

**NEW CANADA ROAD**  
**FROM STATE ROUTE 1 (U.S. HIGHWAY 70) TO U.S. INTERSTATE 40**  
**CITY OF LAKELAND, TN**  
**ENVIRONMENTAL ASSESSMENT**

**PROJECT DATA SUMMARY SHEET**

**Project Description**

The City of Lakeland, TN, in collaboration with the Tennessee Department of Transportation (TDOT), is preparing an Environmental Assessment (EA) for the realignment of Canada Road between State Route (SR) 1 (U.S. Highway 70) and Interstate 40 (I-40). The primary purpose of this project is to improve the major road connection between SR-1 and I-40 for enhanced regional and local transportation mobility. The proposed project is located in northeast Shelby County in the City of Lakeland and within the Memphis Metropolitan Area. The project location is shown on Figure 1. The proposed project involves providing a 4-lane divided roadway through the corridor. The typical section would provide two (2) 11' min. traffic lanes in each direction through the residential corridor, and two (2) 12' min. traffic lanes in each direction through the commercial corridor. Provisions will be made for bicyclists according to TDOT policy. The typical section would include a 14' minimum width raised landscaped median, curb/gutter and a 10' bicycle/pedestrian path on both sides of the road. The minimum right-of-way (ROW) width for the 4-lane roadway with raised median section and 10' bicycle/pedestrian path would be 108' through the residential corridor, and 116' through the commercial corridor.

The proposed alignment and typical street section are currently being developed using the Context Sensitive Solution (CSS) process.

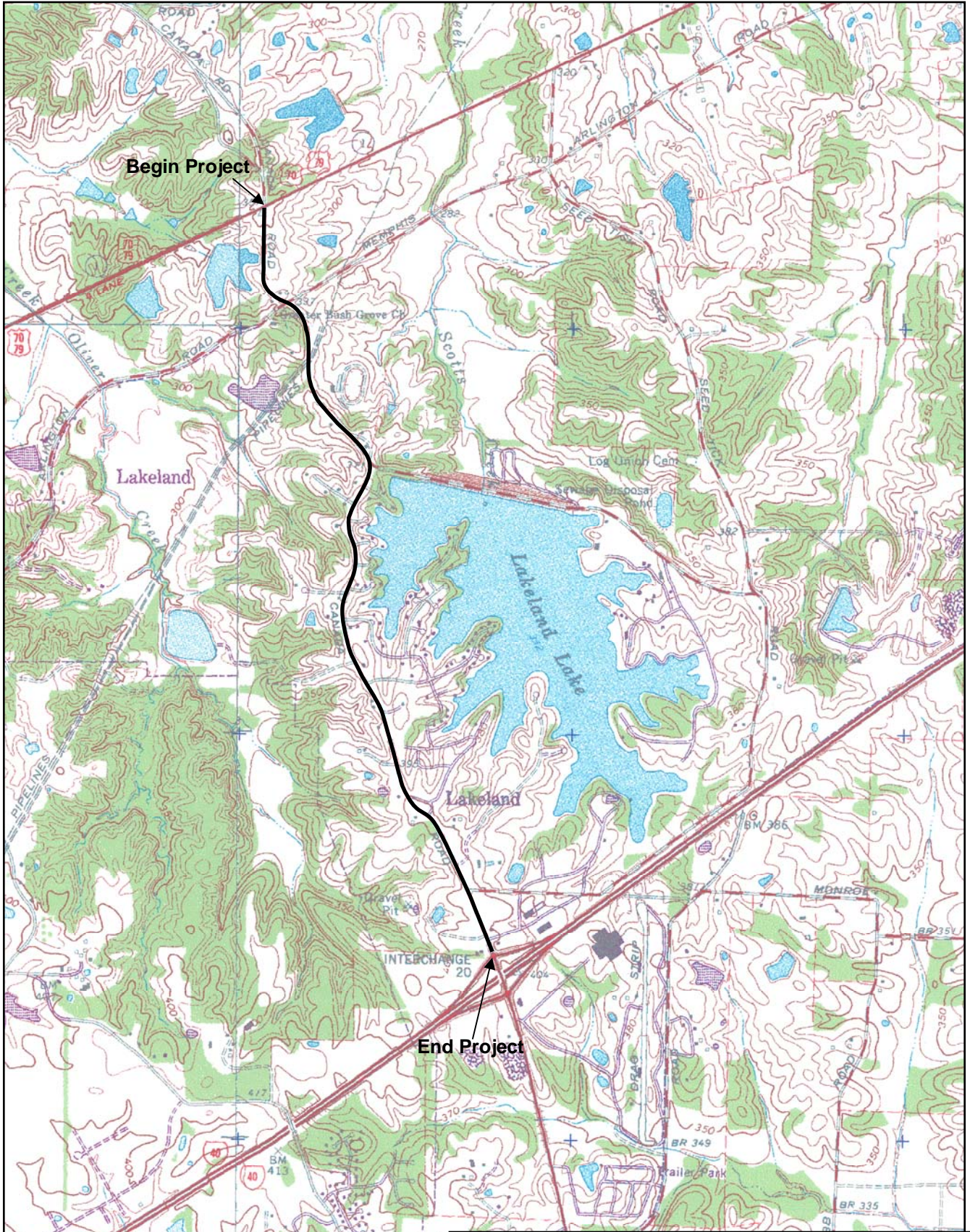
**Context Sensitive Solutions Process**

Early in the project, the City of Lakeland committed to the CSS process to involve the public in the decision making process related to the new alignment for Canada Road. An advisory team of community stakeholders representing private property owners, homeowner's association representatives, and members from various City of Lakeland Boards were selected, and a resource team of government agency representatives was identified to participate in the process. A project management team consisting of City of Lakeland personnel and their consultants was identified to plan and facilitate the CSS process.

**Alternatives Analysis**

Through the CSS process, the citizens of Lakeland have identified two potential alignments in the study area. These two alignments were selected based on impacts to commercial and residential properties and are shown as Alternative A and Alternative C in the following figures. The CSS process will continue to analyze the two potential





**PROJECT LOCATION MAP**  
**CANADA ROAD**  
**LAKELAND, TENNESSEE**



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DATE: 1999

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SOURCE: ON FILE AT F&A  
 (DELORME)

SCALE: 1:25,000

JOB NO. D7008-1

FIGURE





# ALTERNATIVE A NEW CANADA ROAD

LAKELAND, TENNESSEE

JUNE 30, 2009

- LEGEND**
- RIGHT-OF-WAY AREA
  - AREA OF CUT / FILL
  - MEDIAN
  - COMMERCIAL ZONING
  - FOREST - OAK / HICKORY
  - FOREST - OAK / PINE
  - WETLANDS
  - WATER BODY
  - CULTURAL - CEMETERY
  - CULTURAL - CHURCH



GRAPHIC SCALE



( IN FEET )  
1 inch = 800 ft.



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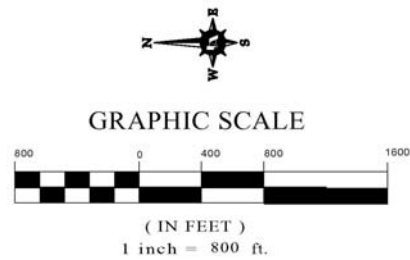




# ALTERNATIVE C NEW CANADA ROAD

LAKELAND, TENNESSEE  
JUNE 30, 2009

- LEGEND**
- RIGHT-OF-WAY AREA
  - AREA OF CUT / FILL
  - MEDIAN
  - COMMERCIAL ZONING
  - FOREST - OAK / HICKORY
  - FOREST - OAK / PINE
  - WETLANDS
  - WATER BODY
  - CULTURAL - CEMETERY
  - CULTURAL - CHURCH



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alignments and select one alternative that will be further studied during the EA process. The No-Build alternative will also be analyzed through the EA process. The alternative of improvement to the existing roadway was abandoned due to the severe impacts on a number of residential properties.

### **Study Methods and Procedures**

The EA process will be conducted in accordance with the Tennessee Environmental Procedures Manual (TEPM). The TEPM outlines Federal and State regulations, and discusses specific tasks and studies to be conducted during the environmental process. TDOT Environmental Division's scopes of work will be followed for performing specific technical studies for potential environmental impacts of the project including: ecology, historic architecture and archaeology, hazardous materials, air quality, noise, and identification of required permits.

## **PRELIMINARY PURPOSE AND NEED:**

### **Community Profile**

The City of Lakeland has a population of 10,848 as of 2007 which reflects an increase of 58% since the 2000 census. The portions of eastern Shelby County surrounding Lakeland have experienced similar growth and the area will continue to be one of the most desirable areas to reside. Canada Road is considered the gateway to the City of Lakeland.

### **Project Status**

This project was initiated at the request of the City of Lakeland, Tennessee. Lakeland, the Memphis/Shelby County Metropolitan Planning Organization (MPO), and Shelby County Government have collaborated throughout the development process to ensure that the transportation needs envisioned by the local community are coordinated. This Canada Road project from SR-1 to I-40 has been on the MPO Long Range Transportation Plan since 1980 and has been included in the MPO Transportation Improvement Program (TIP). The City of Lakeland has a TDOT approved contract to fund this project with 80% Surface Transportation Program (STP) funds and the City has selected the consultant for environmental/design.

Currently, plans to improve the I-40/Canada Road Interchange and to improve the Canada Road/SR-1 intersection are under development by the TDOT and the Federal Highway Administration. Canada Road from I-40 south to SR-15 (U.S. Highway 64) was recently improved to a 4 lane divided roadway to alleviate traffic congestion on this portion of the road, and plans to add a bicycle and pedestrian pathway to this section of Canada Road are being developed. TDOT is also widening I-40 from 4-lanes to 6-lanes from SR-15 (U.S. Highway 64) to SR-385.

## **System Linkage**

Canada Road is functionally classified as a major north-south arterial in the MPO's Long Range Transportation Plan providing a needed north-south link to the east part of Shelby County. Improving the level-of-service for this section of Canada Road will improve the vehicular mobility for City of Lakeland residents, eastern Shelby County residents and emergency services. The portion of Canada Road that is the subject of this Purpose and Need is connected to major east-west highways including SR-1, I-40, and SR-15. Canada Road becomes Houston Levee Road just south of SR-15. Houston Levee Road is a major north-south arterial that runs from SR-15 to the south part of Shelby County. Eventually, Houston Levee Road is planned to extend into DeSoto County, Mississippi. The next adjacent interchange to the west of the Canada Road and I-40 interchange is SR-15, which is approximately 2.4 miles away. The next interstate interchange to the east is SR-385 which is approximately 5.2 miles away.

Current projects along Canada Road include a new I-40 interchange and the development of bicycle/pedestrian pathways from I-40 to SR-15 (U.S. Hwy. 64). The I-40 interchange will also include bicycle/pedestrian facilities. With the bicycle/pedestrian considerations of the new alignment of Canada Road between SR-1 (U.S. Hwy. 70) and I-40, Canada Road will serve as a multimodal connection between SR-1 (U.S. Hwy 70) and SR-15 (U.S. Hwy 64) once completed.

## **Existing Conditions**

The existing route of Canada Road from just north of I-40 to SR-1 measures approximately 2.3 miles and the majority of the route is zoned residential or agricultural. The existing route consists of two 11' travel lanes, with no shoulders and a posted speed limit of 35 miles per hour. There is approximately 1,500 linear feet of sidewalk on the east side of Canada Road from just south of Leeward Slopes Drive to Green Spruce Drive; however it doesn't connect to the Commercial use area located just north of I-40. There are roadside ditches, relatively sharp drop-offs and residential yards immediately adjacent to the pavement edge along portions of the existing route. The existing route is shoulder deficient and fails to meet current design standards. The north end of the corridor is curvilinear and fails to meet stopping sight distance in a number of locations. Numerous residential lots access Canada Road along the north portions of the corridor causing the potential for numerous vehicular accidents due to on and off egress. Sight distance issues exist with many of the access points.

## **Traffic**

The existing Average Annual Daily Traffic (ADT) on Canada Road just north of I-40 is approximately 7,000 vehicles per day (vpd). In 2008, the City of Lakeland adopted its most current transportation plan based on the 2006 Comprehensive Land Use Plan and the updated 2007 Metropolitan Planning Organization Transportation Demand Model. The subarea travel demand model included an analysis of Canada Road between I-40 and SR-1 at full build out of the City of Lakeland. The 2008 Special Area Transportation

Study completed by Kimley-Horn indicates that future AADT traffic volumes along Canada Road range from nearly 30,000 vpd adjacent to I-40 to nearly 21,000 vpd adjacent to SR-1. These traffic volumes are anticipated to occur at full build-out of the municipality. The 2008 Special Area Transportation Plan does not predict when full build-out will occur.

**Level of Service**

The character of a roadway’s operating conditions can be quantified by a “Level of Service” (LOS) analysis. The LOS analysis incorporates several factors including traffic volumes, number of lanes, terrain, directional split, heavy vehicles, and shoulder widths.

LOS is a qualitative measure that describes the character of traffic conditions related to speed and travel time, freedom to maneuver, traffic interruptions, etc. There are six levels ranging from “A” to “F” with “F” being the worst. Each level represents a range of operating conditions. General descriptions of operating conditions for each of the levels of service related to this report as found in the Highway Capacity Manual are as follows:

**LOS Traffic Flow Conditions**

<b>LOS</b>		<b>Description</b>
Acceptable	A	Free-flow traffic operations at average travel speeds. Vehicles completely unimpeded in ability to maneuver. Minimal delay at signalized intersections.
	B	Reasonably unimpeded traffic operations at average travel speeds. Vehicle maneuverability slightly restricted. Low traffic delays.
	C	Stable traffic operations. Lane changes becoming more restricted. Travel speeds reduced to half of average free flow travel speeds. Longer intersection delays.
Unacceptable	D	Small increases in traffic flow can cause increased delays. Delays likely attributable to increased traffic, reduced signal progression and adverse timing.
	E	Significant delays. Travel speeds reduced to one third of average free flow travel speed.
	F	Extremely low speeds. Intersection congestion. Long delays. Extensive traffic queues at intersections.

The level of service (LOS) on Canada Road, based on 7,000 AADT, is “C” for a two-lane roadway. The LOS for the forecasted 21,000 to 30,000 AADT (Lakeland full build-out) is “E” for the “no build” alternative and “C” for a four lane cross-section alternative. Although the existing LOS of “C” is indicative of flow with speeds at or near free flow speeds, that is not actually the case during peak hours due to a large number of turns onto side streets and private drives which add to traffic congestion that is not accounted for in the LOS analysis.

### **Transportation Demand**

The Canada Road project is included in the current MPO Transportation Improvement Program (TIP) and 2008 Long Range Transportation Plan as an “Existing Plus Committed Project”. The City of Lakeland entered into a contract with TDOT for Environmental Assessment of the corridor in spring 2008. The Federal Highway Administration has concurred with this initial contract scope of work.

### **Social And Economic Conditions**

Canada Road is the only major north-south arterial that runs through the City of Lakeland and provides connectivity with north and south Shelby County and access to I-40. The residential property along this portion of Canada Road is approximately 50% built out and the “mixed use center” is approximately 50% built out. This leaves a significant number of sites available for future residential locations and commercial locations, which would lead to economic growth for the City of Lakeland. Widening improvements to the existing route or an alternative route would provide greater ease of access to existing properties and improved quality of life for the residents immediately adjacent to the existing route.

### **Land Use**

Lakeland is located in east Shelby County and is undergoing rapid growth, as are most of the suburbs outside the greater Memphis metropolitan area. The main land use along the portion of Canada Road from I-40 to SR-1 is zoned for “Suburban Neighborhood” which primarily consists of single-family residential lots. The southern portion of the route is zoned for both “Mixed Use Center” and “Residential Support Center” which consists of neighborhood commercial uses.

### **Modal Relationships**

Canada Road is a major north-south route with interstate access that connects to SR-1, I-40 and SR-15.

### **Safety**

Over the last three years the average accident rate for this 2.3-mile portion of Canada Road is 23 accidents per year. The two reasons listed for the majority of the accidents reported were “failure to maintain control” and “failure to keep on road”. Due to the lack



of shoulders there is very little opportunity for recovery of an errant vehicle. Site distance issues do exist with many of the private drive and residential street access points. The proposed widening or alternative route should improve sight distances and add shoulders and/or curb with buffer area to allow for recovery of errant vehicles.

As previously mentioned, the majority of this portion of Canada Road runs through a residential area and there is no pedestrian/bicycle path connectivity from the “Suburban Neighborhood” land use to the “Mixed Use Center” located just north of I-40. Sidewalks and bicycle provisions will improve the safety for pedestrians and bicyclists’ and will provide connectivity to the “Mixed Use Center”.