



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
PROJECT PLANNING DIVISION

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Gerald F. Nicely  
Commissioner

Phil Bredesen  
Governor

**MEMORANDUM**

TO: Mr. Paul Degges, Chief Engineer

FROM: Mr. Steve Allen, Director  
Project Planning Division

DATE: August 4, 2006

SUBJECT: **RSAR – SR331 (Tazewell Pike) in Knox County**

The Roadway Safety Audit Review for SR331 (Tazewell Pike) in Knox County has been completed and the report is attached. A bid contract will be let to implement all the improvements. The following guidance is provided:

- Add a two-way center turn lane. Widen on the western side of the existing roadway to minimize impacts to property owners.
- Relocate the driveway to the strip mall on the western side of the existing roadway (L.M. 0.12, near Suntrust Bank sign) approximately 200 feet to the south (L.M. 0.08). This is to discourage drivers on the SR-33/Broadway off-ramp from making left turns to the driveway. There are two existing driveways that allow access to the strip mall from SR-33/Broadway.

Total estimated cost for these improvements is \$700,000.

If you should need any further information, please contact me @ (615) 741-2208 or (615) 741-9558.

SLA/EA

Attachment

CC: Ed Cole  
Jimmy Moore  
Fred Corum  
Mike Tugwell  
Amanda Snowden  
Gary Olgetree  
File

# ***ROAD SAFETY AUDIT REPORT***

***STATE ROUTE 331 (Tazewell Pike)***

***KNOX County***

***From L.M. 0.11 (Ramp from SR-33/Broadway)***

***To L.M. 0.29 (McCamey Rd)***

***PIN #107420.00***



***PREPARED BY  
TENNESSEE DEPARTMENT OF TRANSPORTATION  
PROJECT PLANNING DIVISION***

Approved by:	Signature:	Date:
<b>DIRECTOR Project Planning Division</b>		

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

# Road Safety Audit Review

Knox County

State Route 331 (Tazewell Pike)

Begin: L.M. 0.11 (Ramp from SR-33/Broadway)

End: L.M. 0.29 (C319 McCamey Rd)

Date of Review: February 8, 2006

## Description of Project and Background

This project involves an area of concern along SR-331 (Tazewell Pike) in Knox County that was brought to TDOT's attention by the Hazard Elimination Safety Program List. Consequently, staff were asked to evaluate this section of roadway to determine the need for appropriate safety measures.

## Team Members

- Mark Geldmeier – Chief Traffic Engineer, City of Knoxville.
- Mike Conger – Senior Transportation Engineer, Knoxville TPO.
- James Norris – Transportation Engineer, Knoxville TPO.
- Herman Ledford – District Maintenance Superintendent, TDOT Maintenance District 15 Office (Knoxville).
- C.L. Tilley – Roadway Specialist Supervisor 1, TDOT Project Planning Division/Conceptual Planning Office (Nashville).
- Nathan Vatter – Operations Specialist 2, TDOT Region 1 Traffic Office (Knoxville).
- Erik Andersen – Roadway Specialist 2, TDOT Project Planning Division/Short Range Planning and Data Office (Nashville).

## Information used in the Review

- Knox County general highway map.
- Aerial photograph.
- ADAM Coverage Count (Station 54).
- TRIMS Traffic Report.
- TRIMS Geometric Report.
- TRIMS Route Feature Description Listing.
- TRIMS Photolog.
- TRIMS Crash Data (including 2001, 2002, 2003, and any available in 2004 and 2005).
- TRIMS Crash Rate Summary Report (including 2001, 2002, 2003, and any available in 2004 and 2005).
- TRIMS Crash Summary Report (including 2001, 2002, 2003, and any available in 2004 and 2005).
- Crash Reports (Reference # 8114704, 8460171, 7979802, 8459582, 8114067, 8679084, 8110828, 8465559, 8114780, 8119236, 8119970, 8451754, 8451766, 8459943, 8460258, 8460188, 8699502, 8681431, 8110901, 8118700, and 8459699).

- Crash Diagram.
- Onsite visit during the midday of Wednesday, February 8, 2006.

## Pre-Briefing Summary

After analyzing the information, this finding was made:

- From L.M. 0.11 (Ramp from SR-33/Broadway) to L.M. 0.29 (C319 McCamey Rd) is eligible for Hazard Elimination Safety Program funds because the crash ratio (actual crash rate divided by critical crash rate) is 5.64, which is greater than 3.50 (the minimum threshold).

## Observations

During the onsite visit, these observations were made:

- The roadway has:
  - One (1) northbound lane;
  - One (1) northbound acceleration/deceleration lane that begins at L.M. 0.11 (Ramp from SR-33/Broadway), changes into a Right Turn Only lane, and ends at L.M. 0.23 (Forestal Dr); and
  - One (1) southbound lane.
- The speed limit is 40 mph in both directions (posted at L.M. 0.13 for northbound traffic and L.M. 0.34 for southbound traffic).
- There are four (4) unsignalized intersections within the project area:

Log Mile	Intersecting Street	Right or Left
0.18	C320 Baum Rd	Right
0.23	C313 Forestal Dr	Right
0.24	C332 Coile Rd	Left
0.29	C319 McCamey Rd	Right

- Both sides of the roadway have retail/commercial development with many private drives.



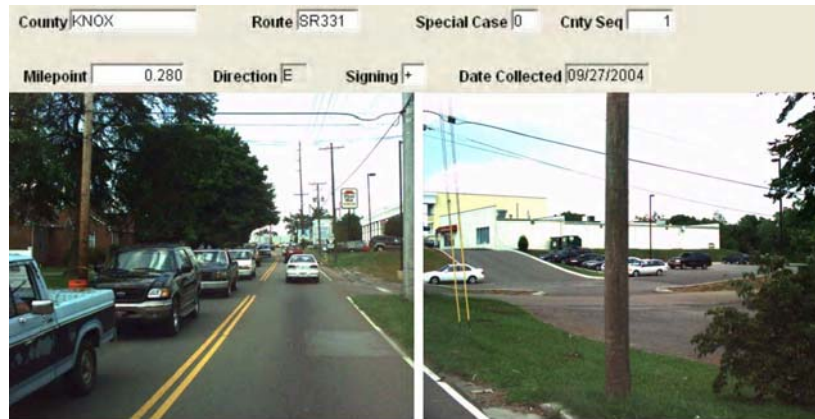
**Photo 1.** TRIMS image looking northbound where the Ramp from SR-33/Broadway enters at L.M. 0.11.



**Photo 2.** TRIMS image looking northbound at the Baum Rd intersection at L.M. 0.18 (right).



**Photo 3.** TRIMS image looking northbound at the Forestal Dr intersection at L.M. 0.23 (right) and the Coile Rd intersection at L.M. 0.24 (left).



**Photo 4.** TRIMS image looking northbound at the McCamey Rd intersection at L.M. 0.29 (right).

## Guidance

A bid contract will be let to implement all the improvements. The following guidance is provided:

- 1) Add a two-way center turn lane. Widen on the western side of the existing roadway to minimize impacts to property owners.
- 2) Relocate the driveway to the strip mall on the western side of the existing roadway (L.M. 0.12, near Suntrust Bank sign) approximately 200 feet to the south (L.M. 0.08). This is to discourage drivers on the SR-33/Broadway off-ramp from making left turns to the driveway. There are two existing driveways that allow access to the strip mall from SR-33/Broadway.

**Route:** SR-331 (Tazewell Pike)  
**County:** Knox County  
**Description:** Begin: L.M. 0.11 (Ramp from SR-33/Broadway)  
End: L.M. 0.29 (C319 McCamey Rd)  
**Date:** 7/5/2006

Construction cost.	\$	340,000
Right-of-Way cost.	\$	160,000
Utility cost.	\$	200,000
<b>TOTAL PROJECT COST</b>	<b>\$</b>	<b>700,000</b>

**Prepared by Project Planning Division**  
Estimated prices based on TDOT 2005 Average Unit Bid Prices

<b>Route:</b>	<b>State Route 33 (U.S. 441)</b>
<b>Description:</b>	<b>From I-640 To Forrestal Drive</b>
<b>County:</b>	<b>Knox</b>
<b>Length:</b>	<b>0.1± miles</b>
<b>Date:</b>	<b>6/19/2006</b>

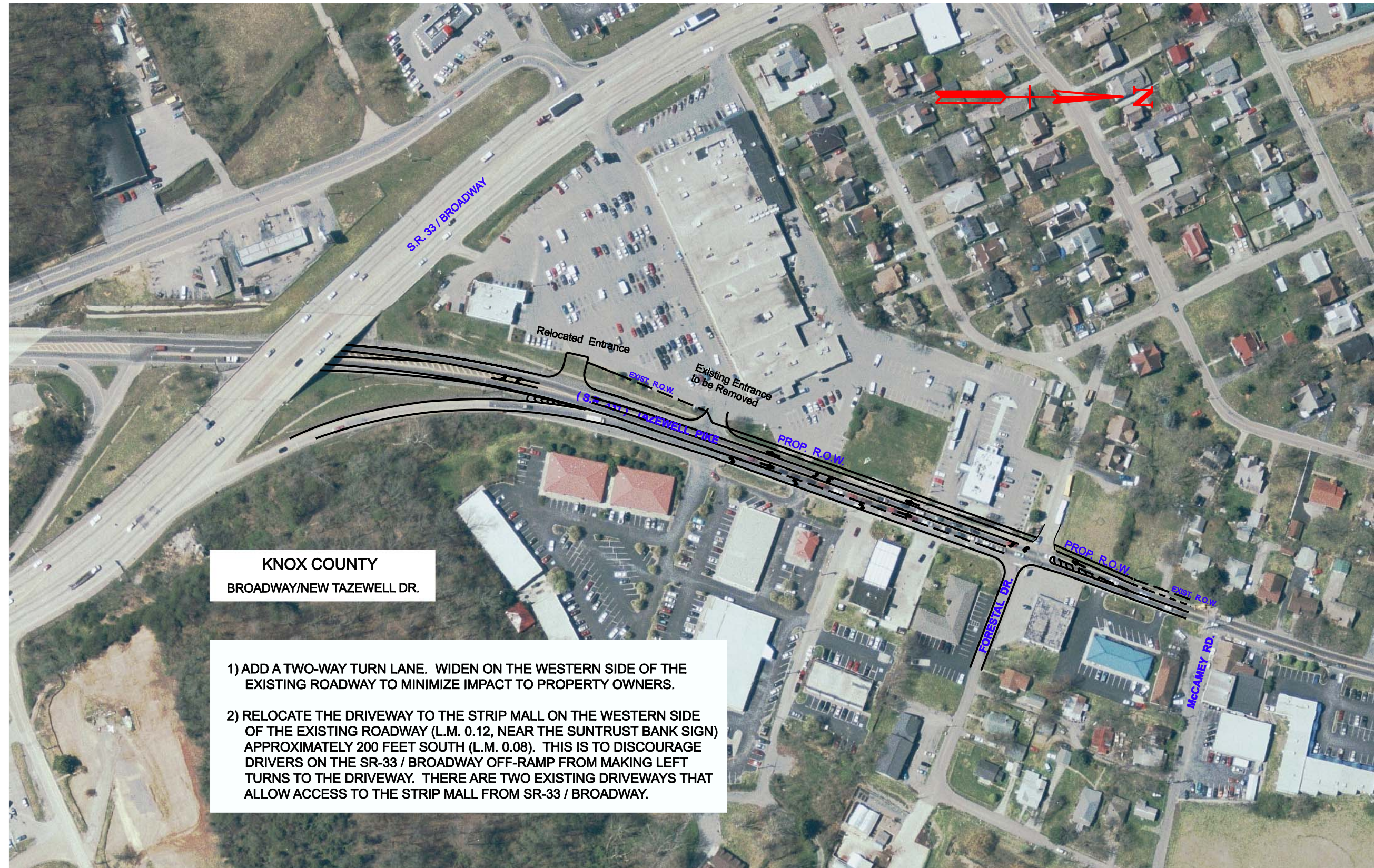
<b>CLEAR AND GRUBBING</b>	<b>\$</b>	<b>2,000</b>
<b>EARTHWORK</b>	<b>\$</b>	<b>20,000</b>
<b>PAVEMENT REMOVAL</b>	<b>\$</b>	<b>5,000</b>
<b>DRAINAGE</b>	<b>\$</b>	<b>40,000</b>
<b>STRUCTURES</b>	<b>\$</b>	<b>N/A</b>
<b>RAILROAD CROSSING OR SEPARATION</b>	<b>\$</b>	<b>N/A</b>
<b>PAVING (Includes C &amp; G)</b>	<b>\$</b>	<b>150,000</b>
<b>RETAINING WALLS</b>	<b>\$</b>	<b>N/A</b>
<b>MAINTENANCE OF TRAFFIC</b>	<b>\$</b>	<b>15,000</b>
<b>TOPSOIL</b>	<b>\$</b>	<b>1,000</b>
<b>SEEDING</b>	<b>\$</b>	<b>1,000</b>
<b>SODDING</b>	<b>\$</b>	<b>3,000</b>
<b>SIGNING</b>	<b>\$</b>	<b>5,000</b>
<b>LIGHTING</b>	<b>\$</b>	<b>N/A</b>
<b>SIGNALIZATION</b>	<b>\$</b>	<b>N/A</b>
<b>FENCE</b>	<b>\$</b>	<b>N/A</b>
<b>GUARDRAIL</b>	<b>\$</b>	<b>N/A</b>
<b>RIP RAP OR SLOPE PROTECTION</b>	<b>\$</b>	<b>N/A</b>
<b>OTHER CONST. ITEMS (8.5%)</b>	<b>\$</b>	<b>23,000</b>
<b>MOBILIZATION</b>	<b>\$</b>	<b>15,000</b>
<b>CONSTRUCTION COST</b>	<b>\$</b>	<b>280,000</b>
<b>10% ENG. &amp; CONT.</b>	<b>\$</b>	<b>30,000</b>
<b>TOTAL CONSTRUCTION COST</b>	<b>\$</b>	<b>310,000</b>
<b>10% PRELIMINARY ENGINEERING</b>	<b>\$</b>	<b>30,000</b>
<b>TOTAL COST</b>	<b>\$</b>	<b>340,000</b>

Prepared by Functional Design Office



# RSAR - Site # 1: S.R. 331 ( Tazewell Pike ) KNOX COUNTY

From L.M. 0.11 ( Ramp from S.R. 33/ Broadway ) to L.M. 0.29 ( McCamey Rd. )



**KNOX COUNTY**  
BROADWAY/NEW TAZEWEEL DR.

- 1) ADD A TWO-WAY TURN LANE. WIDEN ON THE WESTERN SIDE OF THE EXISTING ROADWAY TO MINIMIZE IMPACT TO PROPERTY OWNERS.
- 2) RELOCATE THE DRIVEWAY TO THE STRIP MALL ON THE WESTERN SIDE OF THE EXISTING ROADWAY (L.M. 0.12, NEAR THE SUNTRUST BANK SIGN) APPROXIMATELY 200 FEET SOUTH (L.M. 0.08). THIS IS TO DISCOURAGE DRIVERS ON THE SR-33 / BROADWAY OFF-RAMP FROM MAKING LEFT TURNS TO THE DRIVEWAY. THERE ARE TWO EXISTING DRIVEWAYS THAT ALLOW ACCESS TO THE STRIP MALL FROM SR-33 / BROADWAY.

