



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
SUITE 600, JAMES K. POLK BUILDING
NASHVILLE, TENNESSEE 37243-0337

GERALD F. NICELY
COMMISSIONER

PHIL BREDESEN
GOVERNOR

March 5, 2008

Certified Mail

Tennessee Valley Authority
Attn: Mr. Ben Bean
Watershed Representative
Guntersville/Tims Ford Watershed
3696 Alabama Highway 69
Guntersville, Alabama 35976

Re: Project No. APD-NH-27 (40)
State No. 58007-1220-64
Marion County; Tract Nos. 1 & 2

Dear Mr. Bean:

The Tennessee Department of Transportation proposes to improve the intersection of I-24 and State Route 27 in Marion County. This project will impact lands owned by your agency and will involve the need of a Permanent Easement. Accordingly, please find enclosed a completed Land Use Application accompanied by Warrant No. 4777855 in the amount of \$5,000.00 to address processing expenses. Also find two sets of half size right of way plans, legal description of the tracts noted above, and two special plats with the location and ties to TVA monuments. I am also sending appraisals of these tracts to establish a monetary value for the land within the easement.

This project is scheduled for an October, 2008 letting, so I would greatly appreciate an expeditious review of this proposal. Should you have any questions or need any further information please do hesitate to contact me at 615-253-1113 or at gary.palmer@state.tn.us. Thank you very much for your cooperation on this matter.

Sincerely,

A handwritten signature in cursive script that reads "Gary Palmer".

Gary Palmer
Transportation Specialist 1

Enclosures



LAND USE APPLICATION

Tennessee Valley Authority (TVA) Resource Stewardship receives several hundred requests annually for use of TVA land or landrights. Please fill out this application completely. TVA has implemented a cost recovery system so that those who benefit directly from the use of public lands reimburse TVA for its total cost. The appropriate initial payment or standard fee must be included with your application. You will be billed for any additional costs for those actions that exceed the initial payment. Please see the attached sheet *TVA Land Transaction Fees* for additional information. If you have any questions, please call your local TVA Resource Stewardship Watershed Team.

TVA OFFICIAL USE ONLY

RLR No.: 183453

Tract No. Assigned by Realty: _____

1. Name and Mailing Address of Applicant:

Tennessee Department of Transportation
Suite 600, James K. Polk Bldg.
Nashville, TN 37243-0337

Home Telephone No.: _____
 Office Telephone No.: 615-253-1113
 E-Mail Address: Gary.Palmer@state.tn.us
 SSN or Federal ID No.: _____

2. Name, Address, and Title of Authorized Agent: *(i.e., builder, engineer.) Include a letter confirming your authorization.*

Mr. Gerald F. Nicely, Commissioner
Tennessee Dept. of Transportation
Suite 700, James K. Polk Bldg.
Nashville, TN 37243-0349
 Home Telephone No.: _____
 Office Telephone No.: 615-741-2848

3. Location:
Attach a location map and a map showing boundaries of TVA land needed.

Subdivision: Marion County

Subdivision Plat Lot No.: I-24 @ S.R. 27 (U.S. 72)
 Tax Map & Parcel No.: _____
 Reservoir: _____
 River: _____
 River Mile: _____

4. Type of Land Use Required:
Please call your local TVA Resource Stewardship Watershed Team (WT) listed on page 2 to help us determine the appropriate TVA action needed.

Approval by TVA WT:	Approval by TVA Board:
<input type="checkbox"/> Land Use Permit	<input checked="" type="checkbox"/> Easement
<input type="checkbox"/> License Agreement	<input type="checkbox"/> Deed Modification
<input type="checkbox"/> Sufferance Agreement	<input type="checkbox"/> Lease (____ years needed)
<i>(Complete page 1 only)</i>	<input type="checkbox"/> Abandonment
	<input type="checkbox"/> Land Transfer

Proposed Time Schedule for your Project:
 Start Date: October, 2008 Projected Completion Date: October, 2013

Describe your project, its purpose and intended use:
 Describe the proposed development, on or off TVA land. Include a general description of proposed structures to be erected and land disturbance including vegetation removal, fills or excavations. Attach a copy of detailed plans as appropriate.

Will federal assistance be used as part of this project?
 Yes No If yes, describe activity and complete Applicant Information Pre-Award Form.

RECEIVED
 MAR 07 2008
 BY 5000.00 BB
 B.Act.
 RLR #

Authorization for TVA to process your application:
 Application is hereby made for approval of the land use described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities. By submitting this request, I understand business credit checks will be performed as part of the normal business procedure.

PAYMENT TERMS: Payment for Land Transaction Fees and any related costs are due Net thirty (30) days from the date of invoice. On any overdue payment, TVA shall charge interest at the rate payable by TVA under the United States Prompt Payment Act (31 U.S.C. §§3901-3906), from the date payment is due until the date TVA receives payment. Payment of interest shall be due within thirty (30) days after TVA's invoice for such interest is dated.

Failure by the Customer to pay all invoices within sixty (60) days will result in termination of the request.

8. Authorization (continued)

I understand TVA charges a standard fee for minor land actions, and that full cost recovery is required for all other actions. I understand and agree to pay all of TVA's costs associated with the processing of this application (if it is not a minor land action covered by the standard fee), and that the standard fee or initial processing fee is nonrefundable and does not guarantee TVA approval; that TVA may impose terms and conditions at the time of approval; and that these fees are in addition to any payment that may be required for the purchase or use of TVA land.

FEB 26 2008
Date

Donald F. Kelly
Signature of Applicant

9. Anticipated Economic Impacts of your Project:

A. Projected cost estimate and funding source (if project is to be completed in phases, please include time schedule and costs for each phase):

\$17.5 Million
80% Federal 20% State

B. Number of jobs to be created - Near - Term (including construction) _____
Long - Term _____

C. Negative socioeconomic impacts considered: N/A

D. Expected public and investor benefits:
Improved ingress and egress from I-24 onto S.R. 27 and from S.R. 27 onto I-24

10. Describe Anticipated Environmental Impacts: (Include copies of reviews, assessments, or letters from federal or state agencies)
See Permits

11. Alternative Site(s) Considered: (Include justification for rejecting alternate locations; attach explanation if needed)
N/A

12. List all permits, approvals, or certifications required by other federal, state, or local agencies: (Include those required for any structure, construction activity, discharge or other activities described in this application)

Issuing Agency	Type Approval	Identification Number	Date of Application	Date of Approval
TDEC	Indiv. 401 Water Quality			
CORPS	Indiv. 404 Nationwide			
TVA	26A			

13. Has any agency denied approval for the project described herein or any activity related to the project?
 No Yes (If "Yes", attach explanation)

<p>A complete request should include:</p> <ol style="list-style-type: none"> This completed application form and a check or money order with Social Security Number or Federal ID Number on the check made payable to "TVA" for the appropriate land transaction fee. A location map indicating the area of TVA land or landrights affected by the project. Drawing(s) or plan(s) of any proposed construction activity or development which would result if land or landrights are granted. Other documents as available (surveys, environmental documents, etc.). 	<p>FOR TVA USE ONLY</p> <p><u>MARCH 07 2008</u> <u>DGB</u> Date Application Received Initials</p> <p><u>OCT. 17, 2008</u> <u>DGB</u> Date Application Complete Initials</p> <p><u><i>D. G. Brewster</i></u> Team Manager</p>
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JOINT APPLICATION FORM

Department of the Army/TVA

Paperwork Reduction Act Statement - Public reporting burden for this collection of information is estimated to average 1.5 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Agency Clearance Officer, Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402; and to the Office of Management and Budget, Paperwork Reduction Project (3316-0060), Washington, D.C. 20503.

The Department of the Army (DA) permit program is authorized by **Section 10 of the Rivers and Harbors Act of 1899** and **Section 404 of the Clean Water Act (P.L. 95-217)**. These laws require permits authorizing structures and work in or affecting navigable waters of the United States and the discharge of dredged or fill material into waters of the United States. **Section 26a of the Tennessee Valley Authority Act**, as amended, prohibits the construction, operation, or maintenance of any structure affecting navigation, flood control, or public lands or reservations across, along, or in the Tennessee River or any of its tributaries until plans for such construction, operation, and maintenance have been submitted to and approved by the Tennessee Valley Authority (TVA).

Name and Address of Applicant:		Name, Address, and Title of Authorized Agent:	
Tennessee Department of Transportation Suite 900, James K. Polk Building Nashville, Tennessee 37243-0334			
Telephone Number:	Home <input type="text"/>	Telephone Number:	Home <input type="text"/>
	Office <input type="text" value="(615) 253-0021"/>		Office <input type="text"/>

Location where activity exists or will occur (include Stream Name and Mile, if known):

SR-27 (US-72) Interchange at I-24, TDOT project # 58007-1220-64, Marion County

Application submitted to DA TVA

Date activity is proposed to commence:

Date activity is proposed to be completed:

Describe in detail the proposed activity, its purpose and intended use (*private, public, commercial, or other*). Describe structures to be erected including those placed on fills, piles, or floating platforms. Also describe the type, composition, and quantity of materials to be discharged or placed in the water; the means of conveyance; and the source of discharge or fill material. Please attach additional sheets if needed.

The applicant proposes to improve SR-27 (US-72) Interchange with I-24 (TDOT project # 58007-1220-64, PIN 102236.00). The improvements include constructing a new directional ramp, improving existing ramps, and replacing the existing bridge. The proposed project will increase the efficiency and improve operational characteristics of the existing interchange which provides access between I-24 and U.S. Route 72.

This project will cause a loss of flood storage volume of 71,776 CY. There will be no power storage volume loss. Mitigation plans are prepared to substitute the proposed fill and flood storage loss.

Application is hereby made for approval of the activities described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities. **I agree that, if this application is approved by TVA, I will comply with the attached terms and conditions and any special conditions that may be imposed by TVA at the time of approval. Please note the U.S. Army Corps of Engineers may impose additional conditions or restrictions.**

Date


Signature of Applicant

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of The United States knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both. The appropriate DA fee will be assessed when a permit is issued.

Names, addresses, and telephone numbers of adjoining property owners, lessees, etc., whose properties also join the waterway:

List of previous DA/TVA permits/approvals DA Permit Number TVA Date

Is any portion of the activity for which authorization is sought now complete? Yes No (If "Yes" attach explanation)
 Month and year the activity was completed: . Indicate the existing work on the drawings.

List all approvals or certifications required by other federal, interstate, state, or local agencies for any structures, construction, discharges, deposits, or other activities described in this application.

Issuing Agency	Type Approval	Identification No.	Date of Application	Date of Approval
TDEC	IARAP		09/25/2009	
	NPDES			

Has any agency denied approval for the activity described herein or for any activity directly related to the activity described herein?
 Yes No (If "Yes" attach explanation)

Privacy Act Statement

This information is being requested in accordance with Section 26a of the TVA Act as cited on the front page of this form. Disclosure of the information requested is voluntary; however, failure to provide any required information or documents may result in a delay in processing your application or in your being denied a Section 26a permit. An application that is not complete will be returned for additional information. TVA uses this information to assess the impact of the proposed project on TVA programs and the environment and to determine if the project can be approved. Information in the application is made a matter of public record through issuance of a public notice if warranted. Routine uses of this information include providing to federal, state, or local agencies, and to consultants, contractors, etc., for use in program evaluations, studies, or other matters involving support services to the program; to respond to a congressional inquiry concerning the application or Section 26a program; and for oversight or similar purposes, corrective action, litigation or law enforcement.

Project plans or drawings should accompany the application. These should be on paper suitable for reproduction no larger than 11 x 17 inches or contained on a 3-1/2 inch floppy computer disc in "dxf" format, and should be submitted to the appropriate TVA and U.S. Army Corps of Engineers offices. An application that is not complete will be returned for additional information.

U.S.A.C.E. Offices		TVA Office Location
U.S. Army Corps of Engineers Eastern Regulatory Field Office P.O. Box 465 Lenoir City, Tennessee 37771-0465 (865) 986-7296	U.S. Army Corps of Engineers Savannah District The Plaza, Suite 130 1590 Adamson Parkway Morrow, Georgia 30260-1763 (678) 422-2729	Tennessee Valley Authority
U.S. Army Corps of Engineers Nashville District P.O. Box 1070 Nashville, Tennessee 37202-1070 (615) 736-5181	U.S. Army Corps of Engineers Western Regulatory Field Office 2042 Beltline Road, SW, Bldg C, Suite 415 Decatur, Alabama 35602 (256) 350-5620	
U.S. Army Corps of Engineers Norfolk District P.O. Box 338 Abingdon, Virginia 24212 (276) 623-5259	U.S. Army Corps of Engineers Asheville Regulatory Field Office 151 Patton Avenue, Room 208 Asheville, North Carolina 28801-5006 (828) 271-4856	



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL DIVISION
SUITE 900, J. K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TN 37243-0334

TELEPHONE: (615) 253-2477

FAX: (615) 741-1098

September 25, 2009

Mr. Ron Gatlin
U.S. Army Corps of Engineers
Regulatory Branch
3701 Bell Road
Nashville, TN 37214-2660

Subject: Project # 58007-1220-64
Fed # NH-27 (45)
PIN 102236.00
SR-27 (US-72) Interchange with I-24
Marion County

Dear Mr. Gatlin:

We are enclosing form DA/TVA, along with copies of appropriate plan sheets and drawings; mitigation notes; and portions of the USGS quad maps for South Pittsburg, TN (100-SW) showing the location where we believe an Individual Section 404 Permit may be required on the subject project.

This location is as follows:

SECTIONS 8.1, 10, and 11 of TDEC form CN-1091

SR-27 (US-72) Interchange with I-24

Longitude 85.6903°, Latitude 35.0401°

<ul style="list-style-type: none">• Sta. 265+00.00 to Sta. 279+58.93 on Ramp A	<p><u>Wetland Impacts (WTL-1, WTL-2, and WTL-3)</u> Impacts due to roadway construction, hydraulic basin construction for controlling flood storage, and utility lines relocation (I 404)</p>
	<p><u>WTL-1</u> Area of permanent wetland impact = 7.38 acres Area of temporary wetland impact = 0.65 acre</p> <p><u>Associated impacts on WTL-1</u></p> <ul style="list-style-type: none">• Temporary impacts due to 8 in. water line relocation• Temporary impacts due to 6 in. gas line pipe relocation• Temporary impacts due to 6 in. main force sewer line pipe relocation

<ul style="list-style-type: none"> • Sta. 404+50.00 on SR-27 to Sta. 126+00.00 on I-24 • Sta. 404+50.00 on SR-27 to Sta. 817+00.00 on Ramp F 	<p><u>WTL-2</u> Area of permanent wetland impact = 0 acre Area of temporary wetland impact = 0.15 acre</p> <p><u>WTL-3</u> Area of permanent wetland impact = 0.12 acre Area of temporary wetland impact = 0.73 acre</p>
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Mitigation (WTL-1, WTL-2, and WTL-3): we propose the following mitigation:

Temporary wetland Impacts

Topsoil is to be removed from all areas of temporary wetland impacts and stockpiled prior to construction. Upon completion of construction activities, all temporary wetland impact areas are to be restored to preconstruction contours and the stockpiled wetland soil spread, to restore these areas to preconstruction elevation. The area of temporary impacts will then be planted with the appropriate tree species (see sheet # 26G for tree species and spacing).

Permanent wetland impacts

We propose to do in-watershed mitigation for 7.5 acres of the permanent wetland impacts by purchasing, at a 2:1 ratio, 15 wetland mitigation credits from the Sequatchie Valley Site, 8.4 miles northeast of the project location, managed and constructed by MRW Environmental, LLC.

Alternatives:

1. The no-build alternative was not chosen because the safety and functionality of the interchange would continue to degrade as traffic volumes increase over time. I-24 and SR-27 are major routes on the National Highway System carrying high traffic volumes across the state of Tennessee. These interchange modifications will make these routes safer for the traveling public and lead to more efficient movement of goods and services through the area.
2. Spanning the entire boundary below elevation 616.7 in an attempt to eliminate all fills was not chosen because it is cost prohibitive and would still not eliminate all the fills in the floodplain. An option to reduce impacts to WTL-1 and get below 1 acre-ft of fill would require a bridge for almost the entire length of Ramp A. That bridge alone would be approximately 1800 ft. long and an additional cost of \$4.9 million at \$90 per square foot.
3. The use of retaining walls in all four quadrants of the interchange was not chosen because it is cost prohibitive and would not eliminate all the fills in the floodplain or get below 1 acre-ft of allowable fill. The cost of 1900 ft. of retaining wall along Ramp A alone at \$45 per square foot would cost over \$725,000.

In accordance with the criteria set forth by your office, we are also showing additional crossings, for your use in developing the Individual Section 404 Permit. These sites meet the requirements for the Tennessee Department of Environment and Conservation's General and Individual Permits.

These locations are as follows:

SR-27 (US-72) Interchange with I-24 Longitude 85.6903°, Latitude 35.0401°	
<ul style="list-style-type: none"> • Sta. 274+45.00 on Ramp A 	<p>Unnamed tributary to Battle Creek (STR-1) Fill, culvert extension, and channel lining with rip-rap (IARAP #1)</p> <p>Location 1 Rock fill and channel lining with rip-rap</p> <p>Existing: 106 ft. of open channel</p> <p>Proposed:</p> <ul style="list-style-type: none"> • 48 ft. of rock fill in the existing channel under the proposed Ramp A. • 58 ft. of rip-rap in the existing channel at the outlet of the proposed 72 in. RCP under the proposed Ramp A.
<ul style="list-style-type: none"> • Sta. 147+54.22 on I-24 	<p>Location 2 Culvert extension and channel lining with rip-rap</p> <p>Existing: Existing open channel length = 95 ft. Existing culvert length = 437 ft. of 72 in. CMP. Total existing length = 532 ft.</p> <p>Proposed:</p> <ul style="list-style-type: none"> • 8 ft. of 72 in. CMP culvert extension at the inlet of existing culvert. • 74 ft. rip-rap at the outlet of existing culvert. • Open channel impact length at the inlet of extended culvert = 13 ft. <p>Total proposed including existing culvert length = 532 ft.</p>
<ul style="list-style-type: none"> • Sta. 135+09.11 on I-24 	<p>Unnamed tributary to Battle Creek (STR-2) Culvert extension, channel relocation, and channel lining with rip-rap (IARAP #2)</p> <p>Location 1 Culvert extension and channel lining with rip-rap</p> <p>Existing: Existing open channel length = 58 ft. Existing culvert length = 344 ft. of 60 in. CMP. Total existing length = 402 ft.</p> <p>Proposed:</p>

<ul style="list-style-type: none"> • Sta. 512+48.00 to Sta. 513+64.00 on Ramp C 	<ul style="list-style-type: none"> • 8 ft. of 60 in. CMP culvert extension at the inlet of existing culvert. • 50 ft. rip-rap at the outlet of existing culvert. <p>Total proposed including existing culvert length = 402 ft.</p> <p><u>Location 2</u> Channel relocation and lining with rip-rap</p> <p>Existing: Existing open channel length = 112 ft. Total existing length = 112 ft.</p> <p>Proposed:</p> <ul style="list-style-type: none"> • Open channel impact length = 112 ft. • 7 ft. of rip-rap in the proposed channel due to outfall from 24 in. CMP. <p>Total proposed impact = 112 ft. including 7 ft. rip-rap in the proposed Channel.</p>
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<p><u>Mitigation</u> <u>(STR-1):</u></p> <ul style="list-style-type: none"> • For 56 ft. (56 ft. x 1.0) of channel fill and extended encapsulation (48 ft. channel fill with rock at location 1 and 8 ft. culvert extension at location 2), we propose a payment of \$11,200 to the In-Lieu Fee Stream Mitigation Program. • For 99 ft. (132 ft. x 0.75) of proposed rip-rap in the stream channel (58 ft. at location 1 and 74 ft. at location 2), we propose a payment of \$19,800 to the In-Lieu Fee Stream Mitigation Program. <p><u>(STR-2):</u></p> <ul style="list-style-type: none"> • For 8 ft. (8 ft. x 1.0) of extended channel encapsulation (location 1), we propose a payment of \$1,600 to the In-Lieu Fee Stream Mitigation Program. • For 43 ft. (57 ft. x 0.75) of proposed rip-rap in the stream channel (50 ft. at location 1 and 7 ft. at location 2), we propose a payment of \$8,600 to the In-Lieu Fee Stream Mitigation Program. • For the proposed 112 ft. of open stream channel impact at location 2, we propose onsite mitigation. Please see sheet 26 G for mitigation information.
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<p><u>Alternatives:</u></p> <ol style="list-style-type: none"> 1. The no-build alternative was not chosen because the safety and functionality of the interchange would continue to degrade as traffic volumes increase over time. I-24 and SR-27 are major routes on the National Highway System carrying high traffic volumes across the state of Tennessee. These interchange modifications will make these routes safer for the traveling public and lead to more efficient movement of goods and services through the area. 2. Using a bridge or retaining wall on Ramp A and Ramp C might reduce or eliminate impacts on STR-1 and STR-2 but as previously mentioned these are not better options because of the high costs.

This project includes a total permanent wetland impact of 7.5 acres and a total temporary wetland impact of 1.53 acres.

We propose to do in-watershed mitigation for 7.5 acres of the permanent wetland impacts by purchasing, at a 2:1 ratio, 15 wetland mitigation credits from the Sequatchie Valley Site, 8.4 miles northeast of the project location, managed and constructed by MRW Environmental, LLC. The mitigation plan is enclosed and TDOT Environmental Division is also in the process of purchasing these credits from MRW Environmental, LLC. We will forward the purchase documentation once the process is completed.

For the above stream impacts, a total payment of \$41,200 is proposed to the In-Lieu Fee Stream Mitigation Program. Please cite this payment to the TSMP in your permits.

It is the opinion of this office that all other aspects of the project not specifically mentioned in this letter meet the criteria for a Wet Weather Conveyance.

A Categorical Exclusion was approved by the Federal Highway Administration (FHWA) on February 7, 2005 and a re-evaluation was completed on August 27, 2007. Copies are enclosed for your information and use in permit processing.

By copy of this letter, we are forwarding one copy of all related materials to the Tennessee Department of Environment and Conservation, Division of Water Quality Control, and requesting Section 401 Certification action.

By copy of this letter, we are also applying for a letter of no objection or Section 26a Permit from the Tennessee Valley Authority. Appropriate information is enclosed.

In addition to the impacts listed above, we are requesting that the Tennessee Department of Environment and Conservation, TVA, and the Corps of Engineers include approval for all proposed outfall structures (ditches, pipes, etc) associated with the proposed stream crossings or wetland impacts in your permit.

SECTION 9 of TDEC form CN-1091 Purpose and Justification

The principal purpose of this proposed project is to increase the efficiency and improve operational characteristics of an existing interchange which provides access between I-24 and U.S. Route 72. The proposed project calls for a number of improvements associated with the existing interchange which include construction of a new directional ramp, improving existing ramps, and replacing the existing bridge.

This interchange is located just south of Kimball, Tennessee and approximately 30 miles west of Chattanooga. There are currently four ramps which provide access between I-24 and US-72. Three of these are directional ramps (US-72 to I-24 Westbound, I-24 Eastbound to US-72, and US-72 to I-24 Eastbound), and one is a loop ramp (I-24 Westbound to US-72). All of the ramp terminals with I-24 are geometrically insufficient, except for the ramp from I-24 Eastbound to US-72. The three deficient ramps' acceleration/deceleration lengths at I-24 are shorter than current AASHTO guidelines specify. To reduce the traffic volume on an existing heavily traveled loop ramp that currently carries traffic from I-24 Westbound to US-72 Northbound and Southbound, constructing another directional ramp from I-24 Westbound to US-72 Northbound in the Northeast quadrant of this interchange is necessary. The vertical clearance above US-72 (under the I-24 bridges) varies from 14.90 feet to 15.73 feet. AASHTO recommends

maintaining a minimum of 16 feet for freeways and arterial systems (16.50 feet for new construction to accommodate future resurfacing). These bridges have been struck several times by tall trucks. These collisions demonstrate that the vertical clearance needs to be increased to at least 16.50 feet.

For the above reasons, a no-build alternative is not feasible for this project. The proposed alternative will provide a safer and more efficient traffic facility for the motoring public, increases level of service along US-72 at this location, and allow for future widening in the median of I-24 when it becomes necessary. Please refer to the enclosed Interchange Modification Study report prepared by Florence and Hutcheson, Inc for the Tennessee Department of Transportation for more details about the beneficial results of the proposed project.

Flood Control and Power Storage Loss

The town of Kimball is participating in the FEMA Flood Insurance Program. There are base flood elevations determined for Battle Creek and Kimball Cove Branch but no floodways have been established for these streams in the published flood study for the Town of Kimball dated May 19, 1987. The controlling elevations at this location would be from Battle Creek and the Tennessee River, Guntersville Reservoir. The 100 and 500 year flood elevations at the interchange location are 613.6 and 616.7 (NGVD 1929), respectively according to TVA data.

The Town of Kimball is very concerned about backwater flooding of the commercial area from the Tennessee River. TDOT has participated throughout the project development in discussions with the Town of Kimball, the USACE and TVA regarding flooding issues and possible solutions that could be constructed in conjunction with this project. Thompson Engineering, the consultant preparing the roadway plans for TDOT, performed a hydraulic and hydrologic analysis for the project and made some recommendations. These recommendations include a flap gate on the 72" culvert under the interchange and a flood gate on the box culverts east of the interchange in conjunction with use of the TVA property in the north east quadrant of the interchange as flood control storage as it is currently. It has since been determined that federal funds for the project cannot be used for the flood control structures and no state funds are available for that purpose at this time.

The roadway elevations of both routes are above the flood stages for Battle Creek and Tennessee River, Guntersville Reservoir. Fill will have to be placed within the flood control storage zone, however to carry the roadways and ramps.

The power storage zone for Guntersville Reservoir is between elevations 593.0 and 595.0 and there is no proposed fill in the power storage zone. The flood control storage zone is between elevations 593.0 and 616.7 with an estimated fill of 71,776 cubic yards (44.5 acre-ft). This volume is greater than the net loss of 1 acre-foot of flood control storage allowable by TVA, using its standard methods for such calculations, therefore the mitigation plan described below and shown on Sheet 26 H of the plans was prepared by TDOT Hydraulic and Design section:

Proposed Mitigation Plan for flood control storage loss

TDOT proposes to mitigate the fills in the flood control storage zone by excavating material in the TVA property shown as tract 1 of the project plans in the north east quadrant of the interchange and hauling it upland. An average depth of approximately 3.0 ft over the 14.86 acres site will offset the calculated fill volumes. The material excavated will not likely be suitable road fill material, so it must be hauled away from the project site.

Mr. Ron Gatlin
September 25, 2009
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The benefits of this mitigation plan outweigh the costs since this area will offset the flood control storage fill volumes and preserve the flood control storage for the Town of Kimball. For more information, please see the enclosed mitigation plan prepared by the TDOT Hydraulic Section.

The enclosed coordination letters from the USFWS dated October 28, 2004 and updated on December 11, 2007 stated that no significant adverse impacts to wetlands or federally listed endangered or threatened species are anticipated from this proposal. A search of the TDEC, Division of Natural Areas database conducted on February 28, 2006 and updated on July 16, 2007 and September 24, 2009 indicated that there are two protected species within a one mile radius and twelve protected species within one to four mile radius of the project area. It is the opinion of the TDOT biologist that most of these species will not be affected by this project because they are considered not likely present in the ROW due to one or more of the following reasons: present habitat unsuitable, not observed during site visit, or original record questionable. A TDOT email was sent to TWRA on January 8, 2008, requesting their comments regarding the animal species; in a response dated January 24, 2008, TWRA stated that BMPs would be sufficient to minimize impacts to rare species for this project. The species review form (Form N) and the TDOT correspondences are enclosed for your use in permit processing.

The enclosed SHPO letter dated December 16, 2002, stated that the area of potential effect for this undertaking contains no cultural resources eligible for listing in the National Register of Historic Places. The combined Archaeological/Architectural/Historical Assessment is also enclosed on a CD as a PDF file for your information and use in permit processing.

The letting date for this project is currently scheduled for December 11, 2009. We would greatly appreciate your initial review and request for additional information needed, or issuance of the public notice, within 30 days of receipt of our application; and issuance of these permits as soon as possible.

Please advise us if you have any questions or if we can be of any assistance.

Sincerely,



Khalid Ahmed
Roadway Specialist 3, Natural Resource Office

Enclosures

JLH: KMA: pc

cc: Mr. Daniel C. Eagar
Mr. Anthony Summitt, TVA
260 Interchange Park Dr.
Lenoir City, TN 37772-5664
Mr. Ronnie Porter, Program Operations Office (via email)
Mr. N.E. Christianson, Chief Engineer Office (via email)
Mr. Eric Chance, TSMP (via email)
Mr. Brandon Crowley, HQ Construction Division (via email)
Mr. Ken Flynn, Region 2 Construction Office (via email)
Mr. Tommy Paul, Region 2 Environmental Coordinator Assistant (via email)

Mr. Ron Gatlin
September 25, 2009
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Mr. Scott Medlin, Project Management Division (via email)
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Reading file (letter only)