Austin, Texas/Light Rail Corridors

Austin Light Rail Corridors

Austin, Texas

(November 1999)

(Access the Austin Light Rail map)

Description

The Austin Capital Metropolitan Transportation Authority (Metro) is proposing to develop a light rail transit (LRT) system in the North/South Central Corridor with phased implementation in the Southeast Corridor.

The initial phase of the locally preferred alternative for light rail development includes 20.0 miles serving a total of 26 stations. This phase includes an 18-mile LRT system, operating along the existing railroad right-of-way owned by Capital Metro from McNeil Road to Lamar at Airport in north Austin, then operating on-street through downtown Austin to Ben White Boulevard in south Austin. The initial phase also includes a 2.0 mile LRT line serving 5 stations from the Central Business District to 5th and Pleasant Valley in east Austin. The 20-mile initial phase is estimated to cost $1,085.8 million (in escalated dollars).

Capital Metro is further proposing a phased implementation of the Austin Area LRT System with development of a 14.6 mile Minimum Operable Segment (MOS) from McNeil Road in north Austin to the CBD. The MOS is planned to provide direct access to the University of Texas, the State Capitol Complex and the Austin CBD. Service is proposed to operate at 10-minute frequencies during peak periods, and 20-minute frequencies during the off-peak. The 14.6 mile MOS is estimated to cost $739.0 million (in escalated dollars) and to serve 37,400 average weekday boardings by the year 2025.

Austin Light Rail Summary Description

Proposed Project	14.6 mile, 16 station LRT Minimum Operable Segment
Total Capital Cost ($YOE)	$739.00 million
Section 5309 New Starts Share ($YOE)	$369.50 million
Annual Operating Cost ($YOE)	$23.40 million
Ridership Forecast (2025)	37,400 average weekday boardings (17,100 daily new riders)
FY 2001 Finance Rating:	**Medium-High**
FY 2001 Project Justification Rating:	**Medium**
FY 2001 Overall Project Rating:	**Recommended**

The *Recommended* rating is based on the project's adequate cost-effectiveness and transit-supportive land use, as well as its strong capital and operating financing plans *for this early stage of project development*. The overall project rating applies to this *Annual New Starts Report* **and reflects conditions as of November 1999.** Project evaluation is an ongoing process. As new starts projects proceed through development, the estimates of costs, benefits, and impacts are refined. The FTA ratings and recommendations will be updated annually to reflect new information, changing conditions, and refined financing plans.

Status

In March 1997, Capital Metro and CAMPO (the Capital Area Metropolitan Planning Organization) jointly completed a major investment study (MIS) which recommended a proposed LRT line in the northwest/north central corridor, designated as the Red Line from the CBD to the City of Leander. The southeast corridor, referred to as the Orange Line, was designated as the second highest priority. In October 1997, the Federal Transit Administration authorized Capital Metro to initiate preliminary engineering and to prepare an Environmental Impact Statement for the Red Line alignment.

The Capital Metro Board, in conjunction with selection of a new General Manager in October 1998, initiated additional planning efforts to refine the locally preferred alternative to ensure that the final plan incorporates the area's major destinations and activity centers. The Austin Area in Motion (AIM) study was a comprehensive market research, public involvement and technical analysis addressing future transportation options. Following extensive public involvement, the Capital Metro Board adopted the revised plan on October 25, 1999 and CAMPO formally endorsed the plan on November 8, 1999. Capital Metro plans to initiate environmental studies in early 2000 for the proposed 20.0 mile initial phase, and to focus the first phase of preliminary engineering on the 14.6 mile MOS. The Capital Metro Board has committed to hold a voter referendum on the service area's preferences regarding light rail no later than November 2000.

TEA-21 Section 3030(a)(85) authorizes the Austin Northwest/North Central/ Southeast-Airport Light Rapid Transit (LRT) for final design and construction. Through FY 2000, Congress has appropriated $2.97 million in Section 5309 New Start funds to the project.

Evaluation

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria*. Information reflects the 14.6 mile minimum operable segment (MOS) of the project. N/A indicates that data are not available for a specific measure.

FTA has evaluated this project as being in preliminary engineering. The project will be re-evaluated when it is ready to advance to final design, and for next year's *Annual Report on New Starts*.

Justification

The *Medium* project justification rating reflects across the board average ratings in the criteria, including cost-effectiveness and transit-supportive land use.

Mobility Improvements

Rating: Medium

Capital Metro estimates that the 14.6 mile MOS will serve 37,400 average weekday boardings, will attract 17,100 daily new riders by 2025, and will result in the following annual travel time savings.

Mobility Improvements	New Start vs. No-Build	New Start vs. TSM
Annual Travel Time Savings (Hours)	2.6 million hours	2.1 million hours

Based on 1990 census data, there are an estimated 4,446 low-income households within a ½ mile radius of the proposed 16 LRT stations in the MOS, or roughly 28 percent of total households within ½ mile of proposed stations.

Environmental Benefits

Rating: Medium

The Austin region is in attainment for ozone and in attainment for carbon monoxide. Capital Metro estimates the following annual emissions reductions.

Criteria Pollutant	New Start vs. No-Build	New Start vs. TSM
Carbon Monoxide (CO)	reduction of 137 annual tons	reduction of 122 annual tons
Nitrogen Oxide (NOx)	reduction of 49 annual tons	reduction of 43 annual tons
Volatile Organic Compounds (VOC)	reduction of 18 annual tons	reduction of 16 annual tons
Particulate Matter (PM10)	reduction of 170 annual tons	reduction of 152 annual tons
Carbon Dioxide (CO2)	reduction of 2,295 annual tons	reduction of 278 annual tons

Capital Metro estimates that in 2025, the MOS will result in the following savings in regional energy consumption (measured in British Thermal Units - BTU).

Annual Energy Savings	New Start vs. No-Build	New Start vs. TSM
BTU (million)	reduction of 1,575 million BTU	reduction of 27,941 million BTU

Operating Efficiencies

Rating: Medium

Capital Metro estimates the following costs per passenger mile for the 14.6 mile MOS.

Operating Efficiencies	No-Build	TSM	New Start
System Operating Cost per Passenger Mile (2025)	$1.18	$1.15	$1.14

Note: Values reflect 2025 ridership forecast and 1999 dollars.

Cost Effectiveness

Rating: Medium

Capital Metro estimates the following cost effectiveness indices.

Cost Effectiveness	New Start vs. No-Build	New Start vs. TSM
Incremental Cost per Incremental Passenger	$11.70	$12.30

Note: Values reflect 2025 ridership forecast and 1999 dollars.

Transit-Supportive Existing Land Use and Future Patterns

Rating: Medium

The *Medium* land use rating reflects existing conditions in the corridor with a mix of from moderate to low densities, but including a number of major trip generators. Local agencies have initiated a proactive program to encourage transit-supportive development.

Existing Conditions: The proposed 14.6 mile corridor for the MOS connects the Austin area's major activity centers including the University of Texas (UT), the UT Pickle Research area, the State Capitol Complex and the CBD. Total employment for the CBD, including the University of Texas, equals 70,000. An additional 30,000 jobs are located within ½ mile of stations in the remainder of the MOS corridor. Total population within ½ mile of stations in the MOS is estimated at 48,000, at an average density of 4,300 persons per square mile. Densities are highest around the eight stations in the CBD and UT area, while the northernmost two station areas are largely undeveloped. Currently, only minimal development exists along the northern portion of the MOS between McNeil Road and Howard Lane.

By 2025, employment along the MOS is expected to grow to 145,400, while population in the MOS is expected to grow to 109,500. CBD employment is anticipated to increase from 70,000 in 1997 to 86,500 in 2025. Strong growth is occurring in the Austin metropolitan area in general; by 2025, population is estimated to exceed 1.9 million and employment is estimated in excess of 1.1 million. Much of this growth is focused in a north-south corridor, specifically to the north and northwest of central Austin.

There are a considerable number of surface parking lots in the CBD, although surface parking is restricted to 60 percent of normal, City-wide requirements. UT plans to continue to supply.

14,000 parking spaces for a total campus population of 70,000. There are no specific restrictions on parking outside the CBD.

Future Plans and Policies: The City of Austin, Capital Metro, and the MPO have all issued transit-supportive policy guidelines and have initiated proactive public involvement programs to develop corridor and station area plans. The City of Austin's Smart Growth Initiative includes a number of activities supportive of transit-oriented development. These include designation of Smart Growth Corridors in coordination with bus and light rail transit services, land use plans and development incentives around proposed transit station areas, and a Traditional Neighborhood Development ordinance encouraging higher density, mixed use and transit-oriented development.

The City's Neighborhood Planning Initiative is the primary tool to implement land use policies. Through the development of community-based neighborhood plans, the city will attempt to integrate the goals of the Smart Growth Initiative into land use, zoning, and capital improvement decisions. The Austin City Council's draft downtown design guidelines call for creating mixed-use development, maintaining a fine-grained grid, and creating a more pedestrian-oriented streetscape.

There have been extensive efforts to encourage active public and organizational involvement. A Citizen's Planning Committee, appointed by the Austin City Council, has recommended and implemented a significant emphasis on integrated transportation and land use planning. The University has implemented an extensive Community Vision Project, including design workshops and site committee meetings. Numerous private sector organizations and institutions have actively participated in local planning efforts. And the Austin Area in Motion (AIM) program actively engaged citizens in planning decisions. Station planning activities will be refined during the preliminary engineering phase with the City of Austin, MPO, neighborhood organizations, and TxDOT.

A downtown ordinance provides flexibility from parking and other zoning requirements near station areas. Within the CBD, the parking minimum is 20 percent and the maximum is 60 percent of normal requirements to encourage transit use, and no parking is required for buildings of less than 4,000 square feet. The city is conducting a comprehensive parking study and developing a parking management plan for the Austin Downtown Area.

Other Factors

Economic Impact Analysis: In conjunction with recent planning efforts undertaken to refine the locally preferred alternative, Capital Metro also examined the economic costs and benefits of the fixed guideway investment in the Austin region. The goal of this assessment was to estimate the recommended alignment's impact on congestion management, affordable mobility and pedestrian-oriented development. The study concluded that the recommended transit alignment for the 20 mile locally preferred alternative would yield estimated net economic benefits, exceeding total estimated investment and life-cycle costs, of $384.8 million. The study concludes that the project would yield a real rate of return on investment of approximately 8.4 percent. The MOS is estimated to yield net economic benefits of $323.7 million, representing a real rate of return of 9.7 percent.

Local Financial Commitment

Proposed Non-Section 5309 Share of Total Project Costs: 50%

The financial plan for the 14.6 mile MOS includes $369.5 million (50 percent of total project costs) in Section 5309 New Starts funding, $103.7 million (14 percent) in existing cash reserves accumulated from the 1% local sales tax revenues, and $265.8 million (36 percent) from future dedicated local sales tax revenues.

Stability and Reliability of Capital Financing Plan

Rating: Medium-High

Agency Capital Financial Condition: The Austin Capital Metropolitan Transportation Authority is in sound financial condition. Capital Metro receives a one cent set-aside from the local sales tax, generating approximately $100 million in revenues annually which can be used for capital as well as operating expenses. The Board of Directors and Capital Metro management have been working aggressively to reduce the amount of this annual revenue used to fund local operations and to increase the amount reserved for capital projects. The amount used for current operations was reduced to 74% in FY 1998 and to 67% in FY 1999. Cash reserves are estimated to exceed $100 million by the end of FY 2000.

Capital Cost Estimates and Contingencies: Capital cost estimates, averaging approximately $51 million per mile for the MOS, appear reasonable at this time. However, preliminary engineering is needed to produce more specific cost estimates.

Existing and Committed Funding: Capital Metro proposes that $369.5 million (in escalated dollars) will be available as the local capital funding share for the MOS by leveraging its existing revenue base of sales tax revenues and passenger fare revenues. The financing plan includes $103.7 million in cash reserves from sales tax proceeds and an additional $265.8 million in anticipated sales tax revenues, reflecting approximately one-third of annual sales tax proceeds which are dedicated to capital project development. The current financing plan does not assume the issuance of debt, except the potential of a small amount of short term debt to meet cash flow requirements during the construction period.

Assuming the current 1% dedicated sales tax revenue remains in place, the local funding source appears solid and reasonable to meet projected capital financing requirements. The projected annual growth rate in sales tax revenues is 4% to 5%, compared to a 15% annual growth rate in the 1995-1999 period. The Capital Metro Board action in October 1999 indicated strong policy support for commitment of local sales tax funds to the proposed financing plan. Specific programming of funds is planned as soon as voter preferences have been affirmed through a referendum. The Capital Metro Board has approved the funding necessary to proceed with preliminary engineering and the preparation of an environmental impact statement.

New and Proposed Sources: Only existing sources are proposed for the construction of the MOS. No new or proposed sources are needed.

Stability and Reliability of Operating Finance Plan

Rating: Medium

Agency Operating Condition: The agency plans to continue to use two-thirds of the dedicated sales tax revenue, totaling approximately $100 million annually, for current operations and to place the remaining one third in reserve for future capital projects. Capital Metro is attempting to cut its existing system operating costs by redesigning the route network, developing new service policy guidelines and a five-year service plan in 2000.

Capital Metro's current fare recovery ratio is only 12%, in part due to low fares. The Agency is trying to increase the ratio to 20% by changes in the pass program and more enforcement of fare evasion. Capital Metro is attempting to cut its existing system operating costs by redesigning the route network, developing new service policy guidelines and a five year service plan in 2000.

Operating Cost Estimates and Contingencies: Annual operating costs for the 14.6 mile MOS are estimated at $23.4 million in 2015 (YOE dollars), reflecting 10-minute peak and 20-minute off-peak service frequencies. Operating cost estimates appear reasonable at this time. More detailed operating plans are to be developed in preliminary engineering.

Existing and Committed Funding: All of the project's proposed sources of operating funding are existing, leveraged from passenger fare revenues and the approximately two-thirds of the annual sales tax revenues directed to operating expenses. A 30-year cash flow analysis illustrates that ongoing system transit and paratransit operations, system capital replacment needs, as well as LRT operations for the MOS can be financed with currently available sources.

New and Proposed Sources: All proposed operating revenue sources currently exist. No new or proposed sources are needed.

Locally Proposed Financing Plan

(Reported in $YOE)

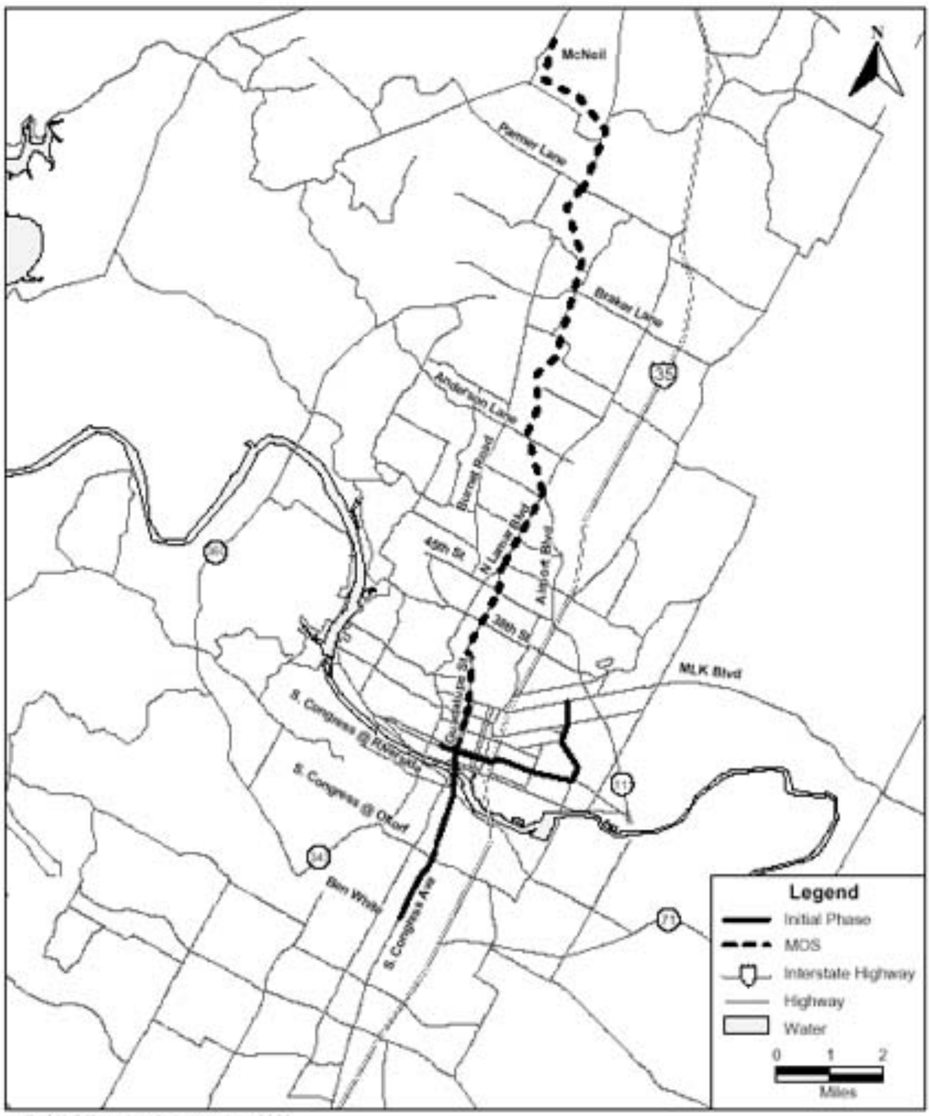
Proposed Source of Funds	Total Funding ($million)	Appropriations to Date
Federal: Section 5309 New Start	$369.50	$2.97 million appropriated through FY 2000

Local: Cash Reserves (from sale tax revenues)	$103.70	N/A
Dedicated 1% sales tax revenues	$265.80	N/A
TOTAL	**$739.00**	

Note: Funding proposal reflects assumptions made by project sponsors, and are not DOT or FTA assumptions. Totals may not add due to rounding.

Austin Area Light Rail Transit System

Austin, TX



Federal Transit Administration, 2000

Report Problems

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