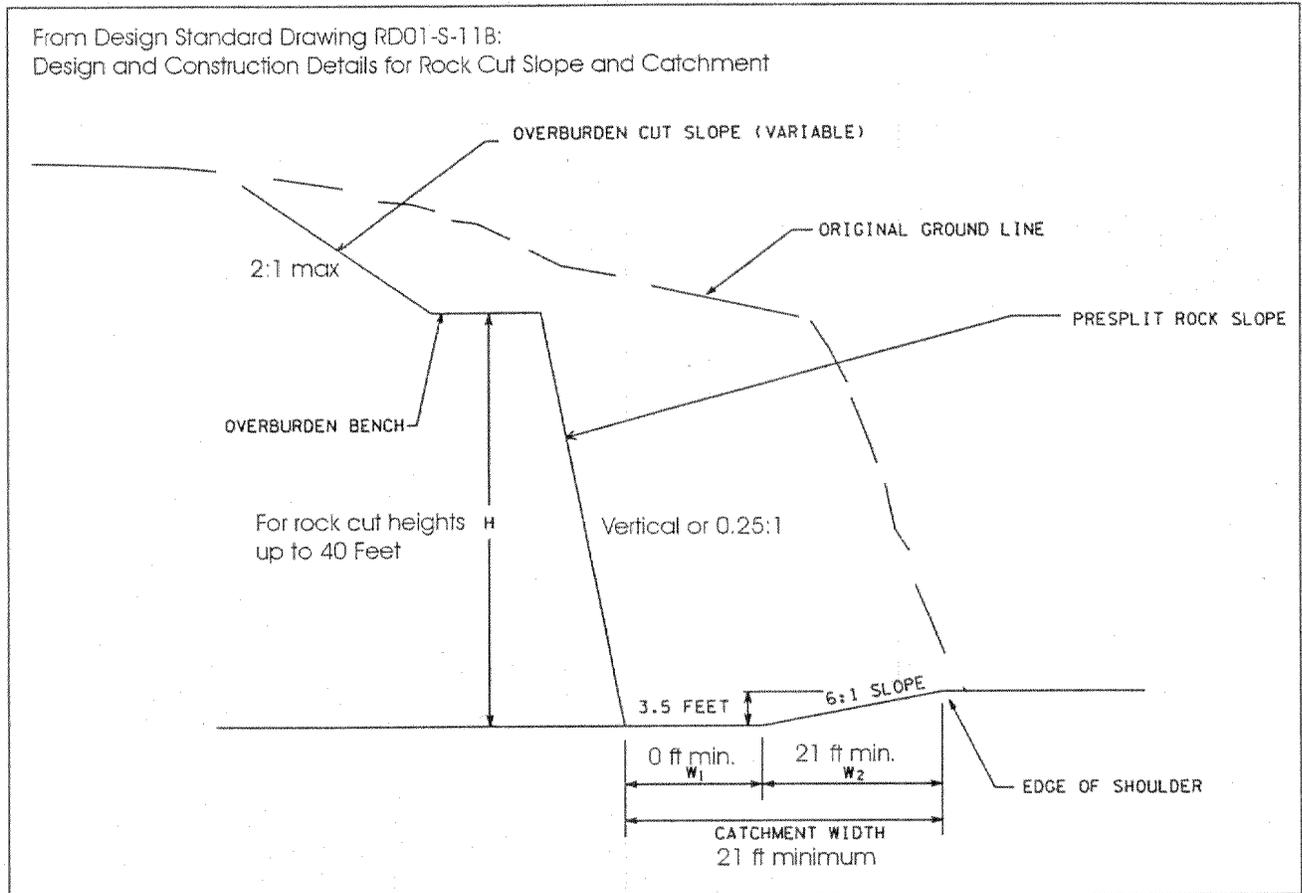


Figure 2: Rock Cut Slope and Catchment Width Details

A vertical cut in the rock, completed with careful construction control should be sufficient to reduce or eliminate rockfall hazard at this location. The main hazard posed by this rock cut is due to its' close proximity to the traveled way and inadequate catchment. If additional width is needed to the left side of centerline, the roadway and catchment ditch may be moved into the hillside more than 21 feet. However, we do not recommend movement of the cut into the hillside more than 40 feet without additional geotechnical exploration.

Mr. Dudley Daniel
Page 4
August 22, 2006

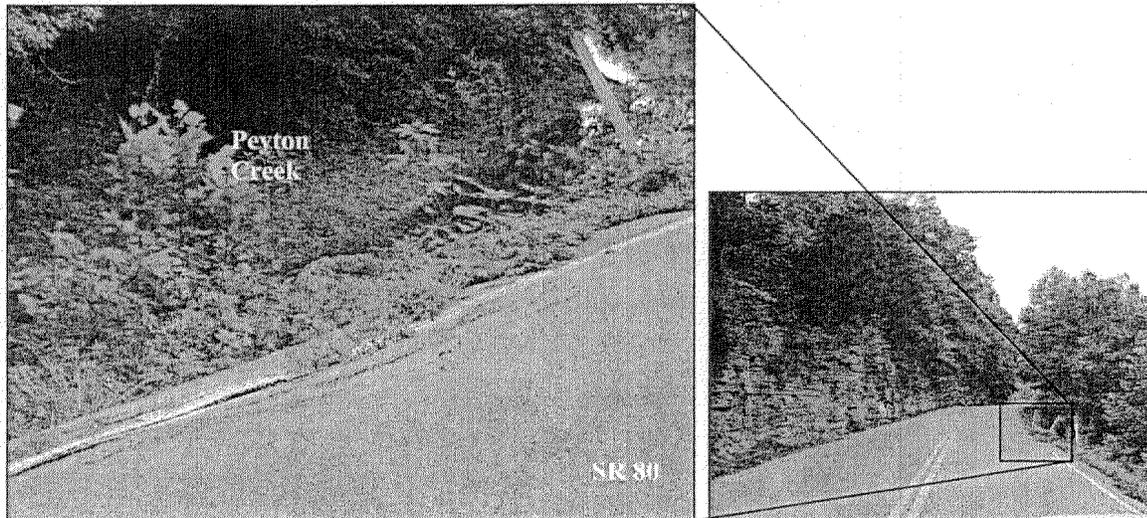


Figure 3: State Route 80 Stability Issue at Edge of Peyton Creek

Moving the current roadway into the hillside and away from the creek will also increase the stability of our roadway in this location. The steep banks of Peyton Creek are near vertical in some locations along this alignment and there are some small slides that do pose a potential safety issue for the traveling public, though they do not as yet threaten the entire roadway.

If there are questions concerning this correspondence, please contact the Geotechnical Engineering Section.

Vanessa C. Bateman, P.G., P.E.
Operations Specialist 3

M. Leonard Oliver, P.E.
Civil Engineering Manager 2

MLO:VCB:LGW

GES File No. 8002506

Index Of Sheets

1	TITLE SHEET
2	TYPICAL SECTION
3-5	PROPOSED LAYOUT

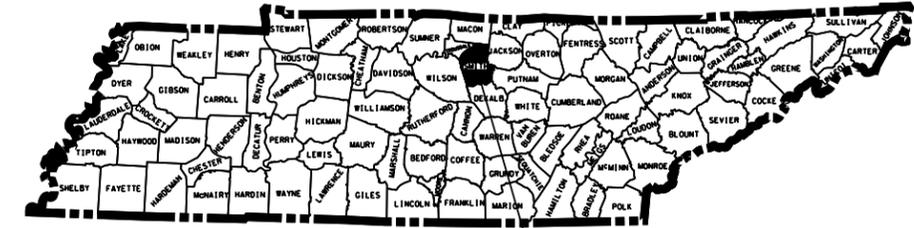
STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION BUREAU OF ENGINEERING

TENN.	YEAR 2006	SHEET NO. 1
FED. AID PROJ. NO.		
STATE PROJ. NO.	80006-1236-14	

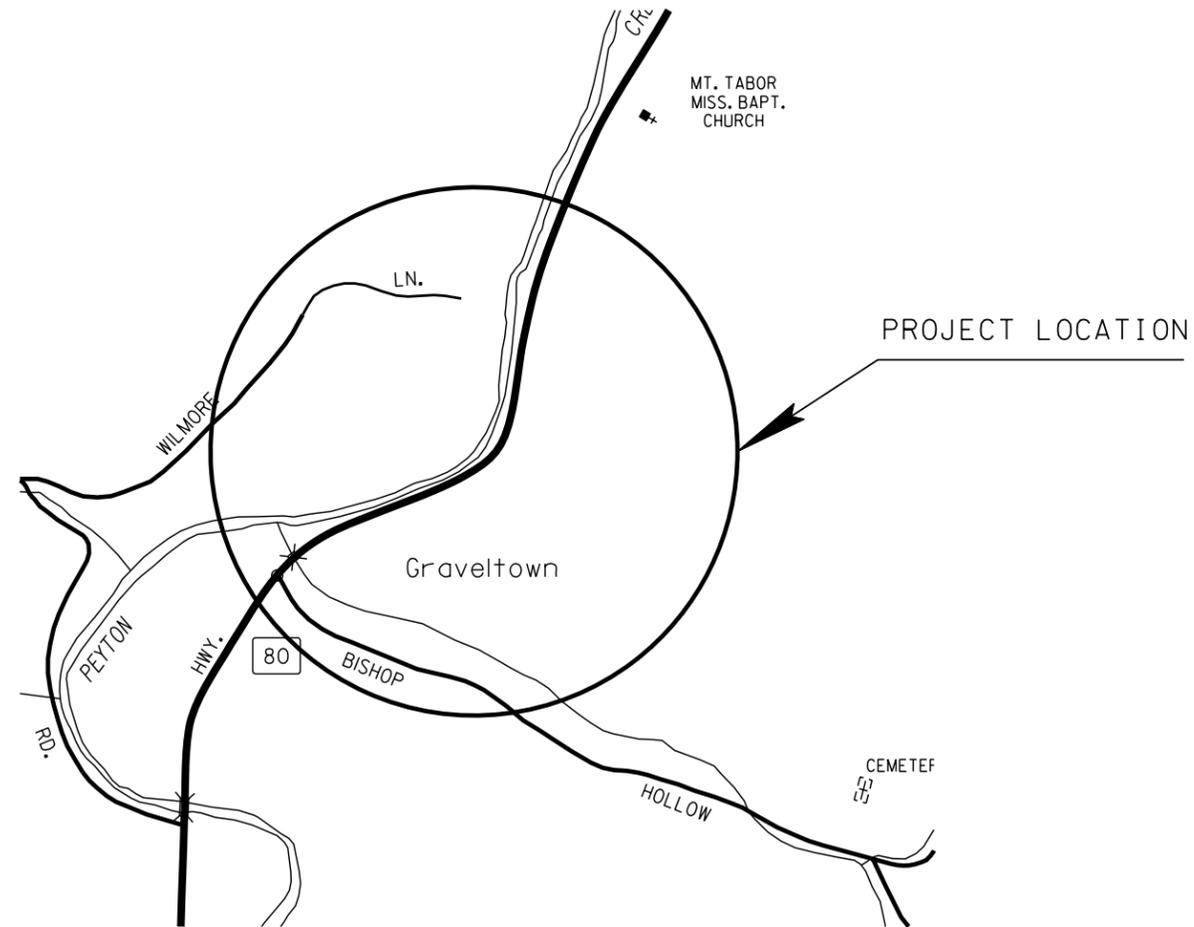
SMITH COUNTY

STATE ROUTE 80
FROM: NEAR BISHOP HOLLOW LANE
TO: SOUTH OF TONY HOLLOW LANE

STATE HIGHWAY NO. 80 F.A.H.S. NO.



PROJECT LOCATION



SPECIAL NOTES

PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED MARCH 1, 2006 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

TDOT TRANSPORTATION MANAGER 1 DUDLEY DANIEL
DESIGNER STEVE HYLTON CHECKED BY _____
P.E. NO. _____
PIN NO. 107370.00

APPROVED: _____
CHIEF ENGINEER

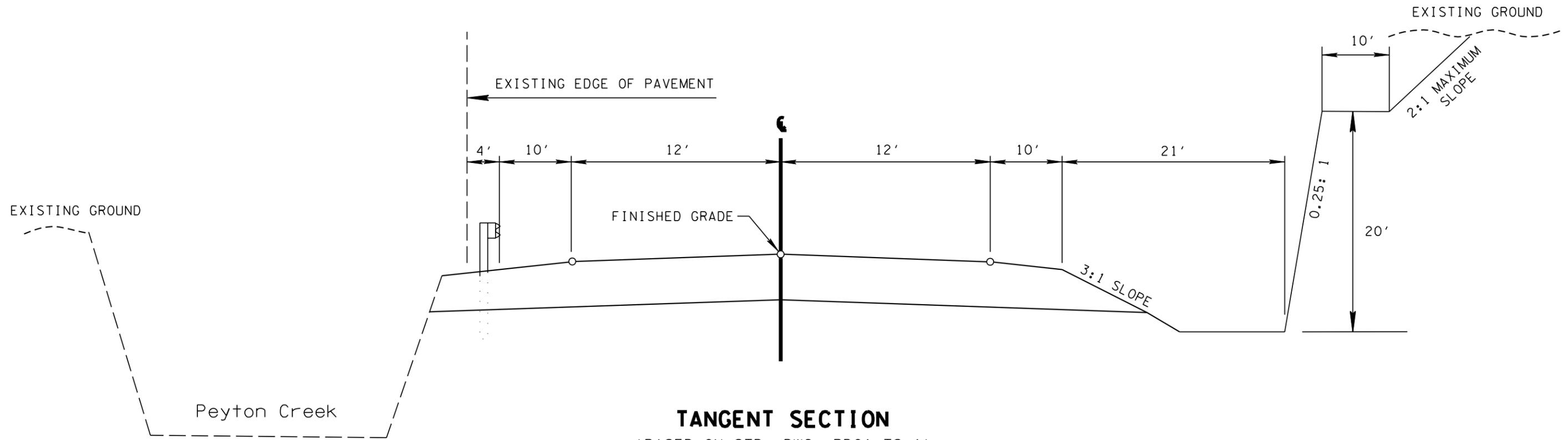
DATE: _____

APPROVED: _____
COMMISSIONER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED: _____
DIVISION ADMINISTRATOR DATE

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2006	80006-1236-14	2



TANGENT SECTION
 (BASED ON STD. DWG. RD01-TS-1)

NOT TO SCALE

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 SMITH COUNTY
 STATE ROUTE 80

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2006	80006-1236-14	3



CURVE C02
 PI 108+75.19
 N 734,697.4107
 E 1,979,325.6055
 Δ 36° 57' 22" (RT)
 D 5° 59' 58"
 R 955.00
 L 615.98
 T 319.13
 SE 0.000 FT/FT
 DESIGN SPEED 00 MPH
 TRANS. LENGTH 000

SEE SHEET NO. 4

MATCH LINE

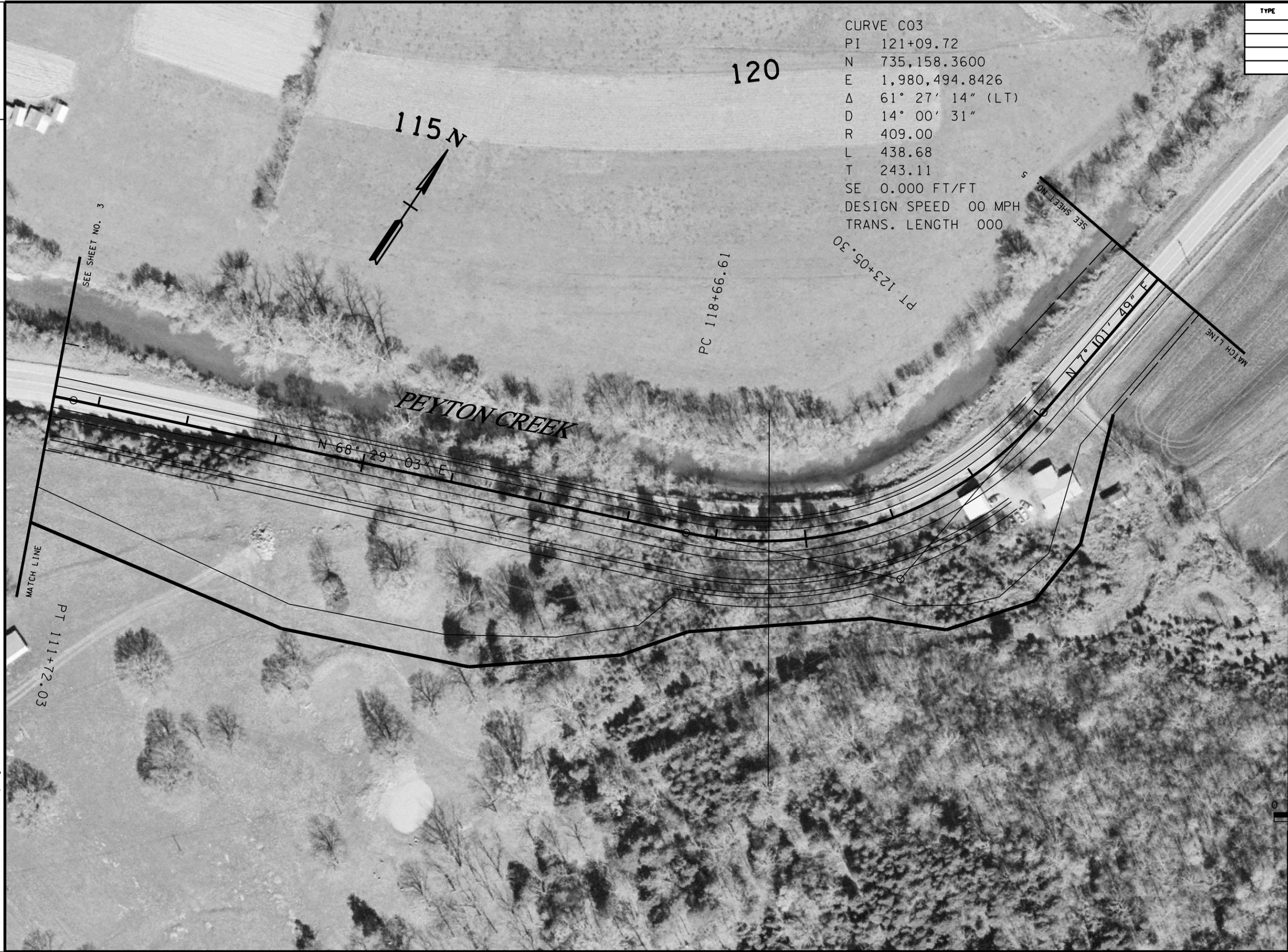


STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION

SMITH COUNTY
 STATE ROUTE 80

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2006	80006-1236-14	4

CURVE C03
 PI 121+09.72
 N 735,158.3600
 E 1,980,494.8426
 Δ 61° 27' 14" (LT)
 D 14° 00' 31"
 R 409.00
 L 438.68
 T 243.11
 SE 0.000 FT/FT
 DESIGN SPEED 00 MPH
 TRANS. LENGTH 000



TYPE	YEAR	PROJECT NO.	SHEET NO.
	2006	80006-1236-14	5



CURVE C04
 PI 127+49.53
 N 735,840.5338
 E 1,980,578.9677
 Δ 7° 20' 13" (RT)
 D 2° 59' 59"
 R 1,910.00
 L 244.58
 T 122.46
 SE 0.000 FT/FT
 DESIGN SPEED 00 MPH
 TRANS. LENGTH 000



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