

Attachment A

U.S. Department of Transportation Federal Highway Administration and Tennessee Department of Transportation Environmental Assessment, State Route 29 (U.S. 27) from State Route 61 East of Harriman to State Route 62 Roan/Morgan Counties, January 16, 2003.



Environmental Assessment



STATE ROUTE 29 (U.S. 27)
FROM State Route 61 East of Harriman
TO State Route 62
Roane/Morgan Counties

Submitted Pursuant to 42 USC 4332 (2) (c)

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

AND

TENNESSEE DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL PLANNING AND PERMITS DIVISION

Cooperating Agencies
Tennessee Valley Authority
U.S. Army Corps of Engineers

TD
194.6
T2 829
R73

Boyle
0

STATE ROUTE 29 (U.S. 27)
FROM State Route 61 East of Harriman
TO State Route 62
Roane/Morgan Counties



ENVIRONMENTAL ASSESSMENT

Submitted Pursuant to 42 USC 4332(2)(c) by the

U.S. Department of Transportation
Federal Highway Administration

and

Tennessee Department of Transportation
Office of Environmental Planning and Permits

Cooperating Agencies

Tennessee Valley Authority
U.S. Army Corps of Engineers

Jan 16 2003

Date of Approval

Mark Dora

for FHWA Division Administrator

The following persons may be contacted for additional information concerning this document:

Mr. Gary Corino
Acting Division Administrator
Federal Highway Administration
640 Grassmere Park, Suite 112
Nashville, TN 37211
(615) 781-5770

Mr. Charles E. Bush
Transportation Manager II
TN Department of Transportation
Environmental Planning and Permits
Division
Suite 900, James K. Polk Building
505 Deaderick Street
Nashville, TN 37243-0334
(615) 741-3653

TABLE OF CONTENTS

<u>ITEM</u>	<u>PAGE</u>
Summary	i
Chapter I - Purpose and Need for Action	1
A. Traffic	1
B. Capacity	1
C. Roadway Deficiencies	4
D. Safety	4
E. Conclusion	4
Chapter II - Alternatives Including the Proposed Action ...	5
A. The "No-Build" Alternative	5
B. The "Build" Alternatives (A&B)	5
Chapter III - Environmental Consequences	10
A. Land Use Impacts	10
B. Farmland Impacts	10
C. Social Impacts	11
1. Environmental Justice	11
D. Relocation Impacts	12
E. Economic Impacts	14
F. Air Quality Evaluation	15
G. Noise Impacts Evaluation	15
H. Ecological Impacts	15
1. Water Quality Impacts.....	15
2. Wetland Impacts.....	16
3. Wildlife Impacts.....	20
4. Impact To Other Unique or Sensitive Ecological Resource.....	20
5. Endangered & Threatened Species	20
6. Permits	21
I. Floodplain Impacts	21
1. Beneficial Floodplain Values.....	21
2. Hydrological Impacts	21

TABLE OF CONTENTS (Continued)

J. Cultural Impacts 24
 1. Archaeological Impacts 24
 2. Architectural/Historical Impacts 24
K. Visual Impacts 24
L. Energy Impacts 25
M. Construction Impacts 25
N. Geological Impacts 26
O. Hazardous Materials Impacts 27
P. Pedestrians and Bicyclists Impact 27

Chapter IV - Coordination and Comments 28
 A. Initial Coordination 28
 B. Initial Coordination Mailing List 28
 C. Summary and Disposition of Comments 30
 D. Cooperating Agencies 35

TABLES

Table 1 - Project Data Summary Sheet 9
Table 2 - Wetland Impact Summary 17

FIGURES

Figure 1 - Project Vicinity Map iii
Figure 2 - Project Location Map 2
Figure 3 - Proposed Typical Cross-Sections 6
Figure 4 - Floodplain Map 23

APPENDICES

Appendix A - Census Data for Morgan and Roane Counties
Appendix B - Initial Coordination Reply Letters
Appendix C - Cultural Correspondence
Appendix D - Cooperating Agency Letters
Appendix E - Air and Noise Assessment

SUMMARY

The Tennessee Department of Transportation (TDOT) is proposing an improvement of State Route 29 in Roane and Morgan Counties from State Route 61 east of Harriman to State Route 62 (See Project Location Map).

The existing facility is substandard. It suffers from poor horizontal and vertical alignment. The existing route also has operational and structural problems. A "No-Build" and two "Build" Alternatives are being considered. The Department proposes to upgrade the existing road to a four lane roadway. Depending on which Build Alternative is selected, the road will be improved to four traffic lanes along its existing alignment (Alternative A) or partially along its existing alignment and partially on a new location (Alternative B).

The primary beneficial aspects of the project are:

- (1) Providing additional capacity to handle increased traffic volumes. (The reduction of congestion from increased traffic volumes.)
- (2) The improved movement of goods and emergency services.
- (3) Better traffic flow to and from commercial areas.
- (4) Correct geometric deficiencies
- (5) Improve safety by reducing the accident rate.
- (6) Providing a four-lane facility from a county seat (Wartburg) to the nearest interstate (I-40).

The primary adverse effects are:

- (1) Temporary construction impacts such as fugitive dust, open burning, equipment noise, motorist inconveniences and temporary stream siltation.
- (2) Reduction of wildlife habitat.
- (3) Loss of land for right-of-way.

- (4) Family and business displacements.
- (5) Wetland losses.

There will be a Section 404 permit required from the U.S. Army Corps of Engineers.

A section 26a approval will be needed from the Tennessee Valley Authority for the bridges or culverts associated with crossings of Little Emory River, Bitter Creek, Crooked Fork, and other tributaries, depending on the final design.

PROJECT VICINITY MAP

For

State Route 29 (US-27)
From State Route 61 East of Harriman
To State Route 62
Roane and Morgan Counties

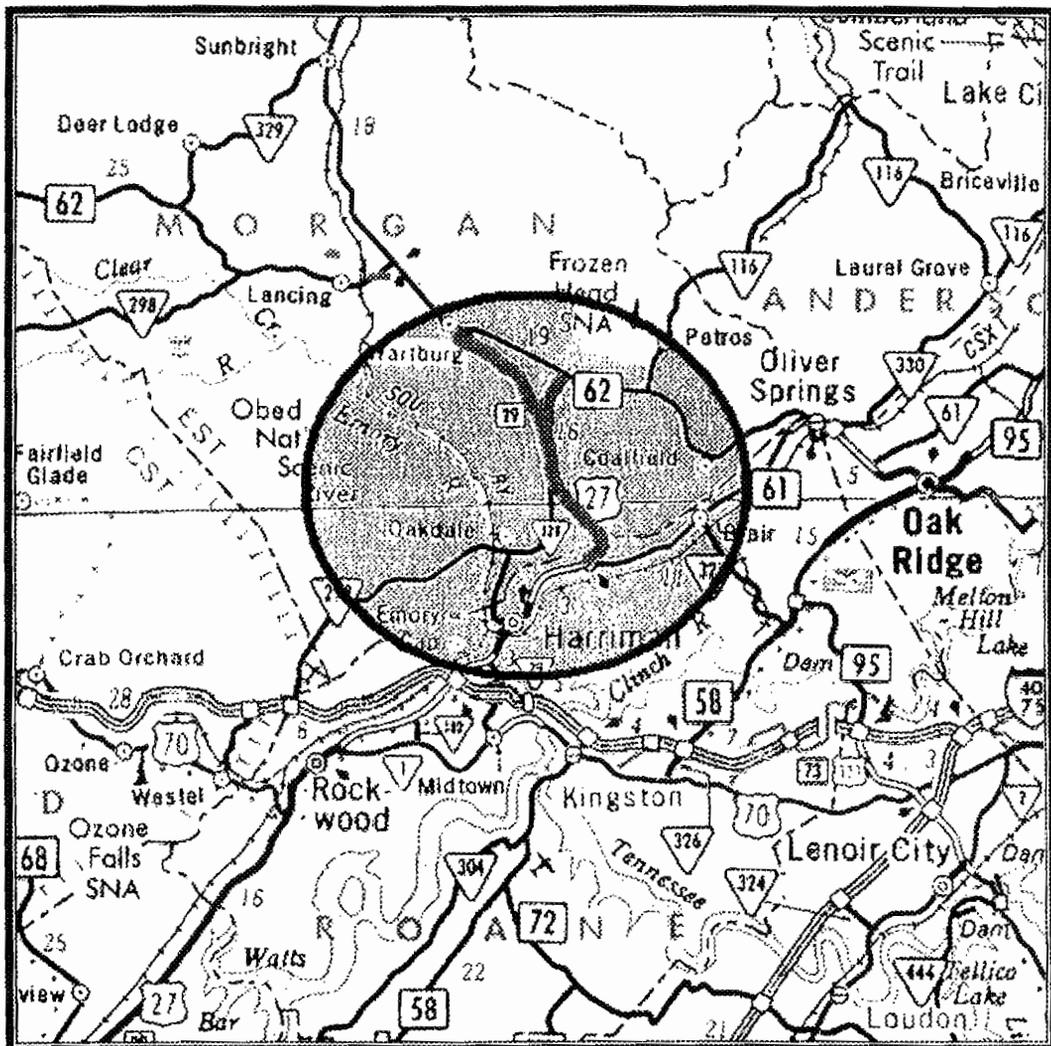


FIGURE 1

CHAPTER I

PURPOSE AND NEED FOR ACTION

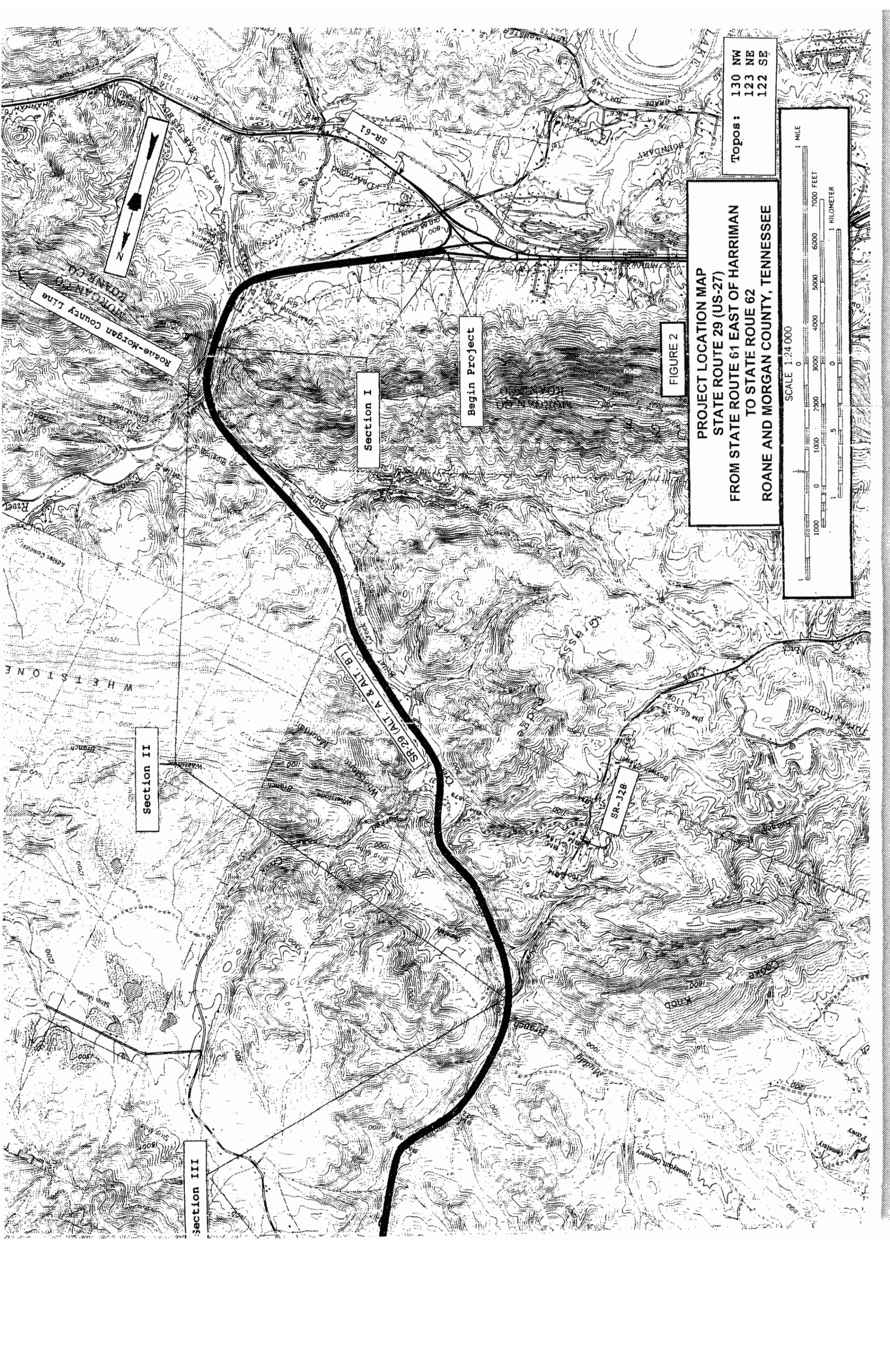
This portion of State Route 29 has a number of deficiencies in capacity, geometrics and safety. The purpose of this proposed project is to improve the route's level of service. The project will also correct geometric deficiencies including the horizontal and vertical alignments, number of lanes, shoulder width and safety concerns. This improvement will lead to an increased ease of travel and the more efficient movement of goods and services.

A. TRAFFIC

Traffic studies examined State Route 29 from State Route 61 near Harriman to State Route 62. For comparison purposes analysis of the existing highway, with no improvements, indicate that by the year 2004 the Average Daily Traffic (ADT) will be 4,650 for Sections I and II, 4,800 ADT for Section III, and 6,150 ADT for Section IV. Future traffic (2024) along this route is projected to be 7,425 ADT for Sections I&II, 7,700 ADT for Section III, and 9,833 ADT for Section IV.

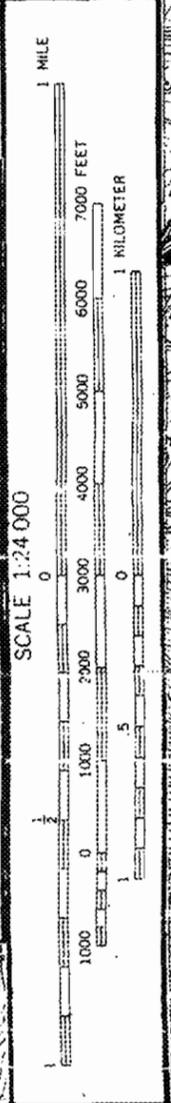
B. Capacity

Levels of Service (LOS) for State Route 29 for the years 2004 and 2024, with and without the proposed improvement, are noted on page 3. The LOS table shows a LOS of D and E for the road without improvements for the future, indicating approaching or unstable operating conditions. This shows a need to improve capacity on this route, and that this project will provide the capacity needed for an acceptable LOS for Sections I, II and III. This will also be true if Section IV, Alternative A is constructed. If Section IV, Alternative B is constructed the existing portion of State Route 29, from Wartburg to Section III, will remain at LOS E.



Topos: 130 NW
123 NE
122 SE

FIGURE 2
PROJECT LOCATION MAP
STATE ROUTE 29 (US-27)
FROM STATE ROUTE 61 EAST OF HARRIMAN
TO STATE ROUTE 62
ROANE AND MORGAN COUNTY, TENNESSEE



Section I

Begin Project

FIGURE 2

Section II

Section III

SR-29 (ALT. 4 & ALT. B)

SR-62

SR-61

Roane-Morgan County Line



PROJECT LEVEL OF SERVICE

SECTION	LOS - 2004 Existing Traffic on Existing Road (No-Build)	LOS - 2004 Existing Traffic on State Route 29 (Build Project)	LOS - 2024 Projected Traffic on Existing Road (No-Build)	LOS - 2024 Projected Traffic on State Route 29 (Build Project)
Sections I & II	C	A	D	A
Section III	E	A	E	A
Section IV Alternative A (Existing)	E		E	If (Alt A) is built LOS A If (Alt B) is built LOS E
Section IV Alternative (B)				A

BASIC HIGHWAY SEGEMENT LEVEL OF SERVICE

Levels of Service (LOS) are defined as follows:

- LOS A - continuous free flow operations
- LOS B - reasonably free flow operations
- LOS C - stable operation approaching a range in which
small increases in volume will cause substantial
deterioration in service
- LOS D - borders on unstable flow
- LOS E - extremely unstable operation
- LOS F - forced or breakdown flow

C. ROADWAY DEFICIENCIES

The existing roadway is deficient in horizontal and vertical alignment, structural width, capacity and number of lanes. The existing vertical and horizontal alignments in Section I seem satisfactory for the design speed of 60 MPH. If some locations in Section I are found that the design speed cannot be met a design exception is recommended. Section II is mountainous terrain and most of the existing vertical and horizontal alignments in this section are satisfactory for the 50 MPH design speed. A 50 MPH design speed is also recommended for Section III. However, this section's existing vertical and horizontal alignments are deficient and will require upgrading. Section IV, Alternative A, on existing alignment, has vertical deficiencies. The design for this section has curbs and gutters with a design speed of 50 MPH. Alternative B, on new alignment, would have a design speed of 60 MPH.

D. SAFETY

Section I and the beginning portion of Section II have an accident rate of 1.83, which is above the statewide average for two lane rural roadways of 1.77. Section IV's accident rate is 2.44 which is also above the statewide average.

E. CONCLUSION

Based on this information, the Tennessee Department of Transportation has determined there is a need for the proposed project. This project will serve as a necessary corridor improvement and will lessen traffic congestion on existing State Route 29. The proposal has logical termini, is of sufficient length to address environmental matters on a broad scope, had independent utility, reduce the accident rate and will not restrict consideration of alternatives for other reasonable foreseeable transportation improvements. The completion of this project will fulfill the Tennessee legislative initiative to provide the county seat (Wartburg) with a four-lane highway to the nearest interstate highway (I-40).

CHAPTER II
ALTERNATIVES INCLUDING THE PROPOSED ACTION

A. THE "NO-BUILD" ALTERNATIVE

The "no-build" alternative is considered to mean that no improvement to the existing facility will be made other than routine maintenance activities.

The principal advantages of this alternative are that noise and construction impacts associated with the improvement would not occur. No temporary disruption of present travel patterns would result. There will be no displacements of residents or businesses, nor any trees or yards taken in front of area residences.

The disadvantages of the "no-build" alternative are that the route's horizontal and vertical deficiencies will not be corrected; the Level of Service will continue to deteriorate; the accident rate will not be reduced; and the existing roadway will not handle projected future traffic.

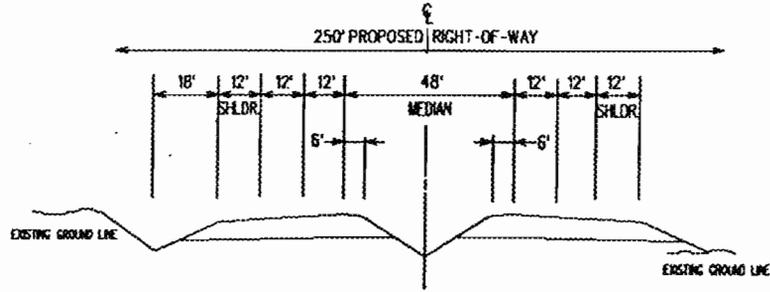
B. THE "BUILD" ALTERNATIVES (A&B)

The proposed alternatives will begin at the present interchange of State Route 29 and State Route 61 east of Harriman and end at State Route 62. The total length for the proposed project is 12.3± miles for Alternative A and 9.7± miles for Alternative B.

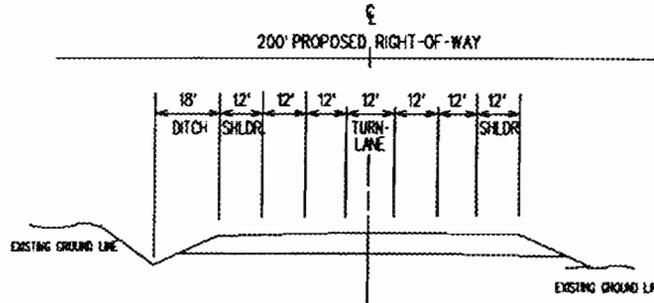
This project consists of widening the existing facility to four or five-lanes, depending on the alternative. Due to the number of different proposed typical cross sections it will be helpful to refer to the project location map while reviewing the description of each section. Both Alternatives A and B have the same alignment and the same design for Sections I through III. Section IV has two alternative alignments with Alternative A 5.5± miles in length and Alternative B 2.9± miles in length.

FIGURE 3

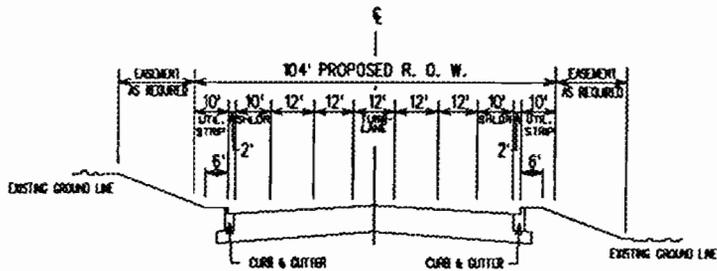
TYPICAL SECTIONS



PROPOSED TYPICAL SECTION 1
STATE ROUTE 29 (US-27)
1. FROM BEGINNING OF PROJECT TO 0.7 MILE SOUTHEAST OF STATE ROUTE 328 (OLD HWY-29)
2. FROM 0.5 MILE SOUTHEAST OF WESTMINSTER DRIVE TO END OF PROJECT



PROPOSED TYPICAL SECTION 2
STATE ROUTE 29 (US-27)
FROM 0.7 MILE SOUTHEAST OF STATE ROUTE 328 (OLD HWY-29)
TO 0.5 MILE SOUTHEAST OF WESTMINSTER DRIVE



PROPOSED TYPICAL SECTION 3
STATE ROUTE 29 (US-27)
FROM NEAR WESTMINSTER TO STATE ROUTE 62

FIGURE 3

Section I (A&B) - Section I (Length 1.3± miles) begins at present interchange of State Routes 29 and 61 and ends at the Roane-Morgan County Line. The proposed typical cross section provides 4 @ 12' traffic lanes, a 48' median, 2 @ 12' shoulders and a minimum right-of-way width of 250'. (See Figure 3, Typical Section 1.) The widening is proposed for the right (east) side of the existing route. The proposed design speed is 60 MPH.

Section II (A&B) - Section II (Length 3.5± miles) begins at the Roane-Morgan County Line and ends at State Route 328. From the beginning termini to 0.7± mile south of State Route 328 the proposed typical cross section will be the same as proposed for Section I. (See Figure 3, Typical Section 1.) From 0.7± mile south of State Route 328 to State Route 328 the proposed typical cross section provides 4 @ 12' traffic lanes, a 12' center turn lane, 2 @ 12' shoulders (10' stabilized) and a minimum right-of-way width of 200'. A 50 MPH design speed is proposed for this typical cross section due to mountainous terrain. (See Figure 3, Typical Section 2.) The widening is proposed on the right (east) side of the existing route to minimize involvement with Bitter Creek.

Section III (A&B) - Section III (Length 2.0± miles) begins at State Route 328 and ends 0.5 ± mile southeast of Westminster Road. The proposed typical cross section is the same as proposed for the end of Section II. (See Figure 3, Typical Section 2.) Most of the existing vertical and horizontal alignments are deficient and will require upgrading. The proposed widening will vary from side to side of the existing route beginning on the left (west) side and crossing over to the right (east) side. This location will minimize involvement with Bitter Creek.

Section IV - Section IV has two alternatives (A & B) that are under consideration:

(Alternative A) Alternative A (Length 5.5 miles) begins 0.5 ± mile southeast of Westminster Road and ends at State Route 62 near Wartburg. The alignment of this section will follow the existing route to the end. The proposed typical cross section from 0.5± mile south of Westminster Road to Westminster Road consists of 4 @ 12' traffic lanes, a 12' center turn lane, 2 @ 12' shoulders (10' stabilized) and a minimum right-of-way width of 200'. A 60 MPH design speed is proposed for this rural section. (See Figure 3, Typical Section 2.) The proposed typical cross section from Westminster Road to State Route 62 consists of 4 @ 12' traffic lanes, a 12' center turn lane, curb and gutters with a minimum right-of-way width of 104'. This urban section has a 50 MPH design speed. (See Figure 3, Typical Section 3.)

(Alternative B) Alternative B (Length 2.9 miles) begins 0.5± mile south of Westminster Road and ends at State Route 62, east of Wartburg. The alignment of this section will be on new location and is the same as the typical section for the beginning of the project. The proposed typical cross section for this new section provides 4 @ 12' traffic lanes, a 48' median, 2 @ 12' shoulders (10' stabilized) and a minimum right-of-way width of 250'. A 60 MPH design speed is proposed. (See Figure 3, Typical Section 1) A jug-handled interchange is proposed for the intersection with State Route 62. This alternative would not improve the deficiencies along the existing facility (Section IV, Alternative A alignment) other than for routine maintenance activities.

Any section of existing State Route 29 that is not utilized in making the improvement would be removed from the State Highway System and turned over to the appropriate local government agency for future maintenance responsibility.

TABLE 1

PROJECT DATA SUMMARY SHEET

<u>ITEM</u>	<u>ALT.A</u>	<u>ALT.B</u>
Functional Classification	Principal Arterial	Principal Arterial
Approximate Length	12.3 miles	9.7 miles
Cross-Section	4 @ 12'/120'/250' 4 @ 12'/84'/200' 4 @ 12'/80'/104'	4 @ 12'/120'/250'
Present ADT (2004)	5,430 Vehicles	3,790 Vehicles
Future ADT (2024)	8,680 Vehicles	6,010 Vehicles
Displaced Residences	34	30
Displaced Businesses	13	3
Displaced Non-Profit Organization	0	1
Approximate R-O-W Required	136.60 acres	208.00 acres
Cost Estimates:		
Construction Cost	\$60,030,000	\$50,795,000
Preliminary Engineering Cost	\$3,635,000	\$2,460,000
Right-Of-Way Cost	\$6,935,900	\$7,737,800
Estimated Utility Cost	\$3,439,000	\$907,500
TOTAL COSTS	\$74,039,900	\$61,900,300

CHAPTER III

ENVIRONMENTAL CONSEQUENCES

The purpose of this chapter is to discuss the probable social, economic, and environmental effects of the project. Anticipated effects including both primary and secondary impacts shall be discussed. Primary impacts are those which will result directly from construction and use of the highway. Impacts, which may be caused by changes in traffic patterns and accessibility, are termed secondary.

A. LAND USE IMPACTS

The proposed project will convert some residential, business, and agricultural land to highway right-of-way. However, in the area where the project is on a new location, new commercial and residential development may occur. Some other changes in land use may occur due to the construction of this proposed project. There are no local land use plans available for this region, which may be used as a guide for future growth.

B. FARMLAND IMPACTS

The construction of either Alternative A or B will convert some farmland into highway right-of-way. The project will also take a small portion of wooded areas, but this acquisition will have a minimal effect on the production of lumber and firewood. In accordance with the Farmland Protection Policy Act of 1981, (FPPA) TDOT and U.S. Department of Agriculture-Natural Resource Conservation Service completed the Farmland Conversion Impact Rating Form. The rating score was 131 for Alternative A and 144 for Alternative B. Since the ratings are below the maximum 160 point criteria that requires the consideration of other alternatives, the project has been found to be compliant with the FPPA of 1981. (See Appendix B for the Farmland Impact Rating Form).

C. SOCIAL IMPACTS

The proposed project will improve traffic service in the study area by providing a better level of service, improving safety, and correcting road deficiencies. The project will be beneficial to travelers and area accessibility. The project will aid accessibility to school districts, recreation areas, churches, businesses, and police and fire departments.

The construction of the project will not result in changes to neighborhoods or community cohesion. The project will not split neighborhoods or isolate a portion of a neighborhood or an ethnic group. This project will not separate residences from community facilities. However, there will be residential and business displacements as a result of the proposed improvement. (See Section D). Responses from officials in both Roane and Morgan Counties and from business checks indicate that there were no minorities employed that would be displaced from their work by this project.

1. Environmental Justice

The proposed action will not disproportionately affect low-income or minority populations. This project is consistent with Executive Order 12988, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. There are no known sensitive social groups such as handicapped, low income, non-drivers, transit-dependent or minorities to be adversely impacted by the project. (See Appendix A for Census Data).

This document has been sent to TDOT's Civil Rights Staff for review in accordance with Title VI of the Civil Rights Act of 1964. The Department will comply with Title VI to ensure that "No person shall be, on the grounds of race, color or national origin, excluded from participation in, denied the benefits of, or subjected to discrimination under any program or activity receiving Federal assistance". The Department notifies the public of proposed highway projects and the availability of environmental documents.

Notices of public hearings and the availability of environmental documents for public inspection are published in local newspapers.

D. RELOCATION IMPACTS

The proposed improvement may require 34 residential displacements for Alternative A and 30 residential displacements for Alternative B. A field survey revealed that the potential displacees are Caucasian and their incomes range from \$15,000 to \$50,000. These displaced persons appear to range from young single people to families with children to retired people. The relocatees are concentrated in Section IV.

There is one mobile home in Section I which may be relocated. In Section II there are 4 residences which appear to have average values from \$50,000 to \$60,000 and one mobile home which may be moved to a similar location. In Section III there are 2 mobile homes which may be relocated to similar sites. In Section IV, Alternative A, there is an estimated 26 residential relocations of which 16 are residences, 8 are mobile homes, and 2 are apartments. The residences appear to range in value from \$30,000 to \$70,000. The mobile homes have an estimated value of \$15,000. The 2 apartments appear to rent for about \$200.00 per month. All of the structures can be replaced in the market. In Section IV, Alternative B, there is an estimated 22 relocations of which 18 are single family units and 4 are mobile homes. The residences appear to range in value from \$10,000 to \$200,000 and the mobile homes have an estimated value of \$15,000 each. All of the structures can be replaced in the market.

The project will displace 13 businesses for Alternative A versus 3 businesses and one non-profit organization displacement for Alternative B. There are no business displacements in Sections I and III. Section II has 2 possible business relocations, a thrift house and a bar, which have an estimated 2 to 3 employees. Section IV-A appears to displace 11 businesses. The displaced businesses are a market/gas station, a clothing store, a food market, a shoe shop, three service stations, an undefined store, a tool and die shop, and a tractor sales and repair facility. These are varied

business operations that appear to employ 2 to 5 employees. The C and C Tool and Die building appears to house a small manufacturing business with as many as 15 employees. If they are acquired, they could probably relocate in the area. The Chilton Tractor Company is a fairly large tractor sales and repair facility. It appears there could be as many as 10 to 15 employees. They could probably relocate in the local area due to their clientele. The undefined store and two of the service stations appear abandoned.

Alternative B may displace Meadowview Baptist Church at its terminus at State Route 62. The church will be left with no ingress and egress and will need to relocate. The church should be able to locate adequate replacement land on which to rebuild.

A Conceptual Stage Relocation Plan (CSRP) has been prepared for this project. The CSRP includes a Residential and Commercial Availability Survey that indicates there are ample replacement sites in the project area available to the displacees. The CSRP noted that all dislocatees are in Morgan County except one. The survey estimated there were 65 residences for sale, 6 for rent, 3 multi-family units for rent, 20 lots for sale, 5 mobile homes for rent, and 4 mobile home sites for rent.

The report indicated that there are 12 houses listed for sale by brokers in Morgan County. The average price of this housing is \$135,000. There are 12 houses shown on the market as for sale by the owner. The average price of these houses range from \$70,000 to \$75,000. The majority of the housing listed is located in Harriman and there are about 75 listed. The average price of 50 of these range from \$30,000 to \$70,000. Rental units range from \$175.00 to \$600.00 per month. There is a program called Housing of Last Resort that may ensure that adequate housing will be available in all needed price ranges.

There are 7 improved commercial property sites and 6 vacant land sites available for business relocations. The CSRP stated that as the project develops adequate housing would be available when the need arises.

The CSRP is only an estimate and may change during later stages of project development. More precise information concerning relocations will be available after the project is surveyed and designed.

In order to minimize the unavoidable effects of right-of-way acquisition and displacement of people, the Tennessee Department of Transportation will carry out a right-of-way and relocation program in accordance with the Tennessee Uniform Relocation Assistance Act of 1972 and the Uniform Relocation Assistance and Real Property Acquisition Act of 1970 (Public Law 91-646).

No occupant of a residential property will be required to move until decent, safe, and sanitary replacement housing is made available. "Made Available" means that the affected person has either by himself obtained and has the right of possession of replacement housing or that the Tennessee Department of Transportation has offered the relocatee decent, safe and sanitary housing which is within their financial means and available for immediate occupancy.

Financial assistance is available to the eligible owner displacee to (a) compensate the displacee for the cost of moving from a home acquired for a highway project, (b) make up the difference, if any, between the amount paid for the State acquired dwelling and cost of an available dwelling on the private market, (c) provide reimbursements of expenses such as legal fees and other closing costs incurred in buying a replacement dwelling and in selling the displacee's property to the Tennessee Department of Transportation, (d) make payment for any increased interest cost resulting from having to acquire another mortgage at a higher interest rate. These payments are in addition to the fair market price paid to owners for their property.

E. ECONOMIC IMPACTS

The proposed project will remove land and improvements from the local tax base. This is anticipated to be a short-term impact

since residential and business displacements are expected to relocate in the local area.

The effects of the proposed roadway should have positive economic effects on the industrial base for Morgan County. Widening this portion of State Route 29 will provide easier access for commercial vehicles and therefore, may accelerate the opportunity for economic growth in the project area. It is also anticipated that the road improvements will increase the value of taxable property in the study area. The improved traffic service along the project route will increase the value of the land remaining along the route and encourage new development in designated residential, commercial, and industrial growth areas.

F. AIR QUALITY EVALUATION

Based upon the analyses of highway projects with similar meteorological conditions and traffic volumes, the carbon monoxide levels of the subject project will be below the National Ambient Air Quality Standard. This project will have no substantial impact on the air quality of the area.

G. NOISE IMPACTS EVALUATION

The noise analysis shows that several of the sensitive receptors along the subject project will be exposed to noise levels approaching or exceeding the noise abatement criteria. However, with the uncontrolled access to the project, it is unlikely that any form of abatement will be incorporated into the design of this project. The entire air and noise analysis is in Appendix E.

H. ECOLOGICAL IMPACTS

1. Water Quality Impacts

This project will not adversely impact any stream crossings. The streams in the area are reasonably clean and healthy, despite the presence of human intrusions in the watersheds. This project could impact Little Emory River, Bitter Creek, Forked Creek, Muddy Branch, Crooked Fork, Flat Creek, Mud Creek, and other unnamed

tributaries. Box culverts will likely be used at stream crossings. Appropriate mitigation measures will be utilized where the project crosses streams.

Erosion occurs when bank vegetation is removed, which holds substrates and prevents scour during flood events. The Federal Highway Administration's Best Management Practices for Erosion and Sediment Control (June 1995) and the Tennessee Department of Transportation's Standard Specifications for Road and Bridge Construction will be employed in the design and construction of the project, which will control erosion and mitigate impacts to the aquatic environment.

Another water quality impact occurs with the removal of tree canopy along aquatic systems. The most obvious is the loss of habitat along the bank. Trees provide habitat not only for terrestrial organisms, but also for aquatic species if the roots are near the water. A food source is available for aquatic life due to the insect life, which may fall into the water from overhanging vegetation.

Loss of canopy translates to an increase in water temperature and greater evaporation because of the loss of shade. These two factors include greater stress upon aquatic organisms and habitats.

2. Wetland Impacts

Fourteen wetlands were identified in the project area on the National Wetlands Inventory Map. There are no wetlands in Section I, five wetlands in Section II, one in Section III, three in Section IV, Alternative A, and five in Section IV, Alternative B. Wetland habitat accounted for a total of 3.9 acres in Section II, 1.55 acres in Section III, 2.93 acres in Section IV, Alternative A, and 5.19 acres in Section IV, Alternative B. Functions performed by the wetlands include flood-flow alteration, sediment retention and stabilization, and wildlife habitat. Nearly all wetlands showed some evidence of habitat degradation from local land use activities (e.g. farming or surface mining) or other local development. Many have also been invaded by one or more exotic plant species. This habitat degradation reduces the functional potential and ecological

value of these wetlands. None of the wetlands observed in the project corridor has any unique ecological value.

Twelve of the fourteen wetlands could be impacted by road construction. The number of wetlands impacted depends upon the final route selected for the project. Section II would impact Wetlands 1, 2, 4 and 5. Section II would temporarily impact Wetland 6. Section IV, Alternative A, would impact Wetlands 7 and 9. Section IV, Alternative B, would directly impact Wetlands 11, 12 and 13. Wetland 7 is a complex of wetlands due to the high degree of existing disturbance which would probably qualify as a potential problem area. The following table lists the wetlands along the project corridor.

TABLE 2
WETLAND IMPACT SUMMARY

Wetland	Size	Impact	Comments
WL1	0.69 acre	0.69 acre	Impacted by Section II
WL2	0.80 acre	0.17 acre	Temporary impact by Section II within proposed ROW
WL3	0.92 acre	No impact	Outside existing and proposed ROW
WL4	1.15 acre	1.15 acre	Impacted by Section II
WL5	0.34 acre	0.34 acre	Impacted by Section II
WL6	1.55 acre	0.80 acre	Temporary impact by Section III within proposed ROW
WL7	1.54 acre	0.49 acre	Impacted by Section IV (A) Temporary impact to 0.05 acre
WL8	0.73 acre	No impact	Outside the proposed ROW
WL9	0.66 acre	0.07 acre	Temporary impact by Section IV (A) within proposed ROW
WL10	0.98 acre	No impact	Can be indirectly impacted by Section IV (B) if runoff is not controlled at construction site
WL11	2.98 acre	2.30 acre	Impacted by Section IV (B)
WL12	0.29 acre	0.29 acre	Impacted by Section IV (B)
WL13	0.34 acre	0.34 acre	Impacted by Section IV (B)
WL14	0.6 acre	No impact	Section IV (B) construction could indirectly affect wetland

WL1 covers about 0.69 acres and has formed in a wet-weather drainageway in Section II of the project area. The primary hydrologic source to the wetland appears to be surface water runoff from the surrounding watershed. The wetland function is rated moderate for flood storage, minor for sediment stabilization, and minor for wildlife habitat.

WL2 covers about 0.80 acres and has formed in the floodplain of Bitter Creek around a blue-line stream in Section II. It is classified as a palustrine (freshwater) wetland and functions are rated moderate for flood storage, moderate for sediment stabilization, and minor for wildlife habitat.

WL3 covers about 0.92 acres and has formed in a depression in the floodplain of Bitter Creek near a blue-line stream in Section II. It is classified as a palustrine wetland and is rated moderate for flood storage, sediment stabilization, and wildlife habitat.

WL4 covers about 1.15 acres and has formed in a wet-weather drainageway east of State Route 29 in Section II. It is classified as a palustrine wetland and is rated moderate for flood storage, and minor for sediment stabilization and wildlife habitat.

WL5 covers about 0.34 acre and has formed on the eastern side of State Route 29, between a wet-weather drainageway and a blue-line stream in Section II. It is classified as a palustrine wetland and is rated minor for flood storage, sediment stabilization and wildlife habitat.

WL6 covers about 1.55 acres and has formed in a wet-weather drainageway west of State Route 29 in Section III. It is classified as a palustrine wetland and is rated moderate for flood storage, sediment stabilization, and wildlife habitat.

WL7 is a complex of wetlands located in Section IV, Alternative A, and covers about 1.54 acres and has formed in the channel of a blue-line stream on both sides of State Route 29 and Leonard Williams Road. They are all classified as palustrine wetlands and are rated moderate for flood storage, sediment stabilization and wildlife habitat.

WL8 covers about 0.73 acres and has formed in a depression east of State Route 29 and east of the Wartburg Water Plant access

road in the floodplain fringe of Mud Creek and Crooked Creek in Section IV, Alternative A. It is classified as a palustrine wetland and is rated moderate for flood storage, sediment stabilization, and wildlife habitat.

WL9 covers about 0.66 acres and has formed in a depression in the floodplain fringe of Mud Creek and Crooked Fork in Section IV (A). It is classified as a palustrine wetland and is rated high for flood storage and moderate for sediment stabilization and wildlife habitat.

WL10 covers about 0.98 acres and has formed in and around a beaver pond established in a wet-weather drainageway in the floodplain of Crooked Fork in Section IV, Alternative B. It is classified as a palustrine wetland and is rated moderate for flood storage, sediment stabilization, and wildlife habitat.

WL11 covers about 2.98 acres and has formed in a floodplain of Section IV, Alternative B. It is classified as a palustrine wetland and is rated minor for wildlife habitat and moderate for flood storage and sediment stabilization.

WL12 covers about 0.29 acres and has formed in wet-weather drainageway below a reclaimed surface mine in Section IV, Alternative B. It is classified as a palustrine wetland and is rated moderate for sediment stabilization and minor for flood storage and wildlife habitat.

WL13 covers about 0.34 acres and has formed on the eastern side of State Route 29, between a wet-weather drainageway below a reclaimed surface mine. It is classified as a palustrine wetland and is rated minor for flood storage and wildlife habitat and moderate for sediment stabilization.

WL14 covers about 0.60 acres and has formed in a wet-weather drainageway at the upstream end of a large pond constructed in the hollow below a reclaimed surface mine in Section IV, Alternative B. It is classified as a palustrine wetland and is rated moderate for flood storage and high for sediment stabilization and wildlife habitat.

As the project enters the survey and design phase, on site avoidance and mitigation opportunities will be investigated. In

addition, impacts may be mitigated by purchases of credit in a wetlands mitigation bank.

For more detailed information see Ecological Assessment on file at the Environmental Planning and Permits Department's office.

3. Wildlife

Because of the highly developed nature of the project corridor and the proposal being an upgrading along most of an existing highway, terrestrial wildlife impacts will be at a minimum along the existing highway. If Alternative B in Section IV is constructed, a larger impact on wildlife is anticipated.

Road construction would eliminate some habitat currently available for plants and animals. Disturbance to pasturelands, agricultural fields, and woodlands and resultant loss of this habitat in the project corridor would cause moderate disruption to animals that inhabit or move through the area. The potential loss and fragmentation of habitat is moderate because the roadway habitat is already highly fragmented.

4. Impacts to Other Unique or Sensitive Ecological Resources

Other unique or sensitive ecological resources within 5 miles of the proposed project corridor include the Obed National Wild and Scenic River, Frozen Head State Park and Natural Area, Lone Mountain State Forest, Catoosa Wildlife Management Area, Cumberland Trail State Park, and Watts Bar Reservoir. Road construction would not directly affect any of these areas.

5. Endangered & Threatened Species

The Department coordinated with Federal and State agencies concerning the likely presence of Federally listed species being in the project area. The U. S. Fish & Wildlife Service provided a list of four federally listed or proposed endangered or threatened species that may occur in the project impact areas. These are the Spotfin chub (Hybopsis monacha), Cumberland elktoe (Alasmidonta atropurpurea), Cumberland rosemary (Conradian verticillata) and

Virginia spiraea (Spiraea virginiana). After a telephone call on September 26, 2002 another species, the purple bean (*Villosa perpurpurea*) was added to the list. The U.S. Fish and Wildlife Service are currently reviewing a Biological Assessment (BA) documenting a finding of no effect for the subject project. The requirements of Section 7 of the Endangered Species Act of 1973 will be fulfilled prior to approval of the final environmental document.

6. Permits

Permits necessary for proceeding with the project include both federal and state agencies:

- Tennessee Valley Authority: Section 26a.
- U.S. Army Corps of Engineers: General (Nationwide) and/or Individual Permits under Section 404 of the Clean Water Act.

I. FLOODPLAIN IMPACTS

1. Beneficial Floodplain Values

Several streams, including the Little Emory River, Bitter Creek, Forked Creek, Muddy Branch, Flat Fork, Crooked Fork and numerous smaller tributaries either cross or flow through the project corridor and will be affected to some extent by road construction. The floodplains of these watercourses include much forested land and riparian habitat. It is not expected that the project will adversely impact the beneficial floodplain values in the area.

2. Hydrological Impacts

Floodplains affected by the proposed project are those of Little Emory River and several branches. The proposed project will cross several small streams and branches. The first crossing is longitudinal on the edge of a floodplain (See Figure 4 - Floodplain Map). The other crossings are approximately perpendicular to their

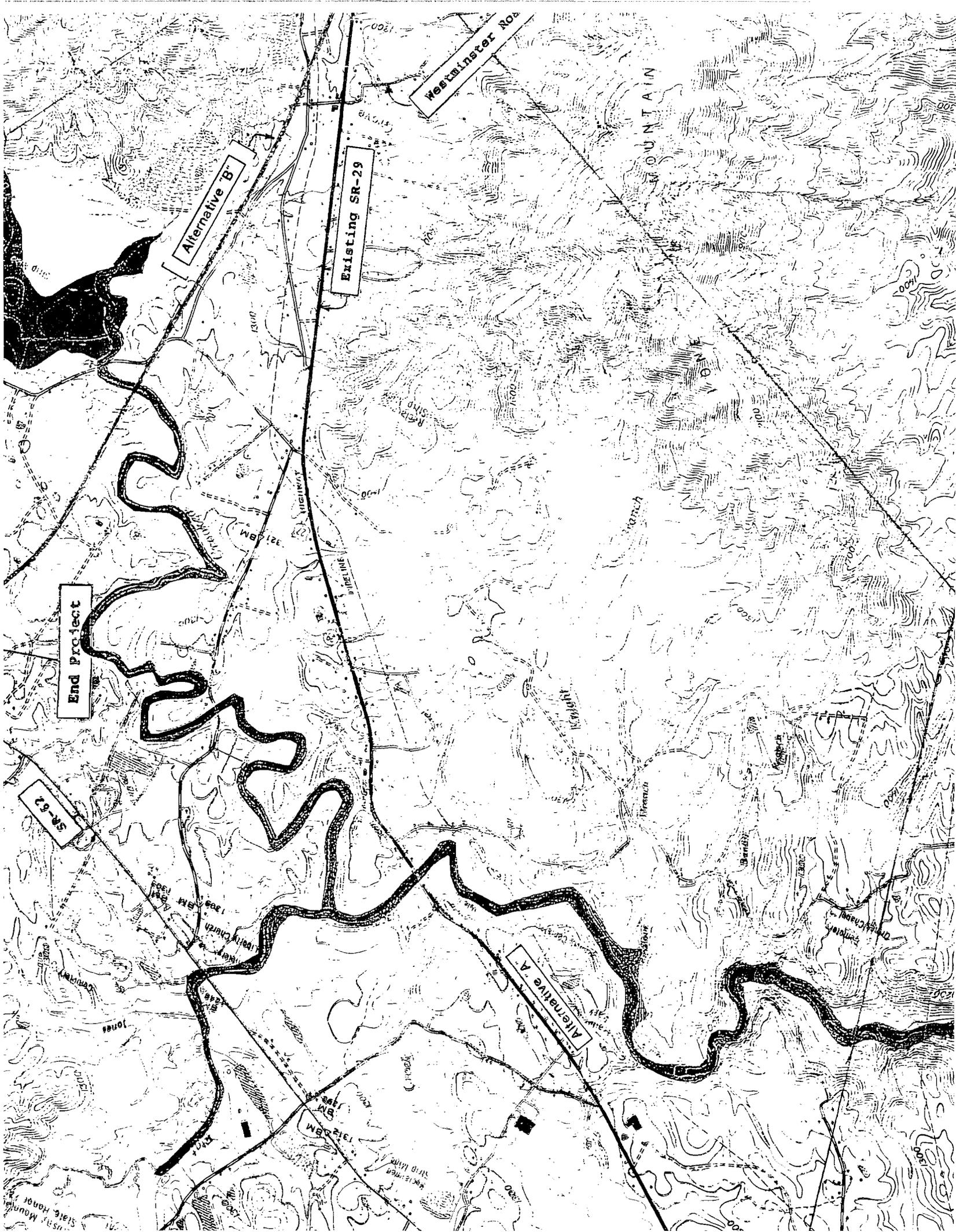
floodplain. These crossings will be made on or near the existing route and the encroachment will therefore be minimized.

The stream crossings are not considered an adverse encroachment on the floodplain because:

- 1) There is no potential for interruption or termination of the transportation facility which is needed for emergency vehicles or provides the communities only evacuation route due to the construction of the build alternative;
- 2) The water crossings will be designed to convey floodwaters so that there will be no risk due to the encroachment in the floodplain;
- 3) There will be no substantial adverse impact on the natural and beneficial floodplain values as described in Section I of this Chapter.

We do not anticipate the Flood Hazard Boundary maps will need changing. The design phase has been initiated and the Department's hydrology section has determined the floodway, floodplain boundaries, and water surface elevations for Little Emory River are not being impacted due to the widening of the existing roadway. A no-rise certification will be issued upon completion for the crossing south of the Roane-Morgan County line. Hydraulic studies have been performed and the report is being finalized. The roadway designer will be instructed to steepen fill slopes, where necessary, to avoid longitudinal encroachments on Little Emory and Bitter Creek floodplains.

In general, in order to prevent major damage from flooding, the provisions set forth in Title 23 Code of Federal Regulations (CFR) 650, Subpart A and provisions of Executive Order 11988 "Floodplain Management" will be followed in the design of the project. CFR 650, Subpart A deals with the location and hydraulic design of encroachments on floodplains.



J. CULTURAL IMPACTS

1. Archaeological Impacts

Pursuant to 36 CFR 800 regulations, staff members of the Tennessee Department of Transportation's Cultural Resource Section surveyed the general area of the proposed project to determine if any archaeological resources would be affected. Survey reports detailing the findings of this evaluation are in Appendix C. In cooperation with the State Historic Preservation Officer (SHPO), it was determined that the proposed project will have no effect on any eligible or listed National Register archaeological resource (See SHPO letter dated 4-9-02 in Appendix C). The entire archaeological report can be found at the Environmental Planning and Permits Division.

2. Architectural/Historical Impacts

It is the opinion of the Department that the proposed project, as presently designed, will have no effect to any architectural or historical resources included in or eligible for inclusion in, the National Register of Historic Places (Refer to the SHPO letter dated 5-12-99 in Appendix C). The entire architectural/historical report can be found at the Environmental Planning and Permits Division.

K. VISUAL IMPACTS

The visual impacts associated with the proposed improvements would be the removal of trees and portions of front yards along the existing State Route 29. There are no sensitive urban or rural settings to be impacted by the project. The view from the road will allow the traveler to enjoy pleasant aesthetic views of this area of Roane and Morgan Counties. Visual impacts would be most evident in Alternate B where no highway presently exists.

J. CULTURAL IMPACTS

1. Archaeological Impacts

Pursuant to 36 CFR 800 regulations, staff members of the Tennessee Department of Transportation's Cultural Resource Section surveyed the general area of the proposed project to determine if any archaeological resources would be affected. Survey reports detailing the findings of this evaluation are in Appendix C. In cooperation with the State Historic Preservation Officer (SHPO), it was determined that the proposed project will have no effect on any eligible or listed National Register archaeological resource (See SHPO letter dated 4-9-02 in Appendix C). The entire archaeological report can be found at the Environmental Planning and Permits Division.

2. Architectural/Historical Impacts

It is the opinion of the Department that the proposed project, as presently designed, will have no effect to any architectural or historical resources included in or eligible for inclusion in, the National Register of Historic Places (Refer to the SHPO letter dated 5-12-99 in Appendix C). The entire architectural/historical report can be found at the Environmental Planning and Permits Division.

K. VISUAL IMPACTS

The visual impacts associated with the proposed improvements would be the removal of trees and portions of front yards along the existing State Route 29. There are no sensitive urban or rural settings to be impacted by the project. The view from the road will allow the traveler to enjoy pleasant aesthetic views of this area of Roane and Morgan Counties. Visual impacts would be most evident in Alternate B where no highway presently exists.

L. ENERGY IMPACTS

Construction of the proposed project will involve the commitment of energy resources both during the short-term construction stage and throughout the long-term operation of the highway. The "Build" Alternative will require greater energy resources in construction than the "No Build" Alternative will require in its maintenance. The post-construction operational energy requirements of the facility should be less with the "Build" Alternative than the "No Build" Alternative. The long-term energy impact would result in net savings in energy usage.

M. CONSTRUCTION IMPACTS

During the actual construction phase of the project there are several categories of unavoidable environmental effects which are expected to occur. These are (1) soil erosion and siltation of watercourses, (2) disposal of solid waste including open burning and fugitive dust, (3) construction noise and (4) detours, public safety, and utility relocations. These adverse construction impacts are primarily short-term in duration and only exist during the construction period.

Construction procedures and public safety shall be governed by the latest guidelines contained in TDOT' "Standard Specifications for Road and Bridge Construction", (March 1995) and FHWA's Best Management Practices for Erosion and Sediment Control, (June 1985).

Disposal of solid waste generated by the construction of this project shall be in accordance with all State waste management rules and regulations. If open burning is used to dispose of vegetation or construction materials, the process must comply with the Tennessee Air Pollution Control Regulations as well s any local regulations.

N. GEOLOGICAL IMPACTS

The area topography includes rock cuts, rolling to steep hills. The project involves rocks of the Cumberland Plateau and the Valley and Ridge Province north of Harriman. A preliminary report discussing potential geotechnical problems was completed in June of 1999 and a geotechnical investigation for Sections I-III was completed in February 2002.

Several coal beds are present and the unweathered black shales are pyritic, as are the hard unweathered sandstones. A potential foundation problem may be posed by springs, small wetlands and soft ground, which may require rock pads or undercutting. Also, interbedded soft shales and hard sandstones if cut vertically or at high angles have produced an under-weathering problem along some of the existing roadway of the Cumberland Plateau. The shales weather quickly, leaving large overhangs of sandstone, which break off and cause a rock fall problem. It is recommended that slopes, where this is a potential problem, be cut back on a 1.5:1 slope ratio to avoid the problem.

Samples of pyritic rock were collected in Sections I-III. A mitigation plan will be formulated and followed during and after construction to ensure the protection of the ecology of the area. The Department has extensive experience with road construction projects involving pyritic material.

In Section IV, Alternative B, there are strip mines in the area. The proposed alignment does avoid the known mines, but some of the area is strongly suspected to be unmapped and may possibly contain reclaimed mines. Undiscovered reclaimed strip mines will be investigated further in the road design phase for this section.

Section IV, Alternative A, crosses rolling topography with moderate stream dissection resulting in small but steep canyons and stream courses. However, no exceptional geotechnical problems were noted.

O. HAZARDOUS MATERIALS IMPACTS

Along the proposed widening of this section of State Route 29, there are several locations within the project limits that may contain underground storage tanks that could be affected by right-of-way acquisition. The removal of any underground storage tanks will be accomplished by following the applicable procedures adopted by Federal and State agencies. It is expected that the required procedures for monitoring the use of the tanks for possible leaks and spillage will be taken at the appropriate time. It is not anticipated that there will be problems with clearing the right-of-way at these locations.

In the event hazardous substances/wastes are encountered within the proposed right-of-way, their disposition shall be subject to the applicable sections of the Federal Resource Conservation and Recovery Act, as amended; and the Comprehensive Environmental Response, Compensation, and Liability Act, as amended; and the Tennessee Hazardous Waste Management Act of 1983.

P. PEDESTRIANS AND BICYCLISTS IMPACTS

The project will have no impact on the Cumberland Trail State Park or any potential corridor it might follow. Although they are not specifically marked for pedestrian and bicycle usage, the project is being designed with paved shoulders that will allow for these functions.

CHAPTER IV
COORDINATION AND COMMENTS

A. Initial Coordination

Initial coordination packages were sent out on October 9, 1998, to federal, state, and local agencies and officials. They were asked to review the proposal and to comment on its possible effects or their areas of environmental concern so that all foreseeable impacts could be considered in the environmental and location studies. Copies of the replies and a list of those who received the initial coordination are in Appendix B.

B. Initial Coordination Mailing List

LIST OF AGENCIES TO WHICH THE INITIAL COORDINATION WAS SENT

RECEIVED

RESPONSES (X)

FEDERAL AGENCIES

Appalachian Regional Commission

Federal Emergency Management Agency - Mitigation Division

Department of Housing and Urban Development - Environmental Officer

U.S. Department of Interior

U.S. Geological Survey - Environmental Affairs

U.S. Geological Survey - Water Resources Division

Office of Surface Mining

Regional Environmental Officer

Fish and Wildlife Service (X)

Department of Commerce - Ecology and Environmental Conservation

U.S. Department of Agriculture - Natural Resources Conservation Service (X)

FEDERAL AGENCIES (Cont.)

Federal Energy Regulatory Commission-Atlanta Regional Office (X)

U. S. Department of Transportation - Federal Aviation Administration

Tennessee Valley Authority
Environmental Management (X)
Land Management

U.S. Army Corps of Engineers (X)

Environmental Protection Agency - EIS Review Section

STATE AGENCIES

Tennessee State Planning Office

Tennessee Department of Environment and Conservation
Commissioner's Office
Division of Water Pollution Control (X)
Division of Water Supply
Division of Ground Water Resources (X)
Division of Natural Heritage
Division of Solid Waste Management (X)
Division of Air Pollution Control (X)

Tennessee Wildlife Resources Agency

Tennessee Historical Commission

Tennessee Department of Agriculture

Tennessee Department of Education

Emory River Watershed

LOCAL AGENCIES AND OFFICIALS

East Tennessee Development District (X)

Roane County Executive

Road Superintendent - Roane County (X)

Morgan County Executive

LOCAL AGENCIES (Cont.)

Superintendent of Highways - Morgan County

Mayor of Wartburg

Public Works Director of Wartburg

OTHER ORGANIZATIONS AND INTERESTED PARTIES

Tennessee Trails Association/Cumberland Trail Conference (X)

Sierra Club - Knoxville

Tennessee State Chapter of the Sierra Club

Tennessee Conservation League

Tennessee Scenic Rivers Association

Tennessee Environmental Council

C. Summary and Disposition of Comments
Received from the Initial Coordination

FEDERAL AGENCIES

Federal Energy Regulatory Commission

Comment: The improvement will not impact any of the hydroelectric developments under the jurisdiction of the Federal Energy Regulatory Commission.

Disposition: None.

FEDERAL AGENCIES (Cont.)

United States Department of the Interior - Fish and Wildlife Service

Comment: The above agency is concerned that highway projects frequently accelerate erosion and sedimentation in streams, resulting in adverse effects to the aquatic environment. They recommend that silt barriers and several other control measures to mitigate adverse impacts be put in place when working adjacent to all streams to prevent runoff of sediment. In addition, the USFWS provided a list of four federally listed or proposed endangered or threatened species that may occur in the project impact areas. These are the Spotfin chub (Hybopsis monacha), Cumberland elktoe (Alasmidonta atropurpurea), Cumberland rosemary (Conradian verticillata) and Virginia spiraea (Spiraea virginiana). (Refer to Appendix B for their letter).

Disposition: A Biological Assessment (BA) is being performed and requirements of Section 7 of the Endangered Species Act of 1973 will be fulfilled prior to approval of the final environmental document. See Ecological Impacts in Chapter III.

Department of the Army - Nashville District Corps of Engineers

Comment: The proposed project would be crossing of Little Emory River and a number of other streams. These waterways, as well as wetland locations which may be impacted by the project should be submitted to the above agency for review prior to execution of construction.

Disposition: Concerns are discussed in Chapter III. Also, The Department will continue to coordinate with the above agency during all stages of the proposed improvement.

FEDERAL AGENCIES (Cont.)

United States Department of Agriculture - Natural Resources
Conservation Service

Comment: They submitted the Farmland Impact Rating Form (See Appendix B) to determine farmland impacts.

Disposition: None.

TVA - Environmental Management Department

Comment: (December 23, 1998 letter), the above agency is concerned about Little Emory River, Bitter Creek, Crooked Fork, and other tributaries crossings. In addition, an easement to cross TVA land and permission to fill in flowage easement along the Little Emory River also would be needed. Other issues concern the Cumberland Trail State Park in the area under study. Endangered species habitat in the Little Emory River/Bitter Creek area are also of concern. They requested to be a cooperative agency during the NEPA process.

Disposition: TDOT will keep TVA informed during the NEPA process and we will coordinate with the appropriate agencies to meet their requirements. A Cumberland Trail Conference letter (August 26, 2002) indicated that the project would have no impact on the Cumberland Trail State Park or any potential corridor it might follow. (Letter is on file at EPPD office)

STATE AGENCIES

Tennessee Department of Environment and Conservation

Comment: The above agency prefers Alternative B because it crosses fewer streams and it encompasses less distance than

STATE AGENCIES (Cont.)

Alternative A. The agency also prefers a narrower median and shoulder in both Section 1 and Alternative B. The number and size of stream crossings should be minimized.

Disposition: See "Build" Alternative in Chapter II. This is our standard typical section for this type of roadway.

Department of Environment And Conservation - Division of Air
Pollution Control

Comment: The above agency noted that the project is not in a nonattainment or maintenance area, therefore a formal conformity determination is not required. It was also noted that since the project is in proximity to the Smokey Mountains, some concern has been expressed in regards to regional haze effects, and traffic simulation modeling has been suggested. However, their agency is not requiring any specific actions above what would be included in the standard Environmental Assessment, as pursuant to the NEPA process.

Disposition: None.

Department of Environment And Conservation - Division of
Ground Water Protection

Comment: The Department does not anticipate that this project will effect or conflict with any of their programs.

Disposition: None.

STATE AGENCIES (Cont.)

Department of Environment And Conservation - Knoxville
Environmental Field Office

Comment: The above agency noted that a site investigation was performed for the project. Some commercial facilities were located along Alternative A that have the potential to contain soil contamination. Alternative B was not investigated because it was on private property. The above agency stated that there are no permitted solid or hazardous waste facilities in the proposed right-of-way and dependent upon final placement of the proposed improvement, the right-of-way could be contaminated from convenient stores or old service garage sites.

Disposition: The "Hazardous Materials Impacts" Section of this report addresses these concerns.

Local Agencies

East Tennessee Development District

Comment: The above agency completed its review of the project and expressed no opinion. The ETDD response did include a letter from the president of the Plateau Utility District, who supported the project and Alternative B.

Disposition: None.

Local Agencies (Cont.)

Roane County Highway Department

Comment: The above agency sent letters to two residences and one commercial establishment along Bitter Creek Highway. One resident responded that they were against the project.

Disposition: None.

OTHER ORGANIZATIONS AND INTERESTED PARTIES

Cumberland Trail Conference/ Tennessee Trails Association

Comment: The above agencies indicated that the project would have no impact on the Cumberland Trail State Park or any potential corridor it might follow.

Disposition: None.

D. COOPERATING AGENCIES

TVA - Environmental Management Department

Comment: In response to TDOT requesting TVA to become a cooperating agency, TVA indicated that they were pleased to participate as a cooperating agency in development of the EA. By incorporating the TVA Section 26a and land use review into the Department of Transportation EA process, TVA hoped to increase the efficiency of the environmental review process for both agencies.

In order to assist TVA in meeting its NEPA responsibilities, this agency asked that information related to wetlands and

COOPERATING AGENCIES (Cont.)

potential mitigation, Floodplain Management Executive Order, National Historic Preservation Act compliance, and Endangered Species Act compliance be included in the EA and Finding of No Significant Impact (FONSI). Other issues TVA noted that may included, as appropriate, state-listed species (biodiversity impacts), farmland, noise, and visual impacts.

Disposition: The information requested is discussed in the appropriate sections of the EA.

On August 20, 2002 a preliminary EA was sent to TVA for their review.

Comment: On September 3, 2002, TVA commented on the preliminary EA. Their first comment was to make sure the project would not adversely impact the endangered species habitats near the Little Emory/Bitter Creek and Flat Fork areas. TVA's second comment concerned the natural gas pipeline upgrade project in the area between Lone Mountain State Forest and the Little Emory River.

Disposition: TDOT has completed a Biological Assessment (BA) addressing the endangered species question. A summary of the project was send to East Tennessee Natural Gas Company. Natural gas pipelines will be addressed more fully in the ROW and design phase of the project.

United States Army Corps of Engineers
Department of the Army - Nashville District Corps of Engineers

On August 20, 2002 a preliminary EA was sent to the U.S. Corps of Engineers for their review.

COOPERATING AGENCIES (Cont.)

Comment: On October 2, 2002, the Corps commented on the preliminary EA. Their review of the information provided indicated that the proposed work would involve impacts from fill activities to Little Emory River, Biter Creek, Forked Creek, Muddy Branch, Crooked Fork, Flat Creek, Mud Creek and other unnamed tributaries. Several wetlands identified would also be impacted. Therefore, the proposed subject work would require a Department of the Army (DA) permit. In order to make a complete and final determination, the Corps would need specific information about the project such as topographical maps if each fill and/or crossing, type of fill, detailed plans with a typical profile and cross-section and the method of construction. Compensatory mitigation may be required for certain activities.

The Corps noted that other federal, state and/or local approvals may be required and indicated that no work should be performed in the waterway below ordinary high water until a validated DA permit is received.

Disposition: TDOT will continue to coordinate with all permitting agencies and obtain all required permits.

Appendix A

Census Data for Morgan and Roane Counties

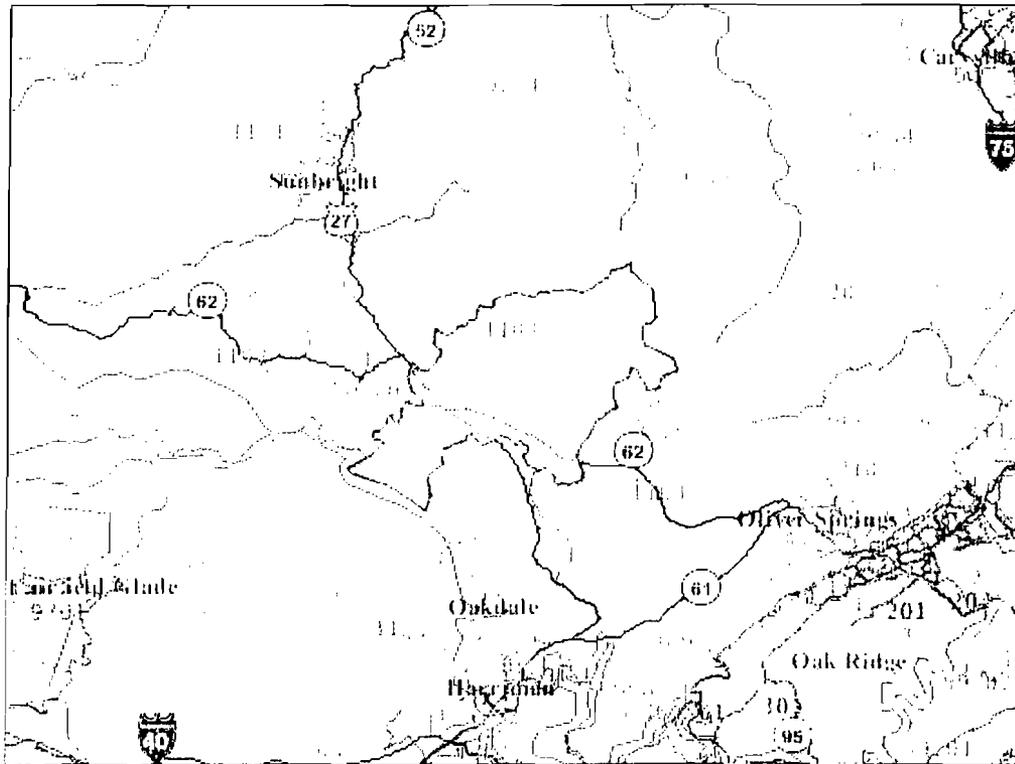
Census Tract 1103, Morgan County, Tennessee

Boundaries

- State
- '00 County
- '00 Census Tract
- '00 Block Group
- '00 Place
- '00 Place
- '90 UA

Features

- Major Road
- Stream/Waterbody
- Stream/Waterbody



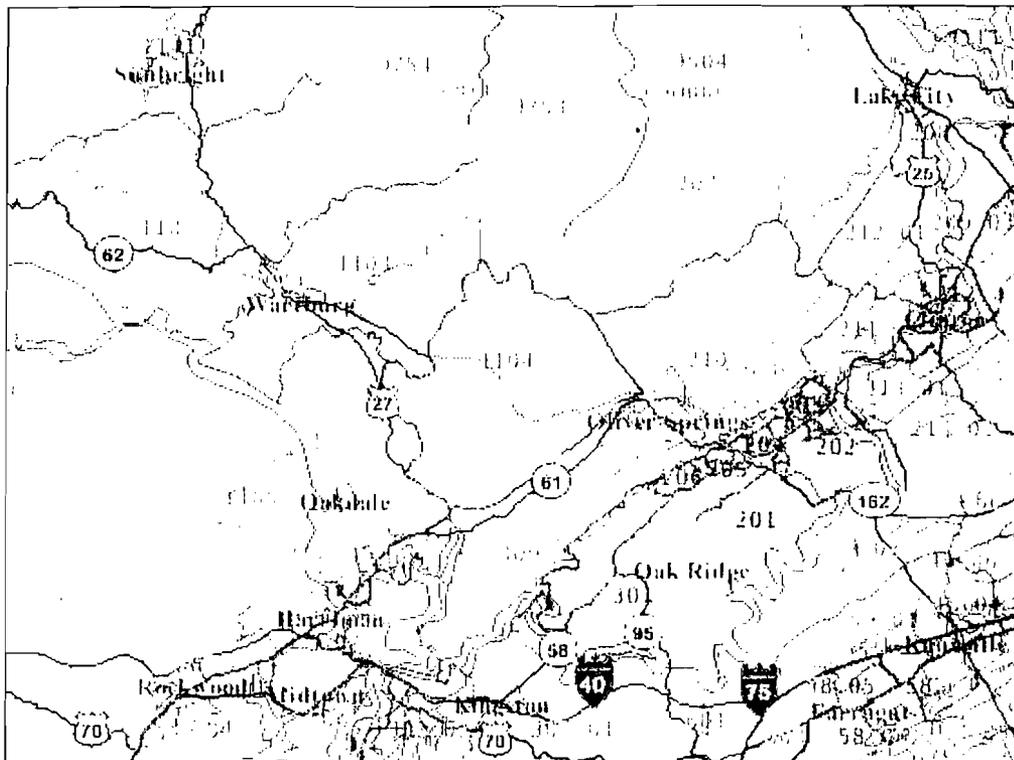
Census Tract 1104, Morgan County, Tennessee

Boundaries

- State
- '00 County
- '00 Census Tract
- '00 Block Group
- '00 Place
- '00 Place
- '90 UA

Features

- Major Road
- Stream/Waterbody
- Stream/Waterbody



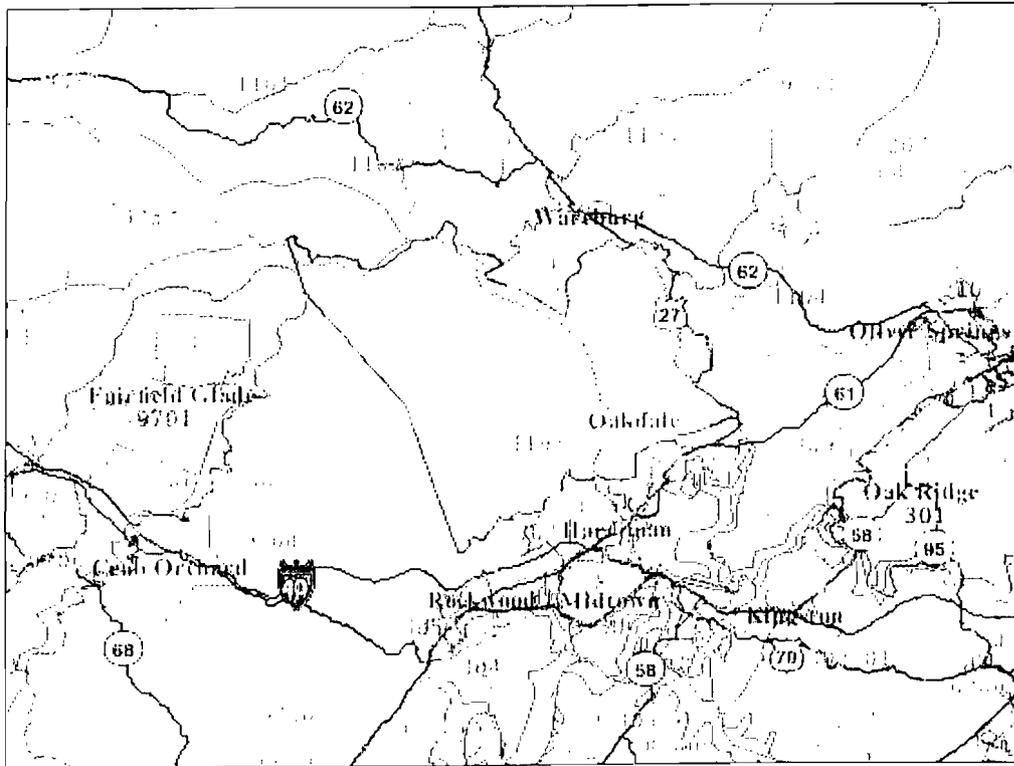
Census Tract 1105, Morgan County, Tennessee

Boundaries

- State
- '00 County
- '00 Census Tract
- '00 Block Group
- '00 Place
- '00 Place
- '90 UA

Features

- Major Road
- Stream/Waterbody
- Stream/Waterbody



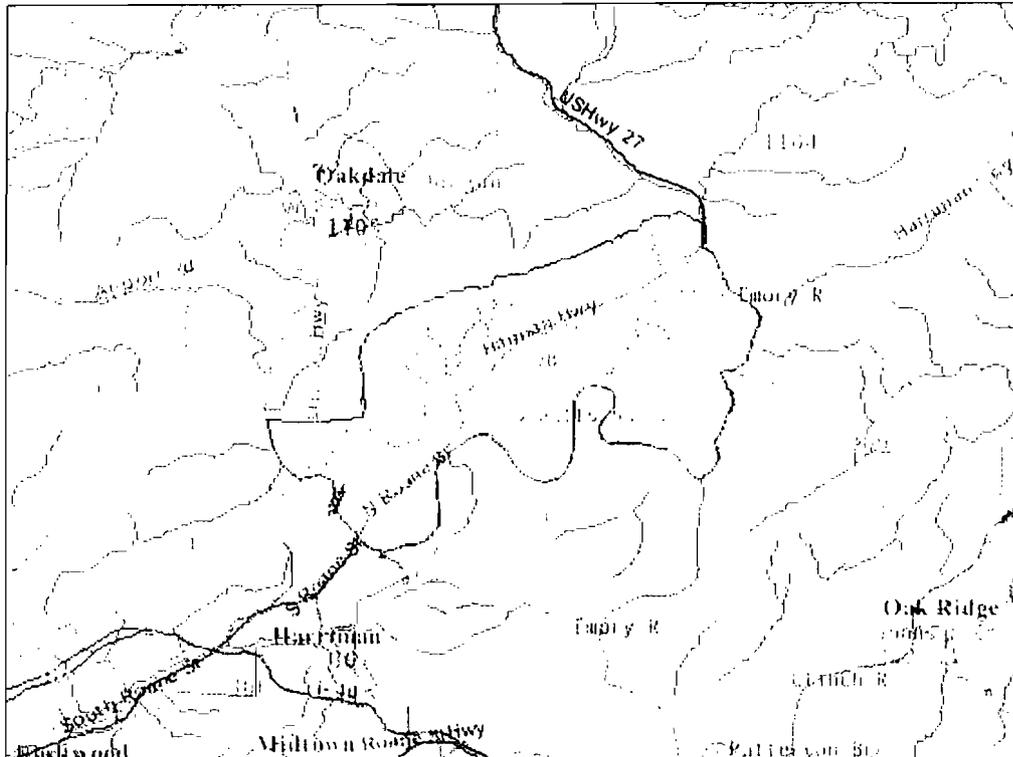
Census Tract 308, Roane County, Tennessee

Boundaries

- State
- '00 County
- '00 Census Tract
- '00 Block Group
- '00 Place
- '00 Place
- '90 UA

Features

- Major Road
- Street
- Stream/Waterbody
- Stream/Waterbody



U.S. Census Bureau

American FactFinder

Main | Search | Feedback | FAQs | GI

Quick Tables

Change selections

Print / Download

Re

C

DP-1. Profile of General Demographic Characteristics: 2000
 Data Set: Census 2000 Summary File 1 (SF 1) 100-Percent Data
 Geographic Area: Census Tract 1103, Morgan County, Tennessee

NOTE: For information on confidentiality protection, nonsampling error, and definitions, see <http://factfinder.census.gov/home/en/datanotes/expsf1u.htm>.

Subject	Number	Percent
Total population	5,016	100.0
SEX AND AGE		
Male	3,171	63.2
Female	1,845	36.8
Under 5 years	236	4.7
5 to 9 years	240	4.8
10 to 14 years	268	5.3
15 to 19 years	265	5.3
20 to 24 years	391	7.8
25 to 34 years	1,003	20.0
35 to 44 years	993	19.8
45 to 54 years	700	14.0
55 to 59 years	217	4.3
60 to 64 years	151	3.0
65 to 74 years	251	5.0
75 to 84 years	200	4.0
85 years and over	101	2.0
Median age (years)	36.0	(X)
18 years and over	4,108	81.9
Male	2,697	53.8
Female	1,411	28.1
21 years and over	3,937	78.5
62 years and over	628	12.5
65 years and over	552	11.0
Male	204	4.1
Female	348	6.9
RACE		
One race	4,995	99.6
White	4,564	91.0
Black or African American	419	8.4
American Indian and Alaska Native	7	0.1
Asian	2	0.0
Asian Indian	0	0.0
Chinese	0	0.0
Filipino	0	0.0
Japanese	0	0.0
Korean	0	0.0
Vietnamese	0	0.0
Other Asian ¹	2	0.0
Native Hawaiian and Other Pacific Islander	1	0.0
Native Hawaiian	1	0.0
Guamanian or Chamorro	0	0.0
Samoa	0	0.0
Other Pacific Islander ²	0	0.0
Some other race	2	0.0
Two or more races	21	0.4
Race alone or in combination with one or more other races ³		
White	4,584	91.4
Black or African American	419	8.4
American Indian and Alaska Native	17	0.3

Asian	7	0.1
Native Hawaiian and Other Pacific Islander	1	0.0
Some other race	13	0.3
HISPANIC OR LATINO AND RACE		
Total population	5,016	100.0
Hispanic or Latino (of any race)	37	0.7
Mexican	6	0.1
Puerto Rican	1	0.0
Cuban	3	0.1
Other Hispanic or Latino	27	0.5
Not Hispanic or Latino	4,979	99.3
White alone	4,532	90.4
RELATIONSHIP		
Total population	5,016	100.0
In households	3,359	67.0
Householder	1,337	26.7
Spouse	745	14.9
Child	1,066	21.3
Own child under 18 years	841	16.8
Other relatives	117	2.3
Under 18 years	51	1.0
Nonrelatives	94	1.9
Unmarried partner	54	1.1
In group quarters	1,657	33.0
Institutionalized population	1,657	33.0
Noninstitutionalized population	0	0.0
HOUSEHOLDS BY TYPE		
Total households	1,337	100.0
Family households (families)	974	72.8
With own children under 18 years	497	37.2
Married-couple family	745	55.7
With own children under 18 years	357	26.7
Female householder, no husband present	185	13.8
With own children under 18 years	111	8.3
Nonfamily households	363	27.2
Householder living alone	328	24.5
Householder 65 years and over	155	11.6
Households with individuals under 18 years	535	40.0
Households with individuals 65 years and over	334	25.0
Average household size	2.51	(X)
Average family size	2.98	(X)
HOUSING OCCUPANCY		
Total housing units	1,453	100.0
Occupied housing units	1,337	92.0
Vacant housing units	116	8.0
For seasonal, recreational, or occasional use	10	0.7
Homeowner vacancy rate (percent)	2.0	(X)
Rental vacancy rate (percent)	7.8	(X)
HOUSING TENURE		
Occupied housing units	1,337	100.0
Owner-occupied housing units	973	72.8
Renter-occupied housing units	364	27.2
Average household size of owner-occupied unit	2.59	(X)
Average household size of renter-occupied unit	2.29	(X)

(X) Not applicable

¹ Other Asian alone, or two or more Asian categories.² Other Pacific Islander alone, or two or more Native Hawaiian and Other Pacific Islander categories.³ In combination with one or more other races listed. The six numbers may add to more than the total population and the six percentages may add to more than 100 percent because individuals may report more than one race.

Source: U.S. Census Bureau, Census 2000 Summary File 1, Matrices P1, P3, P4, P8, P9, P12, P13, P17, P18, P19, P20, P23, P27, P28, P33, PCT5, PCT8, PCT11, PCT15, H1, H3, H4, H5, H11, and H12.

DP-1. Profile of General Demographic Characteristics: 2000
Data Set: Census 2000 Summary File 1 (SF 1) 100-Percent Data
Geographic Area: Census Tract 1104, Morgan County, Tennessee

NOTE: For information on confidentiality protection, nonsampling error, and definitions, see <http://factfinder.census.gov/home/en/datanotes/expsf1u.htm>.

Subject	Number	Percent
Total population	4,125	100.0
SEX AND AGE		
Male	2,051	49.7
Female	2,074	50.3
Under 5 years	251	6.1
5 to 9 years	314	7.6
10 to 14 years	259	6.3
15 to 19 years	287	7.0
20 to 24 years	236	5.7
25 to 34 years	571	13.8
35 to 44 years	709	17.2
45 to 54 years	572	13.9
55 to 59 years	232	5.6
60 to 64 years	208	5.0
65 to 74 years	297	7.2
75 to 84 years	141	3.4
85 years and over	48	1.2
Median age (years)	36.8	(X)
18 years and over	3,122	75.7
Male	1,546	37.5
Female	1,576	38.2
21 years and over	2,961	71.8
62 years and over	608	14.7
65 years and over	486	11.8
Male	215	5.2
Female	271	6.6
RACE		
One race	4,098	99.3
White	4,079	98.9
Black or African American	7	0.2
American Indian and Alaska Native	7	0.2
Asian	3	0.1
Asian Indian	0	0.0
Chinese	0	0.0
Filipino	3	0.1
Japanese	0	0.0
Korean	0	0.0
Vietnamese	0	0.0
Other Asian ¹	0	0.0
Native Hawaiian and Other Pacific Islander	0	0.0
Native Hawaiian	0	0.0
Guamanian or Chamorro	0	0.0
Samoan	0	0.0
Other Pacific Islander ²	0	0.0
Some other race	2	0.0
Two or more races	27	0.7
Race alone or in combination with one or more other races³		
White	4,105	99.5
Black or African American	8	0.2
American Indian and Alaska Native	27	0.7
Asian	4	0.1
Native Hawaiian and Other Pacific Islander	4	0.1
Some other race	6	0.1
HISPANIC OR LATINO AND RACE		
Total population	4,125	100.0

Hispanic or Latino (of any race)	16	0.4
Mexican	7	0.2
Puerto Rican	2	0.0
Cuban	0	0.0
Other Hispanic or Latino	7	0.2
Not Hispanic or Latino	4,109	99.6
White alone	4,068	98.6
RELATIONSHIP		
Total population	4,125	100.0
In households	4,125	100.0
Householder	1,608	39.0
Spouse	981	23.8
Child	1,220	29.6
Own child under 18 years	892	21.6
Other relatives	202	4.9
Under 18 years	101	2.4
Nonrelatives	114	2.8
Unmarried partner	68	1.6
In group quarters	0	0.0
Institutionalized population	0	0.0
Noninstitutionalized population	0	0.0
HOUSEHOLDS BY TYPE		
Total households	1,608	100.0
Family households (families)	1,207	75.1
With own children under 18 years	531	33.0
Married-couple family	981	61.0
With own children under 18 years	425	26.4
Female householder, no husband present	161	10.0
With own children under 18 years	81	5.0
Nonfamily households	401	24.9
Householder living alone	354	22.0
Householder 65 years and over	141	8.8
Households with individuals under 18 years	596	37.1
Households with individuals 65 years and over	371	23.1
Average household size	2.57	(X)
Average family size	2.99	(X)
HOUSING OCCUPANCY		
Total housing units	1,726	100.0
Occupied housing units	1,608	93.2
Vacant housing units	118	6.8
For seasonal, recreational, or occasional use	14	0.8
Homeowner vacancy rate (percent)	0.9	(X)
Rental vacancy rate (percent)	8.1	(X)
HOUSING TENURE		
Occupied housing units	1,608	100.0
Owner-occupied housing units	1,324	82.3
Renter-occupied housing units	284	17.7
Average household size of owner-occupied unit	2.59	(X)
Average household size of renter-occupied unit	2.45	(X)

(X) Not applicable

¹ Other Asian alone, or two or more Asian categories.² Other Pacific Islander alone, or two or more Native Hawaiian and Other Pacific Islander categories.³ In combination with one or more other races listed. The six numbers may add to more than the total population and the six percentages may add to more than 100 percent because individuals may report more than one race.

Source: U.S. Census Bureau, Census 2000 Summary File 1, Matrices P1, P3, P4, P8, P9, P12, P13, P17, P18, P19, P20, P23, P27, P28, P33, PCT5, PCT8, PCT11, PCT15, H1, H3, H4, H5, H11, and H12.

NOTE: For information on confidentiality protection, nonsampling error, and definitions, see <http://factfinder.census.gov/home/en/datanotes/expsf1u.htm>.

Subject	Number	Percent
Total population	4,449	100.0
SEX AND AGE		
Male	2,197	49.4
Female	2,252	50.6
Under 5 years	278	6.2
5 to 9 years	310	7.0
10 to 14 years	316	7.1
15 to 19 years	338	7.6
20 to 24 years	271	6.1
25 to 34 years	584	13.1
35 to 44 years	694	15.6
45 to 54 years	663	14.9
55 to 59 years	248	5.6
60 to 64 years	199	4.5
65 to 74 years	352	7.9
75 to 84 years	162	3.6
85 years and over	34	0.8
Median age (years)	36.9	(X)
18 years and over	3,339	75.1
Male	1,635	36.7
Female	1,704	38.3
21 years and over	3,146	70.7
62 years and over	657	14.8
65 years and over	548	12.3
Male	229	5.1
Female	319	7.2
RACE		
One race	4,431	99.6
White	4,401	98.9
Black or African American	3	0.1
American Indian and Alaska Native	10	0.2
Asian	9	0.2
Asian Indian	0	0.0
Chinese	0	0.0
Filipino	3	0.1
Japanese	1	0.0
Korean	3	0.1
Vietnamese	2	0.0
Other Asian ¹	0	0.0
Native Hawaiian and Other Pacific Islander	0	0.0
Native Hawaiian	0	0.0
Guamanian or Chamorro	0	0.0
Samoa	0	0.0
Other Pacific Islander ²	0	0.0
Some other race	8	0.2
Two or more races	18	0.4
Race alone or in combination with one or more other races³		
White	4,419	99.3
Black or African American	4	0.1
American Indian and Alaska Native	24	0.5
Asian	12	0.3
Native Hawaiian and Other Pacific Islander	0	0.0
Some other race	8	0.2
HISPANIC OR LATINO AND RACE		
Total population	4,449	100.0
Hispanic or Latino (of any race)	26	0.6
Mexican	11	0.2
Puerto Rican	1	0.0
Cuban	0	0.0
Other Hispanic or Latino	14	0.3
Not Hispanic or Latino	4,423	99.4

White alone	4,375	98.3
RELATIONSHIP		
Total population	4,449	100.0
In households	4,436	99.7
Householder	1,684	37.9
Spouse	1,091	24.5
Child	1,324	29.8
Own child under 18 years	973	21.9
Other relatives	225	5.1
Under 18 years	98	2.2
Nonrelatives	112	2.5
Unmarried partner	51	1.1
In group quarters	13	0.3
Institutionalized population	13	0.3
Noninstitutionalized population	0	0.0
HOUSEHOLDS BY TYPE		
Total households	1,684	100.0
Family households (families)	1,291	76.7
With own children under 18 years	554	32.9
Married-couple family	1,091	64.8
With own children under 18 years	463	27.5
Female householder, no husband present	145	8.6
With own children under 18 years	66	3.9
Nonfamily households	393	23.3
Householder living alone	354	21.0
Householder 65 years and over	155	9.2
Households with individuals under 18 years	631	37.5
Households with individuals 65 years and over	416	24.7
Average household size	2.63	(X)
Average family size	3.04	(X)
HOUSING OCCUPANCY		
Total housing units	1,834	100.0
Occupied housing units	1,684	91.8
Vacant housing units	150	8.2
For seasonal, recreational, or occasional use	23	1.3
Homeowner vacancy rate (percent)	1.3	(X)
Rental vacancy rate (percent)	11.0	(X)
HOUSING TENURE		
Occupied housing units	1,684	100.0
Owner-occupied housing units	1,489	88.4
Renter-occupied housing units	195	11.6
Average household size of owner-occupied unit	2.65	(X)
Average household size of renter-occupied unit	2.49	(X)

(X) Not applicable

¹ Other Asian alone, or two or more Asian categories.² Other Pacific Islander alone, or two or more Native Hawaiian and Other Pacific Islander categories.³ In combination with one or more other races listed. The six numbers may add to more than the total population and the six percentages may add to more than 100 percent because individuals may report more than one race.

Source: U.S. Census Bureau, Census 2000 Summary File 1, Matrices P1, P3, P4, P8, P9, P12, P13, P17, P18, P19, P20, P23, P27, P28, P33, PCT5, PCT8, PCT11, PCT15, H1, H3, H4, H5, H11, and H12.

DP-1. Profile of General Demographic Characteristics: 2000
Data Set: Census 2000 Summary File 1 (SF 1) 100-Percent Data
Geographic Area: Census Tract 308, Roane County, Tennessee

NOTE: For information on confidentiality protection, nonsampling error, and definitions, see
<http://factfinder.census.gov/home/en/datanotes/expsf1u.htm>.

Subject	Number	Percent
---------	--------	---------

Total population	6,001	100.0
SEX AND AGE		
Male	2,757	45.9
Female	3,244	54.1
Under 5 years	317	5.3
5 to 9 years	345	5.7
10 to 14 years	408	6.8
15 to 19 years	433	7.2
20 to 24 years	335	5.6
25 to 34 years	711	11.8
35 to 44 years	889	14.8
45 to 54 years	871	14.5
55 to 59 years	301	5.0
60 to 64 years	326	5.4
65 to 74 years	522	8.7
75 to 84 years	382	6.4
85 years and over	161	2.7
Median age (years)	40.3	(X)
18 years and over	4,660	77.7
Male	2,069	34.5
Female	2,591	43.2
21 years and over	4,434	73.9
62 years and over	1,250	20.8
65 years and over	1,065	17.7
Male	363	6.0
Female	702	11.7
RACE		
One race	5,927	98.8
White	5,424	90.4
Black or African American	467	7.8
American Indian and Alaska Native	11	0.2
Asian	13	0.2
Asian Indian	2	0.0
Chinese	1	0.0
Filipino	6	0.1
Japanese	0	0.0
Korean	3	0.0
Vietnamese	0	0.0
Other Asian ¹	1	0.0
Native Hawaiian and Other Pacific Islander	1	0.0
Native Hawaiian	0	0.0
Guamanian or Chamorro	1	0.0
Samoan	0	0.0
Other Pacific Islander ²	0	0.0
Some other race	11	0.2
Two or more races	74	1.2
Race alone or in combination with one or more other races ³		
White	5,490	91.5
Black or African American	496	8.3
American Indian and Alaska Native	58	1.0
Asian	20	0.3
Native Hawaiian and Other Pacific Islander	1	0.0
Some other race	13	0.2
HISPANIC OR LATINO AND RACE		
Total population	6,001	100.0
Hispanic or Latino (of any race)	49	0.8
Mexican	33	0.5
Puerto Rican	3	0.0
Cuban	0	0.0
Other Hispanic or Latino	13	0.2
Not Hispanic or Latino	5,952	99.2
White alone	5,389	89.8
RELATIONSHIP		
Total population	6,001	100.0
In households	5,808	96.8

Householder	2,511	41.8
Spouse	1,135	18.9
Child	1,606	26.8
Own child under 18 years	1,155	19.2
Other relatives	330	5.5
Under 18 years	157	2.6
Nonrelatives	226	3.8
Unmarried partner	117	1.9
In group quarters	193	3.2
Institutionalized population	181	3.0
Noninstitutionalized population	12	0.2
HOUSEHOLDS BY TYPE		
Total households	2,511	100.0
Family households (families)	1,618	64.4
With own children under 18 years	675	26.9
Married-couple family	1,135	45.2
With own children under 18 years	425	16.9
Female householder, no husband present	384	15.3
With own children under 18 years	195	7.8
Nonfamily households	893	35.6
Householder living alone	798	31.8
Householder 65 years and over	342	13.6
Households with individuals under 18 years	789	31.4
Households with individuals 65 years and over	733	29.2
Average household size	2.31	(X)
Average family size	2.90	(X)
HOUSING OCCUPANCY		
Total housing units	2,851	100.0
Occupied housing units	2,511	88.1
Vacant housing units	340	11.9
For seasonal, recreational, or occasional use	10	0.4
Homeowner vacancy rate (percent)	2.0	(X)
Rental vacancy rate (percent)	17.4	(X)
HOUSING TENURE		
Occupied housing units	2,511	100.0
Owner-occupied housing units	1,530	60.9
Renter-occupied housing units	981	39.1
Average household size of owner-occupied unit	2.46	(X)
Average household size of renter-occupied unit	2.09	(X)

(X) Not applicable

¹ Other Asian alone, or two or more Asian categories.² Other Pacific Islander alone, or two or more Native Hawaiian and Other Pacific Islander categories.³ In combination with one or more other races listed. The six numbers may add to more than the total population and the six percentages may add to more than 100 percent because individuals may report more than one race.

Source: U.S. Census Bureau, Census 2000 Summary File 1, Matrices P1, P3, P4, P8, P9, P12, P13, P17, P18, P19, P20, P23, P27, P28, P33, PCT5, PCT8, PCT11, PCT15, H1, H3, H4, H5, H11, and H12.

Appendix B

Initial Coordination Reply Letters



Tennessee Valley Authority, 400 West Summit Hill Drive, Knoxville, Tennessee 37902-1499

December 23, 1998

Mr. Charles E. Bush
Transportation Manager II
Environmental Planning Office
Department of Transportation
Suite 900, James K. Polk Building
505 Deaderick Street
Nashville, Tennessee 37243-0334

Dear Mr. Bush:

PROPOSED IMPROVEMENTS TO STATE ROUTE 29 (U.S. 27) FROM STATE ROUTE 61
NORTH OF HARRIMAN TO STATE ROUTE 62 AT WARTBURG, WATTS BAR
RESERVOIR AND TRIBUTARIES, MORGAN AND ROANE COUNTIES, TENNESSEE

TVA has reviewed information provided in your letter and Project Data Summary Sheet of October 9, 1998, on proposed improvements to U.S. 27. Approvals under Section 26a of the TVA Act would be required for the bridges or culverts associated with crossings of Little Emory River, Bitter Creek, Crooked Fork, and perhaps other tributaries depending on final design. In addition, an easement to cross TVA land and permission to fill in flowage easement along the Little Emory River also would be needed. If a Federal environmental document is to be prepared for this project, we request that Tennessee Department of Transportation and Federal Highway Administration include TVA as a cooperating agency in the National Environmental Policy Act review process. If it is determined that a Federal NEPA review is not to be conducted, please note that environmental information related to wetlands and mitigation, floodplains, National Historic Preservation Act compliance, Endangered Species Act compliance, and other environmental information would greatly facilitate TVA's eventual review and approval of the project.

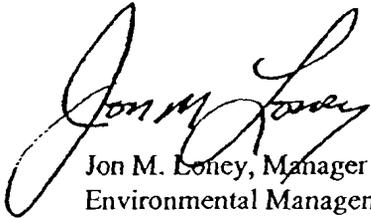
In addition, we are aware of the following environmental resources and issues that should be addressed in the review of this project:

- The corridor for the Cumberland Trail State Park crosses U.S. 27 in the area under study, although the trail may not have been constructed near the proposed highway improvement.
- A 1981 study by the Tennessee Wildlife Resources Agency identified the Little Emory River/Bitter Creek area as a key endangered species habitat. The Little Emory River contains the Alabama lampmussel (federally endangered) and the tangerine darter (state-listed in need of management). Smoky shrew (state-listed in need of management) habitat is known along Bitter Creek.

Mr. Charles Bush
Page 2
December 23, 1998

Should you have any questions, please contact Harold M. Draper at (423) 632-6889 or hmdraper@tva.gov.

Sincerely,

A handwritten signature in cursive script, appearing to read "Jon M. Loney".

Jon M. Loney, Manager
Environmental Management

cc: Mr. James E. Scapellato
Federal Highway Administration
249 Cumberland Bend Drive
Nashville, Tennessee 37228



DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1070
NASHVILLE, TENNESSEE 37202-1070

November 19, 1998

IN REPLY REFER TO

Regulatory Branch

SUBJECT: File No. 980019450; Proposed Improvement of State Route 29 from State Route 61 to State Route 62 in Roane and Morgan Counties, Tennessee

Tennessee Department of Transportation
ATTN: Charles E. Bush
Suite 900
James K. Polk Building
Nashville, Tennessee 37243-0334

Gentlemen:

This is in response to your letter dated October 9, 1998, requesting comments with respect to the potential environmental impacts which may occur as a result of the proposed project.

As stated in your project data summary sheet, there would be a crossing of Little Emory River and a number of other streams which may require Department of the Army Permits. These along with any wetland locations which may be impacted by the project should be submitted to us for our review prior to execution of construction contracts.

Thank you for the opportunity to comment on this matter. If you have any questions, you can contact me at the above address or call (615) 736-5181.

Sincerely,

E. Ronald Green
Project Manager
Construction-Operation Division





United States
Department of
Agriculture

Natural
Resources
Conservation
Service

Tennessee State Office
675 US Courthouse
801 Broadway
Nashville, TN 37203

DEC 11 1998

December 11, 1998

Mr. Charles E. Bush
Transportation Manager II
Department of Transportation
Suite 900, James K. Polk Building
505 Deaderick Street
Nashville, Tennessee 37243-0334

Dear Mr. Bush:

Enclosed is the completed AD-1006 Farmland Conversion Impact Rating for the proposed improvement of State Route 29 (US 27), from State Route 61 North of Harriman to State Route 62 at Wartburg, in Roane and Morgan Counties, Tennessee.

If you have any additional questions please contact me.

JAMES W. FORD
State Conservationist

Enclosure

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date Of Land Evaluation Request October 9, 1998
Name Of Project State Route 29	Federal Agency Involved Federal Highway Administration	
Proposed Land Use Highway	County And State Koane and Morgan Counties	
PART II (To be completed by SCS)		Date Request Received By SCS

Does the site contain prime, unique, statewide or local important farmland? If no, the FPPA does not apply — do not complete additional parts of this form.		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Acres Irrigated	Average Farm Size
Major Crop(s) CORN	Farmable Land In Govt. Jurisdiction Acres: %	Amount Of Farmland As Defined in FPPA Acres: %		
Name Of Land Evaluation System Used L.E.S.A.	Name Of Local Site Assessment System	Date Land Evaluation Returned By SCS 12/10/98		

PART III (To be completed by Federal Agency)	Alternative Site Rating			
	Site A	Site B	Site C	Site D
Total Acres To Be Converted Directly	0	40.51 ±		
Total Acres To Be Converted Indirectly	0	10.00 ±		
Total Acres In Site	0	50.51 ±		
PART IV (To be completed by SCS) Land Evaluation Information				
Total Acres Prime And Unique Farmland	64	79		
Total Acres Statewide And Local Important Farmland				
Percentage Of Farmland In County Or Local Govt. Unit To Be Converted				
Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value				
PART V (To be completed by SCS) Land Evaluation Criterion				
Relative Value Of Farmland To Be Converted (Scale of 0 to 100 Points)	95	95		

PART VI (To be completed by Federal Agency)	Maximum Points	Site A	Site B	Site C	Site D
Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))					
1. Area In Nonurban Use		5	6		
2. Perimeter In Nonurban Use		5	7		
3. Percent Of Site Being Farmed		6	8		
4. Protection Provided By State And Local Government		0	0		
5. Distance From Urban Builtup Area		0	0		
6. Distance To Urban Support Services		0	0		
7. Size Of Present Farm Unit Compared To Average		3	5		
8. Creation Of Nonfarmable Farmland		2	3		
9. Availability Of Farm Support Services		4	6		
10. On-Farm Investments		8	9		
11. Effects Of Conversion On Farm Support Services		2	4		
12. Compatibility With Existing Agricultural Use		1	1		
TOTAL SITE ASSESSMENT POINTS	160	36	49		

PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)	100	95	95		
Total Site Assessment (From Part VI above or a local site assessment)	160	36	49		
TOTAL POINTS (Total of above 2 lines)	260	131	144		

Was A Local Site Assessment Used?

Tom L. / NATAN

FEDERAL ENERGY REGULATORY COMMISSION
ATLANTA REGIONAL OFFICE
Parkridge 85 North Building
3125 Presidential Parkway - Suite 300
Atlanta, Georgia 30340
(770) 452-2360

OCT 16 1998



Mr. Charles E. Bush
Transportation Manager 2
Environmental Planning Office
State of Tennessee
Department of Transportation
Suite 900 - James K. Polk Building
505 Deaderick Street
Nashville, Tennessee 37243-0334

Dear Mr. Bush:

This acknowledges your letter dated October 9, 1998, soliciting comments on the improvement to State Route 29 in Roane and Morgan counties, Tennessee. It appears that the improvement will not impact hydroelectric developments under the jurisdiction of the Federal Energy Regulatory Commission. Therefore, we have no comment.

Sincerely,


Jerrold W. Gotzmer, P.E.
Director

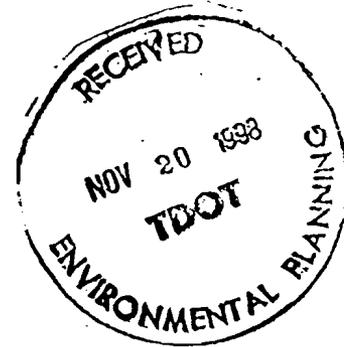


United States Department of the Interior

FISH AND WILDLIFE SERVICE

446 Neal Street
Cookeville, Tennessee 38501

November 18, 1998



Mr. Charles E. Bush
Transportation Manager II
Tennessee Department of Transportation
505 Deaderick Street, Suite 900
Nashville, Tennessee 37243-0334

Dear Mr. Bush:

Thank you for your letter and enclosures of October 9, 1998, concerning the proposed U.S. 27 improvement project in Morgan and Roane Counties, Tennessee. The Fish and Wildlife Service (Service) has reviewed the information submitted and the following comments are provided in accordance with the provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

The Service is concerned that highway projects frequently accelerate erosion and sedimentation in streams, resulting in adverse effects to the aquatic environment. The use of heavy equipment to move earth and existing vegetation disrupts natural drainage patterns and exposes large areas of disturbed soil to erosion. Excessive sedimentation can clog stream channels and contribute to increased flooding. It can also increase water temperatures and cause oxygen demands which can damage or destroy fish and invertebrate populations. Deposition of sediment on the channel bottom also degrades aquatic habitat by filling in substrate cavities, burying demersal eggs, and smothering bottom organisms. In addition, turbidity, as induced by accelerated erosion and sedimentation, results in further damage to aquatic systems. Increased particulate matter suspended in the water column may drive fish from the polluted area by irritating the gills, concealing forage, and/or destroying vegetation that may be essential for spawning and cover habitat for particular species. Turbidity also degrades water quality by reducing light penetration, pH and oxygen levels, and the buffering capacity of the water. Degraded water quality may continue far downstream from the point where the erosion occurs.

Prevention of excessive sedimentation can occur only through application of Best Management Practices during daily construction activities. Rigid application of your agency's construction erosion control standards can preclude most sedimentation problems; however, in some cases additional measures will need to be taken by on-site inspectors and construction representatives.

Upon review of the proposed projects, we find that the information provided is insufficient to determine if the proposed action will require U.S. Army Corps of Engineers' permits. Since permit applications could more thoroughly reveal the extent of construction activities affecting aquatic resources, we will provide additional comments during the 404 review process should the project necessitate Corps' permits. However, we would likely have no objection to the issuance of permits if any necessary stream channel work is held to a minimum and Best Management Practices are utilized and enforced, effectively controlling erosion, sedimentation, and other potential hazards. The following conditions are specifically recommended:

1. Erosion and sediment control measures, including but not limited to the following, should be implemented on all vegetatively denuded areas:
 - a. Preventive planning: A well-developed erosion control plan which entails a preliminary investigation, detailed contract plans and specifications, and final erosion and sediment control contingency measures should be formulated and made a part of the contract.
 - b. Diversion channels: Channels should be constructed around the construction site to keep the work site free of flow-through water.
 - c. Silt barriers: Appropriate use should be made of silt fences, hay bale and brush barriers, and silt basins in areas susceptible to erosion.
 - d. Temporary seeding and mulching: All cuts and fill slopes, including those in waste sites and borrow pits, should be seeded as soon as possible.
 - e. Limitation of instream activities: Instream activities, including temporary fills and equipment crossings, should be limited to those absolutely necessary.
2. Concrete box culverts should be placed in a manner that prevents any impediment to low flows or to movement of indigenous aquatic species.
3. Channel excavations required for pier placement should be restricted to the minimum necessary for that purpose. Overflow channel excavations should be confined to one side of the channel, leaving the opposite bank and its riparian vegetation intact.
4. All fill should be stabilized immediately upon placement.
5. Streambanks should be stabilized with riprap or other accepted bioengineering technique(s).

6. Existing transportation corridors should be used in lieu of temporary crossings where possible.
7. Good water quality should be maintained during construction.

Efficient management practices can minimize adverse impacts associated with construction. It is important that these and other measures be monitored and stringently enforced. This will aid in preserving the quality of the natural environment.

The list below indicates whether or not federally listed or proposed endangered or threatened species may occur in the project impact areas. You should assess potential impacts to listed species and determine if the proposed projects may affect them. A "may affect" finding may necessitate formal consultation. Candidate species are not currently listed or proposed, but they are under consideration for listing. They are not legally protected at this time, but we would appreciate anything you might do to avoid impacting them.

Spotfin chub (Hybopsis monacha)
Cumberland elktoe (Alasmidonta atropurpurea)
Cumberland rosemary (Conradina verticillata)
Virginia spiraea (Spiraea virginiana)

Thank you for giving us the opportunity to comment on these actions. If you have any questions, please contact Jim Widlak of my staff at 931/528-6481, ext. 202.

Sincerely,

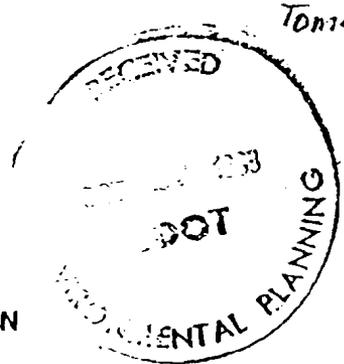


Lee A. Barclay, Ph.D.
Field Supervisor



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

October 22, 1998



Mr. Charles E. Bush
Environmental Planning Office
Tennessee Department of Transportation
Suite 900, James K. Polk Building
505 Deadrick Street
Nashville, TN 37243-0334

Dear Mr. Bush:

Thank you for your recent request for scoping information concerning a proposed construction improvement project on State Route 29 (U.S. 27), from State Route 61 north of Hamman to State Route 62 at Wartburg, in Roane and Morgan Counties, Tennessee.

Staff from the Knoxville Environmental Assistance Center were contacted for their comments. Alternative B is the preferred route in that it crosses fewer streams and it encompasses less distance than Alternative A. The division is concerned about the width of the median, 48 feet in Section 1 and in Alternative B. A narrower median and shoulder is preferred. Additionally, the number and size of stream crossings should be minimized.

Our general concerns about similar projects include some or all of the following issues (not listed in priority order):

- That appropriate erosion and stormwater controls are installed and maintained
- That appropriate permits are obtained prior to beginning work
- That impacts to water resources, including wetlands, are avoided if possible. Several streams will be crossed by the proposed project: Bitter Creek, Mud Lick Creek, Muddy Branch, Mud Creek, Whetstone Branch, Forked Creek, Crooked Creek, Flat Fork, and Summers Branch, along with the Little Emory River.
- The Tennessee Dace, a Deemed in Need of Management species, is recorded in Flat Fork. TDOT should be aware of the possibility the species exists in the other small streams mentioned above.
- That appropriate mitigation be undertaken should impacts to water resources be unavoidable

We look forward to reviewing the Draft Environmental Impact Statement mentioned in the scoping letter. If you have questions concerning my comments, please contact me at 615-532-0699.

Sincerely,

Gregory M. Denton, Manager



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
10th Floor, L & C Tower
401 Church Street
Nashville, Tennessee

November 16, 1998

Mr. Charles E. Bush
Environmental Planning Office
Suite 900, James K. Polk Building
505 Deaderick Street
Nashville, Tennessee 37243-0334



Re: Proposed Improvements to State Route 29
Roane and Morgan Counties, Tennessee

Dear Mr. Bush:

The Division of Ground Water Protection regulates all aspects of the subsurface sewage disposal (SSD) program in the State of Tennessee. In this regard, division staff have worked closely with TDOT on those construction projects where it is anticipated that the project will potentially impact existing SSD systems.

Regarding the proposed improvement project for State Route 29, the Division of Ground Water Protection does not anticipate that this project will effect or conflict with any of our programs. However, if it becomes apparent that our assistance will be requested on a particular project, we ask that our field staff be given adequate prior notice to allow for scheduling of the additional work load.

If you have any questions or feel that our assistance will be requested on this project, you should contact Mr. Isaac Russell with the Knoxville Environmental Assistance Center at (423) 5945446.

Sincerely,

A handwritten signature in cursive script that reads "Kent D. Taylor".

Kent D. Taylor
Director
Division of Ground Water Protection

KDT/SWM

cc: Isaac Russell, Knoxville-EAC



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
KNOXVILLE ENVIRONMENTAL FIELD OFFICE
2700 MIDDLEBROOK PIKE, SUITE 220
KNOXVILLE, TENNESSEE 37921-5602
(615) 594-6035 FAX (615) 594-6105

November 10, 1998

Mr. Charles E. Bush
Transportation Manager 2
Environmental Planning Office
Suite 900, James K. Polk Building
505 Deadrick Street
Nashville, Tennessee 37243-0334

Subject: Potential Environmental Impacts, State Route 29 From State
Route 61 north of Harriman to State Route 62 at Wartburg, in Roane and Morgan
Counties, Tennessee.

Dear Mr. Bush:

A site investigation was performed by David K. Reece of the Hazardous Waste Unit on November 4, 1998. Some commercial facilities were located along the Alternative A proposed route that have the potential to contain soil contamination. Alternative B is approximately 2.9 miles through private property (non commercial), thus a walk over was not conducted.

There are no permitted solid or hazardous waste facilities in the proposed right of way. Dependent upon final placement of the proposed improvement, the right-of-way could be contaminated from convenient stores or old service garage sites.

Sincerely,

A handwritten signature in cursive script that reads "D. Reece".

David K. Reece
Environmental Specialist III, DSWM

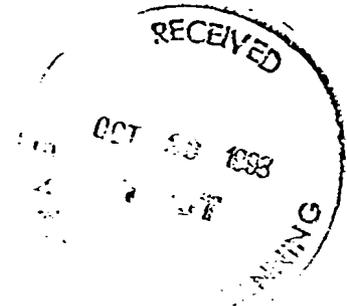
c: Tom Tiesler, DSWM/NCO
Mike Apple, DSWM/NCO
DSWM, Nashville

Enclosure:

*10/12/98
Copy to: Kay*



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
9th Floor L&C Annex, 401 Church Street
Nashville, Tennessee 37243-1531



October 12, 1998

Mr. Charles E. Bush
Department of Transportation
Environmental Planning Office
Suite 900, James K. Polk Building
505 Deaderick Street
Nashville, TN 37243-0334

Dear Mr. Bush:

The Division of Air Pollution Control has reviewed your project summary for the proposed improvements to State Route 29 (U.S. 27), from State Route 61 to State Route 62 in Roane and Morgan Counties, Tennessee. This project is not in a nonattainment or maintenance area, therefore a formal conformity determination is not required. Since this project is in such proximity to the Smoky Mountains, some concern has been expressed in regards to regional haze effects, and traffic simulation modeling has been suggested. This agency, however, is not requiring any specific actions above what would be included in the standard Environmental Assessment, as pursuant to the NEPA process.

We appreciate the chance to comment on this, and we would also appreciate the chance to review the completed Environmental Assessment when it is available.

If you have any questions or comments, please feel free to call me at (615) 532-0554.

Sincerely

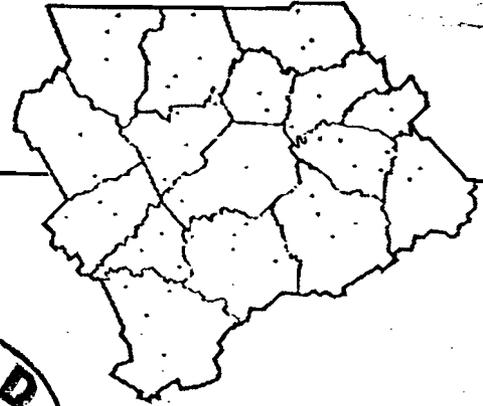
A handwritten signature in cursive script that reads "Tracy R. Carter".

Tracy R. Carter
Director

cc: Dodd Galbreath

East Tennessee Development District

5616 Kingston Pike P.O. Box 19806 Knoxville, TN 37939-2806
PHONE: (423) 584-8553 FAX: (423) 584-5159



November 11, 1998

Mr. Charles E. Bush
Transportation Manager II
Tennessee Department of Transportation
Environmental Planning Office
Suite 900, James K. Polk Building
505 Deaderick Street
Nashville, TN 37243-0334

Dear Mr. Bush:

SUBJECT: Result of Regional Review
Tennessee Department of Transportation - SR 29 (US 27) from SR 61 North of Harriman
to SR 62 at Wartburg in Roane and Morgan Counties (Federal Highway Administration)

The East Tennessee Development District has completed its review of the above mentioned proposal, in its role as a regional clearinghouse to review state and federally-assisted projects.

Floyd E. Freytag, President of the Plateau Utility District, has written a letter to the East Tennessee Development District supporting this proposal. In his letter Mr. Freytag recommends alternative route B. His letter is attached as part of ETDD's review.

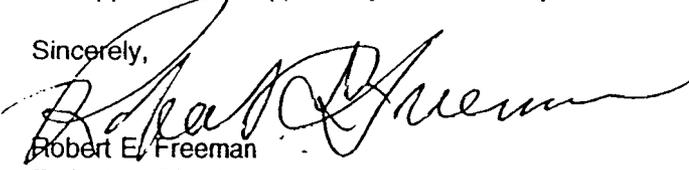
On the other hand, others have expressed concern that Alternative B routes all traffic directly by two schools (where it coincides with SR 62), would require the purchase of several expensive homes (near where it intersects SR 62 on the east), and would tend to discourage tourists from finding the access to the Obed National Scenic River in downtown Wartburg.

ETDD expresses no opinion at this time, and other than a 4-lane route should be built, and understands that public hearings will be held; therefore, all interested parties will have ample opportunity to comment.

ETDD or other reviewing agencies may wish to comment further at a later time.

We appreciate the opportunity to work with you in coordinating projects in the region.

Sincerely,


Robert E. Freeman
Executive Director

cc Federal Highway Administration
Mr. Tommy Kilby, Morgan County Executive
Mr. Floyd E. Freytag, President, Plateau Utility District

ENV 65-29

**PLATEAU UTILITY DISTRICT
P.O. BOX 407
WARTBURG TN, 37887
Telephone 423 346-3101**

Floyd E. Freytag
President

John M. Davis II
Secretary

Joe Walls
Member

October 21, 1998

Trudy Garrett
Project Review Coordinator
East Tennessee Development District
P.O. Box 19806
Knoxville, TN 37939-2806

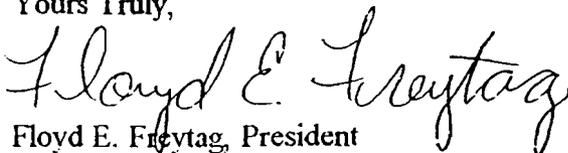
Dear Trudy,

I am extremely glad and appreciate the East Tennessee Development District taking an interest in the proposed highway project for Morgan County. It is a project that it well past due and very much needed. This project, if completed, will mean an awful lot to Morgan County for several reasons. It will give us better access to the rest of the state and make us a more interesting site for business industries looking for new locations. It will also make our recreational sites more accessible.

Having said that a study of the routes and alternate routes, leads me to believe that alternate route B would be the best choice, and I strongly recommend it.

We appreciate the Development District's interest in this and your assistance in this improvement.

Yours Truly,



Floyd E. Freytag, President
Plateau Utility District



**Cumberland
Trail
Conference**

Cumberland Trail Conference

Route 1, Box 219A

Pikeville, TN 37367

423-533-2620 931-456-6219

An Associate Organization of Tennessee Trails Association

Visit Our Web Site at: <http://users.multipro.com/cumberlandtrail>



May 7, 1999

Gus Awali
TDOT – Environmental Planning Office
Suite 900, J.K. Polk Building
505 Deadrick St.
Nashville, TN 37243

Dear Mr. Awali:

This is to inform your organization that the potential expansion of State Hwy 27 in Morgan county, from the current State Hwy 61/Hwy 27 junction to the city of Wartburg, will have no impact on the Cumberland Trail State Park or any potential corridor it might follow. While this trail corridor might cross Hwy. 27 at some point in the near future, no property located in the vicinity of the Hwy 27 has been purchased for this purpose at this time.

Thank you for your consideration on this matter.

Sincerely

Rob Weber
Project Manager

Appendix C

Cultural Correspondence



TENNESSEE HISTORICAL COMMISSION
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
2941 LEBANON ROAD
NASHVILLE, TN 37243-0442
(615) 532-1550

April 9, 2002

Mr. Gerald Kline
Tennessee Department of Transportation
Environmental Planning Office
Suite 900, James K. Polk Building
505 Deaderick Street
Nashville, Tennessee 37243-0334

RE: FHWA, ARCHAEOLOGICAL ASSESSMENT, SR-29/NORTH OF HARRIMAN TO SR-62,
UNINCORPORATED, ROANE COUNTY, TN

Dear Mr. Kline:

At your request, our office has reviewed the above-referenced archaeological survey report in accordance with regulations codified at 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739). Based on the information provided, and the revised design, we concur that the project area contains no archaeological resources eligible for listing in the National Register of Historic Places.

Therefore, this office has no objection to the implementation of this project. If project plans are changed or archaeological remains are discovered during construction, please contact this office to determine what further action, if any, will be necessary to comply with Section 106 of the National Historic Preservation Act.

Your cooperation is appreciated.

Sincerely,

Herbert L. Harper
Executive Director and
Deputy State Historic
Preservation Officer

HLH/jmb



TENNESSEE HISTORICAL COMMISSION
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
2941 LEBANON ROAD
NASHVILLE, TN 37243-0442
(615) 532-1550

May 12, 1999

Ms. Martha Carver
Environmental Planning
TDOT, 9th. Floor Polk Bldg
Nashville, Tennessee 37219

RE: FHWA, ARCHITECTURAL/HISTORICAL ASSESSMENT, SR-29 IMPVTS./SR-61 TO SR-62,
MORGAN, ROANE COUNTY

Dear Ms. Carver:

At your request, our office has reviewed the above-referenced document received on Friday, April 23, 1999 in accordance with regulations codified at 36 CFR 800 (51 FR 31115, September 2, 1986). Considering the information provided, we find that the area of potential effect contains no architectural resources eligible for listing in the National Register of Historic Places. You should notify interested persons and make the documentation associated with this finding available to the public.

All borrow areas outside proposed rights-of-way will require separate certification as specified under Section 107.06-Federal Aid Provisions. If your agency proposes any modifications in current project plans or discovers any archaeological remains during the ground disturbance or construction phase, please contact this office to determine what further action, if any, will be necessary to comply with Section 106 of the National Historic Preservation Act.

This office appreciates your cooperation.

Sincerely,

Herbert L. Harper
Executive Director and
Deputy State Historic
Preservation Officer

HLH/jyg

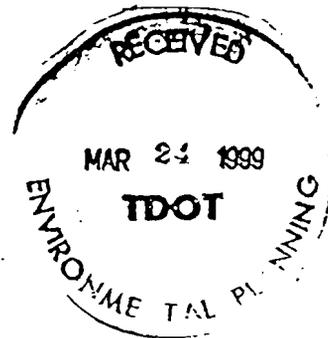
Appendix D

Cooperating Agency Letters

Nathan



Tennessee Valley Authority, 400 West Summit Hill Drive, Knoxville, Tennessee 37902-1499
March 19, 1999



Mr. Charles E. Bush
Transportation Manager
Environmental Planning Office
Tennessee Department of Transportation
Suite 900, James K. Polk Building
505 Deaderick Street
Nashville, Tennessee 37243-0334

Dear Mr. Bush:

ENVIRONMENTAL ASSESSMENT (EA) FOR STATE ROUTE 29 (US 27) FROM SR 61 NORTH OF HARRIMAN TO SR 62 IN WARTBURG, WATTS BAR RESERVOIR AND TRIBUTARIES, MORGAN AND ROANE COUNTIES, TENNESSEE

In response to your January 9, 1999 letter, TVA is pleased to participate as a cooperating agency in development of the subject EA. By incorporating the TVA Section 26a and land use review into the Department of Transportation EA process, we hope to increase the efficiency of the environmental review process for both agencies.

In order to assist TVA in meeting its NEPA responsibilities, information related to wetlands and potential mitigation, Floodplain Management Executive Order, National Historic Preservation Act compliance, and Endangered Species Act compliance should be included in the EA and Finding of No Significant Impact (FONSI), as appropriate. Other issues to be discussed would vary according to project location and impacts but may include, as appropriate, state-listed species (biodiversity impacts), farmland, noise, and visual impacts.

Please invite TVA to any interagency site visits, if any are found to be necessary. Please send a draft copy of the EA for review prior to completion, and a copy of the EA and FONSI when it is completed.

Should you have any questions, please contact Harold M. Draper at (423) 632-6889 or hmdraper@tva.gov.

Sincerely,

for Jon M. Loney, Manager
Environmental Management

Tom L.



Tennessee Valley Authority, 400 West Summit Hill Drive, Knoxville, Tennessee 37902-1499

September 3, 2002

Mr. Charles E. Bush
Transportation Manager II
Tennessee Department of Transportation
Environmental Planning and Permits Division
Suite 900, James K. Polk Building
505 Deaderick Street
Nashville, Tennessee 37243-0334

Dear Mr. Bush:

PRELIMINARY ENVIRONMENTAL ASSESSMENT (EA) - STATE ROUTE (SR) 29 (U.S. 27)
FROM SR 61 EAST OF HARRIMAN TO SR 62, ROANE AND MORGAN COUNTIES,
TENNESSEE

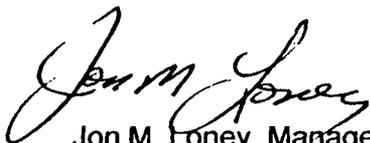
Thank you for the opportunity to review the preliminary EA for the proposed four-lane and five-lane construction of SR 29 (currently signed as US 27) across the Little Emory River, Crooked Fork, Flat Fork, Bitter Creek and other Watts Bar Reservoir tributaries. The document correctly notes that a Section 26a approval would be needed from TVA. An easement for the use of TVA Watts Bar Reservoir lands also may be required. The following comments are provided:

- Section H.4. and H.5, Impacts to Other Unique or Sensitive Ecological Resources and Endangered and Threatened Species, pages 20-21. In our December 23, 1998 letter responding to the initial coordination, we mentioned that a 1981 study by the Tennessee Wildlife Resources Agency identified the Little Emory River/Bitter Creek area as a key endangered species habitat. The Little Emory River contains the Alabama lampmussel (federally endangered) and the tangerine darter (state-listed in need of management). Smoky shrew (state-listed in need of management) habitat is known along Bitter Creek. Also, the October 22, 1998 letter from the Department of Environment and Conservation stated that the Tennessee Dace was present in Flat Fork, and the November 18, 1998 letter from the U.S. Fish and Wildlife Service listed several species. You may wish to state that Department biologists did not find these species in their field studies, if true.
- There is a natural gas pipeline in the area between Lone Mountain State Forest and the Little Emory River. It is proposed to be upgraded as part of the East Tennessee Natural Gas (Duke Energy) Patriot Project. A Draft EIS for the Patriot Project was released by the Federal Energy Regulatory Commission in April 2002. A copy of page 3-75 and maps 8, 9, 10, and 78 from that EIS are enclosed. You may wish to send a copy of the US 27 draft EA to East Tennessee Natural Gas Company, 1575 Downtown West Boulevard, Knoxville, Tennessee 37919 for comment.

Mr. Charles E. Bush
Page 2
September 3, 2002

TVA appreciates the opportunity to serve as a cooperating agency on this project. Upon completion of the EA, please send a copy to me. In addition, please send a copy of the signed Finding of No Significant Impact (FONSI) to this office when completed. Should you have any questions, please contact Harold M. Draper at (865) 632-6889 or hmdraper@tva.gov.

Sincerely,



Jon M. Loney, Manager
NEPA Administration
Environmental Policy and Planning

Enclosures

cc: Mr. Charles S. Boyd
Division Administrator
Federal Highway Administration
640 Grassmere Park, Suite 112
Nashville, Tennessee 37211



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
3701 Bell Road
NASHVILLE, TENNESSEE 37214

RECEIVED

OCT 9 9 2002

October 2, 2002

**ENVIRONMENTAL PLANNING
AND PERMITS**

Regulatory Branch

SUBJECT: File No. 980019450; Proposed Improvements to SR 29
(US Hwy 27), in Roane & Morgan Counties, Tennessee

Mr. Charles E. Bush
Transportation Manager II
TDOT Environmental Planning
and Permits Division
Suite 900, J.K. Polk Bldg.
505 Deaderick Street
Nashville, TN 37243-0334

Dear Mr. Bush:

This is in response to your August 20, 2002 letter requesting our review of the preliminary Environmental Assessment prepared by your agency regarding the subject work.

The U.S. Army administers regulatory jurisdiction over navigable waters of the United States under Section 10 of the Rivers and Harbors Act of 1899 and all waters of the U.S., including wetlands, under Section 404 of the Clean Water Act.

Review of the information provided indicates the proposed work would involve impacts from fill activities to Little Emory River, Bitter Creek, Forked Creek, Muddy Branch, Crooked Fork, Flat Creek, Mud Creek and other unnamed tributaries thereof. Several wetlands identified would also be impacted. Therefore, the proposed subject work would require a Department of the Army (DA) permit. In order to make a complete and final determination, we would need specific information about the project such as a topographical map indicating each fill and/or crossing, type of fill, detailed 8 1/2" x 11" plans, with a typical profile and cross-section and the method of construction. Compensatory mitigation may be required for certain activities.

Other federal, state and/or local approvals may be required. Particularly, the State of Tennessee Department of Environment and Conservation may require a water quality certification and/or Aquatic Resources Alteration Permit (ARAP). Also, the Tennessee Valley Authority may require approval under their Section 26 program. It is the applicant's responsibility to obtain these approvals.

We appreciate your awareness of our regulatory program. No work should be performed in the waterway below ordinary high water until you receive a validated DA permit. If you have any questions, you can contact me at the above address or call (615) 369-7518.

Sincerely,



Deborah T. Tuck
Regulatory Specialist
Operations Division

Appendix E

Air and Noise Assessment

**STATE ROUTE 29
FROM STATE ROUTE 61 EAST OF HARRIMAN
TO STATE ROUTE 62
ROANE AND MORGAN COUNTIES**

AIR AND NOISE EVALUATION

**PREPARED BY
MICHAEL RASMUSSEN
ENVIRONMENTAL PLANNING OFFICE
JUNE 2002**

Air Quality Evaluation

Based upon the analyses of highway projects with similar meteorological conditions and traffic volumes, the carbon monoxide levels of the subject project will be well below the National Ambient Air Quality Standard. This project will have no significant impact on the air quality of the area.

Noise Impacts Evaluation

The effects of increased noise levels due to the project have been evaluated according to the guidance of the 23 CFR, Part 772 which is included in the Tennessee Department of Transportation guidelines on Traffic Noise Abatement. Predicted noise levels have been compared to existing levels and to the Federal Noise Abatement Criteria (See Table 1) to determine the impact of highway generated noise on the community. A noise impact can occur when predicted noise levels approach (1 dBA less than) or exceed the noise abatement criteria and also when there are "substantial" increases in the design year noise levels over the existing noise levels. The criteria used to define "substantial" are as follows:

<u>Increase (dBA)</u>	<u>Subjective Descriptor</u>
0 - 5	No Impact
6 - 15	Moderate Impact
> - 15	Substantial Impact

One of the provisions of the federal noise guidelines is that the designer must account for the statistical variation in traffic noise with respect to time. This is accomplished by stating the existing noise levels, the predicted design noise levels, and the FHWA Noise Abatement Criteria in terms of an "L₁₀" value. This value specifies the sound level (measured on the "A" frequency weighting scale, dBA) which is exceeded no more than 10 percent of the time for the period under consideration. This value indicates both the magnitude and the frequency of occurrence; that is, it gives the dosage of the loudest noise events.

TABLE 1 - Noise Abatement Criteria

Hourly A-Weighted Sound Level - decibels (dBA)

Activity	Category	L10(h)	Description of Activity Criteria
A		60 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B		70 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C		75 (Exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D		----	Undeveloped lands.
E		55 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

With the utilization of the most recent functional layouts and traffic estimates available, the existing and design year (2024) peak-hour levels were predicted at five (5) representative sensitive receptors along the two alternatives. No industrial or commercial receptors were analyzed. The FEDERAL HIGHWAY NOISE PREDICTION MODEL (STAMINA 2.0/OPTIMA) was used to predict these levels. The locations of the predicted levels are shown on the Noise Location Map.

The predicted existing and design year noise levels for the project are shown in Table 2. From this table it can be seen that the sensitive receptors represented by location points 2A and 3A will experience levels approaching or exceeding the noise abatement criteria. In addition the sensitive receptors represented by location point 2B will be subjected to moderate noise impacts when comparing existing and design year noise levels.

Abatement measures were considered for each of the sensitive receptors represented that would be subjected to noise levels that would approach or exceed the noise abatement criteria. Noise barriers were not considered feasible because a five dBA attenuation is not attainable due to the requirement to provide access to all properties. Other forms of noise attenuation, that were also analyzed, included traffic management measures (such as reducing speed limits, prohibition of heavy trucks, etc.) and alteration of horizontal and vertical alignments. The reduction of speed limits and the elimination of truck traffic were determined to be contrary to the major reason for improving the highway, which is to facilitate movement of truck and automobile traffic in the area. Alteration of the horizontal and vertical alignment for the subject project would require undesirable curvature in the alignments or additional construction costs and right-of-way purchases. Each of these methods seems to be unreasonable and infeasible when compared to any limited noise attenuation they might offer. For these reasons, it is unlikely that any form of noise abatement will be incorporated into the design of this project.

Mitigation of Construction Noise Impacts

Construction procedures shall be governed by the Standard Specifications for Road and Bridge Construction as issued by TDOT and as amended by the most recent applicable supplements. The contractor will be bound by Section 107.01 of the Standard Specifications to observe any noise ordinance in effect within the project limits. Detoured traffic shall be routed during construction so as to cause the least practicable noise impact upon residential and noise sensitive areas.

Coordination with Local Officials

The following table, Table 3, indicates the future predicted noise levels and their critical distances for the proposed project. This information is being included to make local officials and planners aware of anticipated highway noise levels so that future development may be compatible with these levels

The distances in the table are measured perpendicular to the center of the proposed near lane at an at-grade situation for both of the proposed alternatives. The predicted "L₁₀" noise levels displayed are conservative and should be considered to be maximum (highest) noise levels expected at any location along the entire roadway at the same distance from the roadway. "L₁₀" is the decibel level measured on the "A" frequency weighting scale (dBA) which is exceeded no more than 10 percent of the time during the peak traffic hour of the design year (2024).

Table 1 indicates the relationship between various land use or activity categories and the upper limits of recommended traffic noise levels for each category as established by 23 CFR, Part 772.

TABLE 2

Summary and Comparison of the
Existing and Design Year (2024)
"L₁₀" Noise Levels in dBA

Location Point	Existing Noise Levels	Design Year Noise Levels <u>With Project</u>	Design Year Noise Levels <u>Without Project</u>	Number and Type of Sensitive Receptors Represented
1 A-B	66	67	66	18 residences
2A	67	69	68	20 residences 2 churches
2B	50	59	50	10 residences
3A	69	71	70	64 residences
3B	65	67	66	13 residences

TABLE 3

Design Year (2024) Predicted "L₁₀"
Project-Contributed Noise Levels (dBA)

<u>Distance*</u>	<u>"L₁₀" Noise Levels</u>
100 Feet (30.5 m)	67
200 Feet (60.9 m)	63
300 Feet (91.4 m)	61
400 Feet (121.8 m)	59
500 Feet (152.3 m)	58

*Perpendicular Distance to the center of the proposed near traffic lane for an at-grade situation.