



U.S. Department  
of Transportation  
**Federal Transit  
Administration**

# Supplemental Report on New Starts

Report of the Secretary of Transportation  
to the United States Congress  
Pursuant to 49 U.S.C. 5309(o)(2)

**A Supplement to the Annual Report on New Starts**



2000





U.S. Department  
of Transportation  
**Federal Transit  
Administration**

Deputy Administrator



400 Seventh St., S.W.  
Washington, D.C. 20590

**C-00-18**

NOV 22 2000

Dear Colleague:

I am pleased to provide you with a copy of the 2000 edition of the Federal Transit Administration's *Supplemental Report on New Starts*, which we have prepared in response to the requirements of 49 U.S.C. 5309(o)(2). This report was approved by Secretary of Transportation Rodney E. Slater on November 22, 2000.

As required under §5309(o)(2), this report updates the status of proposed new fixed guideway systems and extensions ("new starts") that have completed the alternatives analysis or preliminary engineering stages of project development since the date of the last *Annual Report on New Starts*. A total of 19 proposed new starts projects are included in this report; of these, twelve have completed preliminary engineering and seven have completed alternatives analysis.

It is important to stress that this is not a budgetary document. The purpose of this report is to update project-specific information and ratings for those projects that have recently completed alternatives analysis or preliminary engineering. Nothing in this report in any way alters any recommendations for the allocation of discretionary new starts funding that have been made by the Administration.

We look forward to working with Congress as these projects proceed through the new starts development process. If you have any questions regarding the content of this report, please do not hesitate to contact me.

Sincerely,

Nuria I. Fernandez  
Acting Administrator

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# Supplemental Report on New Starts

Report of the Secretary of Transportation  
to the United States Congress

**A Supplement to the Annual Report on New Starts**

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2000

Report Number FTA-TBP10-00-02

Prepared by:  
Federal Transit Administration

Pursuant to:  
Title 49, United States Code, §5309(o)(2)

Available from:  
Federal Transit Administration  
Office of Policy Development, TBP-10  
400 7<sup>th</sup> Street, SW, Room 9310  
Washington, DC 20590

<http://www.fta.dot.gov>

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(FTA archives)





## THE SECRETARY OF TRANSPORTATION

WASHINGTON, D.C. 20590

November 22, 2000

The Honorable Phil Gramm  
Chairman, Committee on Banking,  
Housing and Urban Affairs  
United States Senate  
Washington, D.C. 20510-6075

Dear Mr. Chairman:

I am pleased to present the U.S. Department of Transportation's *Supplemental Report on New Starts*, in response to the requirements of 49 U.S.C. 5309(o)(2). This report updates the status of proposed major transit investment projects ("new starts") that have recently completed the alternatives analysis or preliminary engineering stages of development.

Identical letters are being sent to the Chairman and Ranking Minority Member of the House Committee on Transportation and Infrastructure, and the Ranking Minority Member of the Senate Committee on Banking, Housing, and Urban Affairs. We are also providing copies of this report to the Transportation Subcommittees of the Appropriations Committees of both the House and Senate.

Sincerely,

A handwritten signature in black ink, appearing to read 'Rodney E. Slater'. The signature is fluid and cursive, with a long horizontal stroke at the end.

Rodney E. Slater

Enclosure





## THE SECRETARY OF TRANSPORTATION

WASHINGTON, D.C. 20590

November 22, 2000

The Honorable Paul S. Sarbanes  
Ranking Minority Member  
Committee on Banking, Housing  
and Urban Affairs  
United States Senate  
Washington, D.C. 20510-6075

Dear Senator Sarbanes:

I am pleased to present the U.S. Department of Transportation's *Supplemental Report on New Starts*, in response to the requirements of 49 U.S.C. 5309(o)(2). This report updates the status of proposed major transit investment projects ("new starts") that have recently completed the alternatives analysis or preliminary engineering stages of development.

Identical letters are being sent to the Chairman and Ranking Minority Member of the House Committee on Transportation and Infrastructure, and the Chairman of the Senate Committee on Banking, Housing, and Urban Affairs. We are also providing copies of this report to the Transportation Subcommittees of the Appropriations Committees of both the House and Senate.

Sincerely,

A handwritten signature in black ink, appearing to read 'Rodney E. Slater', written over a printed name.

Rodney E. Slater

Enclosure





## THE SECRETARY OF TRANSPORTATION

WASHINGTON, D.C. 20590  
November 22, 2000

The Honorable Bud Shuster  
Chairman, Committee on  
Transportation and Infrastructure  
U.S. House of Representatives  
Washington, D.C. 20515-6256

Dear Mr. Chairman:

I am pleased to present the U.S. Department of Transportation's *Supplemental Report on New Starts*, in response to the requirements of 49 U.S.C. 5309(o)(2). This report updates the status of proposed major transit investment projects ("new starts") that have recently completed the alternatives analysis or preliminary engineering stages of development.

Identical letters are being sent to the Chairman and Ranking Minority Member of the Senate Committee on Banking, Housing, and Urban Affairs, and the Ranking Minority Member of the House Committee on Transportation and Infrastructure. We are also providing copies of this report to the Transportation Subcommittees of the Appropriations Committees of both the House and Senate.

Sincerely,

A handwritten signature in black ink, appearing to read 'Rodney E. Slater', written over a white background.

Rodney E. Slater

Enclosure





## THE SECRETARY OF TRANSPORTATION

WASHINGTON, D.C. 20590  
November 22, 2000

The Honorable James L. Oberstar  
Ranking Minority Member  
Committee on Transportation and Infrastructure  
U.S. House of Representatives  
Washington, D.C. 20515-6256

Dear Congressman Oberstar:

I am pleased to present the U.S. Department of Transportation's *Supplemental Report on New Starts*, in response to the requirements of 49 U.S.C. 5309(o)(2). This report updates the status of proposed major transit investment projects ("new starts") that have recently completed the alternatives analysis or preliminary engineering stages of development.

Identical letters are being sent to the Chairman and Ranking Minority Member of the Senate Committee on Banking, Housing, and Urban Affairs, and the Chairman of the House Committee on Transportation and Infrastructure. We are also providing copies of this report to the Transportation Subcommittees of the Appropriations Committees of both the House and Senate.

Sincerely,

A handwritten signature in black ink, appearing to read "Rodney E. Slater".

Rodney E. Slater

Enclosure



## Foreword

This report is prepared annually for submission to the United States Congress by the Secretary of Transportation. Title 49, United States Code, Section 5309(o)(2) requires the Secretary of Transportation to submit to the Committee on Transportation and Infrastructure of the House of Representatives, and the Committee on Banking, Housing, and Urban Affairs of the Senate, a "supplemental report on new starts" that describes the Secretary's evaluation and rating of each proposed new starts project that has completed alternatives analysis or preliminary engineering since the date of the last *Annual Report on New Starts*. In addition to those committees, this report is also formally submitted to the Appropriations Committees of both the House and Senate. It is also provided to transit operators, metropolitan planning organizations (MPOs), State departments of transportation, and made generally available to the public at large.

This report is an update of project-specific information; it is not a budgetary document. Nothing in this report in any way alters any recommendations for the allocation of discretionary new starts funding that have been made by the Administration.

Upon request, this report will be made available in alternative formats. It is also available via the Internet at the FTA site on the World Wide Web; the address is <http://www.fta.dot.gov>.



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## Introduction

This report provides an update on the status of proposed major transit investment projects ("new starts") that have recently completed the alternatives analysis or preliminary engineering stage of development. Under 49 U.S.C. §5309(o)(2), the U.S. Department of Transportation is required to prepare in August of each year a "Supplemental Report on New Starts" to Congress that describes the evaluation and rating for each proposed new starts project that has completed alternatives analysis or preliminary engineering since the date of the last *Annual Report on New Starts* (as required under 49 U.S.C. §5309(o)(1)). Nineteen proposed projects meet this requirement and are included in this report; 12 have completed preliminary engineering and seven have completed alternatives analysis.

The purpose of the *Supplemental Report on New Starts* is to update project-specific information for a select number of proposed new starts projects. It does *not* include updated information for all proposed projects. Unlike the *Annual Report*, it is *not* a budgetary document. It is meant to be a constructive element in the administration of the federal transit assistance program, enriching the information exchange between the Executive and Legislative branches.

## The New Starts Rulemaking Process

On April 7, 1999, FTA published a Notice of Proposed Rulemaking (NPRM) in response to the requirement contained in the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) that the Department issue regulations on the manner in which new starts projects proposed for funding under §5309 will be evaluated and rated (64 FR 17062-71). The docket was open for public comment through July 6, 1999, though late-filed comments were accepted through July 19. In general, the NPRM retained the basic "multiple-measure method" for evaluating the statutory criteria for project justification and local financial commitment, described how each factor would be combined into overall ratings for justification and finance, and how those ratings would in turn determine the statutory overall project rating of "highly recommended," "recommended," or "not recommended." It also described how these ratings would be used to approve entry into preliminary engineering and final design, as required under TEA-21.

Comments were received from a total of 41 individuals and organizations (not counting duplicates). FTA also held three public outreach workshops during the comment period to solicit comment on the proposed rule. All comments in the docket are matters of public record, and are available for inspection at the United States Department of Transportation Central Dockets Office.<sup>1</sup> The docket is also available online through DOT's Docket Management System (DMS), at <http://dms.dot.gov>.<sup>2</sup> FTA is working to issue this rule in early 2001.

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<sup>1</sup> The docket is available for inspection from 10:00 a.m. to 5:00 p.m., Monday through Friday (except federal holidays), at the U.S. Department of Transportation, Central Dockets Office, PL-401, 400 7<sup>th</sup> Street SW, Washington, DC, 20590.

<sup>2</sup> Once you have accessed the DMS, follow the instructions and perform a search on docket no. 5474 to view the docket for this NPRM. Please note that the DMS requires the use of a "plug-in" to view the individual comments.

## Planning and Project Development Process

To be eligible for FTA capital investment funds for a new starts project, the proposed project must emerge from the metropolitan and/or Statewide planning process. Local officials must perform a corridor-level analysis of mode and alignment alternatives. This **alternatives analysis** will provide information on the benefits, costs, and impacts of alternative strategies, leading to the selection of a locally-preferred solution to the community's mobility needs. (The FTA/FHWA planning and environmental regulations (23 CFR Parts 450 and 771), which required a Major Investment Study (MIS) that fulfilled the requirement for alternatives analysis, are being revised in accordance with TEA-21; separate Notices of Proposed Rulemaking (NPRMs) were issued for the planning and environmental regulations on May 25, 2000.)

When the sponsoring agency for a new starts project wishes to initiate the **preliminary engineering** phase of project development, it must submit a request to the appropriate FTA regional office. The request must provide information on the metropolitan and/or Statewide plan that identifies the project, including the adoption of the project into the metropolitan transportation plan and the programming of the preliminary engineering activity in the Transportation Improvement Plan (TIP). The request must also address the project justification and local financial commitment criteria outlined below. (This information is normally developed as part of an alternatives analysis.) FTA will then evaluate the proposed project as required by 49 USC §5309(e)(6) and determine whether or not to advance the project into preliminary engineering. FTA approval to initiate preliminary engineering is not a commitment to fund preliminary engineering, final design, or construction.

During the preliminary engineering phase, local project sponsors refine the design of the proposal, taking into consideration all reasonable design alternatives. The process results in estimates of project costs, benefits and impacts in which there is a higher degree of confidence. In addition, requirements under the National Environmental Policy Act (NEPA) are completed (for new starts, this will normally entail the completion of an environmental impact statement), project management concepts are finalized, and any required local funding sources are put in place. Information on project justification and the degree of local financial commitment will be continually updated and reported as appropriate. As part of their preliminary engineering activities, localities are encouraged to consider policies and actions designed to enhance the benefits of the project and its financial feasibility.

**Final design** is the last phase of project development, and may include right-of-way acquisition, utility relocation, and the preparation of final construction plans (including construction management plans), detailed specifications, construction cost estimates, and bid documents. The final design stage cannot be initiated until environmental requirements have been satisfied, as evidenced by a Record of Decision (ROD) or a Finding of No Significant Impact (FONSI). Consistent with 49 USC §5309(e)(6), FTA will approve entry into final design based on the results of the project evaluation process.

## Evaluation and Rating Process

As proposed new starts projects proceed through the stages of the planning and project development process, they are evaluated against the full range of criteria for project justification and local financial commitment contained in §5309(e). In both cases, FTA relies on a multiple-measure approach to assign ratings; these ratings are updated throughout the preliminary engineering and final design processes, as information concerning costs, benefits, and impacts is refined. The results of these evaluations are used to make the required approvals for entry into preliminary engineering and final design, to execute a Full Funding Grant Agreement (FFGA), and to make annual funding recommendations to Congress.

Due to the fact that the Final Rule on new starts project evaluation and rating has not yet been published, the evaluations and ratings contained in this Report are based on FTA's existing process, as published in the Federal Register on December 19, 1996 and amended on November 12, 1997 (61 FR 67093 & 62 FR 60756), which have been modified slightly to account for the increased emphasis on land use by TEA-21 and the prohibition against placing a dollar value on mobility improvements.

### The Criteria

The criteria for new starts project evaluation are described in 49 USC §5309(e). To be eligible for funding under the new starts program, proposed projects must be based on the results of an alternatives analysis and preliminary engineering; justified based on a comprehensive review of a variety of factors, and supported by an acceptable degree of local financial commitment. Sections 5309 (e)(2)-(4) further describe the factors to be considered when making these determinations.

The criteria for evaluating project justification are as follows:

- Mobility improvements
- Environmental benefits
- Operating efficiencies
- Cost effectiveness
- Transit-supportive existing land use policies and future patterns<sup>3</sup>

Consistent with §5309(e)(3)(H), FTA also includes a variety of “**other factors**” when evaluating project justification, including a) the degree to which the policies and programs (local transportation planning, programming and parking policies, etc.) are in place as assumed in the forecasts, b) project management capability, and c) additional factors relevant to local and national priorities and relevant to the success of the project.

Section 5309(e)(1)(C) requires that proposed projects also be supported by an acceptable degree of local financial commitment, including evidence of stable and dependable financing sources to

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<sup>3</sup> While not specified as a criterion in §5309(e)(1)(B), the clear emphasis placed on land use issues by both TEA-21 and the earlier Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) has led to the establishment of project justification criteria for transit-supportive existing land use policies and future patterns.

construct, maintain and operate the system or extension. The criteria for evaluation of the local financial commitment to a proposed project are:

- The proposed share of total project costs from sources other than §5309, including federal formula and flexible funds, the local match required by federal law, and any additional capital funding ("overmatch");
- The strength of the proposed capital financing plan; and
- The ability of the sponsoring agency to fund operation and maintenance of the entire system as planned, including existing service, once the guideway project is built.

## The Evaluations

As noted above, FTA evaluates proposed new starts projects against the full range of criteria for both project justification and local financial commitment, using a multiple-measure method.

**Project evaluation is an ongoing process;** as proposed new starts proceed through the project development process, information concerning costs, benefits, and impacts is refined, and the ratings are updated to reflect new information.

For each of the project justification criteria, the proposed new start is evaluated against both a no-build and a Transportation System Management (TSM) alternative (a package of low to moderate cost improvements designed to make more efficient use of an existing transportation system<sup>4</sup>). For each proposed project, FTA assigns one of five descriptive ratings ("high," "medium-high," "medium," "low-medium," or "low") for each of the five criteria, with "other factors" considered as appropriate. The same is true for the three factors used to evaluate local financial commitment.

Consistent with §5309(e)(6), summary ratings of "highly recommended," "recommended," or "not recommended" are assigned to each proposed project, based on the results of the review and evaluation of each of the criteria for project justification and local financial commitment. To assign these summary ratings, the individual ratings for each of the financial rating factors and project justification criteria are combined into overall "finance" and "justification" ratings, which in turn are combined to produce the summary ratings.

In evaluating the project justification criteria, FTA gives primary consideration to the measures for transit-supportive land use, cost effectiveness, and mobility improvements to arrive at the combined "justification" rating. For local financial commitment, the measures for the proposed local share of capital costs and the strength of the capital and operating financing plans are the primary factors in determining the combined "finance" rating.

For a proposed project to be rated as "recommended," it must be rated at least "medium" in terms of both finance and justification. To be "highly recommended," a proposed project must be rated higher than "medium" for both finance and justification. Proposed projects not rated at least "medium" in both finance and justification will be rated as "not recommended."

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<sup>4</sup> TSM alternatives typically include elements such as traffic engineering and signalization, transit operational changes, and modest capital improvements.

These ratings are used both to approve entry into preliminary engineering and final design, as required under §5309(e)(6), and to recommend proposed projects for federal funding commitments. A proposed project must receive a rating of at least “recommended” in order to be approved for any of these purposes.

The permanent approach FTA will use to assign these summary ratings will be detailed in the upcoming regulation on project evaluation required by 49 USC §5309(e)(5). In the absence of a Final Rule, however, FTA must still use the principles established by TEA-21 to evaluate proposed new starts and assign project ratings. Therefore, the project ratings contained in this report reflect an application of FTA’s *existing* project evaluation process, as published in the Federal Register on December 19, 1996 and amended on November 12, 1997 (61 FR 67093-106 & 62 FR 60756-58). The only significant change is that, due to the TEA-21 provision, the *value* of travel time savings is no longer reported for mobility improvements; instead, travel time savings is reported in terms of hours.

The results of the project evaluation process for the 19 projects included in this Report are shown in Table 1.

Appendix A provides a more detailed profile for each project which has completed the preliminary engineering stage of development, including a description, status, list of funding sources, map, and a presentation of the project evaluation criteria and ratings. Each of these profiles includes a summary description which highlights the overall project ratings and presents key descriptive, cost and ridership data for each proposed new starts project compared to the no-build alternative. Detailed profiles for those proposed projects that have completed alternatives analysis are included in Appendix B.

It is important to note that a *rating* of “recommended” does not translate directly into a *funding* recommendation in any given fiscal year. Rather, the overall project ratings are intended to reflect overall project merit. It is also important to note that the purpose of this Report is to update the status and ratings of those proposed projects that have recently completed alternatives analysis or preliminary engineering; this is *not* a budgetary document and does not alter the funding recommendations contained in the President’s budget proposal to Congress.

## **Projects that have Completed Preliminary Engineering**

Since the last edition of the *Annual Report on New Starts* was issued, a total of twelve proposed new starts projects have completed the preliminary engineering stage of development. All of these projects have been approved for entry into final design. As TEA-21 requires all final design approvals to be based on the project rating and evaluation process, all of these projects have been rated as “recommended” or higher.

**Table 1-A  
Summary of New Starts Project Ratings**

City (Project)	Total Capital Cost (millions)	Total Sect. 5309 Funding Requested (millions)	Section 5309 Funds Share of Capital Costs	Overall Project Rating	Financial Rating	Project Justification Rating
<b>Completed Preliminary Engineering</b>						
Baltimore (Central LRT Double Track)	\$153.7 YOE	\$120.0	78%	<b>Recommended</b>	Medium-High	Medium
Chicago (Douglas Branch Reconstruction)	\$450.8 YOE	\$320.1	71%	<b>Highly Recommended</b>	Medium-High	Medium-High
Denver (Southeast Corridor LRT)	\$882.5 YOE	\$525.0	60%	<b>Recommended</b>	Medium-High	Medium
Memphis (Medical Center Rail Extension)	\$69.1 YOE	\$55.3	80%	<b>Recommended</b>	Medium	Medium
Minneapolis-St. Paul (Hiawatha Avenue LRT)	\$548.6 YOE	\$274.3	50%	<b>Recommended</b>	Medium-High	Medium
Portland (Interstate MAX LRT Extension)	\$350.0 YOE	\$257.5	73%	<b>Highly Recommended</b>	High	High
Salt Lake City (University Corridor LRT)	\$118.5 YOE	\$84.6	71%	<b>Recommended</b>	Medium	Medium
San Diego (Oceanside-Escondido Rail)	\$253.5 YOE	\$72.0	28%	<b>Highly Recommended</b>	High	Medium-High
San Francisco (Third Street LRT - Phase 1)	\$530.8 YOE	\$0.0	0%	<b>Recommended</b>	Medium-High	Medium
Seattle (Central Link LRT (MOS-1))	\$1,500.0 YOE	\$500.0	33%	<b>Highly Recommended</b>	Medium-High	High
Seattle (Central Link LRT (LPA))	\$2,481.0 YOE	\$941.0	38%	<b>Highly Recommended</b>	Medium-High	Medium-High
Washington (Largo Metrorail Extension)	\$433.9 YOE	\$260.3	60%	<b>Recommended</b>	Medium-High	Medium
<b>Completed Alternatives Analysis</b>						
Charlotte (South Corridor LRT)	\$331.1 YOE	\$166.8	50%	<b>Recommended</b>	Medium	Medium-High
Los Angeles (Eastside Corridor LRT)	\$759.5 YOE	\$402.3	53%	<b>Recommended</b>	Medium	Medium
Lowell, MA - Nashua, NH (Commuter Rail Extension)*	\$41.0 YOE	\$18.0	44%	<b>N/A</b>	N/A	N/A
Minneapolis-Rice, MN (Northstar Corridor Commuter Rail)	\$223.0 YOE	\$112.0	50%	<b>Recommended</b>	Medium	Medium
New Orleans (Desire Corridor Streetcar)	\$93.5 YOE	\$57.6	62%	<b>Recommended</b>	Medium	Medium
Stamford, CT (Urban Transitway and ITC Improvements)	\$23.9 YOE	\$18.0	75%	<b>Recommended</b>	Medium	Medium
Washington County, OR (Wilsonville-Beaverton Com. Rail) *	\$82.8 YOE	\$24.9	30%	<b>N/A</b>	N/A	N/A

\* These projects were not rated due to the exemption provided under Section 5309(e)(8)(A) for projects requiring less than \$25 million in Section 5309 New Starts funding.

**Table 1-B  
Summary of New Starts Project Ratings**

City (Project)	Overall Project Rating	Financial Rating	Financial Rating Criteria		Project Justification Rating	Project Justification Criteria				
			Capital Finance Rating	Operating Finance Rating		Mobility Improvement Rating	Environmental Benefits Rating	Operating Efficiency Rating	Cost Effectiveness Rating	Land Use Rating
<b>Completed Preliminary Engineering</b>										
Baltimore (Central LRT Double Track)	Recommended	Medium-High	High	Medium-High	Medium	Medium	High	Medium	Medium-High	Low-Medium
Chicago (Douglas Branch Reconstruction)	Highly Recommended	Medium-High	Medium-High	Medium	Medium-High	Medium	High	Medium	Medium	High
Denver (Southeast Corridor LRT)	Recommended	Medium-High	Medium-High	Medium-High	Medium	Medium	Medium	Medium	Low-Medium	Medium
Memphis (Medical Center Rail Extension)	Recommended	Medium	Medium-High	Medium	Medium	Not Rated	Medium	Medium	High	Medium
Minneapolis-St. Paul (Hiawatha Avenue LRT)	Recommended	Medium-High	High	Medium	Medium	Low-Medium	High	Medium	Low-Medium	Medium-High
Portland (Interstate MAX LRT Extension)	Highly Recommended	High	High	High	High	High	High	Medium	Medium-High	High
Salt Lake City (University Corridor LRT)	Recommended	Medium	Medium-High	Medium	Medium	Low-Medium	Medium	Medium	Medium-High	Medium
San Diego (Oceanside-Escondido Rail)	Highly Recommended	High	High	Medium-High	Medium-High	Medium-High	Medium	Medium	High	Medium
San Francisco (Third Street LRT - Phase 1)	Recommended	Medium-High	Medium-High	Medium	Medium	Medium-High	Medium	Medium	Low	High
Seattle (Central Link LRT (MOS-1))	Highly Recommended	Medium-High	High	Medium	High	Medium	High	Medium	High	High
Seattle (Central Link LRT (LPA))	Highly Recommended	Medium-High	High	Medium	Medium-High	Medium	High	Medium	High	High
Washington (Largo Metrorail Extension)	Recommended	Medium-High	High	Medium-High	Medium	Medium	High	Medium	Medium	Medium-High
<b>Completed Alternatives Analysis</b>										
Charlotte (South Corridor LRT)	Recommended	Medium	Medium	Medium-High	Medium-High	Medium-High	High	Low	Medium	Medium-High
Los Angeles (Eastside Corridor LRT)	Recommended	Medium	Medium-High	Medium	Medium	Medium-High	Medium	Medium	Low	Medium-High
Lowell, MA - Nashua, NH (Commuter Rail Extension)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Minneapolis-Rice, MN (Northstar Corridor Commuter Rail)	Recommended	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
New Orleans (Desire Corridor Streetcar)	Recommended	Medium	Medium	Medium	Medium	Low-Medium	Medium	Medium	Medium	Medium-High
Stamford, CT (Urban Transitway and ITC Improvements)	Recommended	Medium	Medium	Not Rated	Medium	High	Medium	Not Rated	Low-Medium	Medium-High
Washington County, OR (Wilsonville-Beaverton Com. Rail) *	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

\* These projects were not rated due to the exemption provided under Section 5309(e)(8)(A) for projects requiring less than \$25 million in Section 5309 New Starts funding.

**Table 1-C  
Summary of New Starts Project Ratings**

City (Project)	Financial Rating	Finance Rating Criteria		
		Section 5309 Funds as Share of Capital Costs	Capital Finance Rating	Operating Finance Rating
<b>Completed Preliminary Engineering</b>				
Baltimore (Central LRT Double Track)	<b>Medium-High</b>	78%	High	Medium-High
Chicago (Douglas Branch Reconstruction)	<b>Medium-High</b>	71%	Medium-High	Medium
Denver (Southeast Corridor LRT)	<b>Medium-High</b>	60%	Medium-High	Medium-High
Memphis (Medical Center Rail Extension)	<b>Medium</b>	80%	Medium-High	Medium
Minneapolis-St. Paul (Hiawatha Avenue LRT)	<b>Medium-High</b>	50%	High	Medium
Portland (Interstate MAX LRT Extension)	<b>High</b>	73%	High	High
Salt Lake City (University Corridor LRT)	<b>Medium</b>	28%	Medium-High	Medium
San Diego (Oceanside-Escondido Rail)	<b>High</b>	28%	High	Medium-High
San Francisco (Third Street LRT - Phase 1)	<b>Medium-High</b>	0%	Medium-High	Medium
Seattle (Central Link LRT (MOS-1))	<b>Medium-High</b>	33%	High	Medium
Seattle (Central Link LRT (LPA))	<b>Medium-High</b>	38%	High	Medium
Washington (Largo Metrorail Extension)	<b>Medium-High</b>	60%	High	Medium-High
<b>Completed Alternatives Analysis</b>				
Charlotte (South Corridor LRT)	<b>Medium</b>	50%	Medium	Medium-High
Los Angeles (Eastside Corridor LRT)	<b>Medium</b>	53%	Medium-High	Medium
Lowell, MA - Nashua, NH (Commuter Rail Extension)*	<b>N/A</b>	44%	N/A	N/A
Minneapolis-Rice, MN (Northstar Corridor Commuter Rail)	<b>Medium</b>	50%	Medium	Medium
New Orleans (Desire Corridor Streetcar)	<b>Medium</b>	62%	Medium	Medium
Stamford, CT (Urban Transitway and ITC Improvements)	<b>Medium</b>	75%	Medium	Not Rated
Washington County, OR (Wilsonville-Beaverton Com. Rail) *	<b>N/A</b>	30%	N/A	N/A

\* These projects were not rated due to the exemption provided under Section 5309(e)(8)(A) for projects requiring less than \$25 million in Section 5309 New Starts funding.

**Table 1-D**  
**Summary of New Starts Project Ratings**

City (Project)	Project Justification Rating	Mobility Improvement Rating	Mobility Improvements			Environmental Benefits Rating	Environmental Benefits				EPA Classification	
			Annual Travel Time Savings (millions hours)		Low Income Households within 1/2 Mile		Annual Reduction in Greenhouse Gas Emmissions (tons CO2)		Annual Reduction in Regional Energy Consumption (million BTU's)			
			New Start Vs.				New Start Vs.		New Start Vs.		Ozone	Carbon Monoxide
			No-Build	TSM		No Build	TSM	No Build	TSM			
<b>Completed Preliminary Engineering</b>												
Baltimore (Central LRT Double Track)	Medium	Medium	0.6	N/A	7,315	High	8,170	N/A	105,178	N/A	Severe Non-Attainment	Attainment
Chicago (Douglas Branch Reconstruction)	Medium-High	Medium	4.7	2.6	10,056	High	24,046	19,262	293,194	227,522	Severe Non-Attainment	Attainment
Denver (Southeast Corridor LRT)	Medium	Medium	4.0	3.4	1,906	Medium	5,177	7,905	2,340	43,288	Transitional Non-Attainment	Serious Non-Attainment
Memphis (Medical Center Rail Extension)	Medium	Not Rated	N/A	N/A	2,700	Medium	177	N/A	2,318	N/A	Maintenance	Maintenance
Minneapolis-St. Paul (Hiawatha Avenue LRT)	Medium	Low-Medium	1.0	0.4	3,358	High	9,378	10,404	106,273	117,578	Attainment	Attainment
Portland (Interstate MAX LRT Extension)	High	High	17.4	0.8	3,226	High	33,873	3,553	433,413	[13,808]	Attainment	Attainment
Salt Lake City (University Corridor LRT)	Medium	Low-Medium	0.2	[0.2]	3,105	Medium	8,283	6,373	52,997	27,793	Maintenance	Non-Attainment
San Diego (Oceanside-Escondido Rail)	Medium-High	Medium-High	1.4	0.7	1,706	Medium	4,070	2,113	54,464	29,045	Serious Non-Attainment	Moderate Non-Attainment
San Francisco (Third Street LRT - Phase 1)	Medium	Medium-High	N/A	1.3	5,988	Medium	N/A	3,503	N/A	[16,661]	Maintenance	Attainment
Seattle (Central Link LRT (MOS-1))	High	Medium	N/A	12.8	7,879	High	N/A	32,758	N/A	407,589	Maintenance	Maintenance
Seattle (Central Link LRT (LPA))	Medium-High	Medium	N/A	16.5	9,071	High	N/A	19,806	N/A	192,328	Maintenance	Maintenance
Washington (Largo Metrorail Extension)	Medium	Medium	1.7	1.1	46	High	2,740	10,370	19,499	6,418	Serious Non-Attainment	Moderate Non-Attainment
<b>Completed Alternatives Analysis</b>												
Charlotte (South Corridor LRT)	Medium-High	Medium-High	5.3	4.9	5,700	High	46,966	25,117	28,070	10,850	Attainment	Attainment
Los Angeles (Eastside Corridor LRT)	Medium	Medium-High	0.4	0.2	5,343	Medium	2,074	2,030	8,851	16,112	Extreme Non-Attainment	Serious Non-Attainment
Lowell, MA - Nashua, NH (Commuter Rail Extension)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Minneapolis-Rice, MN (Northstar Corridor Commuter Rail)	Medium	Medium	1.0	[0.5]	1,219	Medium	10,860	11,828	143,247	154,427	Attainment	Attainment
New Orleans (Desire Corridor Streetcar)	Medium	Low-Medium	0.0	N/A	6,017	Medium	[170]	[113]	[6,008]	[5,337]	Maintenance	Maintenance
Stamford, CT (Urban Transitway and ITC Improvements)	Medium	High	0.4	0.1	139	Medium	8,929	8,929	116,724	116,724	Attainment	Attainment
Washington County, OR (Wilsonville-Beaverton Com. Rail) *	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

\* These projects were not rated due to the exemption provided under Section 5309(e)(8)(A) for projects requiring less than \$25 million in Section 5309 New Starts funding. Values in brackets [ ] represent an increase.

Table 1-D (Cont)  
Summary of New Starts Project Ratings

City (Project)	Operating Efficiency Rating	Operating Efficiencies			Cost Effectiveness Rating	Cost Effectiveness		Land Use Rating
		Systemwide Operating Cost per Passenger Mile				Incremental Cost per Incremental Passenger	New Start Vs.	
		No-Build	TSM	New Start				
<b>Completed Preliminary Engineering</b>								
Baltimore (Central LRT Double Track)	Medium	\$0.60	N/A	\$0.59	Medium-High	\$8.70	N/A	Low-Medium
Chicago (Douglas Branch Reconstruction)	Medium	\$0.20	\$0.21	\$0.21	Medium	\$11.70	\$13.70	High
Denver (Southeast Corridor LRT)	Medium	\$0.37	\$0.39	\$0.37	Low-Medium	\$18.40	\$14.80	Medium
Memphis (Medical Center Rail Extension)	Medium	\$0.42	N/A	\$0.44	High	\$5.20	N/A	Medium
Minneapolis-St. Paul (Hiawatha Avenue LRT)	Medium	\$0.35	\$0.35	\$0.36	Low-Medium	\$19.00	\$19.20	Medium-High
Portland (Interstate MAX LRT Extension)	Medium	\$0.42	\$0.38	\$0.38	Medium-High	\$3.10	\$9.70	High
Salt Lake City (University Corridor LRT)	Medium	\$0.30	\$0.30	\$0.30	Medium-High	\$6.60	\$10.60	Medium
San Diego (Oceanside-Escondido Rail)	Medium	\$0.10	\$0.10	\$0.10	High	\$4.40	\$6.40	Medium
San Francisco (Third Street LRT - Phase 1)	Medium	N/A	\$0.55	\$0.55	Low	N/A	\$38.90	High
Seattle (Central Link LRT (MOS-1))	Medium	N/A	\$0.47	\$0.45	High	N/A	\$3.30	High
Seattle (Central Link LRT (LPA))	Medium	N/A	\$0.47	\$0.45	High	N/A	\$8.10	High
Washington (Largo Metrorail Extension)	Medium	\$0.38	\$0.38	\$0.38	Medium	\$9.30	\$11.60	Medium-High
<b>Completed Alternatives Analysis</b>								
Charlotte (South Corridor LRT)	N/A	N/A	N/A	N/A	Medium	\$10.00	\$10.30	Medium-High
Los Angeles (Eastside Corridor LRT)	Medium	\$0.32	\$0.32	\$0.32	Low	\$24.00	\$25.30	Medium-High
Lowell, MA - Nashua, NH (Commuter Rail Extension)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Minneapolis-Rice, MN (Northstar Corridor Commuter Rail)	Medium	\$0.35	\$0.34	\$0.34	Medium	\$10.40	\$13.30	Medium
New Orleans (Desire Corridor Streetcar)	Medium	\$0.54	\$0.54	\$0.54	Medium	\$11.30	\$10.90	Medium-High
Stamford, CT (Urban Transitway and ITC Improvements)	Not Rated	N/A	N/A	N/A	Low-Medium	\$11.40	\$13.00	Medium-High
Washington County, OR (Wilsonville-Beaverton Com. Rail) *	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

\* These projects were not rated due to the exemption provided under Section 5309(e)(8)(A) for projects requiring less than \$25 million in Section 5309 in New Starts funding.

### **Baltimore/Central LRT Double-Tracking**

The Maryland Mass Transit Administration (MTA) proposes to construct 9.4 miles of double track to upgrade designated areas of the Baltimore Central Light Rail Line (CLRL) that are currently single track. The CLRL is 29 miles long and operates from Hunt Valley in the north to Cromwell/Glen Burnie in the south, serving Baltimore City and Baltimore and Anne Arundel Counties, with extensions providing service to Amtrak at Penn Station and the Baltimore-Washington International Airport. This proposed project will double track eight sections of the existing line between Timonium and Cromwell Station/Glen Burnie. Although no new stations are required, the addition of a second track will require construction of additional station platforms at four stations. Other elements included in the double track project are bridge and crossing improvements, bi-directional signal system with traffic signal preemption on Howard Street, and catenary and other equipment and systems. The double tracking will be constructed almost entirely in existing right-of-way. The MTA estimates the total cost of these improvements at \$153.7 million (in escalated dollars). In 2020, average weekday boardings are estimated at 44,000, with an estimated 6,800 daily new riders.

FTA approved MTA's request to enter preliminary engineering in January 1999. The project has been divided into two segments to facilitate environmental review. The environmental review for the southern segment, Cromwell Station to Hamburg Street, has been completed with a Finding of No Significant Impact (FONSI) issued July 27, 2000. FTA approved entry into final design of the Southern segment in August 2000. The preliminary engineering phase and a FONSI for the northern segment, North Avenue to Timonium, is anticipated to be completed in fall 2000. Upon completion of the environmental review for the northern segment, MTA will request FTA approval of its entry into final design.

This project has a financial rating of "medium-high" and is rated "medium" for justification, earning an overall rating of "recommended."

### **Chicago/Douglas Branch Reconstruction Project**

The Chicago Transit Authority (CTA) is proposing a complete reconstruction of the approximately 6.6-mile length of the existing Douglas Branch of CTA's heavy rail Blue Line. The line extends from a point just west of downtown Chicago to its terminus at Cermak Avenue. The Douglas Branch Line was originally built in the early 20<sup>th</sup> Century with several improvements and upgrades occurring through the mid-1980s. The line currently carries approximately 27,000 average weekday boardings utilizing 11 existing stations. Due to its age, the line has become seriously deteriorated which has resulted in high maintenance and operating costs and declining service. The Douglas Branch serves one of the most economically distressed areas in Chicago. Total capital costs for the proposed heavy rail reconstruction project are estimated at \$450.8 million (escalated dollars).

FTA approved the Douglas Branch project for final design in June 2000. This project has been rated "medium-high" for both finance and project justification, based on the strongly transit supportive land use along the corridor and the demonstrated local financial commitment, earning it an overall rating of "highly recommended."

## **Denver/Southeast Corridor LRT**

The Regional Transportation District (RTD) and Colorado Department of Transportation (CDOT) are proposing the Southeast Corridor project, a 19.0-mile light rail transit (LRT) system extending from the existing LRT station at I-25 and Broadway in Denver along I-25 to Lincoln Avenue and I-25 in Douglas County, with a LRT spur line along I-225 to Parker Road in Arapahoe County. The double track system is proposed to operate on an exclusive, grade-separated right-of-way and connect with the existing 5.3-mile Central Corridor light rail line in downtown Denver at the existing Broadway station. At I-25 and Broadway, the Southeast Corridor would also connect with RTD's Southwest Corridor light rail line that is currently under construction. The capital cost estimate of the fixed-guideway element is \$882.5 million in escalated dollars, including right-of-way acquisition, final design, construction, and acquisition of rolling stock. Annual operating costs in 2020 are estimated at \$35.3 million. Ridership is estimated at 38,100 average weekday boardings, 12,900 of which are new riders.

The Colorado Department of Transportation (CDOT), in cooperation with the Denver Regional Council of Governments (DRCOG) and the RTD, completed a Major Investment Study on the corridor in July 1997. The MIS resulted in the selection of a multimodal package of highway and rail improvements. The DRCOG Board has included the LRT locally preferred alternative in the 2020 Long Range Regional Transportation Plan. Preliminary engineering and environmental work were initiated in the spring of 1998. A Draft Environmental Impact Statement was issued in August 1999. A Final Environmental Impact Statement was issued in December 1999 and a Record of Decision was signed in March 2000. Revenue service is projected to begin no later than July 2008.

This project has been rated "medium-high" in terms of finance and "medium" for project justification, earning it an overall rating of "recommended" as it enters the final design stage of development.

## **Memphis/Medical Center Rail Extension**

The Memphis Area Transit Authority (MATA), in cooperation with the City of Memphis, is proposing to build a 2.5-mile light rail transit extension to the Main Street Trolley/Riverfront Loop village rail system. The extension would expand the central business district (CBD) rail circulation system to serve the Medical Center area east of the CBD. The proposed project would operate on street in mixed traffic and would connect with the Main Street Trolley, sharing a lane with automobile traffic on Madison Avenue between Main Street and Cleveland Street. At the eastern terminus, near Cleveland Street, a bus transfer point and a small park-and-ride lot would be constructed to accommodate transfers with buses and cars. At the western terminus, existing stations on Main Street near Madison Avenue would be utilized for transfers to/from the Main Street Trolley/Riverfront Loop system. Six new stations would be located along the route. The line will be designed to accommodate light rail vehicles but vintage rail cars would be utilized until a proposed regional LRT line is implemented and a fleet of modern LRT vehicles is acquired. The project is proposed as the last segment of the downtown rail circulation system as well as the first segment of a regional light rail line. The total capital cost of the 2.5 mile project is estimated at \$69.1 million (escalated dollars), of which MATA is expected to seek

\$55.3 million in §5309 new starts funding. MATA estimates 2,100 average weekday boardings in the opening year (2002), increasing to 4,200 by 2020.

This project has been rated "medium" for both project justification and local financial commitment, earning it an overall rating of "recommended" at the completion of preliminary engineering. FTA approved this project for entry into final design in May 2000.

### **Minneapolis-St. Paul/Hiawatha Avenue LRT**

Metro Transit and the Metropolitan Council (local metropolitan planning organization), in cooperation with the Minnesota Department of Transportation (MnDOT), Hennepin County and the Metropolitan Airports Commission (MAC), are proposing to design and construct an 11.6-mile Light Rail Transit (LRT) line along the Hiawatha Avenue Corridor. The proposed LRT will operate on the Hiawatha Avenue/Trunk Highway 55 Corridor linking downtown Minneapolis, the Minneapolis-St. Paul (MSP) International Airport, and the Mall of America (MOA) in Bloomington. The LRT is the transit component of a Locally Preferred Alternative which includes reconstruction of TH-55 as a four lane at-grade arterial between Franklin Avenue and 59th Street and construction of an interchange between TH-55 and TH-62 (Crosstown Highway).

Current plans call for the north end of the LRT to begin in the Central Business District (CBD) and operate on the existing transit mall along 5th Street. The LRT is planned to exit the CBD near the Hubert Humphrey Metrodome, following the former Soo Line Railroad to Franklin Avenue, then parallel Hiawatha Avenue. The project will include a 0.8-mile tunnel to be constructed under the MSP airport runways and taxiways with the construction of one underground station. The line is then planned to emerge from the tunnel on the West Side of the airport and continue south with four proposed stations in Bloomington, including a station in the vicinity of the Mall of America (MOA). The estimated capital cost for the 11.6-mile Hiawatha Avenue LRT, including 16 proposed stations, totals \$548.6 million (escalated dollars). The project is expected to serve 24,600 average weekday boardings by the year 2020; 18,300 average weekday boardings are projected in the opening year.

The Hiawatha Avenue LRT has been rated "medium-high" for local financial commitment and "medium" for project justification, based on the strong transit-supportive land use policies in place along the corridor and throughout the metropolitan area and the strength of the project's capital and operating financing plans. This gives the Hiawatha Avenue project an overall rating of "recommended." FTA approved this project for entry into final design in April 2000.

### **Portland/Interstate MAX LRT Extension**

The Tri-County Metropolitan Transportation District of Oregon (Tri-Met) is proposing a 5.6-mile extension of its Light Rail Transit (LRT) system known locally as the Metropolitan Area Express. The proposed Interstate Metropolitan Area Express (MAX) line will extend existing LRT service northward from the Rose Quarter Arena and the Oregon Convention Center, to North Portland neighborhoods, medical facilities, the Portland International Raceway, and the Metropolitan Exposition Center. Goals of the alignment include complementing regional land use plans by connecting established residential, commercial, entertainment, and other major

activity centers, and providing a key transportation link in the region's welfare to work programs. The LRT extension is estimated to cost \$350 million (escalated dollars) and carry 18,100 average weekday boardings (8,400 new riders) by 2020.

This project is rated "high" for both finance and project justification, earning an overall rating of "highly recommended." This rating is based on the project's strong estimated cost effectiveness, transit supportive land use, and demonstrated local financial commitment to build and operate the project. FTA approved the Portland Interstate MAX extension for entry into Final Design in February 2000.

### **Salt Lake City/University Corridor LRT**

The Utah Transit Authority (UTA) is proposing to construct a 2.5-mile, four station light rail line in eastern Salt Lake City, from the downtown area to Rice-Eccles Stadium on the University of Utah campus. The line would connect with the existing North/South line at Main Street and travel east along 400 South and 500 South to the stadium. Light rail vehicles would operate on city streets and property owned by Salt Lake City, the Utah Department of Transportation, and the University. The line is intended to significantly improve access to jobs, educational opportunities, health care, and housing throughout the 400 South corridor. The University LRT line is scaled back from the originally-proposed 10.9-mile West/East line from the airport to the university.

This project has been rated "medium" for both project justification and finance, earning it an overall rating of "recommended." FTA approved entry into final design for the University LRT in March 2000.

### **San Diego/Oceanside-Escondido Rail Corridor**

The North County Transit District (NCTD) in northern San Diego County, California is planning to convert an existing 22-mile freight railroad corridor between Oceanside and Escondido into a rail transit line. The line would run east from the City of Oceanside through the cities of Vista and San Marcos and unincorporated portions of San Diego County, to the City of Escondido, using diesel multiple unit (DMU) rail vehicles. The alignment also includes 1.7 miles of new right-of-way to serve the campus of California State University San Marcos (CSUSM). The line is located along the State Route 78 corridor, the principal east-west corridor in the county. The complete 23.7-mile system would serve 15 stations, four of which would be located at existing transit centers. Passenger rail service would have exclusive use of the rail line during pre-defined hours of operation.

The Oceanside-Escondido project has been rated "high" for finance and "medium-high" for project justification, earning an overall rating of "highly recommended." The rating for finance represents an increase from the "medium-high" rating reported in the 2000 *Annual Report on New Starts*, due to the commitment of \$80 million in new local funding to this project by the passage of the Governor's budget in July 2000. FTA approved this project for entry into final design in February 2000.

## **San Francisco/Third Street Light Rail – Phase 1**

The San Francisco Municipal Railway (MUNI) has proposed a 7.1 mile light rail transit (LRT) line and maintenance facility in the heavily transit-dependent Third Street corridor in eastern San Francisco. The primary purposes of the Third Street Light Rail Project are to accommodate existing and forecasted transit ridership with greater reliability, comfort, and speed, and to facilitate economic development opportunities along the corridor. The proposed project would operate on the surface from the Caltrain Bayshore Station at the San Francisco County line to the south, connect to the existing LRT system in downtown San Francisco via Third Street, and extend into a subway terminating in Chinatown. The project would provide regional connections to BART and CalTrain at multimodal stations. Third Street Light Rail operations would include exclusive (subway) as well as semi-exclusive (street median) rights-of-way, using MUNI's existing high floor light rail vehicles.

MUNI intends to implement this project in two phases. Phase 1 is a 5.4 mile minimum operable segment (MOS), which would operate as a surface extension of the J-Church MUNI Metro line between the Market Street Subway and the Bayshore CalTrain Station. The estimated capital cost for the MOS is \$530.8 million (escalated dollars). Phase 2, the New Central Subway, would extend the line underground to a terminal in Chinatown, and is estimated to cost \$876.1 million (escalated dollars) to construct.

FTA approved Phase 1 of the Third Street LRT for entrance into final design in April 2000. This project has been rated "medium-high" for finance and "medium" for project justification, resulting in an overall project rating of "recommended" for Phase 1.

## **Seattle/Central Link LRT (MOS-1)**

The Central Puget Sound Regional Transit Authority (Sound Transit) is planning a 23.5-mile, 23-station light rail transit project running north to south from Northgate, through downtown Seattle, Southeast Seattle and the cities of Tukwila and SeaTac. The *Link* LRT system would connect with and operate through the existing 1.6-mile Downtown Seattle Transit Tunnel. Sound Transit plans to implement this system as a series of "minimum operable segments" (MOS). The first MOS will consist of a 7.2-mile, 10-station line running southwest from the NE 45<sup>th</sup> Street station to the South Lander Street station, operating over a combination of new, exclusive right of way and through the Transit Tunnel. The estimated cost of this segment is \$1,500 million (escalated dollars).

The *Link* LRT system is one element of Sound Transit's voter-approved ten year, \$3.9 billion *Sound Move* regional transit plan, which also includes implementation of a 2-mile light rail line in downtown Tacoma; an 82-mile commuter rail system between Lakewood and Everett (the *Sounder*); 20 new regional express bus routes; 14 High Occupancy Vehicle (HOV) direct access ramps (providing access to over 100 miles of existing HOV lanes); 14 new park and ride lots and nine transit centers; and other service improvements.

The Link LRT MOS is rated "high" for project justification and "medium-high" for finance, earning an overall rating of "highly recommended. FTA approved this project for entry into final design in February 2000.

### **Seattle/Central Link LRT (LPA)**

As noted above, Sound Transit in Seattle, Washington is planning a 23.5-mile, 23-station light rail transit project (the "*Link*") running north to south from Northgate, through downtown Seattle, Southeast Seattle and the cities of Tukwila and SeaTac. The system would be implemented as a series of "minimum operable segments" (MOS). The first MOS, discussed above, is a 7.2-mile, 10-station line running southwest from the NE 45<sup>th</sup> Street station to the South Lander Street station, operating over a combination of new, exclusive right of way and through the existing Downtown Seattle Transit Tunnel.

The remainder of the Locally Preferred Alternative (LPA) of the *Link* LRT – MOS-2 and MOS-3 – extends from the planned maintenance facility south to the South 200<sup>th</sup> Street station. The 13-mile segment includes tunnel, aerial and at-grade configurations.

Sound Transit's request to initiate final design on the remainder of the *Link* LRT LPA was approved by FTA in July 2000. This project has been rated "medium-high" for both project justification and finance, earning it an overall rating of "highly recommended." This report represents the first time the *Link* LRT LPA has been evaluated separately from the MOS discussed above.

### **Washington, D.C. Metropolitan Area/Largo Metrorail Extension**

The Maryland Mass Transit Administration (MTA) and the Washington Metropolitan Area Transit Authority (WMATA) are planning a joint project to extend the Blue Line of the Washington Metrorail system from the Addison Road station to Largo Town Center in Prince George's County, Maryland. The 3.1-mile, two-station extension will be operated by WMATA as an integral part of the regional Metrorail system, providing access to downtown Washington, D.C. and the surrounding counties in Maryland and Virginia. The line follows an alignment through central Prince George's County that has been preserved as a rail transit corridor in the county's Master Plan. The two new stations will be located at Summerfield Boulevard north of MD-214 (Central Avenue) and at Largo Town Center just outside the Capitol Beltway (I-95). Shuttle bus service is proposed to link both new stations with FedEx Field (formerly known as Redskins Stadium). MTA will manage the project through preliminary engineering, and WMATA will undertake final design and construction. MTA and WMATA expect this extension to open for service by September 2004.

The Largo Metrorail Extension is rated "medium-high" for finance and "medium" for project justification, earning an overall rating of "recommended." The rating for finance represents an increase from the "medium" rating reported in the 2000 *Annual Report on New Starts*, due primarily to the May 2000 agreement between WMATA and the Maryland State DOT regarding the required local funding. FTA approved entry into final design in July 2000, with WMATA assuming management responsibility for the project.

## Projects that have Completed Alternatives Analysis

Seven proposed new starts projects have completed alternatives analysis since the last edition of the *Annual Report on New Starts* was issued. All of these have been approved to enter the preliminary engineering stage of project development. Five of these proposed projects have been rated as "recommended" or higher; the remaining two are seeking less than \$25 million in §5309 new starts funding, and are therefore exempt from the project rating and evaluation process by §5309(e)(8)(A). Approvals for exempt projects to advance to the next stage of development are based on their having met basic grant eligibility requirements for the new starts program.

### Charlotte/South Corridor LRT

The Charlotte Area Transit System (CATS), in cooperation with the City of Charlotte, is planning an 11-mile, 19-station light rail line from Uptown Charlotte to the Town of Pineville near the South Carolina border. The proposed line would run generally parallel to Interstate-77, operating over portions of Norfolk Southern railroad right-of-way and sharing right-of-way with the city's existing Downtown Trolley System. The proposed project also includes the purchase of up to 12 light rail vehicles and the construction of a maintenance and storage facility. Total capital costs for the MOS are estimated at \$331 million (escalated), with estimated daily ridership totaling 15,500 in 2025.

The proposed South Corridor LRT project in Charlotte has been rated "medium-high" for project justification and "medium" for finance, earning it an overall rating of "recommended." FTA approved this project to enter preliminary engineering in August 2000.

### Los Angeles/Eastside Corridor LRT

The Los Angeles County Metropolitan Transportation Authority (LACMTA) is planning a 5.9-mile light rail transit line that would connect Downtown Los Angeles with low- to moderate-income communities in East L.A. The proposed system would include 8 stations and will traverse eastward from Union Station, the city's major intermodal hub, and Alameda Street through the City Terrace, Belvedere, and East Los Angeles communities of unincorporated Los Angeles County. The project would terminate at Beverly and Atlantic Boulevards, where a 500 space park-and-ride facility is planned. This project is intended to improve mobility for residents and employees in the corridor, and provide improved access to employment opportunities throughout the MTA service area. 15,000 average weekday boardings are forecasted on the proposed line in 2020, including 9,700 new riders. The project is estimated to cost \$759.5 million in escalated dollars, of which LACMTA is expected to seek \$402.3 million in §5309 new starts funding.

Initial systems planning efforts for the Eastside Corridor began in 1989, and an alternatives analysis on the corridor commenced in 1990, resulting in the selection of a heavy rail subway line from Union Station to Whittier/Atlantic Boulevard in 1993. A Record of Decision on the corridor was issued in December 1994. In May 1993, FTA and MTA entered into a Full Funding Grant Agreement (FFGA) on three heavy rail corridors ("MOS-3"), which included the

North Hollywood, Mid-City, and Eastside corridors. In January 1997, FTA requested that the MTA submit a Recovery Plan to demonstrate its ability to complete the FFGA while maintaining and operating the existing bus system. Pursuant to the request, on January 14, 1998, the LACMTA Board of Directors voted to suspend and demobilize rail construction activities on the Mid-City and Eastside projects. The MTA subsequently submitted a Recovery Plan to FTA on May 15, 1998; FTA approved the Plan on July 2, 1998.

In 1998, the MTA undertook a Regional Transit Alternatives Analysis (RTAA) to analyze and evaluate feasible alternatives for the Eastside and Mid-City corridors. The RTAA addressed system investment priorities, allocation of resources to operate existing transit services at a reliable standard, assessment and management of financial risk, countywide bus service expansion, and a process for finalizing corridor investments. On November 9, 1998, the LACMTA Board reviewed the RTAA and directed staff to reprogram state and local resources previously allocated to the Eastside and Mid-City Extensions to the implementation of RTAA recommendations. In June 1999, the MTA initiated a Re-Evaluation/Major Investment Study on the Eastside corridor, and began a draft environmental impact statement on the corridor in March 2000. In June 2000, the MTA board formally selected a light rail transit technology in the Eastside corridor as the locally preferred alternative, and requested formal FTA approval for preliminary engineering on the LPA in July 2000; FTA approved the request in August 2000.

The Eastside Corridor LRT has been rated "medium" for both finance and project justification, earning an overall rating of "recommended."

### **Lowell, MA-Nashua, NH/Commuter Rail Extension**

The New Hampshire Department of Transportation (NHDOT) is proposing a 12-mile extension of an existing commuter rail line from Lowell, Massachusetts to Nashua, New Hampshire. The proposed project would extend existing commuter rail service provided by the Massachusetts Bay Transportation Authority (MBTA) along a corridor generally paralleling Route 3 in Massachusetts. The proposed service extension would provide an alternative to a highly congested highway corridor and is also anticipated to provide traffic mitigation during the planned expansion of Route 3 in Massachusetts. The proposed project also includes the purchase of commuter rail equipment for use by the MBTA, rehabilitation of existing track and the construction of new trackage (where necessary), and a park-and-ride lot with a boarding platform near Everett Turnpike (Exit 2) in Nashua. NHDOT plans to execute an agreement with the MBTA (primary commuter rail operator in New England) to operate the commuter extension project. The total capital cost for the commuter rail extension project is estimated at \$41 million (escalated dollars), with a proposed §5309 share of \$18 million.

Under §5309(e)(8)(A), proposed projects requiring less than \$25 million in §5309 new starts funding are exempt from the project evaluation and rating process required by §5309(e). Based on this exemption, FTA approved NHDOT's request to initiate preliminary engineering for the proposed Nashua-Lowell commuter rail extension project in May 2000. However, FTA strongly encourages sponsors who believe their projects meet the requirements for exemption to nonetheless submit information for evaluation and rating purposes, in order to provide a sound

basis for decisions and recommendations. As no information was submitted to FTA for evaluation, no rating has been assigned.

### **Minneapolis-St. Cloud/Northstar Corridor Commuter Rail**

The Northstar Corridor Development Authority (NCDA) and the Minnesota Department of Transportation (MN DOT) are proposing an 80-mile commuter rail line along the Northstar Corridor, an area generally paralleling Trunk Highway 10 extending from Downtown Minneapolis northwest to Rice, Minnesota. The corridor connects the Twin Cities with several suburban areas, including Anoka, Sherburne, Benton and Morrison counties. Ten of the twelve proposed commuter rail stations will provide park-n-ride facilities and all stations will accommodate bus pick-up areas. The proposed project also includes an extension of the proposed Hiawatha Avenue light rail transit (LRT) line from downtown Minneapolis to the proposed commuter rail service. A feeder bus program providing increased bus service to station sites will also be provided.

The commuter rail project will operate along existing Burlington-Northern Santa Fe (BNSF) railroad tracks, and includes the purchase of five locomotives, 17 passenger rail cars, and the construction of layover and vehicle storage facilities. Total capital costs for this portion of the project are estimated at \$223 million (escalated dollars). The proposed Hiawatha Avenue LRT extension runs approximately one-third of a mile between Third Avenue North and a proposed downtown Minneapolis commuter rail station at Fifth Avenue North. Total capital costs for this extension are estimated at \$22.1 million (escalated dollars). The commuter rail project is expected to serve 10,550 average weekday boardings by the year 2020, including 9,400 new riders.

FTA approved NCDA and MNDOT's request to initiate preliminary engineering in June 2000 on the commuter rail and light rail extension projects. The projects are included in the regions' financially constrained Transportation Improvement Program and long range transportation plans. The Northstar Corridor project has been rated "medium" for both project justification and finance, earning it an overall rating of "recommended."

### **New Orleans/Desire Corridor Streetcar**

The Regional Transit Authority (RTA) of New Orleans is restoring a 2.9-mile streetcar line in downtown New Orleans, as part of the locally preferred alternative for the Desire Corridor. The Desire Corridor Streetcar project will operate along North Rampart Street and St. Claude Avenue between Canal Street and Poland Avenue. The proposed alignment will loop at Canal Street and use exclusive right-of-way in the median of city streets, as much as possible. The project will serve the communities of Iberville, Treme, Faubourg Marigny, St. Roch and Bywater. Six major bus transfer points with construction of center platforms, canopies, passenger benches and landscaping will be provided; 16 intermediate stops with less elaborate center-platform facilities are also planned. The project also includes the purchase of 13 new vehicles. The capital cost estimate of the streetcar project is \$93.45 million (escalated dollars). Ridership is forecast at 15,266 daily boardings in 2020.

The Desire Streetcar project was approved by FTA to enter the preliminary engineering stage of development in August 2000. This project has been rated "medium" in terms of both finance and project justification, earning it an overall rating of "recommended."

### **Stamford/Urban Transitway & Intermodal Transportation Center Improvements**

The City of Stamford, in coordination with the Connecticut Department of Transportation (CDOT) and the Southwestern Regional Planning Agency (local Metropolitan Planning Organization), is proposing a one-mile Urban Transitway to improve access to the Stamford Transportation Center, which is undergoing rehabilitation to accommodate high-speed rail service and additional commuter parking. The proposed project will provide a direct link from Interstate 95 to the Transportation Center, and would incorporate exclusive lanes for buses and other high occupancy vehicles. In addition, the transitway will include new bus routes and improved pedestrian access throughout the length of the facility. Intelligent Transportation Systems (ITS) are also proposed to provide priority traffic signals and real time information via variable message signs, along the transitway. The total capital cost for the proposed transitway is estimated at \$24 million (escalated dollars), of which the project sponsors intend to seek \$18 million in §5309 new starts funds.

Under §5309(e)(8)(A), proposed projects requiring less than \$25 million in §5309 new starts funding are exempt from the project evaluation and rating process required by §5309(e). However, in order to provide a sound basis for decisions and recommendations concerning such projects, FTA strongly encourages sponsors who believe their projects meet the requirements for exemption to nonetheless submit information for evaluation and rating purposes. The City of Stamford has submitted such information for the Urban Transitway and Intermodal Transportation Center Improvements project. This project has been rated "medium" for both project justification and finance, earning an overall rating of "recommended." FTA approved this project for entry into preliminary engineering in February 2000.

### **Washington County, Oregon/Wilsonville-Beaverton Commuter Rail**

Washington County, Oregon, in conjunction with the Oregon Department of Transportation (ODOT), Tri-County Metropolitan District of Oregon (Tri-Met), Portland Metro (Metro), Clackamas County, and the cities of Wilsonville, Tualatin, Tigard and Beaverton, is proposing to design and construct a 15-mile, 5-station commuter rail line between the cities of Wilsonville and Beaverton, connecting the two cities with several outlying jurisdictions. The proposed project would operate along portions of existing Union-Pacific Railroad tracks and connect to Metro's existing Westside light rail system at the Beaverton Transit Center (BTC). As part of the proposed project, approximately 2,000 feet of new track will be constructed at the northern terminus of the alignment near the BTC. The proposed project also includes the purchase of eight passenger rail cars, the construction of vehicle maintenance and dispatch facilities and multiple capital improvements.

The northern portion of the corridor is owned by Union-Pacific Railroad, while the southern portion is owned by ODOT. All proposed stations, with the exception the BTC station, will have

park-and-ride facilities. Total capital cost for the commuter rail project is estimated at \$82.8 million (escalated dollars), of which the project sponsors intend to seek \$24.9 million in §5309 new starts funds.

Under §5309(e)(8)(A), proposed projects requiring less than \$25 million in §5309 new starts funding are exempt from the project evaluation and rating process required by §5309(e). Based on this exemption, FTA approved Washington County's request to enter preliminary engineering for the Wilsonville-Beaverton Corridor project in July 2000. However, FTA strongly encourages sponsors who believe their projects meet the requirements for exemption to nonetheless submit information for evaluation and rating purposes, in order to provide a sound basis for decisions and recommendations. As no information was submitted to FTA for evaluation, no rating has been assigned.



# Appendix A

## Projects That Have Completed Preliminary Engineering

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*Prepared by:*  
Office of Planning  
Federal Transit Administration  
U.S. Department of Transportation



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# Central LRT Double Track

## Baltimore, Maryland

(August 2000)

### Description

The Maryland Mass Transit Administration proposes to construct 9.4 miles of double track to upgrade designated areas of the Baltimore Central Light Rail Line (CLRL) that are currently single track. The CLRL is 29 miles long and operates from Hunt Valley in the north to Cromwell/Glen Burnie in the south, serving Baltimore City and Baltimore and Anne Arundel Counties, with extensions providing service to Amtrak at Penn Station and the Baltimore-Washington International Airport.

The proposed project will double track eight sections of the CLRL between Timonium and Cromwell Station/Glen Burnie. Although no new stations are required, the addition of a second track will require construction of additional station platforms at four stations. The project will reduce headways from 17 minutes to 8 minutes in the peak period, and to 12 minutes in the off-peak, and also improve operational reliability. Other elements included in the double track project are bridge and crossing improvements, bi-directional signal system with traffic signal preemption on Howard Street, and catenary and other equipment and systems. The double tracking will be constructed almost entirely in existing right-of-way. The MTA estimates the total cost of these improvements at \$153.7 million (in escalated dollars). In 2020, average weekday boardings are estimated at 44,000, with an estimated 6,800 daily new riders.

Summary Description	
<b>Proposed Project:</b>	Light rail line double tracking 9.4 miles, new platforms at 4 stations.
<b>Total Capital Cost (\$YOE):</b>	\$153.7 million
<b>Section 5309 Share (\$YOE):</b>	\$120.0 million
<b>Annual Operating Cost (\$YOE):</b>	\$8.4 million
<b>Ridership Forecast (2020):</b>	44,000 avg. weekday boardings 6,800 daily new riders
<b>FY 2001 Financial Rating:</b>	<b>Medium-High</b>
<b>FY 2001 Project Justification Rating:</b>	<b>Medium</b>
<b>FY 2001 Overall Project Rating:</b>	<b>Recommended</b>

The *Recommended* rating is based on the project's strong estimated cost effectiveness and demonstrated local financial commitment. The overall project rating applies to this *Supplemental Report on New Starts* and reflects conditions as of August 2000. 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

The original Central Light Rail Line was built entirely with local funds. The line began operations in 1992 predominately as single track. MTA subsequently examined the feasibility and environmental impacts and benefits of double tracking eight sections. Three Federally funded extensions of the CLRL, to Hunt Valley, Penn Station and Baltimore-Washington International Airport, were completed in 1998. The double track project was adopted by the Baltimore Metropolitan Council and included in its financially constrained long range plan in 1993.

In January 1999, FTA approved Maryland MTA's request to enter preliminary engineering. The project has been divided into two segments to facilitate environmental review. The environmental review for the southern segment, Cromwell Station to Hamburg Street, has been completed with a Finding of No Significant Impact (FONSI) issued July 27, 2000. FTA approved entry into final design of the Southern segment in August 2000. The PE phase and a FONSI for the northern segment, North Avenue to Timonium, is anticipated to be completed in fall 2000. Upon completion of the environmental review for the northern segment, MTA will request FTA approval of its entry into final design and begin preparation of the FFGA request.

TEA-21 Section 3030(a)(42) authorizes the "Maryland – Light Rail Double Track" for final design and construction. Section 3030(g)(1)(C) specifies that the "Baltimore-Washington Transportation Improvements Program" projects will be funded at an 80 percent Federal share, comparing the aggregate expenditure of State and local funds, including highway funds, provided by the State of Maryland for all phases of the Central Corridor Light Rail project. Through FY 2000, Congress has appropriated \$5.65 million in Section 5309 New Starts funds to the project.

## Evaluation

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria*. Criteria were submitted on the entire 29 mile CLRL corridor. While only certain sections of the line are being improved, criteria ratings are provided for the entire line, unless otherwise noted, since double-tracking sections are scattered throughout the system and will affect service for the entire system. With FTA's permission, the MTA did not provide criteria on a TSM alternative. N/A indicates that the data are not available for a specific measure. FTA has evaluated this project as being in final design.

## Justification

The *Medium* project justification rating reflects strong cost-effectiveness but relatively weak transit-supportive land use.

**Mobility Improvements**

**Rating: Medium**

MTA estimates that the project will serve 44,000 average weekday boardings and attract 6,800 daily new riders by 2020, and would result in the following annual travel time savings.

<u>Mobility Improvements</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Annual Travel Time Savings (Hours)</b>	0.6 million	N/A

Based on 1990 Census data, there are an estimated 7,315 low-income households within a ½ mile radius of 29 stations along the proposed project corridor.

**Environmental Benefits**

**Rating: High**

The Baltimore Metropolitan Area is a severe non-attainment area for ozone. MTA estimates that in 2020, the CLRL double tracking would result in the following annual emissions reductions.

<u>Criteria Pollutant</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Carbon Monoxide (CO)</b>	301	N/A
<b>Nitrogen Oxide (NO<sub>x</sub>)</b>	2,700	N/A
<b>Volatile Organic Compounds (VOC)</b>	210	N/A
<b>Particulate Matter (PM<sub>10</sub>)</b>	0	N/A
<b>Carbon Dioxide (CO<sub>2</sub>)</b>	8,170	N/A

Values reflect annual tons of emissions reductions.

MTA estimates that in 2020, the project would result in the following reduction in regional energy consumption (measured in British Thermal Units – BTU).

<u>Annual Energy Savings</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>BTU (million)</b>	105,178	N/A

Values reflect annual BTU reductions

**Operating Efficiencies**

**Rating: Medium**

MTA estimates the following systemwide operating cost per passenger mile by 2020 for the CLRL double tracking project and the No-Build alternative.

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
<b>System Operating Cost per Passenger Mile (2020)</b>	\$0.60	N/A	\$0.59

Values reflect 2020 ridership forecast and 1997 dollars.

**Cost Effectiveness**

**Rating: Medium-High**

MTA estimates the following cost effectiveness index for the project.

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Incremental Cost per Incremental Passenger</b>	\$8.70	N/A

Values reflect 2020 ridership forecast and 1997 dollars.

**Transit-Supportive Existing Land Use and Future Patterns**

**Rating: Low-Medium**

The *Low-Medium* land use rating reflects that although land use in the City of Baltimore remains fairly transit-supportive, adjacent counties along the corridor have not yet undertaken significant policy measures to increase transit supportive development in their jurisdictions.

**Existing Conditions:** The Central Light Rail Line traverses low to moderate density suburban communities, a portion of the Baltimore CBD, and several entertainment and sports centers and tourist attractions. A total of 160,000 employees and 44,000 residents are located within ½ mile of the ten central Baltimore City stations, at densities of 78 and 22 per acre, respectively. Pedestrian accessibility in the city is generally good, with a densely gridded street network. The City of Baltimore has undertaken some revitalization efforts including streetscape improvements in the downtown area. A number of redevelopment and restoration activities are underway or planned in the City near the light rail corridor. The State of Maryland has undertaken programs to improve pedestrian access in station areas. Parking policies and incentives related to transit are currently weak or non-existent. Additional parking has been recommended in the Baltimore CBD in order to increase the economic competitiveness of the area.

Elsewhere in the corridor, the character of commercial and residential development is generally suburban, at low to moderate densities. As a freight corridor, pedestrian access is frequently limited by a lack of sidewalks, due to the presence of adjacent freeways and/or railroad tracks, arterial crossings, and circuitous street systems. The State of Maryland has taken the lead in

growth management with the 1996 passage of its Smart Growth Initiative. Existing or planned growth management policies for outlying areas restrict the extent of urban development and urban service provision, but contain relatively weak policies to concentrate development in transit station areas. Commercial redevelopment of formerly industrial areas is continuing to occur at the north end of the corridor. While there have been some activities to improve pedestrian access to these developments, a particular concentration of activity near light rail stations is not noted.

**Future Plans and Policies:** Current market forces indicate a general outward migration of population from the central city. Employment is forecasted to increase slightly in the CBD and corridor but at a slower rate than regional employment growth. Existing policies to encourage transit-oriented development are generally weak. Baltimore City has undertaken some revitalization efforts, including streetscape improvements in the downtown area. The City of Baltimore has initiated a \$350 million West Side Urban Renewal Project to redevelop 18 square blocks of the Howard Street Corridor. Proposed policies would increase the minimum required parking for new development and increase the number of parking structures; however, greater emphasis on parking management would promote transit use.

Anne Arundel County has designated Transit-Oriented Development areas although with relatively modest development targets. Baltimore County has designated an employment center that includes a number of stations. Existing zoning does not generally support increased development in station areas. Design guidelines specifically for station areas have not been developed. Anne Arundel County is in the process of revising its zoning ordinances consistent with the recently adopted general plan, which should allow for mixed-use, possibly higher densities, and improved pedestrian access in station areas. Baltimore County and Baltimore City may revise zoning ordinances in the near future, consistent with general plan revisions that are currently being developed. These plans address the state's Smart Growth Initiative and contain some provisions aimed at coordinating development with transit. The state's long-range transportation plan has been finalized. The MTA has undertaken activities in a few station areas to integrate development with station areas and facilitate additional station area development.

## Local Financial Commitment

### **Proposed Non-Section 5309 Share of Total Project Costs: 22%**

MTA's financial plan proposes to use \$120 million (78 percent of total project costs) in Section 5309 New Starts funds; \$3.0 million (2 percent) is proposed from Section 5307 Urban Formula funds and \$30.7 million (20 percent) of State funds is also proposed. Section 3030(g)(1)(C) of TEA-21 specifies the 80 percent Federal share for this project, in recognition of previous State and local contributions for all phases of the CLRL including the State's prior 100 percent investment in the CLRL main line. Taking these previous local investments into consideration results in an overall 33 percent Federal investment in the Central Corridor Light Rail system.

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## Stability and Reliability of Capital Financing Plan

### Rating: High

The *High* capital finance plan rating reflects the strong financial condition of the Maryland Department of Transportation, parent agency of the Mass Transit Administration, and the State's demonstrated financial commitment to the project.

**Agency Capital Financial Condition:** All capital transportation investments in the State of Maryland are locally financed entirely through the Maryland Transportation Trust Fund (MTTF) administered by the Maryland Department of Transportation (MDOT). The debt is rated Aa2 by Moody's Investor Services, AA by Standard and Poor's Corporation, and AA by Fitch IBCA, Inc., which are among the highest ratings awarded to transportation agencies.

**Capital Cost Estimates and Contingencies:** The capital cost estimate for this project has remained constant, accounting for 3 percent inflation. Adequate contingencies built into project cost estimates provide some security against the risk of cost overruns. Beyond this, MDOT's Transportation Trust Fund is considered secure and has additional capability to issue debt should the need arise.

**Existing and Committed Funding:** All non-Federal funding for the project has been committed. The State has committed \$30.74 million over the six years scheduled for the project carried forward in its FY 2000 – FY 2005 Consolidated Transportation Program (CTP) as the local match, funded by the Maryland Transportation Trust Fund. The Maryland Transportation Trust Fund, with its additional bonding capacity, provides a stable revenue source for capital projects throughout the State. An additional \$2.95 million of Section 5307 formula funds has also been programmed to this project.

**New and Proposed Sources:** No new sources of funding are proposed for the project.

## Stability and Reliability of Operating Finance Plan

### Rating: Medium-High

The *Medium-High* operating finance plan rating reflects the reliable State support of transit operating subsidies and the financial soundness of MTA operations.

**Agency Operating Financial Condition:** All activities of MDOT are supported by the MTTF, including debt service, maintenance, operations and administration. Revenues allocated to the MTTF exceed \$2 billion annually. MDOT is able to balance anticipated expenditures with projected revenues, despite the fact that the MTTF does not depend on inflation-sensitive revenue sources. MTA's systemwide operating budget in 2003 is anticipated at \$275.2 million. The MTA reports farebox revenues accounting for 32 percent of total revenue in FY 1997. Between 1990 and 1997, MTA's operating expenses increased by 64 percent, or at an average rate of 7.3 percent annually. MTA's operating revenues kept pace with increasing expenses and increased by 50 percent during the same time period.

**Operating Cost Estimates and Contingencies:** Systemwide annual operating and maintenance costs are estimated to increase by \$8.4 million with the double tracking improvements, based on the number of additional trains to be operated at reduced headways. The estimated increase in operating and maintenance costs constitutes an increase of less than 1 percent over the MTTF's FY 2004 projected operating costs. Typically, the MTA has offset cost increases with bus service mile reductions and cost containment programs. Overall, cost increases have been less than general inflation.

**Existing and Committed Funding:** Total operating expenses are covered by the Maryland Transportation Trust Fund, including debt service, maintenance, operations and administration. Operations and maintenance of the Central Light Rail system have been fully programmed in the State CTP.

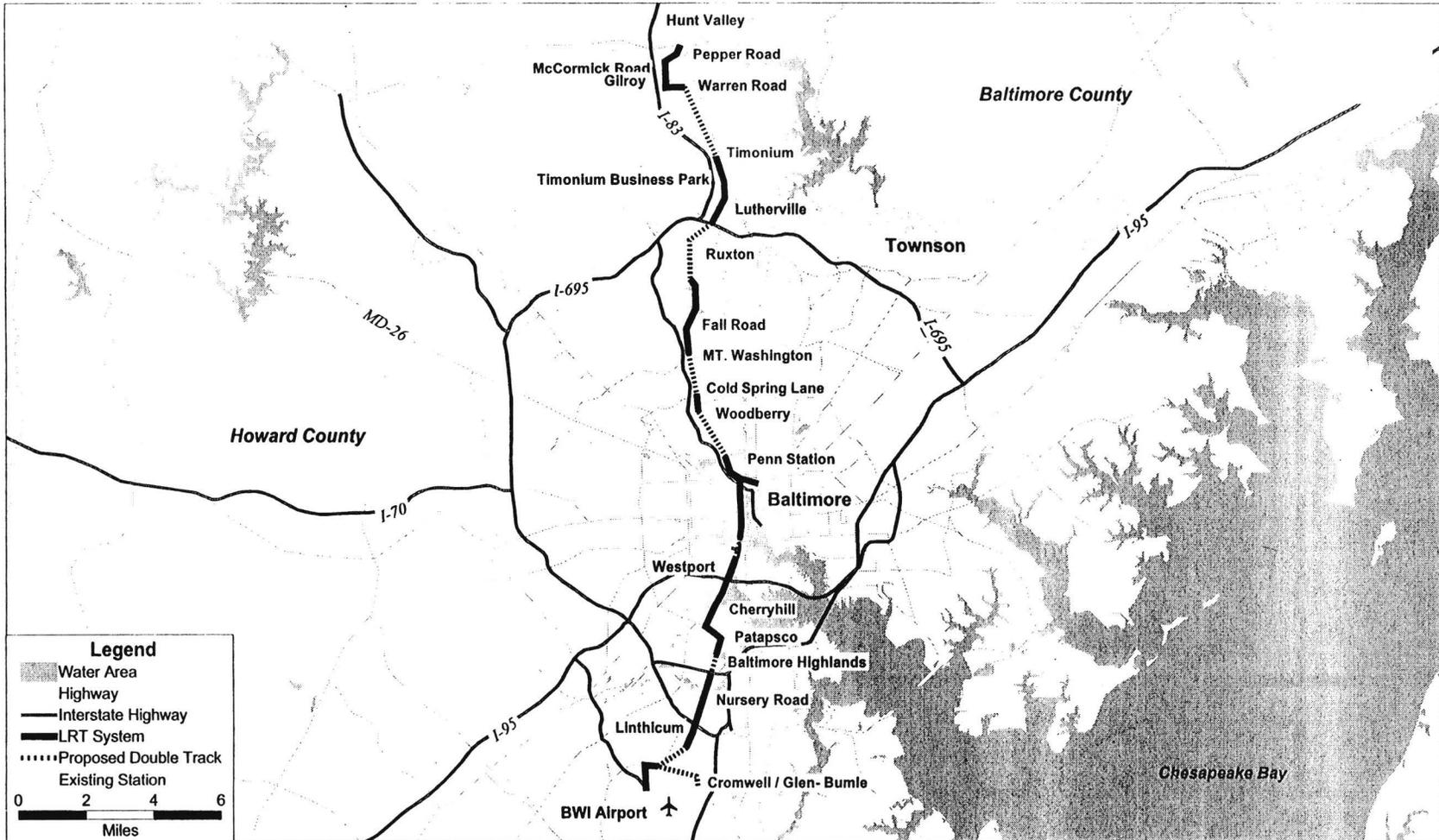
**New and Proposed Sources:** No new funding sources are proposed for the project.

<b>Locally Proposed Financing Plan</b> (Reported in \$YOE)		
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million)</u>	<u>Appropriations to Date</u>
<b>Federal:</b>		
Section 5309 New Starts	\$120.0	(\$5.65 million appropriated through FY 2000)
Section 5307 Formula Funds	3.0	
<b>State:</b>		
MDOT/TTF	30.7	
<b>TOTAL</b>	<b>\$153.7</b>	

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

# Central LRT Double Track

Baltimore, Maryland



# Douglas Branch Reconstruction

Chicago, Illinois

(August 2000)

## Description

The Chicago Transit Authority (CTA) is proposing a complete reconstruction of the approximately 6.6-mile length of the existing Douglas Branch of CTA's heavy rail Blue Line. The line extends from a point just west of downtown Chicago to its terminus at Cermak Avenue. The Douglas Branch Line was originally built in the early 20<sup>th</sup> Century with several improvements and upgrades occurring through the mid-1980s. The line currently carries approximately 27,000 average weekday boardings utilizing 11 existing stations. Due to its age, the line has become seriously deteriorated which has resulted in high maintenance and operating costs and declining service. The Douglas Branch serves one of the most economically distressed areas in Chicago. Total capital costs for the proposed heavy rail reconstruction project are estimated at \$450.8 million (escalated dollars). The project is expected to serve 6,000 daily new riders in the year 2020.

Summary Description	
<b>Proposed Project:</b>	Reconstruction of heavy rail line, 6.6 miles, 11 stations
<b>Total Capital Cost (\$YOE):</b>	\$450.8 million
<b>Section 5309 New Starts Share (\$YOE):</b>	\$320.1 million
<b>Annual Operating Cost (\$1997):</b>	\$3.1 million (in addition to current Douglas Branch operating costs)
<b>Ridership Forecast (2020):</b>	6,000 daily new riders
<b>FY 2001 Financial Rating:</b>	<b>Medium-High</b>
<b>FY 2001 Project Justification Rating:</b>	<b>Medium-High</b>
<b>FY 2001 Overall Project Rating:</b>	<b>Highly Recommended</b>

The *Highly Recommended* rating is based on the strongly transit supportive land use along the corridor and the demonstrated local financial commitment to the project. The overall project rating applies to this *Supplemental Report on New Starts* and reflects conditions as of August 2000. 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 December 1997, the Chicago Area Transportation Study (CATS) – local metropolitan planning organization - included the Douglas Branch Reconstruction Project in the region's financially constrained long range transportation plan. CTA has completed an examination of the environmental impacts and benefits of the proposed project in an Environmental Assessment (EA). FTA issued a Finding of No Significant Impact on the EA in April 2000. FTA approved the project into final design in June 2000.

Section 3030(a)(106) of the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) authorizes the “Chicago – CTA Douglas Branch” for final design and construction. Through FY 2000, Congress has appropriated \$4.92 million in Section 5309 New Starts funds for the project.

## Evaluation

The following criteria have been estimated in conformance with *FTA’s Technical Guidance on Section 5309 New Starts Criteria*. FTA has evaluated this project as being in final design.

## Justification

The *Medium-High* project justification rating reflects the strong transit-supportive land use in the Douglas Branch corridor and the adequacy of all other justification measures.

## Mobility Improvements

**Rating: Medium**

The CTA estimates that the Douglas Branch improvements will attract 6,000 daily new riders in 2020, and that the project will realize the following travel time savings in comparison with the no-build and TSM alternatives.

<u>Mobility Improvements</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Annual Travel Time Savings (Hours)</b>	4.7 million	2.6 million

Based on 1990 census data, there are an estimated 10,056 low-income households within a ½ mile radius of the Douglas Branch Line. This represents 30 percent of the total number of households within a ½ mile radius of the Douglas Branch Line.

## Environmental Benefits

**Rating: High**

Northeastern Illinois (which includes the Chicago metropolitan area) is classified as being in “severe” nonattainment for ozone. The region is in attainment for carbon monoxide (CO) and particulate matter (PM10). CTA estimates that in the year 2020, the Douglas Branch Reconstruction project will result in the following emissions reductions:

<u>Criteria Pollutant</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Carbon Monoxide (CO)</b>	420	253
<b>Nitrogen Oxide (NO<sub>x</sub>)</b>	86	73
<b>Volatile Organic Compounds (VOC)</b>	52	33
<b>Particulate Matter (PM<sub>10</sub>)</b>	0	0
<b>Carbon Dioxide (CO<sub>2</sub>)</b>	24,046	19,262

Values reflect annual tons of emissions reductions.

CTA estimates that the proposed project will result in the following decreases in regional energy consumption (measured in British Thermal Units – BTUs):

<u>Annual Energy Savings</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>BTU (million)</b>	293,194	227,522

### Operating Efficiencies

**Rating: Medium**

CTA estimates the following systemwide operating costs per passenger mile, in the year 2020, for the new start, no-build, and TSM alternatives:

<u>Measure</u>	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
<b>System Operating Cost per Passenger Mile (2020)</b>	\$0.20	\$0.21	\$0.21

Values reflect 2020 ridership forecast and 1997 dollars.

### Cost Effectiveness

**Rating: Medium**

CTA estimates the following cost effectiveness indices:

<u>Measure</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Incremental Cost per Incremental Passenger</b>	\$11.70	\$13.70

Values reflect 2020 ridership forecast and 1997 dollars.

## Transit-Supportive Existing Land Use and Future Patterns

### Rating: High

The *High* land use rating reflects the strong existing urban character of the Chicago central business district (CBD) and the high level of employment and transit-supportive environment that characterizes the corridor.

**Existing Conditions:** The Douglas Branch of CTA's Blue Line has been in operation for approximately 100 years, and serves neighborhoods that originally developed around the transit system. The corridor contains an estimated 54,000 jobs and 115,000 residents within a ½ mile radius of station areas. Densities are high, averaging 9,100 jobs and nearly 20,000 persons per square mile. The University of Illinois at Chicago (25,000 students) is a major trip generator. The line serves a large, dense CBD with an estimated 339,000 jobs. After "looping" through the CBD, the Blue Line also extends to the O'Hare International Airport corridor (100,000 jobs), and the Medical Center Complex (70,000 jobs).

The six-county metropolitan area is forecast to grow by 25 percent and 37 percent, in population and employment, respectively, between 1990 and 2020. Forecasts indicate growth rates of 20 percent and 18 percent for population and employment, respectively, in the Douglas Branch corridor. Employment in the Chicago CBD is forecast to increase by 18 percent through 2020.

Parking requirements in the CBD range up to one space per 2,500 sq. ft. for all floor area over 700,000 sq. ft. (increments of floor area up to this amount have lower parking requirements – e.g., parking is not required for the first 140,000 sq. ft. of floor area). Chicago zoning ordinances provide bonuses in reduced parking requirements and increased floor-to-area ratios for direct connections to transit, open space, and arcades.

**Future Plans and Policies:** The Northeastern Illinois Planning Commission has initiated a three-year effort to develop and advocate a Regional Growth Strategy for Chicago and Northeastern Illinois. Policies call for renewed growth and investment in disinvested areas, as well as cost-effective public investment and high standards of environmental protection in conjunction with new development or redevelopment. A major challenge of this effort is to work with the myriad of governmental, private sector, civic and other interests in the region to identify mutually beneficial actions. Chicago's Downtown Parking Policies (adopted 1989) call for striking a balance between the need for off-street parking and the creation of a "healthful, people-oriented downtown." Recommendations include maintaining a "transit first" orientation in transportation planning; providing close-in, short-term parking serving visitors and shoppers; permitting non-accessory and major accessory facilities only in strategically located "zones of accessibility" (outside of the inner core area); and codifying siting and design guidelines to minimize the impact of parking facilities. Design guidelines and policies emphasize site layout and landscaping to minimize the visual impact of parking on the urban environment.

## Other Factors

**Empowerment/Enterprise Zone:** The Douglas Branch Corridor passes through a Federal Empowerment Zone and state-designated Enterprise Zone. Empowerment Zone incentives include employer wage credits, tax deductions, and tax-exempt bond financing for business expansion. There are five existing stations adjacent to an Empowerment Zone. Enterprise Zone benefits include various tax exemptions, reductions, and credits for firms locating in the zone. Eight Douglas Branch stations are located near an Enterprise Zone.

## Local Financial Commitment

### **Proposed Non-Section 5309 Share of Total Project Costs: 29%**

The financial strategy for the proposed reconstruction of the Douglas Branch (Blue Line) project includes \$320.1 million (71 percent of total project costs) in Section 5309 New Starts funding, \$28.8 million (6 percent) in Section 5307 Formula funds, \$99.1 million (22 percent) in Illinois DOT bonds, and \$2.8 million (1 percent) in bonds issued by the Regional Transportation Authority (RTA) of Northeast Illinois.

## Stability and Reliability of Capital Financing Plan

### **Rating: Medium-High**

The *Medium-High* rating reflects the sound financial condition of CTA and the agency's strong dedicated revenue sources. The rating also acknowledges the commitment of both the RTA and the Illinois DOT to provide funding for the local match of the Douglas Branch Reconstruction Project.

**Agency Capital Financial Condition:** The CTA, RTA, and State of Illinois are considered to be in sound financial condition. The CTA receives funding for both capital and operating expenses from the RTA.

**Capital Cost Estimates and Contingencies:** Capital cost estimates for the Douglas Branch Reconstruction project are considered reasonable. However, CTA did not provide definitive documentation to evaluate escalation rates or provisions to address cost overruns or proposed funding shortfalls.

**Existing and Committed Funding:** All non-Federal funding for the project is considered committed. The RTA has made available \$99.1 million in State funding for the project, consisting of Series B Transportation bond revenues authorized in recent State legislation and proceeds from the state-supported Strategic Capital Improvement Program. RTA has committed \$2.8 million in additional bond revenue.

**New and Proposed Sources:** No new funding sources are proposed for the project

## Stability and Reliability of Operating Finance Plan

### Rating: Medium

The *Medium* rating reflects the adequacy of existing operating revenues to continue operation of the Blue Line.

**Agency Operating Condition:** The operating condition of the CTA is sound. The CTA receives funding for operations from the RTA, including revenue generated from RTA's dedicated sales tax, and recovers 45 percent of costs at the farebox. According to the CTA's FY 1999 proposed budget, the agency expects to generate \$411 million in revenue. This represents an increase of \$6.3 million (1.6 percent) over the FY 1998 budget.

**Operating Cost Estimates and Contingencies:** CTA did not provide information on operating and maintenance costs specific to the Douglas Branch project, or escalation rates and contingency factors associated with the project. According to an analysis of projected systemwide operating costs, the proposed improvement will increase system costs by \$3.1 million versus the No-Build alternative.

**Existing and Committed Funding:** No project-specific operations and maintenance plan was submitted for the Douglas Branch line. However, the proposed improvement will increase annual systemwide operating costs by \$3.1 million, or less than one percent of CTA's annual operating budget. CTA expects to receive \$800 million in RTA sales tax, farebox, and additional revenues for system operations in FY 1999. Sales tax revenue is considered a reliable funding source since it responds to both growth in the economy and price level inflation.

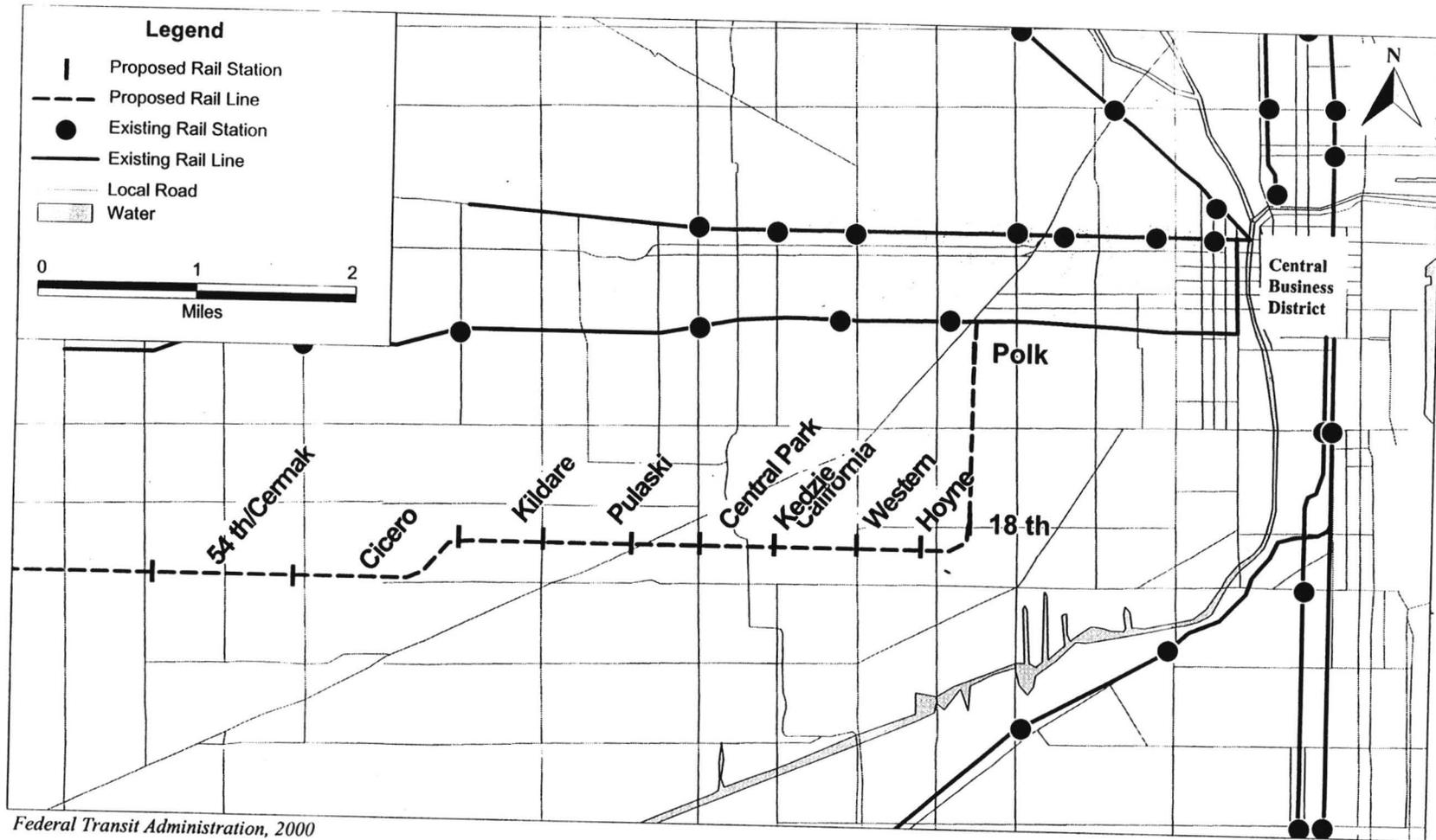
**New and Proposed Sources:** No new funding sources are proposed for the operation of the Douglas Branch (Blue Line) project.

<b>Locally Proposed Financing Plan (Reported in \$YOE)</b>		
<b><u>Proposed Source of Funds</u></b>	<b><u>Total Funding (Smillion)</u></b>	<b><u>Appropriations to Date</u></b>
Federal:		
Section 5309 New Starts	\$320.1	(\$4.92 million appropriated through FY 2000)
Section 5307 Formula	\$28.8	
State:		
Illinois DOT	\$99.1	
Local:		
RTA Bonds	<u>\$2.8</u>	
<b>TOTAL</b>	<b>\$450.8</b>	

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

# Douglas Branch Reconstruction

Chicago, Illinois



# Southeast Corridor LRT

## Denver, Colorado

(August 2000)

### Description

The Regional Transportation District (RTD) and Colorado Department of Transportation (CDOT) are proposing the Southeast Corridor project, a 19.0-mile light rail transit (LRT) system extending from the existing LRT station at I-25 and Broadway in Denver along I-25 to Lincoln Avenue and I-25 in Douglas County, with a LRT spur line along I-225 to Parker Road in Arapahoe County. The double track system is proposed to operate on an exclusive, grade-separated right-of-way and connect with the existing 5.3-mile Central Corridor light rail line in downtown Denver at the existing Broadway station. At I-25 and Broadway, the Southeast Corridor would also connect with RTD's Southwest Corridor light rail line that is currently under construction.

The capital cost estimate of the fixed-guideway element is \$882.5 million in escalated dollars, including right-of-way acquisition, final design, construction, and acquisition of rolling stock. Annual operating costs in 2020 are estimated at \$35.3 million. Ridership is estimated at 38,100 average weekday boardings, 12,900 of which are new riders.

Summary Description	
<b>Proposed Project:</b>	Light rail line 19.0 miles, 14 stations
<b>Total Capital Cost (\$YOE):</b>	\$882.5 million
<b>Section 5309 New Starts Share (\$YOE):</b>	\$525.0 million
<b>Annual Operating Cost (\$YOE):</b>	\$35.3 million
<b>Ridership Forecast (2020):</b>	38,100 avg. weekday boardings 12,900 daily new riders
<b>FY 2001 Financial Rating:</b>	<b>Medium-High</b>
<b>FY 2001 Project Justification Rating:</b>	<b>Medium</b>
<b>FY 2001 Overall Project Rating:</b>	<b>Recommended</b>

The *Recommended* rating is based on the project's adequate justification criteria and solid capital and operating plan. The overall project rating applies to this *Supplemental Report on New Starts and reflects conditions as of August 2000*. 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

The Colorado Department of Transportation (CDOT), in cooperation with the Denver Regional Council of Governments (DRCOG) and the RTD, completed a Major Investment Study on the corridor in July 1997. The MIS resulted in the selection of a multimodal package of highway

and rail improvements. The DRCOG Board has included the LRT locally preferred alternative in the 2020 Long Range Regional Transportation Plan. Preliminary engineering and environmental work were initiated in the spring of 1998. A Draft Environmental Impact Statement was issued in August 1999. A Final Environmental Impact Statement was issued in December 1999 and a Record of Decision was signed in March 2000. FTA approved the project to enter final design in May 2000. Revenue service is projected to begin no later than July 2008.

A combination of Federal Highway Administration (FHWA) and State funds are being utilized to fund Preliminary Engineering (PE). In November 1999 voters approved a local referendum that authorizes RTD to incur debt using low interest rate commercial paper and sales tax revenue bonds for the purposes of constructing the Southeast Corridor LRT. The referendum also extended RTD's current partial exemption from State revenue retention restrictions.

TEA-21 Section 3030(a)(23) authorized the Denver Southeast LRT for final design and construction. Through FY 2000, Congress has appropriated \$3.44 million in Section 5309 new starts funds for this proposed project.

## Evaluation

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria*. N/A indicates that data are not available for this specific measure. FTA has evaluated this project as being in final design.

## Justification

The *Medium* justification rating reflects the project's generally adequate project justification criteria, although it acknowledges a relatively weak project cost-effectiveness.

## Mobility Improvements

### Rating: Medium

The 19.0-mile project is expected to serve 38,100 average weekday boardings and 12,900 daily new riders in 2020. RTD estimates the following annual travel time savings for the Southeast line.

<u>Mobility Improvements</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Annual Travel Time Savings (Hours)</b>	4.0 million	3.4 million

Based on 1990 data, there are 1,906 low-income households within ½ mile of the 13 proposed (and one existing) stations, representing 15 percent of total households served within ½ mile of the stations.

**Environmental Benefits**

**Rating: Medium**

Denver is currently classified a “transitional” non-attainment area for ozone, a “serious” non-attainment area for carbon monoxide, and a “moderate” non-attainment area for PM-10. Denver is in attainment for NO<sub>x</sub>. RTD estimates the following emissions reductions in pollutant emissions.

<u>Criteria Pollutant</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
Carbon Monoxide (CO)	276	231
Nitrogen Oxide (NO <sub>x</sub> )	52	57
Volatile Organic Compounds (VOC)	43	40
Particulate Matter (PM <sub>10</sub> )	3	3
Carbon Dioxide (CO <sub>2</sub> )	5,177	7,905

Values reflect annual tons of emissions reductions.

RTD estimates the following savings in regional energy consumption (measured in British Thermal Units–BTU) will occur.

<u>Annual Energy Savings</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
BTU (million)	2,340	43,288

Values reflect annual BTU reductions.

**Operating Efficiencies**

**Rating: Medium**

RTD estimates the following operating costs per passenger mile.

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
System Operating Cost per Passenger Mile (1997)	\$0.37	\$0.39	\$0.37

Values reflect 2020 ridership forecast and 1997 dollars.

## Cost Effectiveness

### Rating: Low-Medium

RTD estimates the following cost effectiveness indices:

	<b>New Start vs. <u>No-Build</u></b>	<b>New Start vs. <u>TSM</u></b>
<b>Incremental Cost per Incremental Passenger</b>	\$18.40	\$14.80

Values reflect 2020 ridership forecast and 1997 dollars.

## Transit-Supportive Existing Land Use and Future Patterns

### Rating: Medium

The *Medium* land use rating reflects both the existing and relatively dense land uses and strong transit supportive policies within Denver *and* the generally less dense development and weaker policies outside of the City.

**Existing Conditions:** The corridor generally parallels Interstate 25. High density commercial and office space constitute the central business district. Moving southward towards the proposed University Station, the University of Denver and medium-density housing surround the station area. Low-density residential and commercial space characterizes the southern half of the corridor, with some moderate density office development. Downtown Denver, to which this corridor connects, contains a dense concentration of over 102,000 jobs. Although 79,000 jobs are scattered throughout the remainder of the corridor, outside of the Denver Technological Center there is no significant concentration of employment.

The proposed corridor would connect downtown to the Denver Technological Center, which is part of the Southeast Business District. Parking appears plentiful and is generally developed as large lots outside of the CBD. Zoning in the corridor is moderately supportive of transit, with the more supportive policies existing in Denver and less supportive outside of the City. Zoning is in place at all but one of the Denver station areas to implement the “Transit Station Development Program” that requires sidewalks, landscaping, and transit-friendly site design, mixed-use developments, and trip reduction programs. The City of Greenwood Village has new Town Center zoning and Mixed-Use Commercial zoning. Modest growth management policies exist in the region. The Denver Regional Council of Governments is working to establish an urban development boundary.

**Future Plans and Policies:** Denver’s Comprehensive Plan suggests that regional centers should be developed as transit destinations. It includes policy statements that support the provision of incentives for higher density transit-oriented development. The City’s Comprehensive Plan’s Action Agenda endorses the improvement of pedestrian-oriented streets. Denver is preparing a

Transit-Oriented Development (TOD) Zoning District to explicitly encourage transit-oriented and mixed-use developments. The Denver Regional Council of Governments is working to establish an urban development boundary. Some jurisdictions, such as the Cities of Aurora and Greenwood Village, state or suggest urban design standards. The Douglas County Master Plan suggests the development of land-planning criteria that promote transit use and protect options for future transit development. In November 1999, the Arapohoe County Board of County Commissioners adopted a resolution that identifies policies to support light-rail transit. Land use policy within roadway corridors where light-rail transit will be located will be reviewed for incorporation into the Comprehensive Plan update.

Although some existing corridor plans and policies support transit-oriented development, others are weak or are still in the developmental stage. While most cities in the corridor contain some provisions promoting a concentration of development around transit, statements do not specify how such general goals will be implemented or tied to certain development policies. Policies to manage and concentrate growth around transit are still being prepared and not yet fully articulated. Action on an urban growth boundary and a regional growth plan is still pending. A Parking Management Plan for all stations is being prepared, but no specific strategies such as pricing have been determined. No specific targets for reducing parking ratios have yet been articulated for the southern portion of the corridor.

## Local Financial Commitment

### **Proposed Non-Section 5309 Share of Total Project Costs: 40%**

RTD proposes that \$525.0 million (60 percent) in Section 5309 New Start funds and \$357.5 million (40 percent) in local funds be applied to the project.

### **Stability and Reliability of Capital Financing Plan**

#### **Rating: Medium-High**

The *Medium-High* rating reflects the strong financial condition of RTD and the dedicated bond revenues to support the project's capital cost.

**Agency Capital Financing Condition:** The RTD is in solid financial condition. The agency relies on dedicated sales tax revenue to support capital and operation needs. Because of the area's growth, the sales tax revenue has been a stable and reliable funding source. The tax rate of 0.6 percent generates nearly \$200 million in annual revenue. RTD will begin operation of new LRT lines in 2000 (Southwest Corridor) and 2001 (Central Platte Valley) and is still expected to adequately fund construction of the Southeast Corridor project.

**Capital Cost Estimates and Contingencies:** Capital cost estimates for the project have increased 84 percent since its Major Investment Study. Project cost escalation is primarily a result of further engineering and the addition of four stations to the proposed system. Despite cost increases, RTD has reduced its New Starts share of project costs from 80 percent to 60

percent. Available working capital exceeds \$100 million through most of the project developmental period and reaches \$390 million at the conclusion of the twenty-year period. This provision has been included in the cash-flow analysis for unexpected cost overruns or revenue shortfalls.

**Existing and Committed Funding:** Following the November 1999 referendum, all but \$30 million (over 90 percent) of non-New Starts funds are now committed to the Southeast corridor project. The commercial paper bond revenues authorized by the vote are expected to be sufficient to cover the local share of project capital costs. RTD and CDOT will donate right-of-way and prior improvements as in-kind contributions.

**New and Proposed Sources:** The RTD is proposing that as-yet-undetermined local and developer contributions will account for \$30 million in estimated project costs.

### **Stability and Reliability of Operating Finance Plan**

#### **Rating: Medium-High**

The *Medium-High* rating reflects the RTD's strong dedicated operating revenue stream.

**Agency Operating Condition:** RTD's operating financial condition is good. In recent years, the agency has experienced positive operating surpluses, an increased farebox recovery of 23 percent (compared to 17 percent five years ago) a consistent 4 percent annual increase in ridership levels during a six-year period, and increased retained earnings of over \$375 million.

**Operating Cost Estimates and Contingencies:** Annual operating costs are estimated at \$35.3 million in escalated dollars. Operating and maintenance costs and inflation assumptions are reasonable for the project's size and scope.

**Existing and Committed Funding:** RTD proposes funding operations through a combination of the system-generated revenue and regional sales tax revenues. The RTD sales tax mechanism has been in-place and generated revenue for RTD projects for many years. The historical growth rates of the past five years have been at about 7.6 percent while the revenue projections used a more conservative 5.6 percent growth rate.

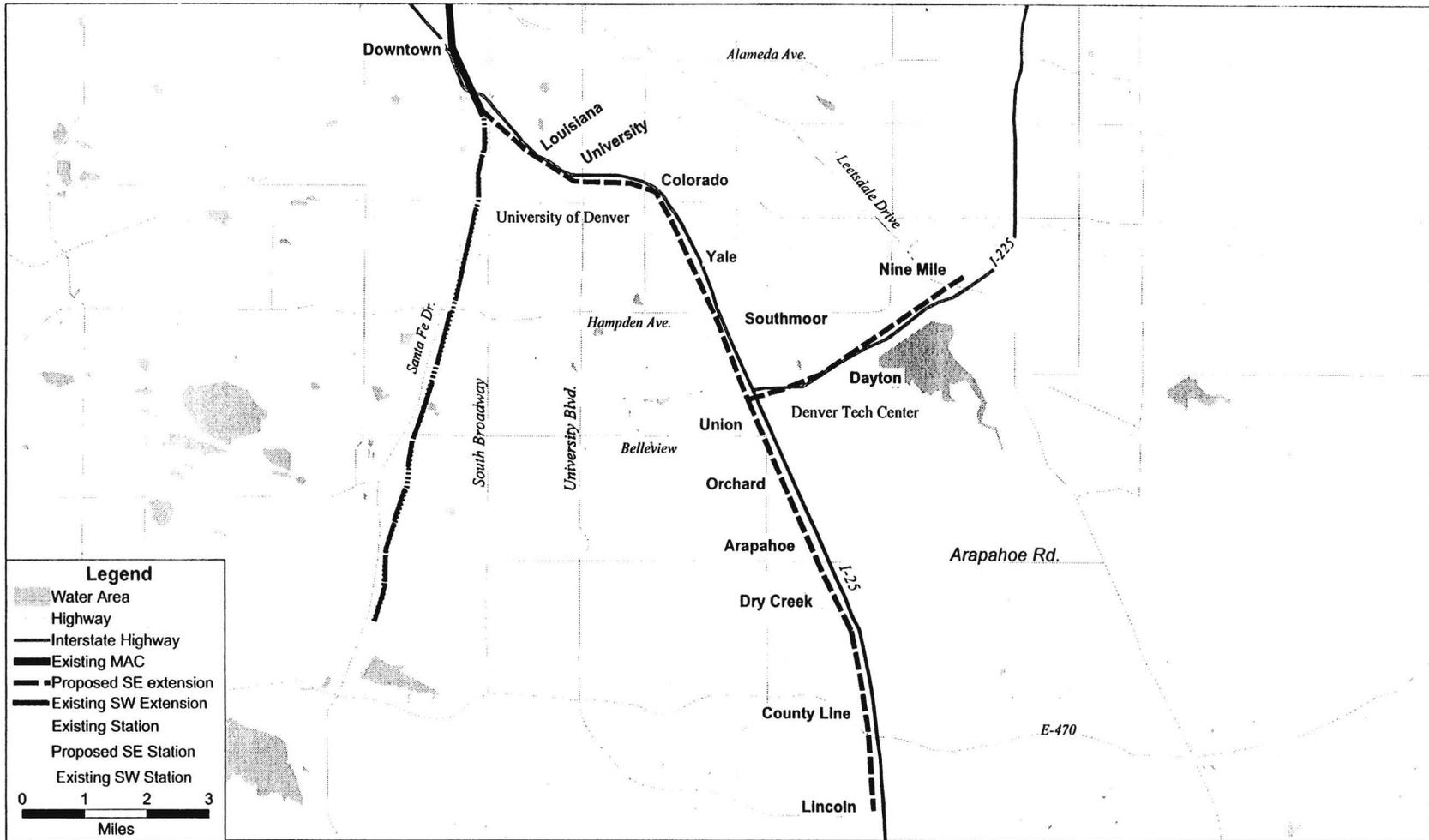
**New and Proposed Sources:** All proposed operating revenue sources currently exist. No new sources are needed.

<b>Locally Proposed Financing Plan (Reported in \$YOE)</b>		
<b><u>Proposed Source of Funds</u></b>	<b><u>Total Funding (\$million)</u></b>	<b><u>Appropriations to Date</u></b>
Federal:		
Section 5309 New Starts	\$525.00	(\$3.44 million appropriated through FY 2000)
Local:		
Sales Tax Revenue-Based		
Bond Proceeds	320.00	
ROW donations	7.50	
Local/Private Contributions	<u>30.00</u>	
<b>TOTAL</b>	<b><u>\$882.50</u></b>	

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

# Southeast Corridor

Denver, Colorado



# Medical Center Rail Extension

Memphis, Tennessee

(August 2000)

## Description

The Memphis Area Transit Authority (MATA), in cooperation with the City of Memphis, is proposing to build a 2.5-mile light rail transit extension to the Main Street Trolley/Riverfront Loop village rail system. The extension would expand the central business district (CBD) rail circulation system to serve the Medical Center area east of the CBD. The proposed project would operate on street in mixed traffic and would connect with the Main Street Trolley, sharing a lane with automobile traffic on Madison Avenue between Main Street and Cleveland Street. At the eastern terminus, near Cleveland Street, a bus transfer point and a small park-and-ride lot would be constructed to accommodate transfers with buses and cars. At the western terminus, existing stations on Main Street near Madison Avenue would be utilized for transfers to/from the Main Street Trolley/Riverfront Loop system. Six new stations would be located along the route. The line will be designed to accommodate light rail vehicles but vintage rail cars would be utilized until a proposed regional LRT line is implemented and a fleet of modern LRT vehicles is acquired. The project is proposed as the last segment of the downtown rail circulation system as well as the first segment of a regional light rail line.

The total capital cost of the 2.5 mile project is estimated at \$69.1 million (escalated dollars), with a Section 5309 new starts share of \$55.3 million. MATA estimates 2,100 average weekday boardings in the opening year (2002), increasing to 4,200 by 2020.

Summary Description	
<b>Proposed Project:</b>	LRT Extension 2.5 miles, 6 stations
<b>Total Capital Cost (\$YOE):</b>	\$69.1 million
<b>Section 5309 Share (\$YOE):</b>	\$55.3 million
<b>Annual Operating Cost (\$2004):</b>	\$1.3 million
<b>Ridership Forecast (2020):</b>	4,200 avg. weekday boardings 1,700 daily new riders
<b>FY 2001 Finance Rating:</b>	<b>Medium</b>
<b>FY 2001 Project Justification Rating:</b>	<b>Medium</b>
<b>FY 2001 Overall Project Rating:</b>	<b>Recommended</b>

The *Recommended* rating is based on the project's strong estimated cost effectiveness and the adequacy of the project's capital and operating plans. The overall project rating applies to this *Supplemental Report on New Starts and reflects conditions as of August 2000*. 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**

A Major Investment Study/Environmental Assessment, resulting in the selection of a trolley service extension as the Locally Preferred Alternative (LPA), was completed in June 1997. The proposed project is included in the City of Memphis' Capital Improvement Program, the Memphis MPO's Transportation Improvement Program, and the State Transportation Improvement Program. FTA approved initiation of preliminary engineering (PE) for the project in April 1998. A Supplemental Environmental Assessment (EA) was prepared to document changes to the preferred alternative and to incorporate updated data developed in preliminary engineering. FTA issued a Finding of No Significant Impact on the Supplemental EA in April 2000. FTA subsequently approved the project into final design in May 2000.

TEA-21 Section 3030(a)(43) authorizes the Memphis Medical Center Extension for final design and construction. Through FY 2000, Congress has appropriated \$10.38 million in Section 5309 New Starts funds for this project.

**Evaluation**

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria*. Information was not provided by MATA comparing the New Start to the Transportation System Management (TSM) alternative. FTA has evaluated this project as being in final design.

**Justification**

The *Medium* project justification rating reflects the project's strong anticipated cost-effectiveness and the adequacy of the other justification measures.

**Mobility Improvements**

**Rating: Not Rated**

The proposed extension is expected to serve 4,200 average weekday boardings and generate 1,700 daily new riders by 2020. No information on travel time savings was submitted by MATA.

<b><u>Mobility Improvements</u></b>	<b><u>New Start vs. No-Build</u></b>	<b><u>New Start vs. TSM</u></b>
<b>Annual Travel Time Savings (Hours)</b>	N/A	N/A

Based on 1990 data, there are an estimated 2,700 low-income households within a ½ mile radius of the six proposed new stations, representing 38 percent of total households within ½ mile of boarding points.

**Environmental Benefits**

**Rating: Medium**

Memphis is currently classified as a maintenance area for ozone and carbon monoxide. Memphis projects that in 2020 the proposed project would result in the following emissions reductions for CO, NO<sub>x</sub>, and VOC.

<u>Criteria Pollutant</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Carbon Monoxide (CO)</b>	13	N/A
<b>Nitrogen Oxide (NO<sub>x</sub>)</b>	2	N/A
<b>Volatile Organic Compounds (VOC)</b>	1	N/A
<b>Particulate Matter (PM<sub>10</sub>)</b>	N/A	N/A
<b>Carbon Dioxide (CO<sub>2</sub>)</b>	177	N/A

Values reflect annual tons of emissions reductions.

MATA estimates the following savings in regional energy consumption (measured in British Thermal Units - BTU) for the forecast year 2020.

<u>Annual Energy Savings</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>BTU (million)</b>	2,318	N/A

**Operating Efficiencies**

**Rating: Medium**

MATA estimates the following systemwide operating cost per passenger mile for the proposed project in the forecast year.

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
<b>System Operating Cost per Passenger Mile (1995)</b>	\$0.42	N/A	\$0.44

Values reflect 2020 ridership forecast and 1995 dollars.

**Cost Effectiveness**

**Rating: High**

MATA estimates the following cost-effectiveness index, comparing the proposed project to the No-Build alternative.

	<b>New Start vs. <u>No-Build</u></b>	<b>New Start vs. <u>TSM</u></b>
<b>Incremental Cost per Incremental Passenger</b>	\$5.20	N/A

Values reflect 2020 ridership forecast and 1995 dollars.

## Transit-Supportive Existing Land Use and Future Patterns

### Rating: Medium

The *Medium* rating reflects the existing transit-supportive conditions along the corridor, improving policies, and proposed new developments. However, the rating also recognizes the relatively slow progress in improving zoning regulations and parking policies in the corridor.

**Existing Conditions:** Development in the 2.5-mile corridor is generally centered around the two ends of the proposed project. Downtown, at the western end of the corridor, contains a mix of commercial, office, and government land uses, and a new minor league baseball stadium. The eastern end of the corridor contains a high concentration of medical facilities and two colleges/universities. Downtown Employment is expected to increase by 60 percent (to 24,000 employees) by 2020. Employment at the Medical Center, a major employment center in the Region with 13,500 jobs in 1995, is forecast to remain stagnant. The corridor includes a high percentage of transit dependent households, and population in the corridor is expected to increase by 76% in downtown and 22% in Midtown by 2020. Development towards the center of the proposed corridor currently consists of underutilized commercial and industrial uses. Current zoning does not specifically promote transit- and pedestrian-oriented site planning, design, or facilities, and does not promote increased development densities.

**Plans and Policies:** The City of Memphis and Shelby County have established the Center City Commission (CCC) to coordinate development throughout its Central Business Improvement District, which includes downtown Memphis and the Medical Center Extension. The CCC plans to study and, ultimately, modify zoning regulations to promote transit usage by the end of 2000, and formulate incentives to promote development in the corridor by the end of 2001. Transit-oriented development on the existing Trolley/Riverfront Loop is underway (at the North End Terminal) and proposed (at Central Station). And, there are increased local public and private sector efforts to facilitate transit supportive development along the Medical Center Extension. However, no specific station plans have been developed, and no parking management policies in the corridor have been implemented.

The State of Tennessee has mandated that Shelby County, along with the incorporated cities within the county, adopt a joint 20-year urban growth plan or risk losing state funding for highways and community development. Shelby County and its affected jurisdictions are currently working on the growth plan, which must be submitted to the State by December 1999.

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## Local Financial Commitment

### Proposed Non-Section 5309 Share of Total Project Costs: 20%

MATA proposes a Federal share of \$55.3 million (80 percent of total project costs) in Section 5309 new start funds, \$6.9 million in State funds (10 percent) and \$6.9 in local funds (10 percent).

### Stability and Reliability of Capital Financing Plan

#### Rating: Medium-High

The *Medium-High* rating reflects the commitment of the non-Federal funding for the Medical Center Rail Extension. The State of Tennessee and City of Memphis both exhibit enough revenue capacity to support construction of the project.

**Agency Financial Condition:** MATA is considered to be in adequate financial condition. Non-Federal funding for the Medical Center Extension is proposed to be split between the City of Memphis and the Tennessee Department of Transportation. The City of Memphis and the State DOT are considered highly stable and reliable funding partners. The City receives AA ratings from Standard and Poor's and Fitch Investor Service, respectively, and an Aa rating from Moody's.

**Cost Estimates and Contingencies:** Cost estimates for the Medical Extension Project have escalated from \$35.9 million in 1998 to \$69.1 million in 1999. Project cost increases are attributed to unanticipated utility relocation costs, some modifications to the original alignment, and a significant increase in contingency costs. The project's revised cost estimates are reasonable. Contingency provisions include funding committed to the project by the city and State above the amount included in the financial plan.

**Existing and Committed Funding:** The City of Memphis and Tennessee DOT have each committed up to \$7.5 million towards the construction of the proposed project. This commitment represents an amount above the \$6.9 million proposed in the financial plan to be contributed from each entity.

**New and Proposed Sources:** No new sources are proposed for construction of the Medical Center Extension.

### Stability and Reliability of Operating Finance Plan

#### Rating: Medium

The *Medium* rating reflects the commitment of the City of Memphis to support MATA's operating needs, but acknowledges the agency's lack of a dedicated funding source.

**Agency Financial Condition:** MATA has no dedicated operating funding source at the present time. The City of Memphis provides the largest single source of operating revenue for MATA, and has a strong record of supporting the operation of the agency's services.

**Cost Estimates and Contingencies:** Annual operating costs for the Medical Center Extension are estimated at \$1.3 million. Implementation of trolley service to the Medical Center Area is expected to result in a reduction in duplicative bus service in the corridor, and an overall decrease in MATA’s systemwide operating expenses.

**Existing and Committed Funding:** Local operating revenues are currently generated through passenger fares, other system revenues, the City of Memphis, and the Tennessee DOT. The City has historically been a reliable funding partner, and has increased its commitment to MATA operations by 160 percent between the years 1980-1997.

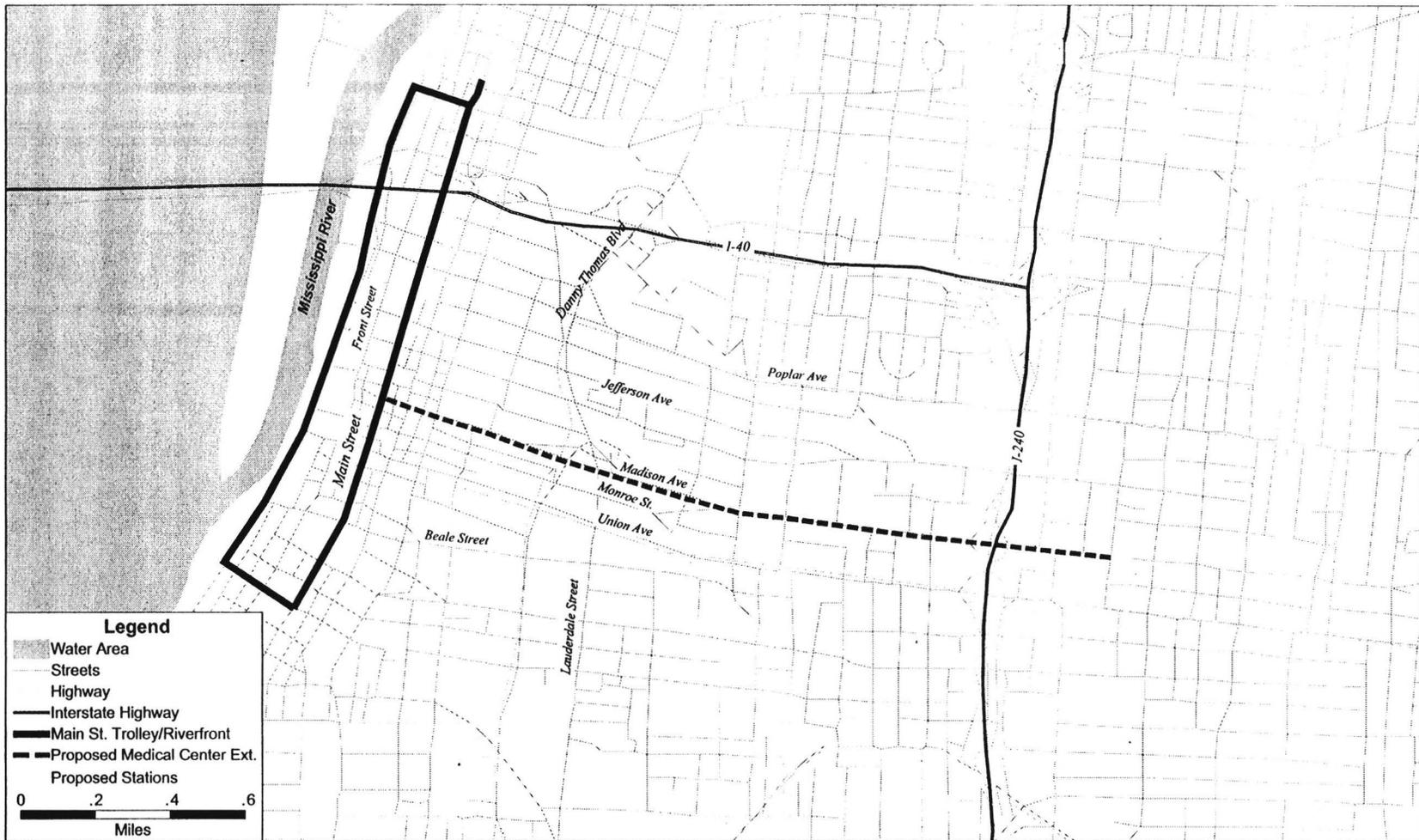
**New and Proposed Funding Sources:** No new funding sources have been proposed for this project. However, MATA is pursuing the establishment of a dedicated funding source to support ongoing system operation and planned expansion.

<b>Locally Proposed Financing Plan (Reported in \$YOE)</b>		
<u>Proposed Source of Funds</u>	<u>Total Funding (Smillion)</u>	<u>Appropriations to Date</u>
Federal:		
Section 5309 New Starts	\$55.3	(\$10.38 million appropriated through FY 2000).
State:		
Tennessee DOT	6.9	
Local:		
City of Memphis	6.9	
<b>TOTAL</b>	<b>\$69.1</b>	

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

# Medical Center Rail Extension

Memphis, Tennessee



Federal Transit Administration, 2000



# Hiawatha Avenue LRT

## Minneapolis-St. Paul, Minnesota

(August 2000)

### Description

Metro Transit and the Metropolitan Council (local metropolitan planning organization), in cooperation with the Minnesota Department of Transportation (MnDOT), Hennepin County and the Metropolitan Airports Commission (MAC), are proposing to design and construct an 11.6-mile Light Rail Transit (LRT) line along the Hiawatha Avenue Corridor. The proposed LRT will operate on the Hiawatha Avenue/Trunk Highway 55 Corridor linking downtown Minneapolis, the Minneapolis-St. Paul (MSP) International Airport, and the Mall of America (MOA) in Bloomington. The LRT is the transit component of a Locally Preferred Alternative which includes reconstruction of TH-55 as a four lane at-grade arterial between Franklin Avenue and 59<sup>th</sup> Street and construction of an interchange between TH-55 and TH-62 (Crosstown Highway).

Current plans call for the north end of the LRT to begin in the Central Business District (CBD) and operate on the existing transit mall along 5<sup>th</sup> Street. The LRT is planned to exit the CBD near the Hubert Humphrey Metrodome, following the former Soo Line Railroad to Franklin Avenue, then parallel Hiawatha Avenue. The project will include a 0.8-mile tunnel to be constructed under the MSP airport runways and taxiways with the construction of one underground station. The line is then planned to emerge from the tunnel on the West Side of the airport and continue south with four proposed stations in Bloomington, including a station in the vicinity of the Mall of America (MOA). The estimated capital cost for the 11.6-mile Hiawatha Avenue LRT, including 16 proposed stations, totals \$548.6 million (escalated dollars). The project is expected to serve 24,600 average weekday boardings by the year 2020; 18,300 average weekday boardings are projected in the opening year.

Summary Description	
<b>Proposed Project:</b>	Light Rail Transit Line 11.5 miles, 16 stations
<b>Total Capital Cost (\$YOE):</b>	\$548.6 million
<b>Section 5309 New Starts Share (\$YOE):</b>	\$274.3 million
<b>Annual Operating Cost (\$YOE):</b>	\$15 million
<b>Ridership Forecast (2020):</b>	24,600 avg. weekday boardings 9,300 daily new riders
<b>FY 2001 Finance Rating:</b>	<b>Medium-High</b>
<b>FY 2001 Project Justification Rating:</b>	<b>Medium</b>
<b>FY 2001 Overall Project Rating:</b>	<b>Recommended</b>

The *Recommended* rating is based on the strong transit-supportive land use policies in place along the corridor and throughout the metropolitan area, and the strength of the project's capital and operating financing plans. The overall project rating applies to this *Supplemental Report on New Starts* and reflects conditions as of August 2000. Project evaluation is an ongoing process. As New Starts projects proceed through development, the estimates of costs, benefits, and impact

are refined. **The FTA ratings and recommendations will be updated annually to reflect new information, changing conditions, and refined financing plans.**

## Status

A Final Environmental Impact Statement (FEIS), including a Record of Decision (ROD) for the Hiawatha Avenue Corridor, was completed in February 1985. The preferred alternative documented in the 1985 FEIS included the reconstruction of the roadway to a four-lane, divided at-grade arterial, with an LRT line adjacent to the roadway and extending north to the Minneapolis CBD and south to the Minneapolis-St. Paul International Airport. Since the completion of the 1985 FEIS, improvements have been implemented on the roadway elements of the preferred alternative.

FTA approved Metro Transit to initiate preliminary engineering in January 1999 on the LRT component. In August 1999, Metro Transit completed a re-evaluation of the 1985 FEIS on a segment of the alignment extending from the Minneapolis CBD to Interstate 494. An Environmental Assessment on the segment extending from I-494 to the MOA was also completed that same month. Revised information included updated cost and ridership estimates, a final route alignment in the downtown Minneapolis portion of the project, and alignment options at the airport as well as options for service to the MOA. The proposed Hiawatha Avenue LRT is included in the region's financially constrained Transportation Improvement Program and the Long-Range Transportation Plan. FTA issued a ROD on the re-evaluation of the 1985 FEIS on the Hiawatha Avenue LRT line in April 2000. In the same month, the Federal Aviation Administration (FAA) also issued a Finding of No Significant Impact on an Environmental Assessment on the portion of the LRT project that will connect with the MSP International Airport. FTA approved the LRT project's entrance into final design in April 2000.

Section 3030(a)(91) of TEA-21 authorizes the "Twin Cities – Transitway Corridors" for final design and construction. Through FY 2000, Congress has appropriated \$69.32 million in Section 5309 new starts funds for the "Twin Cities Transitways" project, which includes the Hiawatha Avenue Corridor light rail project.

## Evaluation

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria*. FTA has evaluated this project as being in final design.

## Justification

The *Medium* project justification rating reflects the strong transit-supportive characteristics of the Hiawatha Avenue Corridor and the positive environmental benefits that are anticipated to result from the implementation of the project.

**Mobility Improvements**

**Rating: Low-Medium**

Metro Transit estimates that, in the year 2020, average weekday boardings will reach 24,600, including 9,300 daily new riders. Metro Transit estimates the following annual travel time savings for the Hiawatha Avenue LRT line:

<b><u>Mobility Improvements</u></b>	<b><u>New Start vs. No-Build</u></b>	<b><u>New Start vs. TSM</u></b>
<b>Annual Travel Time Savings (Hours)</b>	1.0 million	0.4 million

Based on 1990 census data, there are an estimated 3,358 low-income households within a ½ mile radius of the 16 proposed stations. This represents 20 percent of the total number of households within a ½ mile radius of the proposed stations.

**Environmental Benefits**

**Rating: High**

The Minneapolis-St. Paul metropolitan area is an attainment area for ozone and carbon monoxide (CO) and a moderate non-attainment area for particulate matter (PM<sub>10</sub>). Metro Transit estimates that, in the year 2020, implementation of the Hiawatha Avenue LRT will result in the following emissions reductions:

<b><u>Criteria Pollutant</u></b>	<b><u>New Start vs. No-Build</u></b>	<b><u>New Start vs. TSM</u></b>
<b>Carbon Monoxide (CO)</b>	395	253
<b>Nitrogen Oxide (NO<sub>x</sub>)</b>	68	45
<b>Hydrocarbons (HC)</b>	41	27
<b>Particulate Matter (PM<sub>10</sub>)</b>	2	2
<b>Carbon Dioxide (CO<sub>2</sub>)</b>	9,378	10,404

Values reflect annual tons of emissions reductions.

Metro Transit estimates that the proposed project will result in the following savings in regional energy consumption (measured in British Thermal Units – BTU).

<b><u>Annual Energy Savings</u></b>	<b><u>New Start vs. No-Build</u></b>	<b><u>New Start vs. TSM</u></b>
<b>BTU (millions)</b>	106,273	117,578

Values reflect annual BTU reductions.

**Operating Efficiencies**

**Rating: Medium**

Metro Transit estimates the following systemwide operating costs per passenger mile, reporting an increase in the new start compared to the no-build alternative.

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
<b>System Operating Cost per Passenger Mile (2020)</b>	\$0.35	\$0.35	\$0.36

Values reflect 2020 ridership forecast and 1999 dollars.

**Cost Effectiveness**

**Rating: Low-Medium**

Metro Transit estimates the following cost effectiveness indices:

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Incremental Cost per Incremental Passenger</b>	\$19.00	\$19.20

Values reflect 2020 ridership forecast and 1999 dollars.

**Transit-Supportive Existing Land Use and Future Patterns**

**Rating: Medium-High**

The *Medium-High* land use rating reflects the region’s progress in adopting plans, policies and incentives to promote transit-supportive development in the Hiawatha Avenue Corridor and throughout the Twin Cities region. The rating also acknowledges the region’s growth management policies as well as the participation and endorsement of local government and civic organizations in the development and planning processes associated with the proposed light rail project.

**Existing Conditions:** Downtown Minneapolis serves as the dominant job center for the metropolitan region and the upper Midwest with approximately 140,000 employees and 20,000 residents. Approximately 106,000 employees work within three blocks of the proposed Hiawatha Avenue LRT route. In addition, several major trip generators are included along the proposed route, including the Mall of America (largest retail complex in the nation), the Minneapolis-St. Paul International Airport, numerous educational and medical facilities and the Metrodome (sports arena). Minneapolis is also reviewing 16 major development projects for the downtown area that total 8.3 million square feet.

The Twin Cities region has been experiencing steady population and economic growth (ranking ninth in the nation in population growth from 1990 to 1996). In addition, the Minneapolis CBD

is growing at a rate significantly higher than the region as a whole. Total population and employment in 1995 was estimated at 70,000 and 198,000, respectively, within a ½ mile radius of proposed light rail stations. Based on 2020 forecasts, both total population and employment within a ½ mile radius of proposed LRT stations is projected to grow approximately 25 percent (87,800) and 37 percent (271,891), respectively.

**Future Plans and Policies:** The Metropolitan Council, which has responsibility for regional planning and the operation of several major public services, has established a strong policy foundation for growth management. The Met Council’s Metro 2040 Strategy in the Regional Blueprint establishes a growth boundary promoting higher density development overall and emphasizing reinvestment in the urban core. As part of the implementation of the regional growth strategy, the Met Council will tie investments in transportation and sewer facilities to local efforts to implement the regional plan and will determine consistency of local governments’ required comprehensive plans, zoning ordinances, and capital improvement programs with the Regional Blueprint. The Council’s new Smart Growth initiative has produced a *Transit Oriented Development Guidebook* to assist communities in implementing TOD around transit facilities.

The Metropolitan Council has also acted to target regional development resources to the proposed corridor. These actions include the dedication of \$5 million to land assembly in the corridor for the creation of transit-friendly development around stations, and the award of state-funded “Livable Communities Demonstration Account” funding to three separate Hiawatha Avenue LRT neighborhood-based development initiatives. Another mixed-use development project located near the Downtown East (Metrodome) station was awarded Livable Communities funding in a previous funding cycle. In addition, the City of Minneapolis has targeted \$4 million in redevelopment funding for transit-oriented redevelopment initiatives around the city’s proposed LRT stations.

Development of additional surface parking lots is banned downtown. Minneapolis’ interim zoning ordinances offer “bonuses” or reductions in required parking to businesses located within 200 feet of a transit stop. Large developers in downtown Minneapolis are allowed reductions in parking supply requirements. Other provisions under consideration include additional bonuses for locating near an LRT station, and maximum parking limits appropriate to size and use.

## Local Financial Commitment

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

The financial strategy for the proposed Hiawatha Avenue light rail project assumes \$274.3 million (50 percent) of Section 5309 new starts funds, \$117.3 million (21 percent) in State funds, \$87 million (16 percent) in local funds, and \$70 million (13 percent) from the Metropolitan Airports Commission.

## Stability and Reliability of Capital Financing Plan

### Rating: High

The *High* rating reflects the strong financial condition of Metro Transit and the high percentage (100 percent or \$274.3 million) of funding committed at the State and local level to the proposed project.

**Agency Capital Financial Condition:** The Metropolitan Council is in strong financial condition with an existing fund balance (1998) of \$145 million. Metro Transit operates as a division of the Metropolitan Council of Governments, itself a component unit of the State of Minnesota. The Metropolitan Council has taxing capacity and acts as an administrator of both Federal and State funds.

**Capital Cost Estimates and Contingencies:** Total capital cost estimates increased approximately 22 percent over the last year to reflect (1) costs in escalated dollars, (2) the redesign of several project elements, and (3) more detailed engineering studies. These costs are considered reasonable given the project's size and scope.

**Existing and Committed Funding:** All non-New Starts funding (\$274.3 million) is existing and committed to the Hiawatha Avenue LRT. These sources represent contributions from the State of Minnesota (\$117.3 million) and the Hennepin County Regional Railroad Authority (\$87 million). Over the last two years, the Minnesota Legislature has set aside \$117.3 million for the proposed LRT. The remaining 25 percent (\$70 million) of the proposed local funding share from the Metropolitan Airports Commission (also a division of the Metropolitan Council) in the form of general airport revenues was approved by the Federal Aviation Administration in April 2000.

**New and Proposed Sources:** Only existing sources are proposed for the construction of the Hiawatha Avenue light rail project.

## Stability and Reliability of Operating Finance Plan

### Rating: Medium

The *Medium* rating reflects the Metropolitan Council's healthy operating condition. Revenues to operate the proposed Hiawatha Avenue LRT appear strong.

**Operating Cost Estimates and Contingencies:** Operating cost estimates appear reasonable. Project sponsors estimate annual operating and maintenance cost at \$15 million for the Hiawatha Avenue light rail project. This will require an additional annual operating subsidy of \$11.43 million (escalated dollars) representing an increase of 10 percent in operating assistance requirements.

**Existing and Committed Funding:** All of the Hiawatha Avenue light rail project's operating funds currently exist and are considered committed. Funds to support operating costs will be

derived from the following: real growth in existing property tax levies, real growth in State general appropriations/miscellaneous sources; periodic fare increases; and a three year temporary application of regional CMAQ funding.

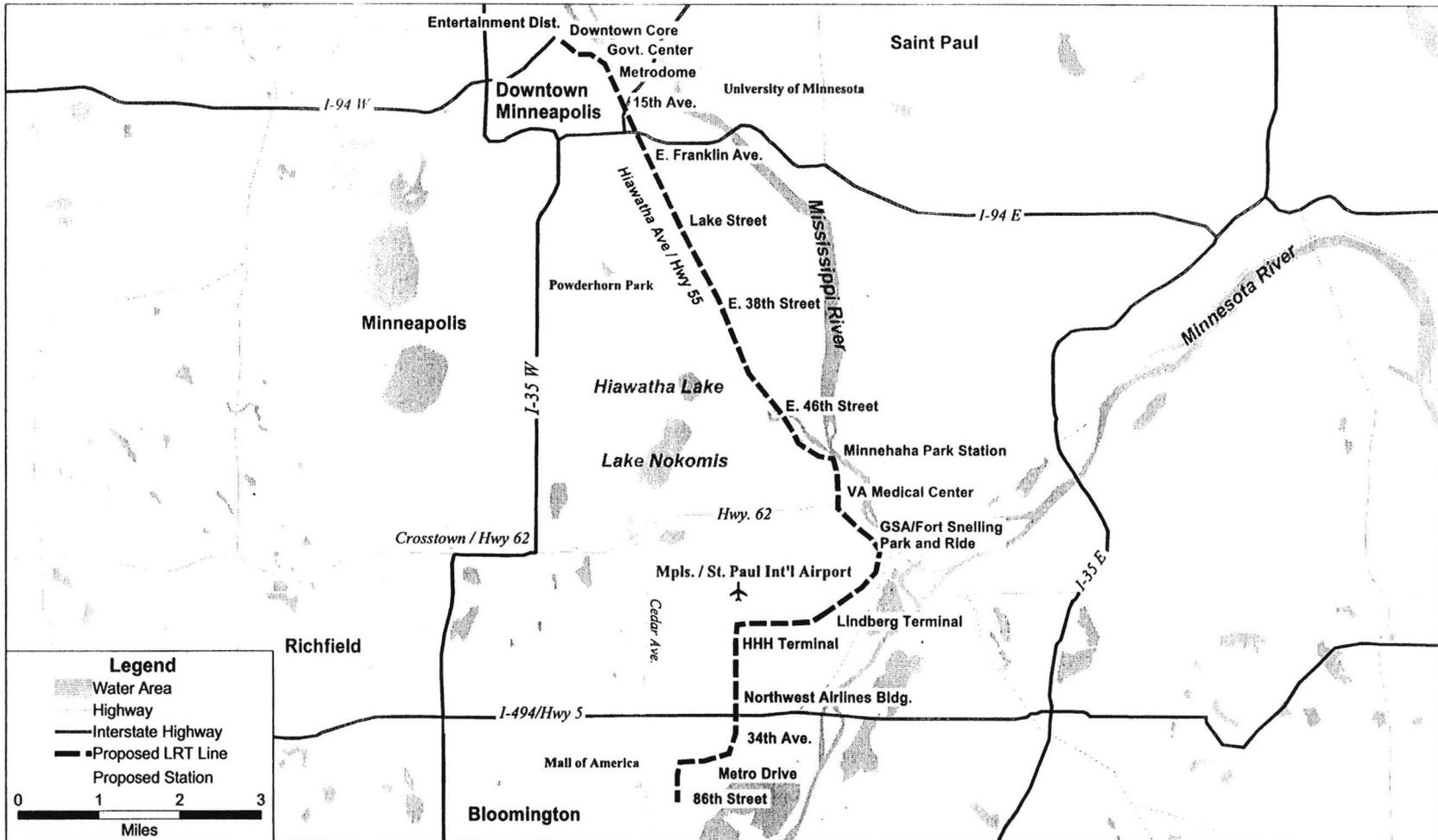
**New and Proposed Sources:** All proposed operating revenues currently exist. No new sources are needed.

<b>Locally Proposed Financing Plan (Reported in \$YOE)</b>		
<b><u>Proposed Source of Funds</u></b>	<b><u>Total Funding (\$million)</u></b>	<b><u>Appropriations to Date</u></b>
Federal:		
Section 5309 New Starts	\$274.3	(\$69.32 million appropriated to the Hiawatha Avenue LRT through FY 2000)
State:		
Minnesota Legislature	\$117.3	
Local:		
Hennepin County Regional Railroad Authority	\$87.0	
Metropolitan Airports Commission	\$70.0	
<b>TOTAL</b>	<b>\$548.6</b>	

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

# Hiawatha Avenue

Minneapolis - St. Paul, Minnesota



# Interstate MAX LRT Extension

## Portland, Oregon

(August 2000)

### Description

The Tri-County Metropolitan Transportation District of Oregon (Tri-Met) is proposing a 5.6-mile extension of its Light Rail Transit (LRT) system known locally as the Metropolitan Area Express. The proposed Interstate Metropolitan Area Express (MAX) line will extend existing LRT service northward from the Rose Quarter Arena and the Oregon Convention Center, to North Portland neighborhoods, medical facilities, the Portland International Raceway, and the Metropolitan Exposition Center. Goals of the alignment include complementing regional land use plans by connecting established residential, commercial, entertainment, and other major activity centers, and providing a key transportation link in the region's welfare to work programs. The LRT extension is estimated to cost \$350 million (escalated dollars) and carry 18,100 average weekday boardings (8,400 daily new riders) by 2020.

Summary Description	
<b>Proposed Project:</b>	Light Rail Transit Line 5.6 miles, 10 stations
<b>Total Capital Cost (\$YOE):</b>	\$350.0 million
<b>Section 5309 New Starts Share (\$YOE):</b>	\$257.5 million
<b>Annual Operating Cost (\$2005):</b>	\$7.2 million
<b>Ridership Forecast (2020):</b>	18,100 avg. weekday boardings 8,400 daily new riders
<b>FY 2001 Financial Rating:</b>	<b>High</b>
<b>FY 2001 Project Justification Rating:</b>	<b>High</b>
<b>FY 2001 Overall Project Rating:</b>	<b>Highly Recommended</b>

The *Highly Recommended* rating is based on the project's strong estimated cost effectiveness, transit supportive land use, and demonstrated local financial commitment to build and operate the project. The overall project rating applies to this *Supplemental Report on New Starts* **and reflects conditions as of August 2000**. 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

The Federal Transit Administration (FTA) approved the initiation of preliminary engineering on the 12-mile South-North LRT project in April 1996. In February 1998, the Draft Environmental Impact Statement was completed for the project.

In November 1998, voters rejected an affirmation of a \$475 million General Obligation bond measure previously approved to fund construction of the South-North LRT. Consequently, Tri-Met re-evaluated alternative alignments and funding strategies to implement the system. A

Supplemental Draft Environmental Impact Statement for the north alignment of the proposed South-North LRT was completed in April 1999. In June 1999, Tri-Met passed a resolution endorsing capital funding for the Interstate MAX project and the City of Portland approved a resolution committing \$30 million dollars to the project. The Final Environmental Impact Statement on the Interstate MAX project was completed in October 1999 and a Record of Decision was issued in January 2000. FTA approved the project’s advancement into final design in February 2000.

TEA-21 Section 3030(a)(66) authorizes the Portland South-North Corridor LRT (Interstate MAX) project for final design and construction. Through FY 2000, Congress has appropriated \$8.96 million in Section 5309 New Start funds for the project.

### Evaluation

The following criteria have been estimated in conformance with FTA’s *Technical Guidance on Section 5309 New Starts Criteria*. N/A indicates that data are unavailable for this specific measure. FTA has evaluated this project as being approved to enter final design.

### Justification

The *High* project justification rating reflects strong transit supportive land use, mobility improvements, and cost effectiveness, and the adequacy of all other justification criteria.

### Mobility Improvements

**Rating: High**

The 5.6-mile extension is expected to serve 18,100 average weekday boardings and 8,400 daily new riders by 2020. Metro, the Metropolitan Planning Organization for the Portland area, estimates the following travel time savings for the LRT project, compared to the no-build and TSM alternatives.

<u>Mobility Improvements</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Annual Travel Time Savings (Hours)</b>	17.4 million	0.8 million

Based on 1990 US Census data, there are an estimated 3,226 low-income households within a ½ mile radius of the proposed 10 stations, representing 25 percent of all households within the corridor.

**Environmental Benefits**

**Rating: High**

The Portland, OR / Vancouver, WA metropolitan region is currently in attainment for both ozone and carbon monoxide. The Interstate MAX and related land use densities are a major component of the region’s air quality maintenance plan.

<u>Criteria Pollutant</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Carbon Monoxide (CO)</b>	1,402	144
<b>Nitrogen Oxide (NO<sub>x</sub>)</b>	251	251
<b>Volatile Organic Compounds (VOC)</b>	176	19
<b>Particulate Matter (PM<sub>10</sub>)</b>	N/A	N/A
<b>Carbon Dioxide (CO<sub>2</sub>)</b>	33,873	3,553

Values reflect annual tons of emissions reductions.

Metro estimates that the South-North Interstate MAX would result in the following changes in regional energy consumption (measured in British Thermal Units -- BTU). Note that a decrease is reported in the comparison between the New Start and No-Build, and an increase reported between the New Start and TSM.

<u>Annual Energy Savings</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>BTU (million)</b>	433,413	[13,808]

Values reflect annual BTU reductions. Values in brackets [] indicate an increase in BTUs.

**Operating Efficiencies**

**Rating: Medium**

Metro estimates the following systemwide operating cost per passenger mile.

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
<b>System Operating Cost per Passenger Mile (2020)</b>	\$0.42	\$0.38	\$0.38

Values reflect 2020 ridership forecast and 1999 dollars.

**Cost Effectiveness**

**Rating: Medium-High**

Metro estimates the following cost effectiveness indices:

	<b>New Start vs. <u>No-Build</u></b>	<b>New Start vs. <u>TSM</u></b>
<b>Incremental Cost per Incremental Passenger</b>	\$3.10	\$9.70

Values reflect 2020 ridership forecast and 1999 dollars.

**Transit-Supportive Existing Land Use and Future Patterns**

**Rating: High**

The *High* land use rating reflects the number of major trip generators and the strong transit supportive policies, both in the corridor and throughout the region.

**Existing Conditions:** The alignment parallels Interstate 5 in northern Portland. The corridor includes three distinct segments. Travelling from south to north, the three areas are Albina, Upper Interstate, and the Expo Center. Albina contains the Rose Garden Arena, a major medical facility, industrial land, and parkspace. Upper Interstate has single and multi-family residential with commercial development directly adjacent to the corridor. The Expo Center area consists of a regional exposition and convention facility, a commercial raceway, parkspace, and some commercial uses. The extension will link north Portland to the Downtown by connecting to the existing East/West Line. Moderate block sizes and required street level store fronts contribute to a pedestrian friendly Downtown. Population within the corridor is expected to increase 51 percent. From 1994 to 2020, employment is expected to rise 48 percent. The population density is expected to rise from 0.94 persons per acre in 1994 to 1.41 in 2020 and employment density is expected to rise from 1.01 to 1.49 persons per acre. Major trip generators in the corridor include the Portland Central Business District, Portland State University, the Civic Stadium, the Rose Quarter (professional sports arena), the Memorial Coliseum, the Oregon Convention Center, the Edgar Kaiser Medical Facilities, and the Expo Center.

Current zoning in the corridor supports high residential and commercial densities. Zoning regulations encourage street use by pedestrians, bicyclists, and transit users by establishing street spacing, building orientation, and street geometrics standards.

**Future Plans and Policies:** The Region 2040 Growth Concept and the Regional Framework Plan (the Growth Concept’s implementing document) establish the pattern and densities for development within the region. The Regional Framework Plan guides the organization of land into clusters of residential development and employment centers. Other focuses of development efforts include “Station Communities,” “Transit Corridors,” and “Main Streets.” Portland conducts station area planning to analyze station area characteristics and create appropriate development plans. For all areas around the station sites, the City is developing Urban Renewal

Districts. The Albina Community Plan calls for a required increase in densities in the area upon commitment of the North Corridor LRT.

The Urban Growth Management Functional Plan and Portland's Central City Transportation Management Plan limits the amount of parking throughout the region. The Central City Transportation Management Plan outlines various ways in which parking will be limited along the alignment in order to encourage increased transit usage.

## Local Financial Commitment

### **Proposed Non-Section 5309 Share of Total Project Costs: 27%**

The Tri-Met financial plan proposes \$257.5 million (73 percent) in Section 5309 new starts funds and \$92.5 million (27 percent) in State, local, and Federal flexible funds for the project. Tri-Met notes that it is not requesting any Section 5309 new starts funding for two simultaneous projects currently under development: the Airport MAX Light Rail project and the Portland Streetcar. Local and private sources will cover \$246.5 million of these project costs.

## Stability and Reliability of Capital Financing Plan

### **Rating: High**

The *High* rating reflects the solid financial condition of Tri-Met, the local lead transit agency, and the other local partners – Metro and the City of Portland. Unlike the previous South-North corridor proposal, this project does not require a referendum to approve a funding source.

**Agency Capital Financial Condition:** Tri-Met is in good financial condition. Short-term bonds will be issued under the agency's existing bond indenture. The bond trust indenture has a rating of AA+ by Standard & Poor's and Aa3 by Moody's.

**Capital Cost Estimates and Contingencies:** Capital cost estimates have decreased by 70 percent from last year because the scope of the project has been reduced from the 12-mile South/North proposal to the current 5.6 mile Interstate MAX. Present cost estimates are reasonable for the scope of the project and inflation assumptions are in-line with regional trends. The agency has a logical contingency plan to modify the construction schedule to minimize additional interim borrowing if federal funding authorizations are insufficient.

**Existing and Committed Funding:** All non-new starts funding for the project is committed and programmed. Non-federal financing alternatives appear strong and well-considered. Financing strategies such as an interim local borrowing program (i.e., letters of credit, commercial paper, vendor financing, and a line of credit) and the commitment of flexible Surface Transportation Program (STP) funds for the project are in place. Tri-Met and the City of Portland recently signed a detailed intergovernmental agreement that defines financing responsibilities, payment of project funds, administration of the project account, and other terms and conditions. The City will use tax increment financing, its General Fund, or its Transportation Fund to support its \$30 million contribution.

**New and Proposed Sources:** Tri-Met’s contribution of short-term bonds is a new funding source, but will be issued under the agency’s existing bond indenture and constitute 20 percent of non-Federal funding. This service is committed and programmed.

**Stability and Reliability of Operating Finance Plan**

**Rating: High**

The *High* rating reflects the stability of operating funds, sufficient projected revenue growth, and adequate cash reserves:

**Agency Operating Condition:** Tri-Met’s operating condition is very strong. The agency’s expense growth rate remains in balance with revenue growth rates, and Tri-Met has substantial working capital reserves on hand to cover any variations in a given year.

**Operating Cost Estimates and Contingencies:** Annual operating costs for Interstate MAX are estimated at \$7.2 million in 2005 dollars. Operating cost estimates appear reasonable Tri-Met maintains from 2 to 3 months working capital across the life of the cash flow – a substantial reserve for covering unanticipated cash flow or cost issues.

**Existing and Committed Funding:** Over 68 percent of all Tri-Met’s ongoing operating revenues are projected to come from its dedicated regional employer/municipal payroll tax revenue, which is assumed to increase at an average annual rate of 7.4 percent. This projected growth is conservative compared to the historical increase of 9.6 percent. The projected farebox recovery ratio is 29 percent.

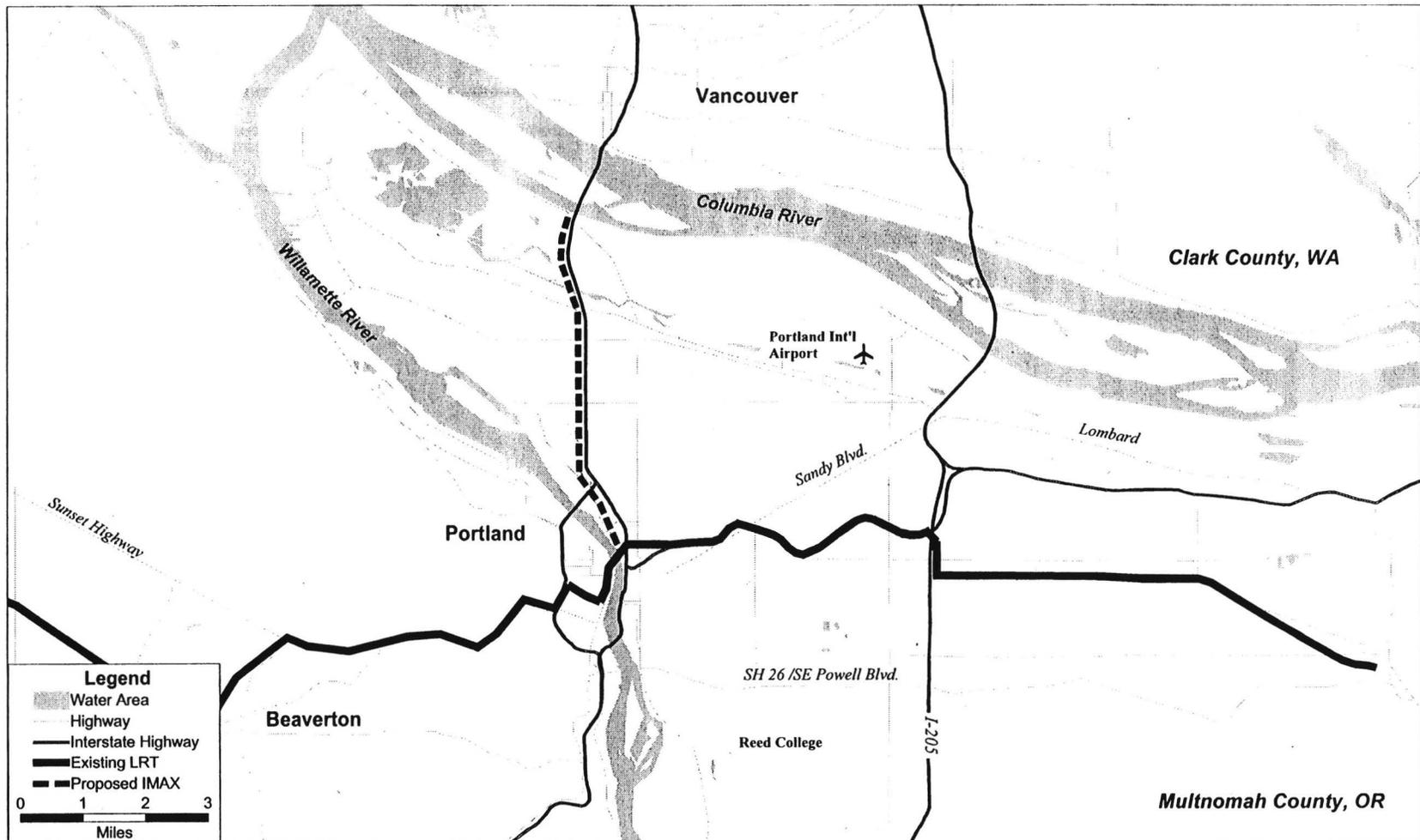
**New and Proposed Sources:** All proposed operating revenues currently exist.

<b>Locally Proposed Financing Plan (MOS-1) (Reported in \$YOE)</b>		
<b><u>Proposed Source of Funds</u></b>	<b><u>Total Funding (\$million)</u></b>	<b><u>Appropriations to Date</u></b>
Federal:		
Section 5309 New Starts	\$257.5	<b>(\$8.96 million appropriated through FY 2000)</b>
STP	24.0	
Local:		
City of Portland	30.0	
Tri-Met Revenue Bonds	<u>38.5</u>	
<b>TOTAL</b>	<b><u>\$350.0</u></b>	

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

# Interstate MAX LRT Extension

Portland, Oregon



Federal Transit Administration, 2000



# University Corridor LRT

## Salt Lake City, Utah

(August 2000)

### Description

The Utah Transit Authority (UTA) has proposed the implementation and operation of light rail transit (LRT) extending 2.5 miles from the North/South line, in downtown Salt Lake City, to Rice/Eccles Stadium on the University of Utah campus. The proposed University Corridor LRT line includes four stations. The University Corridor line is scaled back from the previously proposed 10.9-mile West/East line that extended from the airport to the University. Light rail vehicles will operate primarily at-grade on tracks laid in existing city streets and on property owned by Salt Lake City, Utah Department of Transportation, and the University of Utah. UTA estimates ridership at 7,600 boardings per average weekday in 2020. The University Corridor LRT is being planned to significantly improve access to jobs, educational opportunities, health care, and housing throughout the 400 South corridor.

The capital cost estimate of the 2.5-mile University LRT line totals \$118.5 million (escalated dollars), with annual operating costs projected at \$2.6 million (escalated dollars).

Summary Description	
<b>Proposed Project:</b>	Light Rail Transit Line 2.5 miles, 4 stations
<b>Total Capital Cost (\$YOE):</b>	\$118.5 million
<b>Section 5309 New Starts Share(\$YOE):</b>	\$84.6 million
<b>Annual Operating Cost (\$YOE):</b>	\$2.6 million
<b>Ridership Forecast (2020):</b>	7,500 avg. weekday boardings 3,100 daily new riders
<b>FY 2001 Financial Rating:</b>	<b>Medium</b>
<b>FY 2001 Project Justification Rating:</b>	<b>Medium</b>
<b>FY 2001 Overall Project Rating:</b>	<b>Recommended</b>

The *Recommended* rating is based on the project's strong cost effectiveness but relatively weak mobility improvements, and the adequacy of the project's capital and operating plans. The overall project rating applies to this *Supplemental Report on New Starts* and reflects conditions as of August 2000. 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

The Wasatch Front Regional Council (WFRC) completed a Major Investment Study and Draft Environmental Impact Statement in July 1997 on the 10.9 West-East Corridor. FTA approved entry into preliminary engineering on the West-East LRT project in January 1998. FTA approved the Airport to University – West/East Final EIS (FEIS) in March 1999. In December

1999, the FEIS was revised, providing for an initial line between downtown Salt Lake City and Rice-Eccles stadium on the University of Utah campus. The revision also included a change in alignment from side running LRT to center running LRT along 400 South from Main Street to 200 East. FTA issued a Record of Decision for the Airport to University – West/East project in December 1999. FTA approved final design for the University Corridor LRT in March 2000. UTA has signed a design build contract and has begun final design and construction activities.

TEA-21 Section 3030(a)(72) authorizes the Salt Lake City – Light Rail (Airport to the University of Utah) for final design and construction. Through FY 2000, Congress has appropriated \$4.96 million in Section 5309 New Starts funds for this project.

**Evaluation**

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria* for the 2.5-mile University corridor. FTA has evaluated this project as being in final design.

**Justification**

The *Medium* project justification rating reflects the project’s strong cost effectiveness, adequate transit supportive land use, but relatively weak mobility improvements.

**Mobility Improvements**

**Rating: Low-Medium**

The 2.5-mile project is expected to serve 7,500 average weekday boardings and 3,100 daily new riders by 2020. UTA estimates the following annual travel time savings.

<u>Mobility Improvements</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Annual Travel Time Savings (Hours)</b>	0.2 million	[0.2 million]

[ ] indicates an increase in travel time.

Based on 1990 data, the UTA estimates that 3,105 low-income households are located within ½ mile of the four proposed stations of the University Corridor LRT line. This figure represents 25 percent of all households located within ½ mile of proposed stations.

**Environmental Benefits**

**Rating: Medium**

Salt Lake City is designated as a non-attainment area for carbon monoxide and PM<sub>10</sub>, and Salt Lake and Davis Counties are designated as maintenance areas for ozone. UTA estimates the following annual emissions reductions between the University Corridor LRT line and the TSM and no-build alternatives.

<b>Criteria Pollutant</b>	<b>New Start vs. <u>No-Build</u></b>	<b>New Start vs. <u>TSM</u></b>
<b>Carbon Monoxide (CO)</b>	27	20
<b>Nitrogen Oxide (NO<sub>x</sub>)</b>	19	19
<b>Volatile Organic Compounds (VOC)</b>	154	96
<b>Particulate Matter (PM<sub>10</sub>)</b>	19	12
<b>Carbon Dioxide (CO<sub>2</sub>)</b>	8,283	6,373

Values reflect annual tons of emissions reductions.

UTA estimates the following savings in regional energy consumption (measured in British Thermal Units – BTU) for the University Corridor LRT.

<b><u>Annual Energy Savings</u></b>	<b>New Start vs. <u>No-Build</u></b>	<b>New Start vs. <u>TSM</u></b>
<b>BTU (million)</b>	52,997	27,793

Values reflect annual BTU reductions.

## Operating Efficiencies

**Rating: Medium**

UTA estimates the following systemwide operating costs per passenger mile following implementation of the University Corridor LRT:

	<b><u>No-Build</u></b>	<b><u>TSM</u></b>	<b><u>New Start</u></b>
<b>System Operating Cost per Passenger Mile (2020)</b>	\$0.30	\$0.30	\$0.30

Values reflect 2020 ridership forecast and 1997 dollars.

## Cost Effectiveness

**Rating: Medium-High**

UTA estimates the following cost effective indices:

	<b>New Start vs. <u>No-Build</u></b>	<b>New Start vs. <u>TSM</u></b>
<b>Incremental Cost per Incremental Passenger</b>	\$6.60	\$10.60

Values reflect 2020 ridership forecast and 1997 dollars.

## Transit-Supportive Existing Land Use and Future Patterns

### Rating: Medium

The *Medium* land use rating reflects the high concentration of activities at both ends of the corridor. While the CBD is expected to grow, growth outside of the corridor is forecast to increase at a much higher rate.

**Existing Conditions:** The 2.5-mile corridor runs on 400 South and 500 South in eastern Salt Lake City. The CBD and the University of Utah, which are major activity generators, anchor this LRT corridor on the west and east, respectively. The two middle stations would serve an active urban-scale commercial corridor surrounded by predominately medium-density residential and mixed-use development. The total population in the LRT corridor is approximately 32,900 and total employment is 86,500, including 13,000 employees of the University of Utah. The University has 25,000 students. CBD employment density is a relatively low 37.5 employees per acre. Although intensification of urban-scale development is expected to occur, projected increases in corridor population are low and projected employment growth, while higher, is roughly half the rate forecast for the metropolitan area overall. The existing North/South LRT line, connecting to the proposed University Corridor Line, would link the corridor to higher-intensity activity centers, such as the Delta Center and the Salt Palace Convention Center. Parking is not significantly restricted outside of the CBD and the University area; however, the University has adopted parking management policies, which limit parking supply and promote the use of alternative modes. Salt Lake City has reduced parking requirements for new development.

**Future Plans and Policies:** The Salt Lake City Master Plan recommends a concentration of high-density, mixed use growth in the 400 South/East Downtown corridor and other transit corridors. The Central Community Plan, covering the transit corridor between the CBD and the University, has been updated to permit mixed uses. The city uses zoning as the principal tool to implement transit-supportive land use policies. The performance of land use policies has improved as demonstrated by recent construction in the corridor. Design charrettes are being conducted to ensure transit oriented development practices are being applied along the proposed and existing LRT lines.

Growth management initiatives are at an early stage. Although the city's master plan recommends the concentration of commercial development in the downtown area, no regional growth management policies exist in this high growth region. Natural growth boundaries will ultimately limit metropolitan area sprawl, but will not necessarily produce concentrations of development at a pedestrian-friendly, urban scale. The Envision Utah coalition is working on the development of strategies for the period from 2020 to 2050 addressing growth-related impacts in the six-county Wasatch Front area.

## Local Financial Commitment

### Proposed Non-Section 5309 Share of Total Project Costs: 28%

The financial strategy for the proposed University Corridor light rail project assumes \$84.6 million (72 percent) of Section 5309 new starts funds, \$11.9 million (10 percent) in CMAQ funds and \$22 million (18 percent) in local funds.

## Stability and Reliability of Capital Financing Plan

### Rating: Medium-High

The *Medium-High* rating reflects the solid financial condition of UTA and stability of its funding source.

**Agency Capital Financial Condition:** The 0.25 percent sales tax that the UTA assesses on retail sales within the service area serves as the primary local funding source for the agency's transit projects, including capital and operating costs. For the 1998 Comprehensive Annual Financial Report, UTA reported \$28 million in cash and cash equivalents, which is the primary source for the University Corridor LRT project. In 1998, UTA had a net revenue gain (including depreciation costs) of \$10 million and a total of \$11 million in retained earnings.

**Capital Cost Estimates and Contingencies:** A contingency reserve of \$9.5 million is included in the total capital cost estimate. No specific escalation factors for the University Corridor LRT capital cost estimates have been identified.

**Existing and Committed Funding:** The 0.25 percent sales tax is a stable revenue mechanism that is indexed to inflation, and grows with the economy. UTA has proposed that cash reserves be used to fund a majority of the project's local match from local sales tax funds saved from the North/South Line. The agency reports savings from the North/South Line in the amount of \$43 million (current budget less current obligations).

**New and Proposed Sources:** Only existing sources are proposed for the construction of the University Corridor light rail project. However, UTA is coordinating with local governmental agencies regarding a Fall 2000 referendum, which will help expand bus service and implement the long-range plan. New funding is not needed to implement the University line.

## Stability and Reliability of Operating Finance Plan

### Rating: Medium

The *Medium* rating reflects the stability of UTA's operating revenues but notes concerns about the provision of future bus service.

**Agency Operating Condition:** UTA maintained a strong financial operating position in 1998. In 1998, UTA received \$56.5 million in sales tax revenue; a significant portion of which funded

operating costs. The 0.25 percent sales tax is indexed to inflation, making it a stable funding source.

**Operating Cost Estimates and Contingencies:** Annual operating costs for the 2.5-mile LRT are estimated at \$2.6 million in YOE dollars.

**Existing and Committed Funding:** The existing UTA-levied sales tax revenues cover most of the agency’s current operating costs. Farebox revenues are estimated to cover 25 to 30 percent of the operating costs of the University Corridor LRT. The Governor has stated in a letter to FTA that a previous State commitment of \$5 million in annual operating guarantees passed by the Legislature for the proposed Airport to University line is equally applicable to the University Corridor.

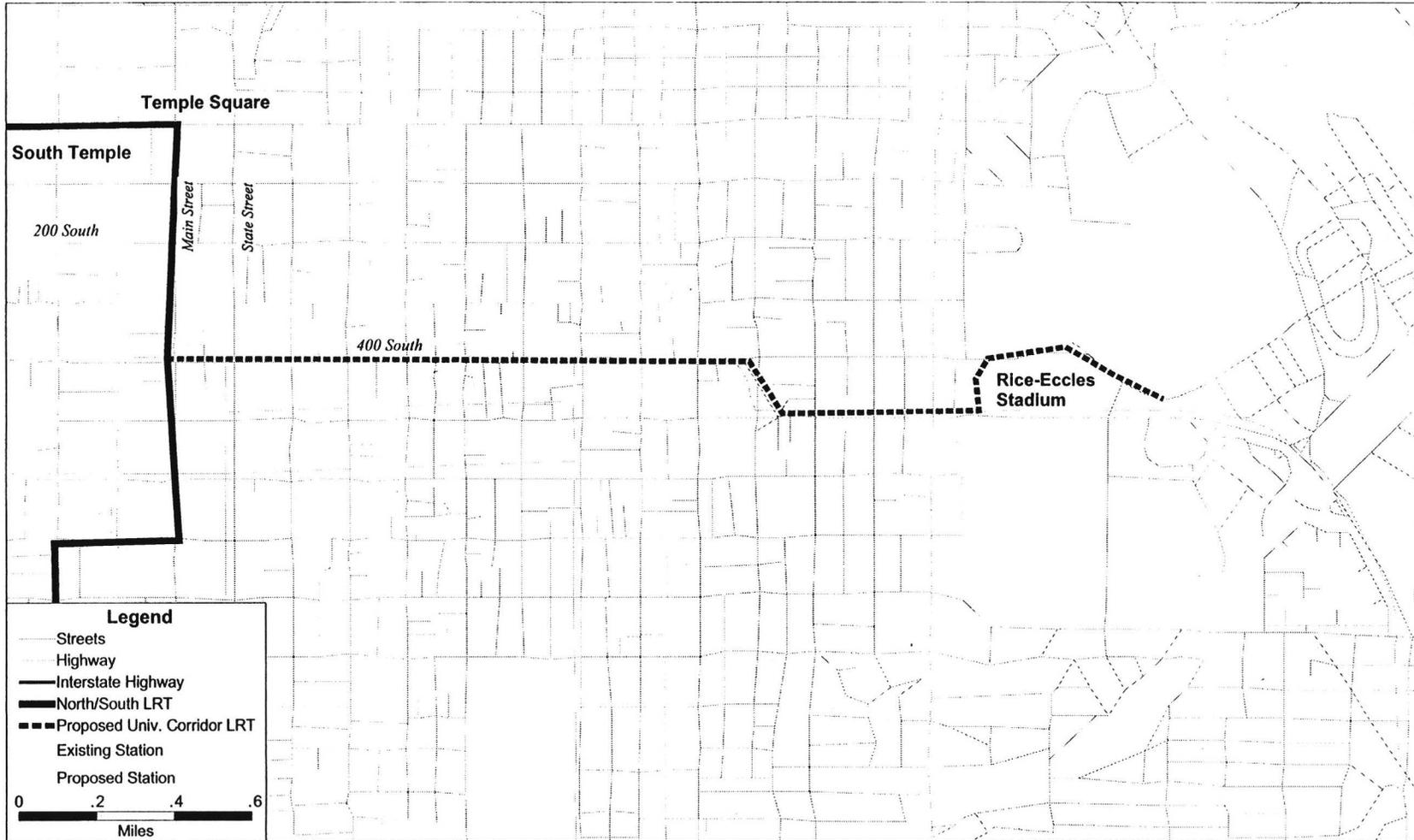
**New and Proposed Sources:** Uncertainty exists about when an additional local revenue assessment i.e., higher sales tax rate, will be needed. According to the UTA cash flow analysis, UTA appears to be able to operate the proposed University Corridor LRT Line, but has to assume no bus service growth in the area through the year 2012. The cash flow analysis assumes that bus passenger fares will increase at a healthy rate. However, the need to construct or implement new projects and maintain and operate existing and new systems may require an earlier tax increase.

<b>Locally Proposed Financing Plan (Reported in \$YOE)</b>		
<b><u>Proposed Source of Funds</u></b>	<b><u>Total Funding (\$Million)</u></b>	<b><u>Appropriations to Date</u></b>
Federal:		
Section 5309 New Starts	\$ 84.6	(\$4.96 million appropriated to the West-East LRT through FY 2000 for preliminary engineering activities)
CMAQ	11.9	
Local:		
UTA Cash Reserves	<u>22.0</u>	
<b>TOTAL</b>	<b><u>\$118.5</u></b>	

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

# University Corridor LRT

Salt Lake City, Utah





# Oceanside-Escondido Rail Corridor

## North San Diego County, California

(August 2000)

### Description

The North County Transit District (NCTD) is planning the conversion of an existing 22-mile freight rail corridor into a diesel multiple unit (DMU) transit system running east from the coastal City of Oceanside, through the cities of Vista, San Marcos, and unincorporated portions of San Diego County, to the City of Escondido. The alignment also includes 1.7 miles of new right-of-way to serve the campus of California State University, at San Marcos (CSUSM). The proposed project is situated along the State Route 78 corridor, which connects Interstate Highways 5 and 15, the principal east-west corridor in Northern San Diego County. The proposed DMU system would serve fifteen stations; four of these stations would be located at existing transit centers. Passenger rail would have exclusive use during pre-defined operational schedules. Average daily weekday boardings in 2015 are estimated at 15,100, with 8,600 daily new riders.

Summary Description	
<b>Proposed Project:</b>	Diesel Multiple Units 23.7 miles, 15 stations
<b>Total Capital Cost (\$YOE):</b>	\$253.5 million
<b>Section 5309 New Starts Share (\$YOE):</b>	\$72.0 million
<b>Annual Operating Cost (\$YOE):</b>	\$8.3 million
<b>Ridership Forecast (2015):</b>	15,100 avg. weekday boardings 8,600 daily new riders
<b>FY 2001 Finance Rating:</b>	<b>High</b>
<b>FY 2001 Project Justification Rating:</b>	<b>Medium-High</b>
<b>FY 2001 Overall Project Rating:</b>	<b>Highly Recommended</b>

The overall project rating of *Highly Recommended* is based on the project's strong cost effectiveness and mobility improvements, and the high level of local funding committed to the construction and operation of the proposed project. The overall project rating applies to this *Supplemental Report on New Starts* and reflects conditions as of August 2000. 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

An Environmental Impact Report (EIR) for the Oceanside-Escondido Rail Project and an EIR for the CSUSM alignment were published and certified in 1990 and 1991, respectively. A Major Investment Study was not required based on concurrence from FTA, FHWA, the San Diego Association of Governments (SANDAG), Caltrans, the City of San Marcos, and NCTD.

Advanced planning for the Oceanside-Escondido Rail Project, which resulted in 30 percent design, was completed in December 1995. The Environmental Assessment/Subsequent Environmental Impact Report (EA/SEIR), was completed in early 1997. The North San Diego County Transit Development Board certified the SEIR in March 1997. FTA issued a Finding of No Significant Impact in October 1997. FTA approved the NCTD's request to advance the project into final design in February 2000.

Section 3030 (a)(77) authorizes the Oceanside-Escondido Corridor for final design and construction. Through FY 2000 Congress has appropriated \$7.93 million in Section 5309 New Starts funds for this project.

### Evaluation

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria*. N/A indicates that data is not available for a specific measure. FTA has evaluated this project as being in final design. FTA will re-evaluate the project in next year's *Annual Report on New Starts*.

### Justification

The *Medium-High* project justification rating reflects the project's strong cost effectiveness and mobility improvements, and acknowledges local efforts to ensure that future development in the corridor supports the transit investment.

### Mobility Improvements

**Rating: Medium-High**

The proposed project is expected to serve 15,100 average weekday boardings and 8,600 daily new riders by 2015. NCTD estimates the project will result in the following annual travel time savings.

<u>Mobility Improvements</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Annual Travel Time Savings (Hours)</b>	1.4 million	0.7 million

Based on 1990 Census data, there are an estimated 1,706 low-income households within a ½ mile radius of the proposed 15 stations, approximately 12 percent of total households within ½ mile of proposed stations.

### Environmental Benefits

**Rating: Medium**

The San Diego region is a "serious" non-attainment area for ozone, and a moderate non-attainment area for carbon monoxide. NCTD estimates that the project would result in the following annual emissions reductions.

<b>Criteria Pollutant</b>	<b>New Start vs. No-Build</b>	<b>New Start vs. TSM</b>
<b>Carbon Monoxide (CO)</b>	96	43
<b>Nitrogen Oxide (NO<sub>x</sub>)</b>	[1]	12
<b>Volatile Organic Compounds VOC)</b>	5	4
<b>Particulate Matter (PM<sub>10</sub>)</b>	0	0
<b>Carbon Dioxide (CO<sub>2</sub>)</b>	4,070	2,113

Values reflect annual tons of emissions reductions. Values in [ ] reflect increases in emissions.

NCTD estimates that in 2015, the project will result in the following savings in regional energy consumption (measured in British Thermal Units-BTU).

<b>Annual Energy Savings BTU (million)</b>	<b>New Start vs. No-Build</b>	<b>New Start vs. TSM</b>
	54,464	29,045

Values reflect annual BTU reductions.

### Operating Efficiencies

**Rating: Medium**

NCTD estimates the following systemwide operating cost per passenger mile in 2015:

	<b>No-Build</b>	<b>TSM</b>	<b>New Start</b>
<b>System Operating Cost per Passenger Mile (1997)</b>	\$0.10	\$0.10	\$0.10

Values reflect 2015 ridership forecast and 1998 dollars.

### Cost Effectiveness

**Rating: High**

NCTD estimates the following cost effectiveness indices:

	<b>New Start vs. No-Build</b>	<b>New Start vs. TSM</b>
<b>Incremental Cost per Incremental Passenger</b>	\$4.40	\$6.40

Values reflect 2015 ridership and 1998 dollars.

## Transit-Supportive Existing Land Use and Future Patterns

### Rating: Medium

The *Medium* land use rating reflects the low density and the dispersed development patterns which currently exists in the corridor, but acknowledges the efforts of local agencies to ensure that future development is transit supportive.

**Existing Conditions:** The corridor parallels Highway 78 along an existing freight rail right-of-way between Oceanside and Escondido, terminating in the two cities at large intermodal Transit Centers. The corridor contains a dispersed mix of commercial, industrial, and single- and multiple-family residential developments. Population and employment densities are generally low around station areas (6.3 people and 4.1 jobs per acre), but are expected to increase. The proposed project would serve several activity centers including the business districts of the four corridor cities (Oceanside, Vista, San Marcos, and Escondido), several office buildings and industrial sites, two hospitals, two community colleges, a regional shopping mall, and the campus of the California State University at San Marcos. There is evidence of some restrictive parking policies in Oceanside, but parking is generally plentiful along the corridor and no regional parking policies were identified by the NCTD. Zoning regulations in Oceanside, Escondido, and Vista have been recently modified to support higher densities and mixed uses around proposed station areas.

**Future Plans and Policies:** Between 1990 and 1995, cities along the proposed rail corridor experienced rates of growth from 10-20 percent. Population and employment around proposed station areas are forecasted to increase by 49 percent (to 65,500) and 66 percent (to 47,400) by 2015. Local development plans to promote transit-friendly character around proposed station areas are significant and demonstrate strong commitment to public transportation. The city of Oceanside has the most developed set of transit supportive policies; its *Oceanside Transit Corridor Study* resulted in the development of transit overlay districts and has set the framework for pedestrian-oriented mixed-use development around the seven stations planned within the city.

Redevelopment plans for the downtown areas of the cities of San Marcos, Vista, and Escondido are underway and include a mix of commercial, residential, and office uses within walking distances of proposed rail stations. The Escondido general plan includes an endorsement of infill development to improve existing neighborhoods. The NCTD has been active in promoting transit-supportive land use planning in the corridor cities, and has made joint development agreements with owners of property adjacent to a few station sites. SANDAG, San Diego County's metropolitan planning organization, supports the management of growth through the encouragement of more intense residential and commercial development around rail stations, and provides funding to member jurisdictions for transit-oriented development planning.

## Local Financial Commitment

**Proposed Non-Section 5309 New Starts Share of Total Project Costs: 72%**

The project's financial plan (reflected in escalated dollars) proposes \$72.0 million (28 percent of total project costs) in Section 5309 New Starts funds, \$104.2 million (41 percent) in State funds, and \$77.3 million (31 percent) in local funds. Note that the non-Federal funding sources proposed in the project's financial plan have increased substantially since the FY 2000 edition of the *Annual Report on New Starts* (reflecting conditions as of November 1999).

## Stability and Reliability of Capital Financing Plan

**Rating: High**

The *High* rating reflects the demonstrated commitment of state and local funding to construct the Oceanside-Escondido Rail project.

**Agency Capital Financial Condition:** NCTD is in good financial condition, with positive operating balances over the past several years and \$5.2 million in cumulative balances for capital projects.

**Capital Cost Estimates and Contingencies:** Project cost estimates and contingencies are reasonable for a project at this stage of development. However, capital costs are anticipated to increase if NCTD double-tracks the entire project, as is currently being studied.

**Existing and Committed Funding:** All of NCTD's proposed non-Section 5309 new starts funding for the project is committed. State funding for the project includes Proposition 108 passenger rail bond revenues and State Transportation Improvement Program funding. In July 2000, the California State Assembly and Senate approved Governor Davis' Transportation Congestion Relief Plan, including \$80 million for the Oceanside-Escondido Rail project. The addition of this new state source has decreased the New Starts share to only \$72.0 million, or 28 percent of total project costs.

San Diego County's ½ cent TransNet revenue is a stable and reliable funding source through 2008. If required, NCTD would borrow against future TransNet revenues to absorb the local share of project costs. However, current TransNet revenue projections do not demonstrate the capacity to cover any other potential significant cost increases.

**New and Proposed Sources:** The July 2000 passage of Governor Davis' transportation budget commits \$80 million of new funding to the project.

## Stability and Reliability of Operating Finance Plan

**Rating: Medium-High**

The *Medium-High* rating reflects the agency's demonstrated revenues and contingencies to operate the proposed project.

**Agency Operating Condition:** In recent years, NCTD has experienced positive operating balances and increased ridership, but increasing costs and a declining farebox recovery ratio (currently at 26 percent of operating costs). The agency is in adequate financial condition.

**Operating Cost Estimates and Contingencies:** NCTD estimates annual project operating costs of \$8.3 million (in 2004 dollars). Annual O&M costs and inflation factors used in NCTD’s financial projections are reasonable. The agency is projected to maintain a 10 percent operating reserve margin through 2020.

**Existed and Committed Funding:** NCTD proposes to fund rail system operations through a variety of systemwide revenue sources. Transportation Development Act (TDA) and TransNet revenues provide a significant and reliable operating funding stream to the agency. NCTD projects a 5.7 percent growth in TDA revenues over a 20-year horizon. However, failure to achieve this rate of growth may jeopardize the agency’s operating balance after the TransNet source sunsets in the year 2008.

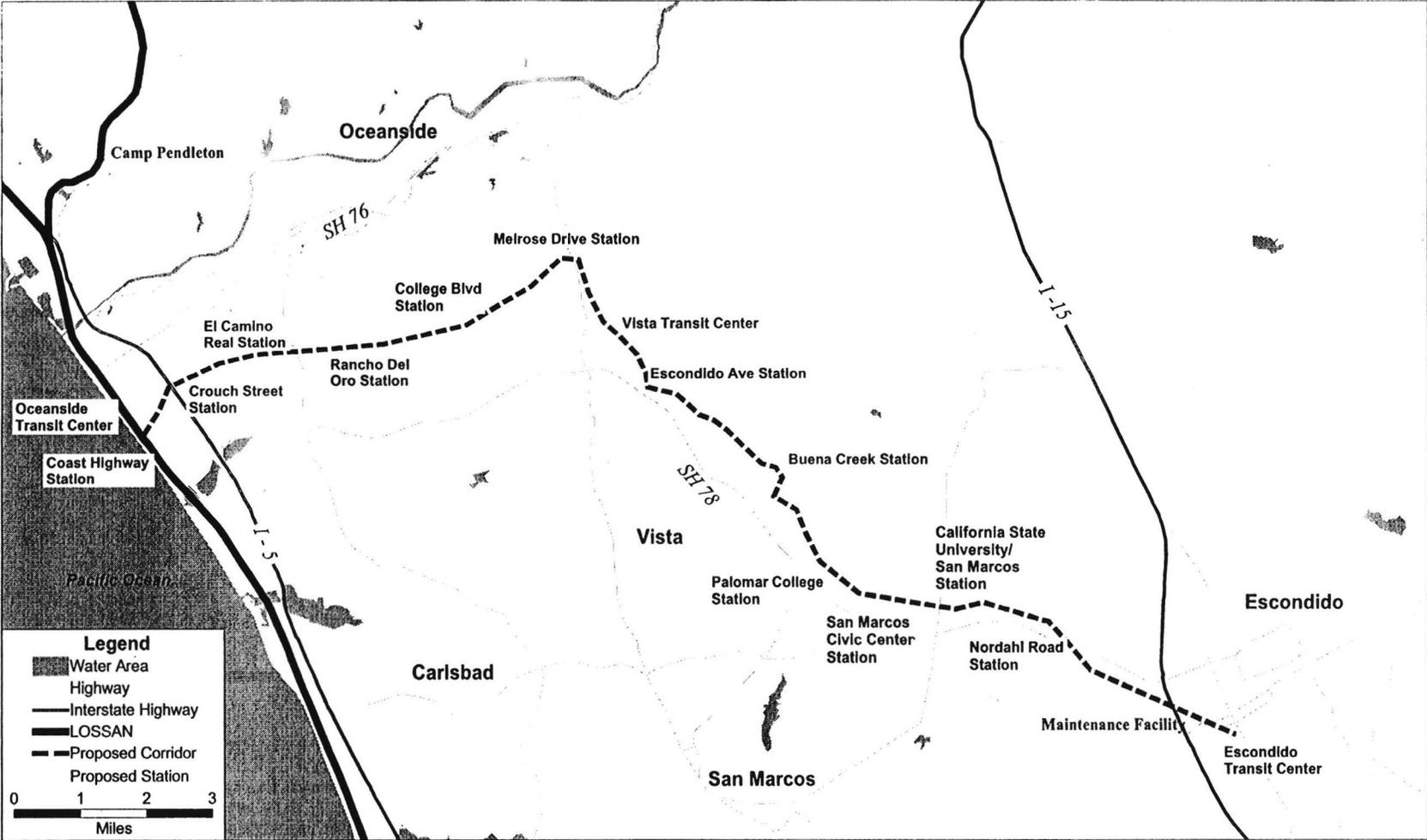
**New and Proposed Sources:** No new operating funding sources are proposed.

<b>Locally Proposed Financing Plan (Reported in \$YOE)</b>		
<b><u>Proposed Sources of Funds</u></b>	<b><u>Total Funding (\$million)</u></b>	<b><u>Appropriations to Date</u></b>
Federal:		
Section 5309 New Starts	\$ 72.0	(\$7.93 million appropriated through FY 2000)
State:		
State 108	17.6	
State STIP	6.6	
State GTIP	80.0	
Local:		
TransNet (NCTD)	67.1	
TransNet (MTDB)	<u>10.2</u>	
<b>TOTAL</b>	<b>\$253.5</b>	

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

# Oceanside - Escondido Rail

North San Diego County, California



Federal Transit Administration, 2000



# Third Street Light Rail - Phase 1

## San Francisco, California

(August 2000)

### Description

The San Francisco Municipal Railway (MUNI) has proposed implementing a 7.1 mile light rail transit (LRT) line and maintenance facility in the heavily transit-dependent Third Street corridor in eastern San Francisco. The primary purposes of the Third Street Light Rail Project are to accommodate existing and forecasted transit ridership with greater reliability, comfort, and speed, and to facilitate economic development opportunities along the corridor. The proposed project would operate on the surface from the Caltrain Bayshore Station at the San Francisco County line to the south, connect to the existing LRT system in downtown San Francisco via Third Street, and extend into a subway terminating in Chinatown. The project would provide regional connections to BART and CalTrain at multimodal stations. Third Street Light Rail operations would include exclusive (subway) as well as semi-exclusive (street median) rights-of-way, using MUNI's existing high floor light rail vehicles.

Capital costs for the complete Third Street Light Rail Project total \$1.41 billion (escalated dollars), to be constructed in two phases. Phase 1, which has been approved by FTA to enter final design and which is evaluated in this profile, is a 5.4 mile minimum operable segment (MOS), which would operate as a surface extension of the J-Church MUNI Metro line between the Market Street Subway and the Bayshore CalTrain Station. The estimated capital cost for the MOS is \$530.8 million (escalated dollars). Phase 2, the New Central Subway, would extend the line underground to a terminal in Chinatown, and is estimated to cost \$876.1 million (escalated dollars) to construct.

Summary Description	
<b>Proposed Project:</b>	Light Rail Transit Line (MOS) 5.4 miles, 19 stations
<b>Total Capital Cost (\$YOE):</b>	\$530.8 million
<b>Section 5309 New Starts Share:</b>	\$0.0
<b>Annual Operating Cost (\$YOE):</b>	\$5.0 million
<b>Ridership Forecast (2015):</b>	80,100 avg. weekday boardings 2,000 daily new riders
<b>FY 2001 Financial Rating:</b>	<b>Medium-High</b>
<b>FY 2001 Project Justification Rating:</b>	<b>Medium</b>
<b>FY 2001 Overall Project Rating:</b>	<b>Recommended</b>

The overall project rating of *Recommended* is based on the strong transit supportive land use policies in place along the corridor, and the adequate local financial commitment to construct the project. The overall project rating applies to this *Supplemental Report on New Starts* and **reflects conditions as of August 2000**. Project evaluation is an ongoing process. As new starts projects proceed through development, the estimates of costs, benefits, and impacts are refined.

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**The FTA ratings and recommendations will be updated annually to reflect new information, changing conditions, and refined financing plans.**

## Status

In October 1996, FTA authorized the initiation of Preliminary Engineering and the preparation of a Draft Environmental Impact Statement/Draft Environmental Impact Report (DEIS/DEIR) on the Third Street corridor. In November 1997, MUNI began Preliminary Engineering for Phase 1 of the light rail alignment as well as the Metro East Maintenance Facility. In June 1998, the San Francisco Public Transportation Commission (SFPTC), which governs MUNI, designated a 2-phase light rail project as the Locally Preferred Alternative. A Record of Decision on Phase I of the project was issued in April 1999. FTA approved the project's entrance into final design in April 2000.

Phase I of the Third Street Light Rail project is included in the region's long-range transportation plan. MUNI is currently working with the Metropolitan Transportation Council (the region's MPO) to adopt Phase II into the financial constrained plan, and to accelerate further development activities on that portion of the project. The complete 7.1 mile project would leverage approximately \$560 million in Federal funds with over \$800 million in State and local resources.

TEA-21 Section 3030(a)(79) authorizes the San Francisco Bayshore Corridor for final design and construction. To date, no Section 5309 new starts funds have been appropriated for this project.

## Evaluation

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria*. Criteria are presented only for the 5.4-mile Phase 1 MOS. In agreement with FTA, the project is not evaluating separate no-build and TSM alternatives; these have been merged into a single alternative for the purposes of the environmental analysis. As a result, the project evaluation data are reported for the comparison of the new start (Phase 1) and the TSM alternative, and not for the comparison to the No-Build alternative. N/A indicates that data are not available for a specific measure. FTA has evaluated this project as being in final design.

## Justification

The *Medium* project justification rating reflects the strong the transit supportive land use policies in place along the corridor and the project's anticipated mobility improvements, but notes the project's poor cost-effectiveness in terms of attracting new riders to the transit system.

## Mobility Improvements

**Rating: Medium-High**

The Phase 1 Third Street LRT would serve approximately 80,100 average weekday boardings and carry 2,000 daily new riders. MUNI estimates that Phase 1 would result in the following annual travel time savings.

<u>Mobility Improvements</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Annual Travel Time Savings (Hours)</b>	N/A	1.3 million

Based on 1990 census data, there are an estimated 5,988 low-income households within a ½ mile radius of the MOS corridor, representing 16 percent of all households located within ½ mile of the corridor.

## Environmental Benefits

**Rating: Medium**

The San Francisco Area is a maintenance area for ozone, and in attainment for carbon monoxide, nitrogen oxides and particulate matter. MUNI estimates that in 2015, Phase 1 would result in the following reductions in emissions.

<u>Criteria Pollutant</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Carbon Monoxide (CO)</b>	N/A	8
<b>Nitrogen Oxide (NO<sub>x</sub>)</b>	N/A	19
<b>Volatile Organic Compounds (VOC)</b>	N/A	1
<b>Particulate Matter (PM<sub>10</sub>)</b>	N/A	0
<b>Carbon Dioxide (CO<sub>2</sub>)</b>	N/A	3,503

Values reflect annual tons of emissions reductions.

MUNI estimates that in 2015, Phase 1 of the Third Street LRT would result in the following increase in regional energy consumption (measured in British Thermal Units - BTU).

<u>Annual Energy Savings</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>BTU (million)</b>	N/A	[16,661]

Values in [ ] indicate an increase in BTUs.

## Operating Efficiencies

**Rating: Medium**

MUNI estimates that systemwide-operating costs per passenger mile would remain constant when comparing Phase 1 of the Third Street LRT to the TSM alternative.

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
<b>System Operating Cost per Passenger Mile (2015)</b>	N/A	\$0.55	\$0.55

Values reflect 2015 ridership forecast and 1999 dollars.

## Cost Effectiveness

**Rating: Low**

MUNI estimates the following cost effectiveness index.

	<b>New Start vs. No-Build</b>	<b>New Start vs. TSM</b>
<b>Incremental Cost per Incremental Passenger</b>	N/A	\$38.90

Values reflect 2015 ridership forecast and 1999 dollars.

## Transit-Supportive Existing Land Use and Future Patterns

**Rating: High**

The *High* rating reflects the urban character of the corridor and the successful efforts of local agencies in encouraging transit supportive development.

**Existing Conditions:** The Third Street light rail project serves a very dense regional CBD (over 220,000 jobs in a 1.25 square mile area) as well as medium- to high-density (14 to 29 units per acre) urban residential neighborhoods with integrated commercial uses. The proposed project will also serve some industrial areas, several of which are being developed for various residential, commercial, and entertainment uses. A new major league baseball stadium opened in Spring 2000 near the northern terminus of the MOS. Neighborhoods throughout the corridor are pedestrian-scaled and walkable. Parking is extremely limited in the CBD and throughout the north end of the MOS. Existing zoning regulations are supportive of moderate- to high-density, transit-oriented development throughout the corridor.

**Future Plans and Policies:** San Francisco's *General Plan* has long encouraged higher-density transit- and pedestrian-oriented development. The city is currently preparing detailed plans for redevelopment areas of the corridor, including specific plans for the Mission Bay and Bayview - Hunters Point communities. In addition, urban design guidelines were recently completed for the Phase I corridor. The San Francisco Redevelopment Agency (SFRA) has special powers to facilitate development, including land acquisition, land assembly, and tax increment financing.

## Other Factors

**Economic Development:** One of the primary goals of the Third Street LRT project is to serve as a catalyst for the redevelopment of economically disadvantaged neighborhoods, including the Bayview/Hunters Point community. Concurrently with the light rail planning process, the SFRA is working with residents to produce a Revitalization Concept Plan to serve as the framework for the physical and economic redevelopment of the community.

## Local Financial Commitment

### **Proposed Non-Section 5309 New Starts Share of Total Project Costs: 100%**

The current financial plan for the Phase I MOS project does not include Section 5309 New Starts funds. The plan proposes \$51.1 million (10 %) in Federal Section 5309 Rail Modernization and Surface Transportation Program resources; \$90.6 million (17 %) in State funding; \$381.1 million (72 %) in local Proposition B revenues; and \$8.0 million (1 %) in private contributions. The current plan reflects escalated dollars; project costs reported in prior years were based on 1997 dollars. MUNI is proposing the use of \$512.3 million in Section 5309 new starts funding for implementing Phase II of the project.

### **Stability and Reliability of Capital Financing Plan**

#### **Rating: Medium-High**

The *Medium-High* rating reflects the high level of local capital funding committed to the Phase 1 project.

**Agency Capital Financial Condition:** The capital financial condition of MUNI is considered strong. Dedicated Proposition B sales tax revenues administered through the San Francisco County Transportation Authority are projected at \$779 million through 2010 to address capital needs.

**Capital Cost Estimates and Contingencies:** Capital costs for the Phase I project are reasonable and include adequate contingencies.

**Existing and Committed Funding:** All proposed Proposition B funding --- covering 70 percent of project costs --- is committed to the Phase 1 project. \$25 of existing State Transportation Improvement Program funding is also considered committed.

**New and Proposed Sources:** MUNI is proposing the use of \$30 million in revenues from a proposed State Rail Bond Program. The proposed program is currently a bill in the state legislature. MUNI is further proposing the use of \$8 million of as yet identified developer contribution and/or other private revenue to complete the financing for the Phase 1 3<sup>rd</sup> Street LRT. These private funds would be used to purchase the 10 additional light rail vehicles required by 2015.

### **Stability and Reliability of Operating Finance Plan**

#### **Rating: Medium**

The *Medium* rating reflects the City of San Francisco's increasing financial support for operation of the MUNI system.

**Agency Operating Condition:** In the past, FTA has found MUNI's condition to be

adequate, and the City has been increasing its financial support for the agency. MUNI has significant experience operating an urban rail system.

**Operating Cost Estimates and Contingencies:** Implementation of Phase 1 of the Third Street LRT would result in a net increase of \$5.0 million to systemwide operating costs. This increase represents a one percent increase in MUNI's systemwide operating budget.

**Existed and Committed Funding:** MUNI projects a 33 percent farebox recovery for the 3<sup>rd</sup> Street LRT. Local legislation passed in November 1999 (Proposition E) ensures that operating cost increases associated with current and expanded MUNI services will be met by a baseline budget adjustment (resulting in increased annual appropriations) from the San Francisco General Fund. Proposition E also transfers the administration of City parking revenues to a Municipal Transportation Agency, which is to include MUNI. These revenues are also available to fund MUNI system operations.

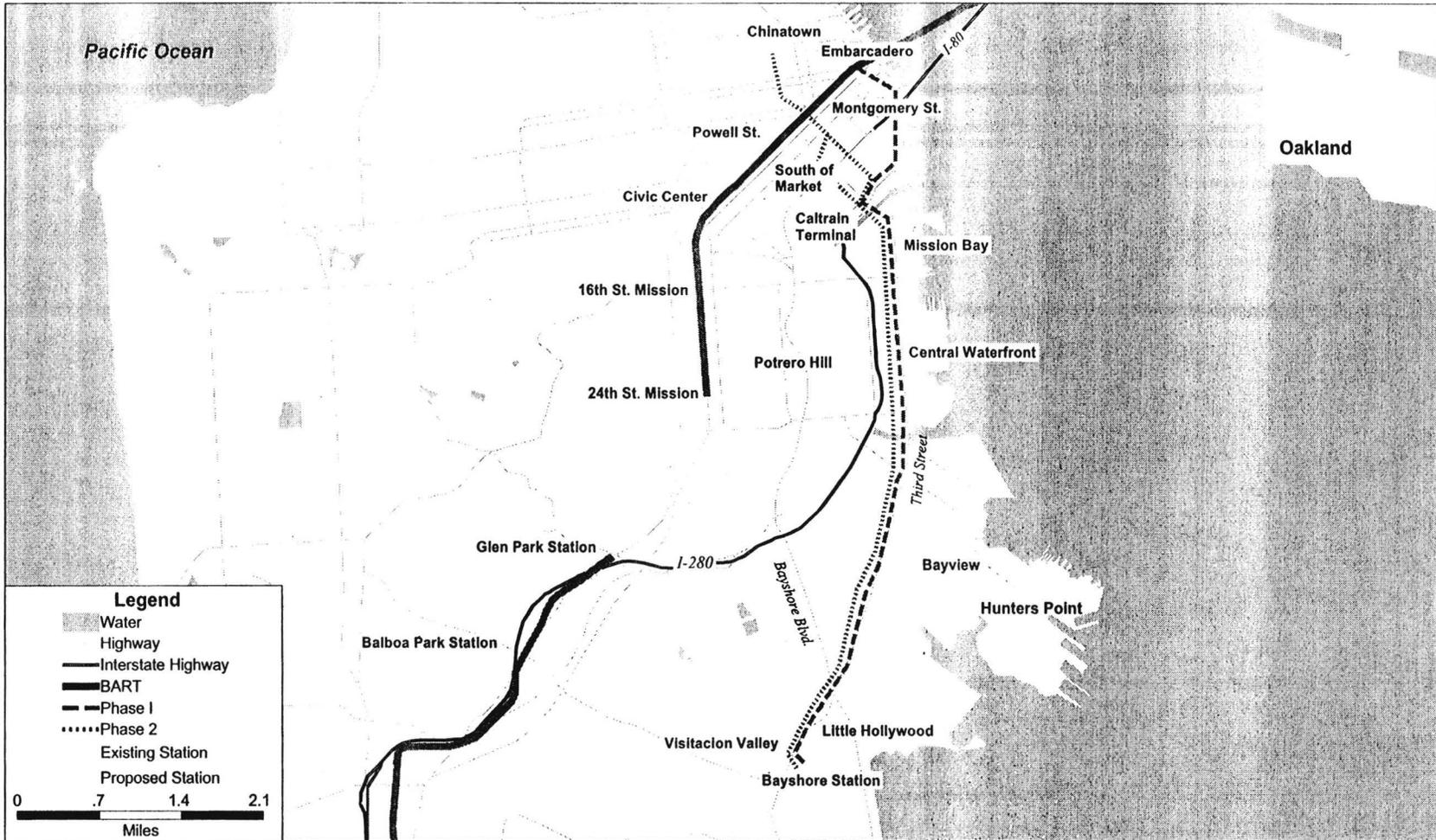
**New and Proposed Sources:** No new sources of operating funding are being proposed by MUNI.

<b>Locally Proposed Financing Plan</b> (Reported in \$YOE)		
<u>Proposed Source of Funds</u>	<u>Total Funding</u> ( <u>\$million</u> )	<u>Appropriations to Date</u>
Federal:		
Section 5309 New Starts	\$ 0.0	(No Section 5309 New Start funds have been appropriated through FY 2000)
Section 5309 Rail Mod	46.1	
STP	5.0	
State:		
STIP	60.6	
State Rail Bond Program	30.0	
Local:		
Proposition B Sales Tax	381.1	
Developer Contribution	<u>8.0</u>	
<b>TOTAL</b>	<b><u>\$530.8</u></b>	

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

# Third Street LRT Phase 1

San Francisco, California



Federal Transit Administration, 2000



**Central Link LRT (MOS-1)**  
**Seattle, Washington**  
 (August 2000)

**Description**

Sound Transit (Central Puget Sound Regional Transit Authority) is planning a 23.5-mile Central *Link* light rail transit (LRT) project running north to south from Northgate, through downtown Seattle, Southeast Seattle and the cities of Tukwila and SeaTac, Washington. *Link* will consist of 23 stations, four new park-and-ride lots, and one existing lot. The system would operate on existing and new right-of-way (ROW), including the existing 1.6-mile Downtown Seattle Transit Tunnel. Sound Transit estimates a total of 156,400 daily riders on the 23.5-mile system in 2020. Capital costs for the entire project are \$3.1 billion (escalated dollars), with annual operating costs estimated at \$62.5 million (escalated dollars).

Sound Transit proposes to implement the system in several minimum operable segments (MOS). The MOS being proposed for Federal funding under TEA-21 will extend 7.2 miles from the NE 45<sup>th</sup> Street station southward to the South Lander Street station. This alignment includes 4.5 miles of wholly new and exclusive ROW, 1.3 miles of exclusive transit ROW in the existing Downtown Seattle Transit Tunnel, and 1.4 miles of ROW reconfigured from an existing busway south of Downtown. Sound Transit estimates average weekday boardings of 87,200 for the MOS in 2020. The estimated cost of this segment is \$1,500 million (escalated dollars).

The *Link* LRT system is one element of Sound Transit's voter-approved ten year, \$3.9 billion (\$1995) *Sound Move* regional transit plan, which also includes implementation of a 2-mile LRT line in downtown Tacoma; an 82-mile Sounder commuter rail system operating between Lakewood and Everett; 20 new regional express bus routes; 14 High Occupancy Vehicle (HOV) direct access ramps (providing access to over 100 miles of existing HOV lanes); 14 new park and ride lots and 9 transit centers; and other service improvements.

<b>Summary Description</b>	
<b>Proposed Project:</b>	Light Rail Transit Line (MOS-1) 7.2 miles, 10 stations
<b>Total Capital Cost (\$YOE):</b>	\$1,500 million
<b>Section 5309 New Starts Share: (\$YOE):</b>	\$500 million
<b>Annual Operating Cost (\$YOE):</b>	\$62.5 million
<b>Ridership Forecast (2020):</b>	87,200 avg. weekday boardings 39,800 daily new riders
<b>FY 2001 Financial Rating:</b>	<b>Medium-High</b>
<b>FY 2001 Project Justification:</b>	<b>High</b>
<b>FY 2001 Overall Project Rating:</b>	<b>Highly Recommended</b>

The *Highly Recommended* rating is based on the project's strong estimated cost effectiveness, transit supportive land use plans and policies, and local financial commitment. The overall project rating applies to this *Supplemental Report on New Starts* and reflects conditions as of August. 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

The Sound Transit Board adopted the *Sound Move* regional transit plan in May 1996. Voters approved \$3.914 billion in local funding for implementation of the plan in November 1996. A Major Investment Study of *Sound Move's* services was completed in March 1997. *Sound Move* is included in the Puget Sound Regional Council's (the area's MPO) Transportation Plan and Regional Transportation Improvement Program (TIP).

FTA approved initiation of preliminary engineering on the Link LRT in July 1997. A Draft Environmental Impact Statement (EIS) was published in December 1998. The Final EIS was initiated in February 1999 and was distributed for public review in November 1999. A Record of Decision was issued in January 2000. The Sound Transit board formally adopted the 7.2-mile MOS for Federal participation on November 18, 1999. FTA approved the project's advancement into final design in February 2000. Sound Transit expects to begin LRT operations in 2006.

TEA-21 Section 3030(a)(85) authorizes the Seattle Sound Move Corridor (*Link* and *Sounder*), of which *Link* is one element, for final design and construction. Through FY 2000, Congress has appropriated \$41.44 million for the *Link* light rail project.

## Evaluation

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria*. Information was provided by Sound Transit comparing the New Start to the TSM alternative for the MOS and for the full LRT system. This evaluation pertains only to the 7.2-mile MOS. FTA has concurred with Sound Transit's methodology that evaluates the *Link* TSM and No-Build scenarios as equivalent with each other. N/A indicates that data are not available for a specific measure. FTA has evaluated this project as being approved to enter final design.

## Justification

The *High* project justification rating reflects strong cost effectiveness and transit supportive land use and the adequacy of the other justification criteria.

**Mobility Improvements**

**Rating: Medium**

The 7.2-mile MOS is expected to serve 87,200 average weekday boardings, including 39,800 daily new riders. Sound Transit estimates the following travel time savings for the New Start compared to the TSM alternative.

<u>Mobility Improvements</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Annual Travel Time Savings (Hours)</b>	N/A	12.8 million

Based on 1990 data, Sound Transit estimates that 7,879 low-income households are located within a ½ mile radius of the 10 proposed stations (representing 11 percent of total households located within a ½ mile radius of stations).

**Environmental Benefits**

**Rating: High**

The Central Puget Sound Area is classified as a maintenance area for carbon monoxide and ozone. Spot areas in the region are designated as non-attainment for PM<sub>10</sub>. Sound Transit estimates the following reductions in emissions for the *Link* light rail:

<u>Criteria Pollutant</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Carbon Monoxide (CO)</b>	N/A	301
<b>Nitrogen Oxide (NO<sub>x</sub>)</b>	N/A	2,303
<b>Volatile Organic Compounds (VOC)</b>	N/A	171
<b>Particulate Matter (PM<sub>10</sub>)</b>	N/A	5
<b>Carbon Dioxide (CO<sub>2</sub>)</b>	N/A	32,758

Values reflect annual tons of emissions reductions.

Sound Transit estimates the following changes in regional energy consumption (measured in British Thermal Units - BTU):

<u>Annual Energy Savings</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>BTU (million)</b>	N/A	407,589

Values reflect annual BTU reductions.

**Operating Efficiencies**

**Rating: Medium**

Sound Transit estimates a reduction in the systemwide operating costs per passenger mile in 2020 for the *Link* light rail MOS compared to the TSM alternative.

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
<b>System Operating Cost per Passenger Mile (2020)</b>	N/A	\$0.47	\$0.45

Values reflect 2020 ridership forecast and 1999 dollars.

**Cost Effectiveness**

**Rating: High**

Sound Transit estimates the following cost-effectiveness index:

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Incremental Cost per Incremental Passenger</b>	N/A	\$3.30

Values reflect 2020 ridership forecast and 1999 dollars.

**Transit-Supportive Existing Land Use and Future Patterns**

**Rating: High**

The *High* land use rating reflects the dense and transit supportive land uses along the proposed MOS corridor and the strong land use policies in place throughout the region.

**Existing Conditions:** The proposed Federally-funded MOS begins in the University District , parallels Interstate 5, runs through the Seattle central business district (CBD) and terminates in the Duwamish industrial area. Station areas (one-half mile radius) in the central LRT corridor contained an estimated population of 95,800. Employment within a one-quarter mile radius was 231,800. Average population density within a one-half mile station radius is 7,000 people square mile. It also runs through some dense residential areas, and serves several large trip generators with a large portion of existing transit trips. Major trip generators include the University of Washington (UW), UW Medical Center and Hospital, UW football stadium and basketball arena, the Capital Hill/First Hill neighborhood (density = 16,000 persons/mile); Seattle Central Community College, Seattle University, four hospitals; Denny Regrade Area (high density residential), and sports stadiums and exhibition centers at the proposed Royal Brougham Station.

The CBD and several neighborhoods served by the project are characterized by mixed land uses in a pedestrian-friendly environment. Single occupancy vehicles constitute less than 50 percent of the mode split in the University District, Capital Hill/First Hill neighborhood, and Downtown Seattle. High parking costs in the CBD, averaging over \$20 per day, limit the desirability of parking. In March 1999, the Seattle City Council adopted a Station Area Interim Overlay District Ordinance restricting the development of new primary parking facilities and other restrictions on the location and access to parking in an area ¼ mile around proposed station areas.

**Future Plans and Policies:** The State of Washington adopted the Growth Management Act of 1990 that attempts to contain sprawl and focus development in urban areas. The Puget Sound Regional Council has adopted Vision 2020, the long-range Plan for the region which promotes development of urban centers, and each locality has adopted a comprehensive plan that builds on the regional plan and emphasizes consistency. Land use planning is well coordinated with transportation planning. Seattle's Comprehensive Plan identifies a network of Urban Centers, Hub Urban Centers, and Residential Villages within which new growth will be concentrated. Seattle monitors its progress on implementing the plan and prepares a report every two years. The City has completed several planning documents that include policies to support transit-oriented development (TOD) and has adopted a resolution that establishes goals and strategies to promote TOD. These include: *Background Report for Light Rail Station Area Planning in Seattle: Existing Conditions and Future Prospects for Transit-Oriented Development*; *Background Report for Light Rail Station Area Planning in Seattle: Station Area Profiles*; neighborhood plans for all neighborhoods along the line; and Ordinance #119394 – Station Area Interim Overlay District.

Zoning to support transit-related development is already in place. The LRT corridor was planned specifically to link urban centers identified in Vision 2020, (a regional land use plan/growth strategy) where high densities are accommodated with existing zoning. Several Seattle city departments, in cooperation with the Washington Department of Transportation and King County, are collaborating on a comprehensive parking study as part of the Seattle Light Rail Station Area Planning process and implementation of the Transportation Strategic Plan.

The City has adopted an interim zoning overlay to prohibit new auto-oriented uses in and around station areas. This measure expired in March 2000. Upon completion of the station area planning process, City staff will recommend that the Council adopt station specific objectives. Furthermore, the City is partnering with a bank and Fannie Mae to establish a Location Efficient Mortgage program that allows homebuyers purchasing homes in close proximity to transit to qualify for higher mortgages than they would otherwise be eligible for.

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## Local Financial Commitment

### **Proposed Non-Section 5309 Share of Total Project Costs: 67%**

Sound Transit proposes \$500.0 million (33 percent) in Section 5309 funds, and \$1.0 billion (67 percent) in local funds for the project. Local sources will consist of a sales and use tax, motor vehicle excise tax, and local issue bonds.

## Stability and Reliability of Capital Financing Plan

### **Rating: High**

The *High* rating reflects the solid financial condition of Sound Transit and the agency's dedicated local revenue sources.

**Agency Capital Financial Condition:** The financial condition of Sound Transit is strong. In 1996, voters approved a \$3.9 billion Sound Move regional transit plan to be supported by two dedicated local tax sources. The taxes continue in perpetuity with no sunset provisions and are dedicated solely to Sound Transit projects. Sound Transit intends to bond against these revenues to implement the *Sound Move* program and has received an A1 rating from Moody's Investor Service.

**Capital Cost Estimates and Contingencies:** Cost estimates have increased from last year, for both the MOS and the entire project, because of increased right-of-way costs and mitigation components. Adequate provisions exist to cover unanticipated cost overruns. The agency applies adequate cost contingencies to all capital items. Furthermore, it maintains two capital reserve funds which are a bond reserve fund equal to one year's debt servicing and an operating reserve fund equal to two months of operating expenditures. The agency's ultimate contingency is its untapped debt capacity. Sound Transit could issue additional bonds without violating its debt policy or legislated constraints on capacity.

**Existing and Committed Funding:** All non-New Starts funding exists and is committed. Sound Transit has access to two strong local tax sources for its exclusive use – a Sales and Use Tax and a Motor Vehicle Excise Tax (MVET) --- which will contribute \$475 million to the project. These sources are separate from sources that fund other transit services in the Seattle area. Growth in tax revenues from these sources has outpaced inflation. The 0.4 percent Sales and Use Tax and the 0.3 percent MVET have existed since the inception of Sound Move in 1996. These sources help Sound Transit contribute a strong local match and to issue and service long-term debt (\$524 million in bonds) as part of the local match.

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

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**Stability and Reliability of Operating Finance Plan****Rating: Medium**

The *Medium* rating reflects Sound Transit's stable and reliable operating revenues, but acknowledges some concern with the operating condition of other transit providers in the region.

**Agency Operating Condition:** In recent years Sound Transit has experienced a zero operating balance (operating costs equal operating revenues), a 20 to 25 percent farebox recovery ratio, and consistent ridership levels. According to the financial plan, operation of the MOS, as well as the full project, will not detract from other Sound Transit project initiatives (e.g., commuter rail, express bus).

**Operating Cost Estimates and Contingencies:** Operating costs are estimated at \$62.5 million and appear reasonable. If economic growth slows or financial difficulties occur, sales tax revenues may be used to secure additional debt funding.

**Existing and Committed Funding:** The financial plan uses the same tax revenue sources to fund operations as are used to fund capital expenditures. These dedicated local sources are anticipated to provide 86 percent of all operating revenues when service is open in 2007. Sound Transit assumes a farebox recovery ratio of 55 percent for the overall *Link* project. Analysis by the agency actually projects a recovery ratio of 66 percent, but the more conservative estimate is used for the financial plan.

Initiative 695 (I-695), which voters adopted in November 1999 adds a degree of uncertainty about the operation of services provided by other providers in the Central Puget Sound region. I-695 replaces the state motor vehicle excise tax (SMVET) with a flat tax and requires voter approval for any increase in taxes, fees, or charges. This legislation becomes effective January 2000.

Although the Initiative did not repeal Sound Transit's ability to impose a MVET, a separate source with a similar name that was approved in 1996 by voters, it could result in a 30 percent decrease in funding for regional operations unless new revenue sources are found. The entire *Sound Move* project relies on strong partnerships with local transit agencies, which may be affected by the loss of the SMVET. While local transit agencies are developing strategies to address projected revenue reductions, changes in service levels for these operators could indirectly impact the proposed service plans and projected ridership levels for Sound Transit services.

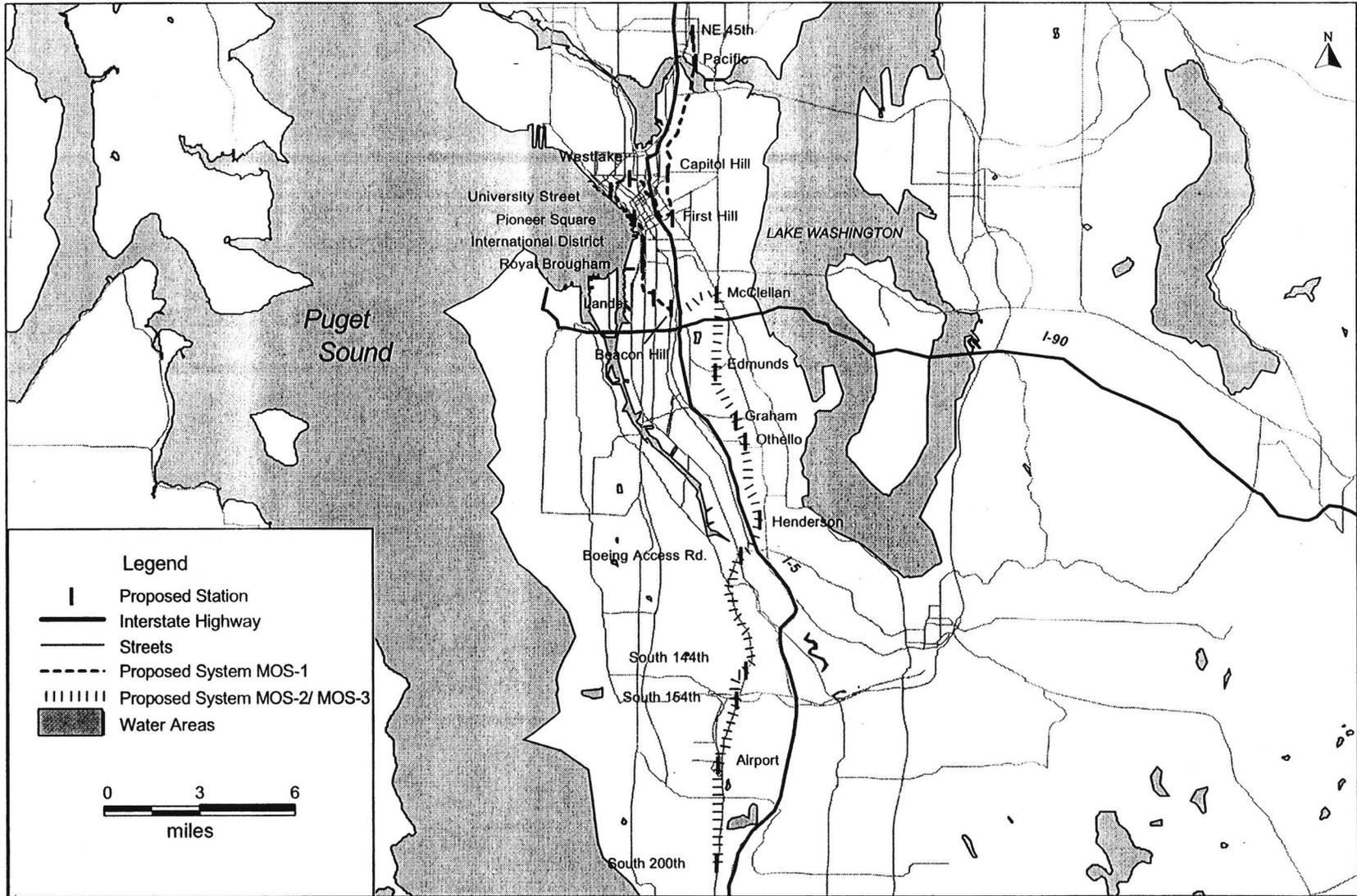
**New and Proposed Sources:** All proposed operating revenue sources for the *Link* LRT currently exist. No new sources are needed.

<b>Locally Proposed Financing Plan (Reported in \$YOE)</b>		
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million)</u>	<u>Appropriations to Date</u>
Federal:		
Section 5309 New Starts	\$ 500.0	(\$41.44 million appropriated through FY 2000 for entire system)
Local:		
Sales and Use Tax and MVET	475.0	
Bonds	<u>524.0</u>	
<b>TOTAL</b>	<b><u>\$1,500.0</u></b>	

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

# Central Link LRT (MOS-1)

## Seattle, Washington





# Central Link LRT (LPA)

## Seattle, Washington

(August 2000)

### Description

Sound Transit (Central Puget Sound Regional Transit Authority) is planning a 23.5-mile Central *Link* light rail transit (LRT) line running north to south from Northgate, through downtown Seattle, Southeast Seattle and the cities of Tukwila and SeaTac, Washington. *Link* will consist of 23 stations, four new park-and-ride lots, and one existing lot. The system would operate on existing and new right-of-way (ROW), including the existing 1.6-mile Downtown Seattle Transit Tunnel. Sound Transit estimates a total of 156,400 daily riders on the 23.5-mile system in 2020. Capital costs for the entire project are \$3.1 billion (escalated dollars).

The Locally Preferred Alternative (LPA), which is the subject of this New Start evaluation, consists of a 20-mile alignment from the NE 45<sup>th</sup> Street station in Seattle to the S. 200<sup>th</sup> Street station in the City of SeaTac. Twenty-one (21) stations and three new park-and-ride lots (1,600 spaces) will constitute the LPA. The estimated LPA cost is \$2.48 billion (escalated dollars). Estimated ridership is 133,100 average weekday boardings. Sound Transit proposes to implement the system in several minimum operable segments (MOS). The initial MOS will extend 7.2 miles from the NE 45<sup>th</sup> Street station southward to the South Lander Street station and is evaluated and rated in a separate project profile in this report.

The remainder of the Locally Preferred Alternative (LPA) of the *Link* LRT – MOS-2/ MOS-3 extends from the planned maintenance facility south to the South 200<sup>th</sup> Street station. The 13-mile segment includes tunnel, aerial and at-grade configurations.

The *Link* LRT system is one element of Sound Transit's voter-approved ten-year, \$3.9 billion (\$1995) *Sound Move* regional transit plan, which also includes implementation of a 2-mile LRT line in downtown Tacoma; an 82-mile Sounder commuter rail system operating between Lakewood and Everett; 20 new regional express bus routes; 14 High Occupancy Vehicle (HOV) direct access ramps (providing access to over 100 miles of existing HOV lanes); 14 new park and ride lots and 9 transit centers; and other service improvements.

### Summary Description

<b>Proposed Project:</b>	Light Rail Transit Line (LPA); 20 miles, 21 stations
<b>Total Capital Cost (\$YOE):</b>	\$2,481 million
<b>Section 5309 New Starts Share: (\$YOE):</b>	\$941 million
<b>Annual Operating Cost (\$YOE):</b>	\$85.4 million
<b>Ridership Forecast (2020):</b>	133,100 avg. weekday boardings ( <i>Link</i> LPA)
<b>FY 2001 Financial Rating:</b>	<b>Medium-High</b>
<b>FY 2001 Project Justification:</b>	<b>Medium-High</b>
<b>FY 2001 Overall Project Rating:</b>	<b>Highly Recommended</b>

The *Highly Recommended* rating is based on the project's strong estimated cost effectiveness, transit supportive land use plans and policies, and local financial commitment. The overall project rating applies to this *Supplemental Report on New Starts* **and reflects conditions as of August 2000**. 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

The Sound Transit Board adopted the *Sound Move* regional transit plan in May 1996. Voters approved \$3.914 billion in local funding for implementation of the plan in November 1996. A Major Investment Study of *Sound Move's* services was completed in March 1997. *Sound Move* is included in the Puget Sound Regional Council's (the area's MPO) Transportation Plan and Regional Transportation Improvement Program (TIP).

FTA approved initiation of preliminary engineering on the Link LRT in July 1997. A Draft Environmental Impact Statement (EIS) was published in December 1998. The Final EIS was initiated in February 1999 and a ROD issued January 2000. FTA approved final design on a 7.2-mile MOS in February 2000. FTA approved Sound Transit's request to initiate final design on the remainder of the LPA in July 2000. Sound Transit expects to begin LRT operations in 2006.

TEA-21 Section 3030(a)(85) authorizes the Seattle Sound Move Corridor (*Link* and *Sounder*), of which *Link* is one element, for final design and construction. Through FY 2000, Congress has appropriated \$41.44 million for the *Link* light rail project.

## Evaluation

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria*. Information was provided by Sound Transit comparing the Link LRT to the TSM alternative. FTA has concurred with Sound Transit's methodology that evaluates the *Link* TSM and No-Build scenarios as equivalent with each other. N/A indicates that data are not available for a specific measure.

FTA has evaluated the LPA as being approved to enter final design. FTA will re-evaluate the LPA (MOS-2,3) project for next year's *Annual Report on New Starts*.

## Justification

The *Medium-High* project justification rating reflects strong cost effectiveness and transit supportive land use and the adequacy of the other justification criteria.

## Mobility Improvements

### Rating: Medium

The full *Link* LRT LPA is expected to serve 133,100 average weekday boardings. Sound Transit estimates the following travel time savings for the New Start compared to the TSM alternative:

<u>Mobility Improvements</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Annual Travel Time Savings (Hours)</b>	N/A	16.5 million

Based on 1990 data, Sound Transit estimates 9,071 low-income households are located within a ½ mile radius of the 21 proposed stations (representing 23 percent of total households located within a ½ mile radius of stations).

## Environmental Benefits

### Rating: High

The Central Puget Sound Area is classified as a maintenance area for carbon monoxide and ozone. Spot areas in the region are designated as non-attainment for PM<sub>10</sub>. Sound Transit estimates the following reductions in emissions for the *Link* LRT portion of the LPA:

<u>Criteria Pollutant</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Carbon Monoxide (CO)</b>	N/A	376
<b>Nitrogen Oxide (NO<sub>x</sub>)</b>	N/A	2,877
<b>Volatile Organic Compounds (VOC)</b>	N/A	212
<b>Particulate Matter (PM<sub>10</sub>)</b>	N/A	6
<b>Carbon Dioxide (CO<sub>2</sub>)</b>	N/A	19,806

Values reflect annual tons of emissions reductions.

Sound Transit estimates the following changes in regional energy consumption (measured in British Thermal Units - BTU):

<u>Annual Energy Savings</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>BTU (million)</b>	N/A	192,328

Values reflect annual BTU reductions.

**Operating Efficiencies**

**Rating: Medium**

Sound Transit estimates a reduction in the systemwide operating costs per passenger mile in 2020 for the *Link* light rail MOS compared to the TSM alternative.

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
<b>System Operating Cost per Passenger Mile (2020)</b>	N/A	\$0.47	\$0.45

Values reflect 2020 ridership forecast and 1999 dollars.

**Cost Effectiveness**

**Rating: High**

Sound Transit estimates the following cost-effectiveness index *Link* LRT portion of the LPA:

	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Incremental Cost per Incremental Passenger</b>	N/A	\$8.10

Values reflect 2020 ridership forecast and 1999 dollars.

**Transit-Supportive Existing Land Use and Future Patterns**

**Rating: High**

The *High* land use rating reflects the dense and transit supportive land uses along the proposed LPA corridor and the strong land use policies in place throughout the region.

**Existing Conditions:** The proposed Federally-funded LPA begins in the University District, parallels Interstate 5, runs through the Seattle central business district (CBD) and terminates at the South 200<sup>th</sup> Street Station in SeaTac just south of the Seattle-Tacoma International Airport. Station areas (one-half mile radius) in the central LRT corridor contained an estimated population of 95,800. Employment within a one-quarter mile radius was 231,800. Average population density within a one-half mile station radius is 7,000 people per square mile. It also runs through some dense residential areas, and serves several large trip generators with a large portion of existing transit trips. Major trip generators include the University of Washington (UW), UW Medical Center and Hospital, UW football stadium and basketball arena, the Capital Hill/First Hill neighborhood (density = 16,000 persons per square mile); Seattle Central Community College, Seattle University, four hospitals; Denny Regrade Area (high density residential), sports stadiums and exhibition centers at the proposed Royal Brougham Station, commercial establishments in Rainier Valley, a neighborhood commercial hub in Tukwila, and the Sea-Tac International Airport.

The CBD and several neighborhoods served by the project are characterized by mixed land uses in a pedestrian-friendly environment. Single occupancy vehicles constitute less than 50 percent of the mode split in the University District, Capitol Hill/First Hill neighborhood, and Downtown Seattle. High parking costs in the CBD, averaging over \$20 per day, limit the desirability of parking. In March 1999, the Seattle City Council adopted a Station Area Interim Overlay District Ordinance restricting the development of new primary parking facilities and other restrictions on the location and access to parking in an area ¼ mile around proposed station areas.

**Future Plans and Policies:** The State of Washington adopted the Growth Management Act of 1990 that attempts to contain sprawl and focus development in urban areas. The Puget Sound Regional Council has adopted Vision 2020, the long-range Plan for the region which promotes development of urban centers, and each locality has adopted a comprehensive plan that builds on the regional plan and emphasizes consistency. Land use planning is well coordinated with transportation planning. Seattle's Comprehensive Plan identifies a network of Urban Centers, Hub Urban Centers, and Residential Villages within which new growth will be concentrated. Seattle monitors its progress on implementing the plan and prepares a report every two years. The City has completed several planning documents that include policies to support transit-oriented development (TOD) and has adopted a resolution that establishes goals and strategies to promote TOD. These include the *Background Report for Light Rail Station Area Planning in Seattle: Existing Conditions and Future Prospects for Transit-Oriented Development*; *Background Report for Light Rail Station Area Planning in Seattle: Station Area Profiles*; neighborhood plans for all neighborhoods along the line; and Ordinance #119394 – Station Area Interim Overlay District.

Zoning to support transit-related development is already in place. The LRT corridor was planned specifically to link urban centers identified in Vision 2020, (a regional land use plan/growth strategy) where high densities are accommodated with existing zoning. Several Seattle city departments, in cooperation with the Washington Department of Transportation and King County, are collaborating on a comprehensive parking study as part of the Seattle Light Rail Station Area Planning process and implementation of the Transportation Strategic Plan.

The City has adopted an interim zoning overlay to prohibit new auto-oriented uses in and around station areas. This measure expired in March 2000. Upon completion of the station area planning process, City staff will recommend that the Council adopt station specific objectives. Furthermore, the City is partnering with a bank and Fannie Mae to establish a Location Efficient Mortgage program that allows homebuyers purchasing homes in close proximity to transit to qualify for higher mortgages than they would otherwise be eligible for.

## **Local Financial Commitment**

### **Proposed Non-Section 5309 Share of Total Project Costs: 62%**

Sound Transit proposes \$941 million (38 percent) in Section 5309 funds, and \$1.54 billion (62 percent) in local funds for the project. Local sources will consist of a sales and use tax, motor vehicle excise tax, and locally issued bonds.

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## Stability and Reliability of Capital Financing Plan

### Rating: High

The *High* rating reflects the solid financial condition of Sound Transit and the agency's dedicated local revenue sources.

**Agency Capital Financial Condition:** The financial condition of Sound Transit is strong. In 1996, voters approved a \$3.9 billion Sound Move regional transit plan to be supported by two dedicated local tax sources. Revenues are trending slightly above prior forecasts. The taxes continue in perpetuity with no sunset provisions and are dedicated solely to Sound Transit projects. Its capacity to borrow is within its debt financing plan. Sound Transit issues \$350 million of bonds in early 1999 to take advantage of favorable rates. Sound Transit intends to bond against these revenues to implement the *Sound Move* program and has received an A1 rating from Moody's Investor Service.

**Capital Cost Estimates and Contingencies:** Cost estimates have increased from last year for the initial MOS and the entire project, because of increased right-of-way costs and mitigation components. However, adequate provisions exist to cover unanticipated cost overruns. The agency applies adequate cost contingencies to all capital items. Furthermore, Sound Transit maintains two capital reserve funds which are a bond reserve fund equal to one year's debt servicing and an operating reserve fund equal to two months of operating expenditures. The agency's ultimate contingency is its untapped debt capacity. Sound Transit could issue additional bonds without violating its debt policy or legislative constraints on capacity.

**Existing and Committed Funding:** All non-New Starts funding exists and is committed. Sound Transit has access to two strong local tax sources for its exclusive use – i.e., sales and use tax and a motor vehicle excise tax (MVET) --- which are anticipated to contribute \$1.54 billion to the project. These sources are separate from sources that fund other transit services in the Seattle area. Growth in tax revenues from these sources has outpaced inflation. The 0.4 percent sales and use tax and the 0.3 percent MVET have existed since the inception of the Sound Move Program in 1996. These sources help Sound Transit contribute a strong local match as well as enabling the agency to issue and service long-term debt as part of the local match.

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

## Stability and Reliability of Operating Finance Plan

### Rating: Medium

The *Medium* rating reflects Sound Transit's stable and reliable operating revenues, but acknowledges some concern with the operating condition of other transit providers in the region.

**Agency Operating Condition:** In recent years Sound Transit has experienced a zero operating balance (operating costs equal operating revenues), a 20-25 percent farebox recovery ratio, and

consistent ridership levels. According to the financial plan, operation of the initial MOS, as well as the full project, will not detract from other Sound Transit project initiatives (i.e., commuter rail, express bus).

**Operating Cost Estimates and Contingencies:** Operating costs are estimated at \$85.4 million and appear reasonable. If economic growth slows or financial difficulties occur, sales tax revenues may be used to secure additional debt funding.

**Existing and Committed Funding:** The financial plan uses the same tax revenue sources to fund operations as are used to fund capital expenditures. These dedicated local sources are anticipated to provide 86 percent of all operating revenues at the initiation of LRT service (currently planned for the year 2007). Sound Transit assumes a farebox recovery ratio of 55 percent for the overall *Link* project. Analysis by the agency projects a recovery ratio of 66 percent, but the more conservative estimate is used for the financial plan.

Initiative 695 (I-695), which voters adopted in November 1999 adds a degree of uncertainty about the operation of services provided by other providers in the Central Puget Sound region. I-695 replaces the state motor vehicle excise tax (SMVET) with a flat tax and requires voter approval for any increase in taxes, fees, or charges. This legislation became effective in January 2000.

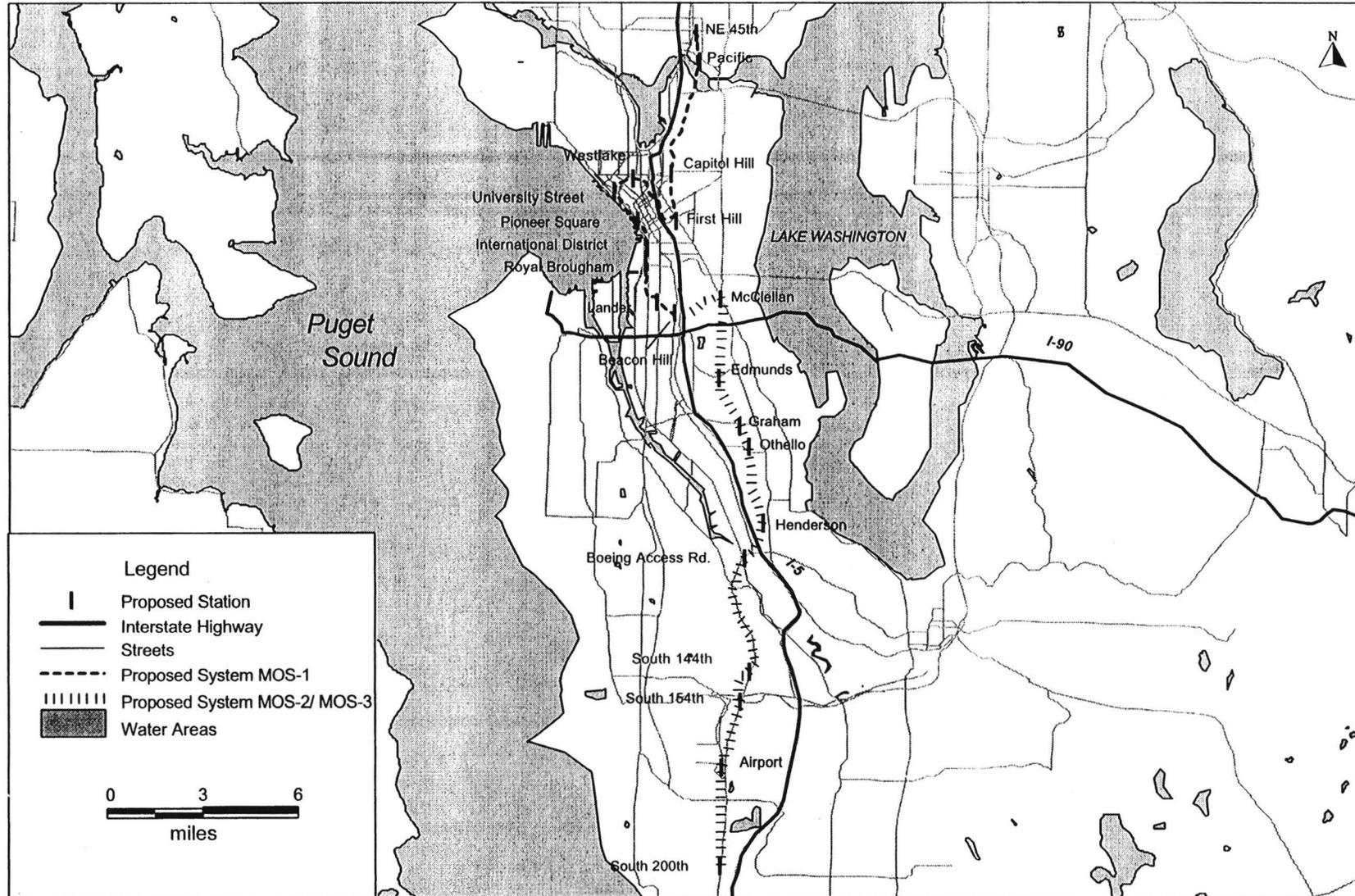
Although the Initiative did not repeal Sound Transit's ability to impose a MVET, a separate source with a similar name that was approved in 1996 by voters, it could result in a 30 percent decrease in funding for regional operations unless new revenue sources are found. The entire *Sound Move* project relies on strong partnerships with local transit agencies, which may be affected by the loss of the SMVET. While local transit agencies are developing strategies to address projected revenue reductions, changes in service levels for these operators could indirectly impact the proposed service plans and projected ridership levels for Sound Transit services.

**New and Proposed Sources:** All proposed operating revenue sources for the *Link* LRT currently exist. No new sources are needed.

<b>Locally Proposed Financing Plan (Reported in \$YOE)</b>		
<u>Proposed Source of Funds</u>	<u>Total Funding (Smillion)</u>	<u>Appropriations to Date</u>
Federal:		
Section 5309 New Starts	\$ 941.0	(\$41.44 million appropriated through FY 2000 for the entire <i>Link</i> LPA)
Local:		
Sales and Use Tax and MVET	706.0	
Bonds	<u>834.0</u>	
<b>TOTAL</b>	<b><u>\$2,481.0</u></b>	

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

# Central Link LRT (LPA) Seattle, Washington





# Largo Metrorail Extension

## Washington, D.C.

(August 2000)

### Description

The Washington Metropolitan Area Transit Authority (WMATA) is the lead local agency in management and development of a proposed 3.1-mile heavy rail extension of the Metrorail Blue Line. The proposed Largo Metrorail Extension will be from the existing Addison Road Station to Largo Town Center, located just beyond the Capital Beltway in Prince George's County, Maryland. The project follows an alignment that has been preserved as a rail transit corridor in the Prince George's County Master Plan. The 3.1-mile alignment will contain at-, above- and below-grade segments, and be underground or covered between Central Avenue and the Capital Beltway. Two new stations will be provided at Summerfield and at the Largo Town Center Station. The stations will provide 500 and 2,200 park-and-ride spaces, respectively, plus a hundred or more kiss-and-ride spaces and 11 bus bays each. A number of WMATA and Prince George's County bus routes will connect to the two new stations; shuttle bus service is proposed between both stations and the FedEx Field (formerly known as the Redskins Stadium). The project will also directly serve the USAir Arena, a former major sports complex planned for entertainment and retail uses. The Maryland Mass Transit Administration managed the project through preliminary engineering, with WMATA undertaking final design and construction; the State of Maryland will fund 100 percent of project costs. The project is anticipated to open for service by December 2004, at a cost of \$433.9 million (in escalated dollars). Average weekday boardings are estimated to be 28,500 in 2020 with 16,400 daily new riders.

Summary Description	
<b>Proposed Project:</b>	Heavy Rail Extension 3.1 miles, 2 stations
<b>Total Capital Cost (\$YOE):</b>	\$433.9 million
<b>Section 5309 New Starts Share (\$YOE):</b>	\$260.3 million
<b>Annual Operating Cost (\$YOE):</b>	\$11.5 million
<b>Ridership Forecast (2020):</b>	28,500 avg. weekday boardings 16,400 daily new riders
<b>FY 2001 Financial Rating:</b>	<b>Medium-High</b>
<b>FY 2001 Project Justification Rating:</b>	<b>Medium</b>
<b>FY 2001 Overall Project Rating:</b>	<b>Recommended</b>

The *Recommended* rating is based on the adequacy of the project's justification criteria and capital and operating finance plans. The overall project rating applies to this *Supplemental Report on New Starts* and reflects conditions as of August 2000. 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

The proposed Largo Metrorail Extension was approved by the WMATA Board as an addition to the 103-mile Metrorail Adopted Regional System in February 1997, applying WMATA Interstate Compact funding arrangements, contingent upon requisite FTA approvals. The project is included in the National Capital Region's Constrained Long Range Plan.

Preliminary engineering was initiated in February 1996. The Draft Environmental Impact Statement (DEIS) was completed and approved by FTA in October 1996. The Final Environmental Impact Statement (FEIS) was completed in December 1999; a Record of Decision (ROD) was issued in February 2000. FTA approved entry into final design in July 2000, with WMATA assuming management responsibility for the project.

TEA-21 Section 3030(a)(94) authorizes the "Washington, DC – Largo Extension" for final design and construction. Through FY 2000, Congress has appropriated \$5.65 million for this project in Section 5309 New Starts funds.

## Evaluation

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria* for the 3.1-mile extension. N/A indicates that data are not available for a specific measure. FTA has evaluated this project as being in final design.

## Justification

The *Medium* project justification rating reflects the adequacy of the project's cost effectiveness and other benefits.

## Mobility Improvements

**Rating: Medium**

WMATA estimates that the Largo Metrorail Extension will serve 28,500 average weekday boardings and attract 16,400 daily new riders by 2020, and would result in the following annual travel time savings.

<b><u>Mobility Improvements</u></b>	<b><u>New Start vs.</u></b> <b><u>No-Build</u></b>	<b><u>New Start vs.</u></b> <b><u>TSM</u></b>
<b>Annual Travel Time Savings (Hours)</b>	1.7 million	1.1 million

Based on 1990 Census data, there are an estimated 46 low-income households within a ½ mile radius of the proposed 2 new stations, approximately 5 percent of total households within ½ mile radius of the proposed stations.

### Environmental Benefits

**Rating: High**

The Washington, DC Metropolitan area is a serious non-attainment area for ozone, and a moderate non-attainment area for carbon monoxide. MTA estimates that in 2020, the Largo Metrorail Extension would result in the following annual emissions reductions.

<u>Criteria Pollutant</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Carbon Monoxide (CO)</b>	94	74
<b>Nitrogen Oxide (NO<sub>x</sub>)</b>	722	563
<b>Volatile Organic Compounds (VOC)</b>	39	37
<b>Particulate Matter (PM<sub>10</sub>)</b>	0	1
<b>Carbon Dioxide (CO<sub>2</sub>)</b>	2,740	10,370

Values reflect annual tons of emissions reductions. Values in brackets [ ] indicate an increase in emissions.

WMATA estimates that in 2020, the Largo Metrorail Extension would result in the following savings in regional energy consumption (measured in British Thermal Units – BTU).

<u>Annual Energy Savings</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>BTU (million)</b>	19,499	6,418

Values reflect annual BTU reductions

### Operating Efficiencies

**Rating: Medium**

WMATA estimates the following systemwide operating cost per passenger mile in the year 2020 for the Largo Metrorail Extension, No-Build, and TSM alternatives.

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
<b>System Operating Cost per Passenger Mile (2020)</b>	\$0.38	\$0.38	\$0.38

Values reflect 2020 ridership forecast and 1999 dollars.

### Cost Effectiveness

**Rating: Medium**

WMATA estimates the following cost effectiveness indices for the new starts compared to the no-build and TSM alternatives:

	<b>New Start vs. No-Build</b>	<b>New Start vs. TSM</b>
<b>Incremental Cost per Incremental Passenger</b>	\$9.30	\$11.60

Values reflect 2020 ridership forecast and 1999 dollars.

## Transit-Supportive Existing Land Use and Future Patterns

**Rating: Medium-High**

The *Medium-High* land use rating reflects the extension’s connection to the Washington metropolitan area CBD and local efforts to foster transit-oriented development around proposed station areas.

**Existing Conditions:** The proposed Largo Metrorail Extension serves the suburban towns of Landover and Largo-Lottsford, Maryland, and traverses medium-density single-family suburban residential development interspersed with multi-family housing, office parks, civic uses, a major professional sports facility, a major entertainment facility, recreational parks, and undeveloped land. Much of the land directly adjacent to the two station areas is not yet developed or is in the process of being developed according to established plans, which call for mixed uses, higher intensities, and pedestrian design in station areas. Redevelopment of the Capital Center is also underway. Some pedestrian improvements are being undertaken with State funding.

**Future Plans and Policies:** High population growth is forecast for the Washington, DC metropolitan area (44 percent between 1995 and 2020) and for the study area. The Maryland Smart Growth Initiative contains a set of policies and tools to manage and direct growth. The Prince George’s County General Plan encourages concentration of land use around station areas, and area plans are consistent with this policy. The county has recently completed a study that recommends actions to strengthen growth management activities. Local plans call for mixed-use, transit-oriented development to occur at moderate densities, albeit higher than in the surrounding area. Largo Town Center, in particular, is being developed in accordance with plans as a mixed-use activity center oriented around the proposed Metrorail Station. County-wide processes are in place to allow for consideration of increased densities in the future, although these have not yet been activated. Prince George’s County has committed to doing small area plans for both station areas in FY 2001. Existing zoning permits moderate-density mixed-use commercial and residential development in station areas. Density bonuses and reductions in parking requirements are available for provision of pedestrian facilities and/or structured parking in station areas. WMATA and MTA are conducting joint activities to pursue transit-supportive station area development. WMATA continues to actively pursue joint development opportunities under a formalized program that has been utilized in many other Metrorail station areas. The state and county have a number of economic development programs that could be used to provide incentives for development in the corridor and in station areas. Local developers

have incorporated the transit facility in their planning and design. However, office development proposals are contingent on construction of the project. The adopted 1999 Maryland Transportation Plan contains policies that support transit-oriented development, joint development and mixed use. In this plan, MDOT has stated goals of (1) providing transit and pedestrian facilities; (2) fostering pedestrian-friendly design in station areas; (3) working closely with local officials to address the pattern and density of land use; and (4) supporting development in established communities and compact mixed-use areas. County and transit agency policies allow for the development of Transit District Overlay Zones for use in increasing densities.

## Local Financial Commitment

**Proposed Non-Section 5309 New Starts Share of Total Project Costs: 40%**

The WMATA financial plan proposes to use \$260.3 million (60 percent of total project costs) in Section 5309 New Starts funds, \$3.2 million (1 percent) of CMAQ funds, and \$170.4 million (39 percent) of Maryland State funds.

## Stability and Reliability of Capital Financing Plan

**Rating: High**

The *High* capital finance plan rating reflects the strong financial condition of the Maryland Department of Transportation, parent agency of the Mass Transit Administration, and the State's demonstrated financial commitment to the project.

**Agency Capital Financial Condition:** All capital transportation investments in the State of Maryland are locally financed entirely through the Maryland Transportation Trust Fund (MTTF) administered by the Maryland Department of Transportation (MDOT). MDOT's debt is rated Aa2 by Moody's Investor Services, AA by Standard and Poor's Corporation, and AA by Fitch IBCA, Inc., which are among the highest ratings awarded to transportation agencies.

**Capital Cost Estimates and Contingencies:** Capital costs have remained constant since inclusion of the modified alignment during preliminary engineering. WMATA has developed financial scenarios for a prolonged outlay of Federal funding (both new starts and non-new starts) for the project, including borrowing costs, cost overruns and potential proposed funding unavailability. MDOT will be responsible for reimbursing WMATA for all non-Federal capital costs of the project.

**Existing and Committed Funding:** The financial plan reflects an increase in the State's share of project financing from 20 percent in FY 2000 to the current 40 percent. The local share has been fully committed in the State's Consolidated Transportation Program. WMATA and MDOT entered into an agreement in May 2000 to provide the local match to the Federal funding for the project.

**New and Proposed Sources:** No new funding sources are proposed for the project.

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**Stability and Reliability of Operating Finance Plan****Rating: Medium-High**

The *Medium-High* operating finance plan rating reflects the reliability of the State of Maryland's support of WMATA's operating subsidies, and the uncertainty of the actual required contribution to be determined by negotiation of the WMATA Interstate Compact for funding Metrorail operations.

**Agency Operating Financial Condition:** All activities of MDOT/MTA are supported by the MTTF, including debt service, maintenance, operations and administration. Revenues allocated to the MTTF exceed \$2 billion annually. MDOT has existing bonding capacity and is able to balance anticipated expenditures with projected revenues, despite the fact that the MTTF does not depend on inflation-sensitive revenue sources. WMATA will operate the new Largo Metrorail Extension, with application of the WMATA Interstate Compact funding arrangements to the project. Individual Compact contributions are subject to negotiation; however, the participating jurisdictions are considered capable and reliable of providing the required funding. WMATA has embarked on an extensive Infrastructure Renewal Program designed to keep Metrorail facilities, systems, track, vehicles and structures in a state of good repair.

**Operating Cost Estimates and Contingencies:** Average annual operating costs are expected to increase and are estimated in forecast-year dollars at \$11.54 million for the Largo Metrorail Extension. A detailed account of O&M costs for the project has not been provided. Therefore, the reasonableness of the estimate cannot be determined, although the approach used for systemwide projections is reasonable. WMATA has an agreement with MDOT to provide 100 percent local funding for operations, including contingencies.

**Existing and Committed Funding:** The MTTF will provide the State operating subsidy for the Largo Metrorail Extension. Farebox revenues are proposed to meet \$7.9 million (68 percent) of increased operating costs, with 8 counties/cities under the WMATA Compact contributing the remaining \$3.65 million (32 percent). The required increase in operating subsidy from the WMATA Compact jurisdictions constitutes a one percent increase over the current subsidy. The State of Maryland has continued to commit to providing the WMATA operating subsidy through the MTTF.

**New and Proposed Sources:** No new funding sources are proposed for the project.

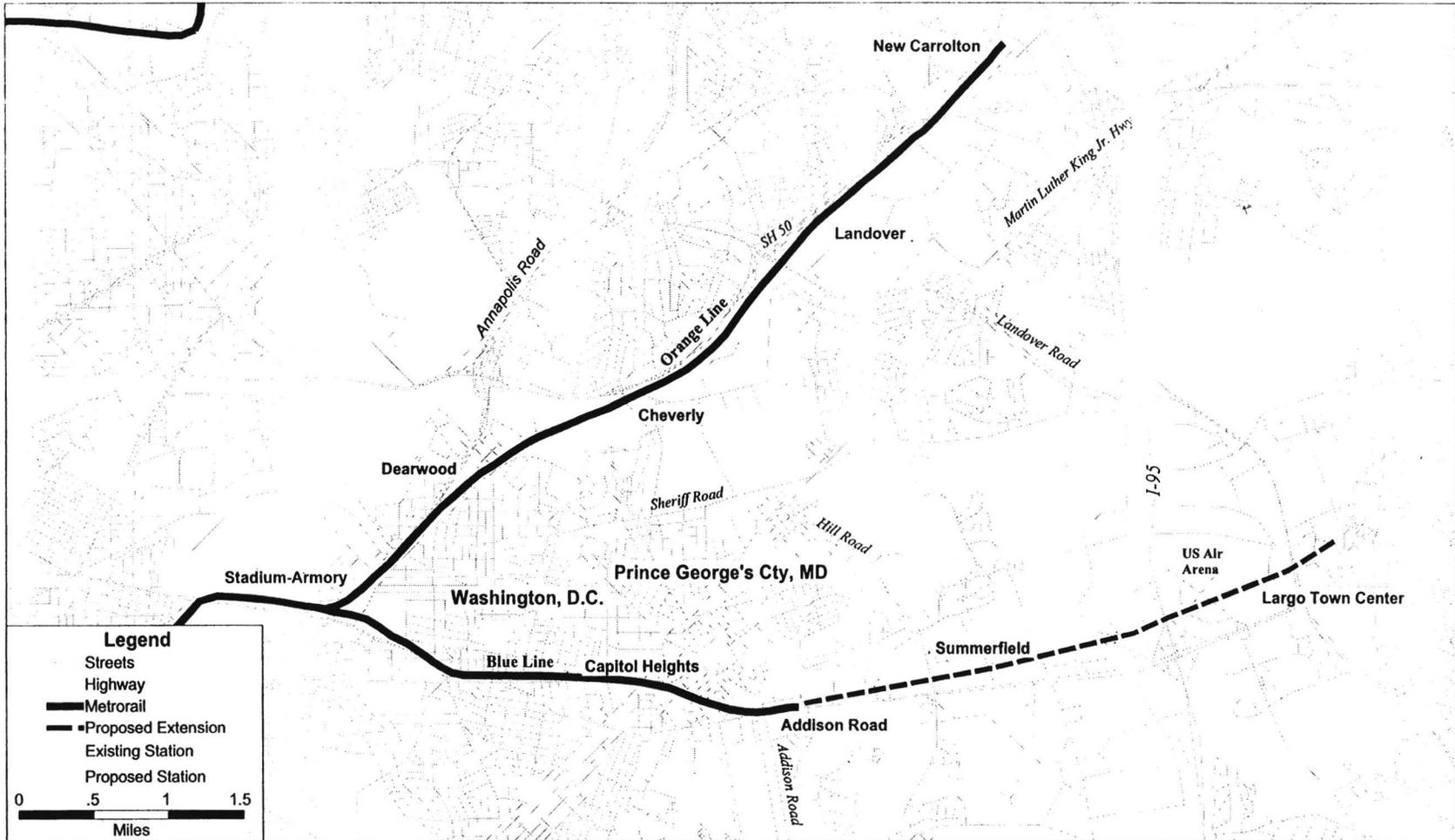
**Locally Proposed Financing Plan**  
(Reported in \$YOE)

<u>Proposed Source of Funds</u>	<u>Total Funding (\$million)</u>	<u>Appropriations to Date</u>
Federal:		
Section 5309 New Starts	\$260.3	(\$5.65 million appropriated through FY 2000)
CMAQ	3.2	
State:		
MDOT/TTF	170.4	
<b>TOTAL</b>	<b>\$433.9</b>	

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

# Largo Metrorail Extension

Washington, DC Metropolitan Area



# Appendix B

## Projects That Have Completed Alternatives Analysis

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*Prepared by:*  
Office of Planning  
Federal Transit Administration  
U.S. Department of Transportation



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## South Corridor LRT Charlotte, North Carolina (August 2000)

### Description

The Charlotte Area Transit System (CATS), in cooperation with the City of Charlotte, are proposing to design and construct an 11-mile light rail transit (LRT) line extending from Uptown Charlotte to the Town of Pineville, North Carolina, near the South Carolina border. The proposed project is currently planned to operate within portions of existing Norfolk-Southern (NS) railroad right-of-way (ROW), including sharing ROW with the city's existing Downtown Trolley System. The proposed project also includes the construction of 19 stations, purchase of up to twelve light rail vehicles and the construction of a light rail vehicle maintenance and storage facility. Total capital costs for the South Corridor project are estimated at \$331 million (escalated dollars).

The South Corridor is an area generally paralleling Interstate-77 along NS railroad ROW in the City of Charlotte and Mecklenburg County. A 3.7-mile portion of the proposed system – between Uptown and Scaleybank Road – would operate on abandoned NS ROW owned by the City of Charlotte. The remainder of the planned system (7.3 miles) would operate on separate tracks generally paralleling NS ROW. Three stations at the southern terminus of the line would include park-and-ride lots and serve as transfer points for local and feeder bus service. An additional station will serve as an intermodal transfer point for feeder buses, while a station at the Charlotte Transportation Center in Uptown Charlotte will provide connections to the Downtown Trolley and local bus service.

The South Corridor light rail project is expected to serve 15,500 average weekday boardings by the year 2020, including 11,200 new riders.

<b>Summary Description</b>	
<b>Proposed Project:</b>	Light Rail Transit Line 11 miles, 19 stations
<b>Total Capital Cost (\$YOE):</b>	\$331.1 million
<b>Section 5309 New Starts Share (\$YOE):</b>	\$166.8 million
<b>Annual Operating Cost (\$YOE):</b>	\$16.9 million
<b>Ridership Forecast (2020):</b>	15,500 avg. weekday boardings 11,200 daily new riders
<b>FY 2001 Financial Rating:</b>	<b>Medium</b>
<b>FY 2001 Project Justification Rating:</b>	<b>Medium-High</b>
<b>FY 2001 Overall Project Rating:</b>	<b>Recommended</b>

The Highly Recommended is based upon the project's adequate cost effectiveness and transit-supportive land use as well as the strength of the project's capital and operating financing plans for this early stage of project development. The overall project rating applies to this *Supplemental Report on New Starts* and reflects conditions as of August 2000. 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 1999, the City of Charlotte completed a Major Investment Study examining transportation and coordinated land use options in the South Corridor between Uptown Charlotte and the Town of Pineville, North Carolina. In February 2000, the Metropolitan Transit Commission (governing board for CATS) selected light rail as the Locally Preferred Alternative (LPA). The LPA was adopted by the Mecklenburg-Union Metropolitan Planning Organization’s financially constrained long-range transportation plan in February 2000.

In November of 1998, a local referendum was passed authorizing a dedicated local sales tax of ½ percent for funding transit service in the region. FTA approved the South Corridor project into preliminary engineering in August 2000.

TEA-21 Section 3030(a)(8) authorizes the Charlotte North-South Corridor Transitway for final design and construction. Through FY 2000, Congress has appropriated \$7.89 million in Section 5309 new starts funds for this project.

### Evaluation

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria*. FTA has evaluated this project as being in preliminary engineering. The project will be re-evaluated when it is ready to advance into final design and for next year’s *Annual Report on New Starts*. N/A indicates that data are not available for a specific measure.

### Justification

The *Medium-High* project justification rating reflects the strong mobility improvements and transit-supportive land use policies in place to support the proposed light rail project.

### Mobility Improvements

**Rating: Medium-High**

CATS estimates that the South Corridor light rail will result in the following annual travel time savings:

<u>Mobility Improvements</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Annual Travel Time Savings (Hours)</b>	5.3 million	4.9 million

Based on 1990 census data, there are an estimated 5,700 low-income households within a ½ mile radius of the proposed 19 stations. This represents approximately 33 percent of the total number of households within ½ mile radius of the proposed stations.

**Environmental Benefits**

**Rating: High**

The Charlotte area is currently classified as an “attainment” area for both ozone and carbon monoxide. CATS estimates that in the year 2025, the project would result in the following annual changes in emissions.

<b>Criteria Pollutant</b>	<b>New Start vs. No-Build</b>	<b>New Start vs. TSM</b>
<b>Carbon Monoxide (CO)</b>	1,135	607
<b>Nitrogen Oxide (NO<sub>x</sub>)</b>	157	84
<b>Hydrocarbons (HC)</b>	101	54
<b>Particulate Matter (PM<sub>10</sub>)</b>	0	0
<b>Carbon Dioxide (CO<sub>2</sub>)</b>	46,966	25,117

Values reflect annual emissions reductions. Values in brackets [ ] indicate a projected increase in emissions.

CATS estimates that in the year 2025, the project would result in the following savings in regional energy consumption (measured in British Thermal Units - BTU).

<b>Annual Energy Savings</b>	<b>New Start vs. No-Build</b>	<b>New Start vs. TSM</b>
<b>BTU (million)</b>	28,070	10,850

Values reflect annual BTU reductions. Values in [ ] indicate a projected increase in emissions.

**Operating Efficiencies**

**Rating: N/A**

	<b>No-Build</b>	<b>TSM</b>	<b>New Start</b>
<b>System Operating Cost per Passenger Mile (1999)</b>	N/A	N/A	N/A

Values reflect 2025 ridership forecast and 1999 dollars.

**Cost Effectiveness**

**Rating: Medium**

CATS estimates the following cost-effectiveness indices:

	<b>New Start vs. No-Build</b>	<b>New Start vs. TSM</b>
<b>Incremental Cost per Incremental Passenger</b>	\$10.00	\$10.30

Values reflect 2020 ridership forecast and 1999 dollars.

**Transit-Supportive Existing Land Use and Future Patterns**

**Rating: Medium-High**

The *Medium-High* land use rating reflects the strong policies employed by the region to implement transit-supportive land use patterns in the Mecklenburg-Union metropolitan area. The rating also acknowledges the region’s success in effectuating infill development.

**Existing Land Use:** The predominant land uses along the proposed corridor are commercial, industrial, multi- and single family housing, including lower-density office and institutional uses. The northern termini of the project is the Charlotte Central Business District, which contains 14 million sq. ft. of office space with over 50,000 employees. The Central Business District contains other major trip generators including the Ericsson Stadium, the Charlotte Convention Center, and the North Tryon arts and entertainment district. Additionally, the redevelopment of formerly abandoned industrial sites along South Corridor is underway. Within the corridor, the redevelopment of industrial sites into transit-supportive land uses has produced 600,000 sq. ft. of office and commercial space and 594 residential units, and other large tracts are planned for additional development. The southern portions of the corridor are low-density and auto-oriented with land a mixture of light industrial, commercial, newer multi-family housing, and a large regional retail facility.

**Proposed Plans and Policies:** The region has proactively supported land use plans and policies that are considered supportive of transit in the adoption of the *2025 Integrated Land Use/Transit Plan*. The plan is designed to concentrate growth within a designated transit corridor and promote urban redevelopment in an older section of the City, which might otherwise deteriorate. Additionally, the *2025 Integrated Land Use/Transit Plan* contains policies to pedestrian accessibility, and promote station area redevelopment. The Regional Centers and Corridors policy is designed to direct growth to the proposed transit corridors and allow higher densities at transit station sites. Specific station area plans will be developed during the preliminary engineering stage of project development. A number of proposed station areas have had new mixed-use office/commercial projects constructed. In addition, several new projects are under construction while others are proposed for rezoning in the corridor. The market demand is strong in the South Corridor for mixed-use development.

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## Local Financial Commitment

Based upon an evaluation completed by FTA, the Charlotte South Corridor LRT was rated *Medium* for local financial commitment.

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

The financial strategy for the proposed South Corridor LRT assumes \$166.8 million (50 percent) of Section 5309 New Starts funds, \$82.15 million (25 percent) in State funds and \$82.15 million (25 percent) in local funds.

## Stability and Reliability of Capital Financing Plan

**Rating: Medium**

The *Medium* reflects the strong financial condition of the Charlotte Area Transit System (CATS) and the percentage (50 percent) of non-Section 5309 New Starts funding committed at the local level to the proposed project. However, the capital costs presented have low contingency costs allocated for this early phase of project development.

**Agency Financial Condition:** CATS is in strong financial condition. The agency receives funding for both capital and operating expenses from the City of Charlotte. CATS is a component of the city government created in 1999 pursuant to an interlocal agreement between the city, Mecklenburg County and the six towns in the county. The city has taxing capacity and acts as an administrator of both Federal and State funds for CATS.

**Cost Estimates and Contingencies:** The capital cost estimates are considered reasonable given the project's size and scope, however, the capital cost estimates for the South Corridor LRT include only a 10 percent construction contingency. Given the early stage in project development, the contingency costs should be increased to allow for potential increases in right-of-way costs, vehicle costs, and higher construction costs.

**Existing and Committed Funding:** At this time, approximately 50 percent (\$82.15 million) of the proposed local share has been reasonably committed to the South Corridor LRT through CATS' dedicated local revenue source. The revenue source (extant sales tax) is considered stable and reliable. State legislative action is required to commit the remaining 50 percent (\$82.15 million) of the proposed local share.

**New and Proposed Sources:** Only existing sources are proposed to fund the construction of the South Corridor light rail project.

## Stability and Reliability of Operating Finance Plan

**Rating: Medium-High**

The *Medium-High* rating reflects CATS' (a component of the City of Charlotte) healthy operating condition. Revenues to operate the proposed South Corridor light rail project appear to be strong.

**Operating Costs and Contingencies:** Operating cost estimates appear reasonable for this early stage of development. Project sponsors estimate an annual operating and maintenance costs at \$16.9 million (escalated dollars) for the South Corridor light rail project.

**Existing and Committed Funding:** All of the proposed South Corridor light rail project’s operating funds are existing and considered committed. Funds to support operating expenses are derived from the Charlotte-Mecklenburg region’s retail sales tax, farebox revenues, State general appropriations and other [local] sources – e.g., regional service reimbursement program, city’s interest income, etc.

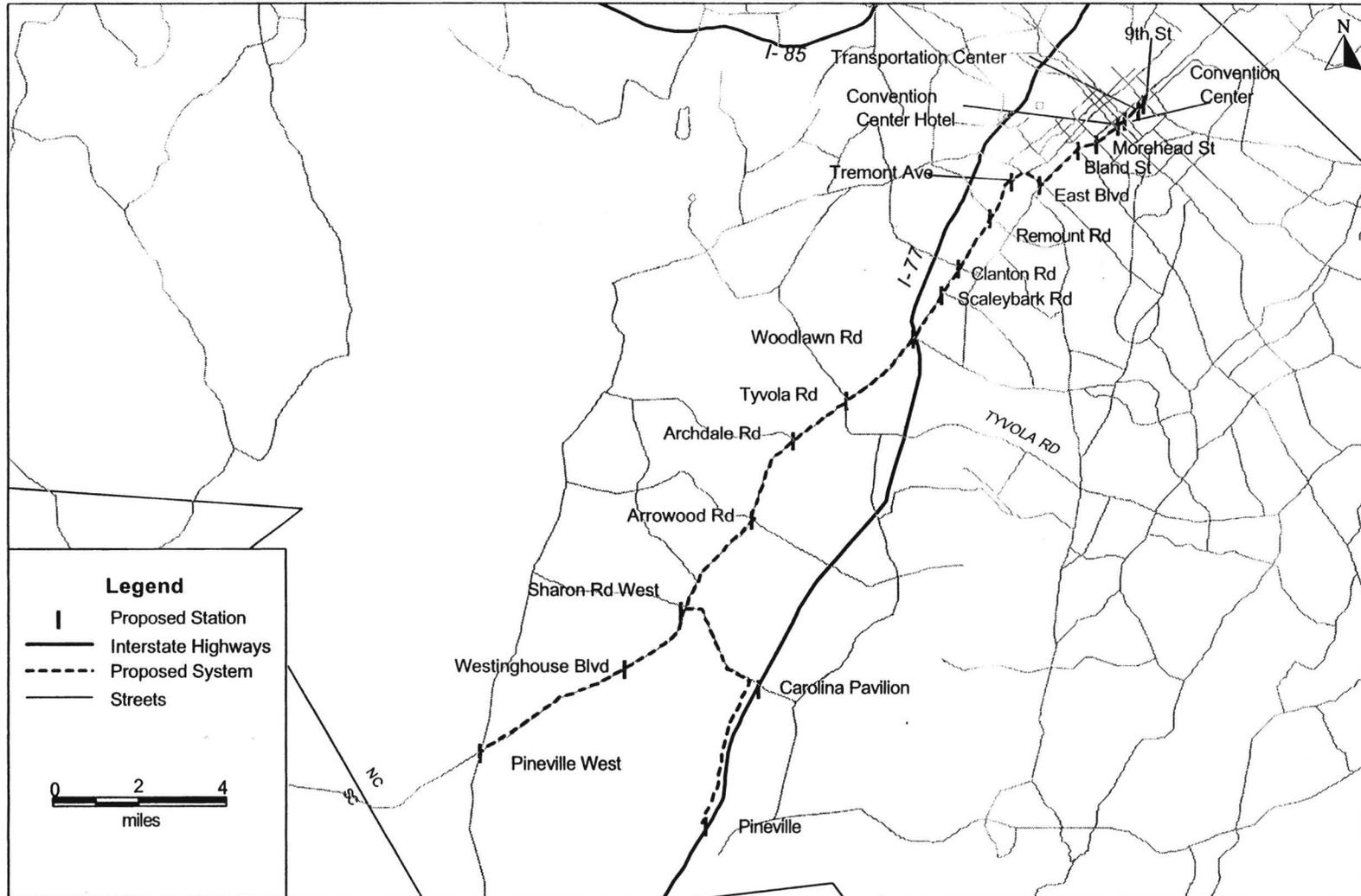
**New and Proposed Sources:** All proposed operating revenues currently exist. No new sources are proposed.

<b>Locally Proposed Financing Plan (Reported in \$YOE)</b>		
<b><u>Proposed Source of Funds</u></b>	<b><u>Total Funding (\$Million)</u></b>	<b><u>Appropriations to Date</u></b>
Federal:		
Section 5309 New Starts	\$166.8	(\$7.89 million appropriated through FY 2000)
State:		
Transportation Trust Fund	82.15	
Local:		
City of Charlotte’s Dedicated Sales Tax	<u>82.15</u>	
<b>TOTAL</b>	<b><u>\$331.1</u></b>	

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

# South Corridor LRT

## Charlotte, North Carolina





# Eastside Corridor LRT

## Los Angeles, California

(August 2000)

### Description

The Los Angeles County Metropolitan Transportation Authority is proposing to implement a 5.9 mile light rail transit (LRT) line in the Eastside Corridor, connecting Downtown Los Angeles with low- to moderate-income communities in East L.A. The proposed system would include 8 stations and will traverse eastward from Union Station (the city's major intermodal hub, serving intercity, commuter, and regional rail service, as well as local and express bus services) along Alameda Street through the City Terrace, Belvedere, and East Los Angeles communities of unincorporated Los Angeles County. The project would terminate at Beverly and Atlantic Boulevards, where a 500 space park-and-ride facility is planned. The project is primarily at-grade, with a 1.8 mile mid-section underground in tunnel. The project is intended to improve mobility for residents and employees in the corridor, and provide improved access to employment opportunities throughout the MTA service area. 15,000 average weekday boardings are forecasted on the proposed line in 2020, including 9,700 new riders. The project is estimated to cost \$759.5 million in escalated dollars, with a Section 5309 New Starts share of \$402.3 million.

Summary Description	
<b>Proposed Project:</b>	Light Rail Transit Line 5.9 miles, 8 stations
<b>Total Capital Cost (\$YOE):</b>	\$759.5 million
<b>Section 5309 New Starts Share (\$YOE):</b>	\$402.3 million
<b>Annual Operating Cost (\$1999):</b>	\$22.4 million
<b>Ridership Forecast (2020):</b>	15,000 avg. weekday boardings 9,700 daily new riders
<b>FY 2001 Financial Rating:</b>	<b>Medium</b>
<b>FY 2001 Project Justification Rating:</b>	<b>Medium</b>
<b>FY 2001 Overall Project Rating:</b>	<b>Recommended</b>

The overall project rating of *Recommended* is based on the existing densities in the corridor and significant mobility improvements estimated to result from the proposed investment. The overall project rating applies to this *Supplemental Report on New Starts* and **reflects conditions as of August 2000**. 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

Initial systems planning efforts for the Eastside Corridor began in 1989, and an alternatives analysis on the corridor commenced in 1990, resulting in the selection of a heavy rail subway line from Union Station to Whittier/Atlantic Boulevard in 1993. A Record of Decision on the

corridor was issued in December 1994. The FTA and MTA entered into a Full Funding Grant Agreement (FFGA) on three heavy rail corridors (“MOS-3”), which included the North Hollywood, Mid-City, and Eastside corridors, in May 1993. In January 1997, FTA requested that the MTA submit a Recovery Plan to demonstrate its ability to complete the FFGA while maintaining and operating the existing bus system. Pursuant to the request, on January 14, 1998, the LACMTA Board of Directors voted to suspend and demobilize rail construction activities on the Mid-City and Eastside projects. The MTA subsequently submitted a Recovery Plan to FTA on May 15, 1998; FTA approved the Plan on July 2, 1998.

In 1998, the MTA undertook a Regional Transit Alternatives Analysis (RTAA) to analyze and evaluate feasible alternatives for the Eastside and Mid-City corridors. The RTAA addressed system investment priorities, allocation of resources to operate existing transit services at a reliable standard, assessment and management of financial risk, countywide bus service expansion, and a process for finalizing corridor investments. On November 9, 1998, the LACMTA Board reviewed the RTAA and directed staff to reprogram state and local resources previously allocated to the Eastside and Mid-City Extensions to the implementation of RTAA recommendations. In June 1999, the MTA initiated a Re-Evaluation/Major Investment Study on the Eastside corridor, and began a draft environmental impact statement on the corridor in March 2000. In June 2000, the MTA board formally selected a light rail transit technology in the Eastside corridor as the locally preferred alternative, and requested formal FTA approval for preliminary engineering on the LPA in July 2000; FTA approved the request in August 2000.

TEA-21 Section 3030(a)(38) authorized the Los Angeles MOS-3 for final design and construction. Through 2000, Congress has appropriated \$76.48 million for the original Mid-City and Eastside subway alignments.

## Evaluation

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria*. FTA has evaluated this project as entering preliminary engineering. The project will be reevaluated 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 the high densities and travel supportive land uses in the corridor and the project's anticipated mobility improvements, but notes the project's low cost-effectiveness rating.

## Mobility Improvements

**Rating: Medium-High**

The Eastside Corridor LRT would serve approximately 15,000 average weekday boardings and carry 9,700 daily new riders. The MTA estimates that the project would result in the following annual travel time savings.

<u>Mobility Improvements</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Annual Travel Time Savings (Hours)</b>	0.4 million	0.2 million

Based on 1990 census data, there are an estimated 5,343 low-income households within a ½ mile radius of the MOS corridor, representing 16 percent of all households located within ½ mile of the corridor.

**Environmental Benefits**

**Rating: Medium**

The Los Angeles region is classified as an “extreme” area for ozone, a “serious” area for carbon monoxide and particulate matter, and as an attainment area for nitrogen oxides. MTA estimates that in 2020, the Eastside LRT project would result in the following reductions in emissions.

<u>Criteria Pollutant</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Carbon Monoxide (CO)</b>	57	43
<b>Nitrogen Oxide (NO<sub>x</sub>)</b>	0	3
<b>Volatile Organic Compounds (VOC)</b>	1	1
<b>Particulate Matter (PM<sub>10</sub>)</b>	0	0
<b>Carbon Dioxide (CO<sub>2</sub>)</b>	2,074	2,030

Values reflect annual tons of emissions reductions.

MTA estimates that in 2020, the proposed Eastside LRT project would result in the following reduction in regional energy consumption (measured in British Thermal Units - BTU).

<u>Annual Energy Savings</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>BTU (million)</b>	8,851	16,112

Values in [ ] indicate an increase in BTUs.

**Operating Efficiencies**

**Rating: Medium**

MTA estimates that systemwide-operating costs per passenger mile would remain relatively constant when comparing the Eastside LRT project with the no-build and TSM alternatives.

	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
<b>System Operating Cost per Passenger Mile (2020)</b>	\$0.32	\$0.32	\$0.32

Values reflect 2020 ridership forecast and 1999 dollars.

**Cost Effectiveness**

**Rating: Low**

MTA estimates the following cost effectiveness index for the Eastside LRT project.

	<b>New Start vs. <u>No-Build</u></b>	<b>New Start vs. <u>TSM</u></b>
<b>Incremental Cost per Incremental Passenger</b>	\$24.00	\$25.30

Values reflect 2020 ridership forecast and 1999 dollars.

**Transit-Supportive Existing Land Use and Future Patterns**

**Rating: Medium-High**

The *Medium-High* rating reflects the dense urban character of the corridor and generally transit-supportive zoning in areas served by the proposed project.

**Existing Conditions:** The corridor study area contains a variety of land uses: commercial uses in the Central City north area; industrial uses between Central City north and the Los Angeles River; commercial uses lining much of the proposed alignment; and increasingly residential uses within the Boyles Heights and East Los Angeles communities. There exists a mixture of residential, commercial, and public uses along 1<sup>st</sup> Street in Boyle Heights. Population in the corridor is relatively dense (10,300 persons/sq mile). Existing parking in the corridor is primarily on-street, with the exception of small lots to serve local businesses. Much of the corridor is auto-oriented, with pedestrian facilities limited to sidewalks; however, major shopping areas in Boyle Heights are pedestrian-oriented, including the El Mercado area at First and Lorena Streets. The LA County Planning and Zoning Code contains development and parking standards for, and requires pedestrian amenities in, specified transit-oriented districts, include the Eastside corridor.

**Future Plans and Policies:** The corridor contains a number of development proposals which are planned or currently under construction, and which would ultimately increase densities throughout adjacent communities. The Pico Aliso and Aliso Village Urban Revitalization Demonstration Projects will provide for significant new residential and community resources in the corridor; medical and cultural centers are also planned. The LA Land Use and Transportation Policy and MTA’s Joint Development Policy encourage the development of transit- and pedestrian-friendly development in transit station areas. Specifically, the Land Use and Transportation Policy contains incentives to reduce parking and increase densities within ½ mile of transit stations. While population and employment in the corridor through 2020 is expected to increase by 20 and 30 percent, respectively, the study area’s share of regional population and employment is forecasted to decline; the MTA provided no evidence of significant policies that address growth management issues in the City, County, or region.

## Other Factors

**MOS-3 FFGA:** The FTA and MTA entered into a full funding grant agreement (FFGA) on three heavy rail corridors (“MOS-3”), which included the North Hollywood, Mid-City, and Eastside corridors, in May 1993. In January 1998, the MTA suspended work on the Eastside and Mid-City corridors. The Eastside corridor LRT is being pursued by MTA as a replacement project for the Eastside heavy rail project issued under the original MOS-3 FFGA.

## Local Financial Commitment

### **Proposed Non-Section 5309 New Starts Share of Total Project Costs: 47%**

The current financial plan for the Eastside Corridor LRT project proposes \$402.3 million in Section 5309 New Starts funding (53%); \$116.0 million (15 %) in Section 5309 Rail Modernization and FHWA flexible funds; and \$241.8 million (32 %) in State funding;

## Stability and Reliability of Capital Financing Plan

### **Rating: Medium-High**

The *Medium-High* rating reflects the high level of local capital funding committed to the proposed project.

**Agency Capital Financial Condition:** The capital financial condition of the MTA is good. The agency enjoys a very good bond rating and plans to issue very little debt for planned capital improvements. The MTA’s sales tax base is strong.

**Capital Cost Estimates and Contingencies:** The MTA was in design and had performed some geotechnical work on the proposed heavy rail subway in the Eastside corridor when work was suspended in 1998. Consequently, current tunneling and other infrastructure cost estimates in the corridor alignment are relatively advanced, and considered reasonable.

**Existing and Committed Funding:** In July 2000, the California State Assembly and Senate approved Governor Davis’ Transportation Congestion Relief Plan, including \$236.0 million for the Los Angeles Eastside LRT project. The sources of these funds are a surplus in state general funds and a commitment of six years sales tax revenue on motor vehicle fuel. While the program is new, the underlying revenue sources already exist and do not require voter approval. These funds are considered committed, but have a six year sunset provision. Additional state funding comes from California’s Regional Improvement Fund; the \$5.1 million in these revenues are also considered committed to the project.

**New and Proposed Sources:** The July 2000 passage of California State transportation budget commits \$236.0 million of new funding to the project.

**Stability and Reliability of Operating Finance Plan.**

**Rating: Medium**

The *Medium* rating reflects the MTA’s improving operating condition, although FTA is concerned about some of the agency’s revenue assumptions in its twenty year operating plan.

**Agency Operating Condition:** In the past, FTA has found MTA’s operating condition to be poor. Recent operating revenue forecasts project zero operating balances through 2025, although realizing such balances will require significant progress in implementing a new fare structure and containing growth in operating costs.

**Operating Cost Estimates and Contingencies:** Little information was provided on the project’s operating cost estimates and contingencies.

**Existed and Committed Funding:** The MTA assumes operating costs will be covered by existing operating revenue sources and a 20 percent fare increase to be implemented in FY 2003, with triennial increases thereafter. The MTA further assumes the implementation of a zonal fare structure on the rail system. The MTA board is anticipated to act on these fare policies in the fall of 2000. The MTA also proposes to limit the cost of bus operations to 1 percent annually through 2004.

**New and Proposed Sources:** No new sources of operating funding are being proposed by MTA.

<b>Locally Proposed Financing Plan (Reported in \$YOE)</b>		
<b><u>Proposed Source of Funds</u></b>	<b><u>Total Funding (\$million)</u></b>	<b><u>Appropriations to Date</u></b>
Federal:		
Section 5309 New Starts	\$402.3	Through 2000, Congress has appropriated \$76.48 million for the original Mid-City and Eastside subway alignments
Section 5309 Rail Mod	38.9	
STP	77.1	
State:		
Traffic Congestion Relief Fund	236.6	
Regional Improvement Fund	5.2	
<b>TOTAL</b>	<b><u>\$759.5</u></b>	

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

# Eastside Corridor LRT

Los Angeles, California





# Lowell-Nashua Commuter Rail Extension

## Lowell, Massachusetts-Nashua, New Hampshire

(August 2000)

### Description

The New Hampshire Department of Transportation (NHDOT) is proposing to design and construct a 12-mile extension of an existing commuter rail line from Lowell, Massachusetts to Nashua, New Hampshire. The proposed project would extend existing commuter rail service provided by the Massachusetts Bay Transportation Authority (MBTA) on an anticipated schedule of six round trips per weekday and three roundtrips on Saturdays. The proposed service extension would provide an alternative to a highly congested highway corridor and is also anticipated to provide traffic mitigation during the planned expansion of Route 3 in Massachusetts. The proposed project also includes the purchase of commuter rail equipment for use by the MBTA, rehabilitation of existing track and the construction of new trackage (where necessary), and a park-and-ride lot with a boarding platform near Everett Turnpike (Exit 2) in Nashua. MBTA anticipates 926 daily riders in FY 2003.

The Lowell, MA-Nashua, NH commuter rail extension is located in an area generally paralleling Route 3 in Massachusetts. NHDOT plans to execute an agreement with the MBTA (primary commuter rail operator in New England) to operate the commuter rail extension project. The total capital cost for the commuter rail extension project is estimated at \$41 million (escalated dollars), with a proposed Section 5309 new starts share of \$18 million. Since the proposed new starts share is less than \$25 million, the project is exempt from the New Starts criteria (see 49 USC Section 5309 (e)(8)(A)).

Summary Description	
<b>Proposed Project:</b>	Commuter Rail Extension; 12 miles; one station
<b>Total Capital Cost (\$YOE):</b>	\$41 million
<b>Section 5309 New Starts Share (\$YOE):</b>	\$18 million
<b>Annual Operating Cost (\$1999):</b>	\$1.7 million
<b>Ridership Forecast (2003):</b>	926 daily new riders

### Status

The Nashua Regional Planning Commission, in cooperation with the City of Nashua, NHDOT and other participatory agencies, has studied the feasibility of restoring commuter rail service to southern New Hampshire since the early 1980s. In 1999, NRPC completed a Major Investment Study that analyzed the passenger rail market, required capital investments, operational issues and several alternatives to the commuter rail extension option. In June 1999, NRPC and NHDOT selected the extension of commuter rail service from Nashua to Lowell as the Locally Preferred Alternative (LPA). The LPA was also included in the NRPC's long-range

Lowell-Nashua Commuter Rail Extension      Lowell, Massachusetts-Nashua, New Hampshire  
 transportation plan. FTA approved NHDOT’s request to initiate preliminary engineering on the project in May 2000. NHDOT is currently undergoing the environmental review phase for the proposed project.

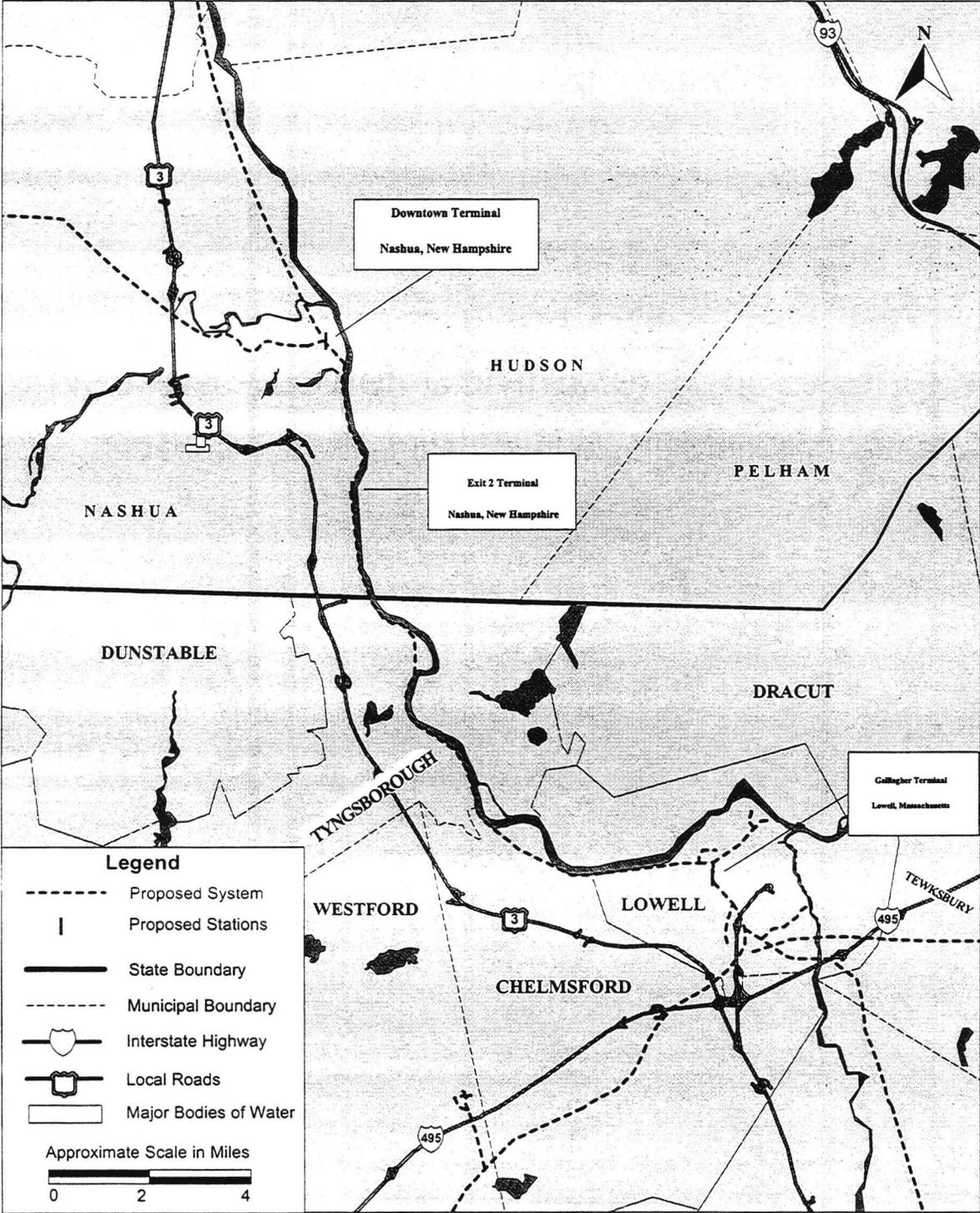
Section 3030(a)(49) of TEA-21 authorizes the “Nashua, NH-Lowell, MA Commuter Rail” for final design and construction. Through FY 2000, Congress has appropriated \$0.98 million in Section 5309 New Starts funds for the project.

<b>Locally Proposed Financing Plan</b> (Reported in \$YOE)		
<b><u>Proposed Source of Funds</u></b>	<b><u>Total Funding (Smillion)</u></b>	<b><u>Appropriations to Date</u></b>
Federal:		
Section 5309 New Starts	\$18.0	(\$0.98 million appropriated through FY 2000)
CMAQ	14.5	
State:		
General Appropriations	8.2	
<b>TOTAL</b>	<b>\$41.0</b>	

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

# Nashua - Lowell Commuter Rail Extension

## Nashua, New Hampshire - Lowell, Massachusetts



Federal Transit Administration, 2000



# Northstar Corridor Commuter Rail

## Minneapolis-Rice, Minnesota

(August 2000)

### Description

The Northstar Corridor Development Authority (NCDA) and the Minnesota Department of Transportation (MN DOT) are proposing to design and construct an 80-mile commuter rail line within the Northstar Corridor connecting the Minneapolis-St. Paul and Rice, Minnesota metropolitan areas. The proposed project also includes a 0.3-mile extension of the proposed Hiawatha Avenue light rail transit (LRT) project from its currently planned terminus in downtown Minneapolis to provide a direct link to the proposed commuter rail service. The proposed project will operate along existing Burlington-Northern Santa Fe (BNSF) railroad tracks. The proposed project also includes the purchase of five locomotives, 17 passenger rail cars, and the construction of layover and vehicle storage facilities. Total capital costs for the commuter rail project are estimated at \$223 million (escalated dollars). The proposed Hiawatha Avenue LRT extension runs approximately one-third of a mile between Third Avenue North and a proposed downtown Minneapolis commuter rail station at Fifth Avenue North. Total capital costs for the Hiawatha Avenue LRT extension are estimated at \$22.1 million (escalated dollars).

The Northstar Corridor is an area generally paralleling Trunk Highway 10 extending from Downtown Minneapolis northwest to Rice, Minnesota. The corridor will connect the Twin Cities with several suburban areas, including Anoka, Sherburne, Benton and Morrison counties. Ten of the twelve proposed commuter rail stations will provide park-n-ride facilities and all stations will accommodate bus pick-up areas. A feeder bus program providing increased bus service to station sites will also be provided. The commuter rail project is expected to serve 10,550 average weekday boardings by the year 2020, including 9,400 daily new riders.

Summary Description	
<b>Proposed Project:</b>	Commuter Rail Line, 80 miles, 12 stations; Light Rail Transit Extension, 1,750 feet
<b>Total Capital Cost (\$YOE):</b>	\$223 million (commuter rail); \$22.1 million (LRT extension)
<b>Section 5309 New Starts Share (\$YOE):</b>	\$112 million (commuter rail)
<b>Annual Operating Cost (\$YOE):</b>	\$13.97 million (commuter rail)
<b>Ridership Forecast (2020):</b>	10,550 avg. weekday boardings 9,400 daily new riders
<b>FY 2001 Finance Rating:</b>	<b>Medium</b>
<b>FY 2001 Project Justification Rating:</b>	<b>Medium</b>
<b>FY 2001 Overall Project Rating:</b>	<b>Recommended</b>

The *Recommended* rating is based on the project's adequate cost effectiveness and transit-supportive land use as well as the strength of the project's capital and operating financing plans for this early stage of project development. The overall project rating applies to this

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*Supplemental Report on New Starts* and reflects conditions as of August 2000. 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 May 1998, NCDA undertook a Major Investment Study (MIS) and a Draft Environmental Impact Statement (DEIS) to examine transportation options in the Northstar Corridor between downtown Minneapolis and Rice, Minnesota. The MIS was completed in December 1999 with the selection of a Locally Preferred Alternative (LPA). The DEIS is currently ongoing. The LPA includes new river crossings, Trunk Highway 10 improvements, commuter rail, feeder bus, pedestrian/bike improvements, and ITS initiatives. The LPA is included in both the Metropolitan Council's and the St. Cloud Area Planning Organization's (local metropolitan planning organizations) financially constrained long-range transportation plans. The commuter rail project is also included in the State Transportation Improvement Program.

Section 3030(a)(90) of TEA-21 authorizes the "Twin Cities - Northstar Corridor (Downtown Minneapolis-Anoka County-St. Cloud)" for final design and construction. Through FY 2000, Congress has appropriated \$1.33 million in Section 5309 New Starts funds for the "Twin Cities – Transitways Projects" which includes the Northstar Corridor commuter rail project.

FTA approved NCDA and MNDOT's request to initiate preliminary engineering in June 2000 on the commuter rail and light rail extension projects. The projects are included in the regional Transportation Improvement Program and financially constrained long range transportation plan.

## Evaluation

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria*. FTA has evaluated this project as entering into preliminary engineering. The project will be re-evaluated when it is ready to advance into final design and for next year's *Annual Report on New Starts*.

## Justification

The *Medium* project justification rating reflects the adequacy of the ratings for the new starts criteria, including cost effectiveness and transit-supportive land use.

## Mobility Improvements

**Rating: Medium**

NCDA estimates that, in the year 2020, the Northstar commuter rail project will result in 10,550 average weekday boardings, including 9,400 daily new riders. NCDA estimates the following annual travel time savings for the proposed project:

<b><u>Mobility Improvements</u></b>	<b><u>New Start vs. No-Build</u></b>	<b><u>New Start vs. TSM</u></b>
<b>Annual Travel Time Savings (Hours)</b>	1.0 million	[0.5 million]

[ ] indicates an increase in travel time.

Based on 1990 census data, there are an estimated 1,219 low-income households within a ½ mile radius of the proposed 12 commuter rail stations. This represents two percent of the total number of households within a ½ mile radius of the proposed stations.

**Environmental Benefits**

**Rating: Medium**

The Minneapolis-St. Paul metropolitan area is an attainment area for ozone and carbon monoxide (CO) and a moderate non-attainment area for particulate matter (PM<sub>10</sub>). NCDA estimates that, in by 2020, the implementation of the Northstar Corridor project will result in the following emissions reductions:

<b><u>Criteria Pollutant</u></b>	<b><u>New Start vs. No-Build</u></b>	<b><u>New Start vs. TSM</u></b>
<b>Carbon Monoxide (CO)</b>	498	401
<b>Nitrogen Oxide (NO<sub>x</sub>)</b>	44	40
<b>Hydrocarbons (HC)</b>	24	33
<b>Particulate Matter (PM<sub>10</sub>)</b>	[1]	0
<b>Carbon Dioxide (CO<sub>2</sub>)</b>	10,860	11,828

Values reflect annual tons of emissions reductions. [ ] indicates an increase in emissions.

NCDA estimates that by 2020, the Northstar Corridor project will result in the following savings in regional energy consumption (measured in British Thermal Units – BTU).

<b><u>Annual Energy Savings</u></b>	<b><u>New Start vs. No-Build</u></b>	<b><u>New Start vs. TSM</u></b>
<b>BTU (million)</b>	143,247	154,427

Values reflect annual tons of BTU reductions.

**Operating Efficiencies**

**Rating: Medium**

NCDA estimates the following systemwide operating costs per passenger mile, reporting a decrease for the new start compared to the no-build alternative.

	<b><u>No-Build</u></b>	<b><u>TSM</u></b>	<b><u>New Start</u></b>
<b>System Operating Cost per Passenger Mile (2020)</b>	\$0.35	\$0.34	\$0.34

Values reflect 2020 ridership forecast and escalated dollars.

## Cost Effectiveness

**Rating: Medium**

NCDA estimates the following cost-effectiveness indices:

<u>Measure</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Incremental Cost per Incremental Passenger</b>	\$10.40	\$13.30

Values reflect 2020 forecast and escalated dollars.

## Transit-Supportive Existing Land Use and Future Patterns

**Rating: Medium**

The *Medium* rating reflects the various local strategies employed by the region to develop transit-supportive land use patterns in the Twin Cities metropolitan area. The rating also acknowledges the region's current growth management policies.

**Existing Conditions:** Downtown Minneapolis serves as the dominant job center for the metropolitan area and the upper Midwest with approximately 140,000 employees and 20,000 residents. The total population within the proposed corridor is estimated at 299,000. While high-density, pedestrian-friendly development is located within walking distance of the proposed Downtown Minneapolis and Northeast Minneapolis stations, the immediate surroundings of the stations are industrial or undeveloped and not strongly pedestrian-oriented. Mid-corridor development at several proposed stations is lower-density and single-use.

The northern portion of the alignment is characterized by low-density and mixed-use development, with a municipal services' complex immediately located to the southwest side of the proposed St. Cloud East station. However, Highway 10 presents a barrier to pedestrian movement between the station and the undeveloped area to the north. The St. Cloud Downtown station, located near the northern terminus, is close to the central business district and is surrounded by high-density residential and mixed-used development in a pattern that appears to be highly pedestrian-friendly. A potential terminus of the commuter rail alignment (Rice Station) is located near the center of a small rural town with mixed land use and a development pattern supportive of pedestrian activity.

**Future Plans and Policies:** Population is forecast to increase approximately 20 percent in the Northstar Corridor by the year 2020, while employment is projected to increase approximately 50 percent. The Twin Cities-St. Cloud metropolitan area is considered a high-growth area. The Twin Cities metropolitan area has experienced one of the highest rates of population growth in all of the major metropolitan areas in the Midwest throughout the last two decades. Land use plans and policies of the Metropolitan Council and the St. Cloud Area Joint Planning Council, and the counties and cities through the which the proposed commuter rail alignment passes, support capturing growth in urbanized areas, the reduction of sprawl, the constraint of residential

growth in rural areas and the preservation of productive agricultural land. In addition, the St. Cloud Area Joint Planning Council has a plan – about to be adopted – that will concentrate development in urban centers and limit development in rural and natural areas. Sherburne and Benton counties also have land use plans that direct new housing into their respective cities, thus supporting growth near proposed commuter rail stations.

Downtown Minneapolis currently has 62,000 parking spaces, which is equivalent to 0.43 spaces per employee. Three major parking facilities with a total capacity of 7,000 spaces are located near the proposed downtown station. Parking spaces in downtown Minneapolis are near capacity. Currently, there are no public parking lots at stations along the corridor outside of Minneapolis, except at the proposed Foley Boulevard Station, where a 1,200-car parking structure was recently built at the Metro Transit bus hub near the proposed station, and the St. Cloud Downtown station, where there are no public parking structures, private lots, or on-street metered spaces. The parking supply ratio in this station area is low, due to relatively high rates of transit, bicycle and pedestrian travel.

## Local Financial Commitment

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

The financial strategy for the proposed Northstar commuter rail project proposes \$112 million (50 percent) of Section 5309 new starts funds, \$89 million (40 percent) of State funds and \$22 million (10 percent) of local funds to finance the \$223 million (escalated dollars) capital cost of the commuter rail project.

### **Stability and Reliability of Capital Financing Plan**

#### **Rating: Medium**

The *Medium* rating reflects the sound financial condition of the State of Minnesota (co-project sponsor) and the State's positive dedicated revenue sources (e.g., property tax levy) and local funding commitments to the project.

**Agency Capital Financing Condition:** The Northstar Corridor Development Authority and the Minnesota Department of Transportation are joint project sponsors. NCDCA was created for the sole purpose of developing the proposed project and thus has no historical track record for funding major transit capital investments.

**Capital Cost Estimates and Contingencies:** Capital cost estimates are considered reasonable given the project's size and scope. Capital cost estimates for the Northstar Corridor commuter rail project include a 15 percent contingency on stations (20 percent for the Downtown Minneapolis station), a 10 percent contingency on vehicle costs and a 20 percent contingency for maintenance and layover facilities, trackwork and signals.

**Existing and Committed Funding:** At this time, a portion of the local funds (nine percent or \$19.14 million) has been committed to the Northstar commuter rail project through county board resolutions. The revenue source (existing local property tax) is considered stable and reliable. Local and State legislative action is required to commit the remaining \$91.86 million of the proposed local share.

**New and Proposed Sources:** Only existing sources are proposed to fund the local share of the construction costs of the Northstar commuter rail project.

## **Stability and Reliability of Operating Finance Plan**

**Rating: Medium**

The *Medium* rating reflects the State of Minnesota's (co-project sponsor) healthy operating condition. However, NCDA was created for the purpose of developing the proposed the commuter rail project, and thus has no historical track record of operating major transit projects. Minnesota DOT has proposed to contract for the operation of the commuter rail system. Metro Transit and several local bus operators would provide feeder bus service.

**Operating Cost Estimates and Contingencies:** Operating cost estimates appear reasonable at this early stage of project development. Project sponsors estimate annual operating and maintenance costs at \$13.97 million (escalated dollars) for the Northstar Corridor commuter rail project. Project sponsors did not submit any information on escalation factors to FTA for review.

**Existing and Committed Funding:** At this time, the proposed project's operating revenues requires legislative action for its enactment.

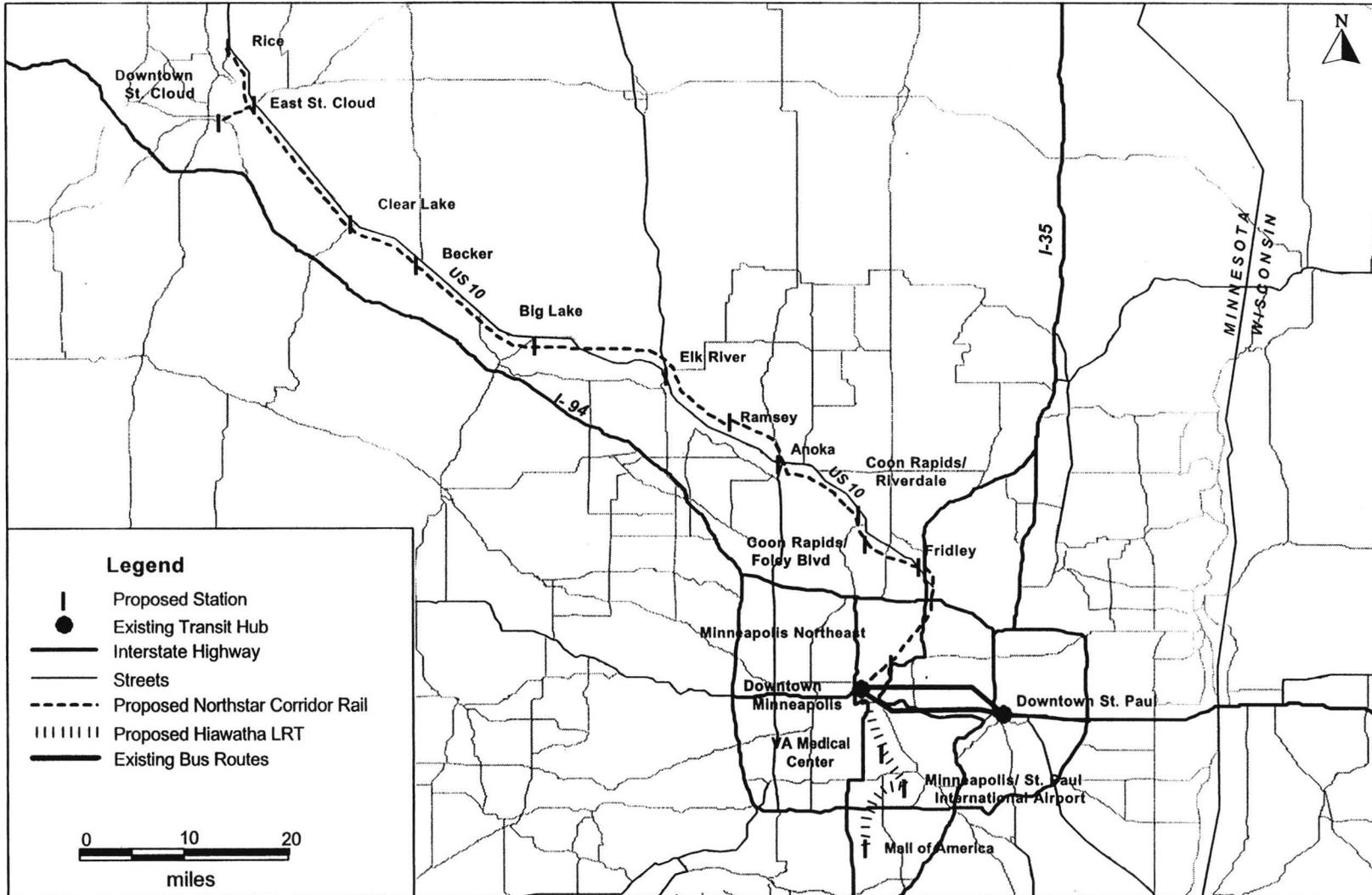
**New and Proposed Sources:** NCDA proposes to acquire annual operating funds from a new State program (Minnesota Multimodal Transportation Fund), which has not yet been enacted by the State Legislature. The proposed program would be funded by motor vehicle sales taxes and would be used to support a variety of highway and other transportation-related projects. At this time, the Governor of Minnesota has not specified a certain percentage or set-aside in the proposed funding program for mass transit, including the Northstar Corridor commuter rail project.

<b>Locally Proposed Financing Plan (Reported in \$YOE)</b>		
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million)</u>	<u>Appropriations to Date</u>
Federal:		
Section 5309 New Starts	\$112.0	(\$1.33 million appropriated to the Northstar commuter rail project through FY 2000)
State:		
Minnesota Legislature	\$89.0	
Local:		
Anoka, Sherburne, Benton and Morrison County Resolutions	<u>\$22.0</u>	
<b>TOTAL</b>	<b><u>\$223.0</u></b>	

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

# Northstar Corridor Commuter Rail

## Minneapolis- Rice, Minnesota



# Desire Corridor Streetcar

## New Orleans, Louisiana

(August 2000)

### Description

The Regional Transit Authority (RTA) is restoring a 2.9-mile traditional streetcar line in downtown New Orleans, as part of the locally preferred alternative for the Desire Corridor. The Desire Corridor Streetcar project will operate along North Rampart Street and St. Claude Avenue between Canal Street and Poland Avenue. The proposed streetcar alignment will loop at Canal Street and use exclusive right-of-way in the median of city streets, as much as possible. The single-track loop will operate in the median of North Rampart and Canal Streets and in the traffic lanes of Basin and Toulouse Streets. The double-track section will operate in the left traffic lanes of North Rampart Street, McShane Place, and St. Claude Avenue between Toulouse Street and Elysian Fields Avenue, and in the median of St. Claude Avenue between Elysian Fields and Poland Avenues. The project will serve the communities of Iberville, Treme, Faubourg Marigny, St. Roch and Bywater. Six major bus transfer points with construction of center-platforms, canopies, passenger benches and landscaping will be provided; 16 intermediate stops with less elaborate center-platform facilities are also planned. The project also includes the purchase of 13 new vehicles. The capital cost estimate of the streetcar project is \$93.45 million (escalated dollars). Ridership is forecast at 15,270 daily boardings by 2020.

Summary Description	
<b>Proposed Project:</b>	Light Rail Streetcar 2.9 miles, 22 stops
<b>Total Capital Cost (\$YOE):</b>	\$93.45 million
<b>Section 5309 Share (\$YOE):</b>	\$57.63 million
<b>Annual Operating Cost (\$1999):</b>	\$1.02 million
<b>Ridership Forecast (2020):</b>	15,270 avg. weekday boardings 2,185 daily new riders
<b>Financial Rating:</b>	<b>Medium</b>
<b>Project Justification Rating:</b>	<b>Medium</b>
<b>Overall Project Rating:</b>	<b>Recommended</b>

The overall project rating of *Recommended* is based on the adequacy of the project's justification criteria and local financial commitment to construct and operate the project. The overall project rating applies to this *Supplemental Report on New Starts* **and reflects conditions as of August 2000**. 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**

RTA completed a Major Investment Study for the Desire Corridor in September 1999. The locally preferred alternative (LPA) includes a package of TSM/enhanced bus improvements in addition to the 2.9-mile streetcar line. The Regional Planning Commission, the New Orleans region’s Metropolitan Planning Organization, endorsed the LPA and incorporated it in the metropolitan transportation plan. The Federal Transit Administration (FTA) approved the initiation of preliminary engineering (PE) in August 2000.

TEA-21 Section 3030(b)(34) authorizes the “New Orleans -- Desire Streetcar” project for alternatives analysis and preliminary engineering. Through FY 2000, Congress has appropriated \$5.96 million in Section 5309 New Starts funds to the project.

**Evaluation**

The following criteria have been estimated in conformance with FTA’s *Technical Guidance on Section 5309 New Starts Criteria*. N/A indicates that data are unavailable for this specific measure.

FTA has evaluated this project as entering preliminary engineering. The project will be reevaluated 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 the adequacy of the project’s environmental benefits, operating efficiencies, cost-effectiveness index, and transit supportive land use at this early stage of preliminary engineering.

**Mobility Improvements**

**Rating: Low-Medium**

RTA estimates that the Desire Corridor Streetcar will have 15,270 average weekday boardings by 2020, and would result in the following annual travel time savings.

<u>Mobility Improvements</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Annual Travel Time Savings (Hours)</b>	0.01 million	N/A

Based on 1990 Census data, there are an estimated 6,017 low-income households within a ½ mile radius of the proposed streetcar stops, approximately 29 percent of the total households within the corridor.

**Environmental Benefits**

**Rating: Medium**

The New Orleans region is a “maintenance” area for transportation related pollutants, including ozone, carbon monoxide, particulate matter, and nitrogen oxides. RTA estimates that the streetcar project will result in the following annual emissions reductions.

<u>Criteria Pollutant</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Carbon Monoxide (CO)</b>	13	9
<b>Nitrogen Oxide (NO<sub>x</sub>)</b>	4	4
<b>Hydrocarbons (HC)</b>	2	1
<b>Particulate Matter (PM<sub>10</sub>)</b>	2	1
<b>Carbon Dioxide (CO<sub>2</sub>)</b>	[170]	[113]

Values reflect annual tons of emissions reductions. [ ] reflect increases in emissions.

RTA estimates that in 2020 the Desire Corridor Streetcar would result in the following increase in regional energy consumption (measured in British Thermal Units – BTU).

<u>Annual Energy Savings</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>BTU (million)</b>	[6,008]	[5,337]

Values reflect annual BTU reductions. [ ] reflect increases in BTUs.

**Operating Efficiencies**

**Rating: Medium**

RTA estimates that its systemwide operating cost per passenger mile will not change significantly with the implementation of the Desire Corridor Streetcar project.

<u>Measure</u>	<u>No-Build</u>	<u>TSM</u>	<u>New Start</u>
<b>System Operating Cost per Passenger Mile (YEAR)</b>	\$0.54	\$0.54	\$0.54

Values reflect 2020 ridership forecast and 1999 dollars.

**Cost Effectiveness**

**Rating: Medium**

RTA estimates the following cost effectiveness indices.

<u>Measure</u>	<u>New Start vs. No-Build</u>	<u>New Start vs. TSM</u>
<b>Incremental Cost per Incremental Passenger</b>	\$11.30	\$10.90

Values reflect 2020 ridership forecast and 1999 dollars.

### Transit-Supportive Existing Land Use and Future Patterns

**Rating: Medium-High**

The *Medium-High* land use rating reflects the high existing densities and zoning along the corridor and the integration of the proposed project in supporting redevelopment of an urban neighborhood.

**Existing Conditions:** The proposed Desire Corridor Streetcar is wholly located within an existing built-up urban area originally developed in the streetcar era. The project serves the high-density, mixed use New Orleans central business district (CBD), and a mix of neighborhood commercial and historic residential neighborhoods outside the CBD. Population densities throughout the corridor are relatively high, averaging 10,000 persons per square mile. Employment within the corridor is 15,307, all within ½ mile of a station. The entire corridor is laid out in a walkable street grid system that promotes pedestrian-friendliness. While policies guiding future transit-supportive development in the CBD are generally permissive rather than proactive, the City’s design review authority encourages high-density, mixed-use development. The CBD includes a high-density mix of office, retail, hotels and leisure attractions. Adjacent to the CBD are the riverfront and the French Quarter historic district which include tourist and leisure attractions. The cost for off-street parking ranges from \$2.25 to \$7.00 per day. Zoning ordinances establish parking caps for new development in the CBD that are considered quite restrictive. Beyond the CBD, high trip generators are a defense complex employing 3,000 workers; entertainment and tourist destinations, including the French Quarter, Louis Armstrong Park and the New Orleans Jazz National Historic Park; and three auditoriums totaling 12,000 seats.

**Future Plans and Policies:** The City’s 1999 Land Use Plan has resulted in recommendations for mixed-use zoning designations that will enhance existing residential/neighborhood commercial districts, as well as facilitate redevelopment of vacant or underutilized industrial and commercial areas. Zoning regulations are currently being revised in accordance with the Land Use Plan, and will include mixed-use zoning designations, as well as consolidation and separation of incompatible uses to better facilitate redevelopment. The market sustains continued conversion of buildings in the CBD to hotel and residential uses; some increased real estate investment elsewhere in the corridor is also underway. The City’s design review authority for large projects and conditional-use projects is the most significant tool for ensuring that new development is transit-supportive. The City has shown an interest in using this authority to promote transit and pedestrian-friendliness. Further, there are economic development programs

available to assist in revitalization of neighborhoods. No significant regional employment growth is projected in the near future. Decline in population along the corridor has slowed in some neighborhoods and has reversed in the French Quarter and CBD. The regional population decline of the 1980's has since reversed. Forecasts show a slight increase in total corridor population and employment by 2020.

## Local Financial Commitment

### **Proposed Local Share of Total Project Costs: 38%**

The project's financial plan proposed to utilize \$57.6 million (62 percent of total project costs) in Section 5309 New Starts funds, \$17.1 million (18 percent) in Federal flexible funds, \$11.5 million (12 percent) in State Capital Outlay funds, and \$7.2 million (8 percent) in local and other funds.

### **Stability and Reliability of Capital Financing Plan**

#### **Rating: Medium**

The *Medium* capital finance plan rating reflects the improved financial condition of RTA and the financial support of both the State and City to undertake the proposed project.

**Agency Capital Financial Condition:** RTA's capital program has been stabilized over the past year through establishment of a local one percent dedicated hotel/motel industry Sales and Use Tax and State support of the Louisiana Community Development Authority. RTA has begun an initiative to set-up a new local capital and maintenance funding program for the RTA light rail system. Resolutions have been approved by the RTA Board to dedicate 60 percent of the first annual revenues from the hotel/motel tax and 40 percent of any further revenues from this source to the LRT capital and maintenance fund. The Canal Street Streetcar project, however, takes priority over the Desire Corridor Streetcar project in funding allocations.

**Capital Cost Estimates and Contingencies:** The capital cost estimates are adequate for a project in this early stage of preliminary engineering. Capital cost estimates will be refined as the project advances through planning and project development.

**Existing and Committed Funding:** The hotel industry Sales and Use Tax is expected to generate \$7.2 million annually in incremental revenue, although the proposed Canal Street Streetcar project has been stated as RTA's first priority. RTA has secured a \$27 million loan from the Louisiana Local Government Environmental Facilities and Community Development Authority's Capital Projects and Equipment Acquisition Programs for both Canal Street and Desire Corridor Streetcar projects; RTA has been approved to participate in this program to a level in excess of \$66 million. The heavy reliance on new starts funds for this project, however, may pose future project funding challenges.

**New Funding:** No new sources of funding are proposed.

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**Stability and Reliability of Operating Finance Plan****Rating: Medium**

The *Medium* operating finance plan ratings reflects the forecast stability of operating revenues sufficient to meet the planned ongoing RTA operating needs.

**Agency Operating Financial Condition:** Although RTA has experienced negative operating balances in the recent past, it is anticipated that application of the local hotel tax for transit will tend to stabilize the agency's financial operations. RTA plans for farebox revenues to increase at an average annual rate of 2.5 percent over a 20-year period are reasonable; these increases will provide approximately 39 percent of the total expected operating revenues. The overall agency operating cash flow presents positive operating balances throughout the 30-year period, although there are some negative operating balances in the near-term. Some concerns remain regarding RTA's ability to operate and maintain the full rail network expansion.

**Operating Cost Estimates and Contingencies:** Agency operating and maintenance costs are projected to rise from \$89.5 million (1999) to \$147.2 million (2018), escalated dollars, and cover ongoing bus and rail operations and maintenance, as well as operations and maintenance for the proposed Canal Street and Desire Corridor Streetcar projects. Operating and maintenance cost estimates, and escalation factors applied, are reasonable.

**Existing Funding:** Retail sales tax revenues are stable with reasonable growth projections, and will provide 50 percent of total operating funds over a 20-year period. The hotel industry sales tax provides another stable and reliable source of operating funds.

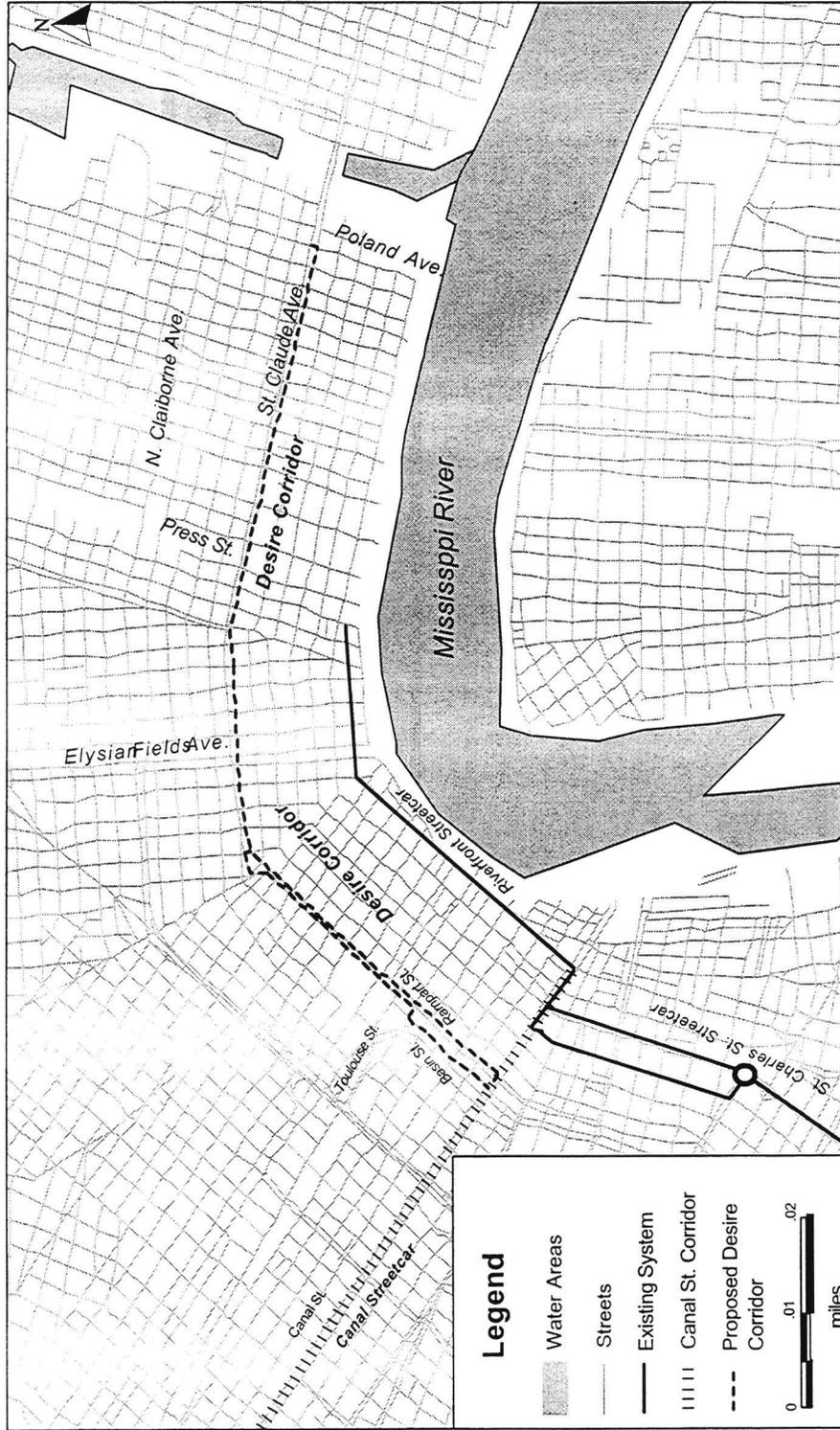
**New Funding:** No new sources of funding are proposed.

<b>Locally Proposed Financing Plan (Reported in \$YOE)</b>		
<u>Proposed Source of Funds</u>	<u>Total Funding (\$million)</u>	<u>Appropriations to Date</u>
Federal:		
Section 5309 New Starts	\$ 57.63	(\$5.96 million appropriated through FY 2000)
STP	17.13	
State:		
Capital Outlay Budget	11.53	
Local:		
Hotel/Motel Sales Tax	5.16	
City of New Orleans	1.00	
Right-of-Way Donation	<u>1.00</u>	
<b>TOTAL</b>	<b><u>\$ 93.45</u></b>	

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

# Desire Corridor Streetcar

New Orleans, Louisiana



# Stamford Urban Transitway and Intermodal Transportation Center Improvements Stamford, Connecticut (August 2000)

## Description

The City of Stamford, in coordination with the Connecticut Department of Transportation (CDOT), and the Southwestern Regional Planning Agency, is proposing to design and construct a one-mile Urban Transitway, incorporating exclusive lanes for buses and other high occupancy vehicles, to improve access to and provide a direct link from Interstate 95 to the Stamford Intermodal Transportation Center (SITC). The SITC serves as a major transfer point for local bus and employer shuttle service and provides access to existing Amtrak and Metro-North rail service in the Northeast corridor. Metro-North operates 190 daily trains that stop at the SITC; approximately 2,500 riders use the service in the peak hours to commute from Stamford to New York City, while 1,500 riders travel inbound to employment opportunities in Stamford.

The Transitway project will include the modification of bus routes serving the SITC and provide improved pedestrian access throughout the length of the facility. Intelligent Transportation Systems (ITS) are also proposed to provide priority traffic signals and real time information via variable message signs along the Transitway. As part of additional improvements to the SITC, the City is expanding rail platform capacity and constructing a 1,200-space parking facility.

The total capital cost for the proposed Transitway is estimated at \$24 million (escalated dollars), with a proposed Section 5309 new starts share of \$18 million. Since the proposed new starts share is less than \$25 million, the project is exempt from evaluation of the new starts criteria, and is thus not subject to FTA's evaluation and rating (see 49 USC Section 5309(e)(8)(A)).

However, the City of Stamford has submitted to FTA information that reflects the new starts criteria of the Transitway *and* a \$20 million parking garage. FTA's evaluation and rating, therefore, reflect the combined \$44 million investment in the SITC. FTA will work with the City of Stamford to identify and report the benefits specific to the proposed Urban Transitway for the *Annual Report on New Starts* for FY 2002.

<b>Summary Description</b>	
<b>Proposed Project:</b>	One-Mile Access Road (including bus and HOV lanes) and Parking Facility
<b>Total Capital Cost (\$YOE):</b>	\$24.0 million (\$44.0 million including the parking facility)
<b>Section 5309 New Starts Share (\$YOE):</b>	\$18.0 million
<b>Annual Operating Cost:</b>	N/A
<b>Ridership Forecast (2005):</b>	17,200 avg. weekday boardings 1,200 daily new riders
<b>FY 2001 Financial Rating:</b>	<b>Medium</b>
<b>FY 2001 Project Justification Rating:</b>	<b>Medium</b>
<b>FY 2001 Overall Project Rating:</b>	<b>Recommended</b>

The overall project rating of *Recommended* is based on the project's (Transitway and parking facility) strong anticipated travel time savings; the existing urban character and transit supportive land use plans and policies surrounding the Transitway corridor and SITC; and the level of committed local funding to build the Transitway. The overall project rating applies to this *Supplemental Report on New Starts* **and reflects conditions as of August 2000**. 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

The Stamford Urban Transitway is the preferred alternative resulting from a series of studies that evaluated alternatives to improve accessibility to the Stamford Intermodal Transportation Center. FTA approved the City of Stamford's request to initiate preliminary engineering on the Urban Transitway project in February 2000. The city plans to initiate the environmental review phase of project development during calendar 2000.

Section 3030(c)(1)(A)(ix) of the TEA-21 authorizes the "Stamford—Fixed Guideway Connector" for final design and construction. Through FY 2000, Congress has appropriated \$1.97 million in Section 5309 New Starts funds to the project.

## Evaluation

The following criteria have been estimated in conformance with FTA's *Technical Guidance on Section 5309 New Starts Criteria*. It should be noted that the criteria reflect both the proposed investment in the Urban Transitway and the 1,200-space parking facility at the SITC. FTA has evaluated this project as entering preliminary engineering.

## Justification

The *Medium* project justification rating reflects the project's strong mobility improvements and transit supportive land use, but below-average cost effectiveness.

## Mobility Improvements

**Rating: High**

The City of Stamford estimates that improvements to the SITC will result in the following annual travel time savings:

<u>Mobility Improvements</u>	<u>New Start vs.</u> <u>No-Build</u>	<u>New Start vs.</u> <u>TSM</u>
<b>Annual Travel Time Savings (Hours)</b>	0.4 million	0.1 million

Based on 1990 census data, there are an estimated 139 low-income households within a ½ mile radius of the proposed boarding points. This represents approximately 3 percent of the total number of households within ½ mile radius of the proposed stations.

**Environmental Benefits**

**Rating: Medium**

The City of Stamford is currently classified as an attainment area for both ozone and carbon monoxide. The City of Stamford estimates that the project would result in the following annual changes in emissions.

<b>Criteria Pollutant</b>	<b>New Start vs. No-Build</b>	<b>New Start vs. TSM</b>
<b>Carbon Monoxide (CO)</b>	49	41
<b>Nitrogen Oxide (NO<sub>x</sub>)</b>	7	7
<b>Hydrocarbons (HC)</b>	6	6
<b>Particulate Matter (PM<sub>10</sub>)</b>	8	8
<b>Carbon Dioxide (CO<sub>2</sub>)</b>	8,929	8,929

Values reflect annual emissions reductions. Values in brackets [ ] indicate a projected increase in emissions.

The City of Stamford estimates that in the year 2005, the project would result in the following savings in regional energy consumption (measured in British Thermal Units - BTU).

<b>Annual Energy Savings</b>	<b>New Start vs. No-Build</b>	<b>New Start vs. TSM</b>
<b>BTU (million)</b>	116,724	116,724

Values reflect annual BTU reductions. Values in [ ] indicate a projected increase in emissions.

**Operating Efficiencies**

**Rating: Not Rated**

Information in support of FTA’s measure for operating efficiencies is not available.

	<b>No-Build</b>	<b>TSM</b>	<b>New Start</b>
<b>System Operating Cost per Passenger Mile</b>	N/A	N/A	N/A

**Cost Effectiveness**

**Rating: Low-Medium**

The City of Stamford estimates the following cost-effectiveness indices for the Transitway and new SITC parking facility:

	<b>New Start vs. <u>No-Build</u></b>	<b>New Start vs. <u>TSM</u></b>
<b>Incremental Cost per Incremental Passenger</b>	\$11.40	\$13.00

Values reflect 2005 ridership forecast and 1999 dollars.

## **Transit-Supportive Existing Land Use and Future Patterns**

### **Rating: Medium-High**

The *Medium-High* rating reflects the moderate to high population and employment densities in the project corridor and the demonstrated integration of SITC improvements into land use planning and redevelopment of the surrounding area.

**Existing Conditions:** The Stamford Urban Transitway (SUT) project corridor encompasses the Stamford Intermodal Transportation Center (SITC) and the Stamford Central Business District. The area is predominantly zoned as a General Industrial District. The corridor is a densely populated development with a mix of industrial, residential, municipal, and commercial uses. In 1990, population and employment in the corridor was estimated at 12,800 (8,376 per square mile) and 6,950 (4,548 per square mile), respectively. Population growth in the corridor is expected to increase 37 percent, housing 30 percent, and employment 142 percent by 2020. The Transitway corridor and area surrounding the SITC is generally automobile-oriented.

**Future Plans and Policies:** The need for a direct east-west link to the SITC --- and the desire to link SITC improvements with the redevelopment of surrounding neighborhoods --- has been addressed in local planning activities for more than fifteen years. For example, the City of Stamford has had a Master Plan in place since 1984 that defines growth management policies and guidelines. The Plan provides a framework for implementation of land use controls and growth management through comprehensive re-zoning and detailed planning. It also encourages development in the vicinity of the SITC and incorporates a philosophy of preserving the character of surrounding neighborhoods. City zoning regulations specifically outline development standards within the Transportation Center Design District and encourage mixed use development as long as there is a compatible and functional relationship between the CBD and surrounding neighborhoods.

The City is using other development programs (e.g. Brownfields, Enterprise Zones) to augment planned development and redevelopment efforts within and adjacent to the project corridor. The Brownfields Cleanup Revolving Loan Fund (BCRLF) pilot program is being used to leverage funds to clean up three major sites within a mile of the SITC. The City has identified several corridor development targets and has provided evidence of strong business and neighborhood support for the Transitway.

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## Local Financial Commitment

### Proposed Non-Section 5309 Share of Total Project Costs: 25 %

Total project costs for the Urban Transitway and the SITC parking facility is estimated at \$44.0 million. Estimated cost for the Transitway only is \$24.0 million (escalated dollars). The City of Stamford proposes a Section 5309 New Starts share of \$18.0 million (75 percent of total Transitway costs); \$5.8 million in City of Stamford bonds; (24 percent) and \$0.2 million in EPA Brownfield Pilot Program funds (1 percent).

## Stability and Reliability of Capital Financing Plan

### Rating: Medium

The *Medium* rating reflects the commitment of proposed non-New Starts funding for Urban Transitway project. However, the City of Stamford did not provide any information on its financial condition.

**Agency Financial Condition:** FTA did not receive any information regarding the agency's financial condition.

**Cost Estimates and Contingencies:** A brief project capital cost distribution for the SITC was submitted; however detailed information regarding the project's capital cost estimates was not provided. No funding contingency plan was submitted; however, Stamford is in the preliminary stages of investigating alternative financing and private sector funding for some project elements.

**Existing and Committed Funding:** The local portion of the project's capital costs will come from City bond proceeds. Of the \$5.8 million, \$0.5 million comes from a prior appropriation and \$0.75 million is in the current fiscal year budget. The remaining \$4.5 million is already programmed in the FY 2001 and FY 2002 capital budget. The additional committed funding of \$0.2 million comes from an EPA Brownfields Pilot Program.

**New and Proposed Sources:** The City of Stamford is considering using Tax Increment Financing to leverage additional funds for the project. In addition, Stamford is in the process of developing a plan and sponsorship program for private sector support of the project's incremental costs. The plan and programs would cover elements of the project such as streetscaping, parking levy or surcharges etc. Based on the information provided to FTA, the City of Stamford is in the process of submitting an application for a \$4 million FHWA CMAQ grant for a bus priority lane on the Transitway. At this time, it is unclear if this funding will be used on the current project scope or scope enhancements.

## Stability and Reliability of Operating Finance Plan

### Rating: Not Rated

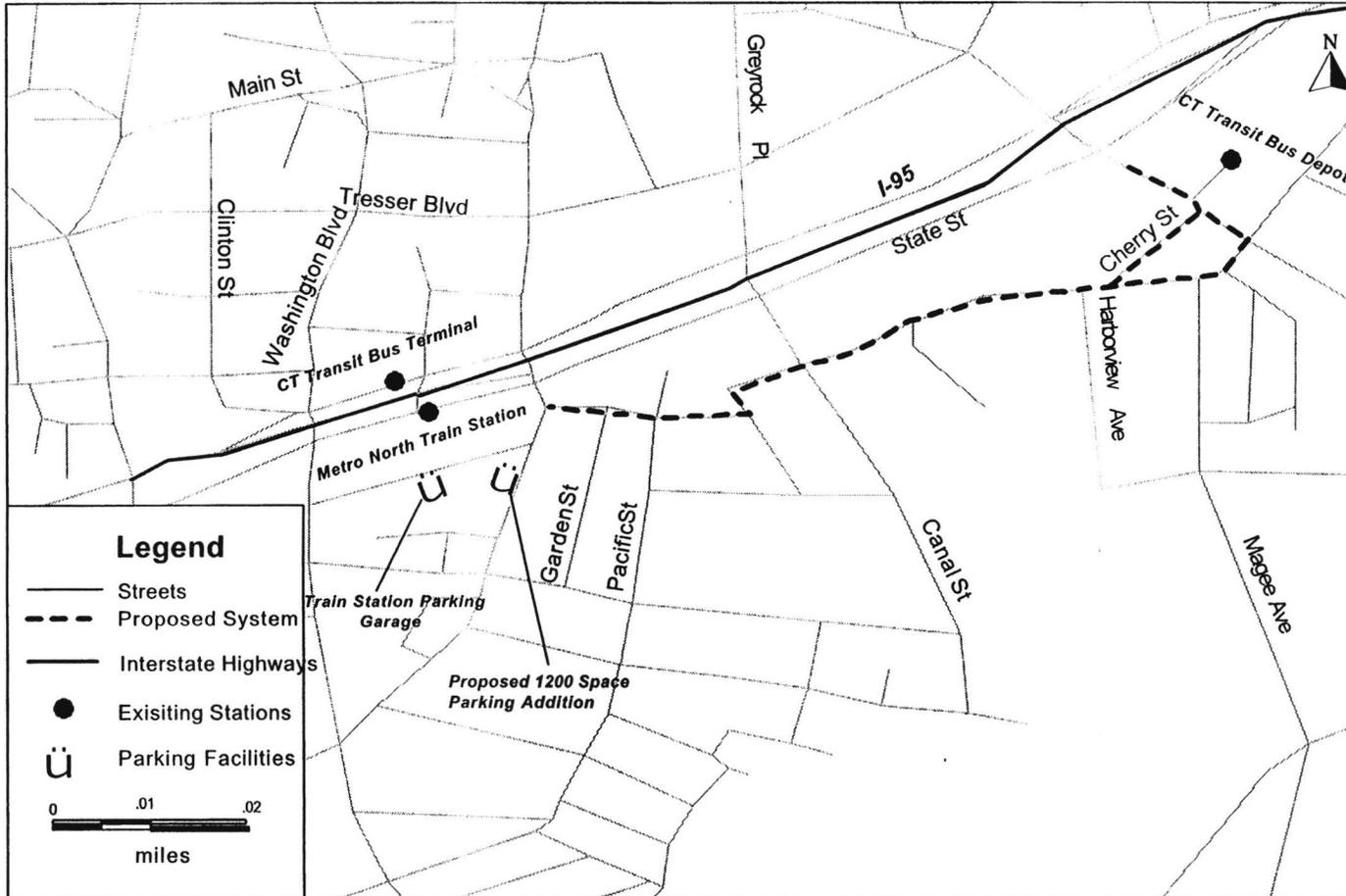
According to the City of Stamford, current local bus routes will be modified to utilize the Transitway, but there will be no change in the amount of service operated. Since the cost of the service will not be affected, no operating cost information was provided, and FTA did not rate the project on this measure.

<b>Locally Proposed Financing Plan</b> (Reported in \$YOE)		
<b><u>Proposed Source of Funds</u></b>	<b><u>Total Funding (\$million)</u></b>	<b><u>Appropriations to Date</u></b>
Federal:		
Section 5309 New Starts	\$18.0	(\$1.97 million appropriated through FY 2000)
EPA Brownfields Pilot Program	\$0.2	
Local:		
City of Stamford Bonds	\$5.8	
<b>TOTAL</b>	<b>\$24.0</b>	

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

# Urban Transitway and ITC Improvements

## Stamford, Connecticut



Federal Transit Administration, 2000



# Wilsonville-Beaverton Commuter Rail

## Washington County, Oregon

(August 2000)

### Description

Washington County, Oregon, in conjunction with the Oregon Department of Transportation (ODOT), Tri-County Metropolitan District of Oregon (Tri-Met), Portland Metro (Metro), Clackamas County, and the cities of Wilsonville, Tualatin, Tigard and Beaverton, are proposing to design and construct a 15-mile commuter rail line in the Wilsonville-Beaverton Corridor. The proposed project would operate along portions of existing Union-Pacific railroad tracks and connect to Metro's existing Westside light rail system at the Beaverton Transit Center (BTC). As part of the proposed project, approximately 2,000 feet of new railroad trackage will be constructed at the northern terminus of the alignment near the BTC. The proposed project also includes the purchase of eight passenger rail cars, the construction of vehicle maintenance and dispatch facilities and multiple capital improvements. The proposed commuter rail project is estimated to have 4,650 average weekday boardings.

The Wilsonville-Beaverton Corridor extends from the City of Wilsonville northwest to Beaverton, Oregon. The northern portion of the corridor is owned by the Union-Pacific railroad, while the southern portion is owned by ODOT. The corridor will connect the two cities with several outlying jurisdictions. Five commuter rail stations are planned along the alignment. All proposed stations, with the exception the BTC station, will have park-and-ride facilities. Total capital cost for the commuter rail project is estimated at \$82.8 million (escalated dollars), with a proposed Section 5309 new starts share of \$24.9 million. Since the proposed New Starts share is less than \$25 million, the project is exempt from evaluation under the New Starts criteria (see 49 USC Section 5309(e)(8)(A)).

Summary Description	
<b>Proposed Project:</b>	Commuter Rail; 15.3 miles; 5 stations
<b>Total Capital Cost (\$YOE):</b>	\$82.8 million
<b>Section 5309 New Starts Share (\$YOE):</b>	\$24.9 million
<b>Annual Operating Cost (\$1999):</b>	\$3.87 million
<b>Ridership Forecast (2020):</b>	4,650 avg. weekday boardings

### Status

In May 1997, Phase I of the *Washington County Interurban Rail Feasibility Study* was completed. The study determined that there were no technical, regulatory or legal issues that would prevent the implementation of a commuter rail line in the Wilsonville-Beaverton Corridor. Phase I resulted in the Oregon Legislature's approval to fund the initiation of a Phase II study to determine if the use of existing Union-Pacific freight railroad trackage offered a transportation solution significant enough to warrant the required capital and operating cost investments. Phase II was commissioned by interested jurisdictions located in the eastern portion of Washington

County and was completed in April 1999. In June 2000, the Washington County Board of Commissioners unanimously adopted commuter rail as the locally preferred alternative (LPA) for the corridor. The affected local governments also passed resolutions adopting the LPA. The project is also supported by the Joint Policy Advisory Committee on Transportation (JPACT) as one of its regional transportation priorities for seeking Federal funding in 2000. FTA approved Washington County's request to enter preliminary engineering on the project in July 2000. An Environmental Assessment (EA) was also completed that same month. In July 2000, FTA authorized publication of the Draft EA. The project was adopted into the Long Range Plan in June 1999. In August 2000, the Metro Council adopted the financially constrained Regional Transportation Plan, which includes the Wilsonville-Beaverton commuter rail project.

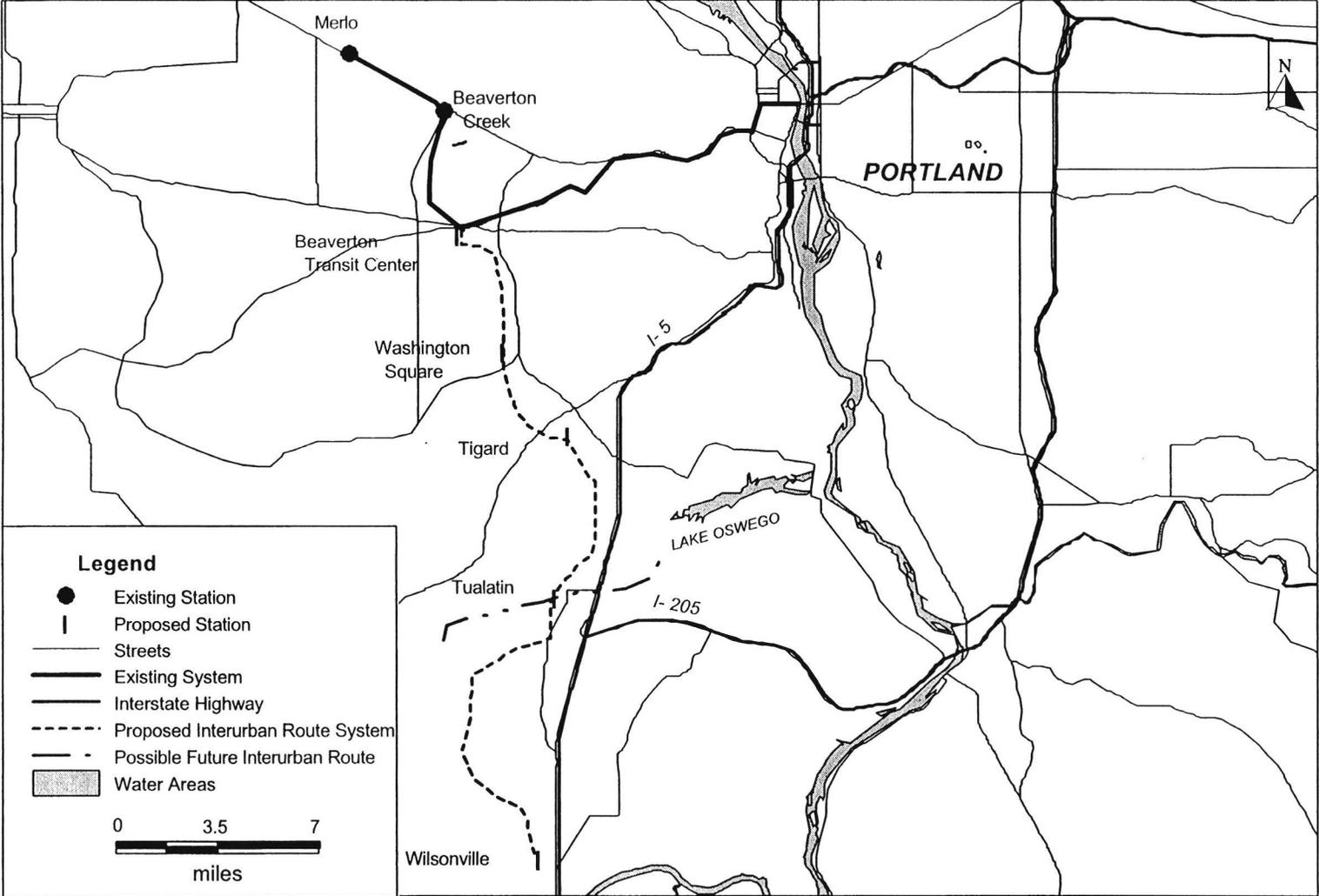
The Wilsonville-Beaverton commuter rail project is not authorized in TEA-21. Through FY 2000, Congress has appropriated \$0.49 million in Section 5309 new starts funds to the project.

<b>Locally Proposed Financing Plan</b> (Reported in \$YOE)		
<b><u>Proposed Source of Funds</u></b>	<b><u>Total Funding (\$million)</u></b>	<b><u>Appropriations to Date</u></b>
Federal:		
Section 5309 New Starts	\$24.9	(\$0.49 million appropriated through FY 2000)
State:		
(Lottery, STP or CMAQ)	32.8	
Local:		
(Counties and Cities or Regional STP funds)	<u>25.0</u>	
<b>TOTAL</b>	<b><u>\$82.8</u></b>	

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

# Wilsonville-Beaverton Commuter Rail

Washington County, Oregon



Federal Transit Administration, 2000







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Supplemental report

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