1.0 Introduction

The Southeast Corridor High-Performance Transit Alternatives Study was conducted to answer the following questions regarding public transportation in the southeastern corridor of the Nashville Region:

- What are the transportation problems in the southeast corridor?
- What are the underlying causes of these problems?
- What are viable options (both transportation and other) to address these problems?
- What are the costs and benefits of the differing options?
- Which option is preferred as the best solution?

The need for transportation improvements in the southeast corridor has been addressed in several studies over the past decade. The region's vision for a multi-county transit system to enhance mobility and provide a safe and efficient multimodal network is illustrated in both the 2025 and 2030 Nashville Area Long Range Transportation Plans. The southeast corridor was selected to undergo the next phase of transit corridor planning because:

- The southeast corridor suffers the worst traffic congestion of the five major transportation corridors in the region.
- The corridor has experienced the highest rate of population growth of the five major corridors. (The study area accounts for 10 percent of the region's land area but contains more than 30% of the region's population.)
- The corridor contains a substantial concentration of trip origins and destinations
- The corridor includes one of the highest transit ridership routes in the region
- The corridor has a strategic position and role in the region as home to many of the areas largest employers, including Nissan and Dell Computer, which makes transportation access in the corridor vital to the region's continued economic success.

The southeast corridor is projected to be one of the strongest growing employment corridors in the region over the next twenty years. For the Nashville area to remain competitive and continue to enjoy increased development opportunities, high growth corridors such as the southeast, will need additional mobility options like high performance transit. High-performance transit provides reliable, affordable, and relatively flexible travel within and throughout a corridor.

The southeast corridor area is approximately 30 miles in length from downtown Nashville to just south of the City of Murfreesboro and encompasses an area of approximately 350 square miles. The southeast corridor has experienced tremendous population growth in recent years and is expected to continue growing at a rapid pace. The population in the study area, which includes portions of both Davidson and Rutherford Counties, was 331,000 in 2000 and is forecast to grow to more than 438,000 by the year 2025.

There are two major thoroughfares in the corridor, Interstate 24 (I-24) and Murfreesboro Road (US-41/70S), which connect Nashville with LaVergne, Smyrna and Murfreesboro. Both thoroughfares provide access to high concentrations of employment sites, including large state and federal offices in downtown Nashville, commercial/retail development in suburban areas, and single-family and multi-family housing throughout. With rapid growth in the area, congestion along these major roadways is forecast to increase. This increased congestion will make existing bus service less attractive due to longer travel times and buses that are stuck in traffic.

There are limited opportunities for roadway expansion due to topographic constraints and development adjacent to the right of way. For example, I-24 in and around downtown Nashville was constructed in the late 1950s and roadway improvements over the last several decades have expanded to the maximum amount of available right-of-way within the corridor. As a result, there is no available median right-of-way. The outside travel lanes are 20 to 30 feet below the surrounding topography and abut rock walls. The physical challenges and potential costs of expanding the right-of-way under these conditions, along with the impacts of taking the highly developed urban and industrial land which surrounds the right-of-way, limits the potential to expand the roadway. Additionally, in other parts of the I-24 corridor, major widening has occurred within the available median right-of-way to avoid affecting development alongside the edge of the roadway. Similar limitations exist along Murfreesboro Road which includes numerous commercial and retail establishments with driveways or parking facilities that directly access the roadway. At another portion along Murfreesboro Road, the Nashville International Airport has a taxiway that crosses over the road and severely limits any roadway widening. Other sections of Murfreesboro Road in the southern portion of the study area bisect the downtowns of LaVergne and Smyrna. Major roadway expansion in these areas would result in the taking of several blocks of downtown businesses. The same development characteristics and roadway expansion implications are true within the City of Murfreesboro at the southern end of the study corridor.

Currently, few options in the corridor provide alternatives to driving in heavily congested conditions. Options for longer-distance commuters are limited to: carpools and vanpools using park-and-ride lots; the Regional Transportation Authority (RTA) “Relax-and-Ride” commuter bus service which operates only during rush hour periods; local and express Metropolitan Transit Authority (MTA) routes that operate over shorter segments of the corridor; and use of the HOV lane on I-24. The HOV lane on I-24 runs between Murfreesboro and Nashville but terminates at Harding Road, several miles short of downtown Nashville. Drivers using the HOV lane must enter mixed traffic at that point creating significant congestion and limiting the utility of the HOV lane for carpools and transit. In addition, the HOV lane is not enforced, further limiting its benefit. For existing bus service there are no options that enable buses to bypass congestion. Considering this, ridership on the existing commuter services is relatively high which indicates a potential unmet demand for transit options in the corridor.

Potential commuters that do not have access to private transportation are denied access to jobs and educational opportunities throughout the corridor as a result of the lack of transit options. This lack of access reduces opportunities for all people throughout the region, hinders social and economic advancement, and reduces regional economic development. As the Southeast Corridor High-Performance Transit Alternatives Study illustrates, the lack of mobility and transportation options combined with the current and projected growth of population, employment—and traffic congestion—requires that transportation alternatives be developed to address these needs.

This report documents the analysis that was conducted on transit alternatives in the southeast corridor between April 2004 and April 2007. This study examined the existing conditions in the corridor and developed a range of transit alternatives to meet the travel needs of the corridor and the goals and objectives of the community. The MPO, a project steering committee comprised of public agencies in the corridor, and consultant staff evaluated those alternatives and developed a locally preferred alternative strategy (LPA). The Nashville MPO approved the proposed LPA in February 2007. This report describes the process by which this alternative strategy was developed and evaluated, and the public and stakeholder involvement process that ultimately led to the approval of the LPA. It describes in detail the LPA and the alternatives ultimately discarded by the Steering Committee, and documents the many technical activities

and analyses that supported and, in many ways, guided the decision-making processes in the study.

The process described in this report follows the guidelines of the Federal Transit Administration's (FTA) Section 5309 *New Starts* process and was developed with the involvement of FTA staff. This report provides information that may subsequently be used in various chapters of a NEPA document.